Suwannee-Satilla Regional Water Planning Council Meeting

November 2, 2022

GEORGIA
WATER PLANNING
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Council Business
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Council Business

- Welcome and Introductions
- Approve meeting summary from June 9, 2022, Council Meeting
- Approve meeting agenda

Council Meeting Agenda

Georgia's State Water Plan

Council Meeting
Suwannee-Satilla Regional Water Council
Draft Agenda – November 2, 2022

Objectives:

1) Review Updated Draft Sections of the Regional Water Plan
2) Receive updates on the Water Quality Resource Assessments
3) Receive updates on the Surface Water Resource Assessments, Including Discussion on Recreational Metrics
4) Review of Management Practices and Discussion of Regional Water Plan Updating Process/Schedule

10:00 – 10:15 a.m.	Welcome and Introductions
	Approve meeting minutes from June 9, 2022, Council Meeting
	Approve meeting agenda
10:15 - 10:45 a.m.	Review Updated Draft Sections of the Regional Water Plan (Shayne Wood, CDM Smith)
10:45 - 11:00 a.m.	Seed Grant Updates (Shayne Wood, CDM Smith)
11:00 - 12:00 p.m.	Receive updates from EPD on Water Quality Resource Assessments (Dr. Elizabeth Booth, Georgia EPD)
12:00 – 12:15 p.m.	Updates from EPD (Cliff Lewis, Georgia EPD)
12:15 - 12:45 p.m.	Lunch
12:45 - 1:45 p.m.	Surface Water Availability Resource Assessments – Discussion with Ecotour Outfitters from the Region on Recreation Metrics (Dr. Wei Zeng, Georgia EPD, Suwannee River Outfitters & Lodge (Fargo, GA), Southern Paddling Guide (Valdosta, GA) Okefenokee Adventures (Folkston, GA)
1:45 - 2:15 p.m.	Review of Management Practices and Discussion of Regional Water Plan Updating Process/Schedule (Shayne Wood, CDM Smith)
2:15 - 2:30 p.m.	Discussion
	Next Steps / Public Comments /Local Elected Official Comments
	Wrap Up
2:30 p.m.	Adjourn

Review Updated Draft Sections of Regional Water Plan

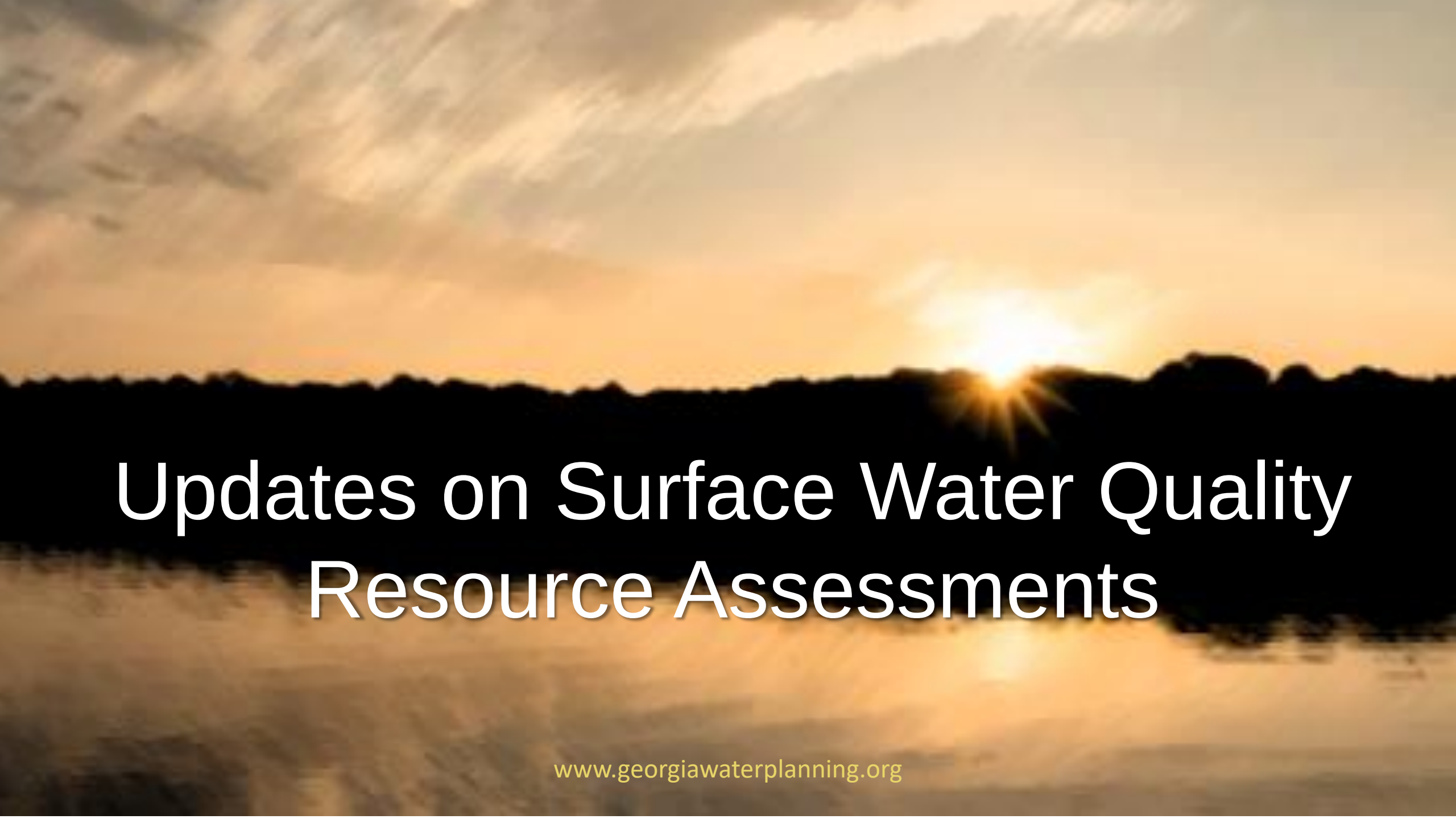
www.georgiawaterplanning.org

Seed Grant Updates

www.georgiawaterplanning.org

Seed Grant Updates

- South Georgia Regional Commission – Corey Hull and Megan Parker
- Others?
- Notes for up-coming grant cycle:
  - Discuss gameplan for future Seed Grant Projects and the Application Process
  - Grant awards are limited to $75,000 and the project period is limited to thirty (30) months in duration.
  - Applicants must attend a pre-application meeting with EPD by October 15th each year and applications must be e-mailed by October each year.
  - Contact Joyce McClain, (470) 251-2761, joyce.mcclain@dnr.ga.gov

