



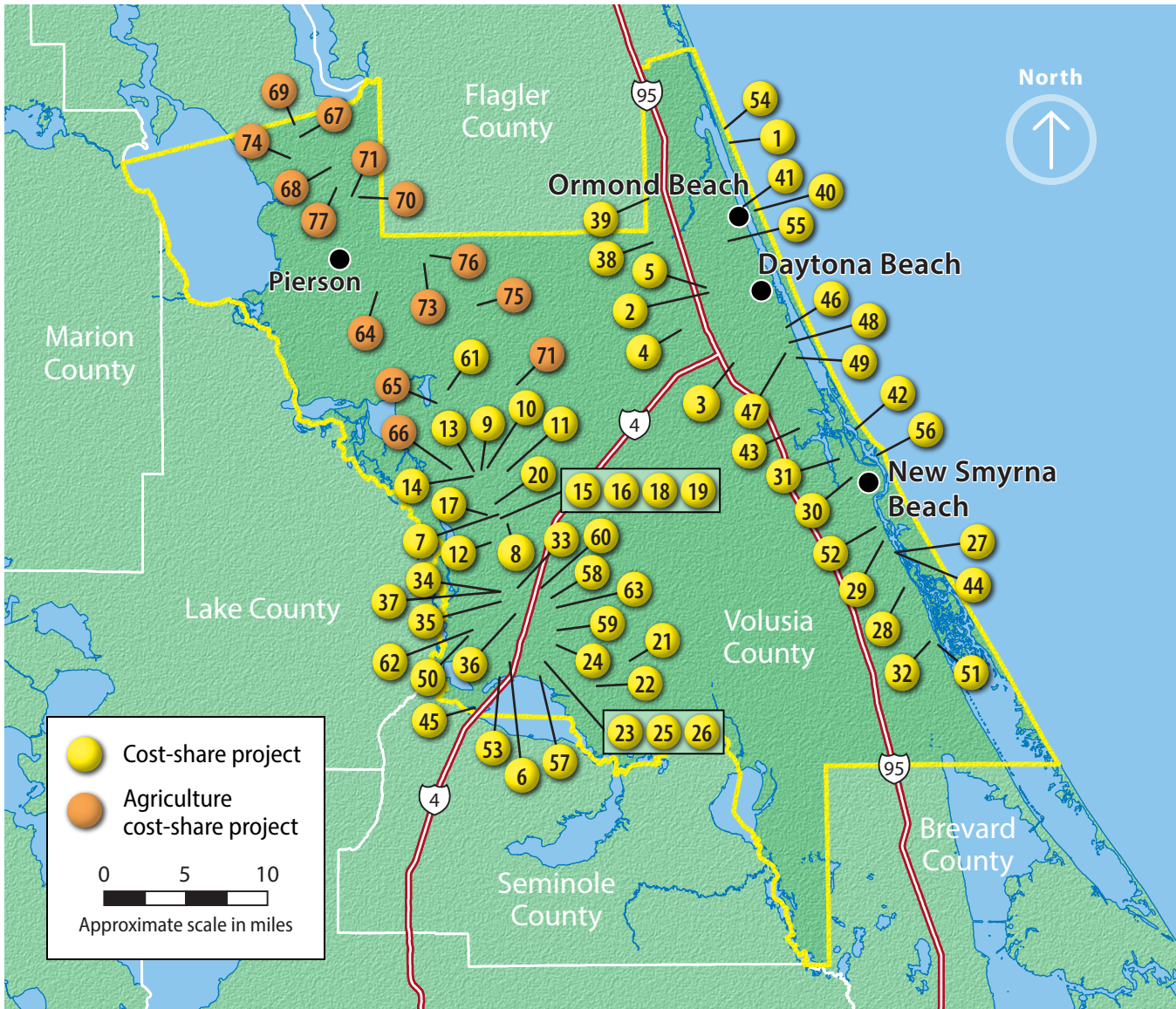
St. Johns River Water Management District

Cost-share and District-led projects in Volusia 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 Volusia 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 Volusia County.



