

AGRICULTURAL WATER USE FORECAST

Suwannee-Satilla Regional Water Planning
Council

March 9, 2022

Mark Masters
Albany State University
Georgia Water Planning & Policy Center

Project Team

- ▣ Albany State University – Georgia Water Planning and Policy Center (Lead)
- ▣ University of Georgia Agricultural and Applied Economics

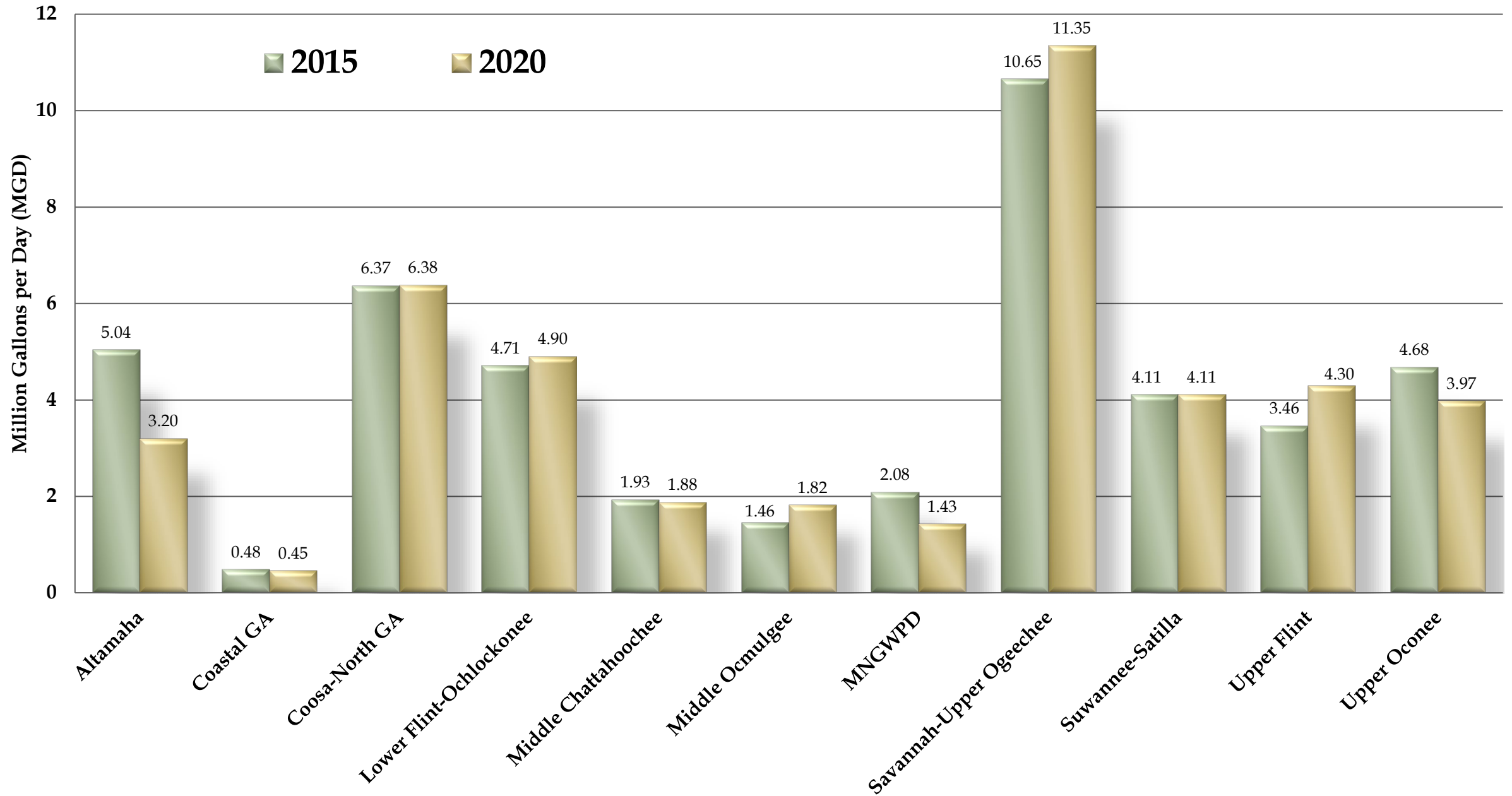


2020-21 Agricultural Water Demand Forecasts - Methods

- ▣ **Acreage – Updated 2020 wetted acreage data**
 - Field observation and aerial survey
- ▣ **Crop projections through 2060 - modeled based on multiple data sources:**
 - Remote sensing and field data
 - USDA Projections, Southeast Model, Georgia Model, Data Trends
- ▣ **Crop water needs - wet, normal, dry years**
 - Expanded use of meter data
 - Review estimates used in 2015-2016 and revise if needed
 - ▣ Surface water method revised to remove “70% assumption”
- ▣ **Animal Ag/Nursery**

