Central Florida Water Initiative

Water for Tomorrow

Water Conservation Application Workshop
Osceola Heritage Park UF/IFAS Extension Office
March 3, 2020

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South Florida Water Management District
Central Florida Water Initiative

- Collaborative process with FDEP, SJRWMD, SFWMD, SWFWMD, FDACS, regional public water supply utilities, and other stakeholders
- CFWI Planning Area includes Orange, Osceola, Polk, Seminole, and southern Lake counties
Water Demands in the CFWI Planning Area

• Traditional groundwater resources alone cannot meet future water demands without adverse effects to local water resources
• Demand for water is projected to increase from 667 mgd in 2015 to 908 mgd in 2040 – 36% increase

* mgd = million gallons per day
## Water Conservation Projections

<table>
<thead>
<tr>
<th>Category</th>
<th>Projected 2040 Water Demand (mgd)</th>
<th>Projected 2040 Water Conservation Savings (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Supply</td>
<td>592.28</td>
<td>41.50 – 44.16</td>
</tr>
<tr>
<td>Domestic and Small Public Supply</td>
<td>24.59</td>
<td>0.86</td>
</tr>
<tr>
<td>Agriculture</td>
<td>163.49</td>
<td>4.19</td>
</tr>
<tr>
<td>Landscape/Recreational</td>
<td>46.96</td>
<td>2.22</td>
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<tr>
<td>Commercial/Industrial/Institutional</td>
<td>69.00</td>
<td>1.55 – 4.40</td>
</tr>
<tr>
<td>Power Generation</td>
<td>11.27</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>907.59</strong></td>
<td><strong>50.32 – 55.83</strong></td>
</tr>
</tbody>
</table>

* mgd = million gallons per day
Alternative Water Supplies Program – CFWI Water Conservation Projects

Governor/Florida Legislature $$$

Florida Department of Environmental Protection $$$

CFWI Water Management Districts

Public or Private Water Users
Entities Eligible to Apply

- Public or private water providers
- Local governments
- Agricultural and nursery producers
- Industrial, commercial, or institutional users
- Large landscape irrigation users (e.g., parks, golf courses, cemeteries)
- Non-profit organizations
- Homeowners’ or condominium associations
Water Sources

• Potable water from a utility
• Well water
• Surface water body or natural waterway
• Water from a canal or stormwater catchment area (e.g., a man-made lake within a housing development, agricultural area, golf course, etc.)
• Reclaimed water
General Project Requirements

- Applicants must be able to fully fund the project as this is a reimbursement program.
- Total project costs must be at least $15,000 for water supply utilities, municipalities, or government agencies.
- Verification of hardware installation.
- Applicants are responsible for proper disposal of all inefficient hardware/technology.
Allowable Costs

• Costs related to project implementation
  – Purchase and installation of hardware and/or technology
  – Some in-kind services
    • Project administration (may include some staff time hours)
    • Advertising

• Eligible expenditures incurred between July 1, 2020 and November 30, 2022
Typical Project Types

• Indoor fixture & appliance replacements/retrofits
  – Components must be WaterSense or ENERGY STAR labeled, as applicable

• Irrigation water use efficiency improvements
  – Smart controllers
  – Rain or soil moisture sensors
  – Spray bodies upgrades
  – Weather stations
  – Agricultural irrigation system conversions
  – Components must be WaterSense labeled, if applicable
Typical Project Types (cont.)

- Florida Water Star rebates
- Utility flushing reduction infrastructure
- Advanced meter analytics and customer portals
  - Must be directly related to water conservation savings
- Other hardware and/or technology-based retrofits or applications that increase water efficiency
  - Cooling tower/HVAC water use efficiency
  - Industrial processes
Plumbing-Related Project Limitations (Non-Allowable)

- Waterless urinals
- Toilet retrofit kits to replace internal tank components
- Toilet retrofits for \( \geq 3.5 \text{ gallons/flush} \) with 1.6 gallons/flush (must be \( \leq 1.28 \text{ gallons/flush} \))
- Dual-flush valves for commercial buildings
- Fixture “give-away” programs
Specific Plumbing Project Requirements

- Toilet china (bowl) and flushometer (flush valve) gallons/flush ratings must be compatible.
- All toilet retrofit projects involving tank toilets must include an educational component addressing leak detection and proper flapper replacement selection and installation.
Specific Irrigation Project Requirements

• Components must be WaterSense labeled, if applicable (e.g., non-agricultural irrigation controllers, sensors, and spray sprinkler bodies)

• Components should be installed, calibrated, and inspected by a trained professional (see guidelines)
Specific Irrigation Project Requirements (cont.)

• For projects involving soil moisture sensor-based controllers, the sensor(s) must be installed according to the manufacturer’s recommendations.

• For agricultural irrigation conversions and retrofits, a mobile irrigation lab or equivalent irrigation audit is encouraged to establish potential water savings and identify additional conservation measures.
Application Considerations

- Quantity of water saved
- Cost-effectiveness of project in dollars per 1,000 gallons ($/kgal) of water saved
- Quality and detail of project planning
- Project readiness
- Environmental/community benefits
- Water source
- Past performance
Application Eligibility

- Project must be within the CFWI Planning Area
- Adhere to the application instructions
- Adhere to applicable laws and regulations
- Comply with allowable funding costs
Application Eligibility

• Water savings assumptions and calculations **MUST** be shown in the space provided in the application

• Guidance for some project types are shown in the Districts’ cost-effectiveness calculator

5. State the estimated water savings resulting from this Project and show how this estimate was calculated. Express estimated water savings in million gallons per year (mgy). Be as specific as your available data allow. Base your calculations on the minimum number of dwelling units affected (for residential projects) or devices installed (for non-residential projects). You must state any assumptions included in your calculations. If you answered “Yes” to question 4, you must use the minimum number of dwelling units or facilities entered into 4c.

See attachments. Current water use came from the Blaney Criddle Analysis
18.42 inches for a 3-month vegetable crop. Coefficient Multiplier for Seepage irrigation is 2.00 and for Linear is 1.33 taken from SFWMD water use permit handbook page 29 (page 39 in the pdf).

18.42 inches x 285 acres x 2.00 x 0.02715 MG/A = 285 MGY. Linear = 18.42 x 285 x 1.33 x 0.02715 = 189.6 MGY. Saves 95.4 MGY. 95.4 / 200 = 33.47%.

The system can irrigate 2 crops per year which will be 570 acres once it is installed, but for this application only one 285-acre celery crop is calculated.
Application Eligibility

- All applicants **MUST** include the Districts’ cost-effectiveness calculator
- This creates one metric applicable to all project types
- District staff can provide guidance on how to properly use the calculator
Other Specifications May Apply

- The applicant is ultimately responsible to design and present its project in accordance with all standards and specifications as they appear in the program guidelines document.

- Do **NOT** consider this presentation as a full or complete guide to the program or application standards, requirements, or specifications.
How to Apply & Key Dates

- All applications must be submitted via the SFWMD website: www.sfwmd.gov/doing-business-with-us/coop-funding
- Application released February 17, 2020
- Applications must be uploaded by 5:00 PM on March 27, 2020
- Eligible project expenditures must be incurred between July 1, 2020 and November 30, 2022
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