Georgia's

State Water Plan

Savannah-Upper Ogeechee
Regional Water Planning Council Meeting
June 4, 2020

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Welcome and Introductions

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Council Business

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Council Business

- Approve meeting minutes from February 6, 2020 Council Meeting
- Approve today's meeting agenda

Today's Meeting Agenda

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Council Meeting
Savannah-Upper Ogeechee Regional Water Council
Agenda – June 4, 2020
10:00 am

Join Zoom Meeting
https://zoom.us/j/92664708419?pwd=bzB3anFKb3laMVdoL25MK3NDK01JZz09
Dial-In Only: 1-646-558-8656
Meeting ID: 926 6470 8419

Objectives:

1) Updates on Topics of Interest

9:45 – 10:00 a.m.	Virtual Registration for Council Members
10:00 – 10:10 a.m.	Roll call, Welcome and Introductions
10:10 – 10:15 a.m.	Council Business
	• *Approve draft meeting minutes from February 6, 2020 Council Meeting*
	• *Approve draft meeting agenda*
10:15 – 10:25 a.m.	GA EPD Updates
	• *Forecasting Process Status – Jennifer Welte, GA EPD*
10:25 – 10:45am	Municipal Forecasting Effort – *Tom Wiedmeier, Vice Chair*
10:45 – 11:05 a.m.	Savannah & Ogeechee Rivers Real-time Online Water Monitoring updates and Council feedback – *Tonya Bonitatibus, Savannah Riverkeeper*
11:05 - 11:30 a.m.	SC DNR State Water Planning Update – *Scott Harder, South Caroline DNR*
	~ 5 -10-minute Stretch Break ~
11:40 - 11:50 a.m.	Metro North Georgia Water Planning District Updates - *Danny Johnson, MNGWP*
11:50 – 12:10 p.m	Comp 2 Corps Topic Coordination Update – *Stan Simpson, USACE*
12:10 - 12:25 p.m.	Stephens Creek FERC Relicensing Update – *Allison Jakupca, Kleinschmidt Group*
12:25 - 12:35 p.m.	Round Table Discussion
12:35- 12:45 p.m.	Public Comments Wrap Up

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- 10:00-10:10 Welcome & Introductions
- 10:10-10:15 Council Business
- 10:15-10:25 GA EPD Updates
- 10:25-10:45 Municipal Forecasting Effort
- 10:45-11:05 SEED Grant Project Update
- 11:05-11:30 SC DNR State Water Planning Update
- 11:40-11:40 MNGWPD Updates
- 11:50-12:10 USACE Updates
- 12:10-12:25 Stephens Creek FERC Relicensing Update
- 12:25-12:35 Round Table Discussion
- 12:35-12:45 Public Comments/Wrap Up

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Georgia Environmental Protection Division Updates

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Forecasting Efforts

- Municipal
  - Stakeholder Meetings held on April 16, June 3; next meeting in Sept.
  - Draft Forecast/Methodology Report preparation
    - Public notice/comment period (mid-July through mid-August)
- Industrial
  - Initial stakeholder meeting on June 3
- Energy Sector
  - Initial stakeholder meeting on April 29
- Agricultural
  - Albany State University/UGA developing forecast

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Municipal Water Demand and Wastewater Flow Forecasting

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Schedule

- Anticipated Stakeholder Meetings
  - Initiation Meeting (Online Webinar, April 14)
  - Draft Forecast Review (Online Webinar, June 3)
  - Forecast Review Meeting (Online Webinar, mid September)
- Feedback on region-specific input (May 15)
- Draft forecast preparation (April-June 3)
- Develop forecast report (June-mid July)
- Public notice comment period (mid-July through mid August)
- Finalize forecasts (complete by end of September)
- Review water and wastewater demand forecasts with Regional Water Councils (October – December)

Data Sources

- Updated population projections (UGA October 2019)
- Surface water and groundwater withdrawal permits
- Georgia water audit data
- USGS self-served population data
- Discharge permits
- LAS information from district offices
- GA DPH septic tank usage data

Water Demand Forecasting

- Update per capita water demand values
  - County average weighted water audit per capita using 2015-2018 data
  - Updated per capita water demand = average withdrawal / SDWIS population served
- Plumbing fixture implementation per capita reduction
  - 2% per year replacement of toilets
  - Census 2000 housing stock age

Water Demand Forecasting

- Update forecast water demands
  - Self-supplied water demand (assume 100% GW) = Self- supplied population x 75 gpcd
  - Permitted utility water demand = updated per capita x future population served
  - Account for plumbing code water conservation (reduction in updated per capita over time)
- Review/adjust forecasts

Wastewater Flow Forecasting

- Update discharges
  - 2019 discharge data for all permitted facilities
- Calculate future centralized discharges = annual average day discharge x population change
- Calculate future septic discharges = 75 gpcd x 80% return x septic population
- Review/adjust forecasts

Input Summary

- Emailed all Georgia water withdrawal and wastewater discharge permit holders to request input
- Detailed log compiled
- Currently working to follow up on detailed input

Next Steps

- Request regional council members and/or utilities to review draft forecast
- Provide input on draft forecasts by June 19
- Participate in the next stakeholder meeting to review finalized forecasts

October 2019 Series: County Residential Population Projections 2018 - 2060							
		2018	2020	2030	2040	2050	2060
	Georgia	**10,471,711**	**10,833,472**	**12,292,423**	**13,298,742**	**14,186,991**	**15,106,503**

October 2019 Series: County Residential Population Projections 2018 - 2060							
Council	**County**	**2018**	**2020**	**2030**	**2040**	**2050**	**2060**
Savannah - Upper Ogeechee	Banks	18,844	19,982	24,827	28,650	32,701	39,065
	Burke	22,250	22,342	22,600	22,350	21,841	21,700
	Columbia	153,225	158,631	177,910	185,922	188,389	186,675
	Elbert	19,023	18,945	18,581	17,982	17,304	16,863
	Franklin	22,878	23,329	25,652	27,876	30,277	34,239
	Glascock	2,995	3,025	3,065	2,911	2,628	2,214
	Hart	25,963	26,107	26,772	27,170	27,657	29,037
	Jefferson	15,431	15,313	14,828	14,146	13,405	12,822
	Jenkins	8,691	8,576	8,044	7,419	6,838	6,241
	Lincoln	7,919	8,125	8,534	8,086	7,465	7,011
	Madison	29,650	30,177	33,121	36,518	40,691	47,883
	McDuffie	21,533	21,597	21,951	22,058	22,054	22,599
	Oglethorpe	15,054	15,240	16,237	17,242	18,353	20,349
	Rabun	16,872	16,986	17,641	18,198	19,221	21,435
	Richmond	201,554	202,240	204,904	202,735	198,965	197,212
	Screven	13,962	13,900	13,558	12,902	12,238	11,801
	Stephens	26,038	26,328	27,927	29,381	31,126	34,377
	Taliaferro	1,627	1,632	1,609	1,452	1,283	1,111
	Warren	5,279	5,210	5,002	4,816	4,639	4,618
	Wilkes	9,889	10,014	10,037	9,302	8,295	7,296
		638,677	**647,699**	**682,800**	**697,116**	**705,370**	**724,548**

Savannah - Upper Ogeechee Municipal Surface Water Withdrawals and Draft Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average (MGD)	2019 Annual Average Withdrawal (MGD)	2060 Annual Average Demand (MGD)
006-0106-01	Commerce, City of	Banks	Grove Creek Reservoir	4.2	2.09	
006-0106-05	Banks County Board Of Commissioners	Banks	Mtn. Creek Reservoir	1	0.73	
			Banks County Total	**5.20**	**2.82**	**1.77**
036-0109-04	Columbia County Water System	Columbia	Clarks Hill Reservoir	8	2.58	
036-0110-01	Columbia County Water System	Columbia	Stevens Creek Reservoir (Savannah River)	45.9	15.69	
			Columbia County Total	**53.90**	**18.27**	**22.21**
052-0104-01	Elberton, City of	Elbert	Beaverdam Creek	1.7	-	
052-0104-04	Elberton, City of	Elbert	Lake Russell	3.7	1.86	
			Elbert County Total	**3.70**	**1.86**	**1.71**
059-0102-01	Lavonia, City of	Franklin	Crawford Creek Reservoir	1.5	-	
059-0102-04	Lavonia, City Of	Franklin	Lake Hartwell	3	1.31	
059-0103-01	Royston, City of	Franklin	North Fork Broad River	1	0.37	
			Franklin County Total	**4.00**	**1.67**	**2.53**
073-0190-01	Hartwell, City Of	Hart	Lake Hartwell	3.5	1.60	
			Hart County Total	**3.50**	**1.60**	**2.88**
090-0108-01	Lincolnton, City Of	Lincoln	Clarks Hill Reservoir	0.63	0.54	
			Lincoln County Total	**0.63**	**0.54**	**0.20**
097-0109-05	Thomson/ McDuffie Water & Sewer Commission	McDuffie	Clarks Hill Reservoir	3.1	1.80	
097-0111-03	Thomson/ McDuffie Water & Sewer Commission	McDuffie	Usry's Lake on Sweetwater Creek	1.5	0.53	

Savannah - Upper Ogeechee Municipal Groundwater Withdrawals and Draft Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average (MGD)	2019 Average Withdrawal (MGD)	2060 Forecasted Annual Average Demand (MGD)
017-0002	Waynesboro, City of	Burke	Cretaceous Sand	4.00	0.77	
017-0005	Sardis, City of	Burke	Cretaceous Sand	0.40	0.11	
			Burke County Total	**4.40**	**0.88**	**0.94**
036-0001	Harlem, City of	Columbia	Crystalline Rock	0.28	-	
036-0002	Grovetown, City of	Columbia	Crystalline Rock	0.90	0.03	
			Columbia County Total	**1.18**	**0.03**	**22.21**
059-0003	Franklin County	Franklin	Crystalline Rock	1.55	0.49	
			Franklin County Total	**1.55**	**0.49**	**2.53**
073-0003	Royston, City of	Hart	Crystalline Rock	0.34	0.14	
			Hart County Total	**0.34**	**0.14**	**2.88**
081-0002	Wadley, City of	Jefferson	Cretaceous Sand, Eocene Sand	0.45	0.41	
081-0003	Louisville, City of	Jefferson	Cretaceous Sand	2.00	0.54	
081-0004	Wrens, City of	Jefferson	Cretaceous Sand	0.80	0.30	
081-0010	Louisville, City of - Grange Road Water System	Jefferson	Cretaceous Sand	0.90	0.53	
			Jefferson County Total	**4.15**	**1.79**	**1.23**
082-0002	Millen, City of	Jenkins	Upper Floridan	1.00	0.52	
			Jenkins County Total	**1.00**	**0.52**	**0.47**
090-0002	Lincoln County Water System	Lincoln	Crystalline Rock	0.35	0.06	
			Lincoln County Total	**0.35**	**0.06**	**0.20**
095-0001	Danielsville, City of	Madison	Crystalline Rock	0.30	0.22	
095-0002	Comer, City of	Madison	Crystalline Rock	0.25	0.12	
			Madison County Total	**0.55**	**0.34**	**2.27**
119-0002	Sky Valley, City of	Rabun	Crystalline Rock	0.30	0.11	
			Rabun County Total	**0.30**	**0.11**	**2.09**
121-0003	Hephzibah, City of	Richmond	Cretaceous Sand	1.20	0.68	
121-0007	Augusta Utilities Department	Richmond	Cretaceous Sand	18.40	5.90	
121-0019	Blythe, City of	Richmond	Cretaceous Sand	0.25	0.08	
			Richmond County Total	**19.85**	**6.66**	**30.39**
124-0002	Sylvania, City of	Screven	Floridan	1.50	0.69	

Savannah - Upper Ogeechee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Banks	101	102	101
Burke	132	129	128
Columbia	153	134	132
Elbert	102	105	194
Franklin	164	161	115
Glascock [3]	73	73	75
Hart	154	158	143
Jefferson [3]	169	163	171
Jenkins	101	107	110
Lincoln [3]	67	66	52
Madison [3]	107	104	75
McDuffie	139	141	112
Oglethorpe [3]	94	100	75
Rabun	168	164	155
Richmond	221	217	170
Screven [3]	161	160	229
Stephens	144	146	129
Taliaferro [3]	71	71	75
Warren [3]	73	72	137
Wilkes [3]	156	156	219

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits.