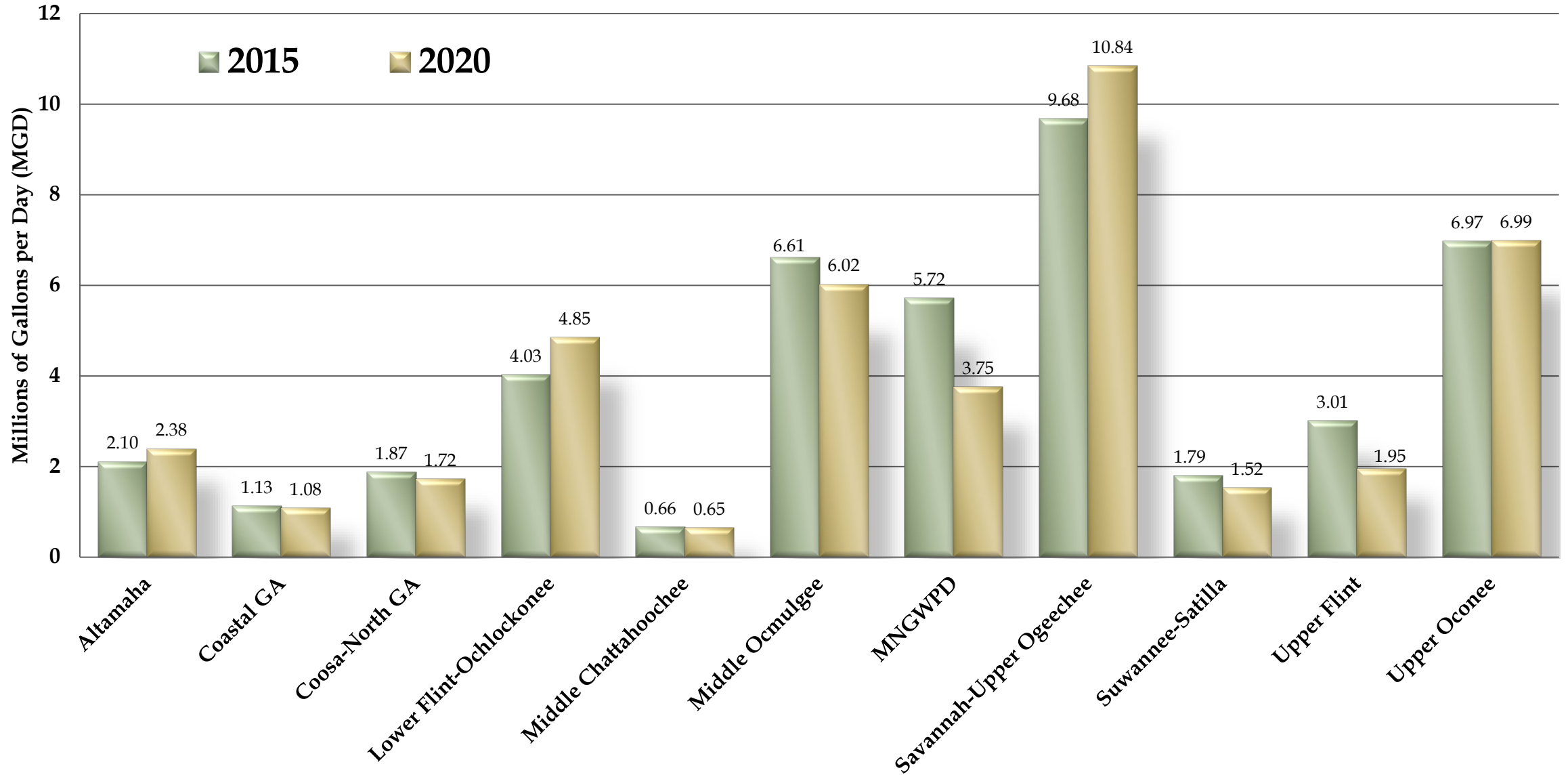
Animal Agriculture - Daily Water Use by Water Planning Region

