

AGRICULTURAL WATER USE FORECAST

Coastal Georgia Regional Water Planning Council

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Project Team

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

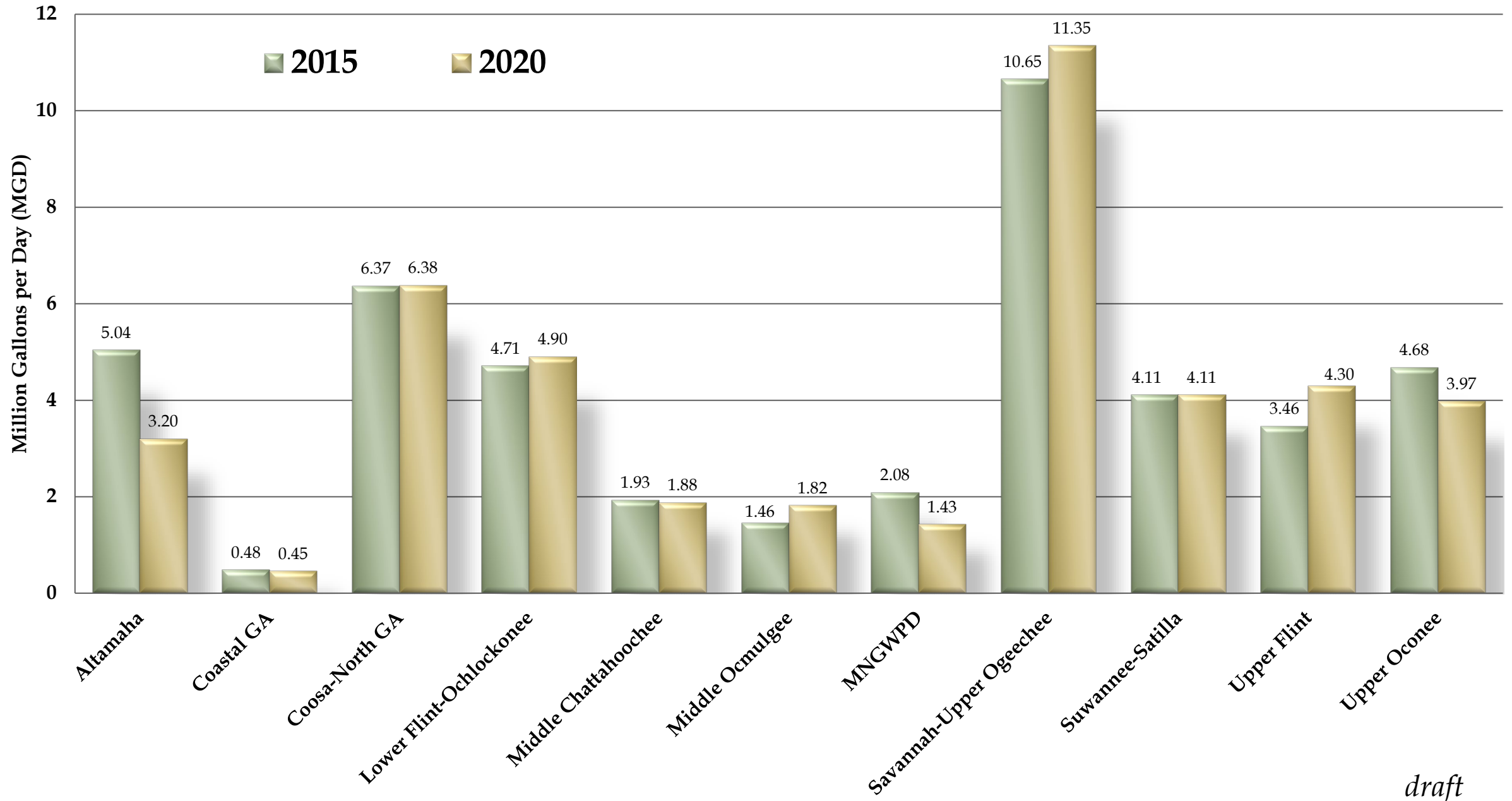


