



March 16, 2010

Dear Council Members:

We are looking forward to seeing you at our next Savannah-Upper Ogeechee Water Planning Council meeting on March 25, 2010. The meeting will be held at Walter McNeely Lakeside Pavilion in the Richard Russell State Park near Elberton, 2650 Russell State Park Road, 706.213.2045.

Please review the attached draft agenda and the pre-meeting materials prior to the meeting. The Governor's Office of Planning and Budget has just released the state-wide population forecasts. The link to the website is:

<http://www.opb.state.ga.us/media/12444/georgia%20population%20projections%20-%20march%202010.pdf>

For your convenience we have also attached a table that summarizes the population forecasts for our Savannah-Upper Ogeechee Region counties. As you know, these population projections form the basis for the municipal water and wastewater forecasts. The draft municipal and industrial water and wastewater forecasts are now ready for your review and comments, and we will review them at the meeting. Please be sure to forward this information to your local governments and water providers for their review. Their input on the future water and wastewater forecasts will be crucial for our planning effort.

In addition to the population data and draft water demand forecasts, a brief summary of the baseline resource assessment results also is provided. We will be presenting highlights of the resource assessments for those of you who were not able to attend the joint meetings in January and February. EPD will have synopses of the resource assessments available soon. Please visit our Regional Water Planning Council Website (<http://www.savannahupperogeechee.org/>) for updated information.

Thank you again for your continued interest and involvement in this important process. Please let us know if you have any questions or concerns.

Ron Cross, Chair
Savannah-Upper Ogeechee Regional Water Planning Council

Charlie Newton, Vice-Chair
Savannah-Upper Ogeechee Regional Water Planning Council



Georgia's State Water Plan

Council Meeting
Draft Agenda

Savannah-Upper Ogeechee Water Planning Council

Meeting 5 Objectives:

March 25, 2010

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| <ol style="list-style-type: none"> 1) Present municipal and industrial forecasts 2) Review resource assessment presentations from joint meetings 3) Continue management practices discussions |
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8:30–9:00 a.m.	Registration
9:00–9:45	Updates from Chair <i>Council Leadership Meeting with EPD Director/Governor's Task Force Update/ Legislative Update/Goals and Schedule</i>
9:45–10:45	Municipal and Industrial Water and Wastewater Forecasts <i>Draft Municipal and Industrial Forecasts</i>
10:45–11:00	Break
11:00–12:00	<i>Guest Speaker from Metro North Georgia Water Planning District</i>
12:00–1:00	Lunch
1:00–1:15	Agricultural and Energy Forecast Update
1:15–2:15	Joint Meeting Update/Overview of Resource Assessments <i>Surface Water Availability Groundwater Availability Water Quality</i>
2:15–3:00	Management Practices <i>Management Practice Selection Process and Example</i>
3:00–3:30	Next Steps <i>Council Input Mechanism/South Carolina Coordination</i>
3:30–4:00	Elected Official and Public Comments
4:00–4:30	Wrap Up/Council Meeting 5 Evaluation/Next Meeting



Georgia's State Water Plan

Water and Wastewater Forecasting Results

March 2010

Forecasts of water and wastewater demands, along with the resource assessments, form the basis for water planning in Georgia. The State Water Plan requires the preparation of water and wastewater demand forecasts for the following water use sectors: Municipal, Industrial, Agricultural and Energy. The draft forecasts being provided for Council consideration and use in management practice selection are being developed in 10 year increments through 2050.

Municipal (Residential, Commercial and Light Industrial) Water and Wastewater

Draft Municipal water and wastewater demand forecasts were prepared for the *Residential*, *Commercial* and *Light Industrial* water use categories. These categories are termed "*Municipal*" to distinguish from heavy water-using industries, which are forecasted separately as "Industrial" and described below. The calculation of draft municipal water and wastewater demand forecasts utilize both population projections and a water use rate, which in most cases uses 2005 as the base year. These draft forecasts are aggregated by county for the planning period through 2050.

To provide Councils with a starting point for the selection management practices, the draft municipal demand forecasts have been disaggregated among relevant categories. These include water source (groundwater and/or surface water) public supply versus self supply for water, and centralized versus septic for wastewater.

