North Florida Water Challenges
July 8, 2015
Brett J. Cyphers, Executive Director
District At A Glance

- 16 counties across 11,305 square miles
- 1.37 million residents
- Seven major hydrologic basins
- Approximately 270 springs, including five 1st magnitude springs
Water Use Estimates and Projections

2010 Estimate ~357 mgd
- Public Supply: 160 mgd (45%)
- Domestic Self-Supply: 66 mgd (19%)
- Recreational: 35 mgd (10%)
- Industry/Commercial/Institutional (ICI): 47 mgd (13%)
- Agriculture: 26 mgd (7%)
- Power Generation: 23 mgd (6%)

2035 Projection ~417 mgd
- Public Supply: 194 mgd (46%)
- Domestic Self-Supply: 73 mgd (18%)
- Recreational: 35 mgd (8%)
- Industry/Commercial/Institutional (ICI): 56 mgd (13%)
- Agriculture: 29 mgd (7%)
- Power Generation: 20 mgd (5%)

Labels show millions of gallons/day, percent of total use.

Legend:
- Light blue: Public Supply
- Orange: Domestic Self-Supply
- Green: Recreational
- Purple: Industry/Commercial/Institutional (ICI)
- Light green: Agriculture
- Brown: Power Generation
Minimum Flows and Levels

Statutory Requirements s.373.042(2), F.S.

What is an MFL?  
“the limit at which further withdrawals will cause significant harm to the water resources or ecology of the area.”

Purpose:  
Support water resource planning and water use permitting to protect water resources and associated ecology.

• All:
  • **1st** magnitude springs (median flow >100 cfs / 64.6 mgd)
  • **2nd** magnitude springs on state or federal conservation land.

• Other waterbodies: importance of waters to the state or region, and existence of or potential for significant harm to water resources or ecology of the state or region.
MFL Development Process

1. Develop Priority List
2. Data Collection
3. Technical Assessments
4. Draft MFLs
5. Peer Review
6. Public Involvement
7. Recovery or Prevention Strategy?
8. Rule Adoption

We Are Here
### FY15 MFL Priority List

<table>
<thead>
<tr>
<th>Location</th>
<th>MFL Initiation</th>
<th>Estimated Technical Completion</th>
<th>Rule Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Marks River Rise (1st mag)</td>
<td>2013</td>
<td>2018</td>
<td>2019</td>
</tr>
<tr>
<td>Wakulla Springs (1st mag)</td>
<td>2013</td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td>Sally Ward Spring (2nd mag)</td>
<td>2013</td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td>Floridan Aquifer–Coastal Region II (SR, OK, WL)</td>
<td>2014</td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td>Jackson Blue Spring (1st mag)</td>
<td>2014</td>
<td>2022</td>
<td>2023</td>
</tr>
<tr>
<td>Floridan Aquifer – Coastal Bay County</td>
<td>2018</td>
<td>2023</td>
<td>2024</td>
</tr>
<tr>
<td>Econfina Creek &amp; Spring Complex (1st &amp; 2nd mag)</td>
<td>2019</td>
<td>2024</td>
<td>2025</td>
</tr>
<tr>
<td>Deer Point Lake</td>
<td>2020</td>
<td>2025</td>
<td>2026</td>
</tr>
<tr>
<td>Yellow River / Shoal River</td>
<td>2021</td>
<td>2026</td>
<td>2027</td>
</tr>
</tbody>
</table>

Apalachicola and Chipola Rivers Reservations established 2006
2015 MFL Priority Water Bodies and Schedule

- Yellow River (2026)
- Shoal River (2026)
- Econofina Creek & Springs Complex (2024)
- Jackson Blue Spring (2022)
- Deer Point Lake (2025)
- St. Marks River Rise (2018)
- Sally Ward Spring (2020)
- Wakulla Springs (2020)
- Floridan Aquifer - Coastal Region II (2020)
- Floridan Aquifer - Coastal Bay Co. (2023)

*(Completion dates of MFL technical assessments shown in parentheses)*

Legend:
- Surface Water
- Coastal Aquifers
- Springs
Springs Protection and Restoration

NWFWMD Springs Funding - $19.2 Million

Restoration Projects
- Spring Restoration Locations
- Jackson County BMPs/Claiborne Aquifer Investigation
- Wakulla County Wastewater Improvements
- Leon County Wastewater Improvements
- Cotton Landing - Holmes Creek

Legend
- County Boundary
- Springs
- Dougherty Karst Region
- Woodville Karst Region
Springs Restoration and Protection

