

# AGRICULTURAL WATER USE FORECAST

Upper Flint 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

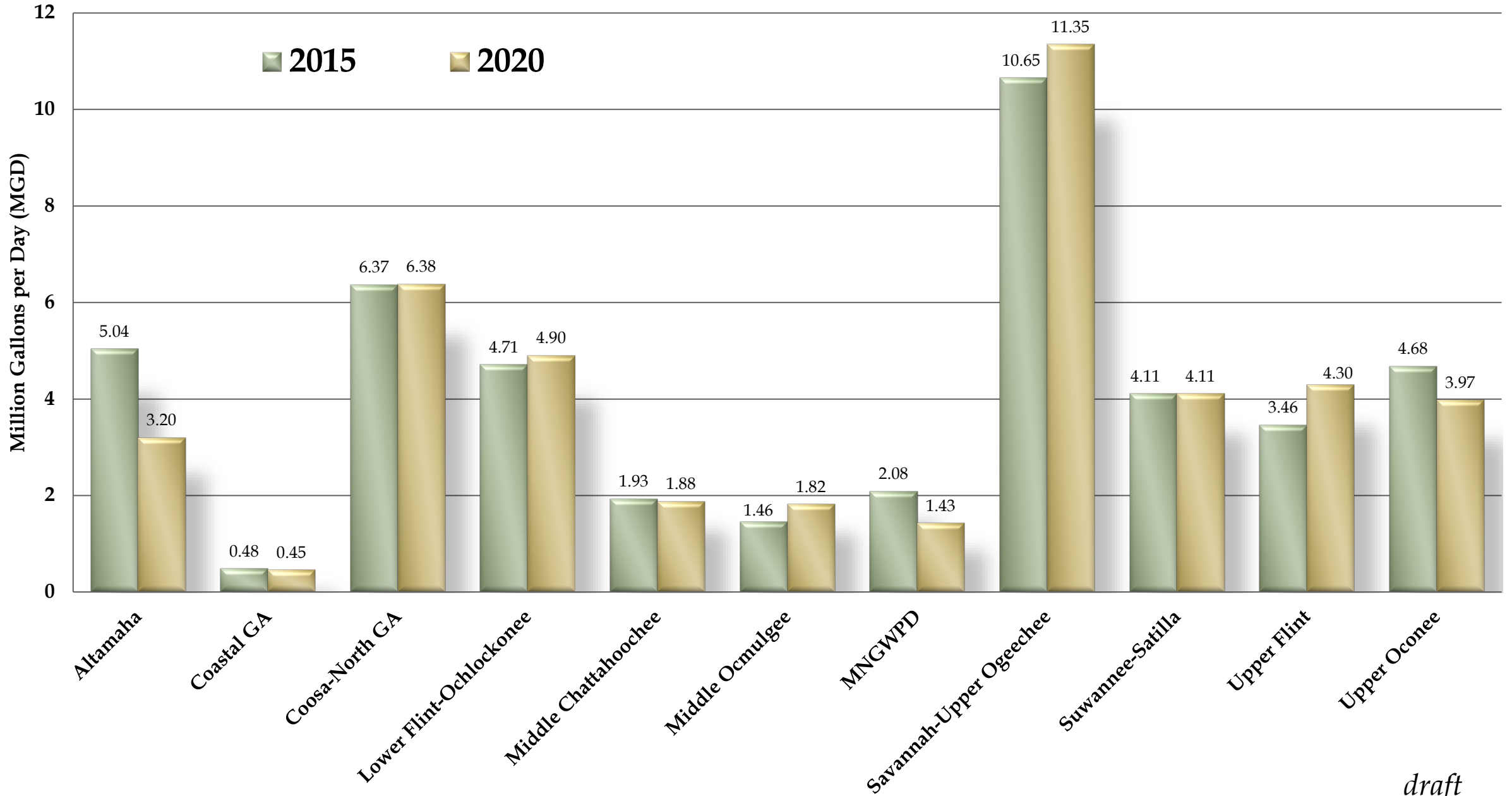


# 2020-21 Agricultural Water Demand