The methodology and input for the draft municipal demand forecasts, such as baseline water use rates (per capita water use rate), were presented to the Councils and to the Municipal Ad Hoc groups in 2009. Feedback was incorporated into this draft March 2010 results and they will be shared with the Municipal Ad Hoc groups prior to presentation at Council Meeting 5. Feedback will be used to revise the forecasts for water use after Council Meeting 5.

The county-level population projections used to forecast municipal water and wastewater demand were developed by the Governor's Office of Planning and Budget (OPB) through contract with the Carl Vinson Institute of Government at the University of Georgia, and are expected to be officially released by OPB during the month of March, 2010. These projections considered comments received on the draft population projections released in 2009. Further questions or comments on these population projections should be directed to the Governor's Office of Planning and Budget.

Industrial Water and Wastewater

In order to prepare industrial water and wastewater demand forecasts for Georgia, the State's major water-using industries were identified and draft industrial water and wastewater demand forecasts were developed using approaches refined by the industrial ad hoc group. Whenever possible, based on input from members of the industrial ad hoc group, product based forecasting methods were used. For example, the carpet manufacturing industry has provided a detailed alternate method. For industries where product based forecasting was not possible, industry-specific workforce projections were used to project the rate of future growth in water use within the industry. These draft

forecasts are aggregated by region for each industry sector for the planning period. To provide the Council with a starting point for the selection of management practices, the draft industrial demand forecasts have been disaggregated among relevant categories, such as the ratio of land application to point discharge for wastewater disposal.

The methodologies described above as well as input EPD has received from industrial users have been presented and discussed with the Councils and also with Industrial Ad Hoc group in 2009. These draft March 2010 results will also be shared with the Industrial Ad Hoc group prior to presentation at Council Meeting 5. Feedback will be used to revise the forecasts for use in the selection of management practices after Council Meeting 5.

The region-specific industry workforce projections that were used for this forecasting were developed by the Carl Vinson Institute of Government at the University of Georgia, under contract to Georgia EPD. These projections reflect comments received from the draft workforce projections numbers released in 2009.

Agricultural Water

Draft forecasts of water use for agricultural irrigation include forecasts of agriculture irrigation water use for the planning period by county and region. For each county, the forecasts list the acres irrigated by crop, and also show irrigation water use under dry, medium, and wet climate conditions. The draft forecasts also indicate whether the source is surface water or groundwater.

Input on the draft forecasts of water use for agricultural irrigation was incorporated into the development of these draft forecasts in 2009, and the draft forecasts have been available on www.gerogjewaterplaning.org since prior to Council Meeting 3. Comments included the request to include non-permitted agricultural uses such as plant nurseries and specialty crops in the irrigation water forecasts. These uses are currently being incorporated into the draft Agricultural Forecasts and will be ready for Council use in early 2010.

Current water uses for non-permitted agriculture uses, such as golf course irrigation and livestock production, is being compiled for Council use, but forecasting of the future water needs is not being performed for this first round of regional water planning due to the lack of available data.

Forecasts of water use for agricultural irrigation were developed by the University of Georgia, College of Agricultural and Environmental Sciences, under contract to Georgia EPD.

Energy Water Use

Forecasts of future water needs for electrical energy production are in the process of being developed. The process includes using the population projections developed by OPB and information on the historical relationship between population growth and energy consumption in Georgia to project future energy needs. Then, to forecast the water needed to meet the future energy needs in Georgia, a power ad hoc group is working with EPD to identify the mix of most likely future fuel sources, and likely placement of new and expanded production facilities.

The draft energy water forecasts will be completed in the summer of 2010. Until then, Councils can begin the work of selecting management practices using current electrical energy water demands and short term (~10 year) forecasts of new and expanded facilities from the power ad hoc group.

