

St. Johns River Water Management District Cost-share and District-led projects in Marion County

The St. Johns River Water Management District (District) implements a wide variety of projects aimed at protecting water supplies, improving water quality, restoring natural systems, and providing flood protection. A summary of the cost-share projects benefiting Marion County are described on the following pages. The summary includes a description of benefits for each project, including nutrient load reduction (total phosphorus [TP], total nitrogen [TN] pounds per year [lbs/yr]), alternative water supplied (million gallons per day [mgd]), water conserved (mgd), alternative water storage capacity created (million gallons [MG]), or acres protected from flooding.

Also listed at the end of this document are Districtled projects and other efforts benefiting the communities in Marion County.



Cost-Share Program:

Through the Cost-Share Program, the District and Florida Department of Environmental Protection (DEP) together have awarded approximately \$35 million for projects in communities throughout Marion County beginning in fiscal year 2014, leveraging approximately \$77 million when combined with local matching funds. Marion County cost-share projects have provided an estimated benefit of 12.8 mgd of alternative water supply, 2 MG of storage capacity, 0.07 mgd of water conserved, 58,800 lbs/yr TN reduction, 31,000 lbs/yr TP reduction, and 14 acres of flood protection.

- Equity Lifestyles Oak Bend I-75 Water
 Quality Improvement The project includes
 demolishing an existing private wastewater
 package plant, connecting the lift station to the
 Marion County central wastewater collection
 system, and connecting 242 mobile homes
 to central sewer. The estimated nutrient
 load reduction water quality benefit to Silver
 Springs is 244 lbs/yr of TN and 150 lbs/yr of
 TP. The project is also estimated to provide an
 alternative water supply benefit of 0.01 mgd.
 Project Status: In Progress.
- 2. Equity Lifestyles Spanish Oaks Water Quality Improvement — The project includes the demolition of an existing private wastewater package plant, designing, permitting, and constructing a lift station on site, and connecting 459 mobile homes to central sewer. The estimated nutrient load reduction water quality benefit to the springs is 575 lbs/yr of TN and 353 lbs/yr of TP. The project is also estimated to provide an alternative water supply benefit of 0.03 mgd. Project Status: In Progress.
- 3. Marion County 4-H Farm Septic-to-Sewer Conversion — The project included the removal of one commercial septic tank and connection to sewer. The estimated nutrient load reduction water quality benefit to Silver Springs is 20 lbs/yr of TN. Project Status: Complete.

- 4. Marion County CP #77 Retrofit of Drainage Retention Areas (DRAs) 7244 and 7396 — The project included the retrofit of two existing drainage retention areas in the Silver Springs Shores subdivision with biosorptive activated media (BAM) to promote denitrification. The estimated nutrient load reduction water quality benefit within the Silver Springs springshed is 318 lbs/yr of TN. Project Status: Complete.
- 5. Marion County Don Garlits Museum Septic-to-Sewer Conversion — The project included the removal of one commercial septic tank and connection to sewer. The estimated nutrient load reduction water quality benefit to Silver Springs is 61 lbs/yr of TN. Project Status: Complete.
- 6. Marion County Enhanced Irrigation Evaluation Program — The program included approximately 90 enhanced irrigation system evaluations to Marion County Utility high water use customers. The estimated water conservation benefit is 0.02 mgd. Project Status: Complete.
- 7. Marion County Package Plant Removal-Sleepy Hollow — The project included redirecting sewage from the under-performing package plant and sending flows to the Silver Spring Shores Advanced Wastewater Treatment Facility. The estimated nutrient load reduction water quality benefit within the Silver Springs springshed is 365 lbs/yr of TN. Project Status: Complete.
- Marion County SE 108 Water Main
 Interconnect This project included the construction of a water main interconnect for two existing potable water systems. It will relocate the withdrawals approximately 6.5 miles further away from Silver Springs. The estimated alternative water supply benefit is 0.03 mgd. Project Status: Complete.
- 9. Marion County Silver Springs Shores
 Drainage Retention Area (DRA) Retrofit
 — The project involved the retrofit of three drainage retention areas in the Silver Springs

Shores Unit 19 subdivision. BAM will be incorporated. The estimated nutrient load reduction water quality benefit to Silver Springs is 218 lbs/yr of TN. Project Status: Complete.

