

Georgia's State Water Plan

Surface Water Quality Resource Assessments

Middle Ocmulgee
Water Planning Council Meeting 6

Water Quality Resource Assessment

Recap

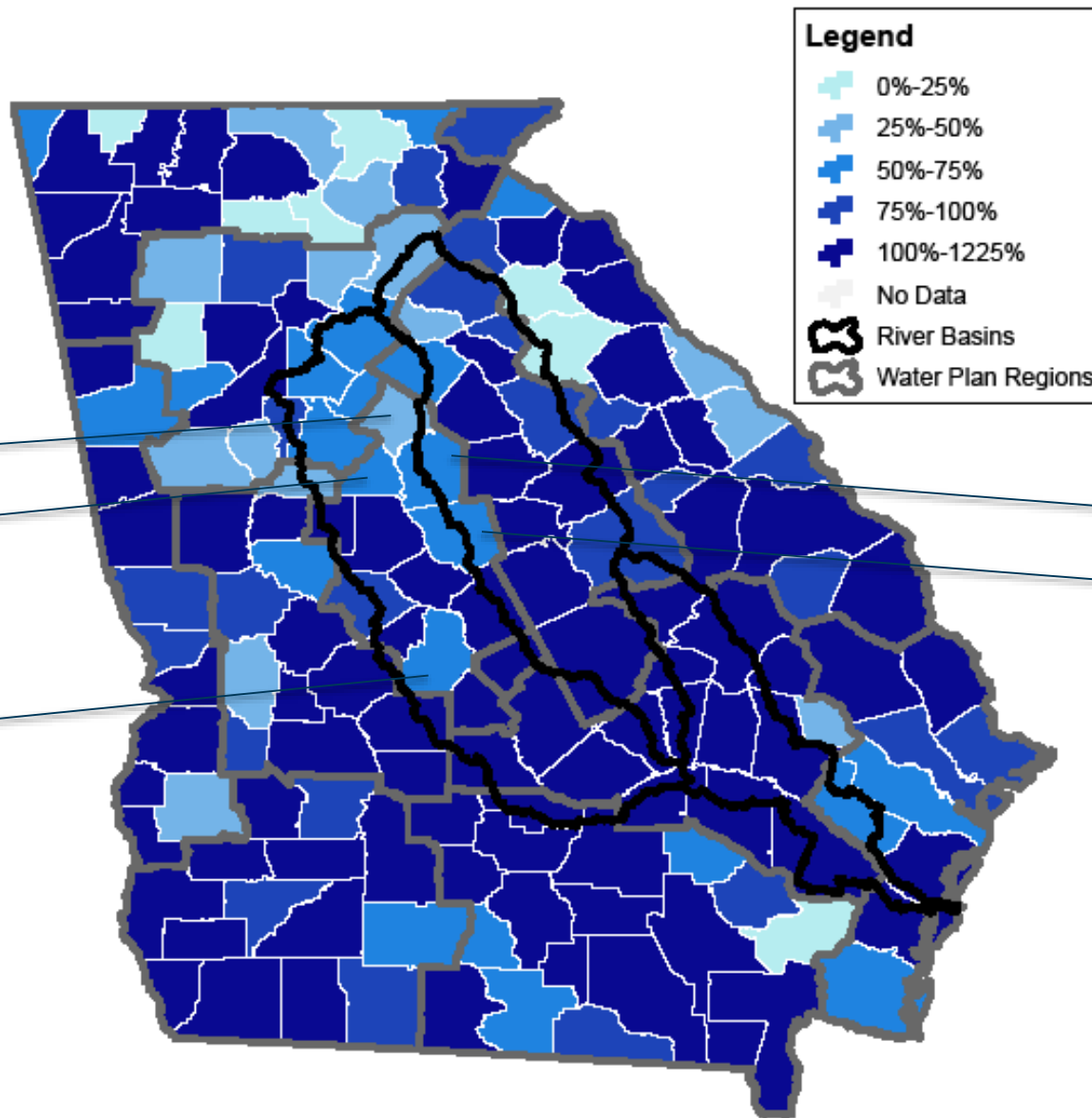
- Current Condition Resource Assessment
 - Presented in January – February 2010/ Joint Meeting Discussions
 - Preliminary DOSAG and Watershed Models
- Initial Future Assimilative Capacity
 - Based on full permitted conditions & existing permits
 - DOSAG: preliminary screening complete
 - Watershed Model: pending land use forecasts

Initial Future Assimilative Capacity in the Oconee, Ocmulgee and Altamaha River Basins

