Memorandum

To: *Georgia Regional Water Planning Councils – Altamaha and Suwannee-Satilla*

From: *CDM Smith*

Date: *October 4, 2018*

Subject: *September 20, 2018 Georgia Regional Water Planning Council Joint Meeting of the Altamaha and Suwannee-Satilla Councils*

This memorandum provides the meeting summary of the September 20, 2018 Georgia Regional Water Planning Council Joint Meeting, held at the Ben Hill Agricultural Pavilion in Fitzgerald, GA. The Joint Council Meeting was held for the Altamaha and Suwanee-Satilla Regional Water Planning Councils from 10 AM to 2 PM. This memorandum provides a summary of the items presented during the joint sessions held between Councils.

1) **Welcome and Introductions**

The Altamaha Council Chairman Ed Jeffords and the Suwannee-Satilla Council Chairman, Scott Downing initiated the meeting and welcomed the attendees and highlighted the importance of the regional water plans and the water resources in the regions. The focus of today's meeting is on management practices related to agriculture.

Next, the Planning Contractor (PC) welcomed the attendees and provided an overview for the day's agenda. Dr. Gary Hawkins with the University of Georgia was introduced to start the day's program.

2) Regional Water Planning Agricultural Management Practices Panel Discussion - Dr. Gary Hawkins, Cooperative Extension Agents, National Resource Conservation Service (NRCS), Soil and Water Conservation District, Future Farmers of America (FFA)

Dr. Hawkins introduced each of the panel members representing the following agencies:

- Cooperative Extension - David Hall (County Program Assistant/Water Educator, Bleckley County), Dustin Rushing (Extension Educator, Southeast District) and Holly Anderson Agricultural and Natural Resources (ANR) Agent, Ben Hill County)
- National Resource Conservation Service (NRCS) – David Walden, Randy Odom

- Altamaha Soil and Water Conservation District – Tabatha Wooten
- Seven Rivers Resource Conservation and Development (RC&D) Council – Eugene Dyal
- Ben Hill County Young Farmers Association – David Evans

When introducing the panel, Dr. Gary Hawkins also provided an overview of each the agencies and their missions. The University of Georgia Cooperative Extension works with the individual farmers on various aspects of water management as well as with citizens and homeowners. NRCS provides the financial incentive and cost share opportunities for conservation programs available to farmers. The Altamaha Soil and Water Conservation District works with Appling, Bacon, Coffee, Jeff Davis, and Telfair Counties to help implement water practices and approve erosion control plans. There are 40 of these types of districts throughout the State. The Seven Rivers RC&D Council works with 17 counties in the Altamaha and Suwannee-Satilla Regions to develop, enhance, and protect natural resources. FFA works with and provides agricultural education opportunities to young farmers at the middle school and high school levels.

Dr. Hawkins then walked through select management practices that are included in the RWPs and asked each panel member to describe their agency's role in helping with implementation. The first management practice discussed was NPSA-1 (Soil Erosion Reduction Measures - Conservation tillage and cover crop).

David Walden with NRCS mentioned the Environmental Quality Incentives Program (EQIP). This voluntary conservation program helps producers invest in solutions that conserve natural resources for the future while also improving agricultural operations. Through EQIP, NRCS provides agricultural producers with financial resources and assistance to implement conservation practices. He also mentioned the Conservation Stewardship Program (CSP) which helps build upon existing conservation efforts while strengthening the farmer's current operation. For fiscal year 2018, 217,000 acres of cover crops and 9,980 acres of conservation tillage were contracted. Farmers sign up to apply for these programs and NRCS incentivizes the farmer to plant cover crops, the benefit of which is erosion control, soil health and water quality. Before and after measurements are taken on each individual farm and the metric to measure performance is soil loss reduction.

Question: Chairman Jeffords asked about the ability to summarize the cumulative results to demonstrate the benefit.

Response: Tabatha Wooten explained that when you leave the cover crop residue, it helps with weed control, adds organics to the soil and helps reduce fertilizer and chemical use, which also translates into a cost savings for the farmer. Dr. Hawkins mentioned that there are Conservation Environmental Assessment Program (CEAP) reports that show the results of usage but there is no database collecting individual farmer's data. David Walden also explained that soil types are going to vary from farm to farm and organic matter can be increased from 1 to 3 percent through the use of these practices. One suggestion was that the Councils could work with NRCS to run the Revised Universal Soil Loss Equation (RUSLE2) model on a watershed basis. The RUSLE2 model shows a reduction by using this practice. Dr. Hawkins

mentioned that some edge of field studies could be performed to help estimate the overall benefits.

Question: The EPD representative asked how/if these programs take targeted priorities (i.e., water quality impairments) identified in the RWPs into account?

Response: David Walden responded that yes, this is taken into account. Applications are ranked and screened. Farmers are given more points on their application if they are located in a priority watershed. Nutrient management plans also help address these priorities.