Statewide Total: 43.8 MGD

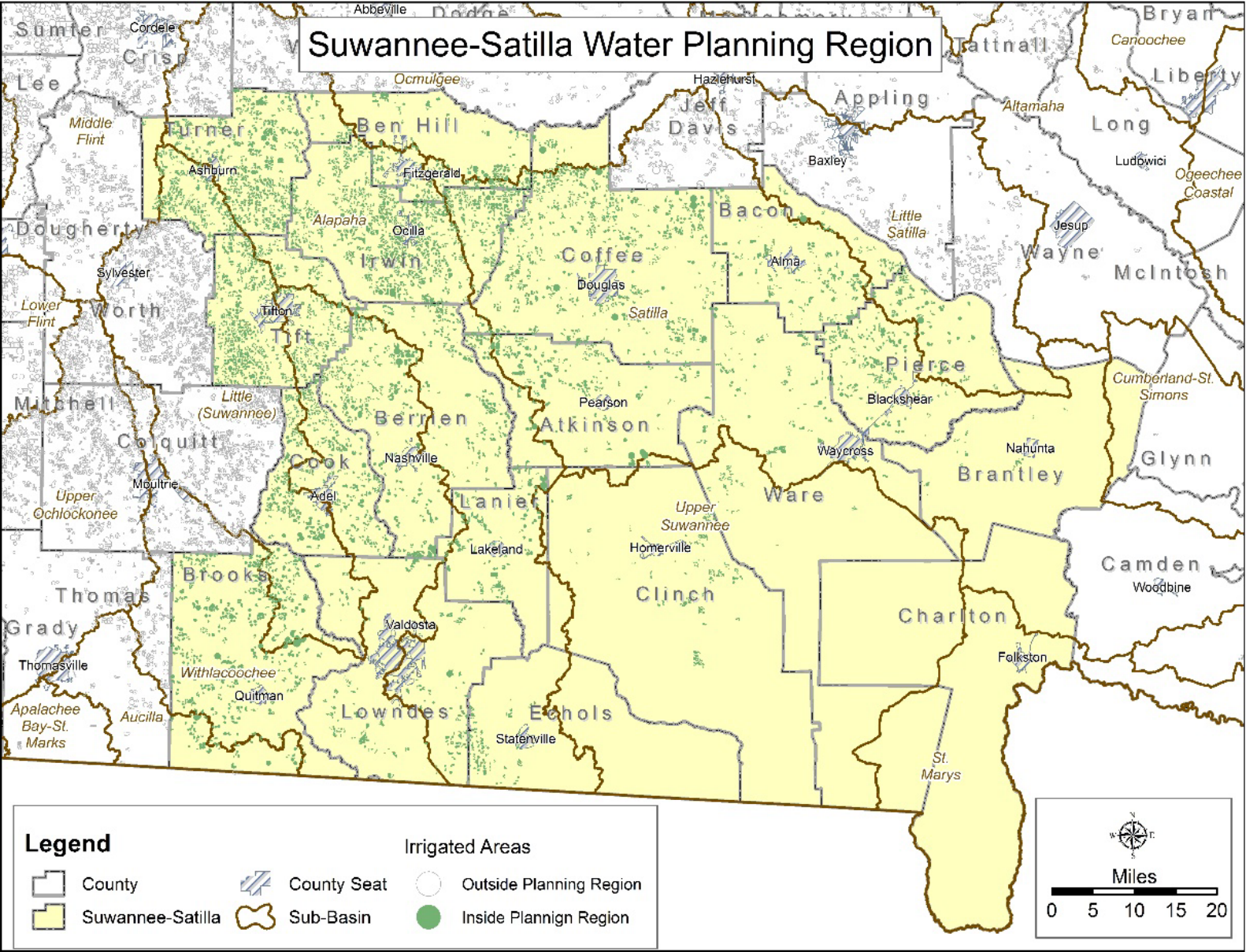


Daily Water Use by Horticultural Nurseries (Container, In-Ground, and Greenhouse), Millions of Gallons Per Day

Statewide Total: 41.76 MGD - *draft*



Irrigated Acres

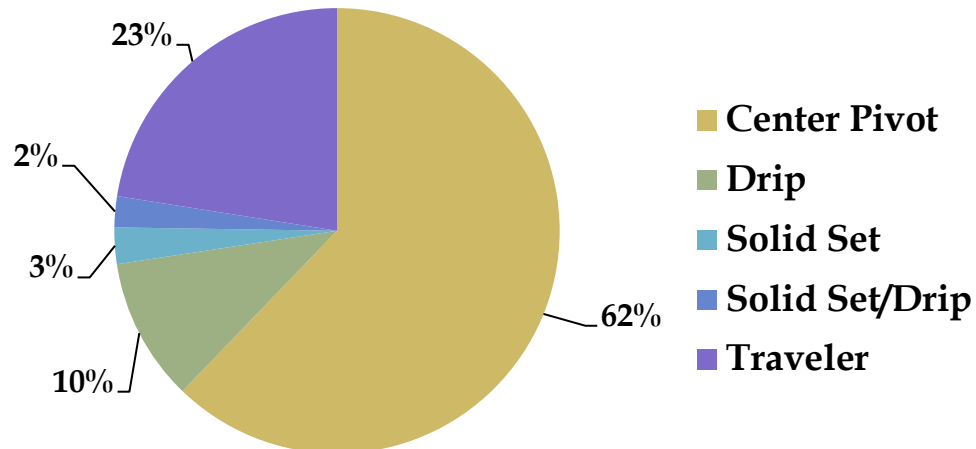


County	2015	2020
Atkinson	13,458	14,258
Bacon	10,125	10,915
Ben Hill	10,853	13,087
Berrien	23,154	25,125
Brantley	1,086	1,079
Brooks	28,819	32,354
Clinch	4,857	4,903
Coffee	32,486	34,335
Cook	18,485	19,494
Echols	3,536	3,485
Irwin	41,799	44,778
Lanier	7,110	8,663
Lowndes	8,728	9,315
Pierce	13,299	14,414
Tift	27,703	29,396
Turner	34,468	35,041
Ware	6,098	6,740

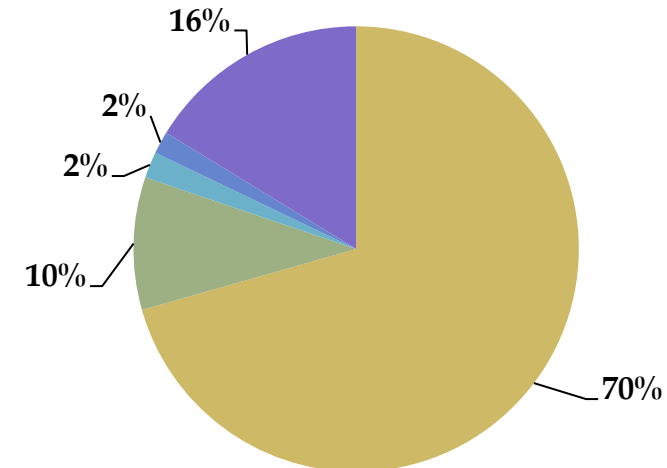
Suwannee-Satilla RWPC

	2015	2020	% Change
Total # of Fields	7,844	8,534	+ 8.8%
Total Acreage	286,131	307,383	+ 7.4%
Total GW Acreage	194,191	217,488	+ 12.0%
Total SW Acreage	91,939	89,895	- 2.2%
Total Center Pivots	4,771	5,314	+ 11.4%
Center Pivot Acreage	198,833	216,976	+ 9.1%

