

## Memorandum

*To: Suwannee-Satilla Regional Water Planning Council*

*From: Shayne Wood and Danielle Honour, CDM Smith*

*Date: April 29, 2019*

*Subject: Suwannee -Satilla Regional Water Planning Council Meeting 8*

This memorandum provides the meeting summary of the Suwannee-Satilla Regional Water Planning Council (Council) Meeting held on April 24, 2019 at 41and Main in Tifton, GA. This memorandum provides a summary of the major items discussed at the Council Meeting. The meeting began at 10:30 AM and followed the agenda outlined below.

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

Council Chairman Scott Downing opened the meeting, welcomed Council Members and guests, and had everyone introduce themselves. Next, the meeting minutes were reviewed. Chairman Downing called for a Motion which was given, followed by a Second, and a vote passed approval of the previous minutes. Chairman Downing then asked Council Members (CM) to review the agenda. A motion was made to approve the agenda, followed by a Second and a vote passed to approve the agenda.

### **2) Suwannee-Satilla, Altamaha and Coastal Georgia Seed Grant Project Update**

Dr. Gary Hawkins with the Crop and Soil Science Department at the University of Georgia gave an update on the EPD seed grant which covers projects in the Suwannee-Satilla, Altamaha and Coastal Georgia regions.

The first management practice Dr. Hawkins discussed was NPS-2 which covers monitoring and determining sources of nutrient pollutant loading. His graduate student installed monitoring stations in a cotton field in Bulloch County. The project uses an H-flume to capture the water and calculate flow from runoff from the field. An ISCO sampler is used to measure water quality samples and soil moisture sensors were also installed in the field. The same type of test was performed on a conventional tillage field to compare results to the conservation tillage field. Blueberry fields in the Altamaha region were also monitored. Specifically, the nutrient movement down through beds into the subsurface tile drain system was measured. An ISCO sampler was used to test the water and hourly samples were collected. It was found that only one sample had a reading for nitrate, but other metals such as aluminum and iron were prevalent in all other samples. The preliminary conclusion is that nitrate may be low because iron bacteria are present and consuming the nitrogen. Therefore, it is difficult to understand how much nitrogen may be present in the system and they may perform a follow-up test with lysimeters to measure nitrate as it moves through the beds. They have also constructed blueberry beds to see if they can capture the nitrate through measurements using a controlled environment.

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Under the NPSA-1 management practice which encourages implementation of conservation tillage and cover crops to reduce erosion, the conservation tillage conference was recently held in February 2019 in Lakeland, GA. They are planning for the 20th annual conference coming up in 2020 and Dr. Hawkins would like to include more field days in the Suwannee-Satilla and Altamaha regions. He is looking for volunteers to see if there are farmers who would be willing to let people come out and see their fields.

Under the WC-12 management practice which encourages and improves use of crop management technologies and techniques, Dr. Hawkins' graduate student has installed soil moisture sensors at varying depths throughout the fields to see how much water is moving through the soil. These have been installed in farms in Bulloch County, Pulaski, and the Watkinsville areas. They are currently reviewing the data to see the differences that may exist between sites.

Along with this management practice, Dr. Hawkins is also studying water use in bell and jalapeno peppers. The study uses three beds with varied drip irrigation amounts (i.e., normal water application, 50% of the normal application, and double the amount of water normally applied). Dr. Hawkins found that reducing water application by half did not result in losing any yield or quality of the peppers whereas doubling the amount of water killed the plants. He presented these findings in India at the Global Water Security Conference in October 2018 and used concepts from the RWP as examples for farmers in India to apply similar practices.

Question/Comment: Chairman Downing asked how does the quantity of water affect taste?

Response: Dr. Hawkins responded that you cannot tell the difference in sweetness with the 50% water application.

Under the GW-2 management practice which promotes land use practices that sustain and protect aquifer recharge areas, Dr. Hawkins developed a 1-hour program that County extension agents can use to educate homeowners on their wells. The agents attend a 4- to 6-hour training on various aspects including well construction, operation and hydrogeography. County agents can work with homeowners to collect well water samples once a year. Samples are brought to the University of Georgia lab and the results are sent back to the County extension agent and to the homeowner. If problems are identified (e.g., high pH, high iron, high copper, etc.), a mitigation measure is recommended to address it. Agents are trained to identify where the source is coming from so that homeowners can learn how to start diagnosing problems before they call the Extension Service for assistance.