Forecasts - Methods

- ▣ **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**

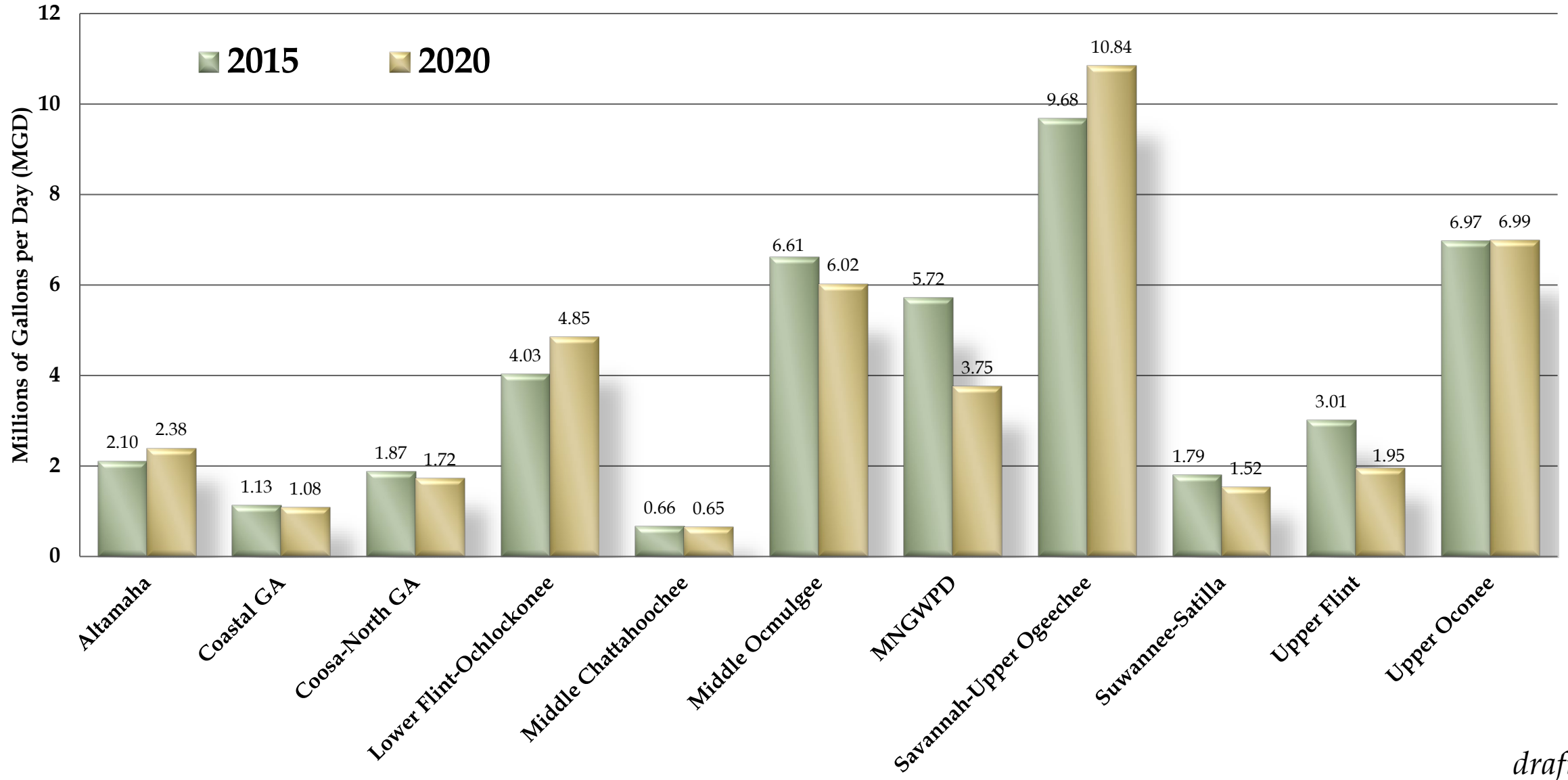
# Animal Agriculture - Daily Water Use by Water Planning Region