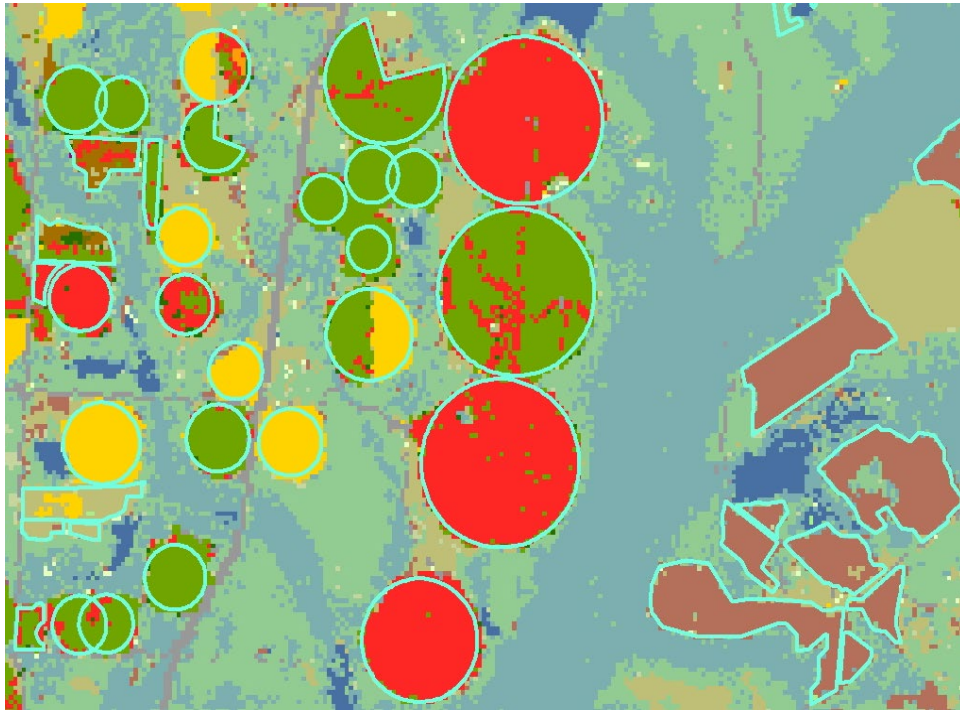
System Type - % of Systems



System Type - % of Acreage

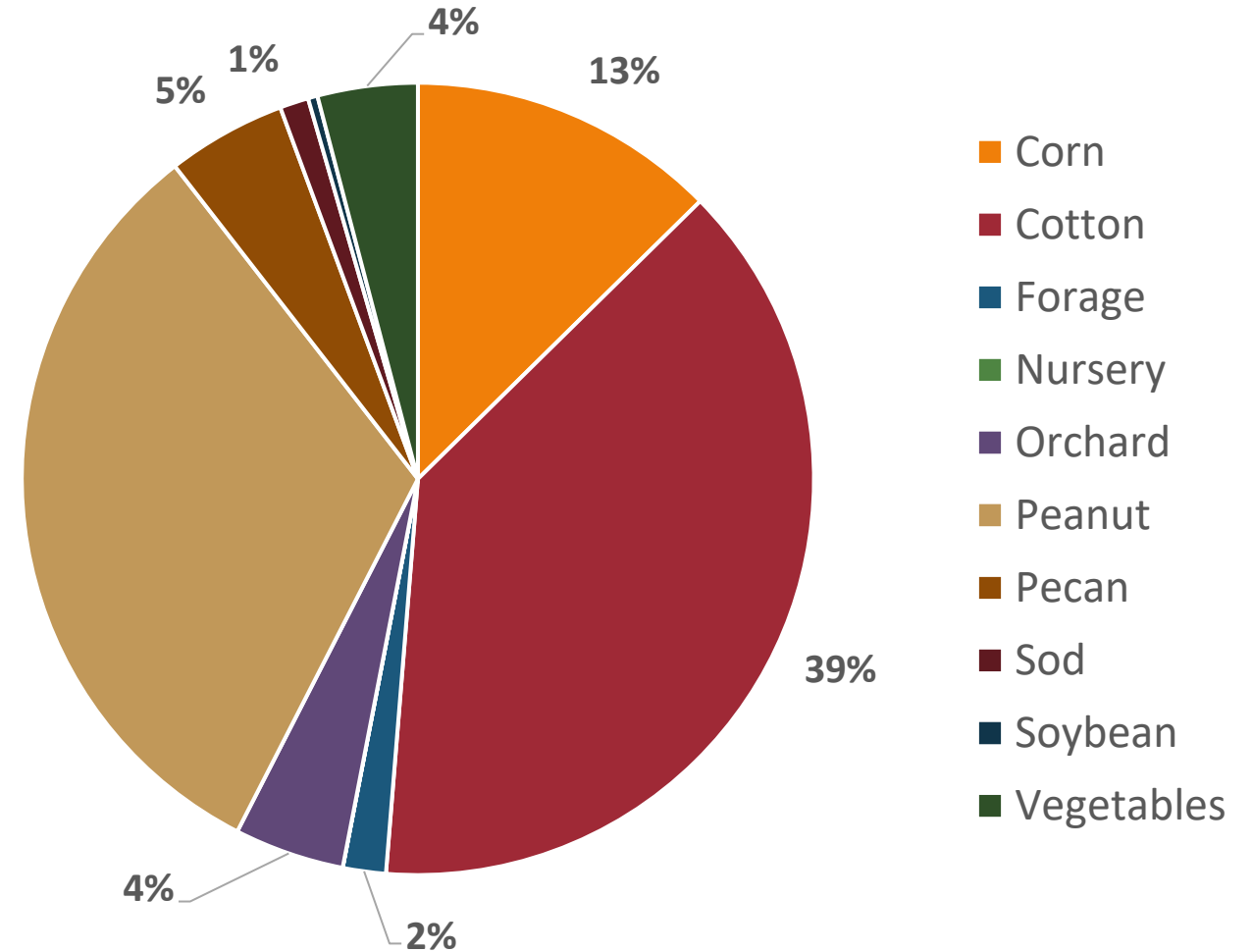


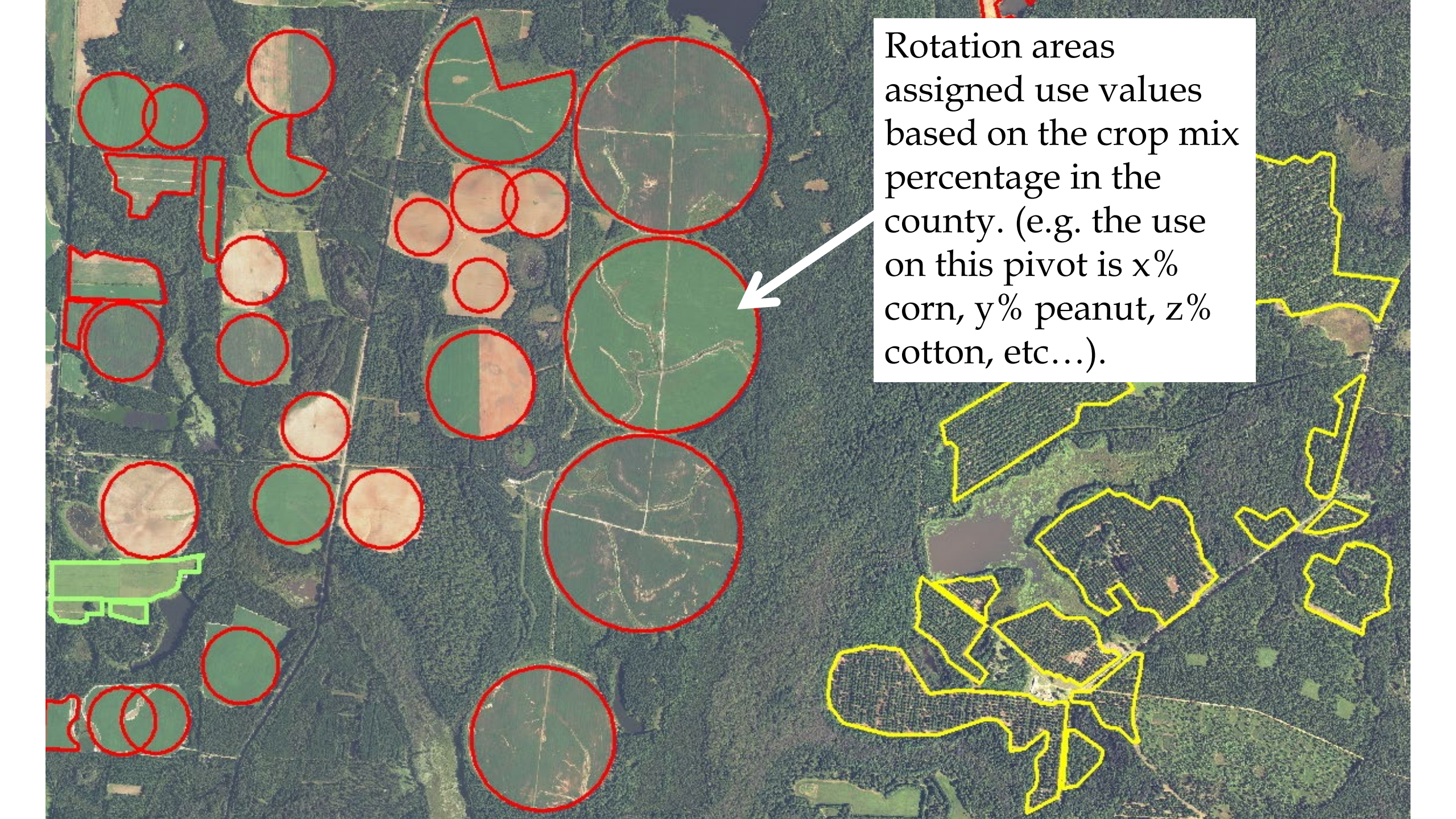
Baseline Crop Mix by RWPC



32%

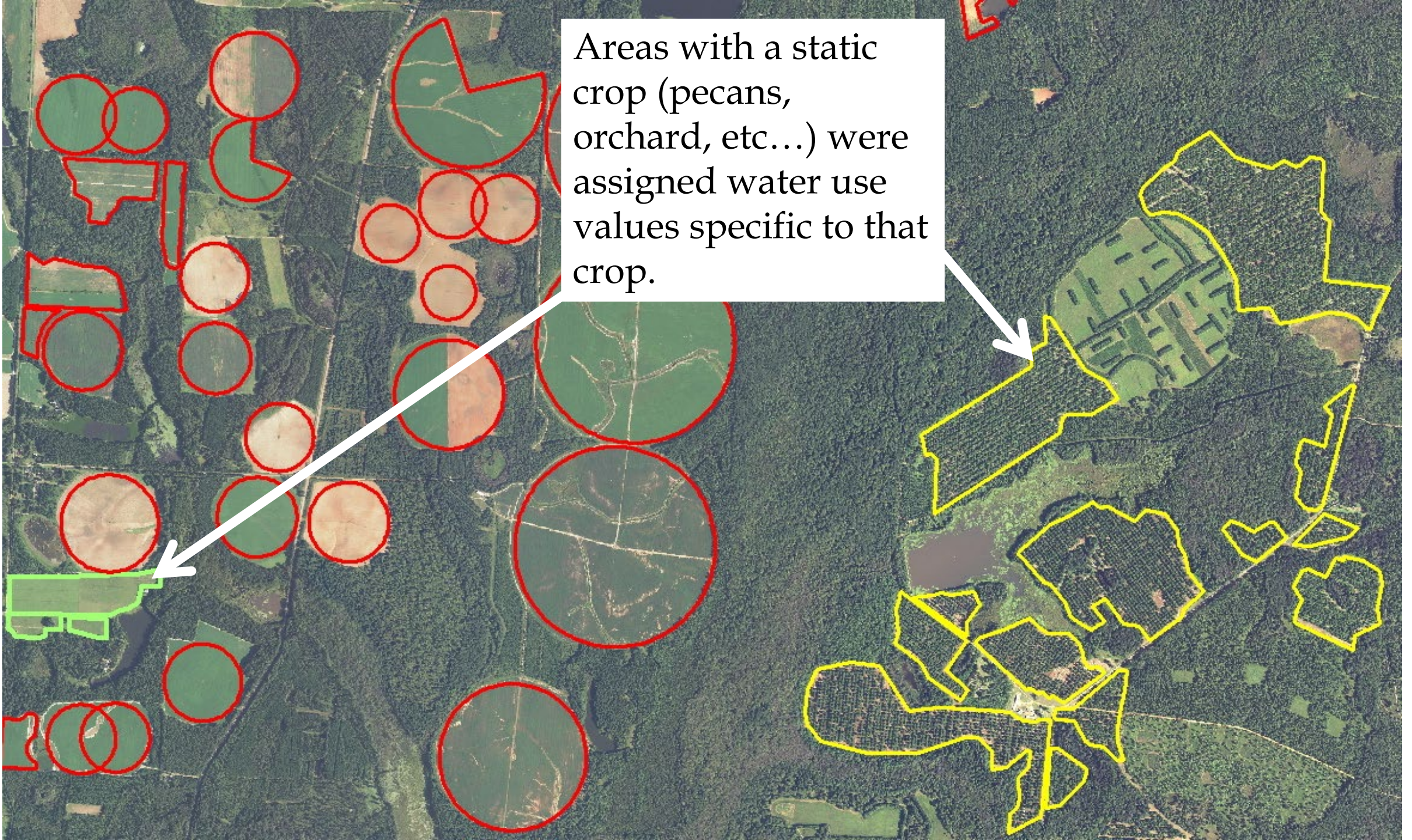
Suwannee-Satilla RWPC



An aerial photograph of a rural landscape. The land is divided into various agricultural plots. Numerous circular and irregular shapes are outlined in red, representing 'rotation areas'. These areas are filled with different colors: some are solid green, some are solid brown, and some are split vertically (half green, half brown). A white arrow points from the text box to one of these red-outlined areas. In the lower right portion of the image, there are several irregular shapes outlined in yellow. The background is a mix of green fields and dark, forested areas.