Under the EDU-1 management practice which promotes and supports water conservation programs, the County extension agents in the Altamaha region area are working to promote water conservation programs including outreach through FFA meetings and 4-H water festivals. They are hoping to get water educators involved throughout the state and provided examples of education programs such as Envirosapes and the flushable/non-flushable game. Soil moisture sensors have been distributed to 11 schools and they work with the teachers to install these in school gardens so that students can learn about farming practices.

Question/Comment: A CM asked about cover crops and different type crops and any comparisons?

Response: Dr. Hawkins responded that some sites use rye only, while other sites use a combination of clover, peas and rye.

Question/Comment: A CM asked if Dr. Hawkins does any work in Flint River basin?

Response: Dr. Hawkins responded that no, he deals mostly with small drip tubes on smaller farms which are not as prevalent in the Flint River basin.

Question/Comment: The EPD representative stated that he gets asked the question how are the plans being used? This is incredible that Dr. Hawkins is implementing projects that refer back to specific management practices that come from the Council's plan. This information is being shared globally beyond just the County Extension plans.

Question/Comment: Chairman Downing stated we are constantly looking for ways to spend grant funding to get real world practical information that is specific to our Council area which is very exciting.

Question/Comment: A CM commented that it would be interesting to see which practices (strip till, minimum till versus conservation tillage) hold more water.

Question/Comment: A CM noted that the work that Dr. Hawkins is doing provides real world data.

### **3) Agricultural Metering Program Update**

Next, Marjie Dickey with EPD provided an update to the Council on the agricultural metering program. The metering program was moved to EPD in 2016 and the first wave of work was contracted with the Georgia Water Planning and Policy Center (GWPPC) at Albany State to perform site assessments. When GWPPC went out to these sites, they found that some sites did not need a meter because no actual irrigation was occurring. For sites where installation of meters are needed, the conditions at the site are being taken into consideration, and the initial focus is on installations at easy and moderate installation sites.

The initial focus for installation of agricultural meters is in the Flint, Chattahoochee, Suwannee and Ochlockonee river basins. The program will also continue to contract for sites that need repair or replacement. There is now a renewed focus on meters that have been repaired and replaced to confirm they are working. EPD has contracted with three contractors to do new installations and replace/repair existing meters. During on-farm visits by GWPPC and its contractors, site assessments are being made that have provided a lot of good information before the contractor goes out to the site for installations, replacements or repairs. The program is working to avoid being out on the fields when farmers have systems running during the growing season, so the contractors are performing installations from October to March except for emergency repairs. The next wave of work will be focused on maintaining meters we already have out there. EPD is also working on a plan to replace meters that seem to be working but have been in the field for 10+ years, so they can be replaced before they fail. The plan will held

ensure metering data is not lost for those sites. The focus for that plan will be on the Flint and Chattahoochee basins first and then Suwannee and Ochlocknee basins after that.

Comment: Cliff Lewis (EPD) stated that to date, the program has found 182 permits that were not in use and those permits were voluntarily taken off the books with consent from the permit holders. That number of permits equates to a significant amount of irrigated acreage.

Question/Comment: A CM asked if there are any technology upgrades with new installations?

Response: Ms. Dickey replied that as of now, there is no telemetry on these meters due to costs. There are 115 sites where monthly readings are being made and the program is testing some telemetry units with some of those. Other sites are read annually. With the expense, the program would not be able to conduct telemetry at every site but they are looking at different ways to test some of the newer technologies.

Question/Comment: A CM asked if EPD is reading all of the meters?

Response: Ms. Dickey stated that EPD has to contract with the Georgia Forestry Commission to conduct meter readings. EPD also has to contract out the installs/repairs/replacements, as per the statute.

Question/Comment: A CM asked what was being done with the metering data?

Response: Ms. Dickey stated that EPD's Hydrology Unit uses it for water planning. The data will be used for updates to the agricultural water use forecast to . It will also provide better information on the source of water associated with certain crops to confirm earlier assumptions made in the forecasting efforts.

Question/Comment: Is any of the work Dr. Kennedy is doing appropriate to update this Council with?

Response: The EPD representative responded that right now, most of Dr. Kennedy's work is aimed at managing the saltwater intrusion plume in the coastal region. Modeling has shown that the location/extents of the plume has not changed, and they have implemented reductions in water use in the Savannah area. The 15 MGD reduction in the "Red Zone," Chatham County and southern Effingham County, was implemented to manage the rate of migration of saltwater intrusion from Hilton Head to Savannah as the migration itself cannot really be stopped.