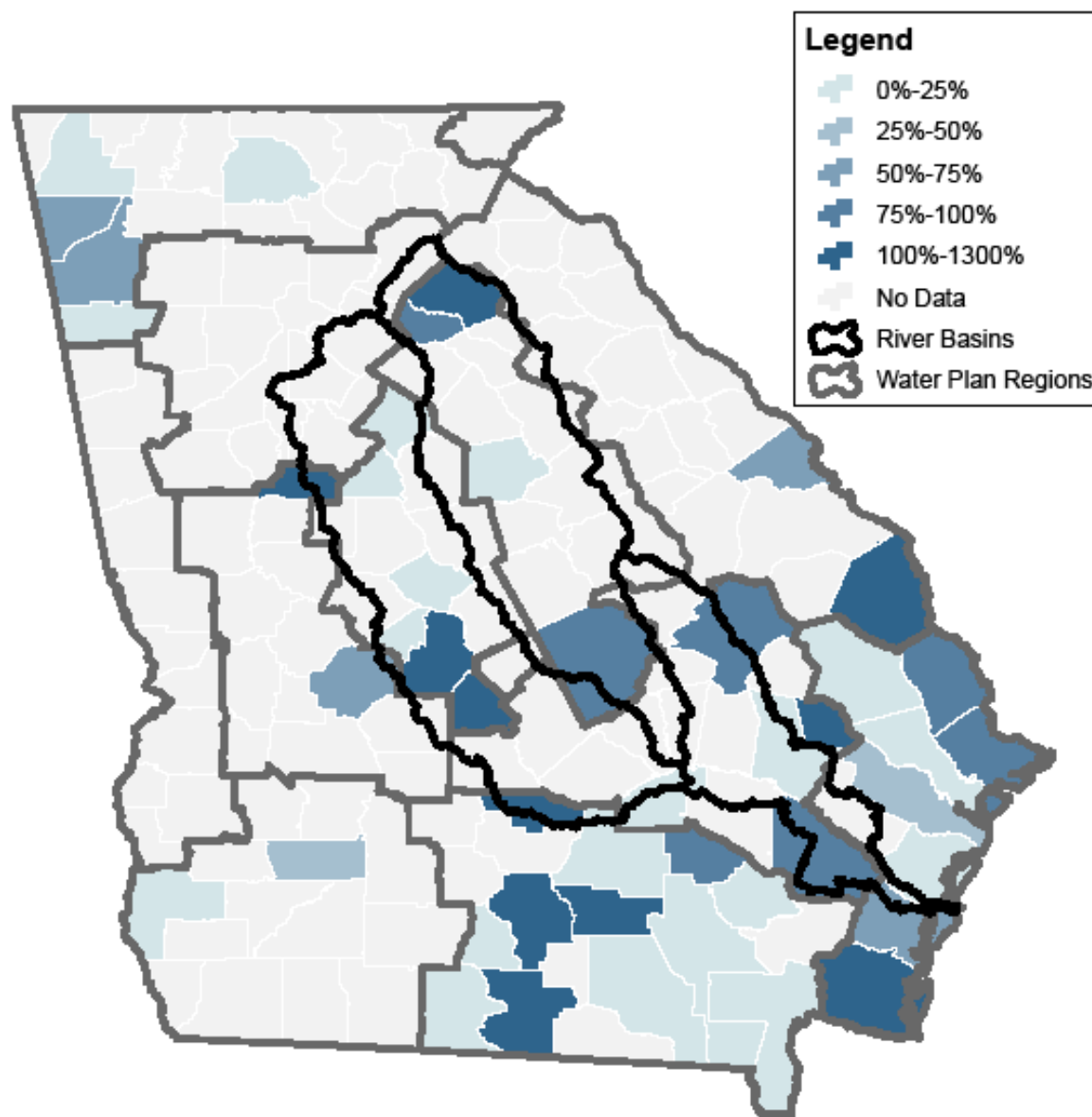
Initial Future Assessment

- Comparison of forecasted wastewater flows vs permitted levels
 - For Counties where forecasted flow > permitted flow, infrastructure may be needed
- Assimilative Capacity Model Runs at Permitted Levels
 - Based on full permitted conditions & existing permits
 - Need to determine causes for segments with no remaining assimilative capacity

Current Permitted Municipal Infrastructure Compared to 2050 Demand in the Altamaha, Ocmulgee, and Oconee Watersheds



Current Permitted Industrial Infrastructure Compared to 2050 Demand in the Altamaha, Ocmulgee, and Oconee Watersheds



Permits Modeled in the Oconee River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Watershed or Lake Model	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)			
Jackson County WWTP	GA0002712	Jackson	Middle Oconee River	0.5	20	4	6	-----			Municipal
Monticello Pond - Pearson Creek WPCP	GA0020141	Jasper	Pearson Creek	0.17	30	-----	5	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L		Municipal
Monticello Pond - White Oak WPCP	GA0020150	Jasper	White Oak Creek	0.115	30	-----	5	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L		Municipal
Gordon WPCP	GA0020397	Wilkinson	Commissioner Creek	0.75	20	5	-----		Seasonal Limits For DOSAG modeling: DO assumed to be 2 mg/L	N	Municipal
Soperton WPCP	GA0020626	Treutlen	Red Bluff Creek	0.6	8	1.5	6			N	Municipal
Greensboro - South WPCP	GA0021351	Greene	Town Creek	0.998	10	1.7	6	1	LAS w/ HCR. Can not be calibrated so was not modeled. The stream has elevated background levels, but not due to point sources since there have been no facilities discharging since 2005		Municipal
Glenwood WPCP	GA0021377	Wheeler	Peterson Creek	0.11	30	-----	-----	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L	N	Municipal
Athens North Oconee WPCP	GA0021725	Clarke	North Oconee River	14	8	2	6	1	Seasonal Limits	Y	Municipal/ Industrial
Athens Middle Oconee WPCP	GA0021733	Clarke	Middle Oconee River	10	20	7.5	6	1	Seasonal Limits	Y	Municipal/ Industrial
Rock Eagle 4-H Camp	GA0022233	Putnam	Gladys Creek	0.155	30	-----	-----	-----	Not included in 2007 Baseline model For DOSAG modeling: NH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L		Municipal
Jefferson WPCP (Central City)	GA0023132	Jackson	Curry Creek	1	10	6	6	-----		Y	Municipal
Madison Southside WPCP	GA0023141	Morgan	Horse Branch Tributary	0.66	25	8	6	-----		Y	Municipal
Madison Northside WPCP	GA0023159	Morgan	Mile Branch	0.14	30	-----	-----	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L	Y	Municipal
Winder Marburg Creek WPCP	GA0023191	Barrow	Marburg Creek	0.6	20	5	5	-----		Y	Municipal
Dudley WPCP	GA0023957	Laurens	Turkey Creek to Oconee River	0.115	30	17.4	5	-----	Seasonal Limits	N	Municipal
Dublin WPCP	GA0025569	Laurens	Oconee River	6	25	10	5	-----		N	Municipal/ Industrial
Rutledge WPCP	GA0025895	Morgan	Rice Creek	0.05	30	-----	5	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L	N	Municipal
Gray Wolf Creek WPCP	GA0026085	Jones	Millsap Creek to Wolf Creek to Commissioner Creek to the Oconee River	0.4	15	2	5	-----		N	Municipal
Social Circle WPCP	GA0026107	Walton	Little River	1.4	17	2	6	-----			Municipal/ Industrial
Milledgeville WPCP	GA0030775	Baldwin	Oconee River	10.5	25	10	2	-----		N	Municipal
Sandersville WPCP	GA0032051	Washington	Tanyard Branch	1.7	20	5	5	-----		N	Municipal/ Industrial

