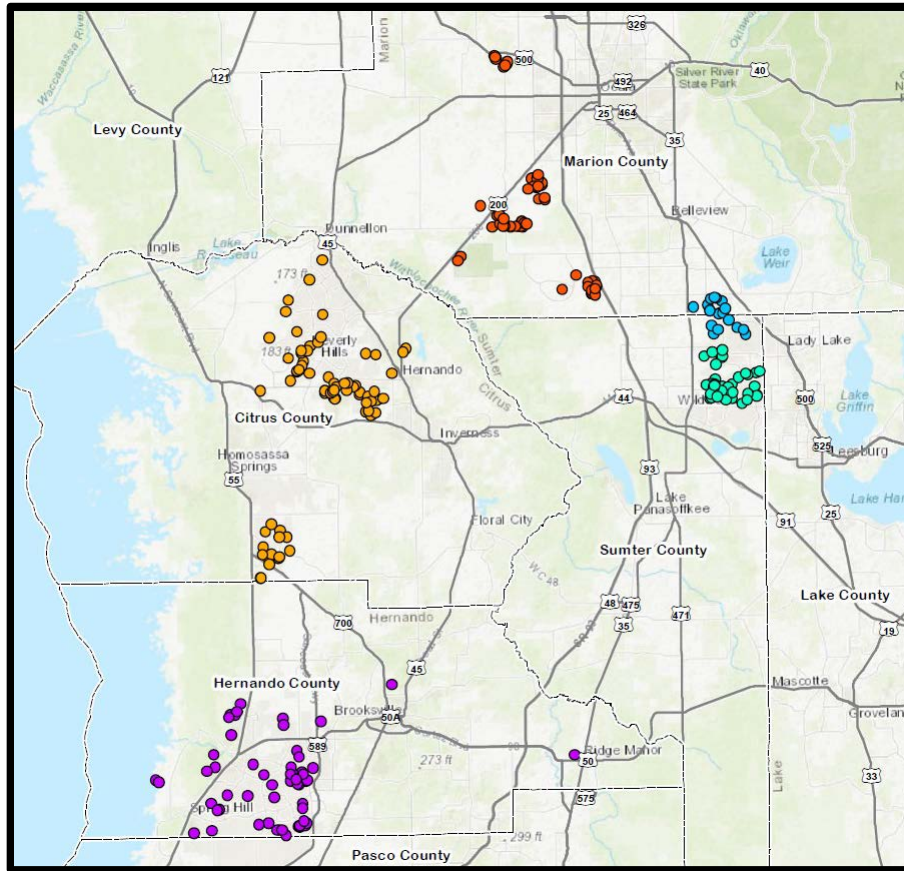


Regional Irrigation System Evaluation Program Phase V Final Report



A Cooperative Funding Initiative (Q040)

