

AGRICULTURAL WATER USE FORECAST

Middle Chattahoochee 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

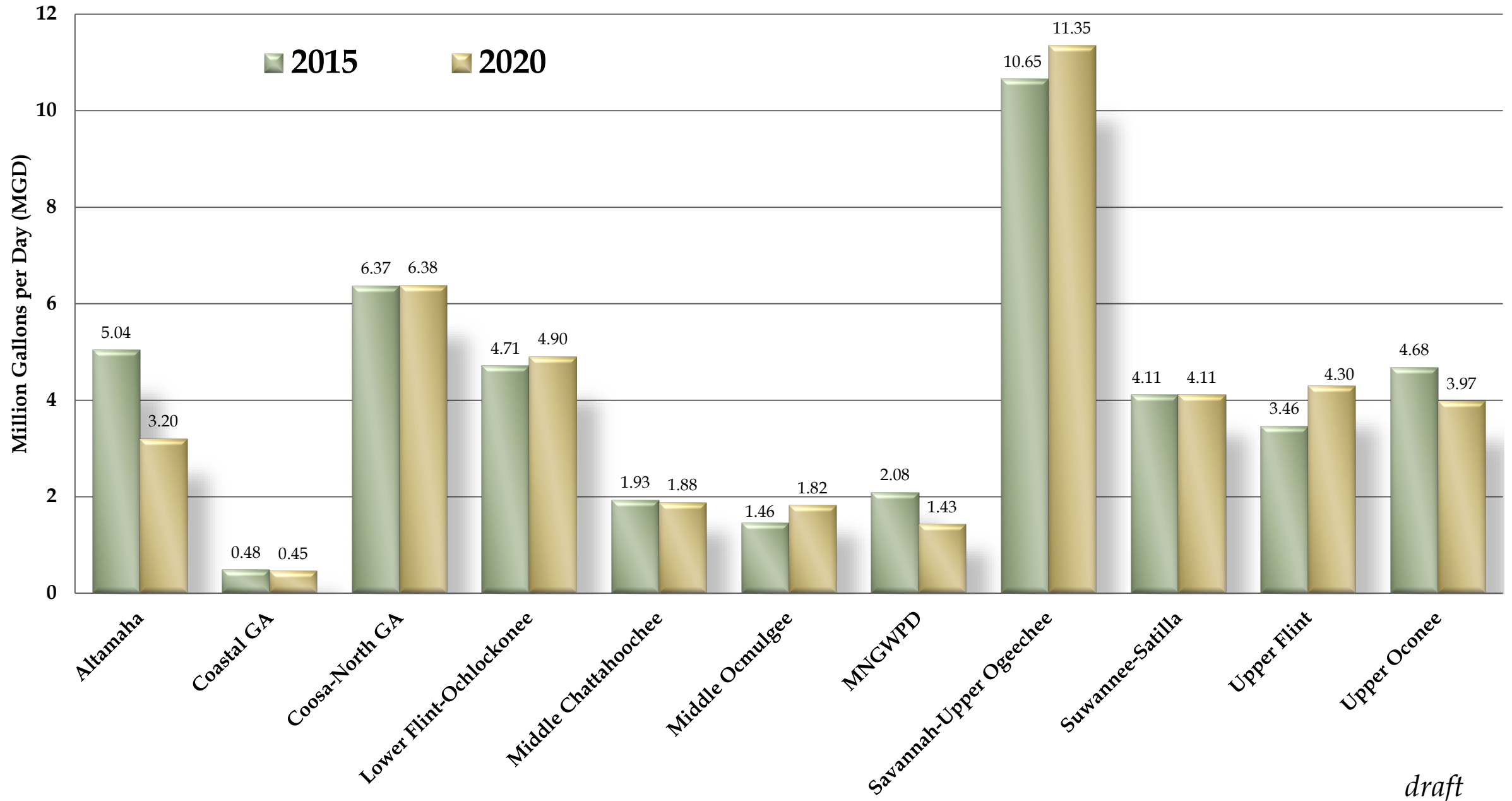


2020-21 Agricultural Water Demand Forecasts - Methods