Comment: A Council Member (CM) stated that when a farmer is dealing with the presence of the burrower bug, the land has to be broken and turned over in order to combat the bug.

Tabatha Wooten was then asked by Dr. Hawkins how the Altamaha Soil and Water Conservation District helps with conservation tillage and cover crops? She replied that they help landowners and producers get connected with agencies for funding opportunities in a five-county area. For example, she had one farmer who applied many times with no results and she worked to identify a different agency that helped him secure funding.

David Walden stated that Georgia started with $28M of federal funding and it has grown to $44M, all of which comes from the Farm Bill. Other states were not spending their allocated amount of funding and if it is not used, it goes back to the federal government and gets re-allocated to other areas. Georgia is the third highest funded state in the nation.

Comment: A CM stated that he appreciated what NRCS is doing and Georgia's NRCS staff have been far more active than almost any other staff in the country.

Next, Eugene Dyal of Seven Rivers RC&D was asked by Dr. Hawkins how his agency works. Eugene responded that they have 17 counties that they serve and at the request of the counties with impaired water bodies, the Seven Rivers RC&D will prepare a 319 plan to identify and implement management practices and perform monitoring. They will monitor for 12 months and compare to historical data. He also mentioned the Conservation Tillage Conference that Seven Rivers RC&D participates in every year with NRCS, offering a workshop day and training. The farmers share their data and show how soil health is improving each year.

Question: Chairman Jeffords asked if conservation tillage helps save on water usage?

Response: Randy Odom responded that yes, the practice helps retain water in the field and infiltrate into soil rather than runoff.

Question: Chairman Downing asked if this will become a standard or will we have to continue to incentivize farmers to implement the practice?

Response: Dr. Hawkins replied that there is approximately 30 percent conservation tillage that occurs across all agricultural land. Crop rotation makes it more difficult. Crops such as cotton, corn, soybeans and some peanuts will use conservation tillage.

David Evans was then introduced. Mr. Evans teaches practices/agricultural awareness to students. In basic agricultural education classes, soil erosion, conservation tillage, and water

use/conservation is taught. FFA holds a 5th grade Agricultural Awareness event. At the young farmer level, 20 educational meetings are held throughout the year and they bring in NRCS to assist with those outreach meetings. Approximately one-third of the people who attend are farmers. Others attend based on general interest.

Holly Anderson with the University of Georgia Cooperative Extension was asked about her role. She responded that they provide education and bring in experts to show the results of their research to farmers. Examples include specialists at the experimental station, irrigation experts and entomologists. She also works with homeowners to reduce their irrigation use on lawns which mostly relates to improved timing and use of water.

David Hall and Dustin Rushing are water educators for Cooperative Extension. They talk to farmers, hold public meetings and provide education to promote the use of cover crops. They provide an educational resource and will go into the field with the farmer to provide hands on education.

Question: Chairman Jeffords asked if the RWPs were affecting your activities and how can we improve our outreach?

Response: Tabatha Wooten mentioned field days and workshops. For 319 plans, the Seven Rivers RC&D has to implement 9 of the elements in the watershed management plan. The conservation tillage conference in February is also an opportunity. They bring in farmers that have used the practices and they present their results. Cooperative Extension spreads the message through 4H meetings and other outreach meetings and conferences.

Comment: A CM stated that we need to improve upon the percent use of conservation tillage. What is the biggest barrier – incentivization or cultural practices? We need to identify it and try to improve on it.

Outreach events should be held in the off-season when farmers are not in the field. Bring together multiple agencies to discuss topics such as the mobile irrigation lab, water sensors, proper well drilling, etc. It was suggested that one of the topics should focus on how farmers could save money and connect the benefit of management practices to economics.

Due to time limitations, Dr. Gary Hawkins is going to follow up with the panel guests on the three remaining management practices that were included with this agenda item and that information will be distributed to the Councils as a follow-up to the meeting.

3) Local Projects Overview from County Extension Agents and FFA

Dr. Hawkins initiated this discussion item and mention that the University of Georgia has a water program and they go to the schools and share information with the 4-H Clubs. Dr. Hawkins is also writing a document that could be used by County Cooperative Extension Agents to provide some guidance on how they might be able to help implement the Regional Water Plans.

Dr. Hawkins also described the University of Georgia's AgWET Program where they install sensors in cotton and peanuts fields and show farmers how to use them. They are going send

water sensors to schools and they are using them to educate the students at high schools and middle schools.

Question: Chairman Downing asked how these programs are implemented across the region – are they specific to a prioritized region or area?

Response: The program is not tailored to the Regional Water Planning Councils. They target five counties in the southeast part of Georgia and six more in the southwest part of Georgia. It was noted that EPD Seed Grants are tailored to the Regional Water Plans/Regions.