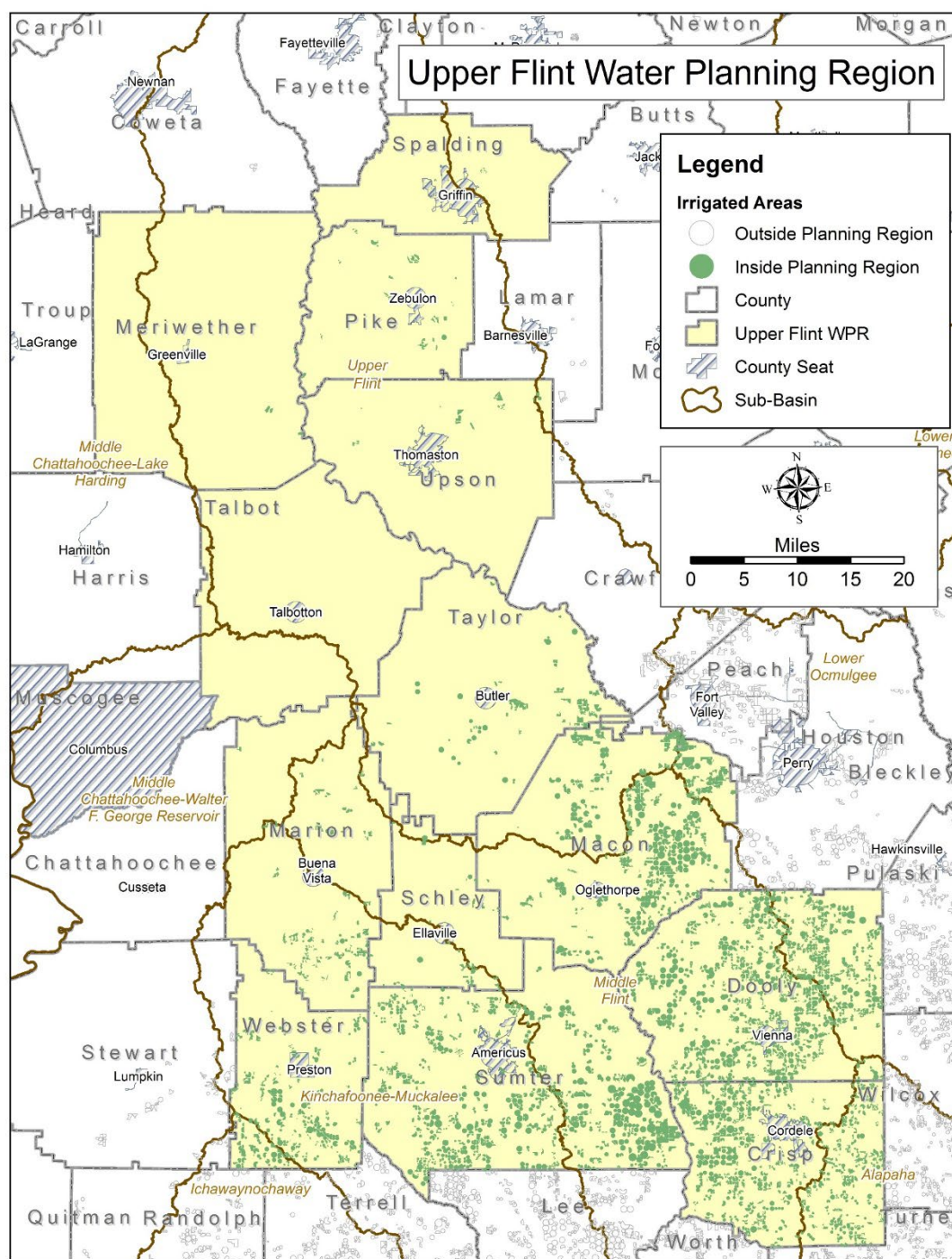
## Statewide Total: 43.8 MGD



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

**Statewide Total: 41.76 MGD - *draft***





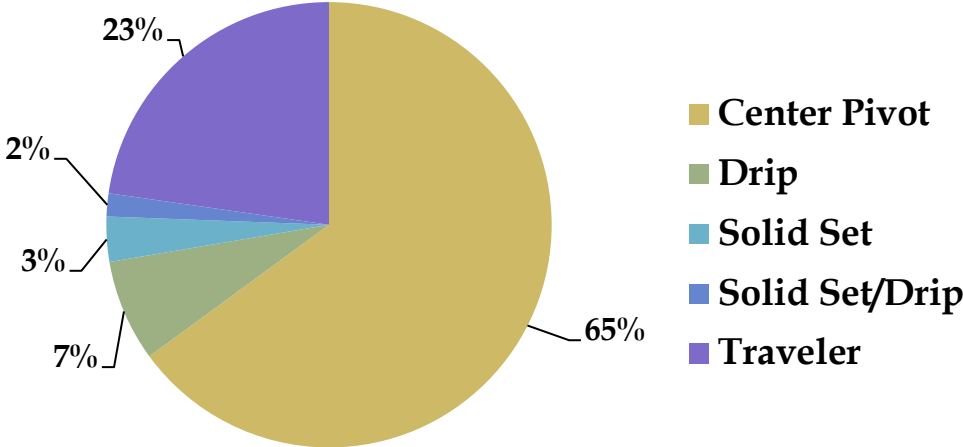
# Irrigated Acres

County	2015	2020
CRISP	32,540	33,455
DOOLY	51,542	55,053
MACON	34,728	36,578
MARION	5,474	5,354
MERIWETHER	247	247
PIKE	1,277	1,415
SCHLEY	1,747	2,222
SPALDING	210	210
SUMTER	46,991	49,242
TALBOT	14	14
TAYLOR	4,344	5,251
UPSON	955	955
WEBSTER	12,041	13,981

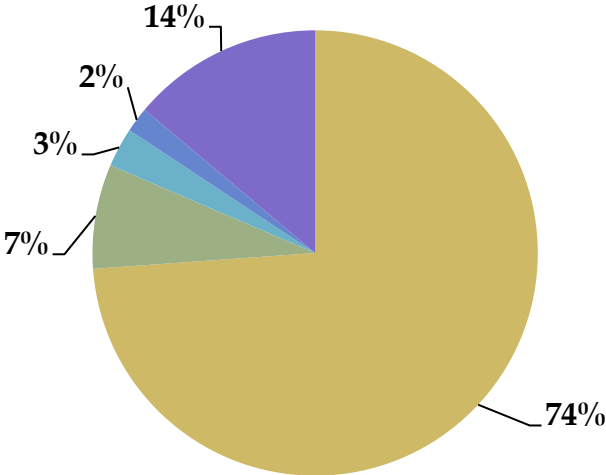
# Upper Flint RWPC

	2015	2020	% Change
Total # of Fields	3,803	4,130	+ 8.6%
Total Acreage	192,108	203,978	+ 6.2%
Total GW Acreage	131,858	145,227	+ 10.1%
Total SW Acreage	60,250	58,751	- 2.5%
Total Center Pivots	2,431	2,682	+ 10.3%
Center Pivot Acreage	140,719	150,666	+ 7.1%