- ▣ **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**

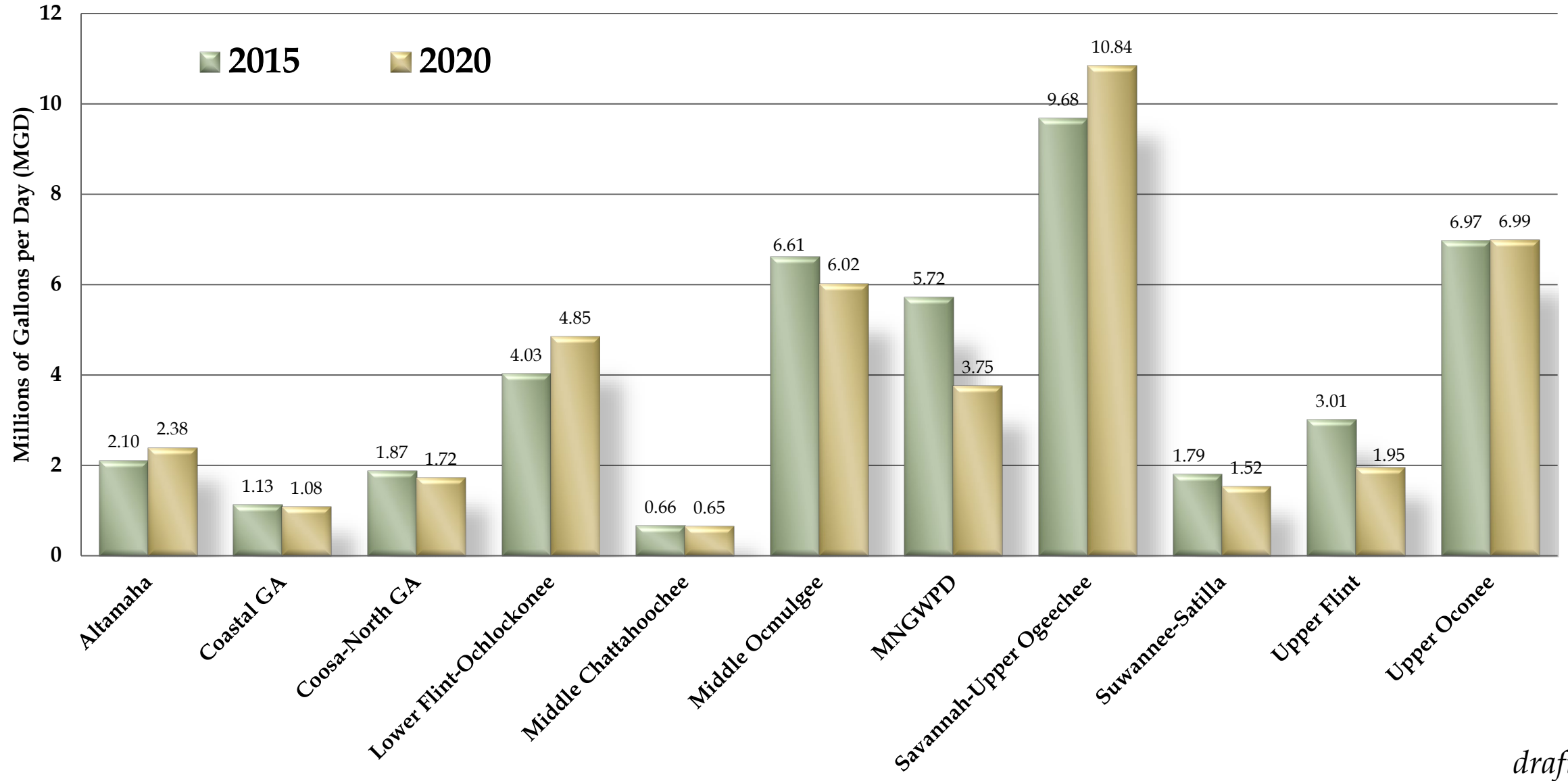
Animal Agriculture - Daily Water Use by Water Planning Region

