

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



Project status as of February 2025

Cost-Share Program:

Through the Cost-Share Program, the District and Florida Department of Environmental Protection (DEP) together have awarded approximately \$29 million for projects in communities throughout Duval County beginning in fiscal year 2014, leveraging approximately \$114 million when combined with local matching funds. Duval County cost-share projects have provided an estimated benefit of 25 mgd of alternative water supply, 2.5 MG of storage capacity, 1.5 mgd of water conserved, 352,000 lbs/yr TN reduction, 109,000 lbs/yr TP reduction, and 106 acres of flood protection.

- 1. Atlantic Beach Phosphorus Treatment Facility — The project included constructing an integrated stormwater reuse and reclaimed water system with phosphorus treatment. The estimated nutrient load reduction water quality benefit is 10,129 lbs/yr of TP. Project Status: Complete.
- 2. Atlantic Beach Selva Marina Reclaimed Water Facilities — The project included interconnection of the reclaimed water distribution systems for the City of Atlantic Beach with the Selva Marina Reclaimed Water Facilities. The estimated alternative water supply benefit is 1 mgd. Project Status: Complete.
- 3. Baldwin Brandy Branch Reuse The project consisted of the construction of an effluent wet-well, transfer pumping system, controls/ instrumentation, and 19,000 linear feet (LF) of 8-inch PVC reuse main from the Town of Baldwin water reclamation facility (WRF) to the JEA Brandy Branch site, where the reclaimed water will discharge at the JEA Cooling Station. The estimated nutrient load reduction water quality benefit is 8,143 lbs/yr of TN and 1,598 lbs/yr of TP. The estimated alternative water supply benefit is 0.25 mgd. Project Status: Complete.
- **4. Jacksonville Beach Penman Road Septic** The project included the removal of five septic tanks, installation of approximately 520 LF of

8-inch sewer gravity main, and sewer laterals to provide service to one multi-family residential and four single-family residential properties currently on septic tanks. The estimated nutrient load reduction water quality benefit to the Hopkins Creek watershed is 67 lbs/yr of TN and 20 lbs/yr of TP. The estimated alternative water supply benefit is 0.001 mgd. Project Status: Complete.

- 5. Jacksonville Beach Sewer Main and Septic The project included removal of septic tanks along the Intracoastal Waterway and extending sanitary sewer mains to eight residential properties. The estimated nutrient load reduction water quality benefit is 240 lbs/yr of TN and 32 lbs/yr of TP. The estimated alternative water supply benefit is 0.004 mgd. Project Status: Complete.
- 6. Jacksonville Crystal Springs Drainage Improvements — The project involved the construction of a 6.7-acre wet retention stormwater management facility, re-grading existing outfall ditches, and upsizing existing cross drains and drainage control structures. The estimated nutrient load reduction water quality benefit is 741 lbs/yr of TN and 246 lbs/yr of TP. Project Status: Complete.
- Jacksonville McCoys Creek Improvements The project involves the restoration of 1.5 miles of McCoys Creek and the adjacent floodplain. The flood protection project protects approximately 52 acres containing 62 structures from a 100-year storm event. Project Status: In Progress.
- 8. Jacksonville Noroad/Lambing Water Quality and Drainage — The project involved the construction of a stormwater treatment train via rehabilitation of existing roadside swales and ditches. The project is estimated to provide 20 acres of flood protection and an estimated nutrient load reduction water quality benefit of 36 lbs/yr of TN and 10 lbs/yr of TP. Project Status: Complete.