County	Total County Population Projections - Savannah Upper Ogeechee Region				
	2010	2015	2020	2025	2030
Banks County	17,589	19,961	22,512	25,407	28,208
Burke County	23,576	26,341	28,989	31,744	34,630
Columbia County	117,121	134,593	153,346	174,038	193,983
Elbert County	20,589	20,906	21,136	21,312	21,427
Franklin County	22,346	23,963	25,829	27,920	29,901
Glascock County	2,854	2,952	3,029	3,091	3,135
Hart County	25,063	27,320	29,645	32,120	34,687
Jefferson County	16,414	16,400	16,259	16,028	15,713
Jenkins County	8,556	8,574	8,558	8,514	8,458
Lincoln County	8,289	9,060	9,733	10,356	10,931
McDuffie County	22,448	24,499	26,403	28,312	30,205
Madison County	29,111	31,847	34,796	38,014	41,029
Oglethorpe County	14,940	17,601	20,620	24,127	28,081
Rabun County	17,053	18,657	20,338	22,114	23,909
Richmond County	201,897	209,633	217,244	224,620	231,476
Screven County	15,480	16,657	17,819	19,036	20,036
Stephens County	25,794	26,729	27,616	28,471	29,273
Taliaferro County	1,881	1,955	2,016	2,063	2,092
Warren County	5,871	6,051	6,166	6,248	6,335
Wilkes County	10,295	10,448	10,587	10,729	10,865
Regional Total	607,167	654,147	702,641	754,264	804,374

Date: March 2010

Source: State of Georgia Office of Planning and Budget

Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 1. Municipal Per Capita Water Use Rate (gpcd)

COUNTY	Public Supplied ^{1,3}	Base Year	Self Supplied ^{2,3}
Banks	101	2005	75
Burke	132	2005	75
Columbia	153	2006	75
Elbert	102	2005	75
Franklin	142	2005	75
Glascocock	73	2005	75
Hart	200	2005	75
Jefferson	169	2005	75
Jenkins	101	2005	75
Lincoln	67	2005	75
McDuffie	312	2005	75
Madison	107	2005	75
Oglethorpe	94	2005	75
Rabun	168	2005	75
Richmond	225	2005	75
Screven	161	2005	75
Stephens	147	2005	75
Taliaferro	71	2005	75
Warren	115	2005	75
Wilkes	156	2005	75

1 Based on "Water Use in Georgia 2005" (USGS) or input from local water providers

2 Based on data from "Water Use in Georgia 2005" for residential wells or input from local water providers

3 gpcd = gallons per day per person

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

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Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 2. Total Municipal Water Demand (mgd), Annual Average Daily Demand (AADD)

COUNTY	2010	2020	2030	2040	2050
Banks	1.51	1.91	2.36	2.74	3.18
Burke	2.25	2.72	3.21	3.74	4.34
Columbia	16.77	21.79	27.40	32.13	37.00
Elbert	1.82	1.82	1.81	1.78	1.75
Franklin	2.40	2.73	3.11	3.42	3.71
Glascock	0.13	0.13	0.13	0.13	0.13
Hart	2.96	3.44	3.97	4.52	5.09
Jefferson	2.04	1.99	1.90	1.77	1.63
Jenkins	0.75	0.73	0.71	0.68	0.66
Lincoln	0.57	0.65	0.71	0.76	0.80
McDuffie	3.62	4.21	4.78	5.32	5.85
Madison	2.62	3.07	3.56	3.94	4.31
Oglethorpe	1.17	1.58	2.12	2.75	3.25
Rabun	2.43	2.85	3.30	3.75	4.20
Richmond	44.78	47.74	50.47	52.79	55.06
Screven	1.71	1.93	2.14	2.22	2.27
Stephens	3.61	3.80	3.98	4.13	4.27
Taliaferro	0.09	0.09	0.09	0.09	0.08
Warren	0.57	0.59	0.59	0.60	0.63
Wilkes	1.18	1.19	1.20	1.20	1.20
Grand Total	92.98	104.97	117.54	128.47	139.41

mgd = million gallons per day

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

3/16/2010

Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 2.1 Total Public Supply Water Demand (mgd), AADD