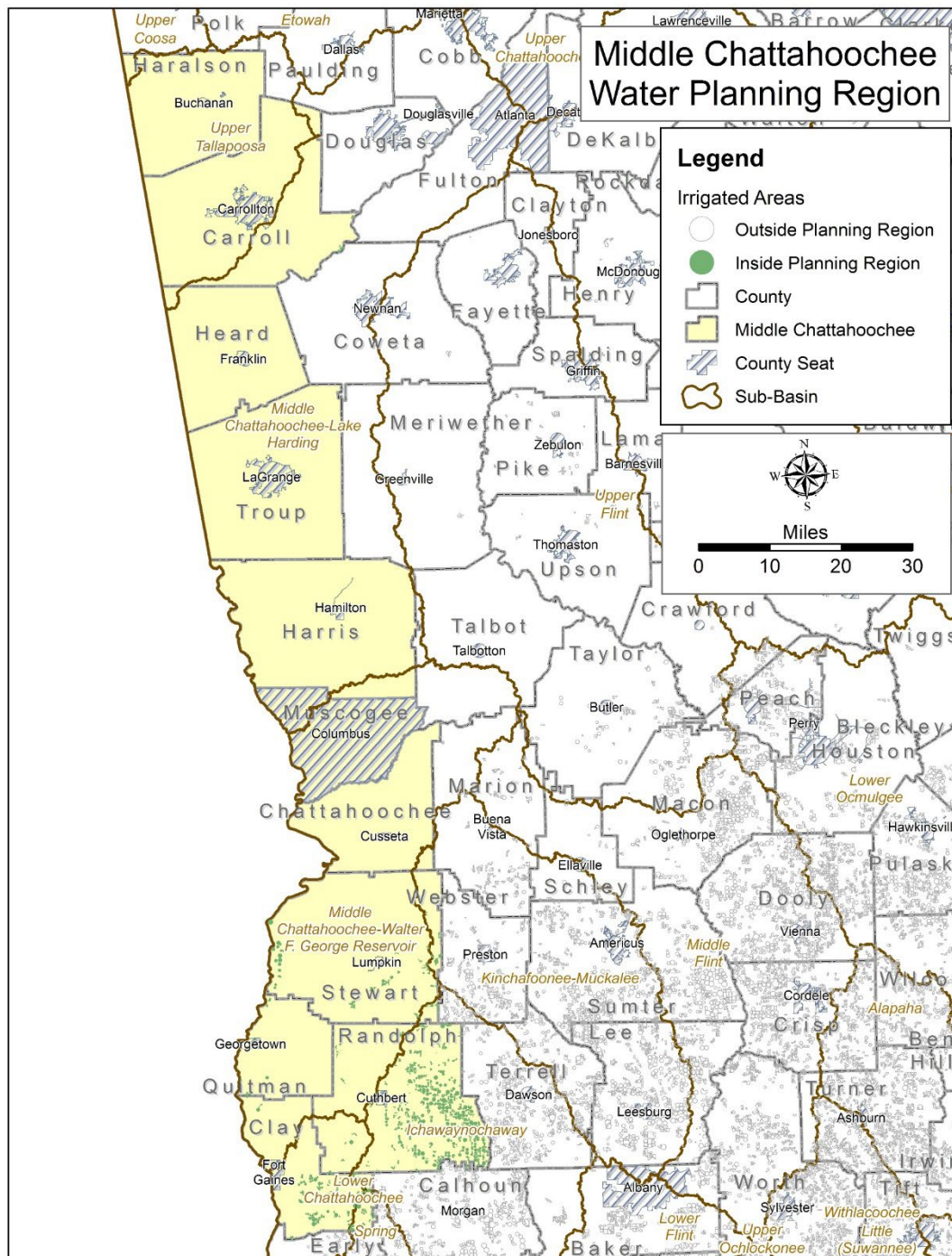
Statewide Total: 43.8 MGD



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

Statewide Total: 41.76 MGD - *draft*





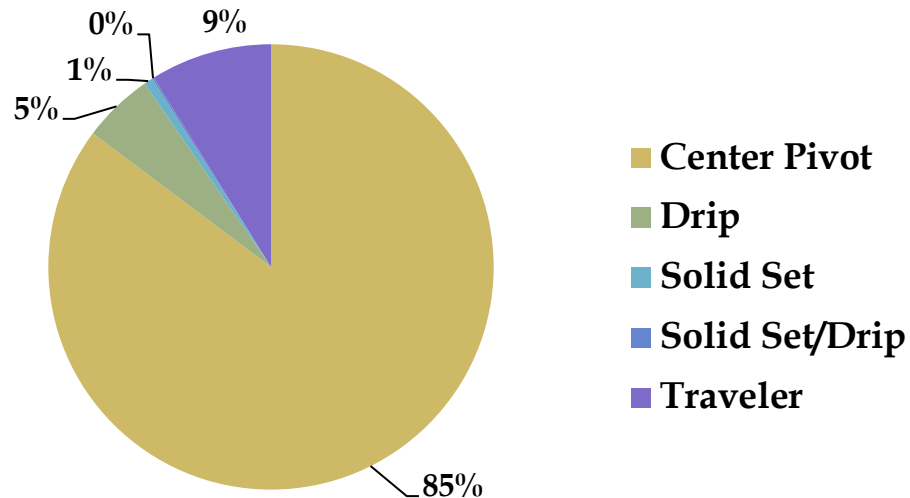
Irrigated Acres

County	2015	2020
CARROLL	297	297
CLAY	8,437	8,566
HARRIS	0	0
MUSCOGEE	0	0
QUITMAN	684	712
RANDOLPH	28,376	29,399
STEWART	4,126	4,650

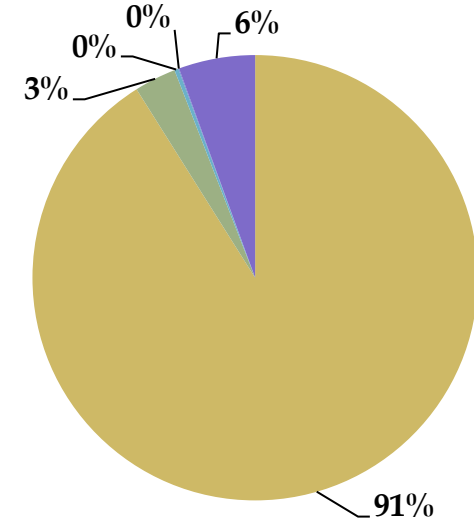
Middle Chattahoochee RWPC

	2015	2020	% Change
Total # of Fields	721	759	+ 5.3%
Total Acreage	41,893	43,624	+ 4.1%
Total GW Acreage	17,230	18,836	+ 9.3%
Total SW Acreage	24,663	24,787	+ 0.5%
Total Center Pivots	614	647	+ 5.4%
Center Pivot Acreage	37,816	39,725	+ 5.0%