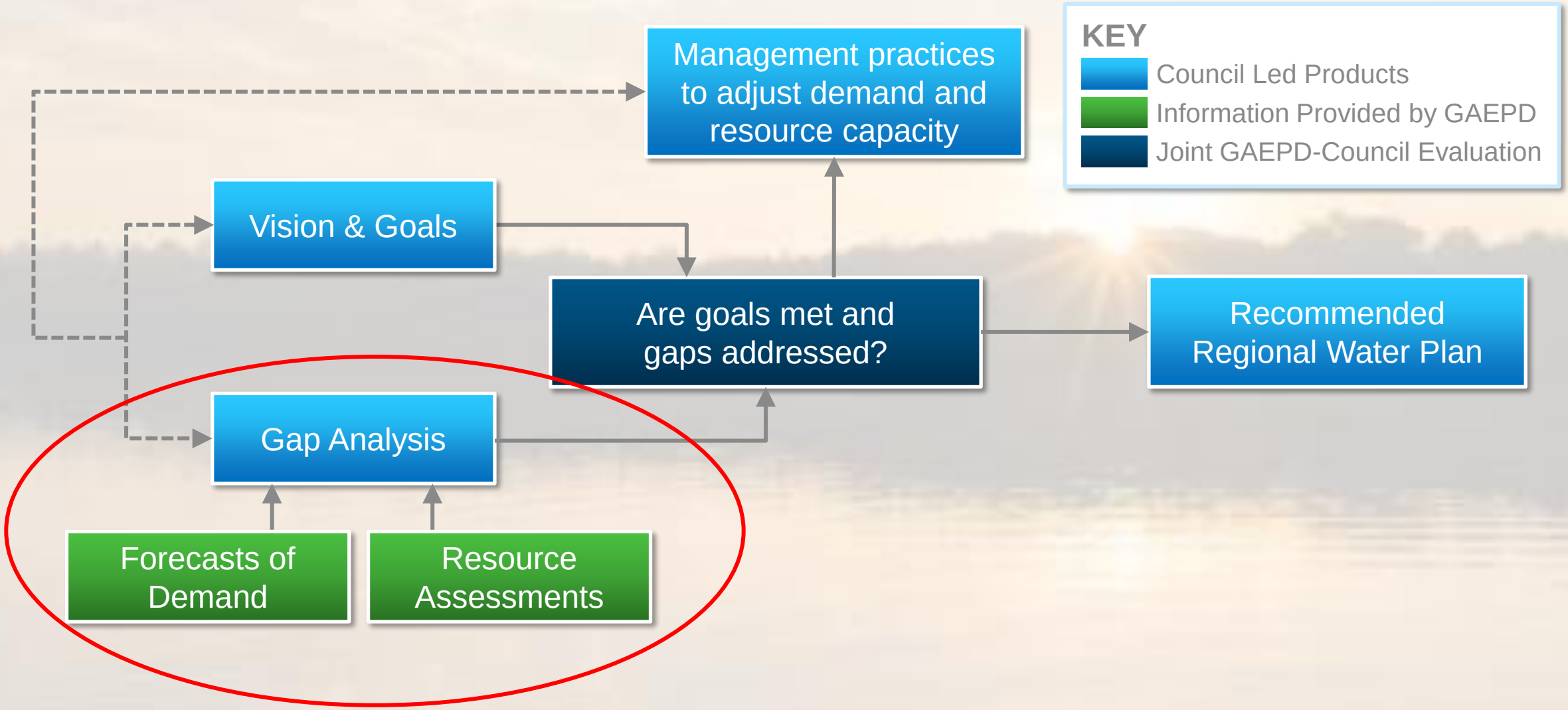


Updates on Surface Water Quality Resource Assessments

www.georgiawaterplanning.org


Updates from EPD
www.georgiawaterplanning.org

Planning Process Diagram

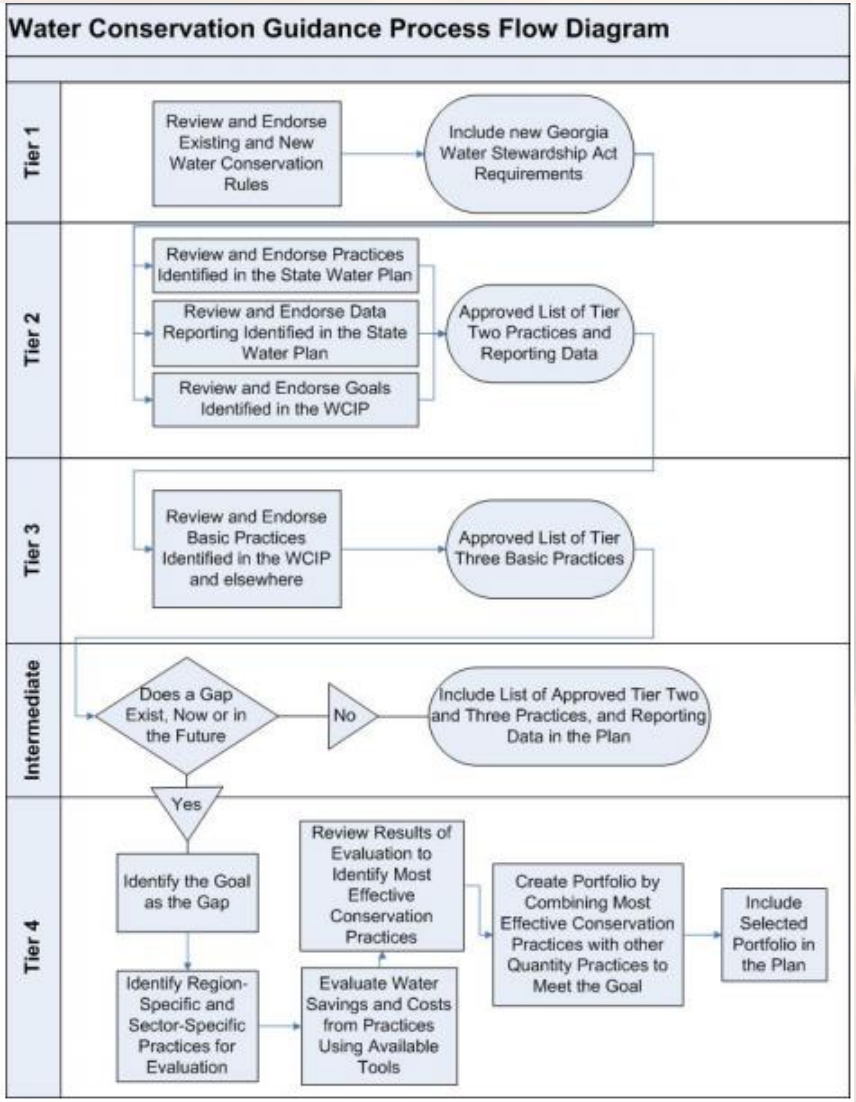


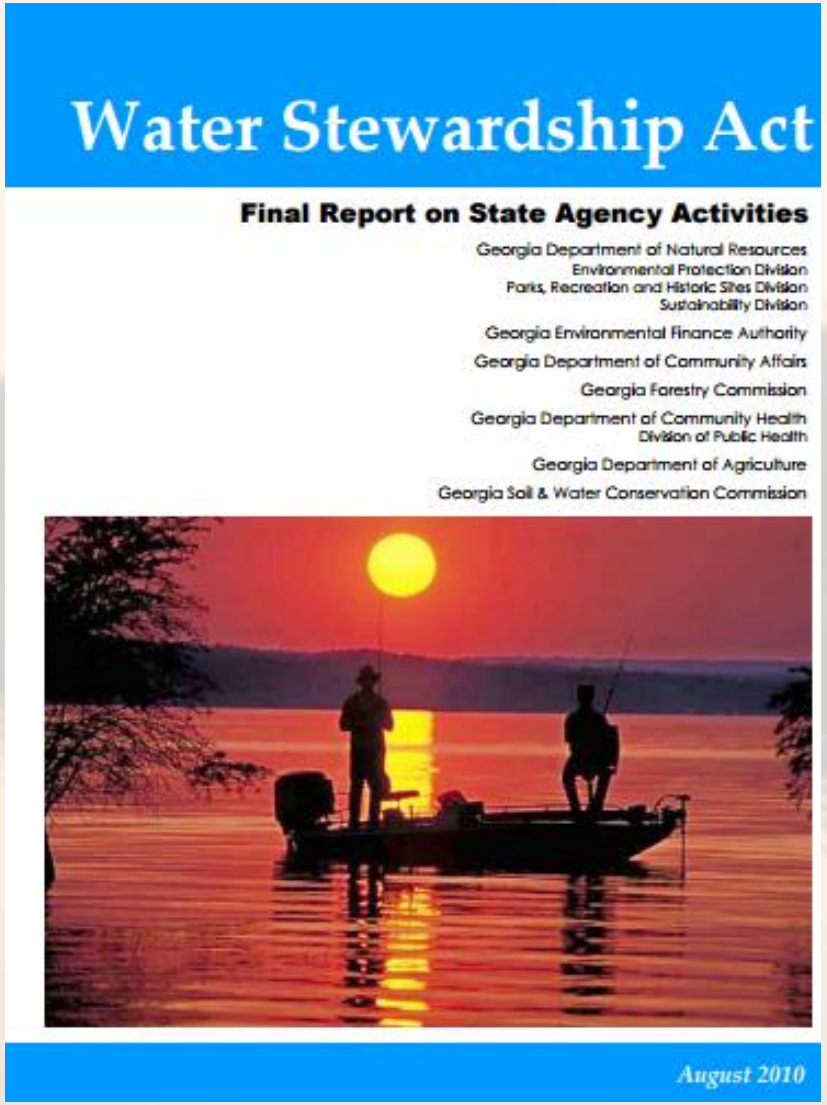

Lunch

Surface Water Availability Resource Assessments – Discussion with Ecotour Outfitters from the Region on Recreation Metrics