- 10. Marion County Silver Springs Shores Reuse to Spruce Creek — The project included constructing a reclaimed water pump station and a reclaimed water main from the Silver Springs Shores water reclamation facility (WRF) to the Spruce Creek Golf and Country Club. The estimated alternative water supply benefit to Silver Springs is 1.2 mgd. Project Status: Complete.
- 11. Marion County Silver Springs Shores Unit 23 Stormwater Retrofit — This project was to retrofit two DRAs with BAM to promote denitrification. The retrofit included the removal of 30 inches of soil in the DRA bottoms and replacement with 24 inches of BAM overlaid with 4 inches of coarse sand and 2 inches of topsoil. The estimated nutrient load reduction water quality benefit within the Silver Springs springshed is 180 lbs/yr of TN. Project Status: Complete.
- 12. Marion County Silver Springs Shores Unit 68 Stormwater Retrofit — The project included retrofitting two DRAs with BAM to promote denitrification. The retrofit included the removal of 30 inches of soil in the DRA bottoms and replacement with 24 inches of BAM overlaid with 4 inches of coarse sand and 2 inches of topsoil. The estimated nutrient load reduction water quality benefit within the Silver Springs springshed is 72 lbs/yr of TN. Project Status: Complete.
- 13. Marion County Silver Springs Shores Wastewater Treatment Facility (WWTF) — The project consisted of improvements to the Silver Springs Shores WWTF to enhance the nutrient removal capabilities to meet advanced wastewater treatment (AWT) standards and to expand the capacity by 0.5 mgd for future package plant and septic-to-sewer connections. The project also included the construction

of infrastructure to connect two package WWTFs and one church septic system to this WWTF. This also includes construction of three new lift stations, rebuilding two existing lift stations, and installation of three new force mains. The two package plants will also be decommissioned and demolished. The estimated load reduction water quality benefit is 3,532 lbs/yr of TN. The project also provides an alternative water supply benefit of 0.01 mgd. Project Status: Complete.

- 14. Marion County Southeast 64th Avenue Road DRA — The project involved the construction of a DRA, installation of pipes and associated conveyance infrastructure, as well as re-grading of swales. The estimated flood protection benefit is 13.6 acres within the Ocklawaha Basin. Project Status: Complete.
- 15. Marion County Toilet Rebate Program

 This program was a continuation of the toilet replacement program to residential and commercial customers within the Marion County utility service area. The estimated water conservation benefit is 0.04 mgd. Project Status: Complete.
- 16. Marion County U.S. 441 Sewer Force Main — The project included constructing approximately 17,000 linear feet of force main through a commercial corridor connecting the Spruce Creek Golf and Country Club sewer system to the Stonecrest sewer system. This project will move discharges farther from Silver Springs and provide more reclaimed water for irrigation from the Stonecrest WWTF. The estimated nutrient load reduction water quality benefit to Silver Springs is 200 lbs/yr of TN. The project also provides an alternative water supply benefit of 0.07 mgd. Project Status: Complete.
- 17. Marion County U.S. 441 Water Main Interconnect — The project involved redistributing 0.12 mgd of groundwater withdrawals from the Upper Floridan aquifer to another pumping center approximately 5.5 miles further from Silver Springs.

The estimated alternative water supply benefit to Silver Springs is 0.52 mgd. Project Status: Complete.

- 18. Ocala Lake Wyomina Drainage DRA Retrofit — The project included reshaping a DRA and installing a layer of BAM in the DRA that serves 166 acres. The project also included a new conveyance system that connects to an aquifer recharge well. The estimated nutrient load reduction water quality benefit to Silver Springs is 166 lbs/yr of TN and 38 lbs/yr of TP. Project Status: Complete.
- 19. Ocala Lower Floridan Aquifer (LFA) Conversion — This is a multi-phase DEP springs project that includes the construction of three Lower Floridan aquifer (LFA) production wells with storage and treatment capacity at Ocala's Water Treatment Plant #2. Upon completion of all phases of the project, the alternative water supply benefit to Silver Springs will be 7.5 mgd. Project Status: In Progress.
- 20. Ocala Pine Oaks Wetland Recharge Park