2020-21 Agricultural Water Demand Forecasts - Methods

- ▣ **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**

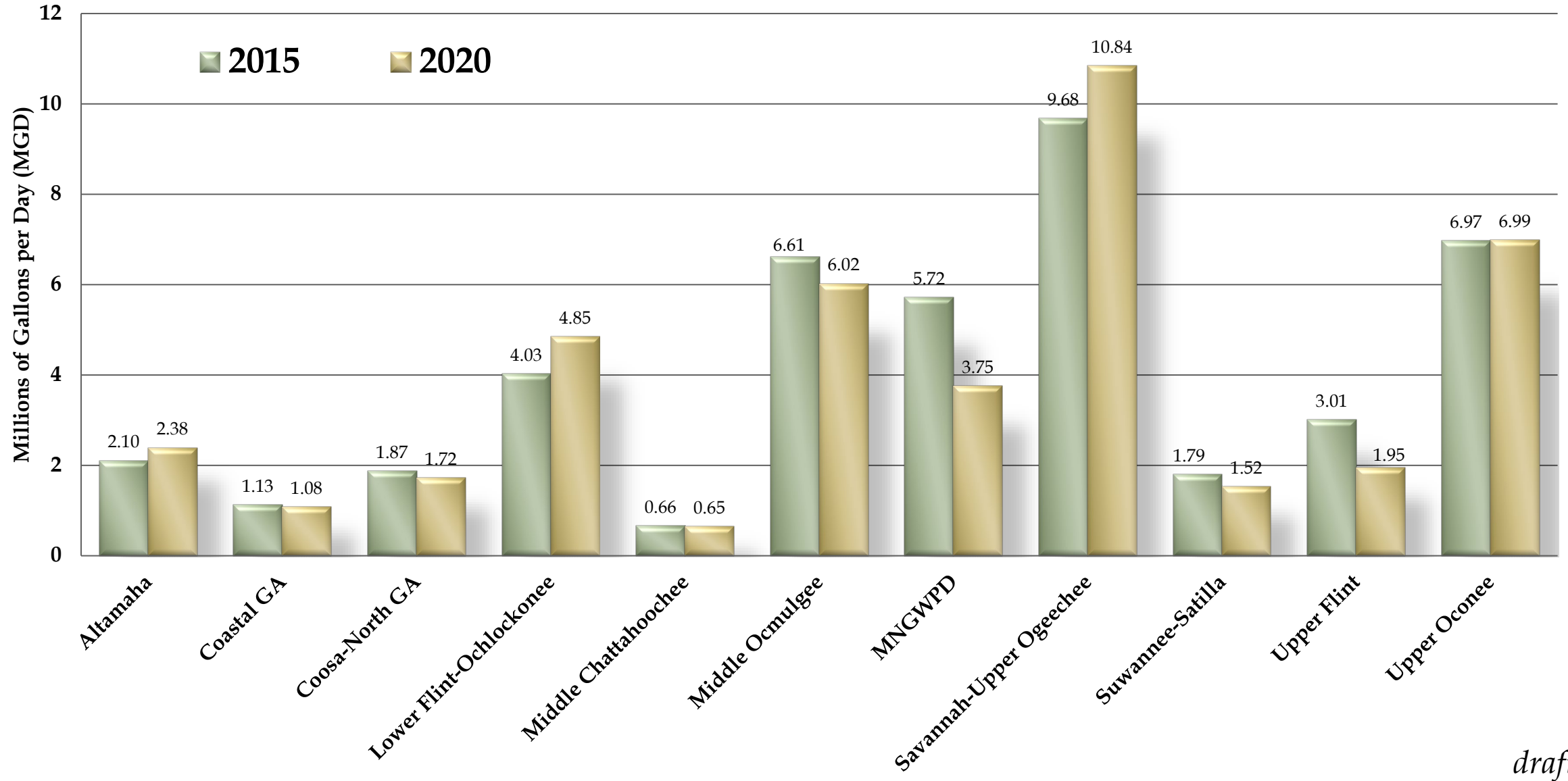
Animal Agriculture - Daily Water Use by Water Planning Region