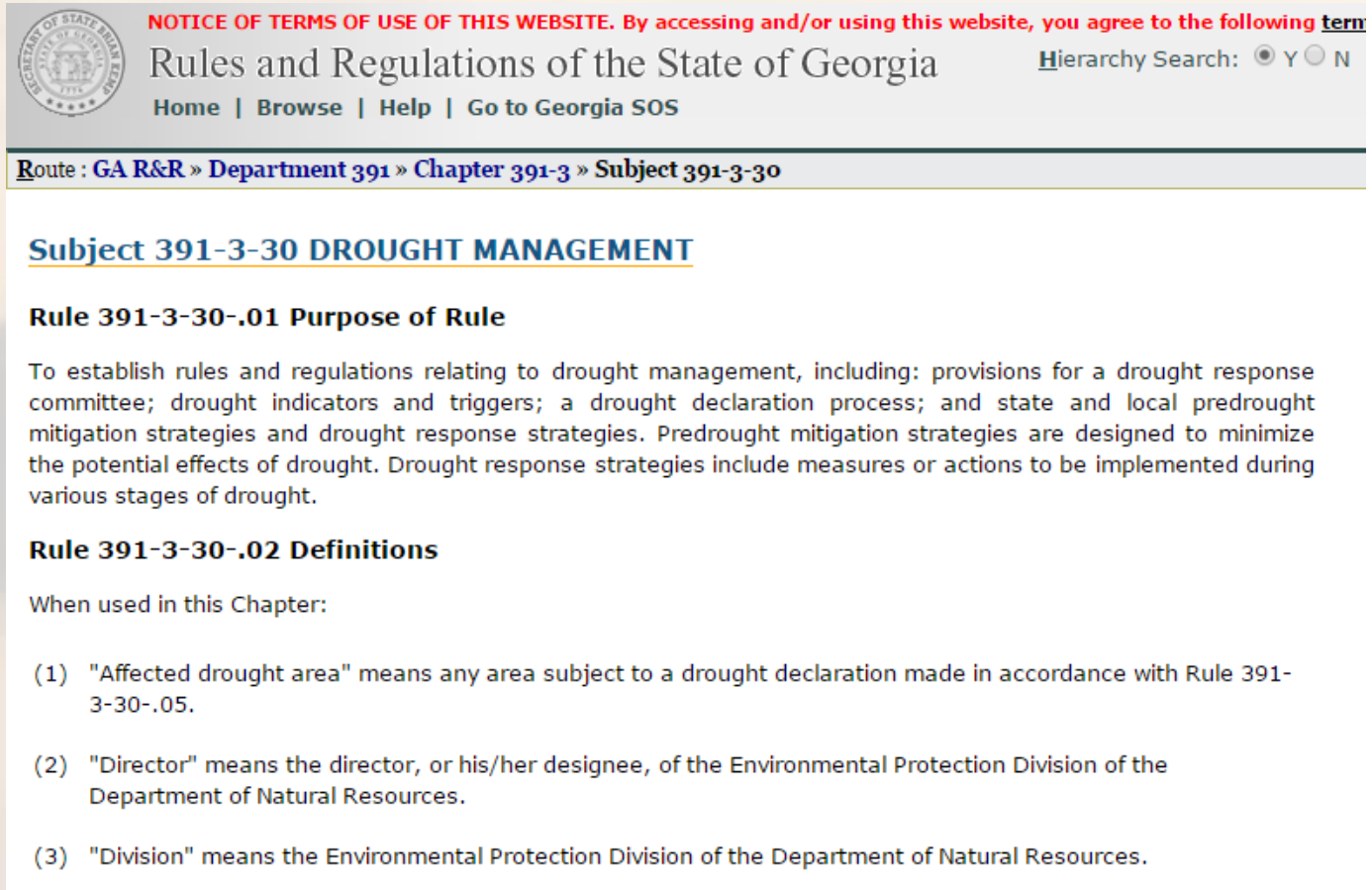

Review of Management Practices
www.georgiawaterplanning.org

Water Conservation is a Priority Management Practice





Drought Management Rules Updated in August 2015



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Route : GA R&R » Department 391 » Chapter 391-3 » Subject 391-3-30

Subject 391-3-30 DROUGHT MANAGEMENT

Rule 391-3-30-.01 Purpose of Rule

To establish rules and regulations relating to drought management, including: provisions for a drought response committee; drought indicators and triggers; a drought declaration process; and state and local predrought mitigation strategies and drought response strategies. Predrought mitigation strategies are designed to minimize the potential effects of drought. Drought response strategies include measures or actions to be implemented during various stages of drought.

Rule 391-3-30-.02 Definitions

When used in this Chapter:

(1) "Affected drought area" means any area subject to a drought declaration made in accordance with Rule 391-3-30-.05.

(2) "Director" means the director, or his/her designee, of the Environmental Protection Division of the Department of Natural Resources.

(3) "Division" means the Environmental Protection Division of the Department of Natural Resources.

State regulations address the following water conservation practices:

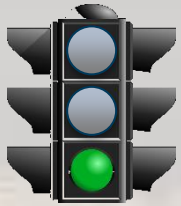
- Submittal of water conservation plans by withdrawal permittees and demonstration by water withdrawal permittees of progress toward water conservation goals or water efficiency standards (Ga. Comp. R. & Regs R. 391-3-6-.07(4) and 391-3-2-.04(11))
- Landscape irrigation limits based on Drought Response Level and as required by Ga. Comp. R. & Regs R. 391-3-30-.03 (with exemptions)
- Even-odd watering restrictions for non-irrigation outdoor water uses during Drought Response Level 2 and 3 (Ga. Comp. R. & Regs R. 391-3-30)
- Car wash facility best management practices and certification requirements (Ga. Comp. R. & Regs R. 391-31-.03)
- Water loss auditing requirements for public water systems (serving more than 3,300 individuals), according to IWA/AWWA Water Audit Method[1] (Ga. Comp. R. & Regs R. 391-3-33, OCGA §12-5-4.1)
- Installation of submeters in multiunit residential buildings and certain retail and light industrial buildings granted a permit for construction after July 1, 2012 (OCGA 12-5-180.1)
- Building code standards for high efficiency plumbing fixtures in new construction after July 1, 2012 (OCGA 8-2-3)
- Building code standards for high efficiency cooling towers in new construction permitted after July 1, 2012 (OCGA 8-2-23)

Additionally, the Council supports and encourages the adoption of voluntary water conservation measures. Utilize existing incentive programs to support the use of these practices.

