2018 Lower East Coast Water Supply Plan Update

Mark Elsner, P.E., Bureau Chief
Tom Colios, Section Leader

Stakeholder Workshop #2
March 21, 2018
Today’s Agenda

- Introduction
- Plan Update – Process & Timeline
- Nursery Water Use & Operations
- Demand Estimates & Projections
  - Agriculture
  - Recreation/Landscape
- Water Supply Source Options
- Palm Beach Aggregates update for C-51 Reservoir
- Conservation
- Water Resource Protection Tools
- Next Steps
Water Supply Plan Requirements

- 20-year planning period (2040)
- Demand estimates and projections
- Resource analyses
- Issues identification
- Evaluation of water source options
- Water resource development
  - Responsibility of water management district
- Water supply development
  - Responsibility of water users
- Minimum Flows and Minimum Water Levels
  - Recovery and prevention strategies
Public Participation

- Stakeholder workshops
- One-on-one meetings and discussions with stakeholders
- Meetings with stakeholder groups
- Governing Board presentations
- Draft documents distributed/posted on website
- Comments on drafts prior to Governing Board approval
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Major Ongoing Efforts

- Finalize agricultural & utility demand estimates
- Groundwater modeling of FAS
- Draft 2018 LEC Water Supply Plan Update report preparation
2018 LEC Plan Update Schedule

Lower East Coast Water Supply Plan Update Process

- Mid-2016: Start Update Process
- Nov. 30, 2017: Kick-off Meeting
- March 21, 2018: Stakeholder Meetings
- Summer 2018: FAS Model Results
- Sept. 2018: Governing Board Approval
Questions?
Nursery Water Use & Operations

Tim Whelan
Art by Nature Garden Center

March 21, 2018
Demand Estimates & Projections for Agriculture, Recreation & Landscape

Nathan Kennedy, Ph.D.
Lead Economist – SFWMD

March 21, 2018
Water Demand Categories

1. Public Water Supply (PWS)
2. Domestic and Small Public Supply (DSS)
3. Industrial/Commercial/Institutional (ICI)
4. Power Generation (PWR)
5. Recreational/Landscape Irrigation (REC)
6. Agricultural Irrigation (AGR)
Water Demand Categories

- Public Water Supply (PWS)
- Domestic and Small Public Supply (DSS)
- Industrial/Commercial/Institutional (ICI)
- Power Generation (PWR)
- Recreational/Landscape Irrigation (REC)
- Agricultural Irrigation (AGR)
Recreational/Landscape Irrigation

- Water used for irrigation of:
  - Land managed by homeowners’ associations
  - Residential developments
  - Golf courses

- Sources:
  - Groundwater & surface water under consumptive use permits
  - Reclaimed water
REC Methodology: Acres

- Key aspects of acreage estimates & projections:
  - Acres in 2016 are from SFWMD consumptive use permits and the FDEP reuse database
  - No change in acreage projected for recreation (golf)
  - Landscape (residential and public areas) acres projected to grow at the same rate as the local population
LEC Golf Acreage
REC Acreage in the LEC

![Graph showing acreage comparison between 2016 and 2040 for different types of land use in the LEC.](image)

- **Monroe Golf**
- **Monroe Landscape**
- **Miami-Dade Golf**
- **Miami-Dade Landscape**
- **Broward Golf**
- **Broward Landscape**
- **Palm Beach Golf**
- **Palm Beach Landscape**

**Legend:**
- Monroe Golf
- Monroe Landscape
- Miami-Dade Golf
- Miami-Dade Landscape
- Broward Golf
- Broward Landscape
- Palm Beach Golf
- Palm Beach Landscape
Key aspects of demand estimates & projections

- Acres are used to calculate demands with the AFSIRS model
- Demands from reclaimed and traditional sources are disaggregated
- Growth in reclaimed forecast with 20 years of FDEP reuse data
Agriculture in the LEC

- Palm Beach, Miami-Dade, and Hendry counties rank 1\textsuperscript{st}, 2\textsuperscript{nd}, and 3\textsuperscript{rd} in Florida in terms of value of production.
- The value of agricultural commodities produced in the LEC was approximately $1.8 billion in 2012.
AGR Crop Categories

- Citrus
- Field Crops
- Fruits (Non-Citrus)
- Greenhouse or Nursery
- Hay
- Potatoes
- Sod
- Sugarcane
- Fresh Market Vegetables