COUNTY	2010	2020	2030	2040	2050
Banks	0.76	0.95	1.18	1.38	1.60
Burke	1.12	1.36	1.61	1.89	2.20
Columbia	15.66	20.36	25.61	30.04	34.61
Elbert	1.03	1.03	1.03	1.02	1.00
Franklin	1.54	1.75	2.01	2.21	2.40
Glascock	0.00	0.00	0.00	0.00	0.00
Hart	1.72	2.02	2.34	2.68	3.03
Jefferson	1.46	1.43	1.37	1.28	1.18
Jenkins	0.41	0.40	0.39	0.38	0.37
Lincoln	0.39	0.45	0.48	0.52	0.55
McDuffie	2.55	2.98	3.39	3.79	4.18
Madison	1.47	1.72	2.00	2.22	2.43
Oglethorpe	0.24	0.33	0.44	0.57	0.68
Rabun	2.09	2.45	2.85	3.24	3.63
Richmond	44.48	47.42	50.14	52.45	54.71
Screven	1.02	1.16	1.29	1.35	1.38
Stephens	3.42	3.60	3.77	3.92	4.05
Taliaferro	0.00	0.00	0.00	0.00	0.00
Warren	0.38	0.39	0.39	0.40	0.42
Wilkes	0.79	0.80	0.81	0.81	0.82
Grand Total	80.52	90.62	101.13	110.15	119.23

mgd = million gallons per day

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3/16/2010

Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 2.2 Public Supply Surface Water Demand (mgd), AADD

COUNTY	2010	2020	2030	2040	2050
Banks	0.76	0.95	1.18	1.38	1.60
Burke	0.16	0.20	0.23	0.27	0.32
Columbia	15.47	20.12	25.31	29.69	34.19
Elbert	1.03	1.03	1.03	1.02	1.00
Franklin	1.46	1.66	1.90	2.09	2.28
Glascock	0.00	0.00	0.00	0.00	0.00
Hart	1.72	2.02	2.34	2.68	3.03
Jefferson	0.00	0.00	0.00	0.00	0.00
Jenkins	0.00	0.00	0.00	0.00	0.00
Lincoln	0.39	0.45	0.48	0.52	0.55
McDuffie	2.55	2.98	3.39	3.79	4.18
Madison	0.00	0.00	0.00	0.00	0.00
Oglethorpe	0.24	0.33	0.44	0.57	0.68
Rabun	2.03	2.39	2.77	3.15	3.54
Richmond	35.62	37.97	40.15	42.00	43.81
Screven	0.00	0.00	0.00	0.00	0.00
Stephens	3.42	3.60	3.77	3.92	4.05
Taliaferro	0.00	0.00	0.00	0.00	0.00
Warren	0.38	0.39	0.39	0.40	0.42
Wilkes	0.79	0.80	0.81	0.81	0.82
Grand Total	66.01	74.88	84.22	92.29	100.45

mgd = million gallons per day

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Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 2.3 Public Supply Groundwater Demand (mgd), AADD

COUNTY	2010	2020	2030	2040	2050
Banks	0.00	0.00	0.00	0.00	0.00
Burke	0.96	1.17	1.38	1.61	1.88
Columbia	0.19	0.24	0.30	0.36	0.41
Elbert	0.00	0.00	0.00	0.00	0.00
Franklin	0.08	0.09	0.11	0.12	0.13
Glascock	0.00	0.00	0.00	0.00	0.00
Hart	0.00	0.00	0.00	0.00	0.00
Jefferson	1.46	1.43	1.37	1.28	1.18
Jenkins	0.41	0.40	0.39	0.38	0.37
Lincoln	0.00	0.00	0.00	0.00	0.00
McDuffie	0.00	0.00	0.00	0.00	0.00
Madison	1.47	1.72	2.00	2.22	2.43
Oglethorpe	0.00	0.00	0.00	0.00	0.00
Rabun	0.05	0.06	0.07	0.09	0.10
Richmond	8.86	9.45	9.99	10.45	10.90
Screven	1.02	1.16	1.29	1.35	1.38
Stephens	0.00	0.00	0.00	0.00	0.00
Taliaferro	0.00	0.00	0.00	0.00	0.00
Warren	0.00	0.00	0.00	0.00	0.00
Wilkes	0.00	0.00	0.00	0.00	0.00
Grand Total	14.51	15.74	16.92	17.86	18.78

mgd = million gallons per day

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Draft March 2010 Municipal Water Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 2.4 Self Supply Groundwater Demand (mgd), AADD