System Type - % of Systems

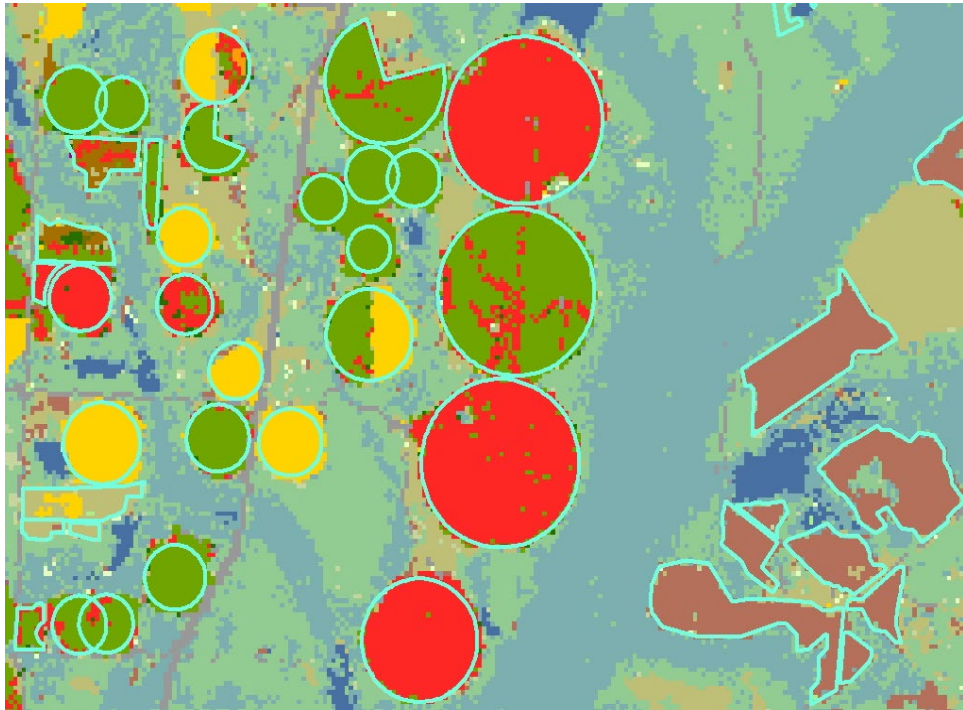


System Type - % of Acreage

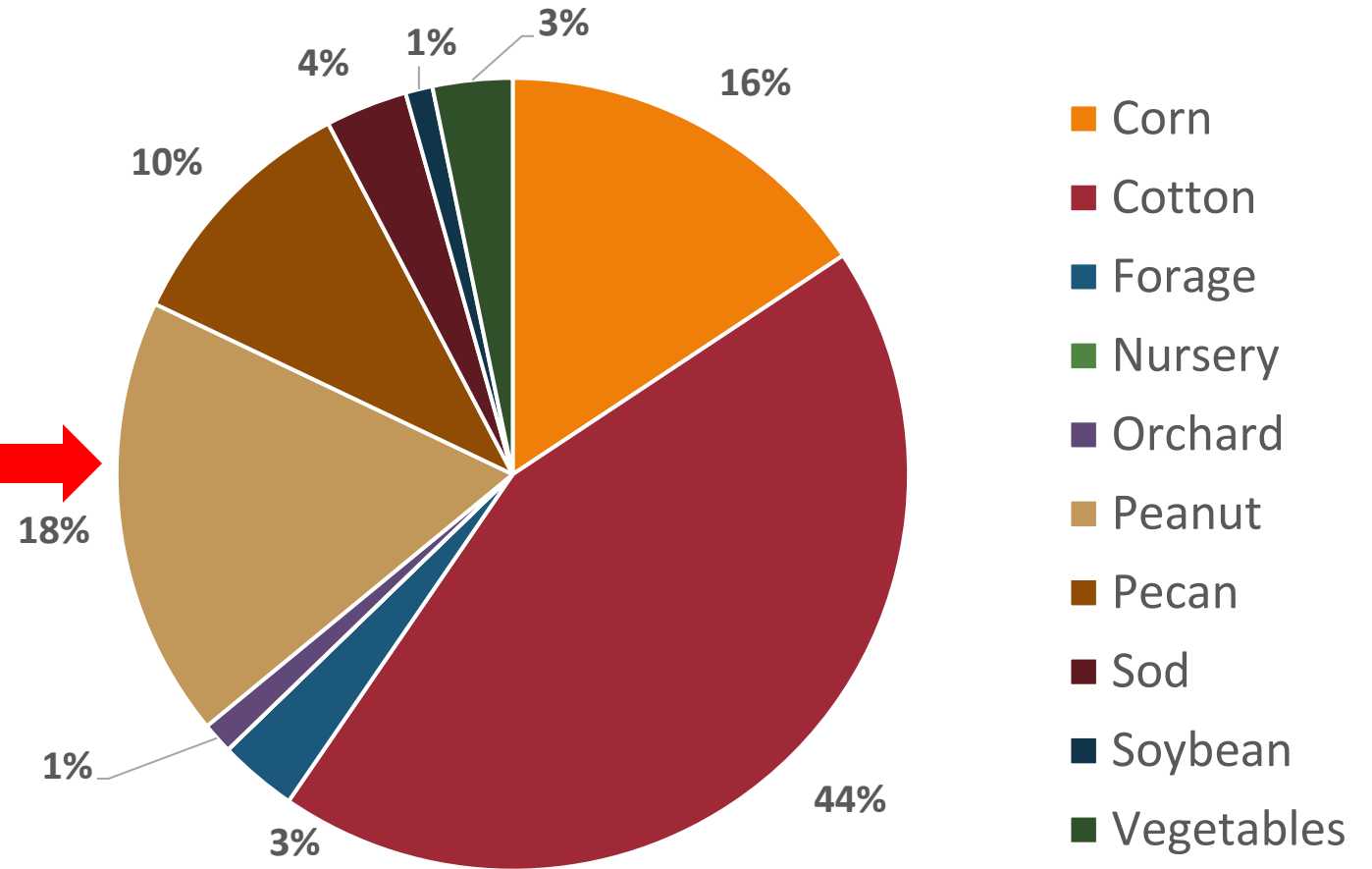




