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Marion County Office of the County Engineer  
Water Resources

# Water Use Efficiency Plan FY 2024/25

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## Water Use Efficiency Plan Overview

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**Mission:** The Marion County Water Use Efficiency Plan aims to inform, educate, and increase water use efficiency among residents of the County. The Water Resources Liaison, who reports to both the Office of the County Engineer and the Utilities Department, facilitates these efforts.

**Background:** A “Water Conservation Plan” is required as a condition of the Marion County Board of County Commissioners’ (MCBCC) Water Use Permits issued to its Utilities Department by the St. Johns River Water Management District (SJRWMD) and the Southwest Florida Water Management District (SWFWMD). The MCBCC further acknowledges that all citizens are equally accountable for using water efficiently, and it is commonly understood that conservation is the most cost-effective method to prolong groundwater supplies and delay the need for significantly more expensive alternative water sources, such as surface water or desalination. While meeting Water Management District Requirements, the Water Use Efficiency Plan provides for comprehensive, goal-based initiatives county-wide.

**FY 2024/25 Water Use Efficiency Initiatives:** The Marion County Water Use Efficiency Plan outlines a combination of public education and incentive-based programs to accomplish its mission. These initiatives are continually reevaluated to determine their effectiveness and the need for changes or additional elements. The following are the water use efficiency initiatives proposed for FY 2024/25.

### **Public Education Initiatives:**

- Targeted Messaging to Marion County Utility (MCU) Customers:
  - MCU Website/Social Media
  - Billing Inserts
  - Billing Messages
  - Billing Statements Show Consumptive History
- Participation in Community Events and Workshops
- Smart-Irrigation Billboard Campaign
- Educational Print Media

**Incentive Based Programs:**

- Tiered Rate Structure
- Toilet Rebate Program
- Water Conservation Kits
- Enhanced Irrigation System Evaluations
- Landscape and Irrigation System Retrofits
- Rain Sensor Check-up Campaign

**Audience:** The plan provides for county-wide initiatives focused on MCU customers as well as all other residents throughout Marion County. Messaging will target the general population, MCU customers, specific homeowners and homeowner associations, and contractors such as homebuilders, irrigation, and landscape contractors.

**Budget:** The plan utilizes funding from multiple sources. The Fiscal Year 2024/25 requested budget totals \$55,613 considering allocations as follows:

- Utilities: \$18,613
- Water Resources: \$37,000

With grants and/or reimbursable as follows:

- Withlacoochee Regional Water Supply Authority (WRWSA): up to \$13,237.50
- SWFWMD: to be determined

The combination of requested County funds with grant funding would equal \$68,850.50 in total program funding, with additional funds to be determined following SWFWMD grant approval. SWFWMD grant funding is moving from the CFI program to the WISE program. The WISE program provides cost-share funding grants to improve water use efficiency up to 50% of project costs up to \$20,000 per project. Eligible projects include toilet and plumbing fixture replacements, WaterSense labeled irrigation controllers, weather stations for irrigation control, and other similar projects. Marion County is coordinating with SWFWMD to determine what projects would be included in an FY 24/25 grant based on cost effectiveness.

## Public Education Initiatives

**Targeted Messaging to MCU Customers:** Information on water use efficiency and the County’s incentive-based programs are provided to MCU customers through the MCU website, billing inserts, billing messages, and by showing consumptive history on bills.

**MCU Website/Social Media:** The water efficiency section of the MCU website contains information on both indoor and outdoor water efficiency. The site and various social media platforms can be used to obtain information on everything from how to check fixtures for leaks to water-wise landscaping. The website is also utilized to inform citizens about and promote the County’s incentive-based programs.

**Billing Inserts:** Billing inserts are distributed on a schedule based on the campaign being promoted. These inserts are used to educate citizens on water use efficiency and to promote the County’s incentive-based programs. Message topics include informing citizens of incentive programs, the change back to the once a week watering schedule at the end of Daylight Savings Time, how to conduct a routine check on an irrigation system, how to identify common household leaks, proper fertilizing messaging, and other topics related to water use.




Mandatory lawn watering restrictions specify the days when you may water. These days depend on whether your address ends in an odd or even number, and on the time of year. So unless your day and number are up, make sure those sprinklers stay down.