Total Irrigated Acreage in the LEC
AGR Demand Projection Complexities

- Population growth
- Robust economic growth
- New development patterns
- Citrus industry in flux
- National and global market dynamics
- Grower strategies and plans are proprietary
- Everglades restoration activities
AGR Water Demands
Statutory Basis for Projections

➢ 2013 legislation [Section 570.93, F.S.] requires FDACS to develop statewide agricultural demand projections
  • Acreages – historical, current, and 20-year projection by crop
  • Demands for average and 1-in-10 year drought by crop
  • Metered data factored into estimates of historical and current demands
  • Consult with stakeholders

➢ FDACS publishes an annual FSAID report
Statutory Basis for Projections

- Section 373.709, F.S.: Agricultural demand projections in water management district’s regional water supply plans should be based on best available data
  - Must consider data for future demands provided by FDACS
  - Any deviation from data must be described
  - FDACS data are presented with adjusted data
Key Components

Irrigated Acreages

- FSAID Irrigated Lands geodatabase
- SFWMD land use

Water Demand Models

- FSAID Water Use Model
- Agricultural Field Scale Irrigation Requirements Simulation (AFSIRS) Model
Key Components

Irrigated Acreages
- FSAID Irrigated Lands geodatabase
- SFWMD land use

Water Demand Models
- FSAID Water Use Model
- Agricultural Field Scale Irrigation Requirements Simulation (AFSIRS) Model
2016 FSAID D Irrigated Areas

- Citrus
- Sugarcane
- Fresh Market Veg.
- Greenhouse/Nursery
- Sod
- Fruit (Non-Citrus)
- Other Crops
FSAID D Irrigated Acreage in the LEC
Key Components

Irrigated Acreages
- FSAID Irrigated Lands geodatabase

Water Demand Models
- FSAID Water Use Model
- Agricultural Field Scale Irrigation Requirements Simulation (AFSIRS) Model
Key Components

Irrigated Acreages

- FSAID Irrigated Lands geodatabase

Water Demand Models

- FSAID Water Use Model
- Agricultural Field Scale Irrigation Requirements Simulation (AFSIRS) Model
<table>
<thead>
<tr>
<th>AFSIRS</th>
<th>FSAID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built with data from UF field experiments</td>
<td>Built with available reported water use from all water management districts</td>
</tr>
<tr>
<td>Uses a wide range of location-specific environmental variables</td>
<td>Uses a limited set of environmental variables</td>
</tr>
<tr>
<td>Irrigation intensities do not vary in response to crop profitability</td>
<td>Irrigation intensities vary in response to crop profitability</td>
</tr>
</tbody>
</table>
AFSIRS and FSAID Comparison

![Bar chart showing AFSIRS and FSAID demands comparison for 2016 and 2040. The chart is divided into categories such as Sugarcane, Vegetable, Greenhouse/Nursery, Citrus, and Other.](image-url)
AFSIRS and FSAID Comparison

- Continued use of AFSIRS in the 2018 LEC Plan Update
  - AFSIRS model is similar to the model used to establish water use permit allocations in the region
  - AFSIRS estimates are consistent with previous planning efforts for the LEC and other planning regions
  - Unique aspects of agricultural production in the LEC are under represented with the FSAID model
## AGR Water Demands in the LEC

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>2016 (mgd)</th>
<th>2040 (mgd)</th>
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<tbody>
<tr>
<td>Citrus</td>
<td>22.3</td>
<td>23.9</td>
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<tr>
<td>Field Crops</td>
<td>0.0</td>
<td>0.2</td>
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<tr>
<td>Fruit (Non-citrus)</td>
<td>14.0</td>
<td>11.2</td>
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<tr>
<td>Greenhouse/Nursery</td>
<td>43.3</td>
<td>30.5</td>
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<tr>
<td>Hay</td>
<td>23.8</td>
<td>24.1</td>
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<tr>
<td>Potatoes</td>
<td>0.8</td>
<td>0.7</td>
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<tr>
<td>Sod</td>
<td>10.1</td>
<td>9.0</td>
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<tr>
<td>Sugarcane</td>
<td>481.2</td>
<td>466.9</td>
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<tr>
<td>Vegetables (Fresh Market)</td>
<td>50.6</td>
<td>36.2</td>
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<tr>
<td><strong>LEC Total</strong></td>
<td><strong>646.1</strong></td>
<td><strong>602.7</strong></td>
</tr>
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</table>
LEC Water Demands Summary