[2] Per capita was calculated using the population stated in SDWIS and the recorded water demands.

Savannah - Upper Ogeechee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Banks	57%	75	49%	49%	8.31	66.69
Burke	64%	75	63%	63%	9.75	65.25
Columbia [3]	13%	75	17%	5%	7.24	67.76
Elbert [4]	51%	75	54%	45%	11.07	63.93
Franklin	51%	75	27%	27%	9.77	65.23
Glascock	60%	75	65%	65%	10.67	64.33
Hart [5]	66%	75	52%	25%	9.36	65.64
Jefferson	47%	75	40%	40%	10.59	64.41
Jenkins [6]	23%	75	54%	25%	10.96	64.04
Lincoln	29%	75	34%	34%	10.18	64.82
Madison [7]	20%	75	70%	25%	9.21	65.79
McDuffie [8]	53%	75	18%	10%	10.25	64.75
Oglethorpe [9]	83%	75	69%	12%	8.95	66.05
Rabun	27%	75	32%	32%	8.44	66.56
Richmond	2%	75	3%	3%	11.22	63.78
Screven	59%	75	67%	67%	10.13	64.87
Stephens [10]	10%	75	10%	5%	10.55	64.45
Taliaferro	62%	75	64%	64%	11.21	63.79
Warren	44%	75	33%	33%	10.62	64.38
Wilkes	51%	75	48%	48%	11.09	63.91

NOTES:

[1] Ratios as shown in the Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[3] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 5% of the population by 2060.

[4] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 45% of the population by 2060.

[5] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[6] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[7] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[8] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 10% of the population by 2060.

[9] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 12% of the population by 2060.

[10] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 5% of the population by 2060.

DRAFT Savannah - Upper Ogeechee Municipal Water Demand Forecast (AAD-MGD) [1]

County	2020	2030	2040	2050	2060
Banks				1.58	1.77
Burke				0.97	0.94
Columbia				22.09	22.21
Elbert				1.68	1.71
Franklin				2.36	2.53
Glascock				0.06	0.05
Hart				2.57	2.88
Jefferson				1.30	1.23
Jenkins				0.46	0.47
Lincoln				0.22	0.20
Madison				1.82	2.27
McDuffie				2.03	2.06
Oglethorpe				2.26	2.79
Rabun				1.95	2.09
Richmond				31.17	30.39
Screven				0.89	0.85
Stephens				3.55	3.79
Taliaferro				0.07	0.06
Warren				0.40	0.39
Wilkes				0.90	0.80

NOTES:

[1] Includes municipal demand to be fulfilled with surface water and groundwater sources. It does NOT include self supplied demand.

Savannah Upper Ogeechee Septic Users[1,2]

County	% Septic Users in 2020	% Septic Users in 2060[3]
Banks County	90%	90%
Burke County	65%	65%
Columbia County	20%	20%
Elbert County	61%	61%
Franklin County	75%	75%
Glascock County	74%	74%
Hart County	78%	78%
Jefferson County	54%	54%
Jenkins County	84%	84%
Lincoln County	81%	81%
Madison County	93%	93%
McDuffie County	80%	80%
Oglethorpe County	94%	94%
Rabun County	85%	85%
Richmond County	21%	21%
Screven County	72%	72%
Stephens County	60%	60%
Taliaferro County	76%	76%
Warren County	62%	62%
Wilkes County	57%	57%

Notes

1.Septic user percentages of total county population were estimated using GA Department of Public Health data, including installation of septic tanks data in each county through 2018.

2. Shaded septic user percentages of total county population are from the US 1990 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics : Georgia, 1990 CPH-5-12.

3.Percent septic users of total county population are assumed constant for future year projections in the absence of additional stakeholder input.

Savannah Upper Ogeechee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0032905	Maysville, City of (Maysville WPCP)	Banks	0.06	0.04	
GA0032638	Commerce, City of (Holiday Inn WPCP)	Banks	0.04	0	
GA0032646	Commerce, City of (Davis House WPCP)	Banks	0.07	0.03	
GA0050215	Banks County Board of Commissioners (Hudson River WPCP)	Banks	0.13	0	
GAG550044	Homer Housing WPCP	Banks	Report	0	
GAG550080	Old Banks County Elementary School WPCP	Banks	Report	0	
		Banks County Total	**>0.3**	**0.07**	**0.14**
GA0020028	Midville, City of (Midville WPCP)	Burke	0.17	0.02	
GA0020893	Sardis, City of (Sardis WPCP)	Burke	0.2	0.04	
GA0038466	Waynesboro, City of (Brier Creek WPCP)	Burke	2	1.69	
		Burke County Total	**2.37**	**1.75**	**1.70**
GA0020389	Harlem, City of (Harlem WPCP)	Columbia	0.25	0.41	
GA0031984	Columbia County (Crawford Creek WPCP)	Columbia	1.5	0.99	
GA0031992	Columbia County (Reed Creek WPCP)	Columbia	4.6	3.32	
GA0038342	Columbia County (Kiokee Creek WPCP)	Columbia	0.3	0.04	
GA0047775	Columbia County (Little River WPCP)	Columbia	6	4.45	
GA0050246	Grovetown, City of (Grovetown WPCP)	Columbia	3	0	
GAG550011	Georgia Department of Natural Resources (Mistletoe State Park)	Columbia	Report	0	
		Columbia County Total	**>15.65**	**9.21**	**10.84**
GA0021067	Bowman, City of (Bowman WPCP)	Elbert	0.09	0.02	
GA0025631	Elberton, City of (Fortson Creek WPCP)	Elbert	0.6	0.31	
GA0025682	Elberton, City of (Falling Creek WPCP)	Elbert	0.9	0.74	
GAG550148	Nancy Hart Nursing Center	Elbert	Report	0	
GAG550160	Heardmont Healthcare (Heardmont Nursing Home WPCP)	Elbert	Report	0	
		Elbert County Total	**>1.59**	**1.07**	**0.95**

Savannah Upper Ogeechee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030613	North Georgia Church Of God (Legacy Retreat Center WPCP)	Banks	0.01	0	
GAJ020023	Banks County Board Of Commissioners (Atlanta International Dragway WPCP)	Banks	0.27	0.097	
GAJ040033	Banks County Golf, LLC (Chimney Oaks WPCP)	Banks	0.072	0.001	
GAJ020181	Banks County Board of Commissioners (Industrial Park WPCP)	Banks	0.045	0.007	
		Banks County Total	**0.397**	**0.105**	**0.21**
GAJ020155	Keysville, City of (Keysville WPCP)	Burke	0.0596	0.029	
		Burke County Total	**0.0596**	**0.029**	**0.03**
GAJ020222	Grovetown, City of	Columbia	0.58	0.341	
		Columbia County Total	**0.58**	**0.341**	**0.40**
GAJ020065	Franklin County Board of Commissioners (Franklin County WPCP - LAS)	Franklin	0.075	0	
		Franklin County Total	**0.075**	**0**	**0.00**
GAJ020114	Hartwell, City of (Hartwell WRF)	Hart	1.75	0.803	
		Hart County Total	**1.75**	**0.803**	**0.89**
GAJ020215	Bartow, Town Of (Bartow WPCP)	Jefferson	0.05	0	
		Jefferson County Total	**0.05**	**0**	**0.00**
GAJ020039	Madison County Industrial Development and Building Authority (Madison County Industrial Development and Building Authority WPCP)	Madison	0.05	0.009	
		Madison County Total	**0.05**	**0.009**	**0.01**
GAJ020007	Thomson, City of (Dearing WPCP)	McDuffie	0.09	0.04	
GAJ020252	Thomson, City of (Mattox Creek WPCP)	McDuffie	0.171	0.069	
		McDuffie County Total	**0.261**	**0.109**	**0.11**
GAJ030794	Waterfall Property Owners Association (Waterfall at Lake Burton	Rabun	0.075	0.003	
GAJ030753	Camp Ramah Darom	Rabun	0.025	0.338	

Draft Savannah Upper Ogeechee Municipal Wastewater Forecasts (MGD)

County	2020	2030	2040	2050	2060
Banks County				0.29	0.34
Burke County				1.74	1.73
Columbia County				11.34	11.24
Elbert County				0.98	0.95
Franklin County				1.12	1.26
Glascock County				0.04	0.04
Hart County				0.85	0.89
Jefferson County				2.89	2.76
Jenkins County				0.45	0.41
Lincoln County				0.20	0.19
Madison County				0.08	0.09
McDuffie County				3.34	3.42
Oglethorpe County				0.08	0.09
Rabun County				2.07	2.31
Richmond County				35.11	34.80
Screven County				1.87	1.80
Stephens County				1.68	1.85
Taliaferro County				0.02	0.02
Warren County				0.25	0.25
Wilkes County				0.45	0.39
TOTAL				**64.86**	**64.86**

Note: Forecast values include Land Application System and Point Source discharges

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SEED Grant Project Update: Initiating and Upgrading Publicly Accessible Water Monitoring for the Savannah-Upper Ogeechee

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What We've Been Up To:

Over the last 4 months, the contractors for this project have been compiling data and talking to experts throughout the basins and worldwide to determine:

1. The existing data and historical data being collected,
2. What repositories worldwide look like and what features we would like in our system
3. What the ongoing cost to maintain the repository in the long term.