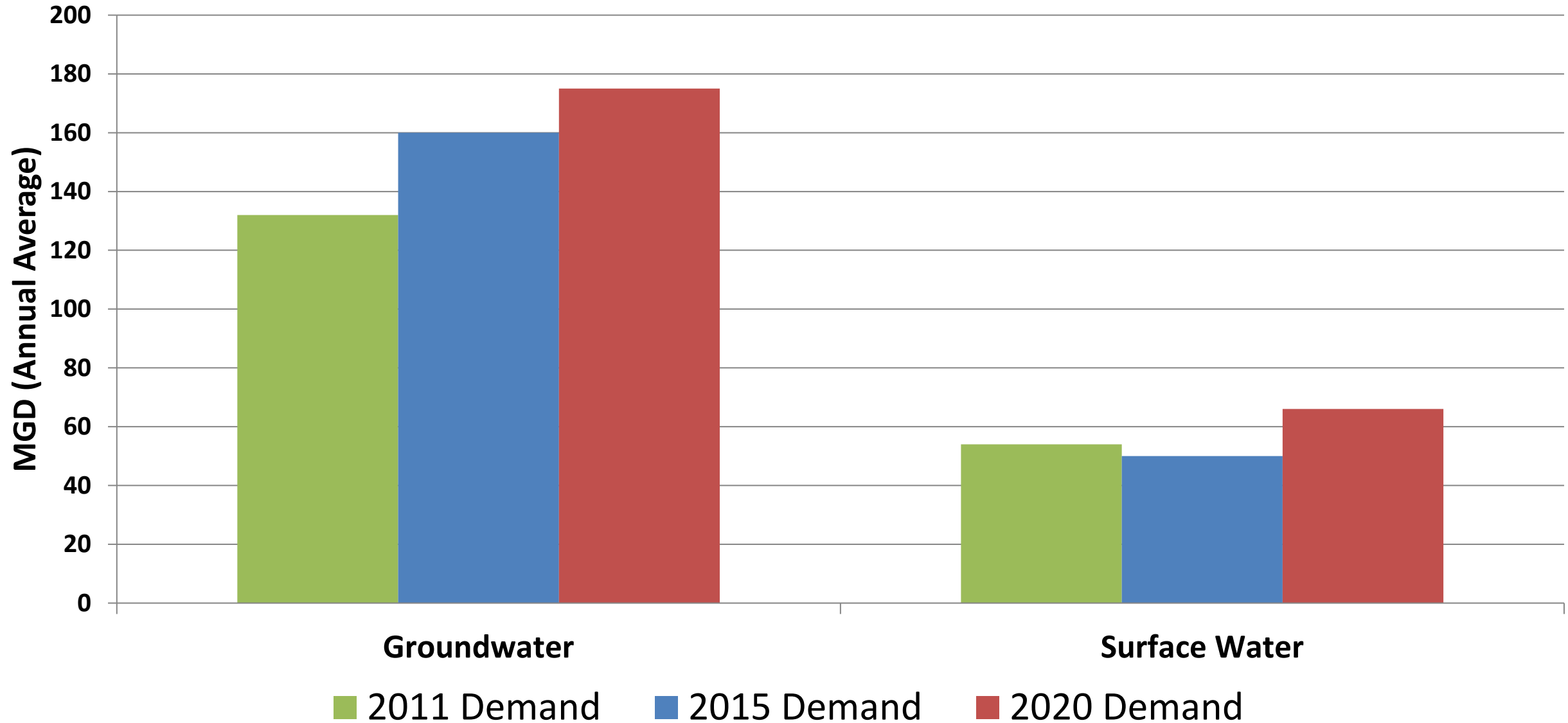
Rotation areas
assigned use values
based on the crop mix
percentage in the
county. (e.g. the use
on this pivot is x%
corn, y% peanut, z%
cotton, etc...).

Areas with a static crop (pecans, orchard, etc...) were assigned water use values specific to that crop.



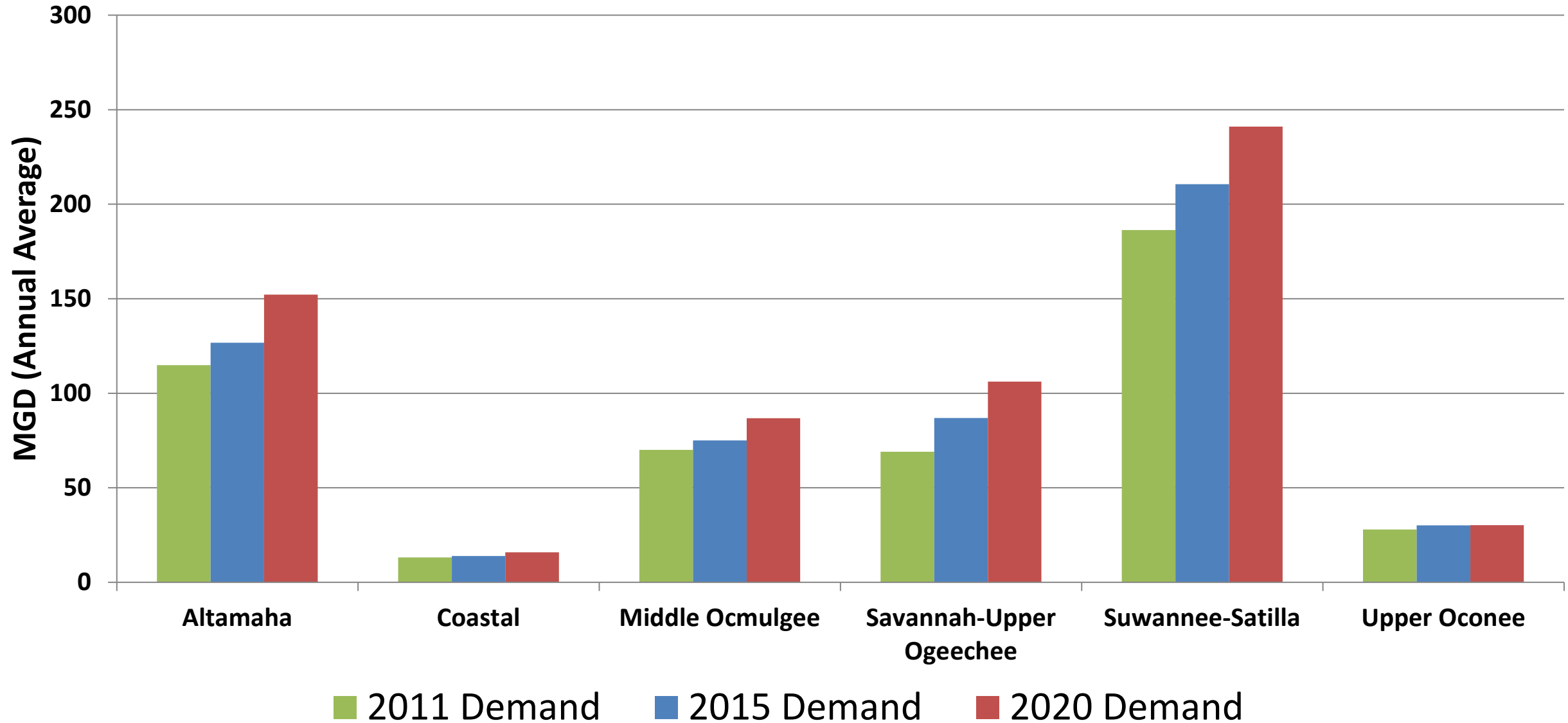
SSC Council – Ag Demand – 75th Percentile