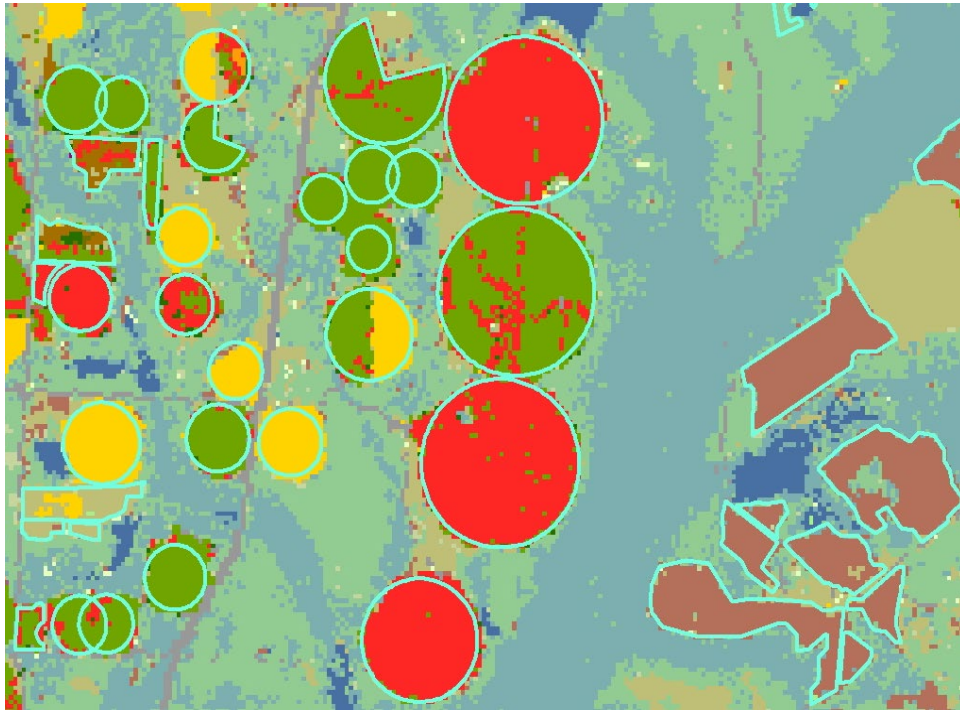
System Type - % of Systems



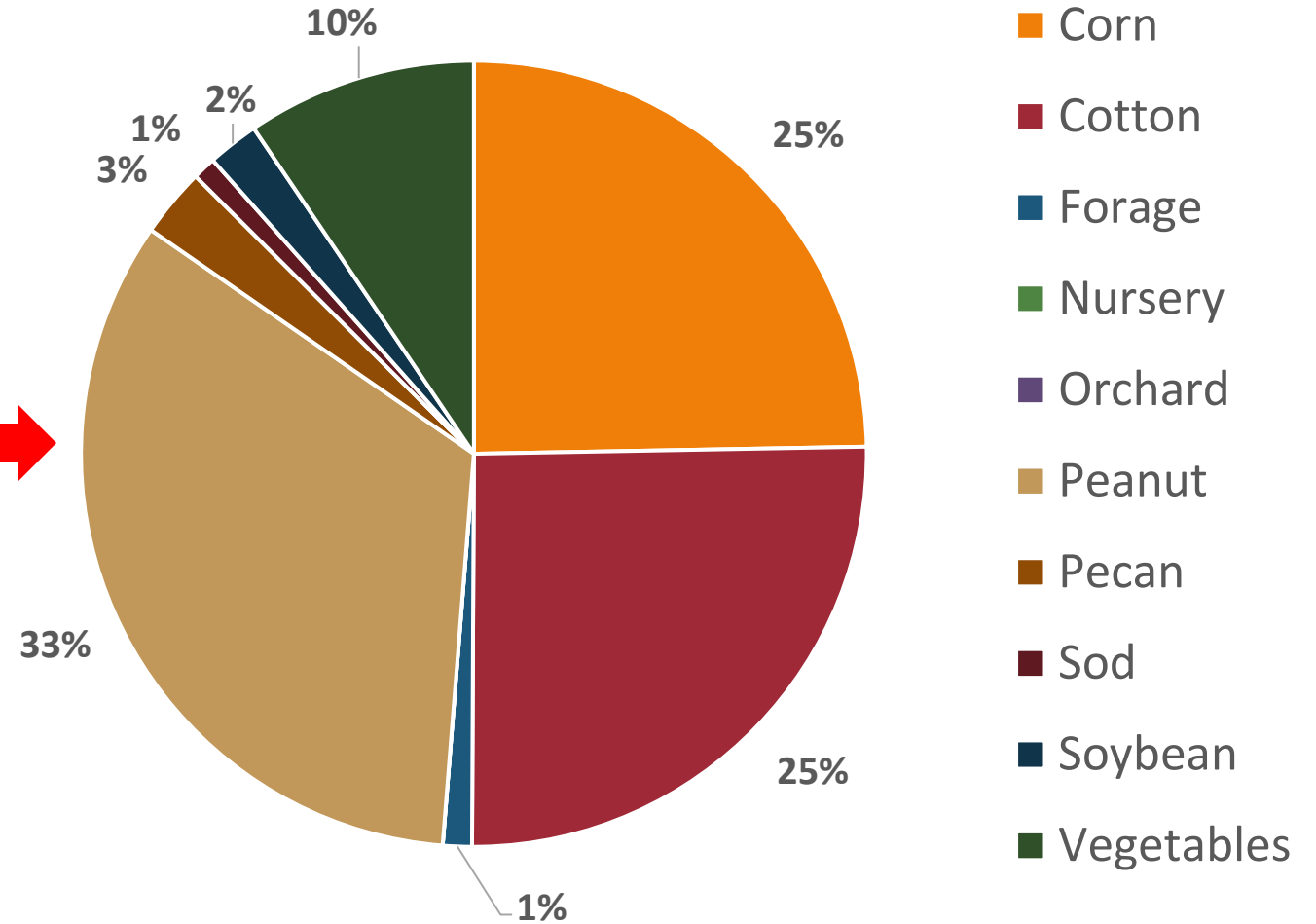
System Type - % of Acreage

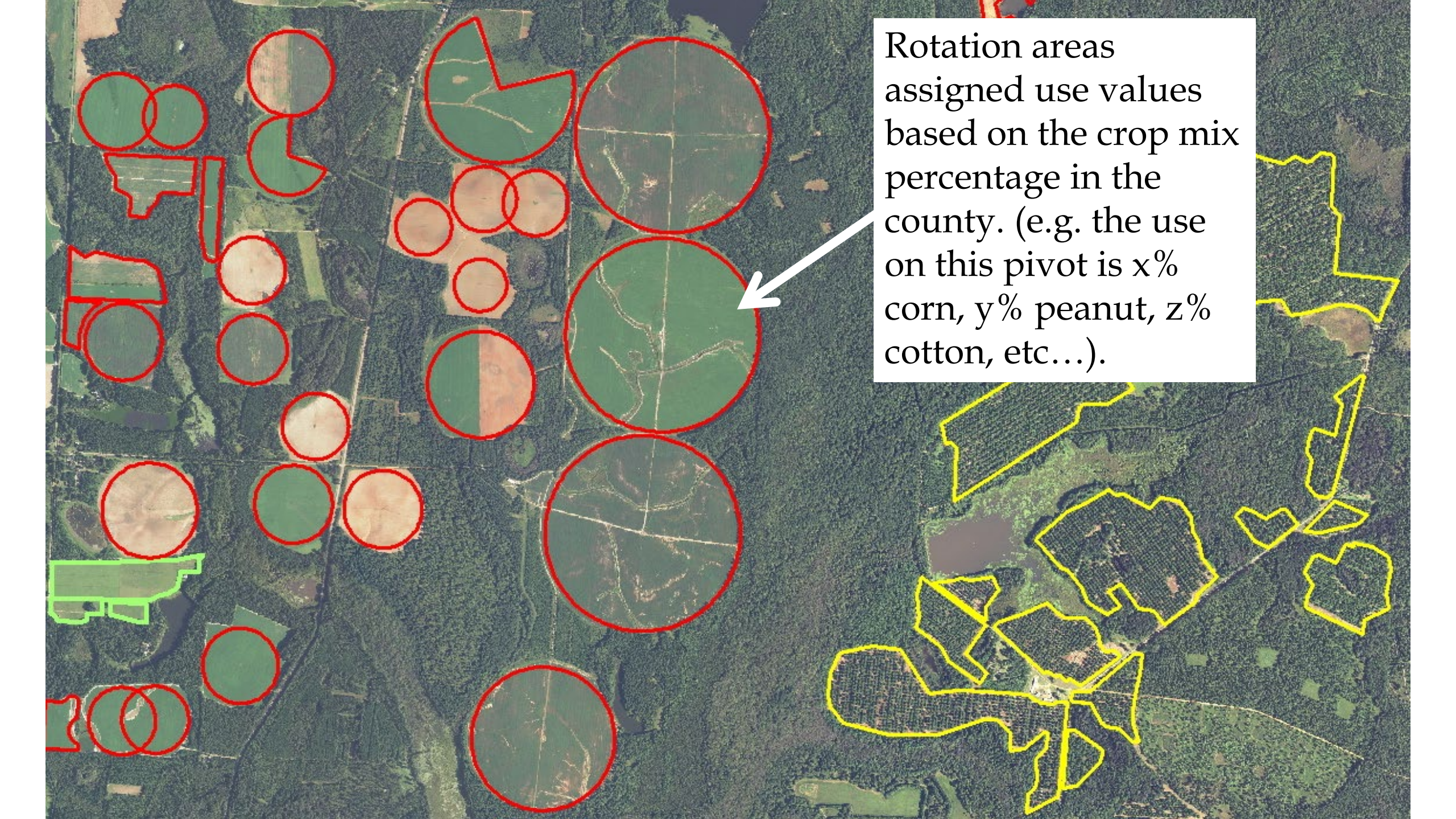


Baseline Crop Mix by RWPC