COUNTY	2010	2020	2030	2040	2050
Banks	0.76	0.95	1.17	1.36	1.58
Burke	1.13	1.36	1.60	1.85	2.15
Columbia	1.11	1.43	1.79	2.09	2.40
Elbert	0.79	0.78	0.78	0.76	0.75
Franklin	0.86	0.97	1.10	1.20	1.30
Glascock	0.13	0.13	0.13	0.13	0.13
Hart	1.23	1.42	1.63	1.85	2.07
Jefferson	0.58	0.56	0.53	0.49	0.45
Jenkins	0.34	0.33	0.32	0.30	0.29
Lincoln	0.18	0.20	0.22	0.24	0.25
McDuffie	1.07	1.23	1.39	1.53	1.67
Madison	1.16	1.35	1.56	1.72	1.87
Oglethorpe	0.93	1.25	1.68	2.17	2.57
Rabun	0.35	0.40	0.46	0.51	0.57
Richmond	0.30	0.32	0.33	0.34	0.35
Screven	0.68	0.77	0.84	0.87	0.88
Stephens	0.19	0.20	0.21	0.21	0.22
Taliaferro	0.09	0.09	0.09	0.09	0.08
Warren	0.19	0.20	0.20	0.20	0.21
Wilkes	0.39	0.39	0.39	0.39	0.39
Grand Total	12.46	14.34	16.41	18.32	20.17

mgd = million gallons per day

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

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Draft March 2010 Municipal Wastewater Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 3. Total Municipal Wastewater Produced (mgd), Annual Average Daily Flow (AADF)

COUNTY	2010	2020	2030	2040	2050
Banks	1.16	1.47	1.81	2.11	2.45
Burke	1.84	2.22	2.61	3.05	3.54
Columbia	14.95	19.44	24.44	28.66	33.01
Elbert	1.62	1.62	1.61	1.58	1.56
Franklin	2.08	2.36	2.70	2.96	3.21
Glascoek	0.11	0.11	0.11	0.11	0.10
Hart	2.58	3.00	3.47	3.95	4.45
Jefferson	1.90	1.86	1.77	1.65	1.52
Jenkins	0.62	0.61	0.59	0.57	0.55
Lincoln	0.52	0.59	0.64	0.68	0.73
Madison	2.99	3.49	3.96	4.40	4.84
McDuffie	2.48	2.90	3.37	3.73	4.07
Oglethorpe	1.02	1.38	1.85	2.40	2.85
Rabun	2.14	2.51	2.90	3.29	3.69
Richmond	44.44	47.38	50.09	52.40	54.65
Screven	1.40	1.59	1.76	1.83	1.86
Stephens	3.27	3.44	3.60	3.74	3.87
Taliaferro	0.07	0.07	0.07	0.07	0.07
Warren	0.54	0.55	0.56	0.57	0.59
Wilkes	1.00	1.00	1.01	1.02	1.02
Grand Total	86.73	97.58	108.93	118.77	128.61

mgd = million gallons per day

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

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Draft March 2010 Municipal Wastewater Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 3.1 Municipal Septic Wastewater (mgd), AADF

COUNTY	2010	2020	2030	2040	2050
Banks	1.16	1.47	1.81	2.11	2.45
Burke	1.23	1.49	1.75	2.03	2.36
Columbia	2.67	3.46	4.35	5.09	5.86
Elbert	0.93	0.93	0.92	0.90	0.89
Franklin	1.84	2.09	2.39	2.62	2.84
Glascock	0.11	0.11	0.11	0.11	0.10
Hart	2.18	2.54	2.93	3.33	3.75
Jefferson	0.91	0.88	0.84	0.78	0.72
Jenkins	0.33	0.33	0.31	0.30	0.29
Lincoln	0.42	0.48	0.52	0.56	0.59
Madison	2.99	3.49	3.96	4.40	4.84
McDuffie	0.98	1.15	1.32	1.46	1.59
Oglethorpe	1.02	1.38	1.85	2.40	2.85
Rabun	1.72	2.01	2.33	2.64	2.96
Richmond	6.21	6.62	6.99	7.31	7.62
Screven	0.88	0.99	1.09	1.13	1.15
Stephens	2.07	2.19	2.29	2.37	2.45
Taliaferro	0.07	0.07	0.07	0.07	0.07
Warren	0.30	0.31	0.31	0.32	0.33
Wilkes	0.47	0.47	0.47	0.47	0.47
Grand Total	28.52	32.45	36.63	40.43	44.19

mgd = million gallons per day

Table 3.2 Municipal Septic Wastewater (% of wastewater flow)