Round 1 (2011), Round 2 (2015) and Round 3 (2020)

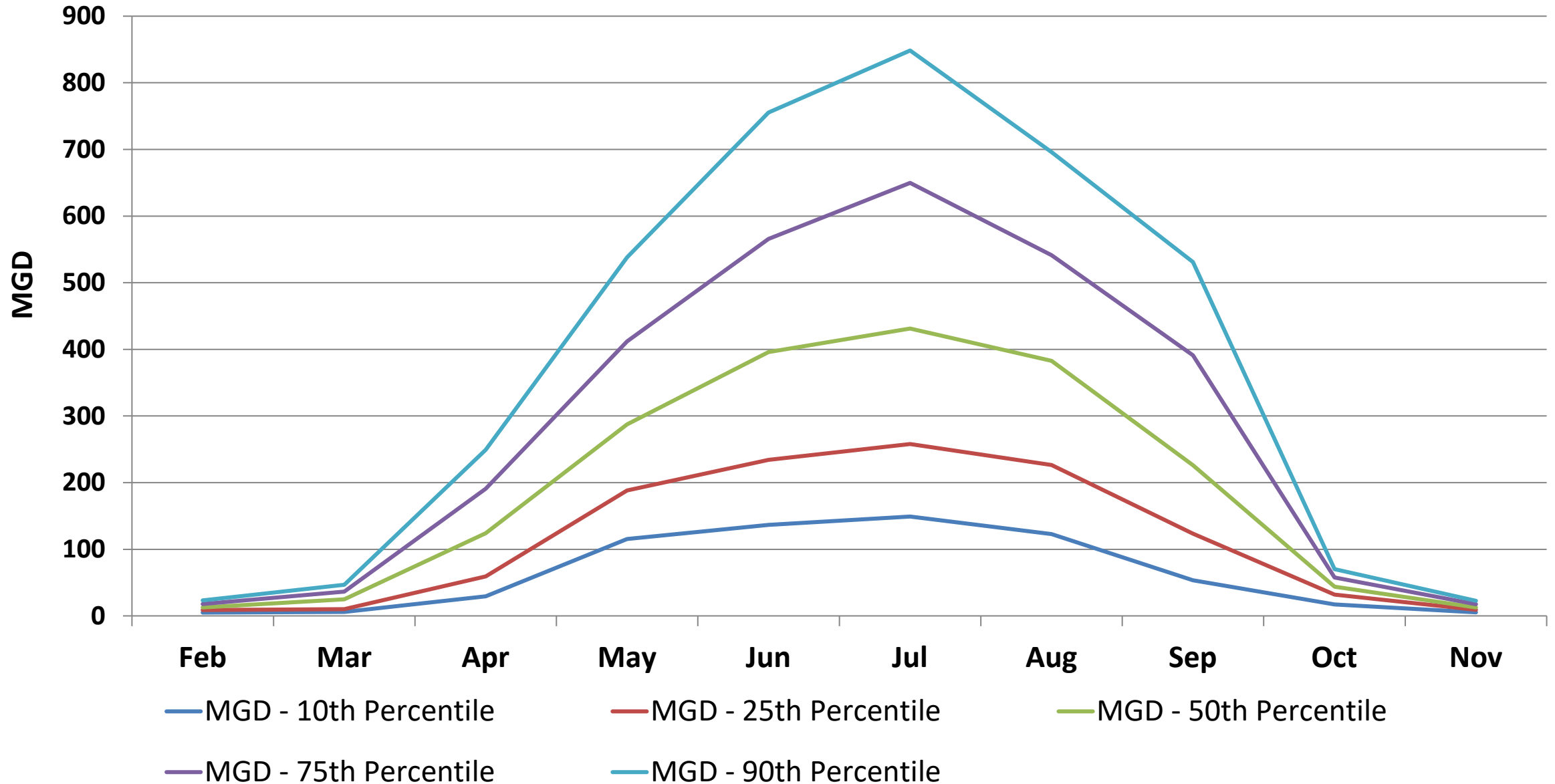


Ag Demand – 75th Percentile

Round 1 (2011), Round 2 (2015) and Round 3 (2020)



Suwannee-Satilla RWPC - Monthly



Ag Demand – Forecast – 75th Percentile

Totals (2020 & 2060)