Permits Modeled in the Oconee River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Watershed or Lake Model	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)			
Eatonton - Westside WPCP	GA0032263	Putnam	Unnamed Tributary to the Little River	0.55	20	5	6	-----		Y	Municipal
Eatonton - Eastside WPCP	GA0032271	Putnam	Rooty Creek	0.55	20	5	5	-----		Y	Municipal
SP Newsprint	GA0032620	Laurens	Oconee River	-----	4500 (lbs/day)	-----	-----	-----	For DOSAG modeling: flow assumed to be 16.22 MGD, NH3 assumed to be 1.09 mg/L, DO assumed to be 2 mg/L	N	Municipal/ Industrial
Mayesville WPCP	GA0032905	Jackson	Tributary to N Oconee River	0.06	30	-----	5	-----	For DOSAG modeling: NH3 assumed to be 17.4 mg/L	N	Municipal
Crawford Westside WPCP	GA0033707	Oglethorpe	Barrow Creek	0.037	30	-----	-----	-----	Not modeled in future resource assessment because plant will be replaced by new Crawford WPCP	N	Municipal
Crawford WPCP	GA0039144	Oglethorpe	Barrow Creek	0.25	10	2	6	4	New facility will take place of Crawford Westside and Eastside facilities		Municipal
Mount Vernon WPCP	GA0033758	Montgomery	Limestone Creek	0.27	15	5	6	-----		N	Municipal
Athens Cedar Creek WPCP	GA0034584	Oconee	Oconee River	4	21	6	6	1	Seasonal Limits		Municipal/ Industrial
Hoschton WPCP	GA0035980	Jackson	Sell Creek Tributary to Indian Cr.	0.5	8	2	6	-----		Y	Municipal
Rentz WPCP	GA0037630	Laurens	Bluewater Creek	0.12	20	5	6	-----	Seasonal Limits	N	Municipal
Braselton WPCP	GA0038547	Jackson	Mulberry River	2.54	5	1	6	1			Municipal
Barrow County WPCP	GA0038733	Barrow	Barber Creek	1.5	5	1.2	6	1			Municipal
Madison I-20 WPCP	GA0038741	Morgan	Four Mile Branch	1	3.6	1	6	1	New Facility. Longterm plan is to eliminate the Northside facility		Municipal
Winder Cedar Creek WPCP	GA0038776	Barrow	Cedar Creek	4	5	3.5	5	1	Seasonal Limits		Municipal/ Industrial
Oconee County Rocky Branch WPCP	GA0038806	Oconee	Barber Creek	1	5	6.4	5	1			Municipal
Monroe WPCP	GA0047171	Walton	Jacks Creek	3.4	20	5	6	-----		Y	Municipal
Mansfield WPCP	GA0047759	Newton	Pittman Branch	0.06	20	8	5	-----			Municipal
Ailey WPCP	GA0049247	Montgomery	Flat Creek Tributary	0.08	10	2	5	-----		N	Municipal
Oconee County Calls Creek WPCP	GA0050211	Oconee	Calls Creek	1	10	2	5	1			Municipal
GA Pacific	GA0047988	Morgan	Briar Creek	-----	25	-----	-----	-----	For DOSAG modeling: flow assumed to be 0.083 MGD, NH3 assumed to be 1.01 mg/L, DO assumed to be 2 mg/L	N	Industrial
Mohawk	GA0003697	Laurens	Oconee River	-----	330 (lb/day)	-----	-----	-----	For DOSAG modeling: flow assumed to be 0.44 MGD, NH3 assumed to be 15.32 mg/L, DO assumed to be 2 mg/L	N	Industrial
DOT #53	GAG550000	Putnam	Tributary to Big Indian Creek	0.01	30	-----	-----	-----	Not included in 2007 Baseline model For DOSAG modeling: NH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L		Municipal

Permits Modeled in the Ocmulgee River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Watershed or Lake Model	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)			
Perdue Farms	GA0002844	Houston	Big Indian Creek	-----	560 (lbs/day)	110 (lbs/day)	5	-----	For DOSAG modeling: Flow assumed to be 4 MGD	N	Industrial
USAF Robins AFB WPCP	GA0002852	Houston	Ocmulgee River	-----	15	5	-----	-----	For DOSAG modeling: Flow assumed to be 3 MGD, DO assumed to be 5 mg/L	N	Municipal/ Industrial
Springs Industries Inc. Griffin	GA0003409	Spalding	Cabin Creek	-----	160 (lbs/day)	-----	5	1	For DOSAG modeling: Flow assumed to be 1 MGD, TNH3 assumed to be 2 mg/L, NPDES permit transferred from Springs Global US, Inc. to Spalding County Water and Sewerage Authority. New permit issued on December 29, 2009.	N	Industrial
Graphic Packaging Int'l. Inc.	GA0003581	Bibb	Ocmulgee River	-----	-----	-----	-----	-----	Non-contact cooling water, For DOSAG modeling: Flow assumed to be 4.04 MGD, BOD5 assumed to be 1.14 mg/L, TNH3 assumed to be 0.2 mg/L, DO assumed to be 5 mg/L	N	Industrial
Griffin - Cabin Creek WPCP	GA0020214	Spalding	Cabin Creek	1.5	13	3.3	5	1	Seasonal Limits	N	Municipal
Hawkinsville South WPCP	GA0020338	Pulaski	Ocmulgee River	1.3	30	17.4	2	-----		N	Municipal/ Industrial
Clayton Co. Northeast	GA0020575	Henry	Panther Creek	10	3.6	0.5	6	0.18		Y	Municipal
Loganville WPCP	GA0020788	Walton	Big Flat Creek	1.75	10	1.7	6	0.3		Y	Municipal
Barnesville Gordon Road WPCP	GA0021041	Lamar	Tobesofkee Creek	1.2	13	2	5	-----	Seasonal Limits	N	Municipal
Perry WPCP	GA0021334	Houston	Big Indian Creek	3	18.5	2	6	-----		N	Municipal
Rockdale County Almand Branch WPCP	GA0021610	Rockdale	Almand Creek	1.25	10	2	6	0.3		Y	Municipal
Jackson Yellow Water Creek WPCP	GA0021831	Butts	Yellow Water Creek Tributary	0.75	30	1.9	5	-----		N	Municipal
Rockdale County Honey Creek WPCP	GA0022659	Rockdale	McClan Creek	0.3	20	10	6	0.5		Y	Municipal
Rockdale County Snapping Shoals WPCP	GA0023035	Rockdale	Snapping Shoals Creek	0.45	30	14.4	5	0.5	Seasonal Limits	Y	Municipal
Stockbridge WPCP	GA0023337	Henry	Brush Creek	1.5	6	1.3	6	0.3		Y	Municipal
Highland Mills Inc. WWTP	GA0023752	Spalding	Wolf Creek Tributary to Troublesome Creek	0.019	30	-----	-----	-----	For DOSAG modeling: TNH3 assumed to be 2 mg/L, DO assumed to be 2 mg/L	N	PID
Jackson Southside WPCP	GA0023931	Butts	Town Branch	0.7	20	1	5	-----		N	Municipal
McDonough Walnut Creek WPCP	GA0023949	Henry	Walnut Creek	2	6	1.3	6	0.15		Y	Municipal/ Industrial
Dekalb County Snapping Shoals WPCP	GA0024147	Dekalb	South River	36	10	2	6	0.3	Seasonal Limits	Y	Municipal/ Industrial
Macon Poplar Street WPCP	GA0024538	Bibb	Ocmulgee River	20	19	7	2	NL	Seasonal Limits	N	Municipal/ Industrial
Macon Rocky Creek WPCP	GA0024546	Bibb	Ocmulgee River	24	25	2	5	NL	Seasonal Limits	N	Municipal/ Industrial
South Hampton MHP	GA0025305	Spalding	Thompson Creek Tributary	0.1	10	1.5	6	1		N	PID