Time of year	Homes with addresses that end in an odd number (or have no address)	Homes with addresses that end in an even number	Nonresidential properties
Daylight Saving Time	Wednesday/Saturday	Thursday/Sunday	Tuesday/Friday
Eastern Standard Time	Saturday	Sunday	Tuesday

• Daylight Saving Time is the second Sunday in March until the first Sunday in November.

• Eastern Standard Time is the first Sunday in November until the second Sunday in March.

**Additional Restrictions Include:**

- Water Only when needed and not between 10 a.m. and 4 p.m.
- Water for no more than one hour per zone.
- Restrictions apply to water from private wells and pumps, ground or surface water and water from public and private utilities.
- Some exceptions apply, such as use of micro-irrigation or a handheld hose with a spray nozzle, installation of new landscaping, watering in of chemicals and fertilizers, and use of reclaimed water. Check with your water supplier to see if restrictions are in place for reclaimed water in your area.
- Communities that have received an irrigation waiver from The Marion County Development Review Committee follow the restrictions on your waiver.

**Billing Messages:** MCU utilizes a “Special Messages” section on each utility bill to promote efficient water use and the County’s incentive-based programs. Such messages include promotion of the Toilet Rebate Program, changes in watering schedule, promotion of the Enhanced Irrigation System Evaluation Program, proper fertilizing messaging, and promotion of the water use efficiency section of the MCU website.

**Billing Statements Show Consumptive History:** MCU provides customers with a chart that displays their water use for the last 12 months. This visual representation of their water use helps them to make informed choices about how they manage water use and implement conservation measures.

### **Participation in Community Events and Workshops:**

The Water Resources Liaison, often in conjunction with Stormwater and MC Utilities staff, participates in community events throughout the year. These events are used to reach citizens, interact with them, and to share literature, materials, and messages related to water use efficiency and resource protection. The Water Resources Liaison engages with homeowner associations and civic groups through meetings and workshops annually. Summer camp workshops and presentations on water efficiency and resource preservation are coordinated with various partners such as FWC, the Boys & Girls Club, and Marion County Parks & Recreation. Additionally, in coordination with the UF/IFAS Extension office, efforts are ongoing to educate residents on the benefits of Florida-Friendly Landscaping™ and promoting the Landscape and Irrigation Retrofit program and Irrigation Audits during homeowner workshops and other events.

The Water Resources Program participates in a variety of festivals and large community events annually. These large events provide an excellent opportunity for Marion County to engage with the public and have impactful conversations with residents and visitors about water use efficiency and water quality. Events typically attended by the Water Resources Program include the Parks & Recreation Fall Carnival, Government Day at The Villages, SpringsFest, Master Gardener’s Spring Festival, Parade of Senior Services, Ocala EarthFest, Citizen’s Academy, and the Run For The Springs 5K.

## Smart-Irrigation Billboard Campaign:



A billboard campaign is utilized each year to promote smart irrigation practices. Billboards run through the months of October and July. These billboards promote the use of rain sensors, discourage overwatering of lawns, and inform citizens of the shift to once a week watering. Billboards in FY 2023/24 achieved over an estimated 1 million impressions at a cost of less than \$0.01 per impression. The FY 2024/25 campaign will be determined based on billboard negotiations, but is expected to be similar to previous years.

## Educational Print Media:

Along with billing inserts for Utility customers, tip cards and brochures on water use efficiency and resource protection are made available at multiple County libraries, the Silver Springs Shores Community Center, and the MCU lobby. Water Resources also partners with the Stormwater Program for the production of the H2OMG webpage and the annual Stormwater calendar, both of which contain water use efficiency education.



## Incentive Based Programs

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Incentive based programs are those that utilize some type of financial incentive to encourage the efficient use of water or improvement in water quality. Some of the available programs only offer enough water savings to offset the program costs if the participant has high outdoor water use. Due to this factor, and the need to utilize County resources wisely, some programs are only offered to residents who are designated as high-water users. High-water users are those that typically use 20,000 gallons of water a month or greater, as verified by MCU water use information. For non-MCU residents, a determination is made based off of relevant water management district data and other indicators.

**Tiered Rate Structure:** MCU utilizes a tiered rate to encourage the efficient use of water. The County's water rate structure contains four (4) tiers for residential service accounts. The tiers are set up in such a way that the price of water increases after 6,000, 12,000, and 20,000 gallons of use per month.