2011 RWP Recommended Management Practices

Table 6-1: Management Practices Selected for the Suwannee-Satilla Region

Management Practice Number	Issue(s) to be Addressed by Action(s)	Description/Definition of Action	Relationship of Action or Issue to Vision and Goals (Section 1.4)
Action Needed - Address Current and Future Surface Water Use in Gap Areas **Data Collection/Additional Research (DCAR)** to confirm frequency, duration, severity, and drivers of surface water gaps and identify significant causes (climate, timing, water use, land cover, etc.) of 7Q10 low flow conditions and advance research/feasibility of potential solutions			
DCAR-1[1] Collect Agricultural Consumption Data; Refine Resource Assessment	Improve understanding and quantification of agricultural water use and the projected surface water gaps on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta (hereafter referred to as "surface water gaps")	Acquire additional data/information on agricultural consumptive use to confirm or refine if agricultural consumption is less than 100% consumptive Conduct "modeling scenario analysis to bracket a reasonable range of consumption" with Resource Assessment models with "new" information on consumptive use to assess effect on surface water gap	1,4,5,13



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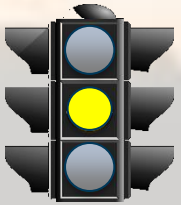
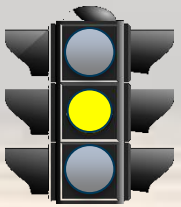
DCAR-2[1] Source of Supply Data to Refine Forecasts		Refine surface water agricultural forecasts and Resource Assessment models to improve data on source of supply and timing/operation of farm ponds and dual-source irrigation systems	1,4,5,13
DCAR-3[1] Improve Forecast and Resource Data; Analyze Storage Impacts on Gaps		Refine and improve surface water Resource Assessment and agricultural forecasts to address spatial and temporal hydrologic variations (i.e., including but not limited to evapotranspiration, infiltration, runoff, and groundwater/surface water interconnections) in relationship to forecasts, climate conditions, and other non-water use variables. This includes developing a better understanding of agricultural and residential water storage systems (ponds) and their effect on low flow conditions.	1,4,5,13





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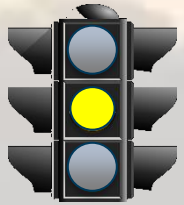
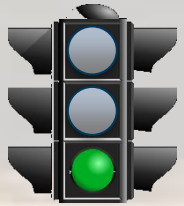
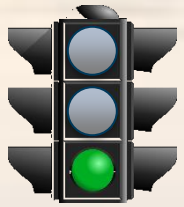
DCAR-4[1] Improve Data Quality and Analysis Capabilities	Obtain additional data and improved understanding of actual versus forecasted water use	Continue to fund, improve, and incorporate metering data regarding agricultural water use; Collect and use this information in Water Plan updates, including expanding the number of GSWCC continuously monitored real-time meter sites in surface water gap areas	5,6,13
DCAR-5[1] Irrigation Efficiency Education and Research	Improvement of surface water flows via reduced surface water use while maintaining/improving crop yields	Collaborate/support research (In-State University, State, and Corporate) on improved irrigation efficiency measures and development of lower water use crops and lower water use plant strains for existing and future crop types	5,6,13
DCAR-6[1] Understand Optimum Application Methods		Improve education and research on when and how much water is needed to maximize crop yield with efficient irrigation	5,6,13







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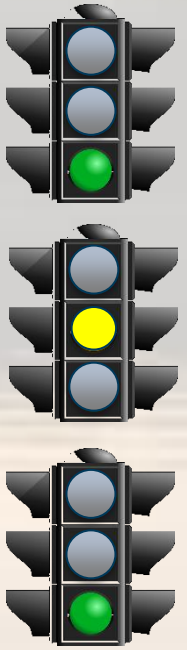
DCAR-7 Minimize Groundwater Impacts to Surface Water	Improvement of surface water flows in areas where groundwater and surface water are hydraulically connected and groundwater use impacts surface water flows	Promote management practices and educate water users to minimize impacts to surface water associated with excessive pumping/use of shallow/surficial aquifers that may impact surface water flows	1,5,6,13
DCAR-8 Analyze Addressing Extreme Conditions	Evaluate the cost versus benefit of closing the largest, most infrequent surface water gaps	Conduct analysis of the socioeconomic benefits and cost in comparison to ecological benefits of addressing surface water gaps that are larger in magnitude, but occur infrequently	1,5,11
DCAR-9 Study Potential Use of Aquifers to Address Gaps	Improvement of surface water flows (in gaps areas)	Conduct research to determine the feasibility and potential benefits and limitations of aquifer storage and recovery for confined aquifers; and determine the feasibility and potential benefits to recharge surficial aquifers to increase stream baseflow to address gaps	4,5,6,7



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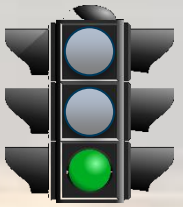
DCAR-10 Restoration Impact on Low Flow Conditions Analysis	Examine potential role of wetlands restoration and water retention structures in addressing surface water low flow conditions. Evaluate implementation considerations for each option.	Develop plan of study and research opportunities and limitations associated with improving river flow conditions via creation/restoration of wetlands and potential water retention structures including streams. If feasible, identify potential location(s) and estimate improvements to stream flow conditions. Identify incentives to make this a viable water supply option and develop a cost-benefit analysis of these incentives.	4,8



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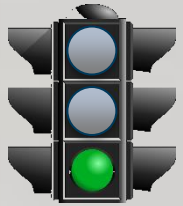
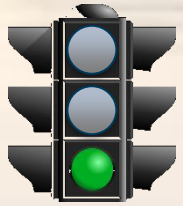
Action Needed - Water Conservation (WC) - Address current and future gaps and meet water needs by efficient water use. The Suwannee-Satilla Council supports the 25 water conservation goals contained in the March 2010 Water Conservation Implementation Plan (WCIP). Note: Water Conservation Tiers can be found here: http://www.gawaterplanning.org/documents/DetailedGuidanceforEvaluatingPracticestoManageDemand-WebDocument_000.pdf			
WC-1 Tier 1 and Tier 2 Measures for Municipal and Industrial Users	Help meet current and forecasted municipal and industrial surface water and groundwater supply needs throughout the region	Encourage Municipal and Industrial water users to continue implementation and adherence to Tier 3 and Tier 4 practices Water Stewardship Act of 2010 and 2015 rules for public water systems to improve water supply efficiency through water loss audit and water loss control programs (391-3-33) by local governments/utilities	6
WC-2 Tier 1 and Tier 2 Measures for Agricultural Users	Help meet current and forecasted agricultural surface water and groundwater supply needs throughout the region	Encourage implementation of Tier 1 and Tier 2 conservation measures and adherence to WCIP by agricultural and surface water groundwater users	6





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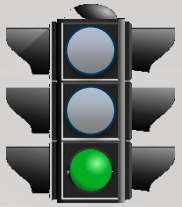
Action Needed - Water Conservation (WC) Continued - Meet current and future gaps and needs by efficient agricultural water use - Tier 3 Conservation Practices[1]			
WC-3 Audits	- Help meet current and forecasted agricultural ground and surface water supply needs - Help address surface water gaps on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta	Conduct irrigation audits	6,13
WC-4 Metering		Meter irrigation systems	
WC-5 Inspections		Inspect pipes and plumbing to control water loss	



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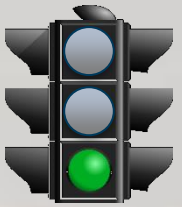
Action Needed - Water Conservation (WC) Continued - Meet current and future gaps and needs by efficient agricultural water use - Tier 3 Conservation Practices[1]			
WC-6 Minimize High-Pressure Systems	- Help meet current and forecasted agricultural ground and surface water supply needs - Help address surface water gaps on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta	Minimize or eliminate the use of high-pressure spray guns on fixed and traveler systems where feasible	6,13
WC-7 Efficient Planting Methods		Utilize cropping and crop rotation methods that promote efficiency	



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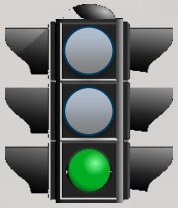
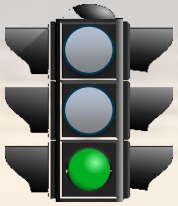
Action Needed - Water Conservation (WC) Continued - Meet current and future gaps and needs by efficient agricultural water use - Tier 4 Conservation Practices[1]			
WC-8 Conservation Tillage	See issues addressed by WC-3 through WC-7	Practice conservation tillage	6,13
WC-9 Control Loss		Control water loss	
WC-10 End-Gun Shutoffs		Install end-gun shutoff with pivots	
WC-11 Low Pressure Systems		Install low pressure irrigation systems where feasible (soil specific)	
WC-12 Application Efficiency Technologies		Encourage and improve use of soil moisture sensors, evapotranspiration sensors, or crop water use model(s) to time cycles	





