



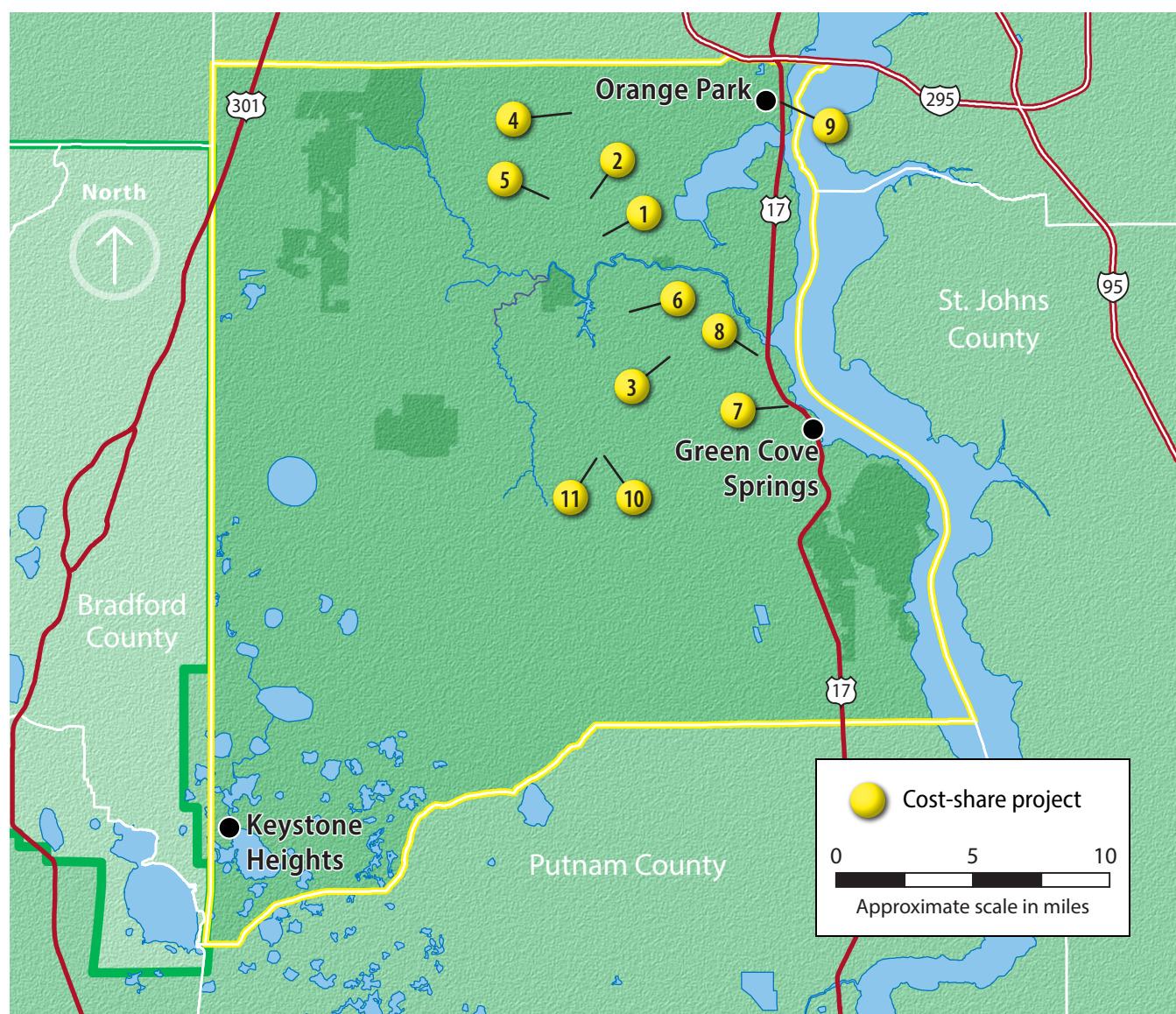
St. Johns River Water Management District

Cost-share and District-led projects in Clay 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 Clay 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 District-led projects and other efforts benefiting the communities in Clay County.



Cost-Share Program:

Through the Cost-Share Program, the District and Florida Department of Environmental Protection (DEP) together have awarded nearly \$6 million for projects in communities throughout Clay County beginning in fiscal year 2017, leveraging nearly \$18 million when combined with local matching funds. Clay County cost-share projects have provided an estimated benefit of 2.1 mgd of alternative water supply, 3 MG of storage capacity, 0.02 mgd of water conserved, 29,000 lbs/yr TN reduction, 5,600 lbs/yr TP reduction, and 39 acres of flood protection.