 The project involved the construction of a 33-acre groundwater recharge wetland that will receive advanced treated wastewater from the city's water reclamation facilities #2, #3, and stormwater from the Old City Yard Drainage Retention Area. The estimated alternative water supply benefit to Silver Springs is 3 mgd of recharge to the Upper Floridan aquifer. The project will also provide an estimated nutrient load reduction water quality benefit of 29,000 lbs/yr of TN and 30,500 lbs/yr of TP. Project Status: Complete.
- **21.** Ocala Reuse Main The project included constructing a reuse water main to two city parks. The estimated alternative water supply benefit is 0.03 mgd. Project Status: Complete.
- 22. Ocala Septic Tank and Well Elimination Program — The project included eliminating approximately 850 septic tanks and 150 wells in the Silver Springs springshed. The estimated

nutrient load reduction water quality benefit is 12,193 lbs/yr of TN. Project Status: Complete.

- 23. Ocala Southwood Villas and SE Lake Weir Septic Tank Connection — The project included the abandonment of 99 residential and 7 commercial septic tanks, and one package plant serving 100 residences in the City of Ocala communities of Southwood Villas and S.E. Lake Weir. The properties will be connected to the city's sewer system. The estimated nutrient load reduction water quality benefit is 2,954 lbs/yr TN. Project Status: Complete.
- 24. Ocala WRF 2 Nutrient Reduction The project included constructing two new three-stage carousels with integral anaerobic and anoxic zones. The estimated nutrient load reduction water quality benefit is 8,658 lbs/yr of TN. The project will also provide an alternative water supply benefit of 0.42 mgd. Project Status: Complete.
- 25. Withlacoochee Regional Water Supply Authority Regional Irrigation System Evaluation Program — The project includes irrigation system retrofits for residential customers within the District's portion of the Withlacoochee Regional Water Supply Authority service area. The estimated water conservation benefit within the Silver Springs springshed is 0.01 mgd. Project Status: In Progress.

Agricultural Cost-Share Program:

The Agricultural Cost-Share Program provides funding to agricultural operations to conserve water and reduce offsite nutrient loading. Beginning in fiscal year 2015, the District and DEP have provided \$1.2 million in funding for agricultural projects in Marion County. Marion County agricultural costshare projects have provided an estimated alternative water supply benefit of 0.12 mgd, 0.12 mgd of water conservation, almost 61,000 lbs/yr of TN reduction and nearly 11,000 lbs/yr of TP reduction.

- 26. Andrew Frederick Irrigation Retrofit This project involved the purchase and installation of a soil moisture and climate sensor system and upgrades to the existing irrigation system on approximately 20 acres of blueberries. The estimated water conservation benefit is 0.002 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and Ocklawaha River Basin is 43 lbs/yr of TN and 19 lbs/yr of TP. Project Status: Complete.
- 27. Black Bear Ranch Microjet Irrigation
 System The project involved performing an irrigation conversion on existing overhead irrigation to a microjet irrigation system and replacing an existing surface water pump on approximately 57 acres of citrus. The estimated water conservation benefit is 0.024 mgd. The estimated nutrient load reduction water quality benefit to the Ocklawaha River Basin is 2,045 lbs/yr of TN and 440 lbs/yr of TP. Project Status: Complete.
- 28. Colvin Farms Center Pivot Retrofits The project involved performing an irrigation retrofit on the hoses, nozzles and end guns for 12 center pivots for use on approximately 850 acres of row crops. The estimated water supply benefit is 0.027 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 8,750 lbs/yr of TN and 1,500 lbs/yr of TP. Project Status: Complete.
- **29.** Colvin Farms Center Pivot Telemetry The project involved performing irrigation retrofits on five center pivots to install GPS computer controls and radios for use on approximately 850 acres of row crops. The estimated water conservation benefit is 0.005 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 8,750 lbs/yr of TN and 1,500 lbs/yr of TP. Project Status: Complete.
- 30. Colvin Farms Soil Grid Mapping and Variable Rate Fertilizer Equipment — This project involved conducting grid soil samples/ mapping and purchase of a variable rate

spreader (VRS) with controller for use on approximately 850 acres of row crops. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 8,750 lbs/yr of TN and 1,500 lbs/yr of TP. Project Status: Complete.