- **9.** Jacksonville Old Plank Road Drainage The project included stormwater structural improvements and the creation of an 8.5acre wetland treatment area. The project is estimated to provide 34 acres of flood protection and an estimated nutrient-load reduction water quality benefit of 43 lbs/yr of TN and 8 lbs/yr of TP. Project Status: Complete.
- 10. Jacksonville Stormwater Microbe Treatment Pilot Project — This pilot study evaluated the application of naturally occurring microbe products as an alternative, nonstructural, best management practice (BMP) as a low-cost means to capitalize on existing wet detention stormwater treatment facilities through an increase in treatment efficiency. The estimated nutrient load reduction water quality benefit to the Lower St. Johns River is 148 lbs/yr of TN. Project Status: Complete.
- JEA 9B Reclaimed Water Main The project involved the construction of a reclaimed water main at a new State Road (SR) 9B interchange. The estimated alternative water supply benefit is 3.5 mgd. Project Status: Complete.
- 12. JEA Arlington East Water Reclamation Facility Expansion — The project included water filter expansion at the JEA Arlington East water reclamation facility. The estimated alternative water supply benefit is 2 mgd. Project Status: Complete.
- 13. JEA Bartram Park Reclaimed Water Storage Tank Expansion — The project involved the construction of a 2.5 MG storage tank a 20-inch fill line, 30-inch suction line, and 16-inch drain line. The estimated water supply benefit is 2.5 MG of reclaimed water storage capacity. The project also provides an estimated water quality nutrient load reduction of 32,724 lbs/yr of TN and 9,132 lbs/yr of TP. Project Status: Complete.
- 14. JEA Demand-Side Management Conservation Program — The water conservation program includes rebates for high-efficiency toilets, clothes washers,

dishwashers, and smart irrigation tools for homeowners. It also includes incentives to commercial customers for implementing the Green Restaurant program, retrofitting ice machines, and cooling tower cost-sharing. The estimated water conservation benefit is 1.5 mgd. Project Status: In Progress.

- 15. JEA Gate Parkway Kernan to T-Line Reclaimed Water (RCW) Main — The project included construction of an estimated 6,600 LF of 30-inch diameter and 8,700 LF of 16-inch diameter reclaimed water pipe to serve current and future reclaimed water demands within JEA's southeast reclaimed water grid. The estimated alternative water supply benefit is 1 mgd. The estimated nutrient load reduction water quality benefit to the St. Johns River is 18,270 lbs/yr of TN and 3,044 lbs/yr of TP. Project Status: Complete.
- 16. JEA Gate Parkway Shiloh Mill Boulevard to Town Center Parkway RCW — The project involved the installation of 2,400 LF of 8-inch RCW to serve planned developments. The estimated alternative water supply benefit is 0.033 mgd. The estimated nutrient load reduction water supply benefit is 550 lbs/yr of TN and 130 lbs/yr of TP. Project Status: Complete.
- 17. JEA H2.O Purification Demonstration Facility

 The project includes the construction of a water purification demonstration facility to further purify reclaimed water to drinking water quality. The estimated alternative water supply benefit is 1 mgd. Project Status: In Progress.
- 18. JEA Hidden Hills RCW This project is composed of 1,600 LF of 12-inch, 2,300 LF of 8-inch, and 130 feet of 6-inch reclaimed water pipe to serve Hidden Hills Golf and Country Club. The estimated alternative water supply benefit is 0.36 mgd. The estimated nutrient load reduction water quality benefit is 5,965 lbs/yr of TN and 1,385 lbs/yr of TP. Project Status: Complete.

- 19. JEA Mandarin Wastewater Treatment Plant (WWTP) Upgrades — The project involved increasing the reclaimed water production capacity of the Mandarin WWTP, including the construction of a 1.6 MG equalization basin, and increased high service pump and disinfection capacities. The estimated nutrient load reduction water quality benefit is 38,066 lbs/yr of TN and 13,927 lbs/yr of TP. The estimated alternative water supply benefit is 3 mgd. Project Status: Complete.
- 20. JEA Queens Harbor Reclaimed Water Main Extension — The project involved the construction of a reclaimed water main to Queens Harbor. The estimated alternative water supply benefit is 0.3 mgd. Project Status: Complete.
- 21. JEA RG Skinner Parkway Reclaimed Water Transmission Main — The project involved the extension of a major 30-inch transmission main along a newly planned roadway corridor. The estimated nutrient load reduction water quality benefit is 183,255 lbs/yr of TN and 51,141 lbs/yr of TP. The project also provides an estimated alternative water supply benefit of 9.5 mgd. Project Status: Complete.
- 22. JEA US 1 to CR 210 Transmission Main — The project includes installation of a reclaimed water main along U.S. 1 to serve the Nocatee and Twin Creeks areas. The estimated alternative water supply benefit is 2.1 mgd. The project also provides an estimated nutrient load reduction water quality benefit to the Lower St. Johns River of 57,595 lbs/yr TN and 18,419 lbs/yr TP. Project Status: In Progress.
- 23. JEA Low Income Toilet Exchange —JEA is expanding the Neighborhood Energy Efficiency program to offer toilet replacements to approximately 200 homes per year, replacing up to 400 toilets. The program provides eligible low-income customers up to two high-efficient toilets in exchange for older, inefficient toilets in JEA's service area. The estimated water conservation benefit is 0.012 mgd. Project Status: Complete.