Cost-Share Program:

Through the Cost-Share Program, the District and Florida Department of Environmental Protection (DEP) together have awarded approximately \$66.6 million for projects in communities throughout Volusia County beginning in fiscal year 2014, leveraging approximately \$227 million when combined with local matching funds. Volusia County cost-share projects have provided an estimated benefit of nearly 16.5 mgd of alternative water supply, 18.5 MG of storage capacity, 0.22 mgd of water conserved, nearly 229,000 lbs/yr TN reduction, 58,000 lbs/yr TP reduction, over 1,000 acres of flood protection, and 0.25 acres of wetlands improved.

- 1. Corinthian Villas Association Sewer Project** — The project includes the abandonment of an aging wastewater treatment facility (WWTF) and installation of a new lift station to connect to city sewer for a 36-unit condominium. The estimated nutrient load reduction water quality benefit to the Halifax River is 250 lbs/yr of TN and 250 lbs/yr of TP. Project Status: Complete.
- 2. Daytona Beach 2.5 MG Reuse Tank** — The project included construction of a 2.5 MG reclaimed water storage tank. The estimated water supply benefit is 2.5 MG reclaimed water storage capacity created. The estimated nutrient load reduction water quality benefit is 22,803 lbs/yr of TN and 7,601 lbs/yr of TP. Project Status: Complete.
- 3. Daytona Beach Bennett Swamp Rehydration and Conservation** — The project included installation of 19,000 linear feet (LF) of pipe, dispersal units, and over 50 flow regulating valves and meters to disperse treated reclaimed water from the city's Westside Regional Wastewater Treatment Plant (WWTP) into 1,100 acres of the Bennett Swamp (a forested wetland) at an average annual rate of 6 mgd. The estimated nutrient load reduction water quality benefit to the Halifax River is 54,000 lbs/yr of TN and 18,000 lbs/yr of TP. Project Status: Complete.

- 4. Daytona Beach Potable Reuse Demo Testing Facility** — This project included the construction of a demonstration test facility that will use full scale equipment to purify treated effluent to potable standards. Project Status: Complete.
- 5. Daytona Beach Williamson Boulevard Reuse** — The project included the installation of approximately 2,200 LF of reclaimed water line on Williamson Boulevard between Dunn Avenue and Mason Avenue in Daytona Beach. The project will fill in the gaps of existing lines, serving large industrial and multifamily customers. The estimated nutrient load reduction water quality benefit is 5,918 lbs/yr of TN and 1,792 lbs/yr of TP. The project is also estimated to provide an alternative water supply benefit of 0.65 mgd. Project Status: Complete.
- 6. Debary Woodbound Lake Outfall Improvements** — The project included the installation of a new intake structure to serve Woodbound Lake and an associated 30-inch intake line, an underground pump station; and extension of an existing 12-inch PVC force main (approximately 1,300 ft) from a point of connection on DeLeon Road to Lake Charles. The estimated flood protection benefit is 37 acres. Project Status: Complete.
- 7. DeLand Alabama Avenue Reclaimed Water (RCW) Main Extension** — The project included the installation of 4,800 LF of reclaimed water main within Volusia Blue Spring springshed. The estimated alternative water supply benefit is 0.175 mgd. Project Status: Complete.
- 8. DeLand Bio-Sorption Activated Media in a Rapid Infiltration Basin (RIB)** — This innovative pilot project included installing biosorptive activated media (BAM) in half of a RIB and using the other half as control to evaluate nitrate reduction in infiltrated wastewater effluent. Project Status: Complete.