- **2016**
  - Agricultural Irrigation
  - Power Generation
  - Industrial/Commercial/Institutional
  - Recreational/Landscape Irrigation
  - Domestic and Small Public Supply
  - Public Water Supply

- **2040**
  - Agricultural Irrigation
  - Power Generation
  - Industrial/Commercial/Institutional
  - Recreational/Landscape Irrigation
  - Domestic and Small Public Supply
  - Public Water Supply

Demands (mgd)

- 0
- 500
- 1,000
- 1,500
- 2,000
- 2,500

- 2016
- 2040
Questions?
Water Supply Source Options

Karin Smith, P.G.
LEC Plan Manager – SFWMD

March 21, 2018
Water Source Options

- Aquifer Storage & Recovery*
- Reclaimed Water*
- Reservoirs*
- Surface Water
- Seawater*
- Fresh Groundwater
- Saline Groundwater*
- Conservation*
## Total Demand Projections

<table>
<thead>
<tr>
<th>Water Use Category</th>
<th>2016 (mgd)</th>
<th>2040 (mgd)</th>
<th>Change (mgd)</th>
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<tbody>
<tr>
<td>Public Water Supply</td>
<td>856</td>
<td>1,081</td>
<td>+225</td>
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<tr>
<td>Domestic &amp; Small Public Supply</td>
<td>15</td>
<td>19</td>
<td>+4</td>
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<td>Agricultural Irrigation</td>
<td>647</td>
<td>603</td>
<td>-43</td>
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<tr>
<td>Recreational/ Landscape Irrigation</td>
<td>149</td>
<td>174</td>
<td>+25</td>
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<tr>
<td>Industrial/ Commercial/ Institutional</td>
<td>52</td>
<td>67</td>
<td>+15</td>
</tr>
<tr>
<td>Power Generation</td>
<td>15</td>
<td>28</td>
<td>+13</td>
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<tr>
<td><strong>LEC Total</strong></td>
<td><strong>1,734</strong></td>
<td><strong>1,972</strong></td>
<td><strong>+238</strong></td>
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</table>

### 2016 Water Sources

- **Surface Water**: 38%
- **Fresh Groundwater**: 52%
- **Saline Groundwater**: 4%
- **Reclaimed Water**: 6%
# Water Source Uses

<table>
<thead>
<tr>
<th>Category</th>
<th>Surface Water</th>
<th>Fresh Groundwater</th>
<th>Saline Groundwater</th>
<th>Reclaimed Water</th>
<th>Storage</th>
<th>Conservation</th>
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<td>Public Supply</td>
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<td>Agricultural</td>
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<td>✓</td>
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<td></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Recreational/Landscape</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Industrial/Commercial/Institutional</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Power Generation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>
Water Source Options

- Aquifer Storage & Recovery*
- Reclaimed Water*
- Surface Water
- Reservoirs*
- Seawater*
- Conservation*
- Fresh Groundwater
- Saline Groundwater*
- **Fresh Groundwater**
  - Water Table aquifer
  - Biscayne aquifer
  - Lower Tamiami aquifer

- **Saline Groundwater** (chloride >250 mg/L)
  - Upper Floridan aquifer
  - Avon Park Permeable Zone

- **Seawater** (chloride >19,000 mg/L)
  - Boulder Zone
Fresh Groundwater Limitations

- **Minimum flows & minimum water levels (MFLs)**
  - Biscayne aquifer
  - LWC aquifers

- **Restricted Allocation Areas (RAAs)**
  - LEC Regional Water Availability Rule
  - LWC aquifers MDL

- **Threat of saltwater intrusion**
  - Coastal infiltration
  - Canal conduits from ocean
  - Upconing from relict seawater
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Saline Water Intrusion

- USGS monitoring network
  https://fl.water.usgs.gov/mapper
- SFWMD maps updated in 2014
- Some coastal wellfields threatened
- Impact minimization
- Sea level rise
  - 4-county compact
www.sfwmd.gov, click on Science & Data, then Scientific Publications. Look for Saltwater Interface Maps by County
Surface Water

- Lake Okeechobee
- Water Conservation Areas
- SFWMD canals
- Local canals
- Ponds and pits
- Reservoirs

