AG WATER USE UPDATE AND OTHER STUFF

Lower Flint-Ochlockonee Regional Water Planning Council
Albany, GA – December 10, 2019

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Albany State University
2015–16 Current Agricultural Water Use Estimates – Methods

- **Wetted Acreage Mapping**
  - Detailed mapping
  - Desktop survey
  - Review source assumptions
Baseline Crop Mix by RWPC

Coosa-North Georgia RWPC

- Corn: 48%
- Cotton: 17%
- Forage: 11%
- Nursery: 6%
- Orchard: 4%
- Peanut: 7%
- Pecan: 6%
- Sod: 6%
- Soybean: < 1%
- Vegetables: 1%

Lower Flint-Ochlockonee RWPC

- Corn: 35%
- Cotton: 18%
- Forage: 7%
- Nursery: 7%
- Orchard: < 1%
- Peanut: 27%
- Pecan: < 1%
- Sod: < 1%
- Soybean: 1%

• Wet, normal and dry year estimates by crop/soil/county (e.g. 10th – 50th – 90th percentiles) – Incorporate meter data
• Aggregated spatially to 2015 irrigated acreage
Ag Demand – 75th Percentile

2010 Demand
2015 Demand - No Throw
2015 Demand - w/Throw

MGD - Annual Average

Metro
Coosa
Chatt
Flint-Och
Lower Flint–Och. RWPC – Monthly (2015, without throw)
## Lower Flint–Ochlockonee RWPC

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change</th>
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</thead>
<tbody>
<tr>
<td>Total # of Fields</td>
<td>10,683</td>
<td>11,742</td>
<td>+ 9.9%</td>
</tr>
<tr>
<td>Total Acreage</td>
<td>613,816</td>
<td>647,145</td>
<td>+ 5.4%</td>
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<tr>
<td>Total GW Acreage</td>
<td>482,711</td>
<td>532,569</td>
<td>+ 10.3%</td>
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<tr>
<td>Total SW Acreage</td>
<td>131,105</td>
<td>114,576</td>
<td>- 12.6%</td>
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<tr>
<td>Total Center Pivots</td>
<td>6,783</td>
<td>8,823</td>
<td>+ 30.1%</td>
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<tr>
<td>Center Pivot Acreage</td>
<td>464,524</td>
<td>539,059</td>
<td>+ 16.0%</td>
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</tbody>
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### System Type - % of Systems

- **Center Pivot**: 75%
- **Drip**: 6%
- **Solid Set**: 2%
- **Solid Set/Drip**: 16%
- **Traveler**: 1%

### System Type - % of Acreage

- **Center Pivot**: 83%
- **Drip**: 3%
- **Solid Set**: 5%
- **Solid Set/Drip**: 1%
- **Traveler**: 1%
The Floridan Aquifer Collaborative Engagement for Sustainability (FACETS) project is funded by the USDA National Institute of Food and Agriculture.
PROJECT VISION

Promote economic sustainability of agriculture and silviculture in N Florida and S Georgia while protecting water quantity, quality, and habitat in the Upper Floridan Aquifer and the springs and rivers it feeds.
Project Focus Area
Portion of the Upper Floridan Aquifer that underlies the Flint and Suwannee River Basins

Unconfined Floridan Aquifer System
Confined Floridan Aquifer System
Thinly Confined Floridan Aquifer System
BMP Demonstration Sites

Lower Flint River Basin (1,747 mi²)
SIRP

Santa Fe River Basin (1,848 mi²)
SVAEC

Project Focus Area
Portion of the Upper Floridan Aquifer that underlies the Flint and Suwannee River Basins
PROJECT ACTIVITIES AND OUTPUTS

BMP Research
- Water use, quality, yield impacts of alternative irrigation & nutrient practices

Modeling Platform
- Land use/mgmt. impacts
- Water quantity and quality, farm and forest yield, net return, and regional economy

Stakeholder Engagement
- Baseline & future scenarios
- Tradeoffs
- Social Learning
- Communication tools

Extension and Outreach
- On-farm BMP demos
- In-Service Training for Extension
- Water Schools for decision makers

collaborative research and outreach
Cropping Systems & BMPs

- Initial focus: farm scale
  - corn, cotton, peanut, carrot (FL only), hay, pasture
- BMPs
  - Nutrient Management: Application rates and timing
  - Irrigation Management: Calendar, soil moisture probe, apps
  - Winter cover crops
  - Conservation tillage
  - Conversion to less intensive rotational production systems
  - Conversion to silviculture
For more information
http://Floridanwater.org

The Floridan Aquifer Collaborative Engagement for Sustainability (FACETS) project is a Coordinated Agricultural Project funded by the USDA National Institute of Food and Agriculture. The FACETS project brings scientists and stakeholders together in a participatory process to develop new knowledge needed to explore tradeoffs between the regional agricultural economy and environmental quality; understand changes needed to achieve agricultural water security and environmental protection; and to implement desired changes.