- 9. DeLand NW Reclaimed Water Ground Storage Tank and Pump Station** — The project included construction of a 2 MG ground storage tank and 4,200 gallon/minute pump station. The estimated water supply benefit is 2 MG reclaimed water storage capacity created. Project Status: Complete.
- 10. DeLand Reclaimed Water Main Extension Phase 1** — The project included installing a reclaimed water main within existing developed areas for irrigation purposes. The estimated alternative water supply benefit is 0.115 mgd. Project Status: Complete.
- 11. DeLand Reclaimed Water Main Extension Phase 2B** — The project included installing a reclaimed water main within existing developed areas currently irrigating with potable water. The estimated alternative water supply benefit is 0.127 mgd. Project Status: Complete.
- 12. DeLand RCW Main Extension Phase 3 and 3A** — The project involved the installation of a 6-inch reclaimed water main through the Crystal Cove subdivision (145 homes) and installation of a 12-inch line along McGregor Road from Woodland Boulevard to Crystal Cove Boulevard. The project also included installation of reclaimed water mains throughout the Alexandria Pointe subdivision (94 homes). The estimated alternative water supply benefit is 0.140 mgd. The project is also estimated to provide a nutrient load reduction water quality benefit of 3,444 lbs/yr of TN and 430 lbs/yr of TP. Project Status: Complete.
- 13. DeLand Reclaimed Water System Expansion Phase 4A** — The project included construction of approximately 17,300 LF of reclaimed water main extension to serve new customers. By using lower quality reclaimed water for irrigation, the project provides a reduction in fresh groundwater withdrawals within the Volusia Blue Spring Priority Focus Area (PFA). The estimated alternative water supply benefit to Volusia Blue Spring is 0.3 mgd. Project Status: Complete.
- 14. DeLand Reclaimed Water Main Extension Phase 5** — The project includes the installation of approximately 4,700 LF of reclaimed water main and 13,500 LF of reclaimed distribution main to serve the Cross Creek subdivision and community park. The estimated alternative water supply benefit is 1.47 mgd. Project Status: In Progress.
- 15. DeLand Reclaimed Water Retrofit, Part B and Wiley Nash Water Reclamation Facility (WRF) Upgrades** — The project included installation of additional filtration facilities to treat surface water from the St. Johns River for augmentation of existing reuse supplies. The estimated alternative water supply benefit is 2mgd. Project Status: Complete.
- 16. DeLand Reclaimed Water Storage and Recovery** — The project included installing a reclaimed water transmission main from a wastewater treatment plant on South Amelia Avenue to stormwater reservoirs A and B. The estimated alternative water supply benefit is 0.164 mgd. Project Status: Complete.
- 17. DeLand Spring Hill Septic-to-Sewer Conversion** — The project included installation of approximately 8,000 LF of gravity sewer, a sewage lift station and provision of sanitary services to approximately 180 existing properties. The estimated nutrient load reduction water quality benefit is 1,856 lbs/yr of TN. Project Status: Complete.
- 18. DeLand St. Johns River Filtration System Upgrades** — The project involved upgrading the existing pump station at the St. Johns River. Additionally, one automatic backwash filter will be upgraded to match the other two that were funded previously via the cost-share program. The estimated alternative water supply benefit is 1.5 mgd. Project Status: Complete.
- 19. DeLand Wastewater Treatment Plant Upgrades** — The project included modifying an existing wastewater treatment plant aeration and instrumentation system to provide higher nutrient removal efficiency. The estimated nutrient load

reduction water quality benefit to the Volusia Blue springshed is 35,000 lbs/yr of TN.

Project Status: Complete.

20. DeLand Wiley M. Nash Water Reclamation Facility Upgrades —

The project consists of process upgrades to advanced wastewater treatment (AWT) standards, including a 5.0 mgd 5-stage oxidation ditch, conversion of the existing three carrousel processes, new influent pump station, and a de-grit and splitter facility, that will accommodate future expansion to 12.5 mgd. The estimated nutrient load reduction water quality benefit is 28,479 lbs/yr of TN and 6,328 lbs/yr of TP. Project Status: In Progress.