November 10, 2021

Prepared by

Withlacoochee Regional Water Supply Authority



WITHLACOOCHEE REGIONAL
WATER SUPPLY AUTHORITY



Phase 5 Irrigation System Evaluation Program

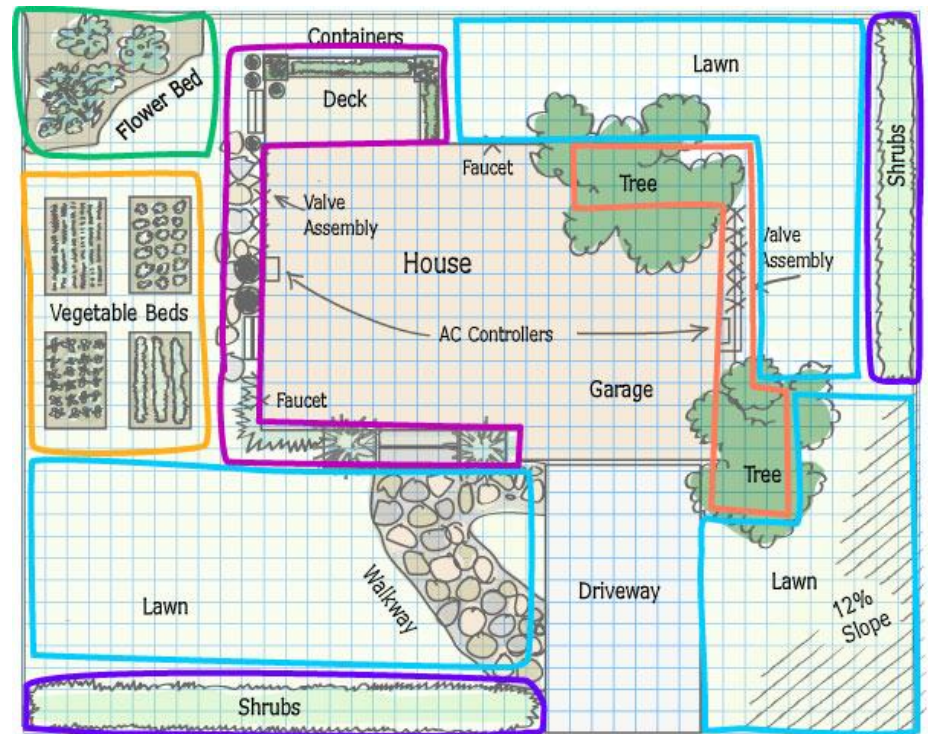
* Participating Utilities



Irrigation System Evaluation Program Goals

Goal: < 150 gallons per capita per day

- Target Single family residential customers
- water use > 20,000 gallons per month
- Voluntary participation
- FREE Irrigation system audits
- Efficiency recommendations



Core and Enhanced Evaluations

Core Evaluations

- In-depth inspection
- Zone efficiency
- Florida-Friendly Landscaping™ practices
- Timing and run cycles
- Rain sensor
- Written report

Core Evaluation

- * Check Water Meter



Leak Detector



Zone Analysis



Calibrate irrigation system runtimes to deliver $\frac{1}{2}$ to $\frac{3}{4}$ - inch water per week

Rain Sensors

- Only **16.4%** had working rain sensors
- **83.6%** needed installation or repair
- Install with a clear view of the sky
- Away from buildings, plants, heat



Spray Patterns Blocked



Other Maintenance Issues



Overspray



Poor Coverage

Enhanced Evaluations

- Same as core, plus:
- Implement some or all recommendations
- Advanced Water Sense labeled controller



Certified by
ICC-ES

Irrigation Controller



Certified by
ICC-ES

Repairs



Core vs. Enhanced Evaluations by Utility

Utility	Core	Enhanced
Citrus	62	15
Hernando	11	46
Marion	12	71
VCCDD	19	0
NSCUDD	47	0
TOTAL	151	132

Preliminary Results

Average savings:

- 186 gallons per account per day
- 86 gallons per person per day
- 22%

Average Cost per Evaluation

- Core: \$401
- Enhanced: \$541

Pre vs. Post Water Usage

Utility	Evaluations with Pre/Post Use	Pre-Evaluation Water Use (MG)	Post-Evaluation Water Use (MG)	Water Saved (MG)	Percent Water Saved
Citrus	77	26.1	19.6	6.5	25%
Hernando	56	17.8	14.7	3.1	17%
Marion					
VCCDD	18	6.0	4.2	1.8	30%
NSCUDD	47	12.3	10.2	2.1	17%
Total	198	62.2	48.8	13.4	22%

Project Budget

Budget \$145,000 for 260 evaluations

Spent \$131,940 for 283 evaluations

- * 50% SWFWMD - \$65,670
- * 25% WRWSA - \$32,985
- * 25% Utilities - \$32,985

Utility Participation

Utility	Evaluations	25% Contribution
Citrus	77	\$8,948
Hernando	57	\$7,110
Marion	83	\$10,454
VCCDD	19	\$1,830
NSCUDD	47	\$4,642
TOTAL	283	\$32,985

Schedule

Milestone	Completion
Irrigation Evaluation Contractor procurement	September 2018
Irrigation Evaluations	December 2018 - September 2020
Draft Report to WRWSA Board	November 2021
Final Report Due	December 2021
Agreement Expiration	June 1, 2022

Staff Recommendation

- * Staff recommends that the Draft Report be submitted to SWFWMD in December for review and comment.
- * If possible, the draft should be updated with Marion County billing data when it is available.
- * Final report will be brought back for approval in January 2022.