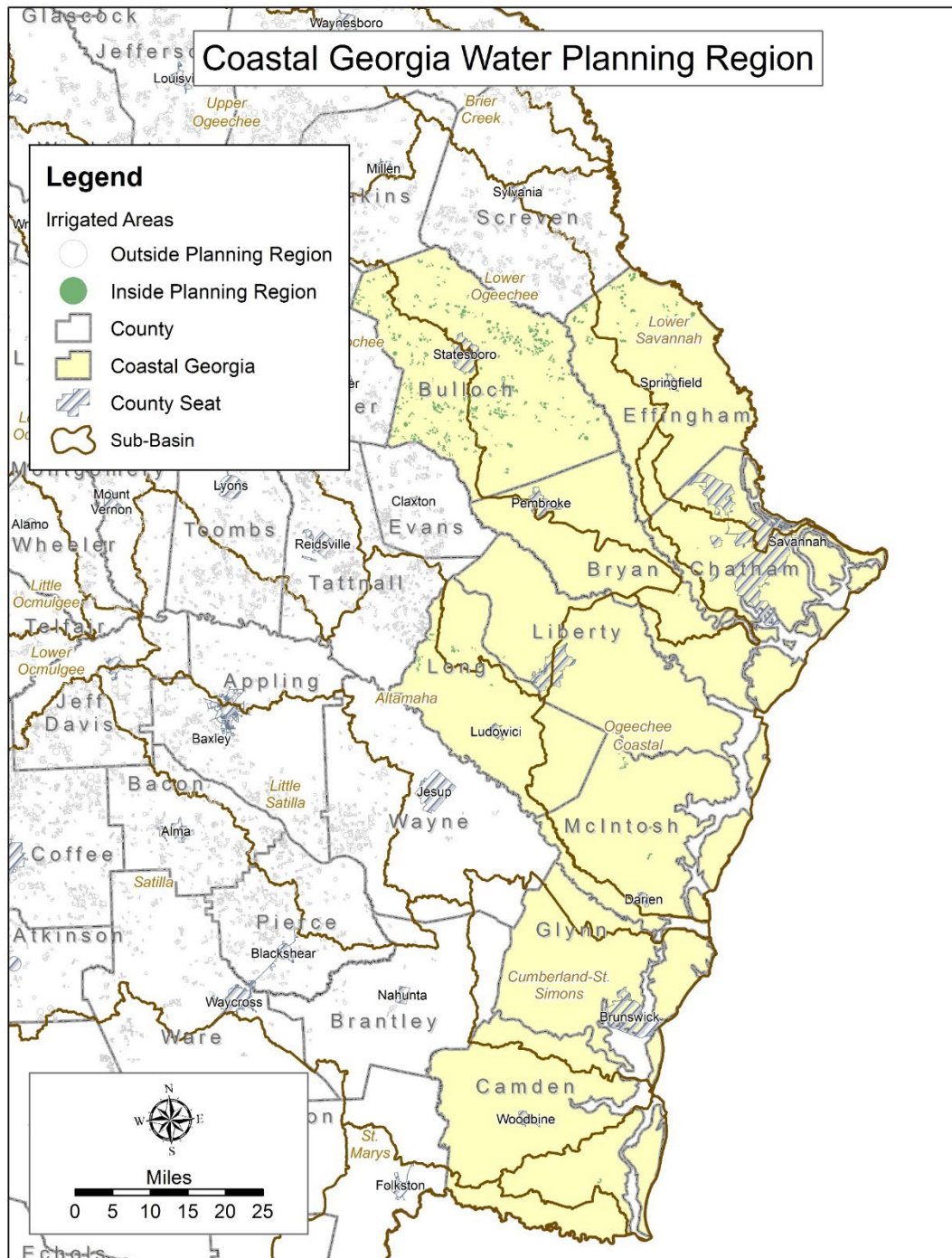
Statewide Total: 43.8 MGD



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

Statewide Total: 41.76 MGD - *draft*





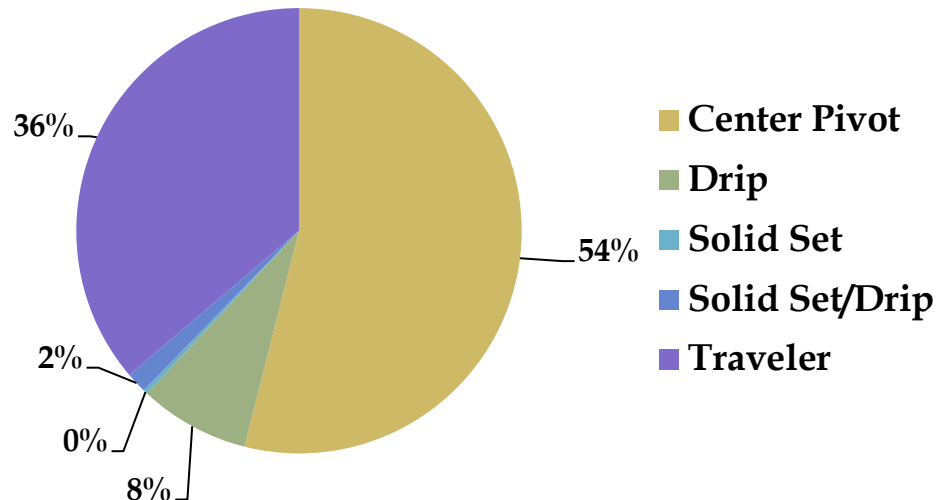
Irrigated Acres

County	2015	2020
Bryan	34	34
Bulloch	17,885	19,298
Camden	0	107
Chatham	93	93
Effingham	2,827	3,038
Glynn	57	57
Liberty	31	31
Long	905	914
McIntosh	635	635

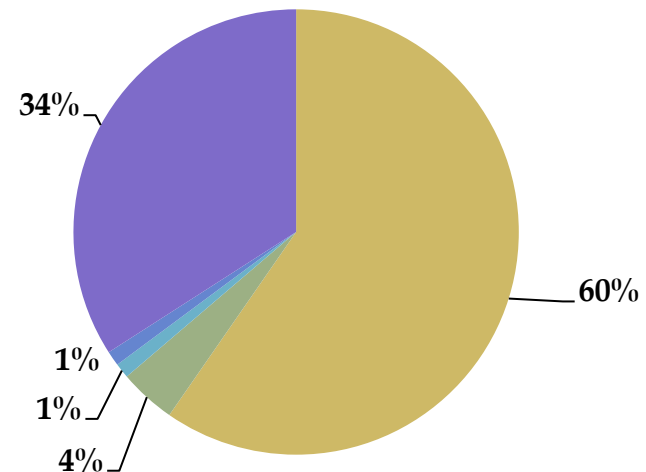
Coastal Georgia RWPC

	2015	2020	% Change
Total # of Fields	610	660	+ 8.2%
Total Acreage	22,468	24,208	+ 7.7%
Total GW Acreage	12,833	14,206	+ 10.7%
Total SW Acreage	9,635	10,001	+ 3.8%
Total Center Pivots	311	356	+ 14.5%
Center Pivot Acreage	12,773	14,438	+ 13.0%