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
Surface Water Limitations

- **MFLs**
  - Lake Okeechobee
  - Everglades
  - Loxahatchee River
  - Florida Bay

- **RAAs**
  - LOSA
  - LEC Regional Water Availability
  - L1, L2, & L3 Canals

- **Biscayne Bay Water Reservation**
Water Source Options

- Aquifer Storage & Recovery*
- Reclaimed Water*
- Reservoirs*
- Surface Water
- Seawater*
- Conservation*
- Fresh Groundwater
- Saline Groundwater*

Floridan Aquifer System

- Recharge area in Central Florida
- Flows naturally at land surface
- Wells are 1,000-1,600 ft deep
- Chlorides >1,000 mg/L
SFWMD FAS Monitoring

- 12 UFA and 6 APPZ active
- Data loggers with continuous recorders
- Provides data to support model calibration

Observations:
- Water quality increases
  - Jupiter
  - Tequesta
  - Palm Beach County-Western
- Spread out & rotate pumpage
- Reduce pumping volume
East Coast Floridan Model

- Indian River to Florida Keys, including recharge areas in Central Florida
- 7 layers, starting with Upper Floridan aquifer and ending at Boulder Zone
- Density-dependent using TDS as the water quality parameter
- Simulations of 2016 and 2040 pumpage
Saline Water Limitations

- Water quality degradation
- Technical considerations:
  - Cost
  - Treatment losses
  - Concentrate disposal
- Geologic variability
Aquifer Storage & Recovery

- History
  - Low recovery efficiencies
  - Mechanical problems
  - Treated water and arsenic
  - ASR wells converted or inactive

- Recent findings
  - Lightly or untreated water minimizes arsenic
  - Target storage volume should be large for higher recovery
  - Natural artesian recovery increases efficiency
CERP ASR Regional Study Results

- 130 ASR wells possible
  - 80 around Lake Okeechobee
  - 40 within the LEC

- Constraints included:
  - Public land ownership
  - Rock fracturing
  - Upconing
  - Lateral saltwater intrusion
  - Effects to existing users
  - Maintaining artesian conditions
Future Growth Opportunity

- Aquifer Storage & Recovery*
- Reclaimed Water*
- Reservoirs*
- Surface Water
- Seawater*
- Fresh Groundwater
- Saline Groundwater*
- Conservation*
Questions?
Water Reuse in the Lower East Coast

Rick Nevulis
Reuse Coordinator – SFWMD

March 21, 2018
What is Water Reuse?

Water reuse is the deliberate application of reclaimed water for a beneficial purpose.
Types of Water Reuse

- Irrigation
- Industrial applications
- Groundwater recharge
- Wetlands creation, restoration, & enhancement
- Indirect/direct potable reuse
- Other uses (e.g., toilet flushing, fire protection, construction dust control, aesthetic purposes, & recreational uses)
Water Reuse in the LEC

2016

Wastewater Flow
668 mgd

Deep injection wells* 55%
Reused 13%
Ocean outfall 32%

*Includes a small amount of shallow injection wells

Source: FDEP, 2017
How is Water Reused in the LEC?

2016

Water Reuse Flow
100 mgd

- Groundwater Recharge: 13%
- Irrigation: 51%
- Industrial, Other: 32%

Source: FDEP 2017
LEC County Contrasts

Broward, Miami-Dade, & Monroe Counties
(548 mgd)

- Disposal: 7% Reuse

Palm Beach County
(120 mgd)

- Disposal
- Irrigation
- Other

2016

51% Reuse

Source: FDEP, 2017
LEC Reuse History

LEC Reuse History (1994 - 2016)

Sources: FDEP Reuse Inventories, 1994 - 2016
2008 Ocean Outfall Legislation

ELIMINATION OF OCEAN OUTFALLS AS A PRIMARY MEANS OF DISPOSAL BY 2025

60% REUSE REQUIREMENT (by county)

- Palm Beach: 12 mgd
- Broward: 33 mgd
- Miami-Dade: 117 mgd
Current Plans to Meet 60% Reuse Requirement

- So. Central Regional - increased reuse irrigation
- Boca Raton - increased reuse irrigation
- Broward Co. North - increased reuse irrigation in N. Broward and S. Palm Beach
- Hollywood/Davie/Cooper City – increased irrigation, contract reuse?
- Miami-Dade North
- Miami-Dade Central - Reuse Feasibility Study
- Miami-Dade South - FPL Turkey Point??