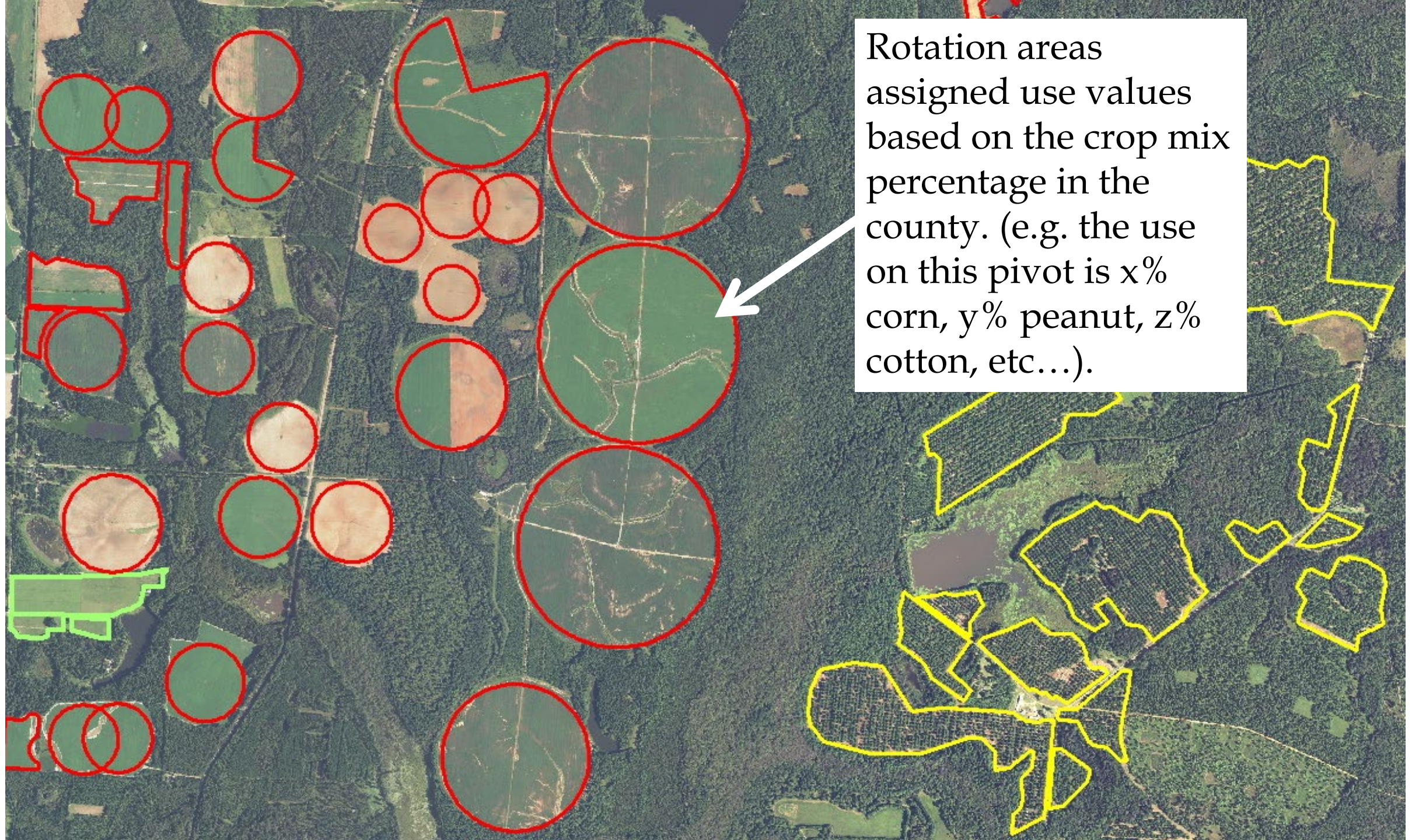
# Baseline Crop Mix by RWPC



## Upper Flint RWPC



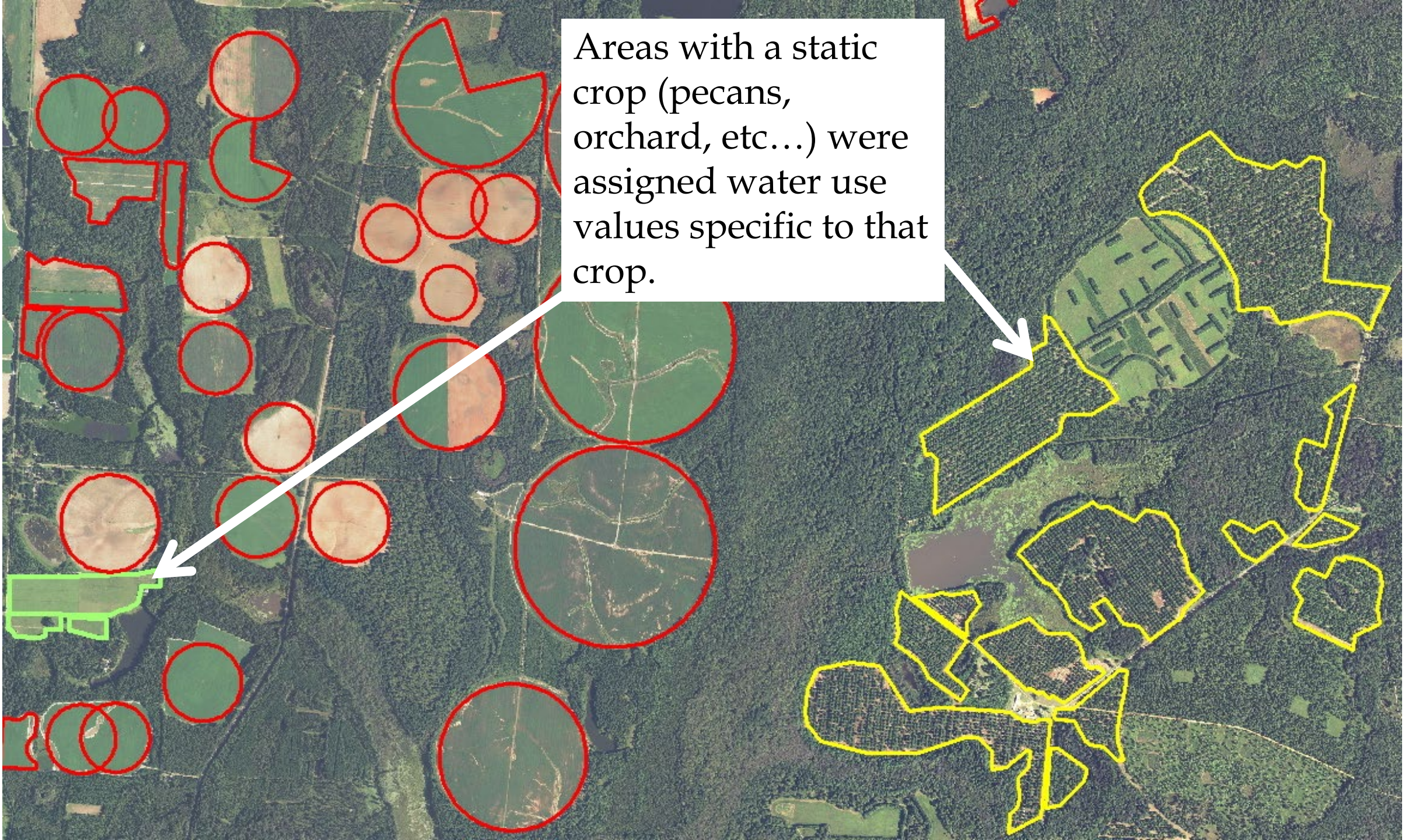




Rotation areas assigned use values based on the crop mix percentage in the county. (e.g. the use on this pivot is x% corn, y% peanut, z% cotton, etc...).