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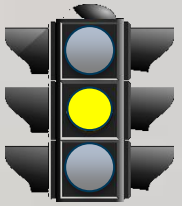
Additional/Alternate to Existing Surface Water Supply Sources (ASWS)[1]			
ASWS-1 Consider Low Flow Conditions in Future Surface Water Permitting	Help ensure that future surface water use does not contribute to frequency and severity of low flow conditions within the Local Drainage Areas that contribute flow to the Atkinson, Statenville, Jennings, or Pinetta gauges	Future surface water uses - If surface water (ponds and withdrawals) is sought for future water supply (new permits), Applicant, GSWCC, and EPD should work collaboratively to demonstrate that future surface water uses will not contribute to frequency or magnitude of gaps	1,4,5



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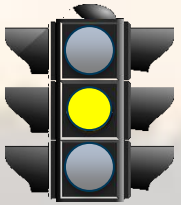
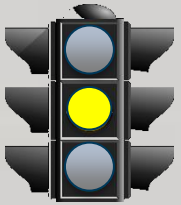
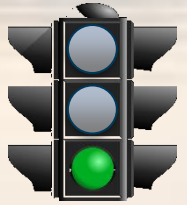
Additional/Alternate to Existing Surface Water Supply Sources (ASWS)[1]			
ASWS-2 Incentives for Dry-Year Releases from Ponds	Help improve surface water flow on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta during low flow conditions	Future surface water uses - Utilizing incentives and collaborative partnerships, examine opportunities to optimize farm and other pond operations to obtain releases in dry/gap years	1,3,4,5
ASWS-3 Substitute Future Surface Water Use with Groundwater in Gap Areas		Future surface water uses - Encourage additional groundwater development as a preferred source of supply for future demand in surface water gap areas	1,2,5,11
ASWS-4 Substitute Existing Agricultural Surface Water Use with Groundwater in Dry Years		Existing surface water uses - Encourage replacement of a portion of existing agricultural surface water irrigation use with groundwater in times of shortage to 7Q10 dry periods; so long as use of the groundwater source does not impact surface water flow in other areas	1,4,5







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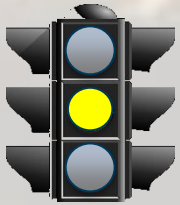
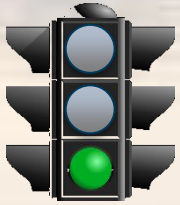
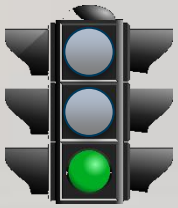
ASWS-5 Opportunities and Incentives for Dry-Year Releases from Ponds	Help improve surface water flow on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta during low flow conditions	Existing surface water uses- Utilizing incentives and collaborative partnerships, identify opportunities that allow for use of agricultural pond storage to augment river flows in times of shortage to 7Q10 dry periods	1,3,4,5
ASWS-6 Consider Phased Seasonal Agricultural Permit Conditions		Existing surface water uses - Identify need for, and feasibility of, seasonal surface water permit conditions for existing agricultural uses to address times of shortage to 7Q10 dry periods; Phase implementation as follows: Phase 1 (Direct stream withdrawals); Phase 2 (Consider pond storage effects based on outcome of research from DCAR-2 and DCAR-3)	1,4,5

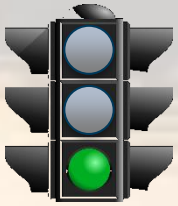




2011 RWP Recommended Management Practices

Table 6-1: Management Practices Selected for the Suwannee-Satilla Region			
Management Practice Number	**Issue(s) to be Addressed by Action(s)**	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Additional/Alternate to Existing Surface Water Supply Sources (ASWS)[1]			
ASWS-7 Ecological Restoration Incentive Program	Help improve surface water flow on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta during low flow conditions	Based on outcome of research (DCAR-10 above), consider incentive-based programs to restore wetlands and other areas if this practice can improve river flows during shortages to 7Q10 dry periods	1,4,5,8
ASWS-8 Land Management Incentives		Evaluate incentive-based land use practices to help promote infiltration and aquifer recharge	1,4,5,7





2011 RWP Recommended Management Practices

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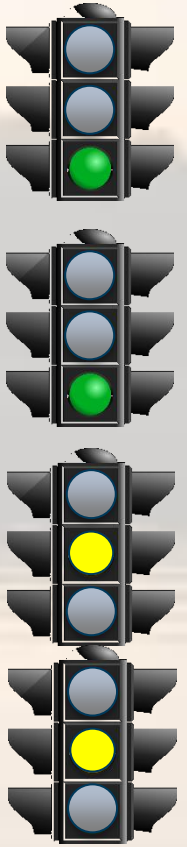
Management Practice Number	**Issue(s) to be Addressed by Action(s)**	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Additional/Alternate to Existing Surface Water Supply Sources (ASWS)[1]			
ASWS-9 Incentives for Greater Wastewater Return Flows; Coordinated Management	Help improve surface water flow on the Satilla River at Atkinson, the Alapaha River at Statenville and Jennings, and the Withlacoochee River at Pinetta during low flow conditions	Evaluate incentive-based programs to increase wastewater returns; modify land application system, septic systems, and manage stormwater to improve return flows while maintaining water quality Evaluate feasibility, and encourage use of, regional storm water management, and if feasible, implement coordinated stormwater management to attenuate high flows and help augment low flows and improve water quality for the Withlacoochee River above the Pinetta Node	1,4,5,10
ASWS-10 Multi-Region Reservoir		Possible joint non-main stem reservoir to serve multiple regions/regional council boundaries with Upper Flint and/or Lower Flint-Ochlockonee Councils	1,4,5,9
ASWS-11 Inter-Basin Transfers		Regional inter-basin transfers (i.e., Ocmulgee to Alapaha and Altamaha to Little Satilla); Collaborating between regions to meet regional water needs and benefit both the areas from which the transferred water is withdrawn and the area receiving the water	1,4,5



2011 RWP Recommended Management Practices

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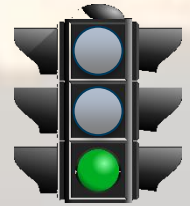
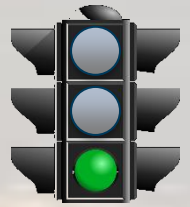
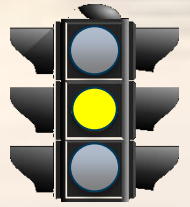
Management Practice Number	**Issue(s) to be Addressed by Action(s)**	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Action Needed - Address Water Quality (Dissolved Oxygen Levels)			
Point Sources – Dissolved Oxygen (PSDO)			
PSDO-1 Collect Water Quality Data	Verification of Water Quality Resource Assessment Data and Assumptions to determine dissolved oxygen conditions (see Figure 5-2 for more information)	Data collection to confirm loading and/or receiving stream chemistry	1,4,5,13
PSDO-2 Point Source Discharge Relocation	Improve dissolved oxygen levels in receiving streams (see Figure 5-2 for more information)	Modification of wastewater discharge location	4,5
PSDO-3 Improve Treatment Facilities		Upgrade or replacement of treatment facilities	4,5,8







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2011 RWP Recommended Management Practices

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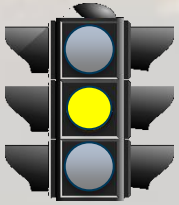
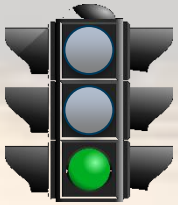
Management Practice Number	**Issue(s) to be Addressed by Action(s)**	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Action Needed - Address Wastewater Permit Capacity Needs/Gaps			
Available Municipal Wastewater Permit Capacity (MWWPC)			
MWWPC-1 Increase Wastewater Permit Capacity	Additional municipal wastewater treatment capacity may be needed in Bacon, Cook, Lowndes, and Pierce Counties	Obtain additional wastewater permit capacity to meet forecasted needs	5
Available Industrial Wastewater Permit Capacity (IWWPC)			
IWWPC-1[2] Collect Additional Industrial Permit Data	Collect additional data where needed on industrial flow volumes and permit conditions to verify permitted versus forecasted needs	Obtain additional permit data regarding flow volumes and permit conditions for industrial wastewater facilities forecasted needs	5