- 24. JEA Low Income Toilet Exchange Phase 2 This is the second phase of the JEA Low Income Toilet Exchange, which provides customers up to two high-efficient toilets in exchange for older, inefficient toilets. Approximately 400 toilets were replaced. The estimated water conservation benefit is 0.012 mgd. Project Status: Complete.
- 25. JEA Water Purification Treatment Evaluation and Pilot Testing — The project included a treatment performance pilot study to compare emerging technologies, micro-filtration and reverse osmosis (MFRO) and ozone and biologically activated carbon (Ozone-BAC) on two different effluent streams. The main purpose of the study is to establish a treatment methodology for an alternative water supply. Project Status: Complete.
- 26. Lucas Fairways Hidden Hills Golf Course RCW Connection — The project involved supplying RCW to the Hidden Hills Golf Club. The estimated alternative water supply benefit is 0.356 mgd. Project Status: Complete.
- 27. Neptune Beach Wastewater Treatment Facility (WWTF) Nutrient Removal Enhancements

 The project involved converting an existing
 0.6 mgd contact stabilization WWTF to a nutrient removal facility that uses the Modified Ludzack Ettinger (MLE) process. The estimated nutrient load reduction water quality benefit is
 5,936 lbs/yr of TN. Project Status: Complete.
- 28. Queens Harbor Residential and Golf Course Reclaimed Water — The project consisted of constructing a reclaimed water main from the JEA terminus to the irrigation storage ponds at Queens Harbor. The estimated alternative water supply benefit is 0.3 mgd. Project Status: Complete.
- 29. San Jose Country Club Intermediate Well Conversion — The project consisted of alleviating the dependency on the Floridan Aquifer by installing an intermediate zone well, known as "Well J," to a depth of 450 feet and complete all required electrical wiring for the

well. The project also includes the installation of a 220V 1-HP single phase irrigation pump with flow meter and backflow preventer and strainer. The estimated alternative water supply benefit is 0.27 mgd. Project Status: Complete.

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 2019, the District and DEP have provided over \$200,000 in funding to projects in Duval County. Duval County agricultural cost-share projects have provided an estimated alternative water supply benefit of 0.04 mgd, 2,300 lbs/yr TN reduction, and 440 lbs/yr TP reduction.

- **30.** Diamond D. Cattle Compost Spreader This project involved purchasing and implementing the use of a compost spreader on approximately 500 acres of pastureland. The estimated nutrient load reduction water quality benefit to the Lower St. Johns River is 1,664 lbs/yr TN and 336 lbs/yr TP. Project Status: Complete.
- 31. Genuine Giants LLC Tailwater Recovery and Reuse — This project involved drain tile installation with tailwater recovery and reuse. The estimated water conservation benefit is 0.036 mgd. The project also provides an estimated nutrient load reduction water quality benefit to the Little Trout River of 595 lbs/yr of TN and 104 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: North Florida Regional Water Supply Partnership — The District is working in partnership with the Suwannee Florida Water Management District, DEP, local utilities and other stakeholders in north Florida to develop joint water resource protection strategies, sharing data and technology, and effective communication with stakeholders across district boundaries. For more information, visit www.northfloridawater.com.

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 Duval County, District properties include Julington-Durbin Preserve and Thomas Creek Conservation Area. For a current listing of District conservation areas, visit *www.sjrwmd.com/lands*.



Project status as of February 2025