Permits Modeled in the Ocmulgee River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Watershed or Lake Model	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)			
Cadwell WPCP	GA0025887	Laurens	Unnamed Tributary to Bay Creek to Alligator Creek	0.048	30	17.4	5	-----		N	Municipal
Rockdale County Scott Creek WPCP	GA0026239	Rockdale	Scott Creek	0.22	30	17.4	6	0.5	New permit issued on July 28, 2008	Y	Municipal
Eastman- Roach Branch WPCP	GA0026310	Dodge	Roach Branch	0.9	15	10	6	-----	Discharge to Roach Branch will be eliminated and routed to Eastman- South GA0046485 (expansion to 1.8 MGD) Wastewater is being sent to Macon Water Authority; City will rescind their permit after construction has been	N	Municipal
Byron Pond	GA0026794	Peach	Juniper Creek Tributary	1	7	0.5	6	1		N	Municipal
Dekalb County Polebridge Creek WPCP	GA0026816	Dekalb	South River	20	10	2	6	0.3	Seasonal Limits	Y	Municipal/ Industrial
Warner Robins Sandy Run WPCP	GA0030325	Houston	Sandy Run Creek	9	5	1	6	-----	Seasonal Limits	N	Municipal
Gwinnett County Jackson Creek WPCP	GA0030732	Gwinnett	Jackson Creek	3	10	2	6	0.3	Gwinnett County plans to take this facility out of service as phased expansions take place at the Gwinnett Co. Yellow River WPCP	Y	Municipal
Fort Valley WPCP	GA0031046	Peach	Bay Creek	2.2	15	5	6	-----		N	Municipal
Cochran WPCP	GA0032107	Bleckley	Jordan Creek	1	5	2	6	-----		N	Municipal/ Industrial
Scotland Pond	GA0032344	Wheeler	Little Ocmulgee River	0.18	30	-----	-----	-----	For DOSAG modeling: TNH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L	N	Municipal
Jackson Northeast WPCP	GA0032719	Butts	Yellow Water Creek Tributary	0.14	20	-----	5	-----	For DOSAG modeling: TNH3 assumed to be 2 mg/L	N	Municipal
Gwinnett County Beaver Run/Sweetwater Creek WPCP	GA0032841	Gwinnett	Sweetwater Creek	4.5	10	2	6	0.3	Gwinnett County plans to take this facility out of service as phased expansions take place at the Gwinnett Co. Yellow River WPCP	Y	Municipal/ Industrial
Lakeview Utilities	GA0035491	Rockdale	Yellow River	0.158	30	-----	-----	-----	For DOSAG modeling: TNH3 assumed to be 17.4 mg/L, DO assumed to be 5 mg/L	Y	PID
Hazlehurst Bully Creek WPCP	GA0036765	Jeff Davis	Ocmulgee River	1.5	30	17.4	2	-----		N	Municipal
Henry County Springdale WPCP	GA0037214	Henry	Little Cotton Indian Creek	0.5	6	1.3	6	1		Y	Municipal
Alamo WPCP	GA0037753	Wheeler	Alligator Creek	0.375	20	5	6	-----	Seasonal Limits	N	Municipal
Warner Robins Ocmulgee River WPCP	GA0037796	Houston	Ocmulgee River	3	30	17.4	6	-----		N	Municipal
Henry County Springdale-Walnut Ck WPCP	GA0037869	Henry	Walnut Creek	0.4	6	1.3	6	0.3		Y	Municipal
Clayton County Casey and Hule WRF	GA0038423	Clayton	002 - Unnamed Tributary to Shamrock Lake	-----	10	1.0	6	0.6	New permit issued on March 23, 2010; *WB Casey WRF permitted flow = 24 MGD is sent only to the constructed wetlands; LAS (GA02-008) is taken out of service. No limits on effluent flow leaving the constructed wetlands (8 outfalls)	Y	Municipal
			003 - Unnamed Tributary to Shamrock Lake							Y	
			004 - Unnamed Tributary to Shamrock Lake							Y	
			005 - Blalock Reservoir							Y	
			007 - Unnamed Tributary to Pates Creek							Y	
			008 - Unnamed Tributary to Pates Creek							Y	
			009 - Pates Creek							Y	
			010 - Unnamed Tributary to Pates Creek							Y	
Locust Grove Indian Creek WPCP	GA0038571	Butts	Indian Creek Tributary to the Towaliga River	1.5	7	2	6	0.75		N	Municipal

Permits Modeled in the Ocmulgee River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Watershed or Lake Model	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)			
Hawkinsville North WPCP	GA0046027	Pulaski	Ocmulgee River	1	30	17.4	2	-----		N	Municipal/ Industrial
Hollingsworth & Vose Company	GA0046426	Pulaski	Ocmulgee River	NL	250 (lbs/day)	-----	2	-----	For DOSAG modeling, TNH3 assumed to be 2 mg/L	N	Industrial
Eastman-South WPCP	GA0046485	Dodge	Sugar Creek Tributary	1.8	10	2	6	1	The flow assumed to be 1.8 MGD includes the 0.9 MGD from Eastman-Roach Branch (GA0026310)	N	Municipal
Gwinnett County Jacks Creek WPCP	GA0047627	Gwinnett	Yellow River	0.62	10	2	6	0.3	Gwinnett County plans to take this facility out of service as phased expansions take place at the Gwinnett Co. Yellow River WPCP	Y	Municipal
Abbeville WPCP	GA0047643	Wilcox	Ocmulgee River	0.28	30	17.4	2	NL		N	Municipal
Rockdale County Quigg Branch WPCP	GA0047678	Rockdale	Yellow River	6	8	2	6	0.3		Y	Municipal/ Industrial
Gwinnett County Yellow River WPCP	GA0047911	Gwinnett	Yellow River	22.0	-----	1	6	0.3	The permitted flow = 22.0 MGD includes the Gwinnett County-Jacks Creek WPCP (i.e., 1.0 MGD), Gwinnett County-Jackson Creek WRF (i.e., 3.0 MGD), and Gwinnett County-Beaver Run/Sweetwater Creek WRF (i.e., 4.5 MGD) flow diversions	Y	Municipal
Helena WPCP (HCR Discharge)	GA0048674	Telfair	Ocmulgee River Tributary	0*					*It is an HCR discharge (flow = 0 during 7Q10 condition)	N	Municipal
Lumber City Pond	GA0050199	Telfair	Ocmulgee River	0.5	30	17.4	5	-----	New permit issued on November 30, 2007	N	Municipal/ Industrial
Forsyth - South WPCP	GA0024732	Monroe	Slippery Rock Creek	0.6	20	4	6	-----	Seasonal Limits. Previously left out in the Ocmulgee River model for Baseline	N	Municipal
Forsyth - Northeast WPCP	GA0031801	Monroe	Town Creek	1.4	10-Jan	2	6	1	Seasonal Limits. Previously left out in the Ocmulgee River model for Baseline	N	Municipal
Pinehurst WPCP	GA0038075	Dooley	South Prong Creek	0.12	10	2	6	-----	Previously left out in the Ocmulgee River model for Baseline	N	Municipal
Dan River - Plant Camellia	GA0002224	Monroe	Ocmulgee River	1.6	539 lbs/day	-----	-----	-----	For modeling purposes TNH3 assumed to be 2 mg/L, DO assumed to be 2 mg/L	N	Industrial