COUNTY	2010	2020	2030	2040	2050
Banks	100%	100%	100%	100%	100%
Burke	67%	67%	67%	67%	67%
Columbia	18%	18%	18%	18%	18%
Elbert	57%	57%	57%	57%	57%
Franklin	89%	89%	89%	89%	89%
Glascock	100%	100%	100%	100%	100%
Hart	85%	85%	84%	84%	84%
Jefferson	48%	48%	47%	47%	47%
Jenkins	54%	53%	53%	53%	53%
Lincoln	82%	82%	82%	82%	82%
Madison	100%	100%	100%	100%	100%
McDuffie	40%	39%	39%	39%	39%
Oglethorpe	100%	100%	100%	100%	100%
Rabun	80%	80%	80%	80%	80%
Richmond	14%	14%	14%	14%	14%
Screven	62%	62%	62%	62%	62%
Stephens	63%	63%	63%	63%	63%
Taliaferro	100%	100%	100%	100%	100%
Warren	57%	56%	56%	56%	56%
Wilkes	47%	47%	47%	46%	46%
Grand Total	33%	33%	34%	34%	34%

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

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Draft March 2010 Municipal Wastewater Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 3.3 Municipal Centralized Wastewater (mgd), AADF

COUNTY	2010	2020	2030	2040	2050
Banks	0.00	0.00	0.00	0.00	0.00
Burke	0.60	0.73	0.87	1.01	1.18
Columbia	12.28	15.97	20.09	23.57	27.15
Elbert	0.69	0.69	0.69	0.68	0.67
Franklin	0.23	0.27	0.31	0.34	0.37
Glascock	0.00	0.00	0.00	0.00	0.00
Hart	0.40	0.46	0.54	0.62	0.70
Jefferson	0.99	0.97	0.93	0.87	0.80
Jenkins	0.29	0.28	0.28	0.27	0.26
Lincoln	0.09	0.11	0.12	0.12	0.13
Madison	0.00	0.00	0.00	0.00	0.00
McDuffie	1.50	1.76	2.04	2.26	2.48
Oglethorpe	0.00	0.00	0.00	0.00	0.00
Rabun	0.42	0.50	0.58	0.66	0.74
Richmond	38.23	40.76	43.10	45.08	47.02
Screven	0.53	0.60	0.67	0.70	0.71
Stephens	1.19	1.26	1.32	1.37	1.42
Taliaferro	0.00	0.00	0.00	0.00	0.00
Warren	0.23	0.24	0.24	0.25	0.26
Wilkes	0.53	0.53	0.54	0.54	0.54
Grand Total	58.21	65.13	72.30	78.34	84.42

mgd = million gallons per day

Table 3.4 Municipal Centralized Wastewater (% of wastewater flow)

COUNTY	2010	2020	2030	2040	2050
Banks	0%	0%	0%	0%	0%
Burke	33%	33%	33%	33%	33%
Columbia	82%	82%	82%	82%	82%
Elbert	43%	43%	43%	43%	43%
Franklin	11%	11%	11%	11%	11%
Glascock	0%	0%	0%	0%	0%
Hart	15%	15%	16%	16%	16%
Jefferson	52%	52%	53%	53%	53%
Jenkins	46%	47%	47%	47%	47%
Lincoln	18%	18%	18%	18%	18%
Madison	0%	0%	0%	0%	0%
McDuffie	60%	61%	61%	61%	61%
Oglethorpe	0%	0%	0%	0%	0%
Rabun	20%	20%	20%	20%	20%
Richmond	86%	86%	86%	86%	86%
Screven	38%	38%	38%	38%	38%
Stephens	37%	37%	37%	37%	37%
Taliaferro	0%	0%	0%	0%	0%
Warren	43%	44%	44%	44%	44%
Wilkes	53%	53%	53%	54%	54%
Grand Total	67%	67%	66%	66%	66%

These draft forecasts are for discussion and use in regional water planning only. They reflect an application of current management practices into the future. As such, Councils may opt to adjust this current application.