2011 RWP Recommended Management Practices

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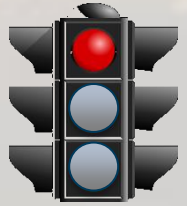
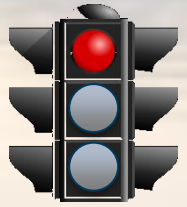
Action Needed - Address Water Withdrawal Permit Capacity Needs			
Municipal Groundwater Permit Capacity (MGWPC)			
MGWPC-1 Increase Municipal Groundwater Permit Capacity	Additional municipal groundwater permit capacity may be needed in Brantley, Coffee, Echols, Lanier, Lowndes, Pierce, and Ware Counties	Obtain groundwater permit capacity	1,4,5
Industrial Groundwater Permit Capacity (IGWPC)			
IGWPC-1 Increase Industrial Groundwater Permit Capacity	Additional industrial groundwater permit capacity may be needed in Ben Hill, Cook, and Ware Counties	Obtain groundwater permit capacity	1,4,5





2011 RWP Recommended Management Practices

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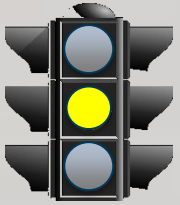
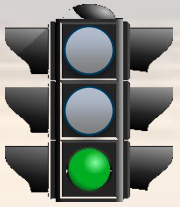
Management Practice Number	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Action Needed - Address Current and Future Groundwater (GW) Needs		
GW-1 Sustainable Groundwater Development	Continue to sustainably drill wells, use, and develop water from the Upper Floridan and other significant aquifers	1,4,5
GW-2 Promote Aquifer-Friendly Land Uses	Encourage land use practices that sustain and protect aquifer recharge areas (both inside and outside the region) for the aquifers that are present in the region	4,5,7





2011 RWP Recommended Management Practices

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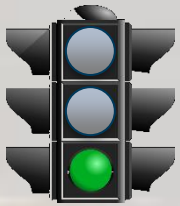
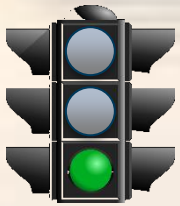
Action Needed - Address Current and Future Groundwater (GW) Needs		
GW-3 Research Groundwater Sustainability	Continue to refine sustainable yield metrics, monitor and improve understanding of historic, current, and future trends in groundwater levels; Continue to refine modeling and other tools	1,4,5,13
GW-4 Inter-State Resource Planning	Collaborate with Florida regarding shared resource issues and water planning	1,4,5,13





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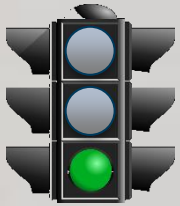
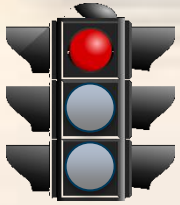
Management Practices to Address Current and Future Surface Water (SW) Needs		
SW-1 Surface Water Use Within Available Capacity	Continue to apply for permits and use surface water within the available surface water resource capacity	1,4,5
SW-2 Monitor and Evaluate Estuaries	Monitor Satilla River flow conditions to help determine flow conditions that sustain estuary conditions	4,8,9,13





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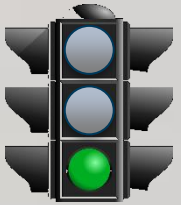
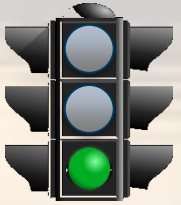
Management Practice Number	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
(Dissolved oxygen, fecal coliform, nutrients, and other impairments)		
NPS-1 Study Human Impacts on Water Quality	Data collection/analysis to confirm if dissolved oxygen and/or fecal coliform is human induced	4,8,13
NPS-2 Monitor and Address NPS Nutrient Loading	Support efforts to monitor and determine the sources of nutrient loading and other NPS impairments to rivers, lakes, and streams, and upon confirmation of source, develop specific management programs to address water quality needs	4,8,10,13





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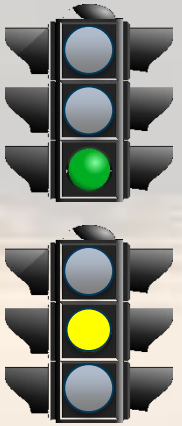
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Urban Best Management Practices (NPSU)		
NPSU-1 Control Erosion	Use soil erosion and sediment control measures	4,8,10
NPSU-2 Manage Stormwater Runoff	Stormwater retention ponds, wetlands, and bioretention areas to manage runoff quality and flow rate and help support river flows (as found in City of Valdosta Watershed Protection Plan, 2009)	4,8,10



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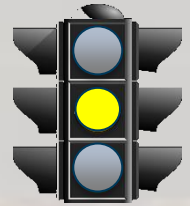
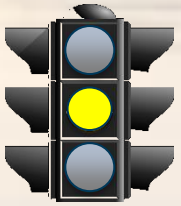
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Urban Best Management Practices (NPSU)		
NPSU-3 Increase Stormwater Infiltration	Consider measures to reduce directly-connected impervious area and promote increased infiltration of stormwater to help reduce nutrient and other pollutant runoff (as found in City of Baxley Watershed Protection Plan, 2007)	4,8,10
NPSU-4 Riparian Buffers	Protect and maintain riparian buffers along urban streams	4,8,10
NPSU-5 Street Sweeping	Implement street sweeping program (as found in City of Pearson Watershed Protection Plan, 2008)	4,8,10





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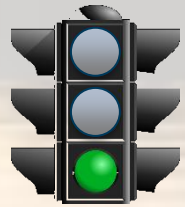
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Rural Best Management Practices (NPSR)		
NPSR-1 Advocate Implementing Road Runoff BMPs	Implement BMPs to control runoff from dirt roads by encouraging County implementation of the BMPs identified in Georgia Resource Conservation and Development Council, “Georgia Better Back Roads – Field Manual”	4,8,10



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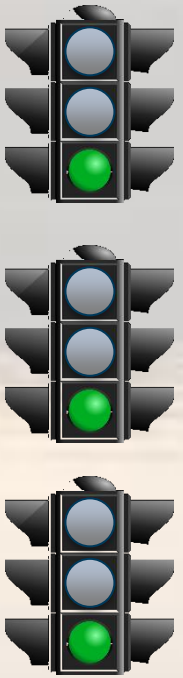
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Forestry Best Management Practices (NPSF)		
NPSF-1 Support Forestry Commission Water Quality Program	Support Georgia Forestry Commission water quality program consisting of BMP development, education/outreach, implementation/compliance monitoring, and complaint resolution process	4,8,10,13
NPSF-2 Improve BMP Compliance	Improve BMP compliance through State-wide biennial BMP surveys and BMP assurance exams, Master Timber Harvester workshops, and continuing logger education	4,8,10,13
NPSF-3 Conservation Land Use Planning	Seek long-term conservation easements or purchase development rights by willing landowners and conservation groups	4,8,10
NPSF-4 Forest Restoration Incentives and Support	Where applicable, support United States Department of Agriculture incentive programs through the Farm Service Agency and NRCS to restore converted wetlands back to forested conditions	4,8