- 31. Colvin Farms Soil Moisture and Rain Sensors

 This project involved the purchase and implementation of soil moisture and climate sensors for use on approximately 850 acres of row crops. The estimated water conservation benefit is 0.016 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 9,180 lbs/yr of TN and 1,556 lbs/yr of TP. Project Status: Complete.
- **32.** James C. LeFils Precision Fertilizer Application — This project involved the purchase and implementation of a GPS variable rate fertilizer system for use on approximately 1,200 acres of agricultural land. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 3,205 lbs/yr of TN and 333 lbs/yr of TP. Project Status: Complete.
- **33. Kenneth MacKay Cover Crop for Citrus Middles** — This project involved the purchase and implementation of a no till drill and side discharge mower for establishment of a cover crop on approximately 65 acres of citrus benefitting Silver Springs. The estimated nutrient load reduction water quality benefit is 520 lbs/yr of TN. Project Status: Complete.
- 34. Kenneth MacKay Irrigation Retrofit This project involved upgrading the existing, lessefficient micro-jet irrigation system to include the purchase and installation of soil moisture and climate sensor telemetry, and the purchase and installation of precision agriculture equipment on approximately 65 acres of citrus. The estimated water conservation benefit is 0.002 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and Ocklawaha River Basin is 96 lbs/yr of TN and 52 lbs/yr of TP. Project Status: Complete.

- 35. Kenneth MacKay Soil Moisture Sensor and Precision Fertilizer Equipment — This project involved the purchase and installation of a soil moisture and climate sensor system and purchase of precision agriculture equipment on approximately 65 acres of citrus. The estimated water conservation benefit is 0.001 mgd. The estimated nutrient load reduction water quality benefit citrus to Silver Springs and Ocklawaha River Basin is 260 lbs/yr of TN and 152 lbs/yr of TP. Project Status: Complete.
- 36. London Farm and Cattle, LLC Biocarbon Application — This project involved the purchase and application of bio-carbon on approximately 200 acres of hay. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 3,124 lbs/yr of TN. Project Status: Complete.
- 37. London Farm and Cattle, LLC Compost Spreader — This project involved the purchase and implementation of a compost spreader for use on approximately 200 acres of hay. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 1,800 lbs/yr of TN and 325 lbs/yr of TP. Project Status: Complete.
- 38. Mid-State Research Center Pivot with Telemetry — This project involved an irrigation conversion to a center pivot with fertigation and implementation of a weather station and climate sensor telemetry for use on approximately 14 acres of row crops and hay. The estimated water conservation benefit is 0.008 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 488 lbs/yr of TN and 151 lbs/yr of TP. Project Status: Complete.
- 39. Mid-State Research Soil Grid Mapping and Variable Rate Fertilizer Application

 This project involved the purchase of soil mapping equipment and variable rate fertilizer spreader for use on approximately 380 acres of row crops, hay, citrus, timber and sod. The

estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 6,781 lbs/yr of TN and 2,100 lbs/yr of TP. Project Status: Complete.

- 40. Quality Trees Tailwater Recovery and Reuse Pond — This project involved construction of a tailwater recovery and reuse pond utilizing greenhouse roof runoff for 20 acres of a container nursery. The estimated alternative water supplied is 0.116 mgd. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha River Basin is 39 lbs/yr of TN and 4 lbs/yr of TP. Project Status: Complete.
- 41. Seiler and Son Farms, LLC Precision Fertilizer Application with GPS — This project involved the purchase and implementation of a GPS fertilizer system for approximately 1,800 acres of peanuts. The estimated nutrient load reduction water quality benefit to Silver Springs and Ocklawaha River Basin is 568 lbs/yr of TN and 115 lbs/yr of TP. Project Status: Complete.
- **42.** Southern Grace Berries Hoop Boom Sprayer and Irrigation Retrofit — This project involved the purchase of a variable rate hoop boom sprayer and performing an irrigation retrofit on approximately 30 acres of blueberries. The estimated water conservation benefit is 0.008 mgd. The estimated nutrient load reduction water quality benefit to Silver Springs is 3 lbs/yr of TN and 20 lbs/yr of TP. Project Status: Complete.
- **43.** Southern Grace Blueberries GPS Rate Controlled Fertilization Equipment — This project involved the purchase and implementation of a GPS rate-controlled fertilizer applicator on approximately 30 acres of blueberries. The estimated nutrient load reduction water quality benefit to the Ocklawaha River Basin is 321 lbs/yr of TN and 65 lbs/yr of TP. Project Status: Complete.