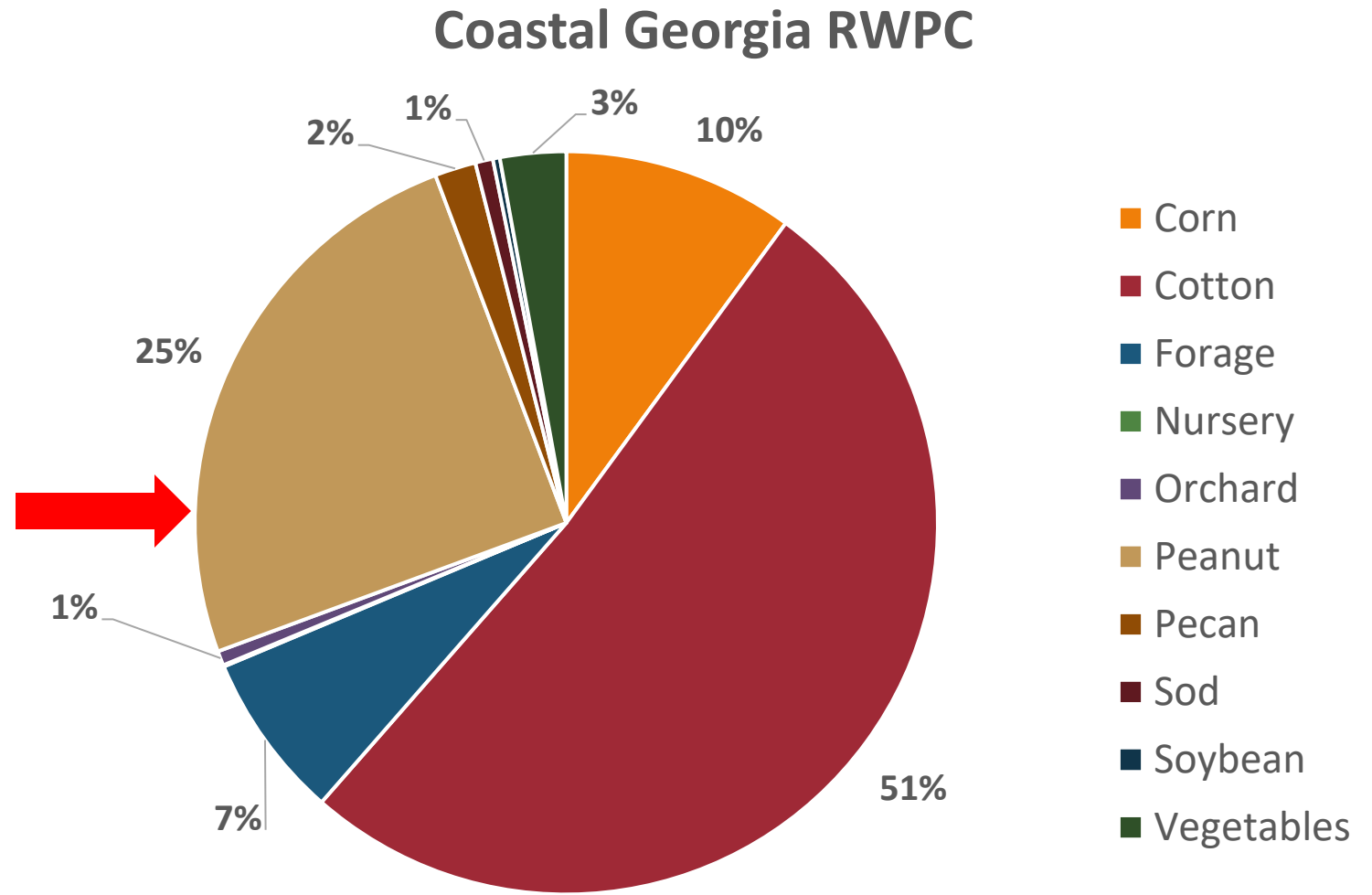
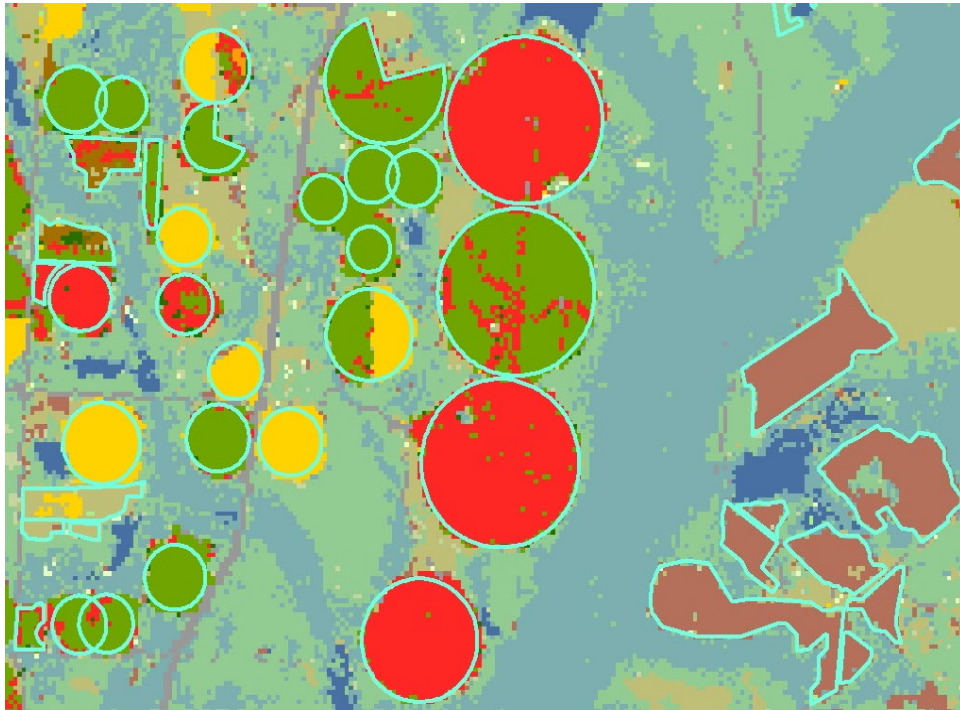
System Type - % of Systems