Question/Comment: A CM stated that groundwater withdrawals were shut down in the Flint basin, and wondered whether a similar situation would happen in the Suwannee-Satilla region.

Response: The EPD representative responded that the current RWP shows that the Suwannee-Satilla region currently has enough groundwater to meet future needs. In addition, EPD is funding improvements to the groundwater modeling in southwest Georgia to convert the existing steady state model to a transient model and conduct further refinements.

Question/Comment: Chairman Downing stated that one of the concerns of the Council is that groundwater wells have been installed and permitted, but actual use varied from the permitted

amounts. Chairman Downing asked about whether those discrepancies have been looked at vs. actual metering data and irrigated acreage.

Response: Ms. Dickey stated that EPD is working with their Hydrology Unit so that the actual numbers from the four priority basins where meters are being installed can be incorporated into the hydrologic modeling efforts. As of now, the state has not moved outside of the four priority basins. After next year, EPD will determine where to focus next for new meter installations.

Question/Comment: Chairman Downing stated that modeling is important but we don't want to take permitted capacity away.

Response: Ms. Dickey responded that EPD is working with the GWPPC and to determine the best approach for maintaining and updating wetted acreage information that is vital to the forecast efforts. Cliff Lewis stated that permit applicants also submit maps of actual irrigated acreages so we have a better idea of how they are irrigating. Approximately 7,000 sites were analyzed for wetted acreage by the GWPPC and it is something EPD incorporates as the agricultural water use forecasts are updated.

#### **4) St. Mary's River Management Committee Update**

Chip Campbell with the St. Mary's River Management Committee provided an overview of the committee and their current activities. The committee was formed in the 1990s during a discussion over having the St. Mary's River designated as a National Wild and Scenic River. Mr. Campbell has served on the committee since 2002. The river was found to qualify for the designation but not recommended due to local concerns. As a result, an interlocal agreement was formed between the Counties that share the St. Mary's River and those Counties work collaboratively to manage and implement a management plan at the local level with assistance and cooperation from states agencies. The Committee held a lot of public meetings to develop their management plan and have been working on implementation for the last 10 years. The goals of the management plan include minimum lot sizes/setbacks for riverfront properties for consistency along the entire length of river. In Camden and Charlton Counties, they achieved a minimum 2-acre lot size and a 100-foot setback from the river. In Nassau County (FL), they have a 1-acre minimum lot size. The committee has also looked at state level programs including Outstanding Florida Waters, however the landowners were concerned about the potential impact on their property and the extent of regulatory requirements from Florida coming into Georgia. One benefit that came out of this discussion was an annual river cleanup. The White Oak Plantation, which is comprised of 10,000 acres on the river, is now a conservation center and they host a dinner at the close of the cleanup. The Committee was also being asked to serve in an advocacy role as different policy discussions got underway. As the Committee is quasi-government, that role wasn't a good fit but a riverkeeper program spun off from the Committee that could act in the advocacy role.

Related to water quality impairments, there was a significant impairment on Horsepen Creek in Camden County. The Temple Landing area is a riverfront community with small lots where there was septic tank contamination creating hot spots along the river. The Committee started a campaign of community outreach and an implementation plan was put in place. The Committee

received a 319(h) grant which helped with education to address public health issues and the costs to rehabilitate or replace approximately 50 septic tanks in that area. They are already seeing improvements in the river as a result of that project. The Committee uses a volunteer base for sampling teams who are trained under the Georgia Adopt-A-Stream program, and through this work they have been able to develop a more comprehensive database for water quality sampling.

The Committee is currently starting a new implementation plan for Charlton County and is going to focus on obtaining a 319(h) grant. Following this effort, they will then focus on Florida.

Question/Comment: Chairman Downing asked about the main difference between the new septic tanks and the older septic tanks.

Response: Mr. Campbell replied that some of the homeowners were previously using ad hoc 55-gallon drums with a drainfield as their septic system. For the collapsed septic systems, they have pumped those out and most of the newly installed systems are now using mounds.

Question/Comment: A CM asked if the Counties grandfathered in the older homes with less than 100 feet for the setback requirements.

Response: Mr. Campbell stated that yes, they did.

Question/Comment: The PC asked if the new septic systems installed were more of the traditional type systems or were they the advanced treatment units that do a better job of treating some of the nutrients?

Response: Mr. Campbell replied that the new ones are definitely better than what was in place, and that a lot of the funding match came from Camden County for the soil used for the mounding for the new septic systems.

Question/Comment: The EPD representative asked what is the timeframe for developing the watershed management plan for Camden County?