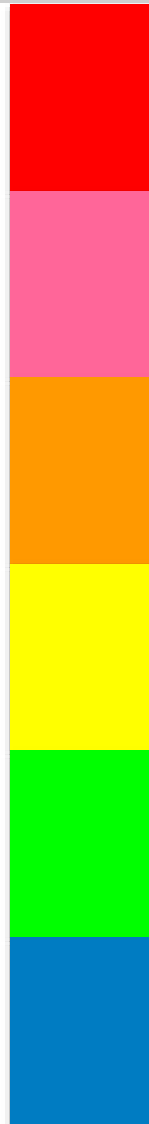
Permits Modeled in the Altamaha River Basin

Name	Permit	County	Receiving Stream	Permitted					Notes	Discharge Type
				Flow (MGD)	BOD5 (mg/L)	Ammonia (mg/L)	Dissolved Oxygen (mg/L)	Total Phosphorus (mg/L)		
Rayonier Outfall 002	GA0003620	Wayne	Altamaha River	-----	22,300 (lbs/day)	-----	-----	-----	Seasonal limits. For DOSAG modeling: flow assumed to be 70 MGD, NH3 assumed to be 17.4 mg/L, DO assumed to be 2 mg/L	Industrial
Swainsboro WPCP (permit will be rescinded)	GA0020346	Emanuel	Crooked Creek	3	30	17.4	2	-----	To be rescinded. Discharge is proposed to be relocated to Yam Grady Creek.	Municipal
DOC Roger State Prison	GA0022900	Tattnall	Ochoopee River	0.85	30	17.4	2	-----		Municipal
Vidalia WPCP	GA0025488	Toombs	Swift Creek	1.88	5	1	6	-----	Seasonal limits.	Municipal
Jesup WPCP	GA0026000	Wayne	Altamaha River	2.5	30	17.4	2	Report		Municipal
Wrightsville WPCP	GA0032395	Johnson	Big Cedar Creek Tributary	0.7452	30	17.4	5	-----		Municipal
Lyons North WPCP	GA0033391	Toombs	Rocky Creek	0.67	5	1	6	-----	Seasonal limits.	Municipal
Lyons East WPCP	GA0033405	Toombs	Swift Creek	0.67	10	2	5	-----	Seasonal limits.	Municipal
Glennville WPCP	GA0037982	Tattnall	Brickyard Branch	2	10	1.6	6	Report	Seasonal limits.	Municipal
Baxley WPCP	GA0038725	Appling	Altamaha River	2.8	30	17.4	2	Report		Municipal
Ludowici WPCP	GA0049166	Long	Fountain Branch	0.24	30	-----	5	-----	Discharge to swamp. For DOSAG modeling: NH3 assumed to be 17.4 mg/L	Municipal
Tennile Pond	GA0049956	Washington	Dyers Creek	0.45	15	1.1	6	-----		Municipal
Swainsboro WPCP (New)	GA0039225	Emanuel	Yam Grady Creek	3	5	0.7	6	1	Permit issued for construction in November 2009. Old Swainsboro WPCP's permit will be rescinded once New Swainsboro WPCP is built.	Municipal

Available Assimilative Capacity in the Oconee, Ocmulgee, and Altamaha River Basins

Model Run	Basin	Available Assimilative Capacity (Total Mileage)				
		Very Good	Good	Moderate	Limited	None or Exceeded
Baseline	Oconee	509	117	51	44	40
	Ocmulgee	560	249	92	41	43
	Altamaha	169	66	61	80	45
Permitted	Oconee	458	163	39	6	80
	Ocmulgee	473	192	185	73	82
	Altamaha	119	34	48	96	123