21. Deltona Howland Boulevard Phase 3 Reclaimed Water —

The project included construction of a reclaimed water main extension along Howland Boulevard from State Road (SR) 415 Elkcam Boulevard. The estimated alternative water supply benefit to the Upper Floridan aquifer is 2 mgd. Project Status: Complete.

22. Deltona Doyle Road Doyle Road RCW Interconnect—

The project included construction of an interconnect between the Deltona Lakes Water Reclamation Facility and the proposed Eastern Facility. The estimated alternative water supply benefit is 0.81 mgd. Project Status: Complete.

23. Deltona Reclaimed Pumping and Storage Expansion Project (Alexander Avenue WRF Phase 1) —

The project included the installation of a new reclaimed water pump station and a reclaimed water ground storage tank at the Alexander Avenue Water Resources Facility. The estimated alternative water supply benefit is 1 MG reclaimed water storage capacity created. Project Status: Complete.

24. Deltona Reclaimed Water Retrofits —

The project included the retrofitting of three existing residential neighborhoods (421 units) and one sports complex to replace potable water for irrigation with reclaimed water

distribution mains. The estimated alternative water supply benefit to the Volusia Blue springshed is 0.41 mgd and the estimated nutrient load reduction water quality benefit is 1,126 lbs/yr TN. Project Status: Complete.

25. Deltona Storage and Treatment Improvements (Alexander Avenue WRF Phase 2) —

The overall project included construction of a 3 MG raw water storage tank for stormwater, a 1 MG reclaimed surface water storage tank, and other improvements. The estimated water supply benefit for this phase of the project is 4 MG storage capacity created. Project Status: Complete.

26. Deltona Aquifer Recharge: Phase 1 —

The project involved the construction of an exfiltration trench with 4,500 LF of drainpipe, control valves, concrete splitter boxes, and piezometers. The trench accepts up to 1.0 mgd of reclaimed water, treated surface water and stormwater. The estimated alternative water supply benefit to Volusia Blue Spring is 0.23 mgd. Project Status: Complete.

27. Edgewater East Thomas Street Septic Elimination —

This project involved the installation of a gravity sewer pipe and connections to 32 existing homes and residential lots on East Thomas Street between the intersections of 2nd and 4th Streets. The estimated nutrient load reduction water quality benefit is 1,498 lbs/yr of TN and 257 lbs/yr of TP. Project Status: Complete.

28. Edgewater Reclaimed Extension to Meadow Lake and Woodbridge —

The project included installation of 5,000 LF of reclaimed water line to Meadow Lake and Woodbridge subdivisions to provide reclaimed water for residential irrigation to 188 single family residents and disconnecting potable supply to the central irrigation system. The estimated alternative water supply benefit is 0.2 mgd. In addition, the estimated nutrient load reduction water quality benefit is 1,828 lbs/yr of TN and 609 lbs/yr of TP. Project Status: Complete.

29. Edgewater Reclaimed Water Quality

Reservoir — The project included construction of a new reuse storage reservoir, wetland outfall, and extending reclaimed water mains to an existing subdivision and two planned undeveloped subdivisions. The estimated nutrient load reduction water quality benefit is 4,929 lbs/yr of TN and 1,643 lbs/yr of TP. In addition, the estimated alternative water supply benefit is 0.6 mgd. Project Status: Complete.

30. New Smyrna Beach Canal C-05 Diversion

Structure and Offsite Pond — The project included construction of a low-flow diversion weir in the C-05 canal adjacent to an existing offline borrow pit back into the canal downstream of the diversion weir. The estimated nutrient load reduction water quality benefit is 1,300 lbs/yr of TN and 320 lbs/yr of TP. Project Status: Complete.

31. New Smyrna Beach Islesboro Stormwater Improvement Project

— The project included the construction of a watershed management collection and stormwater treatment system designed primarily for flood protection. The estimated nutrient load reduction water quality benefit is 602 lbs/yr of TN and 185 lbs/yr of TP and 446 acres of flood protection. Project Status: Complete.