Recommendations: KnowYourRiver.com

We recommend moving forward by creating:

- Two seamless websites/applications:
  1. Public Website: The public one will be created to house all sample locations identified, surface and groundwater.
     https://augustagis.maps.arcgis.com/home/webmap/viewer.html?webmap=f32e162b8d1a4321bd4e484aee467609
  2. Clearinghouse Website: Data currently being collected that is not currently publicly available.
     https://survey123.arcgis.com/share/b5ae039a062e4231bffdc9a98b738404?portalUrl=https://augustagis.maps.arcgis.com
- A trust for the continual maintenance of website/application in perpetuity
  https://docs.google.com/spreadsheets/d/1OrlKJXhV3tnMF0NjksmNSQDhwIy4iO8DVC3koUi6Vqo/edit#gid=0

Clearinghouse Website/App Layers/Storyboard

Layers:

1. Blueline streams,
2. Watershed boundaries, 303D listed segments,
3. Total Maximum Daily Load Facilities that discharge into the water,
4. Ecoregions,
5. Land cover data: (watersKMZ, U.S. Forest Service),
6. LandAirSea systems,
7. Groundwater monitoring wells.).

Storyboard:

https://drive.google.com/file/d/116nmPfV9f5nj2siVFV2yGwQ--Oxa4KTG/view?usp=sharing

Next Steps:

1. Please Complete Survey/Review report
2. Holding stakeholder Zoom meetings for feedback
3. Finalize plan - July
4. Create website/app for launch by September
5. Advertise to public and stakeholders

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South Carolina State Water Planning Update

Scott Harder

Hydrology Section Chief

S.C. Department of Natural Resources

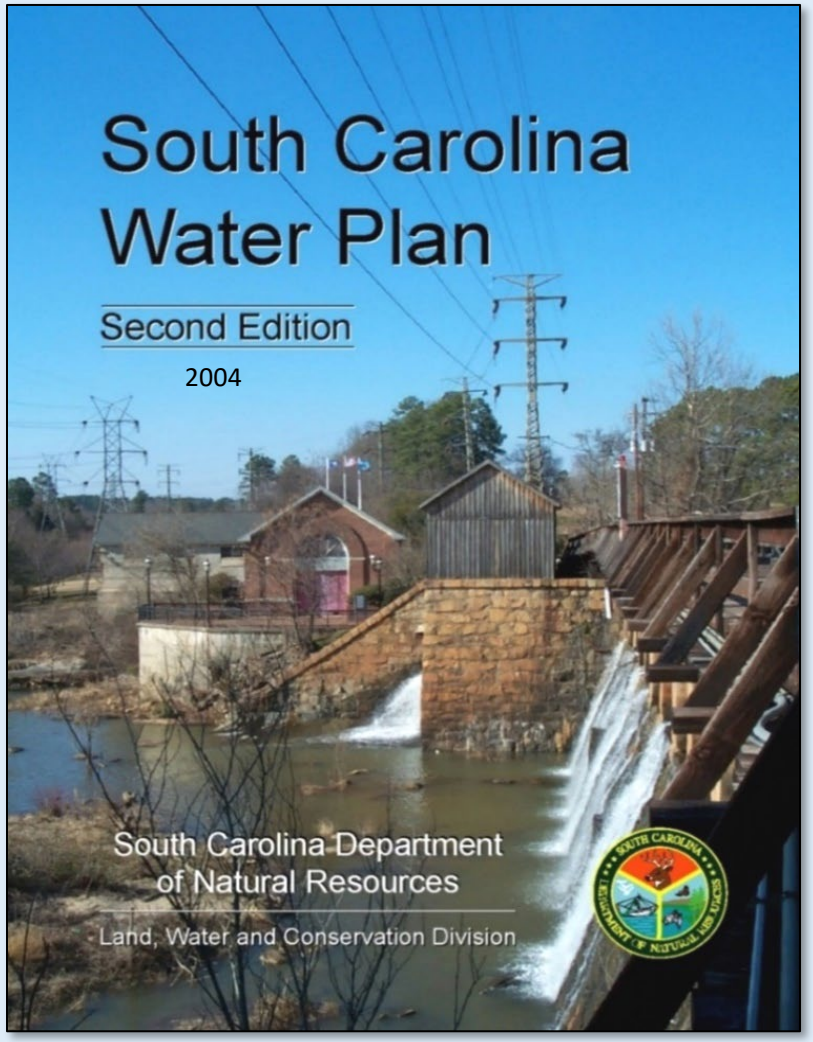
Land, Water and Conservation Division

Savannah - Upper Ogeechee

Regional Water Council Meeting

June 4, 2020

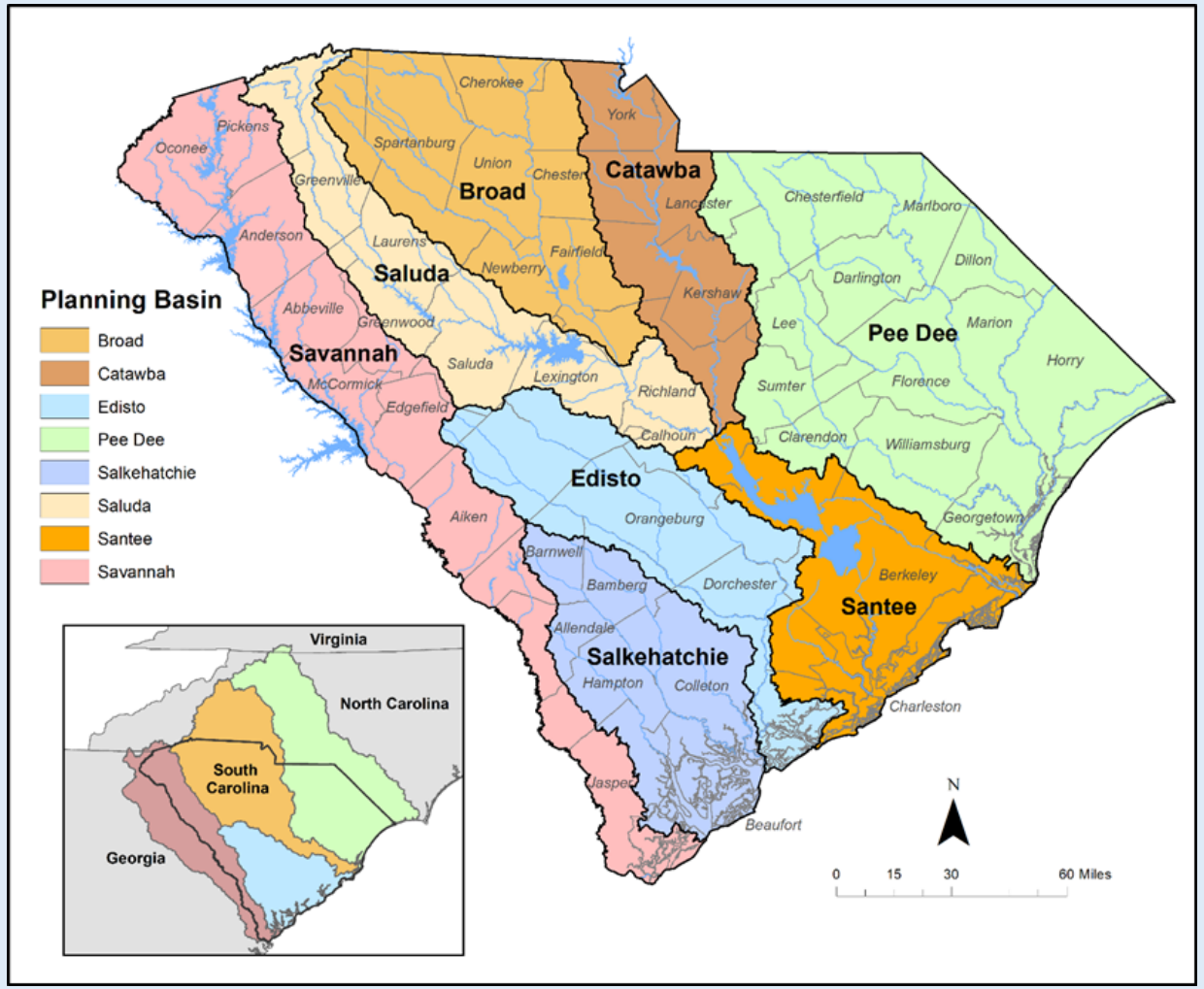
A Brief History of State Water Planning…



- SCDNR published the first edition of the State Water Plan in **1998**.
- In **2004**, SCDNR published the second edition of the South Carolina Water Plan incorporating lessons learned from the drought of 1998-2002.
- One recommendation was to develop a regional water plan for each major river basin in the State.
- **10 years later** – SCDNR and SCDHEC initiated the first step towards these regional water plans, now formally called *River Basin Plans*.

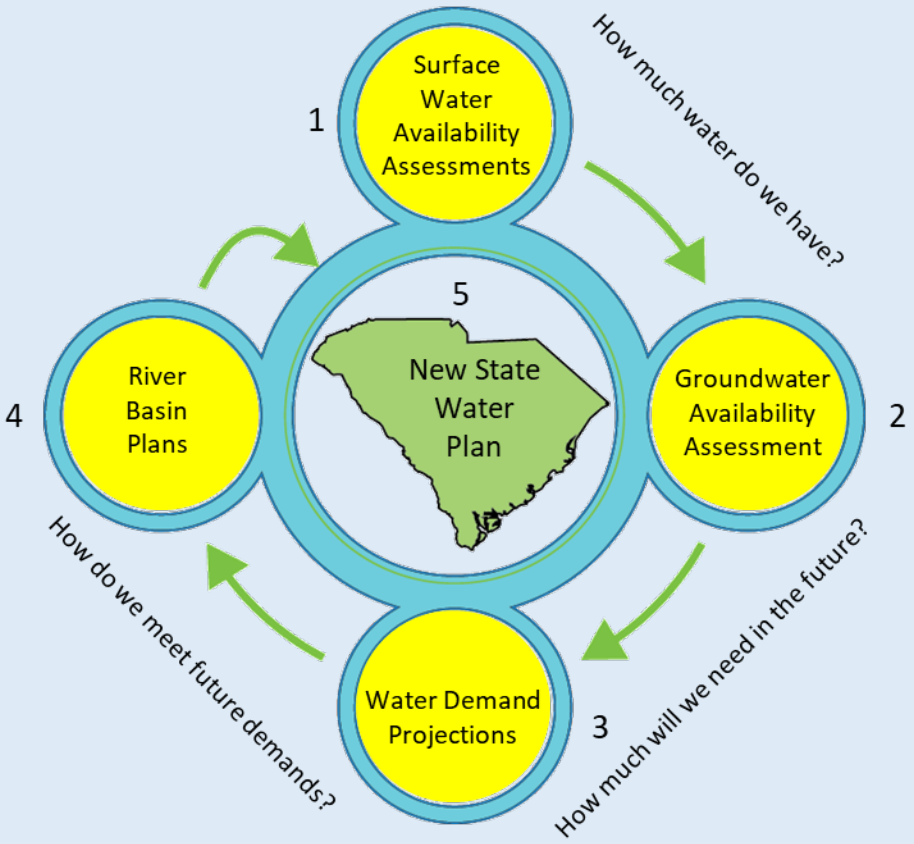
South Carolina's Eight Planning Basins

- River Basin Plans will be developed for the State's 8 major river basins using a ***"bottom-up"*** approach where stakeholders in each basin lead the development of their basin plan.
- Collectively, the River Basin Plans will form the foundation of a new State Water Plan.