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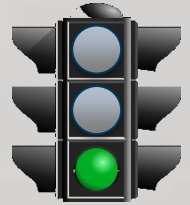
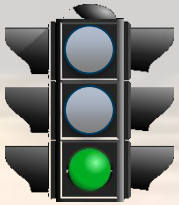
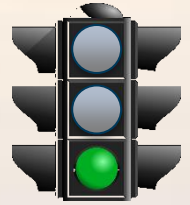
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Agricultural Best Management Practices for Crop and Pasture Lands (NPSA) - Support and encourage implementation of GSWCC BMP and Education Programs		
NPSA-1 Soil Erosion Reduction Measures	Conservation tillage and cover crop	4,6,8,10
NPSA-2 Utilize Buffers	Field buffers, riparian forested buffers, and strip cropping to control runoff and reduce erosion	4,6,8,10
NPSA-3 Livestock Management	Livestock exclusions from direct contact with streams and rivers and vegetation buffers	4,8,10
NPSA-4 Manure Control	Responsible manure storage and handling	4,8,10
NPSA-5 Wetland and Forest Restoration Incentives	Incentives to restore wetlands and historically drained hardwood and other areas	4,8







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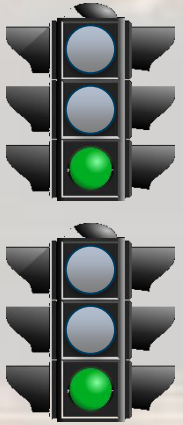
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Existing Impairments and Total Maximum Daily Load Listed Streams (TMDL)		
TMDL-1 Evaluate Impairment Sources	Data collection and confirmation of sources to support modify stream standards to reflect "natural sources" and/or to reflect naturally low dissolved oxygen streams	4,13
TMDL-2 Analyze Impaired Segments and Sources	Data collection to refine river/stream reach length for impaired waters; focus on longest reaches to refine location and potential sources of impairments	4,13
TMDL-3 Stormwater Management BMPs	Stormwater Management: -Agricultural BMPs -Forestry BMPs -Rural BMPs -Urban BMPs *See Above Non-Point Source for Details*	4,8,10,13



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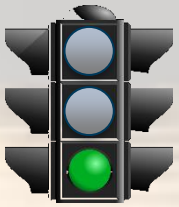
Management Practices to Address Water Quality Non-Point Source (NPS) Needs		
The following practices are selected by the Suwannee-Satilla Council to encourage implementation by the applicable local or state program(s).		
Nutrients – Satilla River Watershed Model (NUT)		
NUT-1 Link Nutrient Loading with Current Land Use	Align current land use with phosphorus and nitrogen loading data to help optimize effectiveness of management practices based on consideration of land uses and actual nutrient loading contribution to surface water resources (i.e., predominant land use is not necessarily the predominant source of nutrient load) - Agricultural, Forestry, Rural, and Urban BMPs *See Above Non-Point Source for Details*	4,8,10,13



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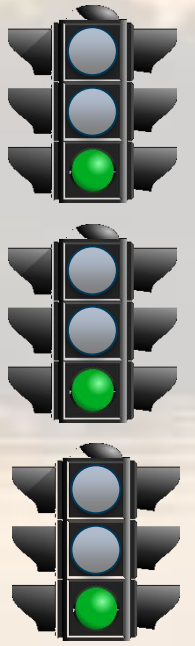
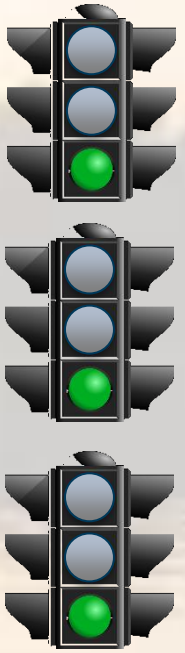
Management Practice Number	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Management Practices to Address Future Educational Needs (EDU)		
EDU-1 Promote Conservation Programs	Support Water Conservation Programs	1,4,5,6,13
EDU-2 Stormwater Education	Support Stormwater Educational Programs	4,5,8,11
EDU-3 Septic System Maintenance Education	Support Septic System Maintenance Programs	4,5,8
EDU-4 Forestry BMP Education	Support Georgia Forestry Commission Forestry BMP and UGA-SFI Logger Education Programs	4,8,10
EDU-5 Funding and Support for BMP Education	Prioritize funding and support for existing and future education, awareness, and BMP programs on non-point source pollution, including but not limited to: Agricultural BMPs, Forestry BMPs, Rural BMPs, Urban BMPs, Georgia Adopt-a-Stream, UGA Extension Service, and Georgia Forestry Commission	4,5,8,10



2011 RWP Recommended Management Practices

Management Practice Number	Description/Definition of Action	Relationship of Action or Issue to Vision and Goals (Section 1.4)
Management Practices to Address Future Ordinance and Code Policy Needs (OCP)		
OCP-1 Engage Local Governments	Encourage local government to develop ordinances and standards to implement and/or update stormwater and land development regulations. Possible resource documents include: Georgia Stormwater Management Manual, Coastal Stormwater Supplement, and Metro North Georgia Water Planning District Model Ordinances	4,8,10
OCP-2 Green Space Opportunities and Incentives	Identify opportunities for green space on incentive and voluntary basis	1,4,5
OCP-3 Promote Integrated Planning	Encourage coordinated environmental planning, land use, stormwater, and wastewater	1,2,4,5,10,13
OCP-4 Local Government Erosion Control Measures	Encourage local governments to enforce Erosion and Sedimentation Control Ordinance (as found in Cities of Pearson and Valdosta Watershed Protection Plans, 2008 and 2009)	4,8,10



2011 RWP Recommended Management Practices

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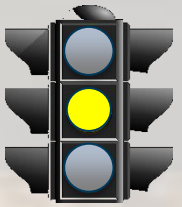
The following Suwannee-Satilla Council Management Practices are programmatic in nature and are therefore described in general terms.		
Management Practice Number	**Description/Definition of Action**	**Relationship of Action or Issue to Vision and Goals (Section 1.4)**
Summary of Management Practices for Shared Resources – The Suwannee-Satilla Region will implement management practices summarized in this table and collaborate with the following Councils to address shared resource gaps. Note: As summarized below, each Council has identified a series of management practices intended to address the contributing portion of the surface water flow gap within their boundaries.		
Surface Water Quantity – Satilla River (Atkinson), Alapaha River (Statenville and Jennings), and Withlacoochee River (Pinetta) Suwannee-Satilla – The Suwannee-Satilla Council has identified the management practices in the above table to address the majority of the cumulative gap at Atkinson, Statenville, and Jennings, and a portion of the cumulative gap at Pinetta. Altamaha – The Altamaha Council has identified water conservation, replacement of surface water use with groundwater use, refinement of forecasting and modeling data, and potential use of incentives and new permit conditions among others to address a portion of the cumulative gap at Atkinson, and a small portion of the cumulative gaps at Statenville and Jennings. Lower Flint-Ochlockonee – The Lower Flint-Ochlockonee Council has identified conservation, investigation of replacement of surface water with groundwater, greater utilization of farm ponds, and consideration of new storage and Aquifer Storage and Recovery (ASR) to address a portion of the cumulative gap at Pinetta. Upper Flint – The Upper Flint Council has identified conservation, investigation of replacement of surface water with groundwater, greater utilization of farm ponds, and consideration of new storage and ASR to address a portion of the cumulative gap at Statenville and Jennings.		



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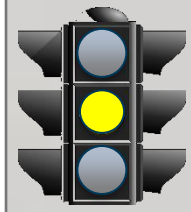
Surface Water Quality: Satilla River Watershed Model – The Altamaha Council has identified the same BMPs for nutrient loading as are summarized in the above table for the Suwannee-Satilla Council. Altamaha – There is one reach with exceeded assimilative capacity in the Suwannee River basin that is shared with the Altamaha Region. The Altamaha Council recommends improved level of wastewater treatment to improve in-stream dissolved oxygen, implementation of ammonia limits, and improvement of wastewater treatment for nutrients (nitrogen and phosphorus). Coastal Georgia – There is one reach with exceeded DO assimilative capacity in the St. Marys River basin that is shared with the Coastal Georgia Region. Both Councils recommend monitoring and data collection to assess whether impairment is caused by non-point source discharges or naturally low DO concentrations in the reach.		