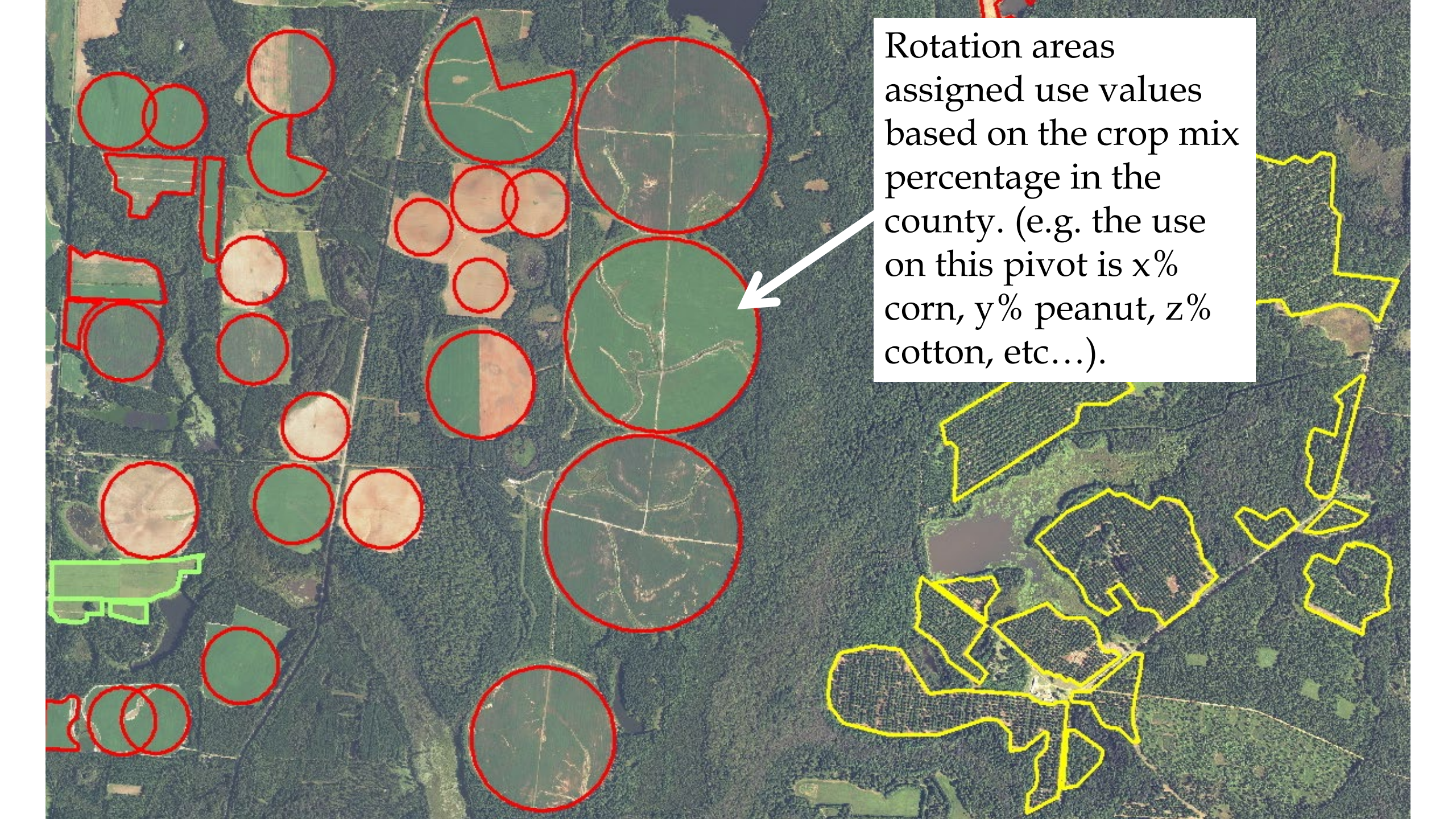


System Type - % of Acreage



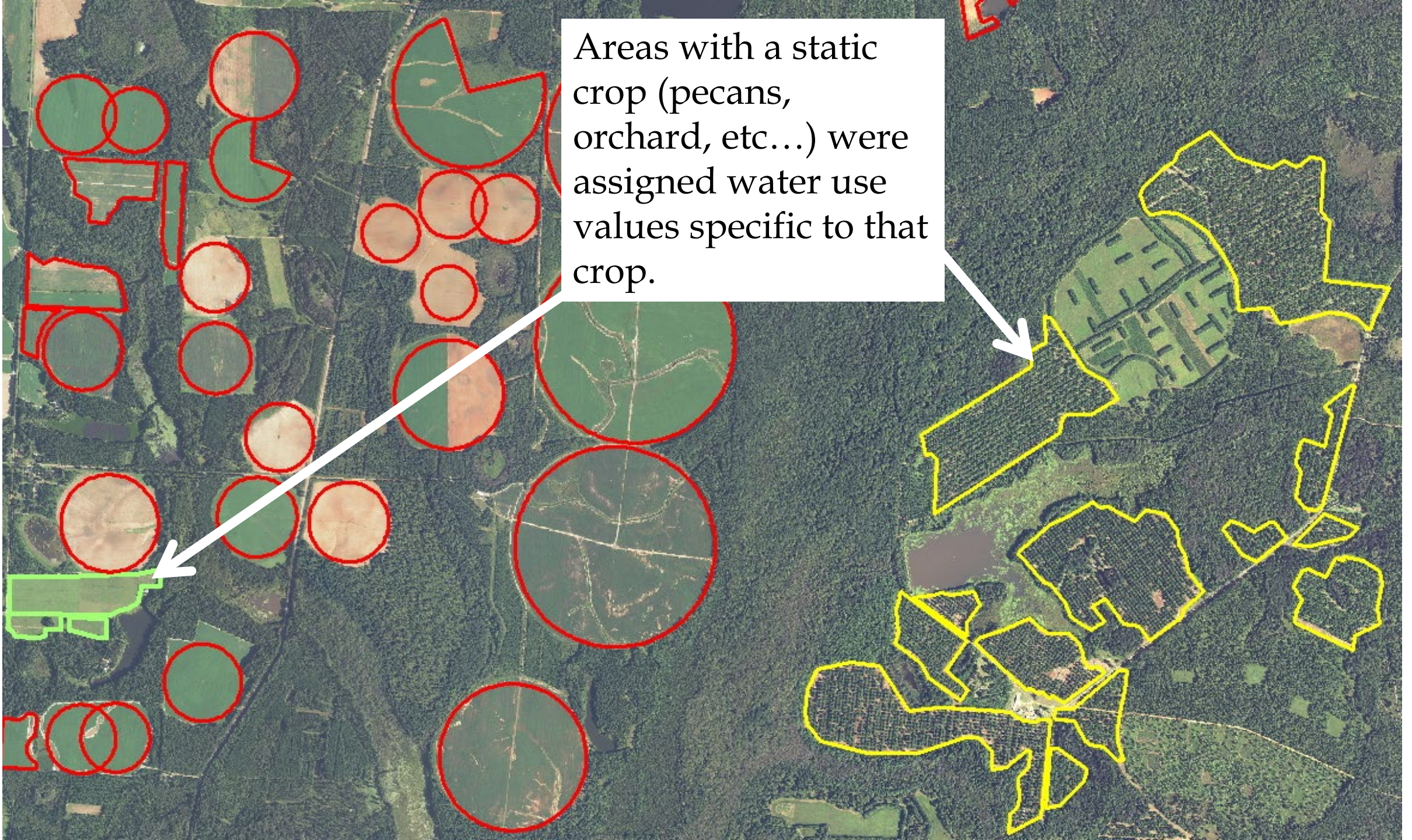
Baseline Crop Mix by RWPC



An aerial photograph of a rural landscape with various agricultural fields. Numerous fields are outlined with red circles of varying sizes, indicating crop rotation areas. Some of these circles are filled with a light brown color, while others are green. A white arrow points from a text box to one of the green-filled circles. In the lower right portion of the image, there are several irregularly shaped areas outlined in yellow. The background is a mix of green fields and darker, forested areas.