**Toilet Rebate Program:** The toilet rebate program offers residents up to \$100 for a single unit or \$180 if two (2) toilets are replaced from a conventional high-volume toilet to a high-efficiency toilet or low flow dual flush. Installing high-efficiency toilets in a house reduces indoor water use by an average

of 10,000 gallons of water per year and has an average lifespan of 20 years. Since 2012, 1630 toilets have been replaced, resulting in an estimated daily savings of 29,093.5 gallons of water, which equates to an estimated annual savings of 10,619,127 gallons of water. When multiplied out over the lifespan of the toilets (20 years), the savings equate to approximately 212.4 million gallons of water. The cost per thousand gallons saved is estimated to be \$1.52, well below the cost of developing alternative water supplies. This program is administered by the Water Resources Liaison and marketed through the use of the MCU website, bill inserts, billing messages, and outreach efforts. While this program mostly targets MCU customers, funding from the WRWSA and Water Resources provide rebates countywide.



**Water Conservation Kits:** Water conservation kits are distributed for free to MCU customers at the MCU office and to other County residents at public education events. The kits contain a soil moisture meter, a rain gauge and a spray nozzle for outdoor versions, and low flow faucet aerators, kitchen faucet aerator, low flow showerhead, and leak detection tablets for indoor versions. Each kit costs \$12.05 to \$12.95, and paired with the social media campaign of “Watch the Weather Before you Water” provides County residents with effective and efficient irrigation practices. Since 2010, more than 1,597 water conservation kits have been distributed. Over the years, conservation kits have included kitchen and



bathroom faucet aerators, toilet tank bags, replacement toilet flappers, leak detection tablets, low flow shower heads, and bathroom timers.

**Enhanced Irrigation System Evaluations:** Studies have shown that over half of the water used for residential landscape irrigation in Central Florida is wasted due to inefficiencies. The goal of the Enhanced Irrigation System Evaluation Program is to assist homeowners in identifying and correcting inefficiencies to reduce outdoor water use.

Water Resources has managed an Irrigation System Evaluation Program since September 2011. This program uses an irrigation contractor to evaluate irrigation systems of high-water users to identify and correct inefficiencies. A review of consumption data indicates that the average overall home water savings has been 25%, or 78,000 gallons of water a year. At a 5-year lifespan, the cost per thousand

gallons saved through this program is estimated to be \$1.12, well below the cost of developing alternative water supplies.

In FY 2015/16, the program was enhanced to provide for additional services at the approval of the homeowner and the County. These services include capping unnecessary irrigation heads, replacing broken/missing/incorrect irrigation heads, raising low irrigation heads and adjusting heads to avoid impervious surfaces and replacing malfunctioning rain sensors. These additional services not only enhance customer service, they maximize the amount of water saved by correcting some of the most common inefficiencies. Data collected showed that 1 year after the audits were performed, home owners that implemented the recommended changes saved on average 40% or 143,400 gallons of water per year. In year 2, the savings increased to an average of 51% or 182,789 gallons of water per homeowner. In year 3, the data collection shows an average savings of 63% or 115,459 gallons of water saved.

**Landscape and Irrigation System Retrofits:** The purpose of this program is to encourage residents to make changes to their landscape and irrigation system to increase water use efficiency. Since FY 2012/13, the County has had in place a program that offers up to \$5,000 for residents to make substantial changes to their landscape and irrigation system to meet Florida Water Star® Silver Level criteria. For many residents, completing a full retrofit to their landscape and irrigation system to meet these criteria is expensive and does not result in a significant financial return on investment. There are, however, many changes that residents can make to use water more efficiently that require less time, money, and effort to install. Therefore, in FY 2016/17 the program evolved to allow residents to optimize their retrofit, based on one or more of the options listed below.



**Smart Irrigation Controller and Sensors:** Smart irrigation controllers utilize local weather and landscape conditions to tailor watering schedules to actual conditions on site. Studies have found that these devices reduce outdoor water use by an average of 15-30%. When used in conjunction with a soil moisture sensor (SMS) or evapotranspiration (ET) based sensor, the potential savings is as high as 90% during the rainy season. The Smart Controller and Sensors Option will offer residents a rebate of up to \$500 towards the purchase and installation of a smart irrigation controller and a SMS or ET based sensor. This may only be applied once every five years at a residence.