- 44. Spring Valley Farms Irrigation Retrofit

 This project involved performing an irrigation conversion to micro-irrigation drip on approximately 75 acres of blueberries.
 The estimated water conservation benefit is 0.023 mgd. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha River Basin is 2,459 lbs/yr of TN and 360 lbs/yr of TP. Project Status: Complete.
- **45. Wild Goose Farms Precision Irrigation and Fertilization** — This project involved the purchase and implementation of GPScontrolled sensing technology, variable rate hoop boom applicator, weather station and biological product application equipment on approximately 335 acres of citrus, blueberries and containerized nursery product. The estimated water conservation benefit is 0.002 mgd. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha River Basin is 3,465 lbs/yr of TN and 507 lbs/yr of TP. Project Status: Complete.
- 46. Wild Goose Farms Variable Rate Spreader — This project involved the purchase and implementation of a variable rate spreader with GPS technology for use on approximately 113 acres of blueberries. The estimated nutrient load reduction water quality benefit to the Ocklawaha River Basin is 280 lbs/yr of TN and 205 lbs/yr of TP. Project Status: Complete.
- 47. Yancy Blueberry Precision Fertilizer
 Applicator This project involved the purchase and implementation of precision fertilizer application equipment for use on approximately 4 acres of blueberries. The estimated nutrient load reduction water quality benefit to Silver Springs and the Ocklawaha River Basin is 29 lbs/yr of TN and 11 lbs/yr of TP. Project Status: Complete.

District-led projects and other efforts

The District constructs large, regional projects that often benefit multiple counties and benefit more than one of the District's core missions. Some of the projects in your county include:

Moss Bluff Lock and Dam — The Moss Bluff Lock is one of three the District operates within the Upper Ocklawaha River Basin. The lock provides navigational access along the Ocklawaha River. It is located on the edge of the Ocala National Forest and was reconstructed in 1968 by the U.S. Army Corps of Engineers to assist with flood control as well as the passage of boats along the Ocklawaha River. The lock is scheduled for rehabilitation in 2025 and the dam for rehabilitation in 2026. Visit *www.sjrwmd. com/localgovernments/flooding/#flooding* to see emergency action and levee plans for the Upper Ocklawaha River Basin.

Central Springs/East Coast water supply planning region — The District works in partnership with the Southwest and South Florida water management districts, DEP, the Withlacoochee Regional Water Supply Authority, local utilities and other stakeholders in the region to implement a datadriven, proactive approach to ensure effective and consistent water resource and water supply planning and development. Learn more about this regional water supply planning region at *www.sjrwmd.com/ water-supply/planning/csec-rwsp*.

Minimum flows and levels (MFLs) program — The District establishes MFLs for priority water bodies within its boundaries. MFLs define the limits at which further water withdrawals would be significantly harmful to the water resources or ecology of an area. MFLs is an effective tool to assist in making sound water management decisions and preventing significant adverse impacts due to water withdrawals.

Hydrologic and water quality data collection — The District operates a network of data collection sites for hydrologic conditions and water quality in many lakes, wetland restoration areas, streams, springs, and wells.

District conservation areas

The District buys land in the course of its work to protect and preserve water resources. These lands also protect plant and wildlife habitat and provide areas for public recreation and environmental education. Virtually all District property is open to the public for activities that are compatible with conservation, though some may be closed during ongoing construction or restoration projects. In Marion County, District properties include Ocklawaha Prairie Restoration Area, Orange Creek Restoration Area, Silver Springs Forest Conservation Area and Sunnyhill Restoration Area. For a current listing of District conservation areas, visit *www.sjrwmd.com/lands*.

Project status as of February 2025