**Legend :
Available
Assimilative
Capacity**



Exceeded capacity

< 0.0 mg/L DO available for assimilative capacity

At Assimilative Capacity

= 0.0 mg/L DO available

Limited

> 0.0 mg/L to $\leq$ 0.2 mg/L of DO available

Moderate

> 0.2 mg/L to $\leq$ 0.5 mg/L of DO Available

Good

> 0.5 mg/L to 1.0 mg/L of DO Available

Very Good

$\geq$ 1.0 mg/L of DO available

Legend

Available Assimilative Capacity

Very Good

Good

Moderate

Limited

Exceeded

At Assimilative Capacity

Unmodeled Lakes and Streams

Lake Oconee

Lake Jackson

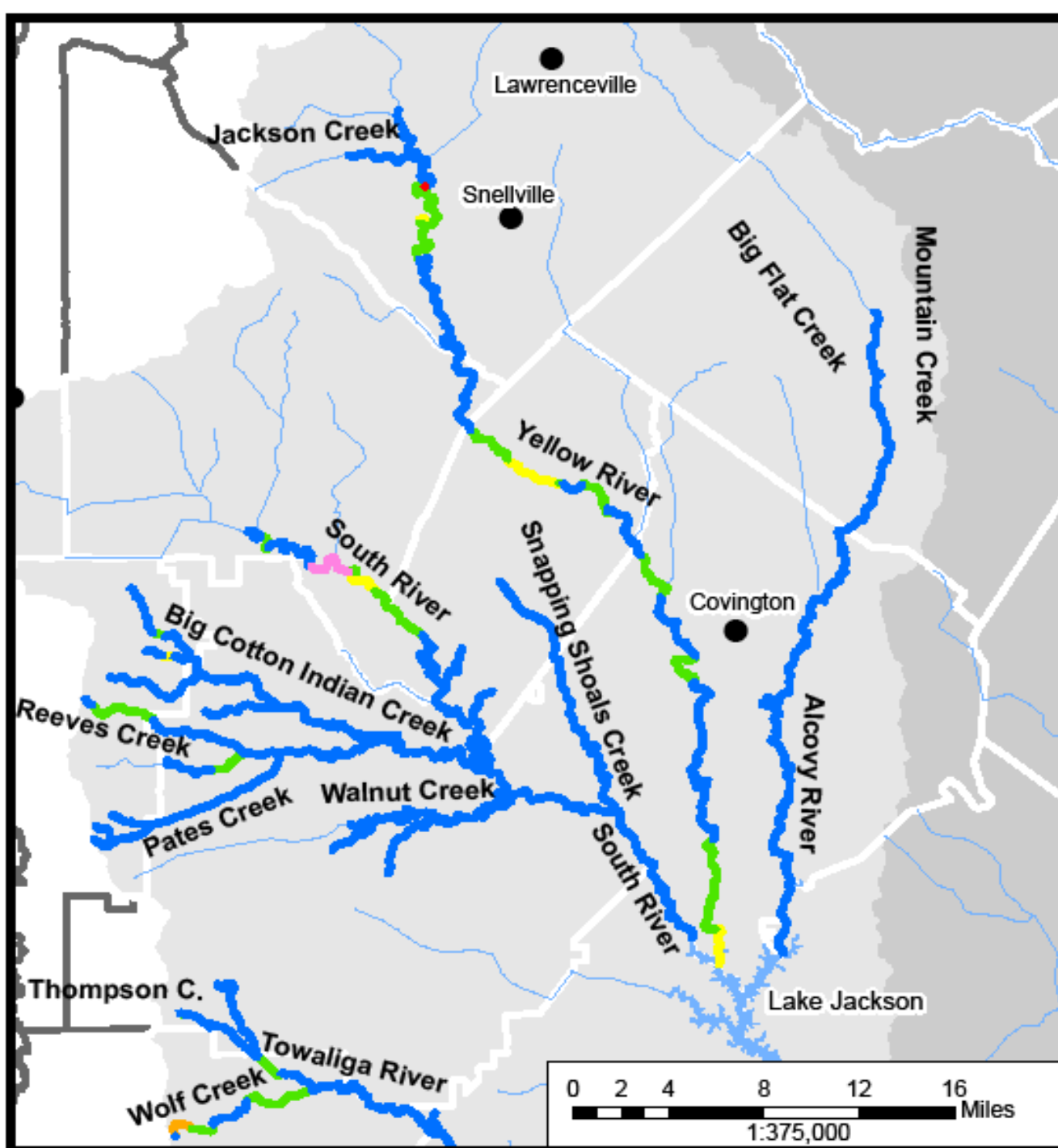
Lake Sinclair

Lake Tobesofkee

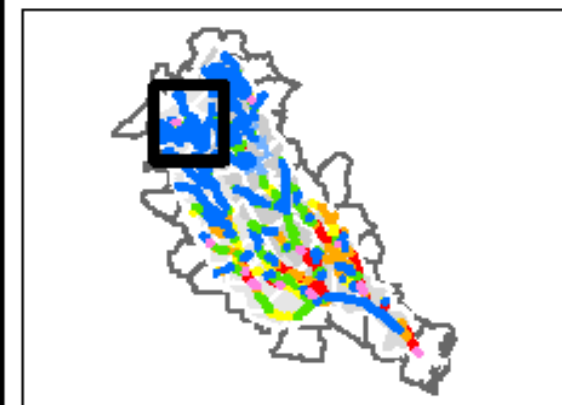
Oconee

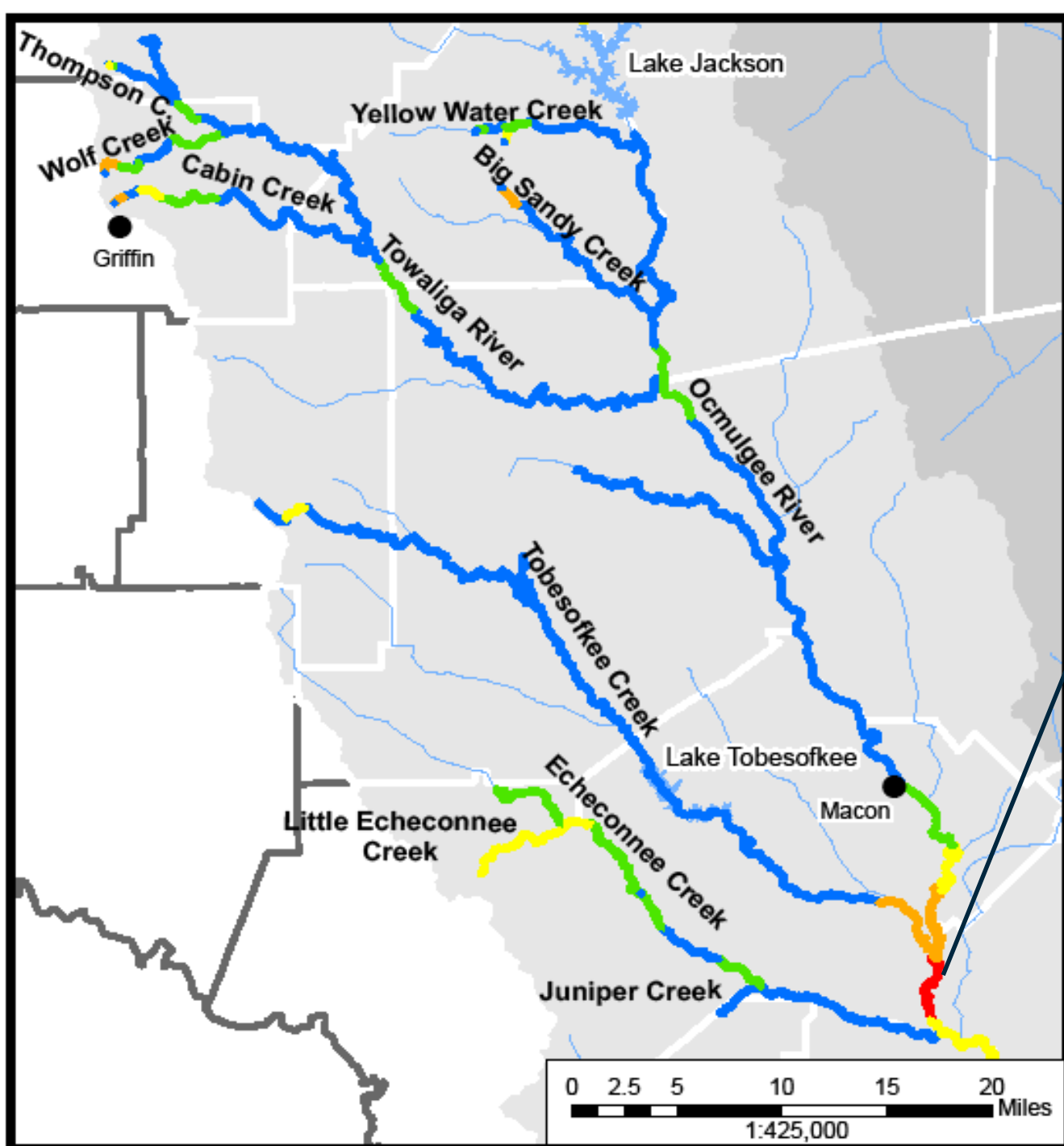
Ocmulgee

Altamaha

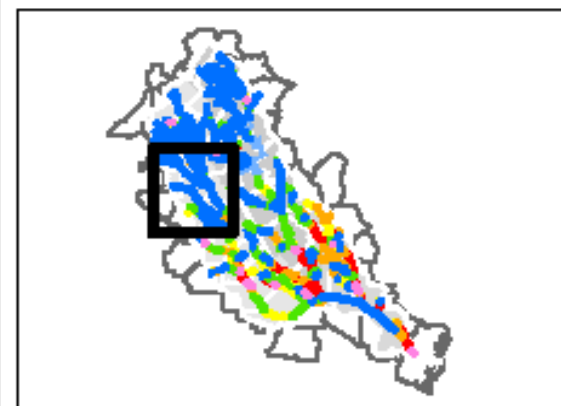


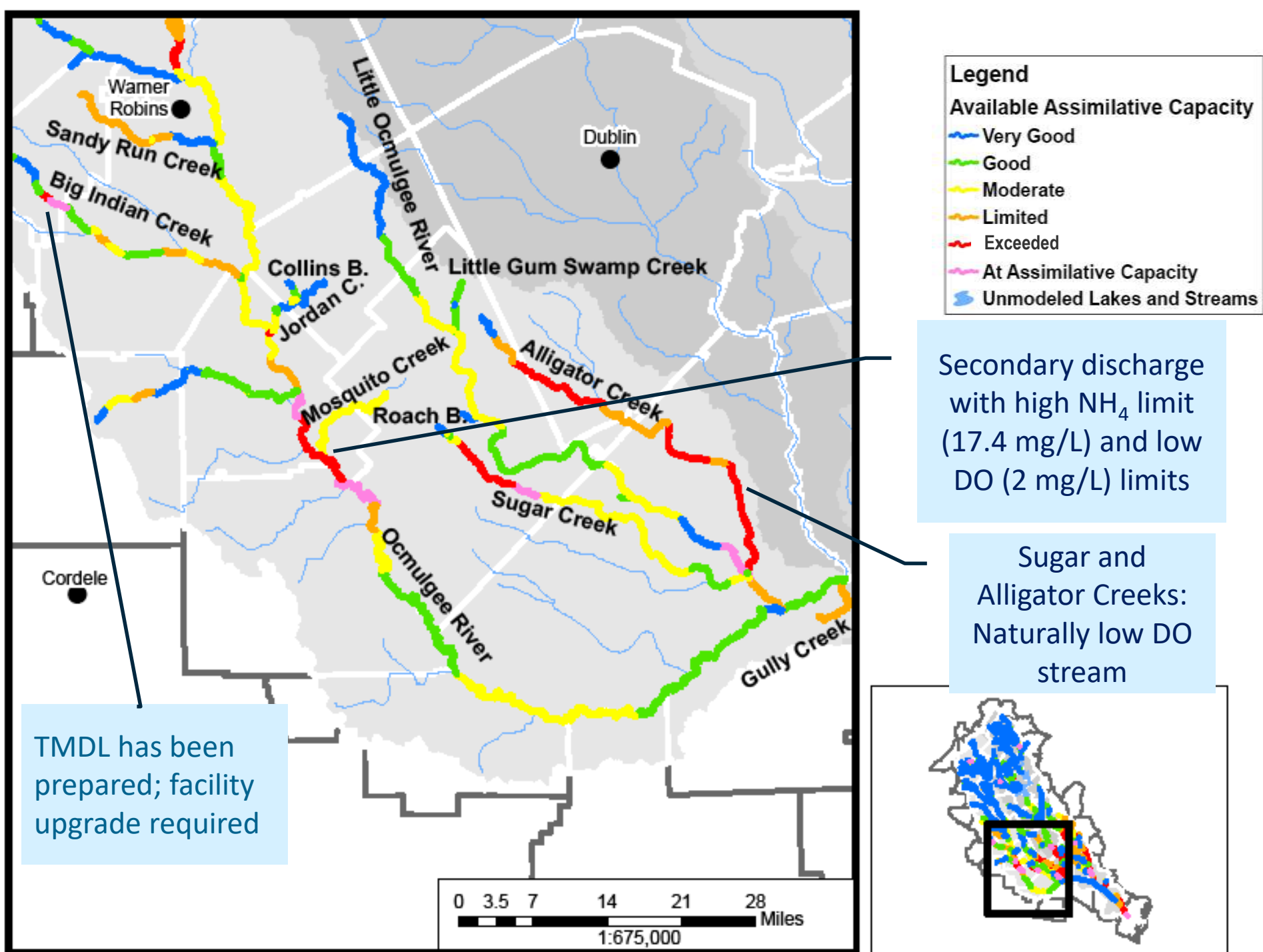
No Major Areas
Exceed Assimilative
Capacity





Swampy below Lake Tobesofkee;
currently on 303 (d)
list for DO





Initial Future Assessment Summary

Comparison of 2050 forecasted wastewater flows vs permitted levels

- Infrastructure gap in the following counties:
 - Municipal - Butts, Houston, Jasper, Jones, Newton
 - Industrial - Bibb

Assimilative Capacity Assessment

- Majority of stream segments have available capacity
- “Red” stream segments will need further evaluation

Water Quality Gap Considerations

Infrastructure Gap

- Gap: Forecasted Quantity > Permitted Quantity
- Filling Gap - Council to identify management practices to provide treatment capacity
 - ✓ Planned Projects: proposed wasteload applications on file (near and long terms)
 - ✓ Other Planned Projects: local government/council input
 - ✓ Conceptual Projects: developed by Council
- Additional Model Runs to include planned project as needed (level of treatment assumption required)