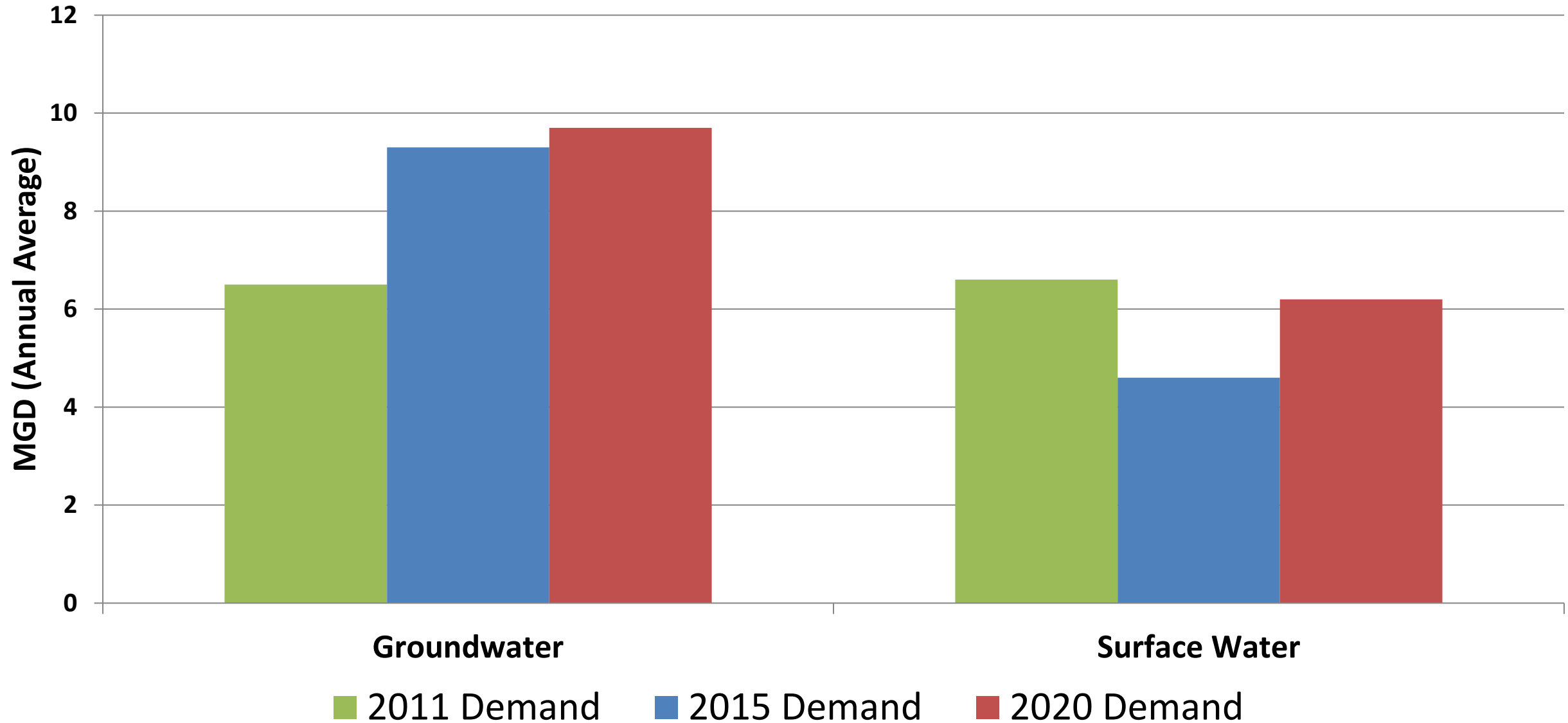
Rotation areas
assigned use values
based on the crop mix
percentage in the
county. (e.g. the use
on this pivot is x%
corn, y% peanut, z%
cotton, etc...).

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



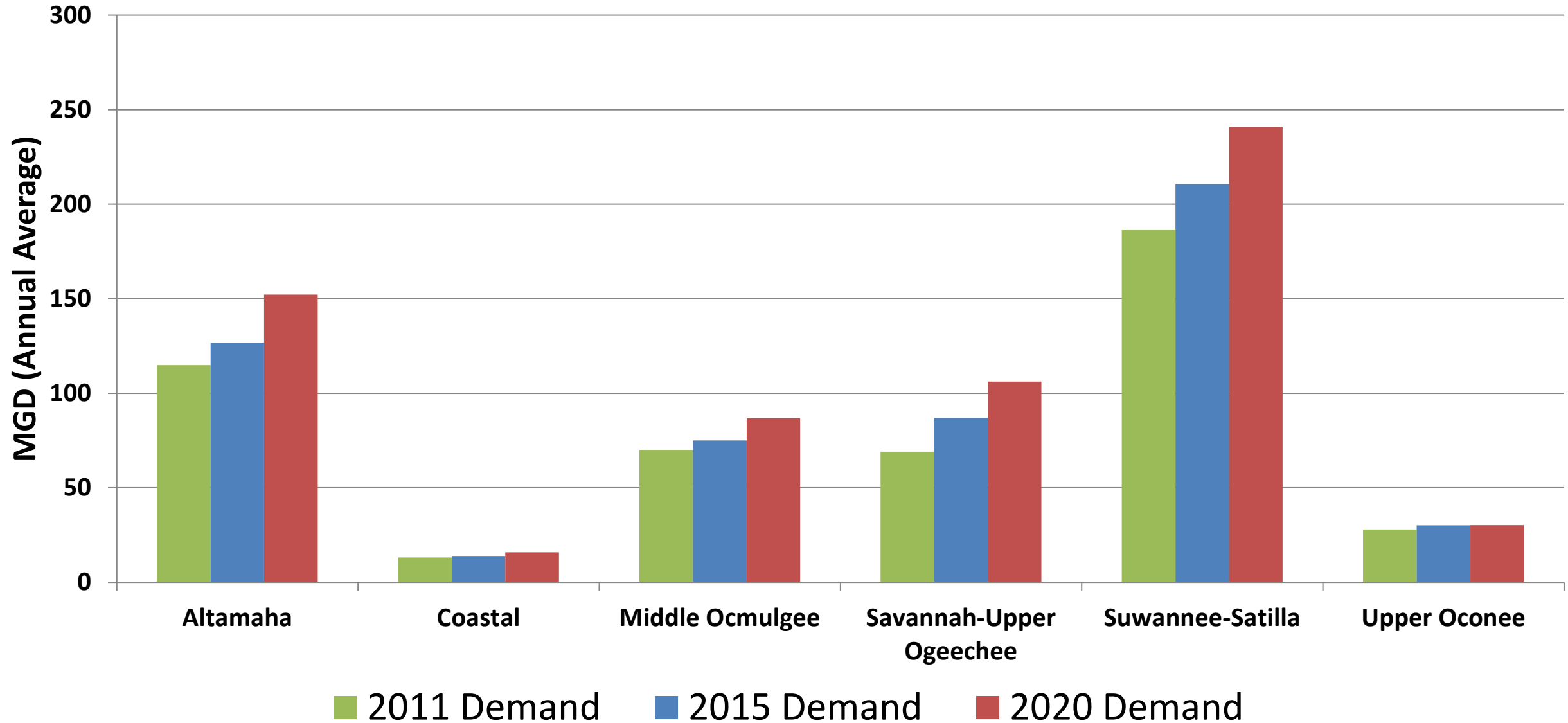
Coastal Council – Ag Demand – 75th Percentile