Lake Okeechobee

Palm Beach

Broward

Miami-Dade

FPL Turkey Point??
Primary source: Responses from wastewater utilities

Secondary source: Changes relative to projected potable water flows, keeping in mind the ocean outfall requirements
LEC Water Reuse/Disposal Projections

2016
Wastewater Flow
668 mgd
- Deep injection wells: 55%
- Ocean outfall: 32%
- Reused: 13%

2040
Wastewater Flow
822 mgd
- Deep injection wells: 64%
- Reused: 36%
- Ocean outfall: 0%*
Projected Water Reuse in the LEC

2016

Water Reuse Flow
100 mgd

- Irrigation: 51%
- Industrial, Other: 32%
- Groundwater Recharge: 13%

2040

Water Reuse Flow
294 mgd

- Irrigation: 41%
- Industrial, Other: 56%
- Groundwater Recharge: 3%
LEC Water Reuse 2040 Projection

Assuming only ocean outfall additions
Water Reuse Summary

- Reclaimed water is expected to continue as an integral part of the water resources in the LEC Planning Area.
- Increases in water reuse will largely be driven by the requirement of the ocean outfall legislation, although some utilities will continue to expand their water reuse systems independent of the legislation.
Questions?
Palm Beach Aggregates Update on the C-51 Reservoir

Ernie Cox
Family Lands Remembered

March 21, 2018
Water Conservation

Jim Harmon, P.G.
Section Leader – SFWMD

March 21, 2018
Water conservation is any action that reduces the demand for water, including those that:

• Prevent or reduce water waste or water loss
• Improve the efficiency of necessary uses

The cheapest gallon of water is the gallon we don’t use
What We Know About Conservation

- Less expensive than new sources
- Meets gap between supply and demand
- Reduces severity of water shortages
- Reduces wasteful use
- Lowers carbon footprint
- Reduces wastewater flows
- Reduces peak demands
- Reduces, defers, or eliminates the need for capacity expansion
Water conservation typically includes:

- Incentive programs for high-efficiency devices
- Conservation rate structures
- Water audits
- Efficiency/conservation ordinances
- Public education campaigns
2018 LEC Plan Update
Finished water per capita use rate (in gallons per capita per day) in Broward, Miami-Dade, Palm Beach, and Monroe counties within the Lower East Coast Planning Area.
SFWMD’s Water Conservation Plan (2008)

- Stakeholder-driven process:
  - Local governments
  - Utilities
  - Commercial users
  - Developers
  - Environmentalists

- Contains a suite of measures:
  - Education, outreach, & marketing
  - Voluntary & incentive-based initiatives
  - Regulatory initiatives
Potential for Conservation Savings

- **Urban (by 2040)**
  - Residential estimates used Alliance for Water Efficiency Tool (SF and MF indoor and outdoor measures)
  - Non-residential (primarily PWS served) estimates used demands based on the Dept. of Revenue heated area and building type multiplied by 15% savings

<table>
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<tr>
<th>Use Sector</th>
<th>County</th>
<th>LEC Planning Area Total</th>
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<tbody>
<tr>
<td></td>
<td>Broward</td>
<td>Miami-Dade</td>
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<tr>
<td>Residential</td>
<td>23.5</td>
<td>29.7</td>
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<td>ICI</td>
<td>1.6</td>
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<tr>
<td><strong>Total</strong></td>
<td>25.1</td>
<td>32.3</td>
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</table>

in million gallons per day (mgd)
Potential for Conservation Savings

- **Agricultural (by 2040)**
  - FDACS’ Florida Statewide Agricultural Irrigation Demand (FSAID) project

<table>
<thead>
<tr>
<th>Crop</th>
<th>Broward</th>
<th>Miami-Dade</th>
<th>Monroe</th>
<th>Hendry</th>
<th>Palm Beach</th>
<th>LEC Planning Area Total</th>
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<tr>
<td>Citrus</td>
<td>N/A</td>
<td>0.09</td>
<td>N/A</td>
<td>2.88</td>
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<td>N/A</td>
<td>0.02</td>
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<td>Fruit (Non-citrus)</td>
<td>0.00</td>
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<td>N/A</td>
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<td>Greenhouse or Nursery</td>
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<td>N/A</td>
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<td>Hay</td>
<td>N/A</td>
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<td>Potatoes</td>
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<td>N/A</td>
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<td>Sugarcane</td>
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<td>N/A</td>
<td>5.11</td>
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<td>5.11</td>
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<td>Vegetables (Fresh Market)</td>
<td>0.20</td>
<td>3.23</td>
<td>N/A</td>
<td>5.27</td>
<td>0.00</td>
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<td><strong>Total</strong></td>
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<td><strong>7.69</strong></td>
<td><strong>0.00</strong></td>
<td><strong>15.54</strong></td>
<td><strong>0.13</strong></td>
<td><strong>23.74</strong></td>
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</table>