**Efficient Irrigation:** The sprinkler heads typically used on irrigations systems (rotors and sprays) have an efficiency of only 60-75%. This means that 25-40% of the water being applied is wasted. High efficiency sprinkler nozzles (rotating nozzles) save water by applying it more uniformly and efficiently (90-95%) than traditional sprinklers. Rotating nozzles typically cost between \$2 and \$10 each, resulting in an average water savings of 1,000 gallons per nozzle per year. Because rotating nozzles apply water at a slower rate than traditional nozzles, it is necessary to ensure that entire irrigation zones are retrofitted to prevent too much or too little water from being applied in areas of the zone. With efficient irrigation, residents will be eligible for a rebate of up to \$200 per zone converted to rotating nozzles.

**Micro-Irrigation:** Micro-irrigation, sometimes referred to as “drip” or “low volume” irrigation, improves irrigation efficiency through the precise application of water to the root area of the plant. Micro-irrigation reduces the amount of water lost to wind, evaporation, and runoff. It also minimizes the growth of weeds. An added benefit is that it is highly customizable for oddly shaped areas and those with a variety of different plant types. Depending on a number of different factors, water savings from converting a single landscape zone to micro-irrigation can

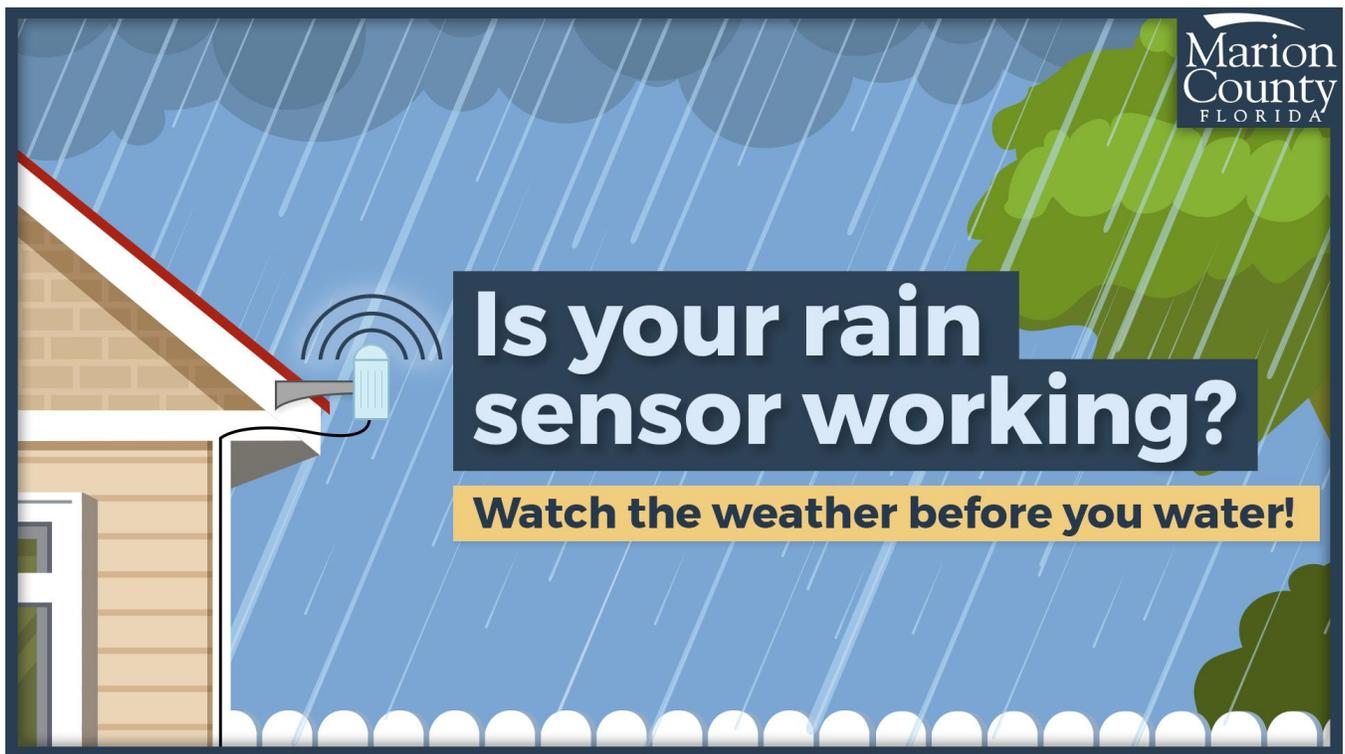
range from 5-20%. With micro-irrigation, residents will be eligible for a rebate of up to \$200 per high-volume irrigation zone converted to micro-irrigation.