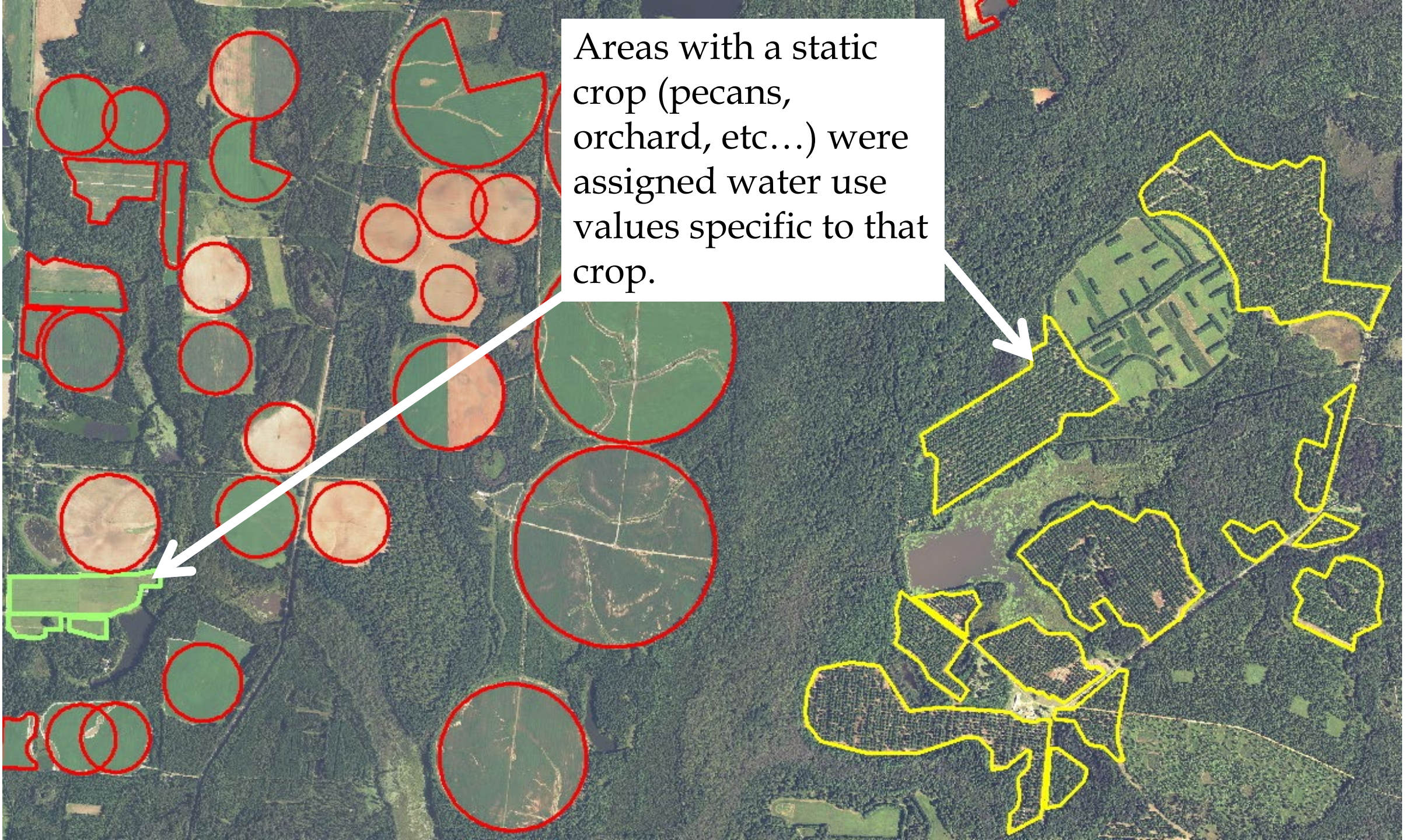
Middle Chattahoochee RWPC



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 green color, while others are empty. A white arrow points from a text box to one of the green-filled circles. In the bottom right corner, there is a cluster of fields outlined with a yellow line. The background is a mix of green fields and brown/tan areas, possibly representing different crops or land use.