Five-step Process…

1. ***Surface Water Assessments*** – completed in 2017 (CDM Smith, Inc).
2. ***Groundwater Assessment*** – Final Report due this spring (USGS).
3. ***Water Demand Projections*** – methodology report completed in October 2019 (SCDNR, Clemson, USACE)
   - Edisto basin projections in progress
4. ***River Basin Plans***
   - Publication of South Carolina State Water Planning Framework.
   - Initiation of Edisto basin planning activities.
5. ***State Water Plan*** – River Basin Plans will form the foundation of a new State Water Plan.



Cooperators:

Planning Process Advisory Committee (PPAC)

- Convened by SCDNR in March 2018.
- Purpose - develop a guidance document (Planning Framework) for developing River Basin Plans (Step 4) and for updating the State Water Plan (Step 5).
- South Carolina State Water Planning Framework (Planning Framework) was published in October 2019.
- PPAC will continue to have a long-term role in overseeing the State and river basin planning process.

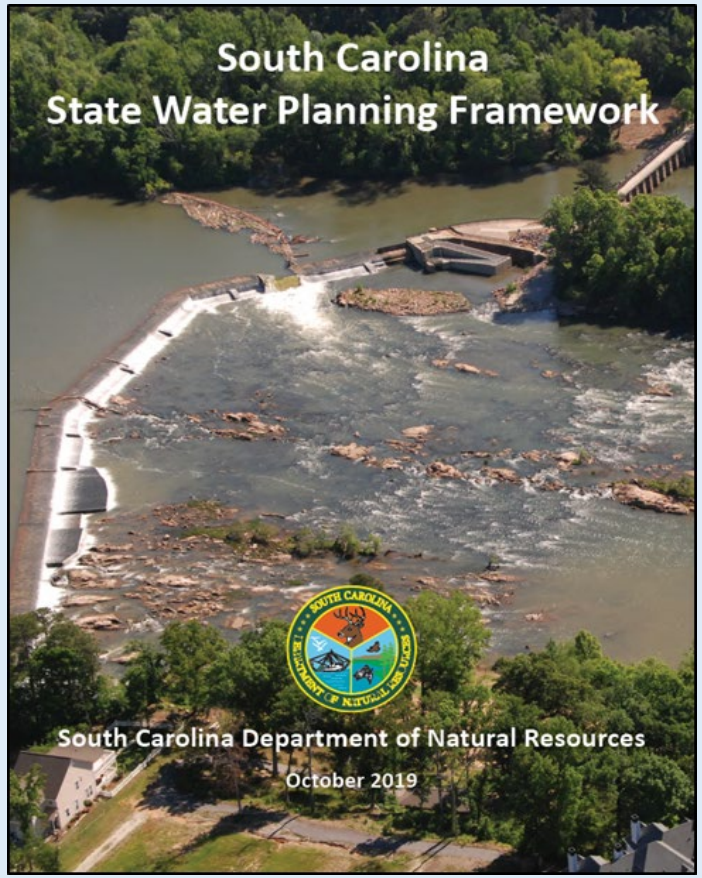
PPAC Vision Statement:
"Reflecting our values of water as a shared resource with a shared responsibility, we will work together to develop and maintain an actionable State Water Plan balancing economic, environmental and social needs of South Carolina for generations to come"

Contents of Planning Framework

Sections:

1. Executive Summary
2. Introduction
3. River Basin Planning Process
4. Methodologies for Evaluating Water Availability
5. River Basin Plan Table of Contents
6. River Basin Planning Process Implementation
7. River Basin Plan Implementation
8. State Water Plan

Appendix: River Basin Council Bylaws



Planning Framework is available for review and download at: http://hydrology.dnr.sc.gov/state-and-river-basin-planning.html.

What is a River Basin Plan

A River Basin Plan will answer:

1. What is the basin's current available water supply and demand?
2. What will be the basin's water demand over the Planning Horizon, and will the water supply meet the demand?
3. What water management strategies will be employed to ensure the supply meets or exceeds the projected demand over the Planning Horizon?

Proactive Water Management, not Reactive!

Guiding Principles

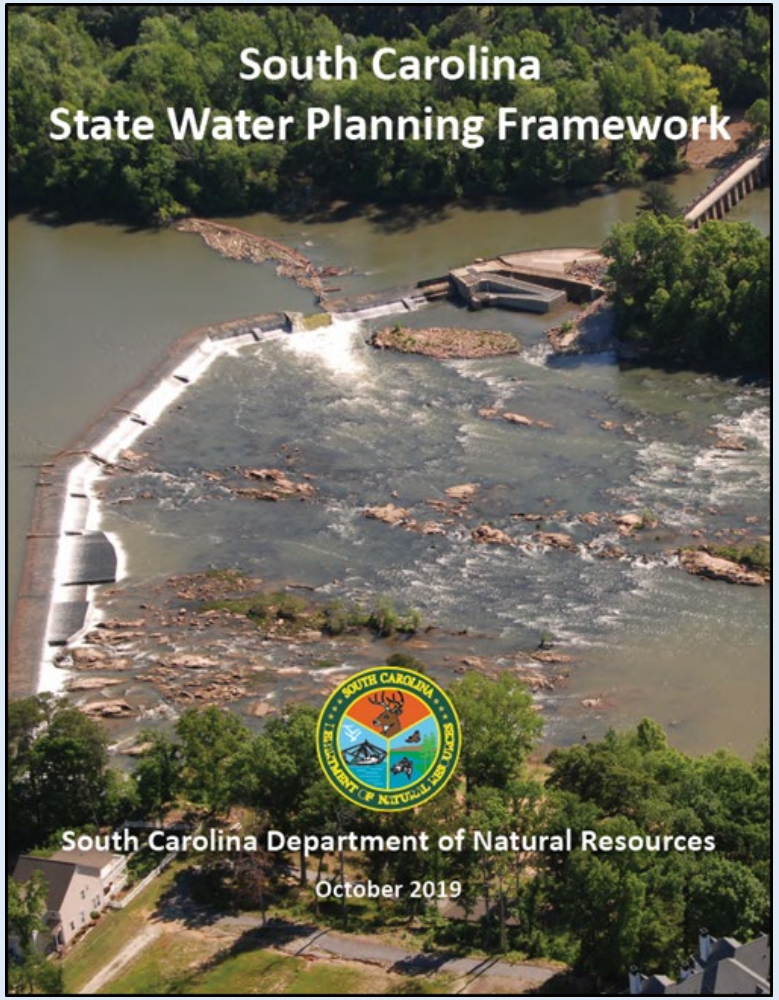
- Water is a limited natural resource and is a major factor for economic development and environmental protection.

- River Basin Plans should strive for the equitable use of water resources with the goal of ensuring water is available for all uses, when and where needed, throughout the Planning Horizon and under drought conditions.

- River Basin Plans should protect the public's health and well-being and should balance social, economic, and environmental needs.

Other Features of a River Basin Plan

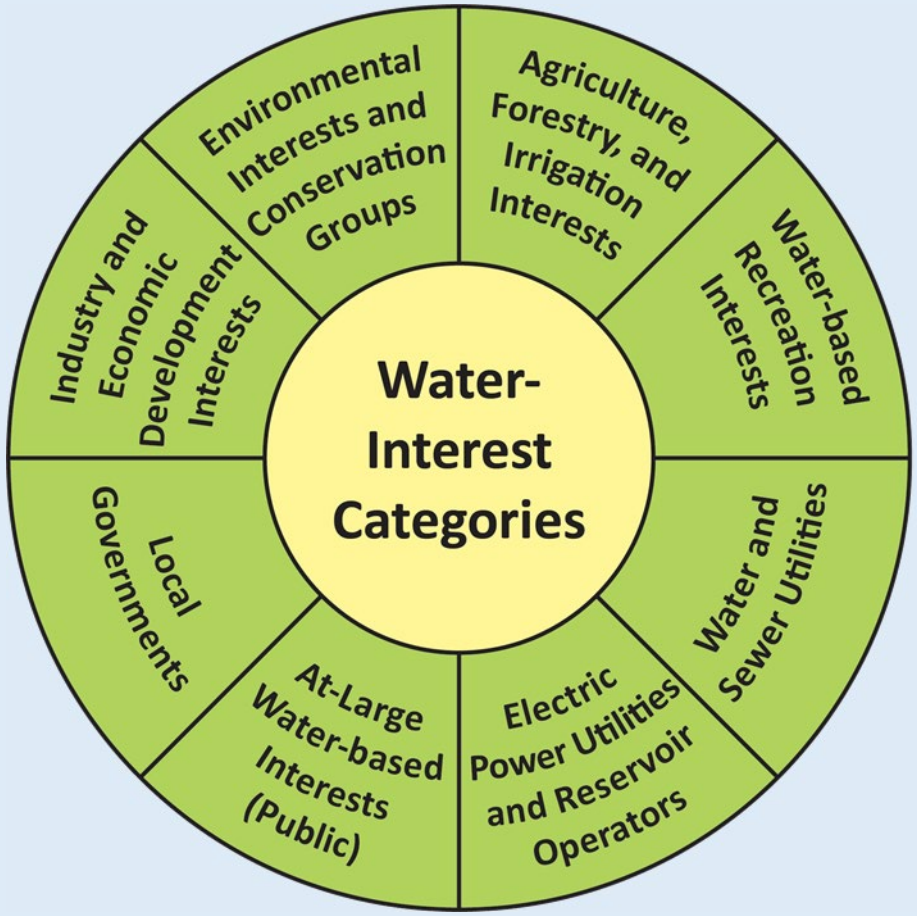
- Covers a **50-year** Planning Horizon.
- Considers both surface water and groundwater resources (focuses on water quantity)
- Not a regulatory document but may include recommendations regarding State water policy, law and regulations.
- Updated every 5-years – *water planning will be an ongoing process.*
- Supported by hydrologic data and models along with water demand projections.



River Basin Council *responsible for developing the River Basin Plan.*

River Basin Council (RBC)

- **Stakeholder-led team** responsible for developing the River Basin Plan.
- Up to **25** members representing 8 interest categories.
- Governed by a set of Bylaws.
- Consensus based decision-making process.
- Chair and Vice Chair elected by RBC.