At the local FFA level, David Evans provides education on everything from crop disease, varieties and cover crops. He brings in experts on irrigation and shows farmers how they can save money by implementing management practices. He suggested that making contact with the Young Farmers Association at the local County level would be good outreach for the Regional Water Plan.

Holly Anderson helps many farmers who are starting from scratch and do not have an agricultural background. The newer generation of farmers seem to be more open to new technology (i.e., apps, sensors). Today, a fewer percentage (about 10 percent) have the background knowledge on farming and are starting out with very little to no farming experience, so education needs are important. This is a noted change in the past historical trend in which the broad majority of farmers from past generations grew up on farms and learned from working on the family farm or local farms.

Comment: Chairman Downing stated that there is a need to design the educational components around what the problems are. Entities are focused on their own projects and education needs to be better collaborated and focused.

4) EPD Permitting and Metering Activity Updates

Cliff Lewis with EPD provided an update on EPD's agricultural permitting and metering activities. In October 2016, the Governor's Compliance Task Force was charged with reviewing the metering program and recommending how to make improvements. The Task Force reviewed EPD's permitting and metering program and looked at compliance and data. The permitting has been on-going since 1988 and was found to use different formats over the years. The Task Force made suggestions for permits to be more comprehensive and to use consistent formats. On the compliance side, less than 3 percent of permittees are out of compliance which equates to approximately 25,000 acres. EPD is performing audits to ensure irrigated acres and sources of water supply are consistent with the permits. In December 2016, through Senate Bill (SB) 451, the metering program was moved to EPD. For permittees who were issued a permit prior to 2003, the State would install a meter. SB 451 also established priorities of how meters would be targeted for installation. The Flint and the Suwannee-Satilla basins hold approximately 50 percent of all issued permits, followed by the Ochlockonee and Chattahoochee Basins.

To date, the Georgia Water Planning and Policy Center (GWPPC) and Albany State University have completed 4,500 site assessments. Through this assessment process it was determined

that 3,000 permitted sites had no existing irrigation infrastructure. For these "un-meterable" sites, the permittee has 5 years to add the needed infrastructure to accommodate a meter.

Not all metering sites are created equal - they have been categorized into "Easy", "Moderate" and "Hard" categories for installation. "Hard" installations include those where heavy equipment is required for digging, or there's a change the setup at the site. EPD is focusing on the "Easy" sites first and then will work on the "Moderate" ones. The hard installations will be addressed after the "Easy" and "Moderate" ones have been completed. To date, most of the "Easy" sites have been completed and EPD is working toward completion of the "Moderate" installation sites. EPD is transitioning their database over from a Microsoft Access based system to an SQL online database that they can give users access to over the next 14 to 16 months.

EPD also suspended the practice of sending letters to permittees summarizing their historical water use based on metering data because it was cost-prohibitive to continue that communication on an annual basis to so many permit holders, but EPD stated that they will give out water use data to permittees if requested.

Question: Chairman Jeffords asked what are the typical restrictions that can be found in a permit?

Response: Cliff Lewis responded that restrictions in permits include irrigated acreage, source of water, size of pump, depth of well and stream buffer areas. There are also no more Floridan permits being issued in the Flint River Basin.

Question: A CM asked of the permits they assessed, how many were out of compliance?

Response: Cliff Lewis responded less than 3 percent. That accounts for approximately 25,000 acres out of 1.5 million acres of permitted irrigated acres.

Question: A CM asked what are the percentage of "Hard" meter installation sites?

Response: It's a fairly small amount. Most of the easy ones have already been done. 2021 is the projected date to complete the "Easy" and "Moderate" installations.

Question: How long do permittees have to get into compliance?

Response: Five years to install infrastructure and EPD will install the meter, or after that, you have to install your own meter.

5) EPD Seed Grant Opportunity Update

The PC then re-introduced Dr. Gary Hawkins who is also the recipient of an EPD Seed Grant. His proposal included three of the RWP Councils (Altamaha, Coastal and Suwannee-Satilla) and implements two of the management practices common to all the RWPs and one management practice specific to the Altamaha and Suwannee-Satilla regions.

Dr. Hawkins explained that for Management Practice NPS-2, they are currently monitoring runoff for nutrient pollutant loads from blueberry fields. For Management Practice NPSA-1, Dr. Hawkins is comparing the results of edge of field monitoring versus conservation tillage versus

traditional tillage and comparing that to the RUSLE2 model. For Management Practice WC-12, sensors at farms have been deployed at various depths and Dr. Hawkins will compare water statistics of the different conservation practices versus traditional or non-conservation measures. Dr. Hawkins' contract to perform the seed grant work was awarded by EPD on June 29th and he has up to 18 months to complete the work outlined in the grant. Dr. Hawkins also shared the University of Georgia Extension website link and explained that he will be posting updates on his work and that there is also an option to subscribe to these updates. Chairman Jeffords requested the PC to send the link to the Council Members and ask them to subscribe to the updates.