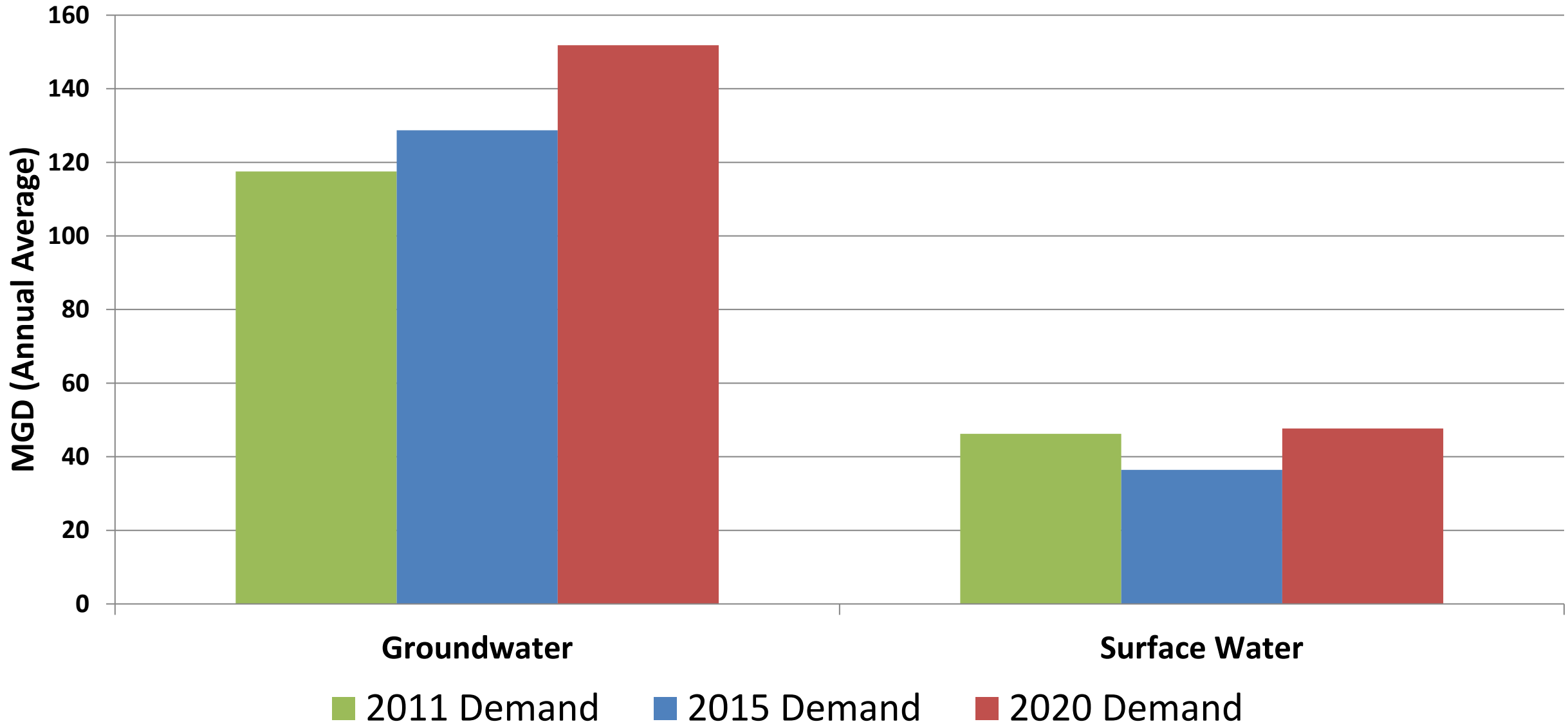
Areas with a static crop (pecans, orchard, etc...) were assigned water use values specific to that crop.





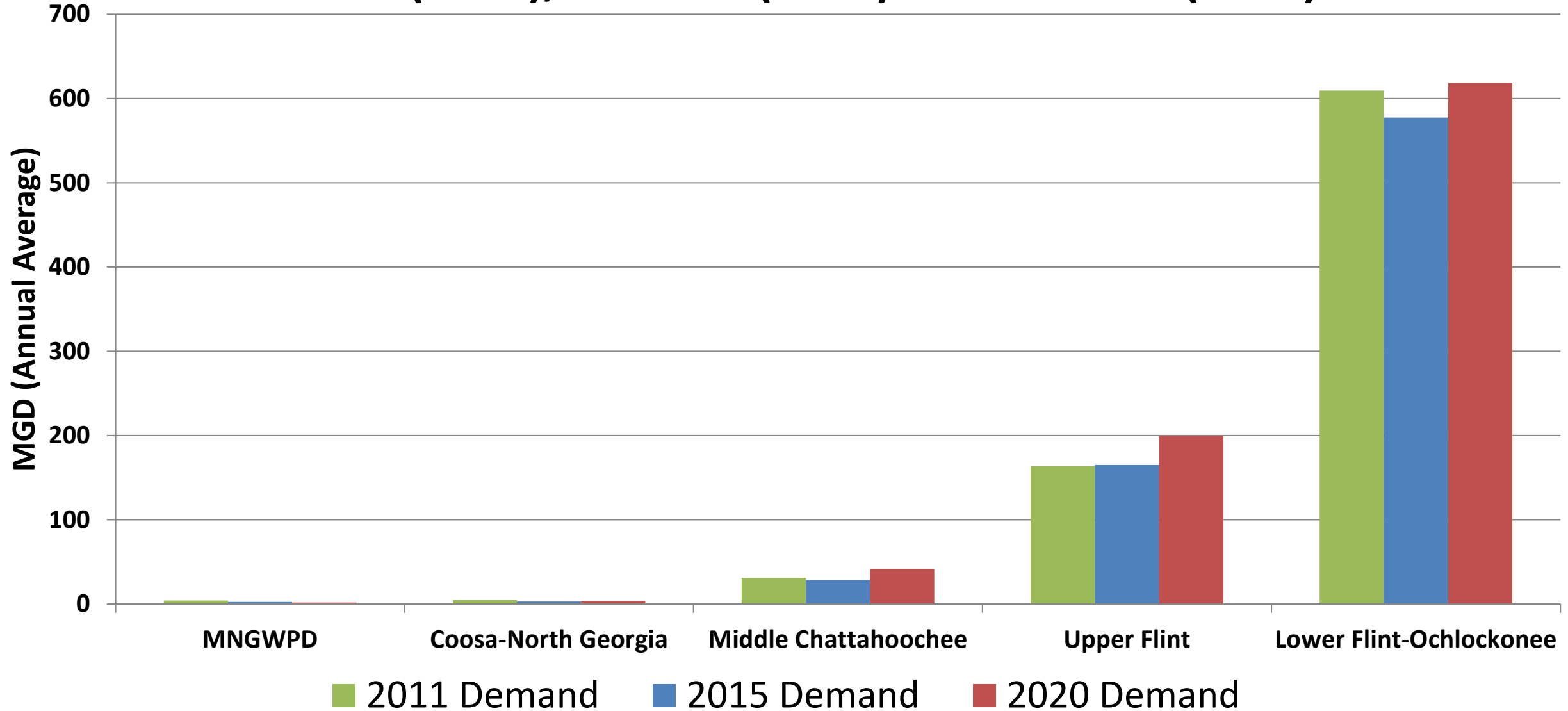
# LFO Council – Ag Demand – 75<sup>th</sup> Percentile