RBC will develop the River Basin Plan over a 2-year period with meetings on a monthly basis

RBC Support

RBCs will develop the plan with support from:

- **Contractors** (solicited and hired by SCDNR):
  - Meeting Facilitation
  - Meeting Coordination – administrative and logistical support
  - Technical support – surface and groundwater modeling
  - Public Outreach
  - River Basin Plan report writing
- **Other State and Federal Agencies**:
  - RBCs can request agencies to serve as Advisors
  - Participate in RBC meetings and subcommittee meetings as requested
- **RBCs can request input from other outside Advisors**

PPAC and SCDNR *will continue to provide oversight of the river basin planning process.*

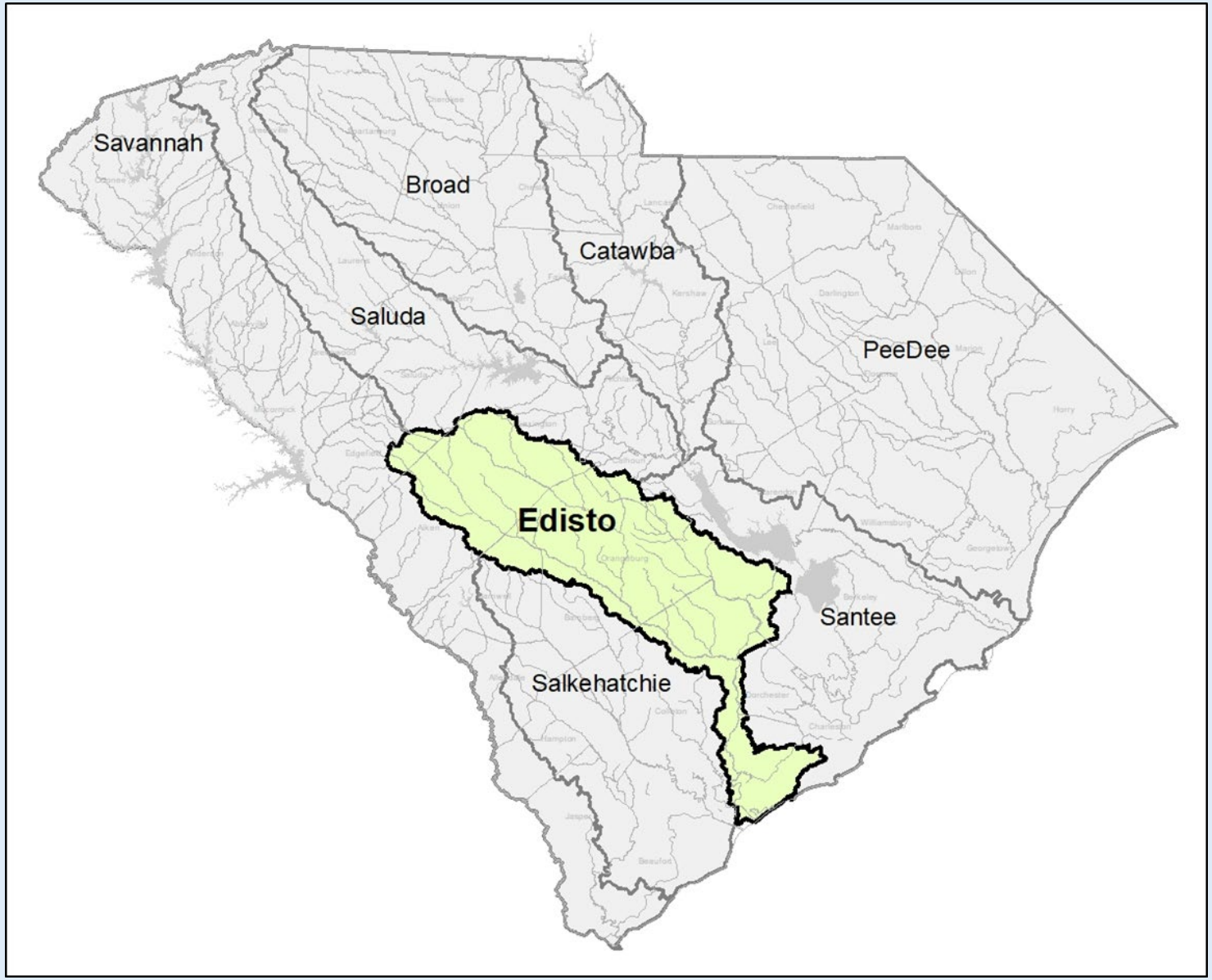
Stakeholder and Public Participation Opportunities

- Guidelines for stakeholder and public participation described in Section 3.7 of Planning Framework
- Public meetings (3 to 4 per basin)
  - Prior to first RBC meeting – “kickoff” meeting(s)
  - After draft River Basin Plan is released
  - After final River Basin Plan is released
- Draft River Basin Plan Public Review Period (30 days)
- RBC Meetings
  - Open to the public
  - Each meeting will include public comment period
  - Meeting schedule/announcements posted on SCDNR website
  - Approved meeting minutes/summaries posted on SCDNR website

Where are we now?

Planning Framework is being implemented in the Edisto River Basin

Edisto River Basin Planning



Edisto River Basin Planning

- Schedule:

Nov 2019: Public kick-off meetings
  - Introduced planning process
  - Solicited RBC membership applications

Nov 2019- Jan 2020: SCDNR accepted RBC membership applications

Jan – May 2020: Solicitation of Contractors
  - Facilitator (CDM Smith)
  - Coordinator & Public Outreach (Clemson University)
  - Technical work (in progress)

Apr 2020: 23 RBC members appointed

June 2020: First RBC meeting (virtual format)

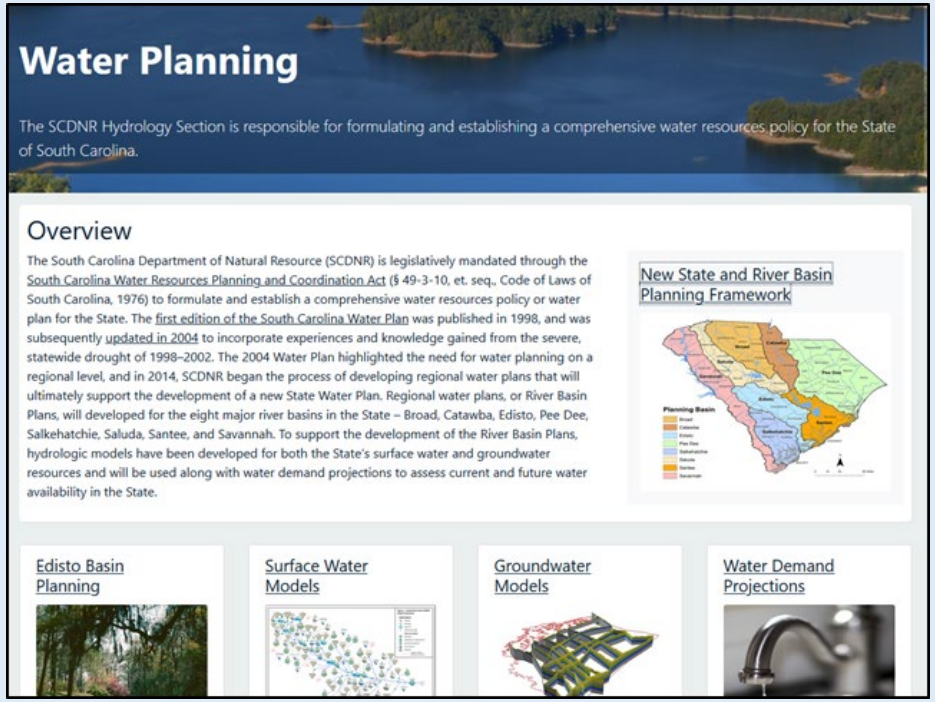
State Water Plan

- Contingent upon completion of 8 River Basin Plans.
- Major content includes:
  - A summary of legislative, policy, process, and program recommendations regarding the State's water resources documented in the River Basin Plans.
  - A summary of each River Basin Plan's water availability analyses and conclusions.
  - An evaluation of statewide trends in water use and availability.

Table of Contents:

1. Introduction
2. Policy and Legislative Recommendations
3. Planning Process and Program Recommendations
4. Financing Needs
5. Current and Future Water Demand
6. Water Availability Assessment
7. Water Management Strategies
8. Drought and Drought Response in South Carolina
9. Implementation
10. Special Topics

Water Planning Websites



http://hydrology.dnr.sc.gov/water-planning.html

http://hydrology.dnr.sc.gov/edisto-basin-planning.html

Contact Information:

Scott Harder, harders@dnr.sc.gov

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Metro North Georgia Water Planning District Updates

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MNGWPD Updates

- Governing Board Budget Approval - June 8th
- Scope of Work for 5-year Plan Update
  - Forecasting
    - Will include biosolids for first time
  - Facility Planning
  - Action Item Assessment and Update
  - Technical Resource Studies
    - Residential water demands
    - Drought response options menu
    - Watershed resilience evaluation
    - Cost-Benefit Analysis
    - Septic System Impacts to Surface Water Study – Wet Weather (pending Board)
- Schedule

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Comp II Corps Coordination Update

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US Army Corps of Engineers

Savannah District Water Management

HIDE/SHOW

May 30, 2020 09:23	HARTWELL	RUSSELL	THURMOND
Current Pool Elevation	661.39	474.27	331.70
Guide Curve Elevation	660.00	475.00	330.00
Average Elevation	659.61	474.19	328.64
Todays Precip (in)	0.00	0.00	0.10
Monthly Precip (in)	8.71	6.82	4.79