After Dr. Hawkins' update, the PC also reminded the Councils that the Fiscal Year 2019 Grant Period for the Regional Water Plan Seed Grant was announced by EPD and they are accepting proposals which are due by December 14, 2018. Proposals must include a letter of support from the Regional Water Planning Councils. A pre-application meeting with EPD is also required and must be held by November 30, 2018. The PCs are available to help with coordination and assist with linking up potential granting partners with EPD, the Councils and other interested parties who may want to participate in supporting a grant application and/or project.

6) Next steps and Continued Regional Water Plan support

The PC then covered next steps and continuing support that will be provided to the Councils through 2019. This includes Council Meeting support, which can include individual quarterly meetings and/or joint Council meetings as well as inviting representatives from the Metro District to provide updates. In addition, the PC will continue to assist the Councils in promoting the RWP and providing outreach, either through Council website updates and/or targeted outreach events.

The PC then showed the Council an example of the newly updated Georgia State Water Planning website (waterplanning.georgia.gov) as well individual Council pages. The PC explained that Councils have the ability to tailor their individual web pages and the PC will assist them with this process. In addition to the support for Seed Grant opportunities (previously discussed), the PC can also assist the Council with identifying continuing education opportunities that can then be brought to the Council at either a future meeting or webinar. The PC can send out a survey to poll members on potential topics of interest.

7) Public Comment

Alice Keyes from 100 Miles requested to make a public comment during the meeting. 100 Miles recently completed an industrial water use study for Coastal Georgia. The 100 Miles study captures current water use efficiency practices in place among some of the industries in the Coastal Georgia region. Ms. Keyes provided a brief overview of the study and some of its findings. The PC also noted that in this last round, the industrial forecast was not updated in the RWP updates so that explains some of the differences between the 100 Miles study and the current RWP industrial forecast.

8) Altamaha and Suwannee-Satilla Regional Water Planning Council Business Meetings

The Councils then broke out for their individual business meetings which are covered under a separate meeting summary.

9) Hands-On Demonstration

First, a demonstration of the mobile irrigation lab system (MILS) was provided. MILS performs an audit of a pivot system from beginning to end. As pivots age, there are issues with water quality, efficiency, etc. MILS can tell how uniformly the water is being applied and if underwatering or overwatering is occurring. In the end, this information can provide a cost savings to the farmer. Typically, a pivot that has 85 percent or higher efficiency is desired. The Georgia Soil and Water Conservation Commission, in partnership with NRCS, provides cost-free agricultural irrigation evaluations and feedback on system performance is given to the farmer in the form of charts and graphs.

Lastly, a demonstration of soil water sensors was provided. There are two types of sensors to measure water availability, resistance and capacitance. Sensors measure water availability at two depths and the sensor sends information to a data logger. On average, the equipment costs $1,600 with an annual subscription fee of $150. There is about 5 to 10 percent use of sensors across the farming community and they are typically used for high value crops. However, there is more prevalent use of sensors by farmers in the southeast Georgia region.

10) Meeting Attendance

The table below summarizes the Altamaha and Suwannee-Satilla Council Members in attendance as well as public and agency attendees.

Affiliation	Name
Altamaha Regional Water Planning Council	Ed Jeffords
	Rex Bullock
	Mark Burns
	John Roller
	Paul Stavriotis
Suwannee-Satilla Regional Water Planning Council	Scott Downing
	Eugene Dyal
	Joe Lewis
	Donald McCallum
	Grady Thompson
Georgia EPD Representatives	Cliff Lewis
	Jennifer Welte
Regional Water Planning Council Planning Contractors	Danielle Honour
	Shayne Wood

Affiliation	Name
Public/Agency Attendees:	
Georgia DNR	Don Harrison
Public	Furman Peebles
GACD/NRCS	Lakeisha Webb
	Lystashia Watkins
USDA NRCS	Randy Odom
	David Walden
Georgia Young Farmers Ass'n.	David Evans
Future Farmers of America (FFA)	Harry Tucker
Altamaha Soil and Water Conservation District	Tabatha Wooten
Altamaha Soil and Water Conservation District	Nancy Anne Conner
UGA Extension	Dustin Rushing
	David Hall
	Hunter Brannon
	Holly Anderson
	Cale Cland
UGA	Gary Hawkins
UGA SIRP	Calvin Perry
GACD	Pat E. Ray
Georgia Ass'n of Groundwater Professionals (GAGWP)	Larry Altman
Georgia Forestry Commission	Matthew Mrizek
Southern Georgia Regional Commission	Erica McLelland
Rayonier Advanced Materials	Brian Mooney
100 Miles	Alice Keyes