in million gallons per day (mgd)
Conservation Strategies

- Public Water Supply
  - Conservation plan, rate structure, audit & leak detection

- Domestic & Small Public Supply
  - Fixture replacement, leaks, water-efficient appliances

- Industrial/Commercial/Institutional
  - Indoor fixtures & equipment, HVAC, audits

- Agricultural Irrigation
  - FDACS BMPs, efficient irrigation systems, weather-based controllers

- Power Generation
  - Indoor fixtures & equipment

- Recreational/Landscape Irrigation
  - Efficient irrigation systems, weather-based controllers, audits
Conservation Programs

- **Education, Outreach, and Marketing**
  - School programs
  - Media campaigns
  - Informative billing
  - Training staff & associates
  - Florida-Friendly Landscaping™ demonstration gardens
  - Workshops & exhibits
  - Landscape design & irrigation education for residents & industry professionals
  - Irrigation water audits for residential, commercial, & agricultural users
  - Indoor water use audits for residential & commercial users
  - Retrofit & rebate programs for replacing inefficient water-using devices with efficient ones
Conservation Programs

- Cost share funding programs
  - SFWMD Cooperative Funding Program

- Certification & recognition programs
  - Florida Green Building Coalition
  - Florida Green Lodging Program
  - Leadership in Energy and Environmental Design (LEED)
  - Green Globes
  - WaterCHAMP
  - WaterStar℠
  - Florida-Friendly Landscaping™ Program

- Agricultural mobile irrigation labs (MILs)

- USDA Environmental Quality Incentives Program (EQIP)
Regulatory Initiatives

- Local ordinances for water efficiency in construction and landscape design
- Year Round Irrigation Rule [40E-24]
## Summary of Water Conservation

<table>
<thead>
<tr>
<th>Use Sector</th>
<th>Broward</th>
<th>Miami-Dade</th>
<th>Monroe</th>
<th>Hendry</th>
<th>Palm Beach</th>
<th>Total by Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>25.1</td>
<td>32.3</td>
<td>1.5</td>
<td>NA</td>
<td>20.3</td>
<td>79.2</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.4</td>
<td>7.7</td>
<td>0.0</td>
<td>15.5</td>
<td>0.1</td>
<td>23.7</td>
</tr>
<tr>
<td>Total</td>
<td>25.5</td>
<td>40.0</td>
<td>1.5</td>
<td>15.5</td>
<td>20.4</td>
<td>102.9</td>
</tr>
</tbody>
</table>

in million gallons per day (mgd)
How the SFWMD Can Help

- Technical assistance & advice
  - Conservation hardware, technology, & program design
  - PWS goal-based conservation plans
  - Draft local ordinances on conservation, irrigation, or landscape for technical accuracy & standards

- SFWMD’s conservation webpage ([www.savewaterfl.com](http://www.savewaterfl.com)) provides comprehensive information for major user groups

- SFWMD’s *Self-Assessment Guide for Commercial and Institutional Users*
Questions?

“When the well runs dry, we know the worth of water”

James Harmon, P.G.
Implementation Section Leader
Water Supply Bureau
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Water Resource Protection Tools

Toni Edwards
Senior Scientist – SFWMD

March 21, 2018
Next Steps

Karin Smith, P.G.
LEC Plan Manager – SFWMD

March 21, 2018
Next Steps

- Utility coordination
- Agricultural coordination
- Floridan aquifer model runs
Next Steps

- Next stakeholder meeting: **Summer 2018**
  - Water supply and resource development projects
  - Model overview
  - Draft plan
- Model results meeting: **Summer 2018**
Need Water Supply Plan Information?

- Plan information can be found at [www.sfwmd.gov/lecplan](http://www.sfwmd.gov/lecplan)
- Workshop announcements sent via email
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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