- Jackson Blue Spring - $2.8 million
- Wakulla Spring - $14.3 million
- Williford Spring - $1.8 million
- Holmes Creek Springs - $202,000
- Devil’s Hole Spring - $145,000
Wakulla Spring

Wastewater Improvements

- Wakulla County - $12.3 million
  - Residential connections to central treatment
  - $4.6 million State + $7.7 million match
  - 8,000 lbs/year nitrogen reduction

- Leon County - $2 million
  - Residential connections to central treatment
  - $1 million State + $1 million match
  - 4,500 lbs/year nitrogen reduction

Enhanced Hydrologic Monitoring

- Nine additional surface water sites including five real-time stations
- Continuous water quality and flow meters
Jackson Blue Spring

Agricultural BMPs - $2.1 million

Agricultural Cost Share Program
• Up to 75% cost-share for equipment; 22 producers in program
• Estimated nitrogen reduction of 204,000 lb/yr through improved fertilizer application practices
• Estimated water savings up to 1.3 million gallons per day from center-pivot retrofits and other water savings measures

Mobile Irrigation Lab
• More than 730 farm evaluations and follow-up visits
• 7.8 million gallons per day water savings
Region II Water Use Estimates and Projections

2010 Estimate ~74 mgd

- 45.72, 62%
- 13.65, 19%
- 3.68, 5%
- 4.00, 5%
- 6.54, 9%

2035 Projection ~101 mgd

- 60.00, 59%
- 17.78, 18%
- 9.74, 10%
- 6.70, 7%
- 6.54, 6%

Labels show millions of gallons/day, percent of total use
Regional Water Supply Planning

Two-step Process:

1) Perform a Water Supply Assessment to estimate future water needs and evaluate the sources available to meet those needs (s.373.036, F.S.).

2) Develop a Regional Water Supply Plan for any region where existing and anticipated water sources are not adequate to meet future needs, while sustaining water resources and natural systems (s.373.709, F.S.).

The District’s Governing Board, after careful consideration of information provided, makes the final determination of the need for a Regional Water Supply Plan.
Current Planning Projects & Initiatives

• **Water Supply Planning**
  
  • Regional Water Supply Plan Update for Santa Rosa, Okaloosa, and Walton counties (Region II) - 2017
  
  • Districtwide Water Supply Assessment Update - 2018

• **Other Related Activities**
  
  • Local Government Water Supply Development Grant Projects
  
  • Annual water use reports, reuse assessment, conservation evaluation report under development
Grant Funding: 2013-2015

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Water Quality

- Water Quality
  - Grant Funding: $6,852,395
  - District Match: $1,054,078
  - Total: $7,906,473

Water Supply

- Water Supply
  - Grant Funding: $23,725,143
  - Total: $24,622,760
  - Total: $48,347,903

Total

- Total
  - Grant Funding: $30,577,538
  - Total: $25,676,838
  - Total: $56,254,376

Legend:

- Bay County Alternative Upstream Intake
- Water Supply
- Reuse
- Stormwater Improvement

Map Showing Locations of Grant Funding Projects Across Northwest Florida.
Water Supply Development Grants in Region II

• Since 2013, 13 projects for $4,574,262 in grant funding + ~ $3.4 million in match to utilities and local governments

• Project types include 9 water supply (distribution, upgrades, plans) and 4 reuse projects

• Overall, 26% of total grant funds awarded are in Region II
2013 Reuse in Region II (mgd)

<table>
<thead>
<tr>
<th>County</th>
<th>Permitted Capacity</th>
<th>Total Flow</th>
<th>Potable Water Offset*</th>
<th>Reuse Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Okaloosa</td>
<td>31.39</td>
<td>15.44</td>
<td>3.96</td>
<td>11.48</td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>11.09</td>
<td>6.37</td>
<td>3.23</td>
<td>3.14</td>
</tr>
<tr>
<td>Walton</td>
<td>13.20</td>
<td>5.01</td>
<td>2.13</td>
<td>2.87</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55.68</strong></td>
<td><strong>26.81</strong></td>
<td><strong>9.32</strong></td>
<td><strong>17.50</strong></td>
</tr>
</tbody>
</table>

*Reclaimed water that replaces potable quality water for Parts III and VII, and nursery irrigation Part II*
Gross Per Capita Water Use by County (gpcd)

*Per capita show gross per capita values; residential per capita values for utilities that report residential water use are significantly lower.
Thank You

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