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

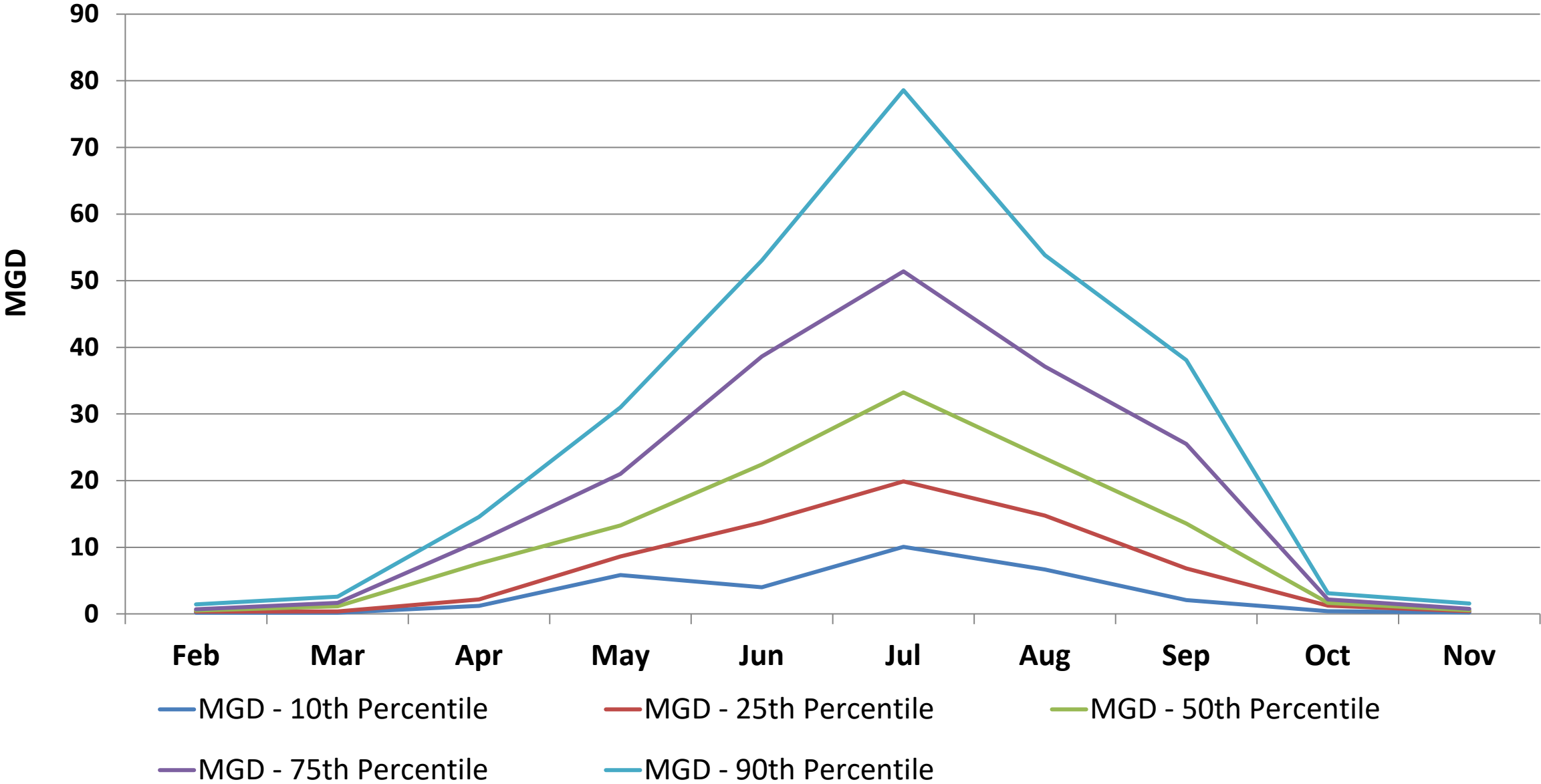


Ag Demand – 75th Percentile

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



Coastal Georgia RWPC - Monthly



Ag Demand – Forecast – 75th Percentile

Totals (2020 & 2060)