3/16/2010

Draft March 2010 Industrial Water and Wastewater Demand Forecasts for the Savannah- Upper Ogeechee Water Planning Region

Table 4. Total Industrial Water Demand (mgd), Annual Average Daily Demand (AADD)

NAICS	Industry	2010	2020	2030	2040	2050
315	Apparel	0.00	0.00	0.00	0.00	0.00
336	Automotive Manufacturing	0.00	0.00	0.00	0.00	0.00
325	Chemicals	69.30	70.43	71.77	73.37	75.34
335	Electrical Machinery	0.00	0.00	0.00	0.00	0.00
332	Fabricated Metal Products	0.00	0.00	0.00	0.00	0.00
311	Food - Food Manufacturing	0.82	0.83	0.84	0.86	0.88
312	Food - Beverage and Tobacco	0.09	0.11	0.12	0.12	0.13
212	Mining	0.39	0.46	0.52	0.59	0.65
322	Paper	64.66	67.90	69.23	70.70	72.47
324	Petroleum	0.00	0.00	0.00	0.00	0.00
331	Primary Metals	0.00	0.00	0.00	0.00	0.00
326	Rubber	0.00	0.00	0.00	0.00	0.00
327	Stone and Clay	10.11	11.80	13.48	15.16	16.85
313	Textiles - Textile Mills	12.56	12.56	12.56	12.56	12.56
314	Textiles - Textile Product Mills	0.00	0.00	0.00	0.00	0.00
--	Other Industrial	0.41	0.43	0.46	0.49	0.52
--	Industrial from Municipal	0.72	0.77	0.82	0.87	0.93
	TOTAL	159.06	165.27	169.79	174.73	180.33

mgd = million gallons per day

Table 5. Total Industrial Wastewater Produced (mgd), Annual Average Daily Flow (AADF)

NAICS	Industry	2010	2020	2030	2040	2050
315	Apparel	0.00	0.00	0.00	0.00	0.00
336	Automotive Manufacturing	0.00	0.00	0.00	0.00	0.00
325	Chemicals	64.45	65.50	66.74	68.24	70.06
335	Electrical Machinery	0.00	0.00	0.00	0.00	0.00
332	Fabricated Metal Products	0.00	0.00	0.00	0.00	0.00
311	Food - Food Manufacturing	0.74	0.74	0.76	0.77	0.79
312	Food - Beverage and Tobacco	0.06	0.07	0.07	0.08	0.08
212	Mining	0.24	0.28	0.32	0.36	0.40
322	Paper	64.66	67.90	69.23	70.70	72.47
324	Petroleum	0.00	0.00	0.00	0.00	0.00
331	Primary Metals	0.00	0.00	0.00	0.00	0.00
326	Rubber	0.00	0.00	0.00	0.00	0.00
327	Stone and Clay	19.11	22.29	25.48	28.66	31.84
313	Textiles - Textile Mills	10.80	10.80	10.80	10.80	10.80
314	Textiles - Textile Product Mills	0.00	0.00	0.00	0.00	0.00
--	Other Industrial	0.19	0.20	0.22	0.23	0.25
--	Industrial from Municipal	0.44	0.47	0.50	0.53	0.57
	TOTAL	160.68	168.25	174.11	180.37	187.26

March 2010 Draft Municipal and Industrial Water and Wastewater Forecasts Definitions

For the purposes of these forecasts, the following definitions are used.

Centralized = water supplied or wastewater treated by a system that combines multiple users, such as a water/wastewater utility

Industrial = water supplied or wastewater treated by Georgia's largest water using industries. This includes individually permitted systems, and, where industrial water use data was readily available, systems that are supplied by a centralized system (like a utility)

Municipal = water used for or wastewater from domestic (residential), commercial, and light industrial uses, not otherwise forecasted in the industrial forecasts. Includes both "public" and "self-supply".