**Florida-Friendly Landscape™:** Landscape plant selection and water efficiency go hand in hand. Installing drought tolerant plants can greatly reduce or eliminate the need for supplemental irrigation. Florida-Friendly Landscape™ will incentivize the installation of drought tolerant plants in a previously high-volume irrigation zone. In order to take advantage of this, the zone where plants are being installed must concurrently be converted to low-volume or micro-irrigation, or irrigation must be removed. Implementing Florida-Friendly Landscape™ will offer residents a rebate of up to \$200 per zone and can be used in conjunction with the Efficient Irrigation or Micro-Irrigation Options.



Residents who receive more than \$2,000 in rebates are required, per the terms of their agreement, to promote efficient irrigation practices in their development and/or neighborhood and allow at least one scheduled tour of their property at the County's request. In all cases, the rebate offered will not exceed the actual price paid for the purchase and installation.

**Rain Sensor Check-up and Campaign:** A rain sensor is a device designed to shut-off or inhibit lawn irrigation when a certain amount of rainfall has accumulated. Studies have shown that, in Florida, a properly functioning rain sensor saves an average of 3,000 gallons of water a month. Florida Statute 373.62 requires that “any person who purchases and installs an automatic landscape irrigation system must properly install, maintain, and operate technology that inhibits or interrupts operation of the system during periods of sufficient moisture.” While this requirement has been in effect since 1991, there are many homes that either have no rain sensor, or have one that does not work.



The Rain Sensor Campaign is a three-month effort (April-June) that focuses on getting residents out to check on the operation of their rain sensor or install one outside of the Enhanced Irrigation Systems Evaluation. The campaign utilizes pamphlets, bill inserts, web materials, community newsletters, media releases and presentations to educate residents. Depending on billboard availability, this resource may be utilized as well.

## Budget

Funding for the various Water Use Efficiency Plan initiatives is outlined below. At the time of drafting this plan, not all funding requests have been formally approved for fiscal year 2024/25 and adjustments may be necessary based on actual funding allocations.

Project	Total Program Amount	Suggested Program Funding FY 2024/25			
		Marion County Utilities	Water Resources	Total Grant Funding Amount	Grant (Source)
					WRWSA <sup>3</sup>
<b>Landscape and Irrigation Retrofit Rebate</b>	\$25,000.00	N/A	\$25,000.00	TBD	N/A
<b>Toilet Rebate<sup>1</sup></b> <i>Utility Customers<sup>2</sup></i> <i>Non-Utility Customers</i>	\$8,750.00	\$4,750.00 N/A	\$2,000.00	TBD \$2,000.00	\$2,000.00
<b>Water Conservation Kits</b> <i>Utility Customers</i> <i>Non-Utility Customers</i>	\$7,900.00	\$3,500.00	\$2,000.00	\$1,400.00 \$1,000.00	\$1,400.00 \$1,000.00
<b>Educational Print Media</b> <i>(rack cards, handouts etc.)</i>	\$2,500.00	\$1,250.00	N/A	\$1,600.00	\$1,600.00
<b>Educational outreach</b> <i>(promotional items)</i>	\$8,000.00	\$3,500.00	\$3,000.00	\$1,500.00	\$1,500.00
<b>Bi-monthly Utilities Bill Inserts</b>	\$3,200.00	\$1,600.00	N/A	\$1,600.00	\$1,600.00
<b>Utilities Billboards</b>	\$5,650.50	\$4,013.00	N/A	\$1,637.50	\$1,637.50
<b>Digital Media and Social Media Campaign</b>	\$7,500.00	N/A	\$5,000.00	\$2,500.00	\$2,500.00
<b>Total</b>	\$68,850.50	\$18,613.00	\$37,000.00	<b>\$13,237.50</b>	<b>\$13,237.50</b>

<sup>1</sup>Toilet Rebate #'s are for FY not entire grant program.

<sup>2</sup>The program is a yearly program that is being moved from the CFI grant to the WISE program. Total grant funds are yet to be determined for FY 24/25 from SWFWMD.

<sup>3</sup> 50% Cooperative Grant funding with the Withlacoochee Regional Water Supply Authority