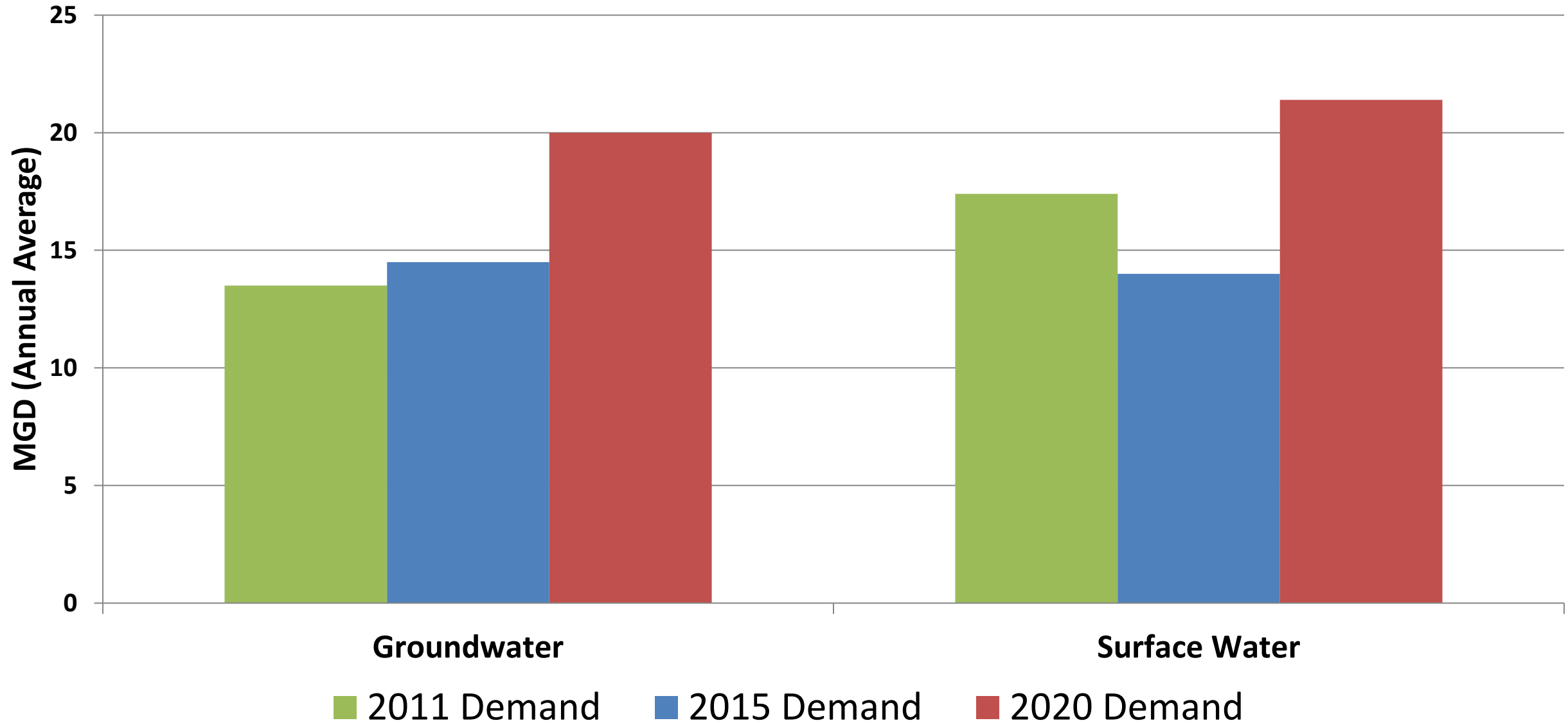
Rotation areas
assigned use values
based on the crop mix
percentage in the
county. (e.g. the use
on this pivot is x%
corn, y% peanut, z%
cotton, etc...).

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



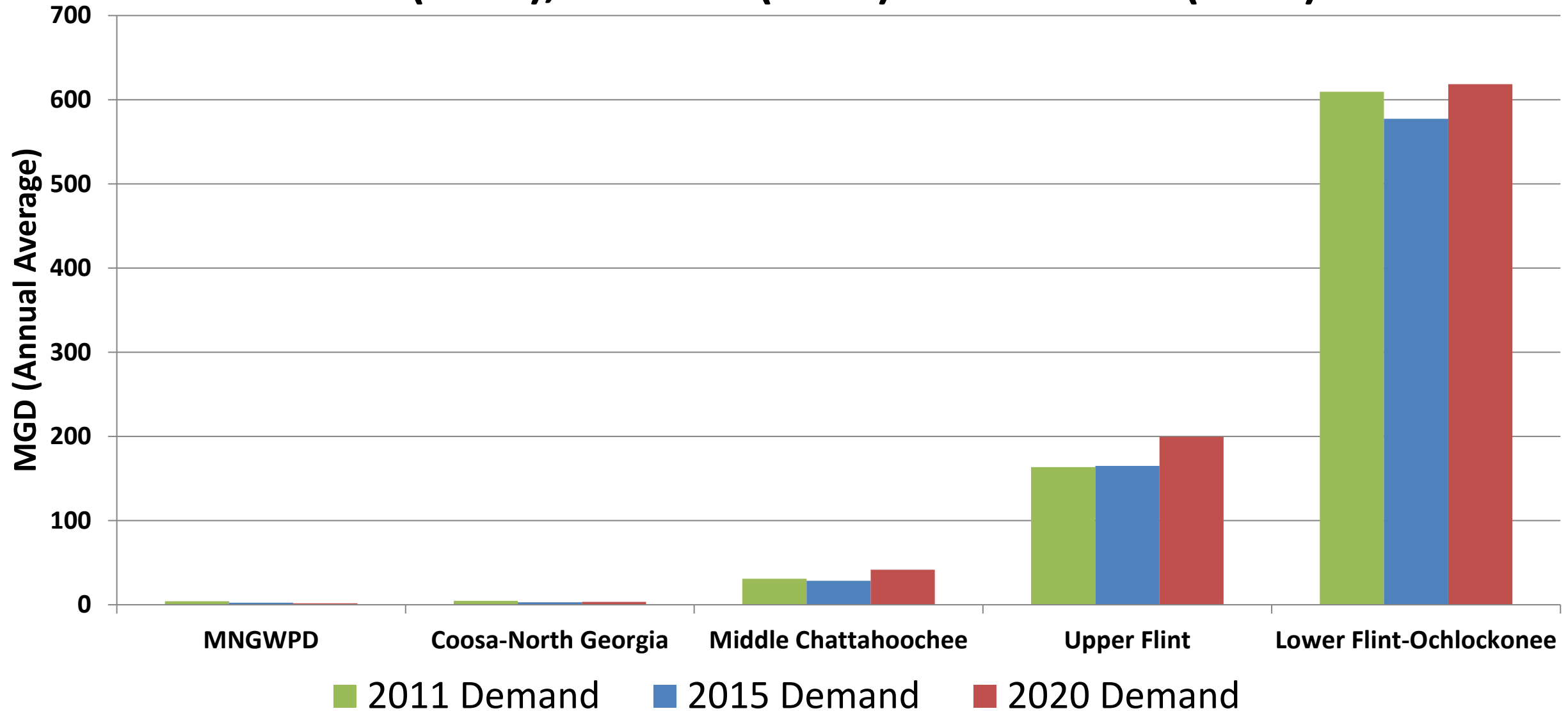
MC Council – Ag Demand – 75th Percentile