MORNING REPORT

HOURLY PROJECT DATA

DECLARATIONS

POOL SCHEMATIC

OBSERVED RAINFALL

Rainfall Forecast Day	1	2	3	4	5	6	7
	1-3			4-5		6-7	
	1-5						
	1-7						

DROUGHT PLAN INFO

HISTORIC DATA

MISCELLANEOUS PRODUCTS

OTHER USEFUL LINKS

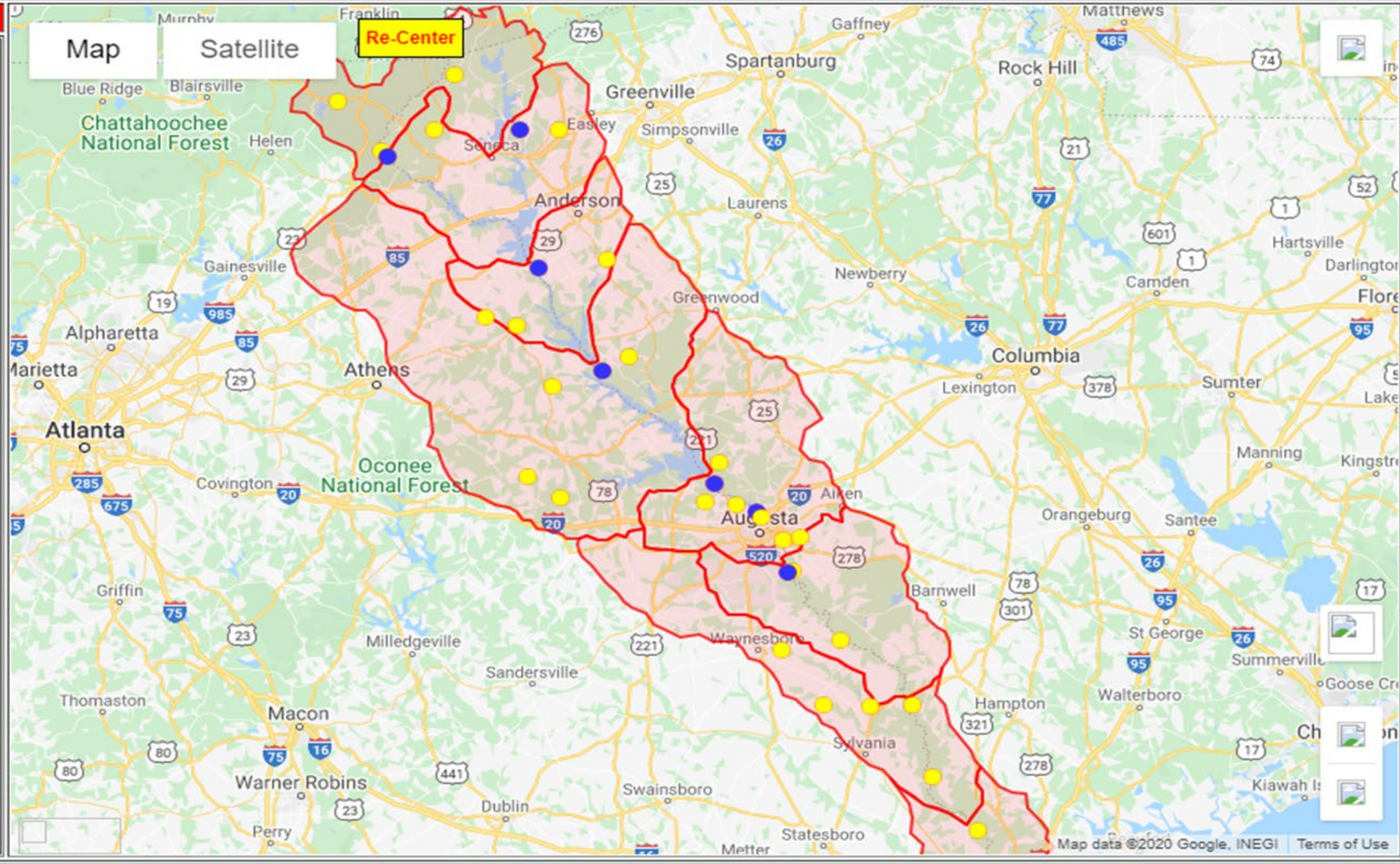
BALANCING THE BASIN

SELECT GAGE OF INTEREST

INUNDATION MAPS

MOBILE PAGE

Please contact us if you are having Technical Difficulties with this Site.



BUILDING STRONG®

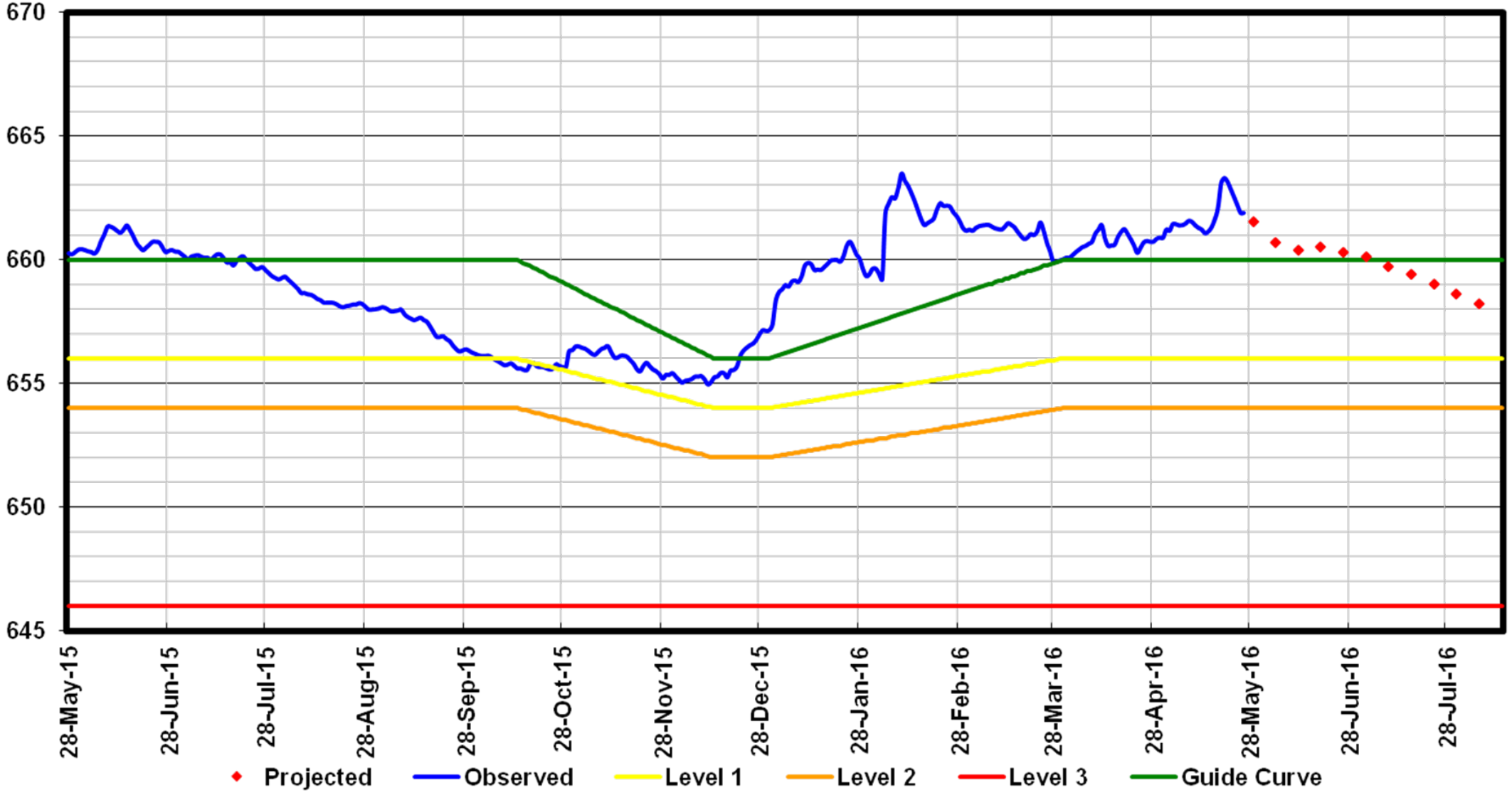
This site contains provisional data and links to provisional data that comes from our partner agencies

Lat: Lon: Refresh

Privacy Policy

Hartwell Lake

Assumes Net Local Inflows begin around 70% of Normal and return to 80% over 10 weeks



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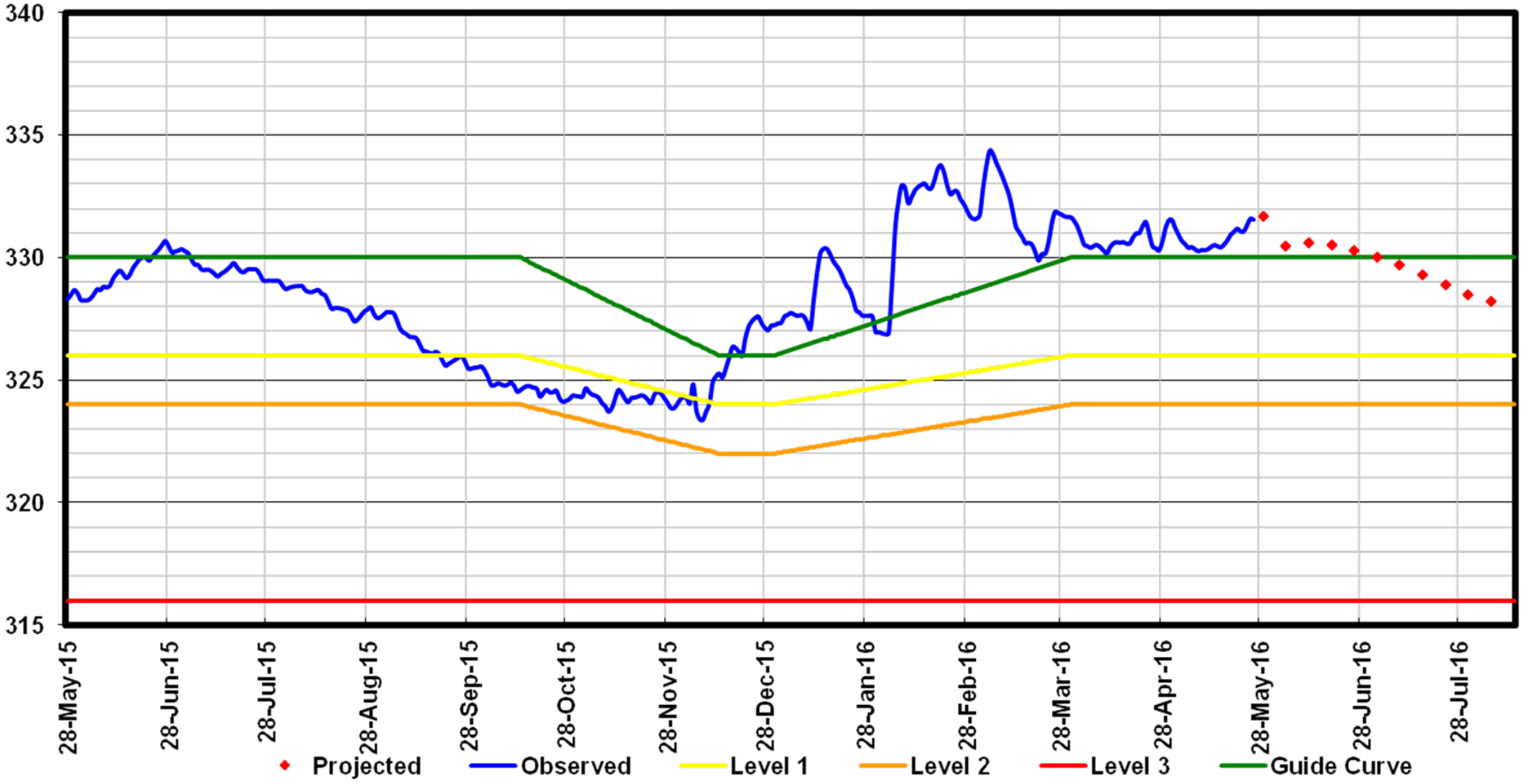
Thurmond Lake

Assumes Net Local Inflows begin around 100% of Normal and return to 80% over 10 weeks