Response: Mr. Campbell stated that he doesn't expect it to take too long since they are working under an older plan that had expired. Once it is in place, the Committee will apply for 319(h) grant funding.

## **5) Supreme Court Lawsuit Florida v. Georgia**

Jennifer Welte from Georgia EPD provided an overview of the Supreme Court lawsuit between Florida and Georgia regarding the waters within the Apalachicola-Chattahoochee-Flint (ACF) River Basin. The lawsuit began in 2013, when Florida petitioned the Supreme Court for an equitable apportionment of water in the ACF system, seeking to have more water allocated towards them from the ACF by placing a water allocation cap on Georgia at the state line.

The Supreme Court assigned a Special Master to review the complaint. In February 2017, the Special Master provided the Supreme Court with his report and recommendations. In the recommendations, the Special Master suggested that Florida could not receive any relief from a cap on Georgia's water use given operation of the Corps of Engineer's operation of storage

facilities on the Chattahoochee River. Oral arguments were held in front of the Supreme Court in January 2018. In June 2018, the Supreme Court ruled that the Special Master used too strict of a standard and remanded the case back to the Special Master.

A new Special Master was appointed and is currently overseeing the next phase of this case. He has since issued case management orders and a schedule, and has ruled that no new evidence will be collected in this phase. The Special Master specified questions for the two states to answer in briefs based on the evidence already submitted. The Special Master will review the briefs and decide whether or not to hold a hearing, where the attorneys for each side can present their arguments in person. The Special Master would then issue a new report and recommendations to the Supreme Court. The next term of the Supreme Court begins in October and goes through June; the earliest we may have a decision from the Supreme Court could be June 2020.

Question/Comment: A CM asked if economic considerations are being taken into account.

Response: The EPD Representative commented that because it is an equitable apportionment case, economic harm is considered. In this case, consideration is being given to the value of Florida's oyster industry vs. the value of Georgia's agricultural industry.

Question/Comment: Chairman Downing asked why would Florida aim for such a large reduction if pumping has been going on forever?

Response: The EPD Representative was unable to answer this question, but noted that one contributor impacting Florida's oyster industry appears to be over fishing. Florida took the position that they only needed to prove that injury had occurred. However, based on the court proceedings they are now being asked to show what that injury is and what benefit will be gained from the proposed cap.

Question/Comment: A CM asked if mussels survive better during low water levels?

Response: The EPD representative stated that mussels don't replicate as well during high flow conditions. There are four federally protected species of mussels in the Flint River system. During drought periods, their populations tend to come back.

Question/Comment: A CM asked if Florida wins and they get more water and the mussels are a protected species - how does it impact the mussels?

Response: The EPD representative responded that these are two separate issues (mussels and oysters) that have a connection and that is flow. The U.S. Fish and Wildlife Service has said we need to have the right flows in the right 4 or 5 locations in Flint River Basin where the mussels propagate.

Question/Comment: A CM asked what is the impact on agriculture in Georgia?

Response: The EPD representative responded Georgia is working on a solution to better manage its resource; this is the reason the moratorium was issued. Continued solutions involve a habitat conservation plan that would allow farmers to use water while protecting the species

of concern. The State of Georgia is not asking to use more water, just to keep what we already have. Metering helps to quantify water conservation efforts in the Flint basin as well as with forecasting. The Flint River Basin has water conservation efficiency requirements for agricultural use. Through the work that the GWPPC has done, they are reporting that the vast majority of systems used in the Lower Flint are the low pressure drop nozzle systems which are 90 percent efficient in terms of water use. 85% of the systems in the Lower Flint basin are metered.

Question/Comment: A CM stated that we are dealing with Mexico and the geopolitics of food supply –our food supply is coming more from this area – will that enter into the equation?

Response: Chairman Downing responded that some agriculture production from California is already moving to the southeast – we are already seeing outside producers coming here to inquire about growing crops here.

Question/Comment: A CM asked what is the current value of agriculture in Georgia?

Response: The EPD representative responded that it is valued at approximately \$75B in the State of Georgia, \$20B is at risk due to the lawsuit.

Question/Comment: Chairman Downing stated that this is the reason why the work of the Council needs to continue. We want to have the information to protect the resource and we want to be ahead of the issues before they develop. We need to stay diligent in doing our updates and following our standard operating procedures (SOPs). We don't have resources like a state mandated water district. We have to go out to find funding and grants and viable projects and it is harder for us to put together. This is the only Council where headwaters of every river in our region originate inside our boundaries.