[1]Seek to reduce frequency and severity of human impacts to 7Q10 low flow conditions in the region associated with agricultural water use. Focus on surface water permit holders and new surface water permit requests in Satilla Watershed [(Atkinson, Bacon, Brantley, Coffee, Irwin, Pierce, and Ware Counties (Atkinson Gap)], Alapaha Watershed [Atkinson, Ben Hill, Berrien, Echols, Irwin, Lanier, Lowndes, Tift, and Turner Counties (Statenville and Jennings Gaps)], and Withlacoochee Watershed [(Berrien, Brooks, Cook, Lowndes, Tift, and Turner Counties (Pinetta Gap)].
[2]Additional industrial wastewater capacity may be needed. EPD to update and refine discharge limit databases.

Regional Water Planning Overview

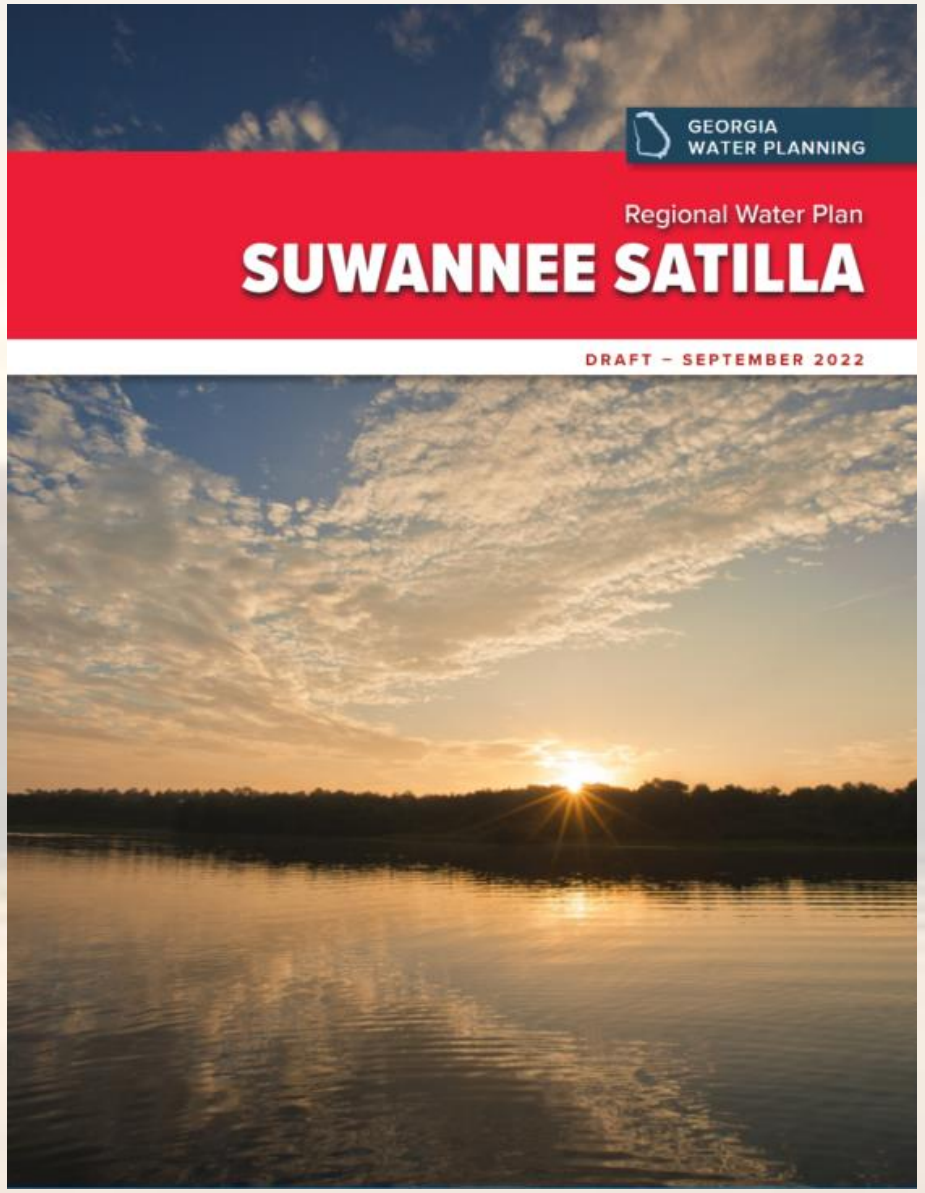
www.georgiawaterplanning.org

Water Planning and the Importance of Plans

Regional Water Planning Review and Revision Process

5-Year Review Process will focus on:

- Updated water demand and wastewater forecasts
- Updated Surface Water and Ground Water Availability Resource Assessments (Quantity)
- Updated Surface Water Quality / Assimilative Capacity Resource Assessment
- Refinement of Management Practices, if needed, to address potential water resource gaps



Regional Water Planning Review and Revision Process

- With the support of the Planning Contractor (PC), the Council will:
  - Evaluate updated municipal & industrial water and wastewater demand forecasts ☑
  - Evaluate updated energy water demand forecasts ☑
  - Evaluate updated agricultural water demand forecasts ☑
  - Evaluate updated water resource assessments
  - Re-evaluate updated potential challenges
  - Re-evaluate management practices

Regional Water Planning Review and Revision Process

- Jennifer Welte – Point of Contact, Project Manager for Review & Revision Process
- Dr. Elizabeth Booth – Surface Water Quality Resource Assessment
- Dr. Wei Zeng - Surface Water Availability Resource Assessment
- Dr. Jim Kennedy – Groundwater Availability Resource Assessment
- Shayne Wood – CDM Smith, Planning Contractor

Discussion/Next Steps

Regional Water Planning Overview & Schedule

Regional Water Plan Review and Revision Schedule

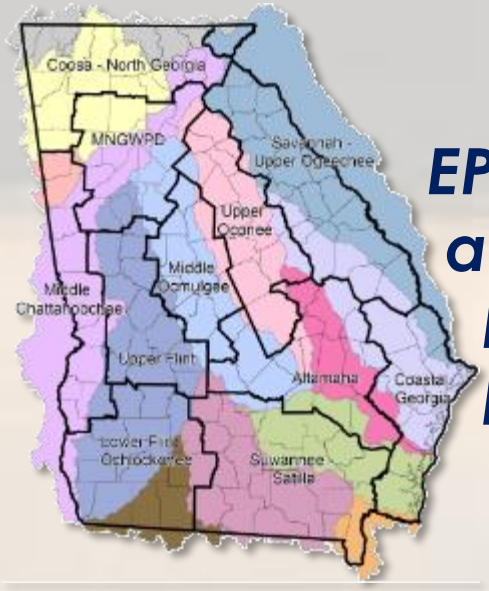
Meeting One
July 2021

Meeting Two
Council Meeting
March 9, 2022

Meeting Three
2nd Quarter 2022

Meeting Four
3rd Quarter 2022
Draft Plan

Meeting Five (Final)
4th Quarter 2022
Incorporate Comments



EPD targeted date of adoption of revised Regional Water Plan by December 2022

Public Comments/Local Elected Official Comments

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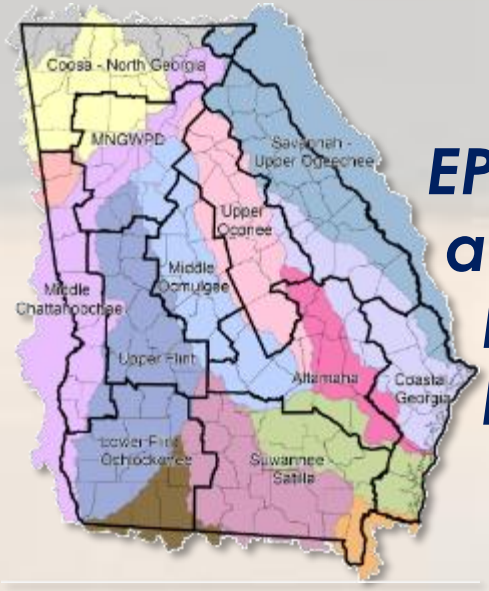

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Thank You!

Questions? Comments?
Need More Information?

woodsh@cdmsmith.com
cliff.lewis@dnr.ga.gov