Public = water or wastewater services provided by a centralized entity, often a public utility, but also including privately-owned utilities. This does not include water supplied to an individual entity from an onsite well (self-supply).

Self-supply = water supplied to an individual entity, such as a house or business, from an individual well.

Septic = Onsite sewerage treatment that may include systems that service a single or small number of units, usually from a single entity. A common example is a septic tank with drainfield for disposal

The logo features a blue outline of the state of Georgia on the left, with a horizontal blue brushstroke extending to the right across the page. The text "Georgia's State Water Plan" is written in blue, with "Georgia's" in a smaller font above "State Water Plan".

Georgia's State Water Plan

Draft Water Resource Assessments

"If Georgia is to develop water resource plans that will allow continued sustainable use and enjoyment of the state's water resources, the state must first define the capabilities and current use of these water resources."

- Georgia Comprehensive State-wide Water Management Plan (2008) -

As described in the State Water Plan, resource assessments are evaluations of the capacity of water resources to meet demands for water supply and wastewater discharge without unreasonable impacts.

In January and February 2010, EPD conducted Joint Meetings of the Regional Water Planning Councils to: 1) deliver the preliminary results of the draft baseline resource assessments to the regional water planning councils; and, 2) provide representatives of each council with the first opportunity to exchange information with representatives of the other councils with whom they share water resources.

Preliminary Results of Draft Baseline Resource Assessments

- Groundwater availability
 - indicate that for all of the areas evaluated there is more groundwater available than is withdrawn to meet current demands
 - exceptions are seen in areas on the coast affected by saltwater intrusion and portions of the Lower Flint River basin (which are currently subject to special permitting provisions)
- Surface water availability
 - indicate that in much of the state there is sufficient water to meet current demands for offstream, consumptive water use and instream flow targets, even during dry periods
 - in some parts of the state, instream flow targets and current offstream needs cannot be fully met during dry periods
- Surface water quality
 - indicate that many of the water bodies evaluated are likely to be able to assimilate additional wastewater discharge (although downstream effects will have to be evaluated)
 - for some waterbodies, high levels of treatment may be required for additional wastewater discharges
 - non-point sources are a large source of nutrients and are likely causing higher values of chlorophyll-a in lakes

Technical Questions

If Councils identify the need for more detailed technical information on the resource assessment methodologies (i.e., what was done, how, and why those choices were made), EPD will provide the information as requested by each Council in a manner consistent with the 2010 project schedule.

Council Meetings

Each Council will conduct meetings in 2010 to: 1) evaluate how future water and wastewater demands can be met without unreasonable impacts; 2) select management practices; and, 3) draft an initial recommended regional water plan.

The preliminary results of the draft baseline resource assessments provide a starting point for each Council to consider how to meet the vision and goals for the region's water resources. Each Council will use the draft resource assessments along with the draft water demand forecasts to select the management practices that will be used in the region.

To evaluate how future water and wastewater demands can be met without unreasonable impacts, EPD will run the resource assessment models with the water demand forecasts and specific inputs on management practices from each Council. For example, a Council may determine the anticipated locations of additional groundwater withdrawals and the volume of groundwater desired for a location.

Each Council will coordinate the selection of management practices with other councils and evaluate the fiscal impacts and impacts on shared water resources of the management practices with input from local government representatives.

Submission of Comments

In the first quarter of 2010, EPD will release a synopsis of each draft water resource assessment for public comment via www.georgiawaterplanning.org and the ten regional websites. The public comment period will be open for at least sixty days from the time of posting. During that time, the detailed technical report associated with each draft water resource assessment will also be released. EPD will consider all comments, provide responses and make necessary revisions to the draft water resource assessments.

Refinements and adjustments to the draft water resource assessments are expected and will be based on input from Council members, interested groups, the general public and the scientific and engineering advisory panel.

Councils will use preliminary drafts of the baseline water resource assessments to begin the initial selection of management practices.