Question/Comment: A CM asked what is USDA grant status?

Response: The PC responded that Mark Masters is working on that with the University of Florida (UF) Water Institute and we may try to bring Mark Masters or Wendy Graham to the next meeting for an update.

## **6) Discuss Expectations for the Water Planning Councils in the Future – Objectives for Implementation, Funding, Appointments/Reappointments**

Next, Jennifer Welte from Georgia EPD provided an overview for this agenda item. EPD received \$1.3M this year in funding from the State and EPD works with the planning contractors to pass that on to Councils to continue their work. EPD also set up a seed grant program that requires the applicant to bring a match and these have worked well. For the technical work we fund, EPD maximizes the federal monies we get to prepare the technical information you use for planning. We anticipate the next plan update to start the first part of 2020 and will be more focused on implementation. The State Water Plan created the RWPs to inform GEFA funding allocations and EPD uses the RWPs to inform permitting and permit evaluations, decisions and reissuance of permits. We reviewed recent GEFA projects at the last meeting and we'll continue to track those. EPD staff work with the elements of the RWP which has a good tie to wastewater



permitting – our program that models those systems is the same program that sets limits for those facilities.

For agriculture, we'll continue to collect data and partner and collaborate with entities like UGA and use the RWPs to help inform decisions on what should be considered for implementation.

Question/Comment: A CM stated that we may be underestimating the amount of strip tilling that is going on. The majority of land in our area that is farmed is not using cover crops.

Question/Comment: Chairman Downing asked what are the expectations of this group from EPD?

Response: Jennifer stated that the State Water Plan approved by the legislature created the Councils and the requirement for 5-year plans. We will continue to update our plans on a 5-year cycle. For our Councils, many members are at the 10-year mark and the last movement on appointments was at the end of 2014 through 2016 for some of the Councils. Right now, EPD is gathering the list of members who have been active and how many vacancies we have – any recommendations we have we are putting forward. Jennifer stated that it's a priority in moving those appointments forward with Director's office. The process goes first to the Governor, the Lieutenant Governor and then the Speaker of the House. Jennifer requested to have council members let her know if they are not interested in being re-appointed or if they have other recommendations.

## **7) Public Comments/Local Elected Official Comments and Next Steps/Wrap Up**

Chairman Downing asked about meeting frequency and would like to know if the Council needs to meet more often or if twice per year is enough. He asked members to provide him feedback outside of this meeting regarding the frequency. Next Chairman Downing asked if there was anyone wishing to make a comment.

The representative from the WWALS Watershed Coalition (Suwannee Riverkeeper) stated that EPD is conducting its triennial review of water quality standards and their group is advocating to change the use from fishing to recreational for the Suwannee River as more people are using the water for swimming and boating.

Next steps and future topics were discussed. The Council expressed an interest in having Dr. Kennedy speak at a future meeting. As the transient groundwater model is updated, EPD is preparing the information to share with Councils sometime this fall.

Question/Comment: Jennifer Welte highlighted the outreach efforts by EPD including conferences, working with ACCG, outreach meetings, and sharing information on the RWPs with elected officials.

Question/Comment: Dr. Gary Hawkins stated that seed grants are coming up again soon and asked for project ideas from the Council. He said that Eugene Dyal is a good resource or talk to Shayne Wood (PC). EPD is shifting the application window and the advertisement will be announced in July and applications are due in October.

Question/Comment: A CM stated that water levels have not changed in 40 years and he doesn't see anything we should be alarmed about.

Response: Chairman Downing state that pressure and flow are the issue – some of the springs don't run in the summer anymore.

The meeting adjourned at approximately 2:00 PM.

## **8) Meeting Attendance**

Suwannee- Satilla Regional Water Planning Council members in attendance:

- Ben Copeland, Scott Downing, Eugene Dyal, Joe Lewis, Rusty McCall, Donald McCallum, Grady Thompson, Doyle Weltzbarker, James Willis and Tom Putnam (as a proxy for Wesley Langdale)

Georgia EPD Representative in attendance:

- Cliff Lewis, Jennifer Welte, Marjie Dickey

Regional Water Planning Council contractors in attendance:

- Danielle Honour and Shayne Wood (CDM Smith)

Public/Agency attendees:

- Corey Hull, South Georgia Regional Commission
- Chip Campbell, St. Mary's River Management Committee
- Emily Ryan and Amy Brown, Suwannee River Water Management District
- Gretchen Quarterman, WWALS Watershed Coalition (Suwannee Riverkeeper)