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

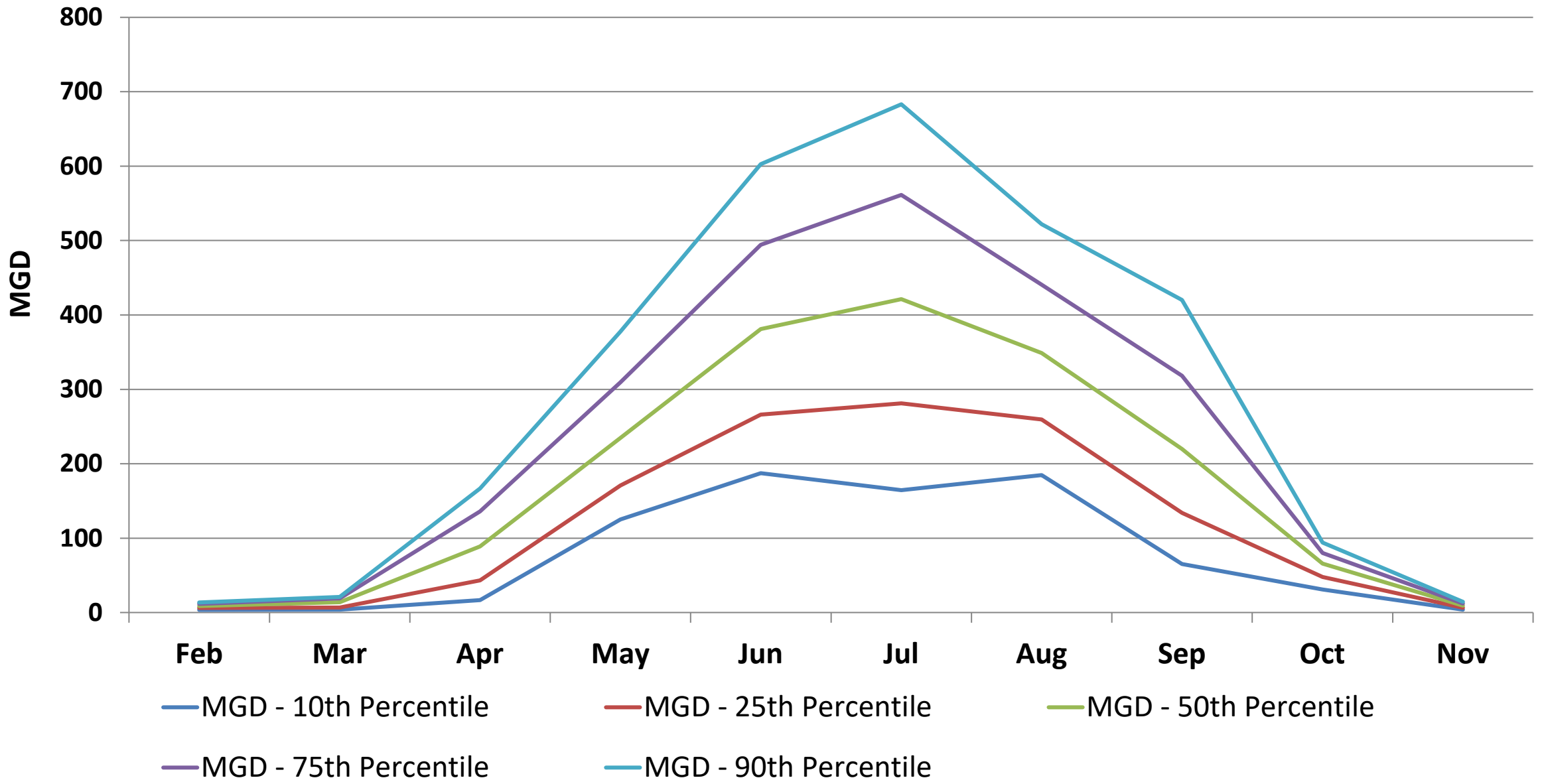


# Ag Demand – 75<sup>th</sup> Percentile

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



# Upper Flint RWPC - Monthly



# UF – Ag Demand – Forecast – 75th Percentile

## Totals (2020 & 2060)