- 1. Clay County Utility Authority (CCUA) County Road 209 Reclaimed Water Transmission Main** — The project included the construction of 2,900 linear feet (LF) of reclaimed water main extension to serve a future development area. The estimated alternative water supply benefit is 0.048 mgd. The project is also estimated to provide a nutrient load reduction water quality benefit to the lower St. Johns River of 452 lbs/yr of TN and 140 lbs/yr of TP. Project Status: Complete.
- 2. CCUA Old Jennings Reclaimed Water Groundwater Storage Tank** — The project included the construction of a 0.75 MG ground storage tank at the Old Jennings Road Reclaimed Water Plant Facility. The estimated water supply benefit is 0.75 MG reclaimed water storage capacity created. The project is also estimated to provide a nutrient load reduction water quality benefit to the lower St. Johns River of 7,011 lbs/yr of TN and 2,169 lbs/yr of TP. Project Status: Complete.
- 3. CCUA Saratoga Springs Reclaimed Water Storage and Pumping Station** — The project included the construction of a storage and pumping station that will deliver reclaimed water to over 2,000 new customers in new residential developments. The estimated water supply benefit is 0.75 MG reclaimed water storage capacity created. The project is also estimated to provide a nutrient load reduction water quality benefit to Peters Creek and the

lower St. Johns River of 5,740 lbs/yr of TN.
Project Status: Complete.

- 4. CCUA Stormwater Harvesting** — The project involved the construction of a stormwater harvesting pilot project to supplement the public access reuse system with stormwater from a Florida Department of Transportation (FDOT) wet detention pond located along the first phase of the First Coast Outer Beltway/State Road 23. The project involved the installation of approximately 1,200 feet of horizontal well adjacent to FDOT's wet detention stormwater ponds, including a wet well and submersible pump for the augmentation into CCUA's nearby public access reclaimed water distribution system. The estimated alternative water supply benefit is 0.7 mgd. Project Status: Complete.
- 5. CCUA Tynes Reclaimed Water Storage** — The project included the construction of two 0.75 MG reclaimed water storage tanks and a distribution facility to provide reclaimed water to over 772 new customers within the Two Creeks, Pine Ridge, Linda Lakes, and Azalea Ridge subdivisions. The estimated alternative water supply benefit is 1.5 MG reclaimed water storage capacity created. The project is also estimated to provide a nutrient load reduction water quality benefit to the lower St. Johns River of 1,484 lbs/yr of TN.
Project Status: Complete.
- 6. CCUA Wastewater Treatability Study** — The project is a single-phase treatability study to explore wastewater treatment options to allow diversification of CCUA's water supply portfolio to meet future water demands, while minimizing impacts to environmental constraints, such as minimum flows and levels (MFLs) in southwest Clay County.
Project Status: Complete.
- 7. Green Cove Springs Harbor Road Water Reclamation Facility Phase 2** — The project includes the replacement of the existing wastewater treatment facility (WWTF) with a

water reclamation facility (WRF) that includes biological nutrient removal capabilities. The new facility will be capable of treating domestic wastewater and providing a higher treatment level. The estimated nutrient load reduction water quality benefit to the St. Johns River is 10,650 lbs/yr of TN and 3,050 lbs/yr of TP. The project will also provide an estimated alternative water supply benefit of 1.25 mgd. Project Status: In Progress.

8. **Green Cove Springs North Grid Reclaimed Water System Phase 2 and 3** — The project included the installation of a reclaimed water line along the southern boundary of the planned Black Creek Marina development and additional residential areas. The project will provide an estimated alternative water supply benefit of 0.14 mgd. The project is also expected to provide an estimated nutrient load reduction water quality benefit of 3,000 lbs/yr of TN and 215 lbs/yr of TP. Project Status: Complete.
9. **Orange Park Septic Conversion** — The project includes the abandonment of 41 septic tanks and connection to existing sewer mains within the Town of Orange Park. The estimated nutrient load reduction water quality benefit to Doctors Lake is 393 lbs/yr of TN. Project Status: In Progress.
10. **Penney Farms Mandatory Meter Reader Replacement** — The project included replacement of old handheld readers with newer supported readers. The estimated water conservation benefit is 0.015 mgd. Project Status: Complete.
11. **Penney Farms Stormwater Management** — The project included the construction of a stormwater control structure / impoundment area and a 48-inch diameter stormwater pipe connected to the impoundment. The estimated flood protection benefit is 39 acres and the estimated nutrient load reduction water quality benefit is 268 lbs/yr of TN and 44 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:

Black Creek Water Resource Development

project — The project will increase recharge to the Upper Floridan aquifer in northeast Florida using excess flow from Black Creek. The project will also contribute to regional minimum flows and levels recovery and increase water levels in the Alligator Creek system, including Lakes Brooklyn and Geneva. The Black Creek project was identified in the North Florida Regional Water Supply Plan to help meet future water supply demands while protecting natural resources. This project is being built in southwest Clay County between Penney Farms and Camp Blanding. For more information, visit www.sjrwmd.com/projects/#black-creek.

Doctors Lake restoration projects — Doctors Lake has experienced water quality issues due to nutrient loading from stormwater runoff and other nonpoint sources such as septic tank effluent. Because of its narrow connection with the St. Johns River, the 3,400-acre lake has poor circulation and nutrients tend to concentrate in the lake. Two projects — the Doctors Lake Enhanced Effluent Treatment project and septic-to-sewer projects in collaboration with the Clay County Utility Authority — are addressing water quality. For more information, visit www.sjrwmd.com/projects/#doctors-lake.

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 Clay County, District properties include Black Creek Ravines Conservation Area and J.P. Hall Bayard Point Conservation Area. For a current listing of District conservation areas, visit www.sjrwmd.com/lands.