Water Quality Gap Considerations

IFA shows at or exceeds assimilative capacity at permitted quantity

- Evaluate possible causes first
- Request Additional Evaluation with Revised Modeling Conditions
 - At forecasted flow
 - At actual effluent levels
 - With management practice if necessary
- Recommend Additional Monitoring
 - Documented violation may prompt TMDL evaluation
 - Follow established TMDL process, facility upgrade may be required

Non-Point Source and Impaired Streams

Water Quality 101

- **What are 305(b) and 303(d) ?**
- **What is this TMDL stuff ?**
- **Do I want to be on the 303(d) list?**
- **How do I get off that list?**

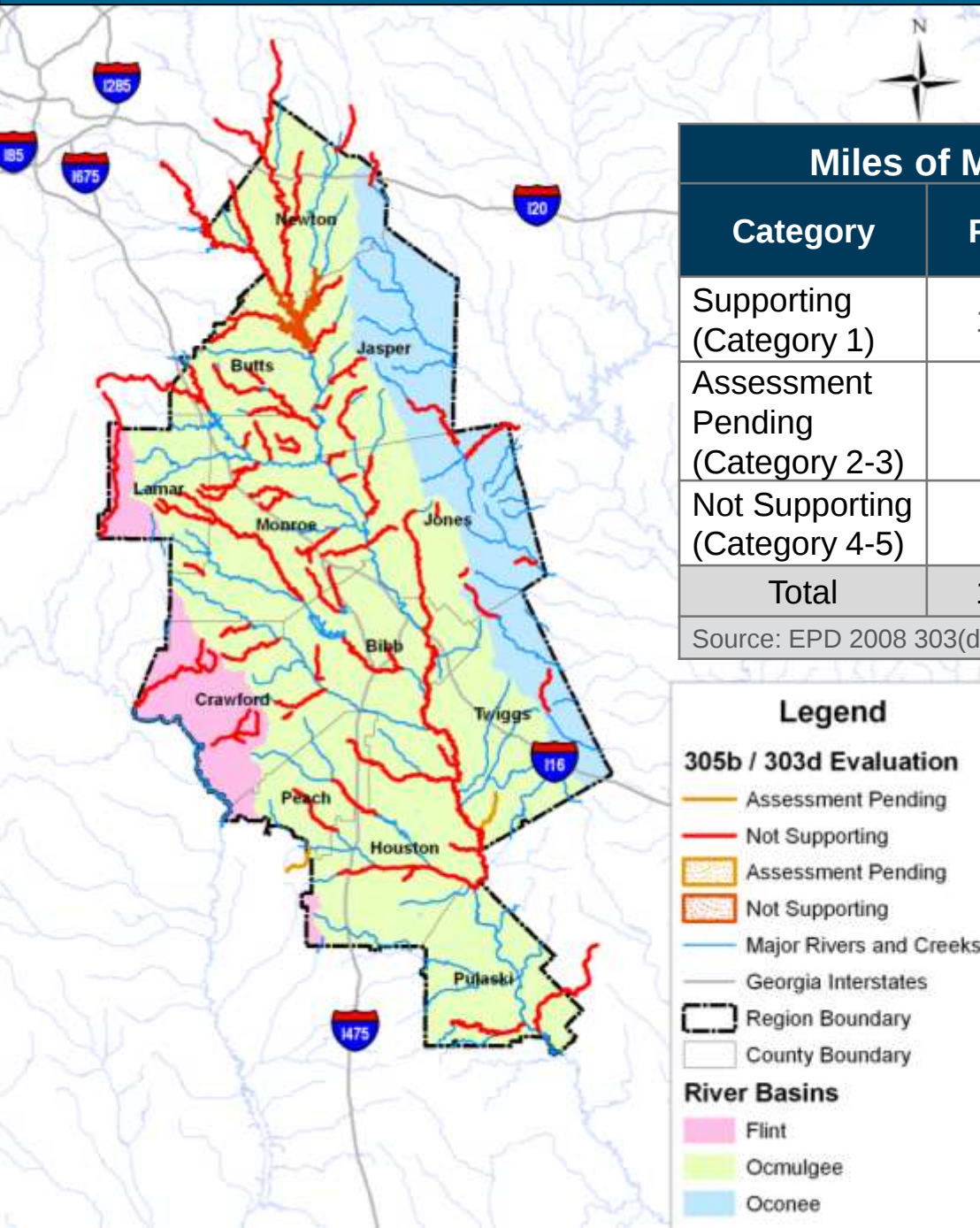
Water Quality 101

- 303(d) and 303 (b) are sections in the Clean Water Act
- EPD prepares a list of assessed waters – 303(d) list
Supporting, non-supporting, or assessment pending
- Threatened and impaired water List
- Updates every 2 years
- *Water Quality in Georgia* is the combined 305(b) & 303(d) report

Water Quality 101

- **Designated use – classifications & standards**
- **Classifications**
 - **Drinking water, recreation, fishing, etc.**
- **Standards**
 - **Establish criteria for DO, pH, bacteria, etc.**
- **If >10% of data exceeds standard, then considered non-supporting & not meeting designated use**
- **If non-supporting, EPD establishes a TMDL**
- **TMDL – Total Maximum Daily Load**

Middle Ocmulgee Impaired Waters



Miles of Monitored Stream by Category

Category	Flint	Ocmulgee	Oconee	Total Miles of Stream
Supporting (Category 1)	132	507	119	758
Assessment Pending (Category 2-3)	0	11	0	11
Not Supporting (Category 4-5)	58	535	45	638
Total	190	1,053	164	1,407

Source: EPD 2008 303(d)/(305(b) list of impaired waters

Legend

305b / 303d Evaluation

- Assessment Pending
- Not Supporting
- Assessment Pending
- Not Supporting
- Major Rivers and Creeks
- Georgia Interstates
- Region Boundary
- County Boundary

River Basins

- Flint
- Ocmulgee
- Oconee

Miles of Impaired Stream by Parameter of Concern

Criterion Violated	Flint	Ocmulgee	Oconee	Total Miles of Impaired Stream
Biota (Fish Community)	31	272	17	320
Biota (Macroinvertebrate Community)	0	33	0	33
Copper	0	5	0	5
Dissolved Oxygen	11	57	0	68
Fecal Coliform	27	277	28	332
Fish Consumption Guidance (PCBs)	0	54	0	54
pH	4	11	0	15
Toxicity	0	16	0	16
Total	73	725	45	843

Source: Georgia EPD 2008 303(d)/305(b) list of impaired waters
Note: streams may be listed for more than one parameter; therefore the total miles of stream listed by criterion may be greater than the total miles of listed streams.





Watershed and Lake Modeling

- Current Conditions Assessment - Jan 2010
- Initial Future Assessment – Fall 2010 after future land use forecast