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

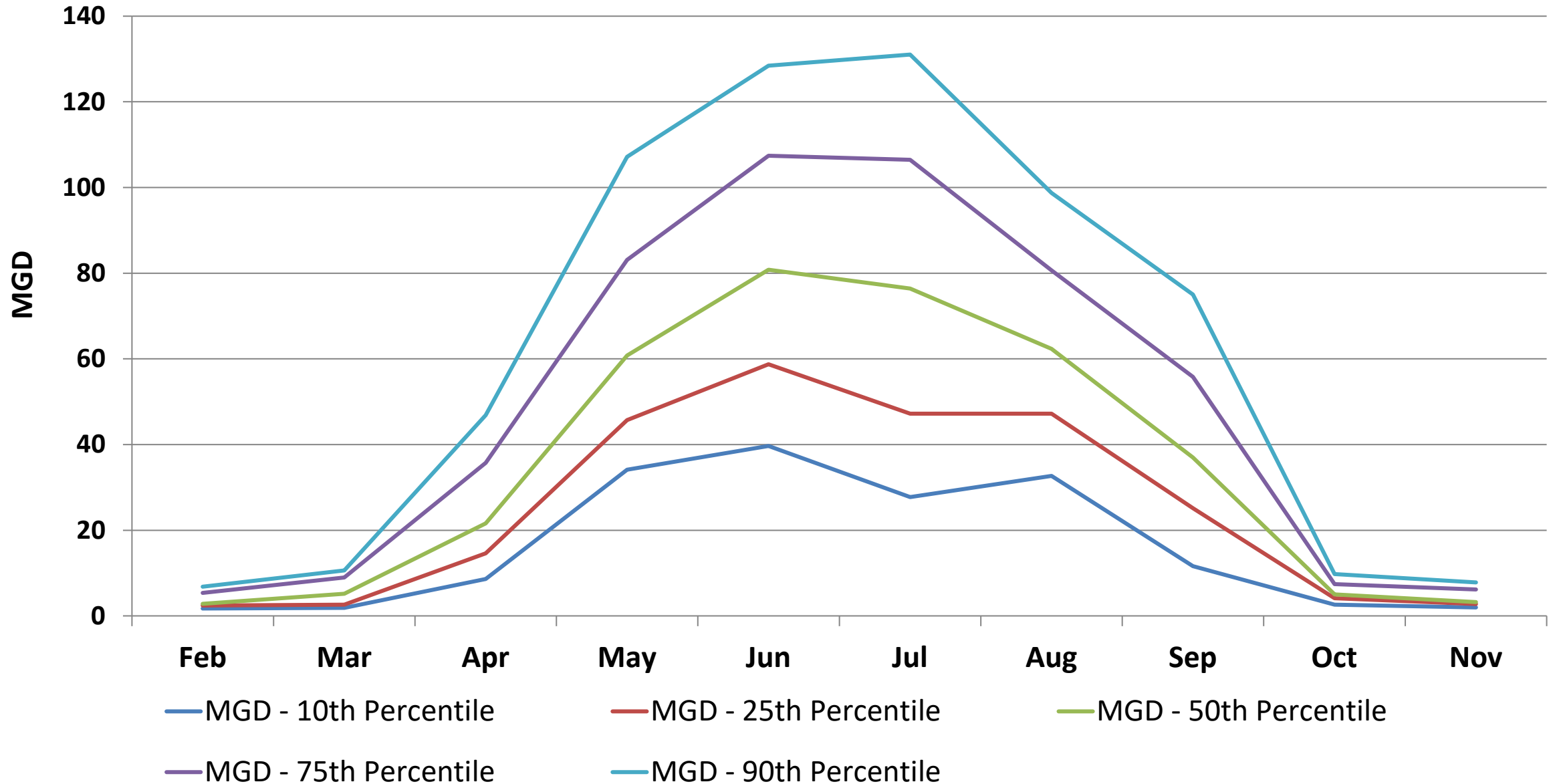


Ag Demand – 75th Percentile

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



Middle Chattahoochee RWPC - Monthly



MC – Ag Demand – Forecast – 75th Percentile

Totals (2020 & 2060)