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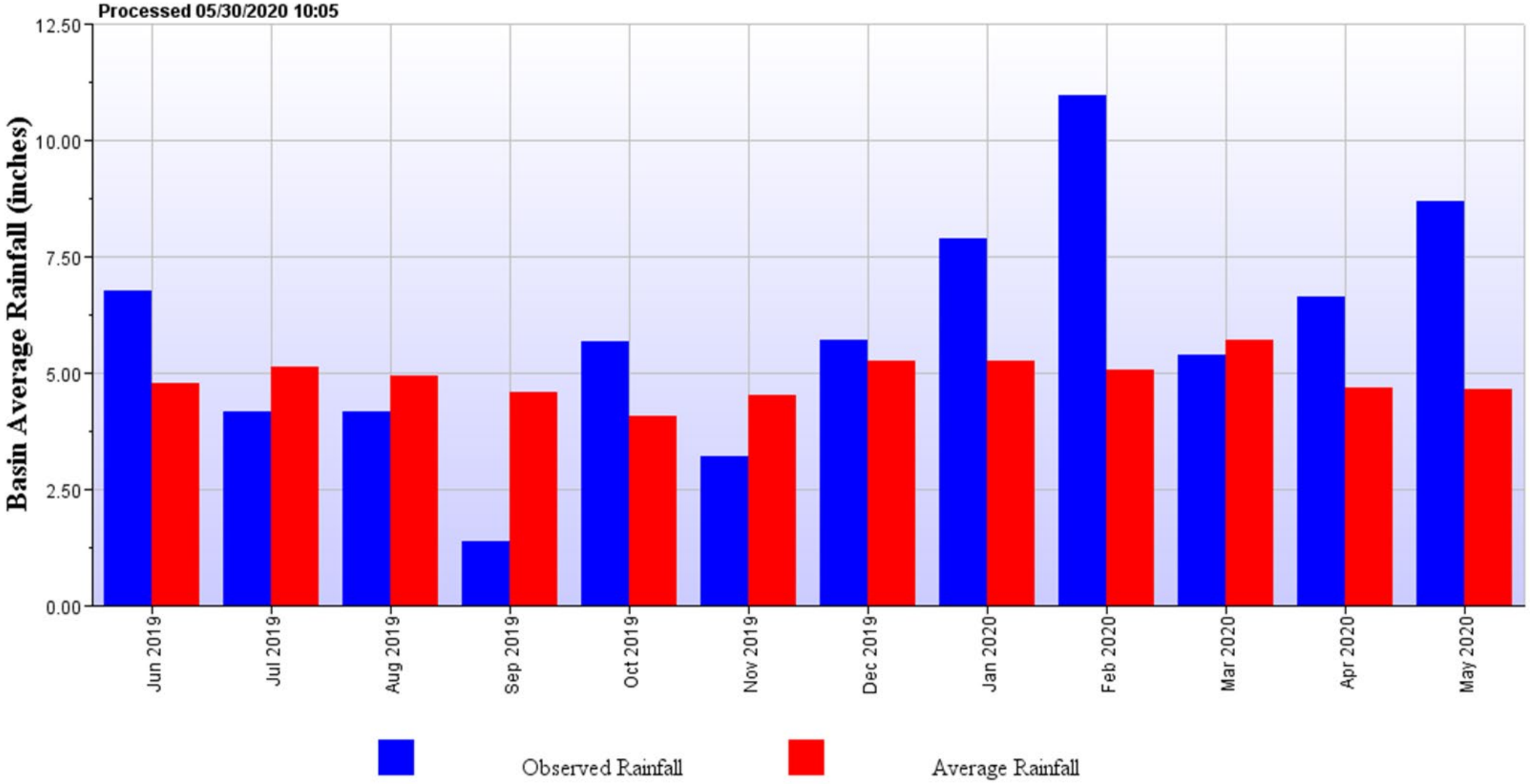
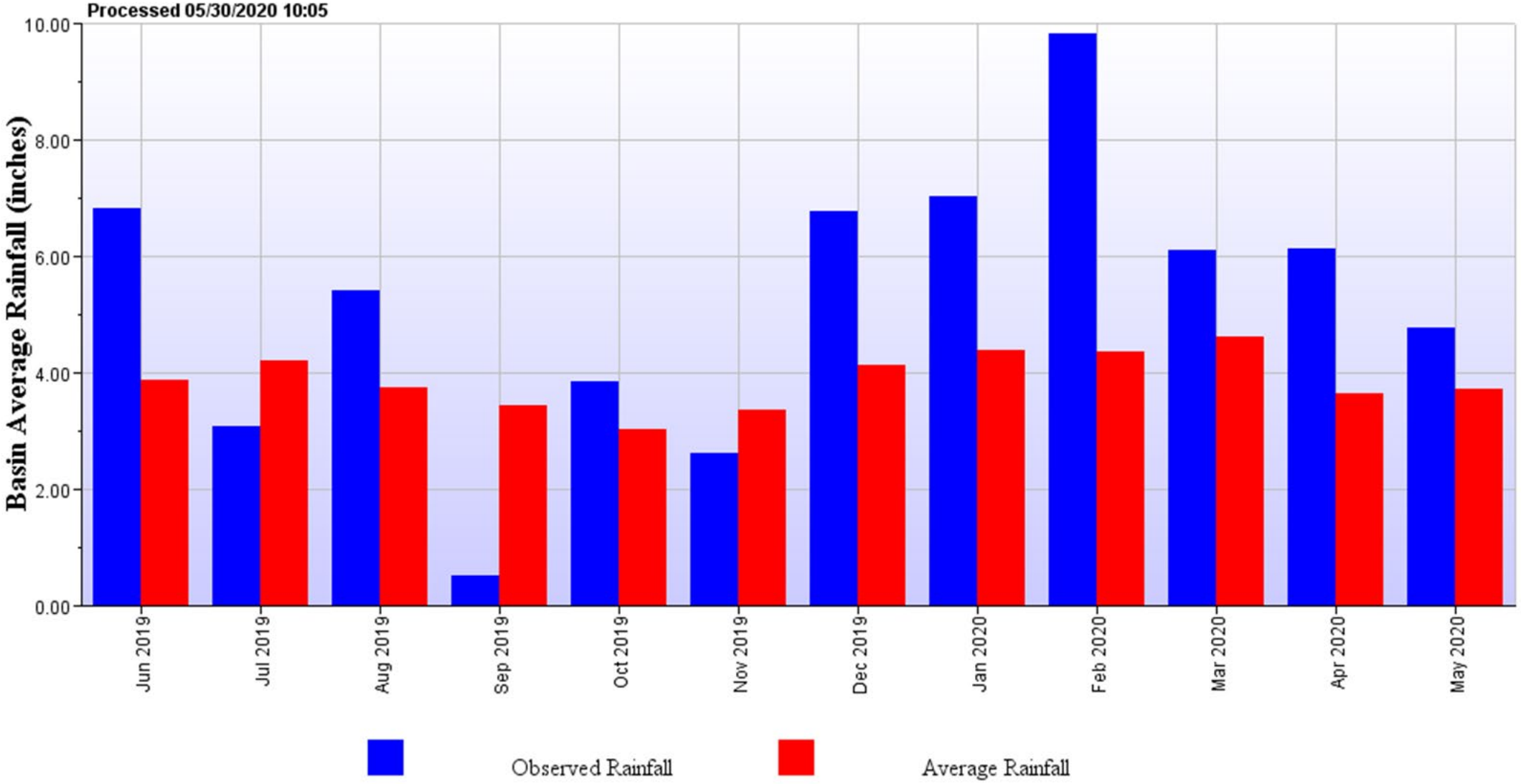
Hartwell Basin Rainfall



KavaChart images from VE.com

Thurmond Basin Rainfall



KavaChart images from VE.com

Savannah River Basin Comp Study

Upcoming meetings with study sponsors

- Concerns remain on water quality impacts
- Concerns remain on hydropower impacts
- Implementation uncertain

THE CORPS HAS A NEW DROUGHT PLAN FOR LAKE THURMOND...
WHY? WHATEVER THEY'RE DOING SEEMS TO HAVE WORKED.
R. MEIKLE
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Stephens Creek Hydroelectric Project Relicensing Update

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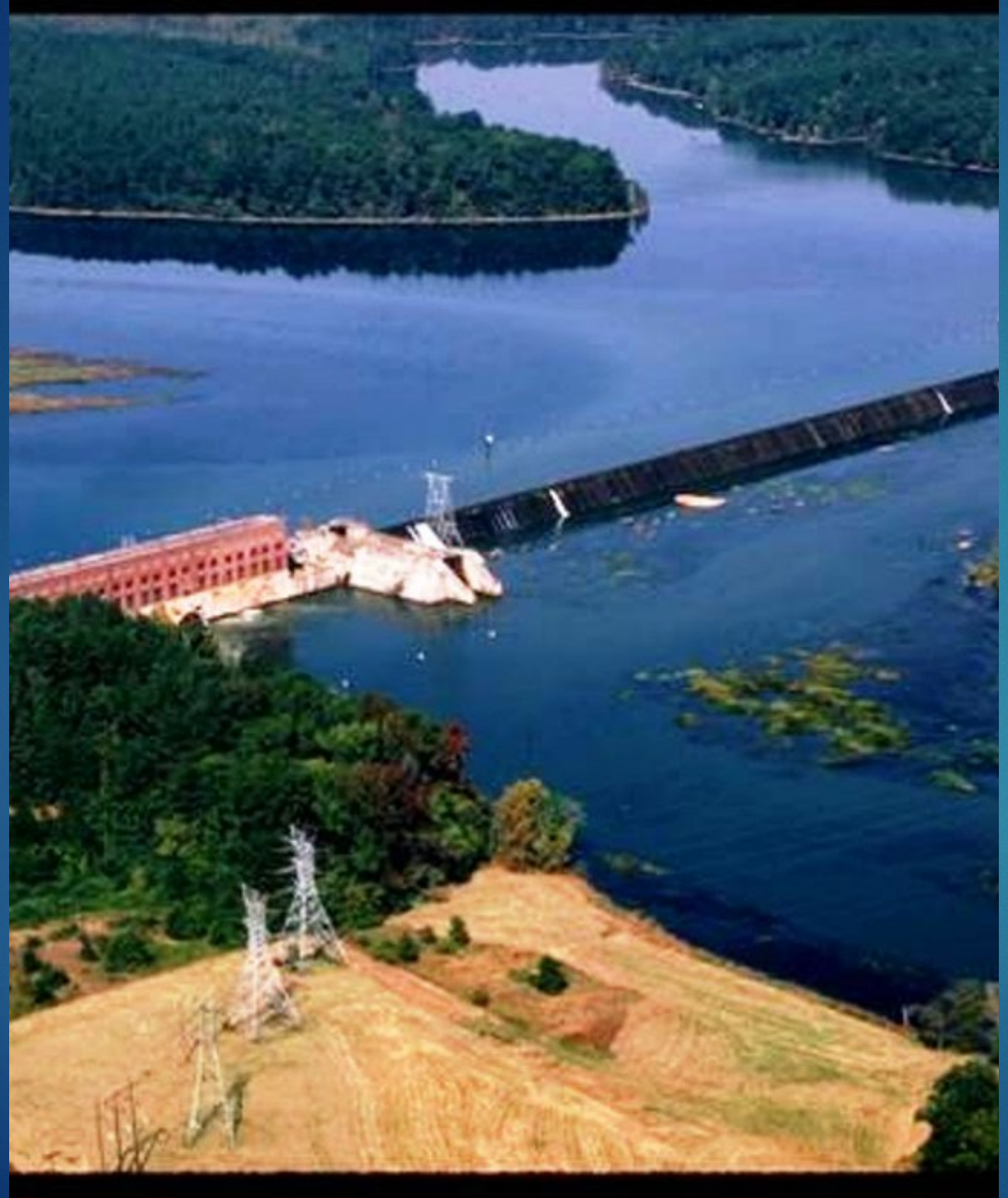
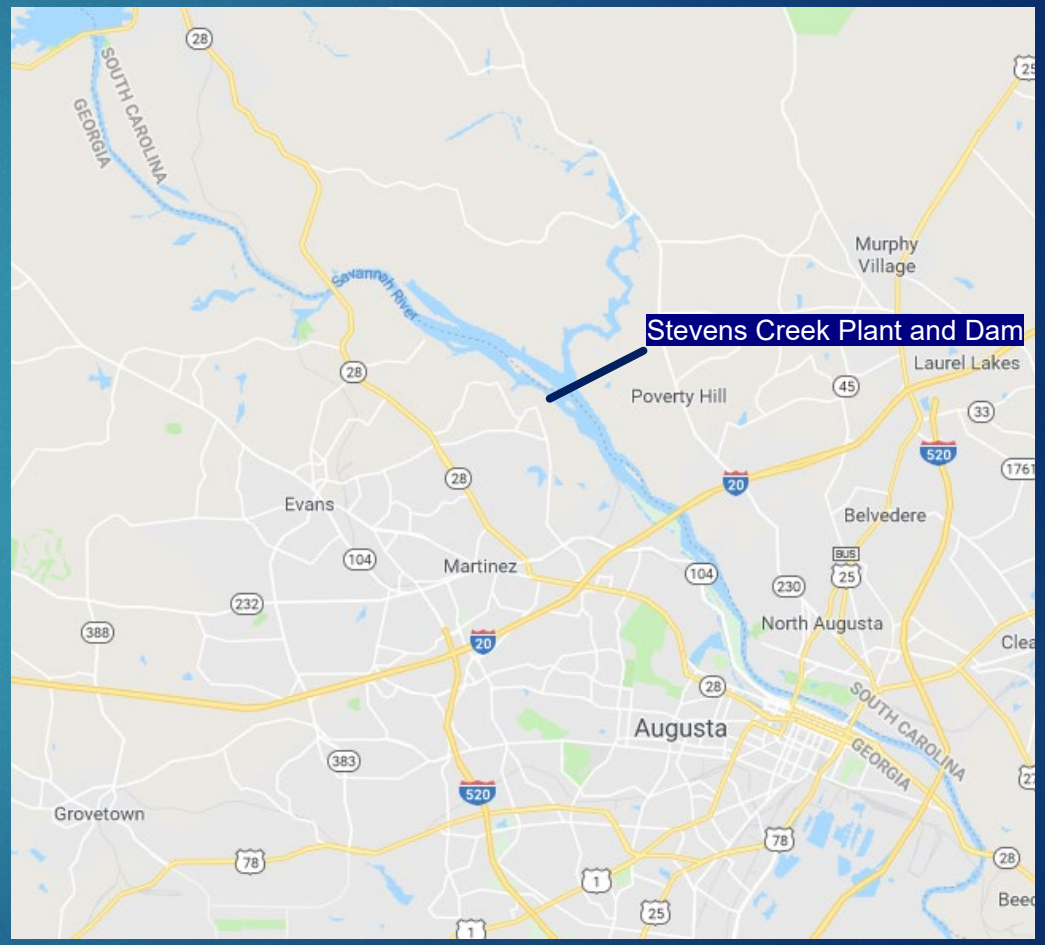


Stevens Creek Hydroelectric Project Relicensing Update

Project Information

- Owned and operated by Dominion Energy SC.
- Approx. 13 miles downstream of Clarks Hill (JST Dam).
- 1 mile upstream of ADD and canal headgates.
- Dam forms the Stevens Creek Reservoir.
- Hydroelectric facility operates to re-regulate flow releases from Thurmond Dam (4.5-ft fluctuation band).



What Is Relicensing?

- Non-federal hydropower projects are typically required to receive a permit (i.e. license) to operate from FERC.
- Typically 40-50 year term of license.
- Required to start relicensing at least 5 years before existing license expires.
- Licensing/Relicensing process requires environmental review per the National Environmental Policy Act ("NEPA Review").

How Long Does Relicensing Last & Where Are We Now?

Activity	Timeframe
Preliminary Issues Scoping	2018-2020
File NOI/PAD/Draft Study Plans (**Official Start of Relicensing**)	May 15, 2020
FERC Approval of TLP	June/July 2020
Agency/Stakeholder Meeting (JAM) and Site Visit	August 2020
Comments Due on PAD	October 2020
First Study Season	2021
Second Study Season	2022
Draft License Application Review	2022
Final License Application Filing	2023
FERC Issuance of New	2025

What is in the PAD?

Relicensing Process Overview

FERC Relicensing Process Plan and Schedule.

Hydro Project Overview

Existing Operations and License Conditions

Project Facilities and Components

Soils and Geology

Local Soils, Geology and Erosion Potential

What is in the PAD?

Water Resources	Water Quantity and Quality Info. Water Quality Study Plan Mussel Study Plan (water quality components)
Fish and Aquatic Resources	Existing Information on Fisheries, Mussels and Aquatic Macroinvertebrates. Mussel Study Plan Aquatic Habitat Whitepaper
Floodplains, Wetlands, Riparian, and Littoral Habitat	Overview of Wetlands and Shorelines

What is in the PAD?

Rare, Threatened and Endangered Species

- Review of Federally Listed Species
- Forest Service TES species - Long Cane Ranger District
- State species lists with protection status
- RTE Whitepaper

Recreation and Land Use Resources

- Review of Recreation Resources Surrounding the Project
- Buffer Zone Information from SCDNR
- Recreation Study Plan

Cultural Resources

- Review of cultural resources in the Project vicinity identified under the previous relicensing

Who is Involved?

Federal Agencies: NMFS, USACE, USFWS, USFS
NGOs and Local Governments and Authorities such as:
Water Districts, Riverkeeper

South Carolina

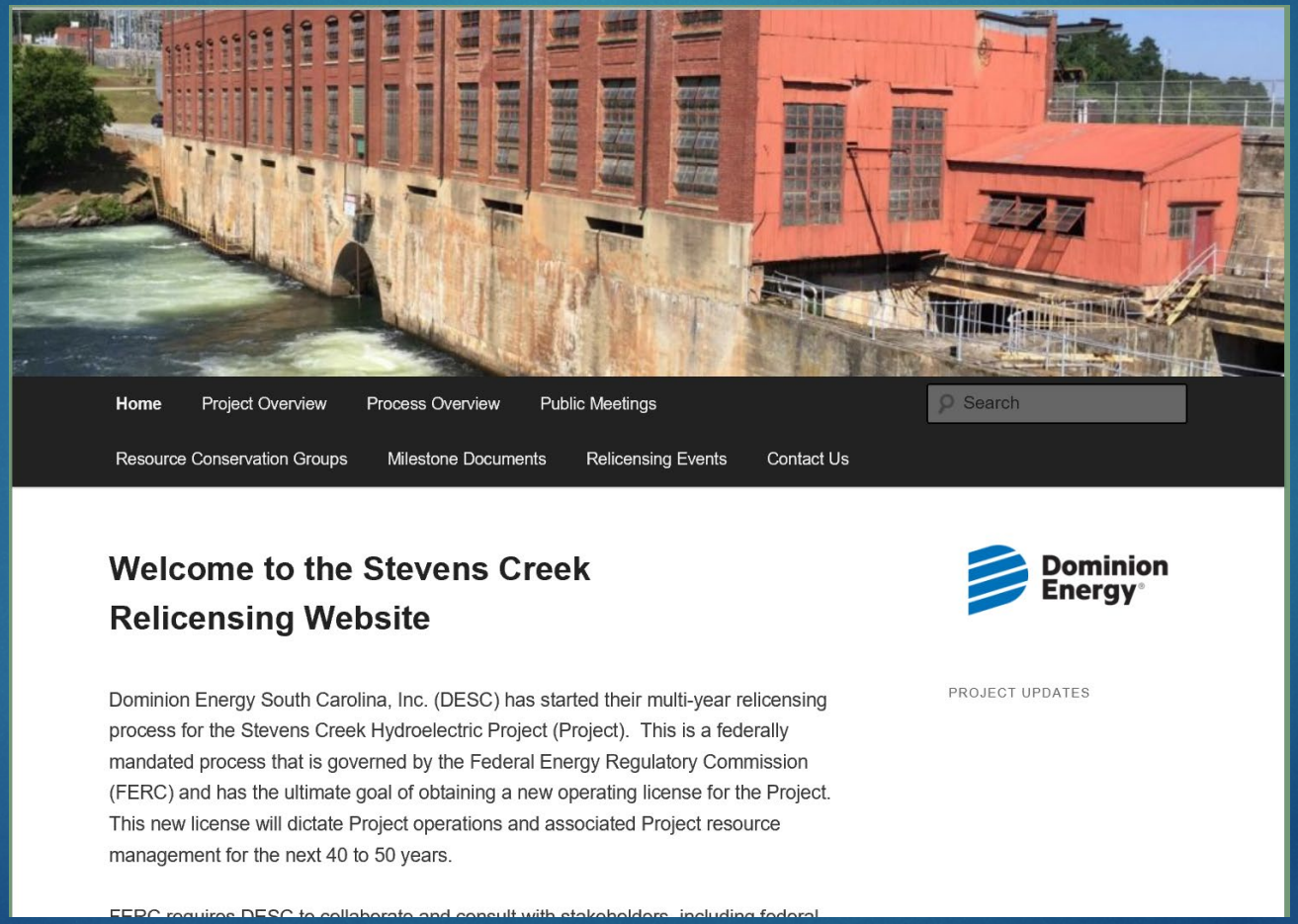
- SC DHEC
- SC DNR
- Edgefield County Water & Sewer Auth.
- Edgefield Planning Commission
- SC Dept. Of Archives and History

Georgia

- Georgia DNR – Environmental Protection Division (401)
- Georgia DNR
- City of Augusta
- Georgia Forestry Commission
- Georgia Geologic Survey
- Georgia Historic Preservation Division

Stay Up to Date!

www.stevenscreekrelicense.com



Relicensing Questions?

Georgia's
State Water Plan

Roundtable Discussion

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Council Committee Next Steps

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Public Comments

Next Meeting Date & Topics

Thank You!

Questions? Comments? Need More Information?

Haydn.Blaize@dnr.ga.gov
reidan@cdmsmith.com