32. Oak Hill Septic-to-Sewer: Area 1 — Indian Harbor Estates

— The project included the connection of 280 homes to centralized sewer. Oak Hill Indian Harbor Estates is adjacent to the Indian River Lagoon (IRL) and will abandon septic tanks and connect to 10,600 LF of sewer line. The estimated nutrient load reduction water quality benefit to the IRL is 2,883 lbs/yr of TN. Project Status: Complete.

33. Orange City Alternative Water Supply

Conveyance System Monastery Road — The project consisted of installing approximately 2,000 LF of reclaimed water pipeline along with other necessary additional appurtenances on Monastery Road in Orange City. The project interconnects a city reclaimed water line to

the north on Graves Avenue and a WVWS regional line on east Rhode Island Avenue, south of Oakhurst Golf Estates. The estimated alternative water supply benefit is 0.27 mgd. Project Status: Complete.

34. Orange City Blue Spring Nutrient Reduction

— The project resulted in the installation of two nutrient removal devices (sedimentation baffle boxes); installation of two aeration systems; and excavation in the southern portion of Mill Lake to remove excessive amounts of muck. The estimated nutrient load reduction water quality benefit is 1,080 lbs/yr of TN and 299 lbs/yr of TP. Project Status: Complete.

35. Orange City Industrial Drive Flood Control and Water Quality Enhancement

— The project includes the installation of properly sized reinforced concrete pipe culverts, a pump station, a stormwater force main, and improvement of an existing stormwater pond to alleviate flooding in the area. The estimated flood protection benefit is approximately 104 acres. Project Status: Not Started.

36. Orange City Reclaimed Water Main and Water Meters

— The project included construction of a reclaimed water main extension along Veteran's Memorial Parkway from Halifax Health Hospice to Harley Strickland Boulevard. The estimated alternative water supply benefit is 0.25 mgd. Project Status: Complete.

37. Orange City Volusia Blue Spring Septic-to-Sewer

— The project includes building two lift stations with collection systems and abandoning 27 septic tanks. The estimated nutrient load reduction water quality benefit to Volusia Blue Spring is 199 lbs/yr TN. Project Status: In Progress.

38. Ormond Beach Breakaway Trails RCW

— The project included construction of a ground storage tank and a high service pump station with three variable frequency drive high service pumps. The estimated water supply benefit is 2 MG reclaimed water storage capacity

created. In addition, the estimated nutrient load reduction water quality benefit to the Halifax River is 3,175 lbs/yr of TN and 1,059 lbs/yr of TP. Project Status: Complete.

- 39. Ormond Beach Reclaimed Water Supply and Storage** — The project includes construction of a 2 MG ground storage tank and pump/ filtration station and extending a reclaimed water main from its existing terminus to the proposed reclaimed water storage site. The estimated nutrient load reduction water quality benefit to the Halifax River is 6,790 lbs/yr of TN and 594 lbs/yr of TP and the estimated water supply benefit is 2 MG reclaimed water storage capacity created. Project Status: Not Started.
- 40. Ormond Beach South Peninsula Reclaimed Water Expansion** — The project included the expansion of the city's reclaimed water distribution network to an additional 653 properties. The estimated alternative water supply benefit is 0.56 mgd. Project Status: Complete.
- 41. Ormond Beach Stormwater Outfall Flood Protection** — The project includes the installation of one-way flow valves that prohibit high tides from entering the outfall pipes and flooding neighborhoods as the Halifax River Crests. Installation of these check valves in the flood prone locations will reduce the effect of tidal flooding. The estimated flood protection benefit is 161 acres. Project Status: In Progress.
- 42. Ponce Inlet Ponce De Leon Circle Septic-to-Sewer** — The project included construction of approximately 1,200 LF of 8-inch gravity sewer, 1,300 feet of force main, manholes, a lift station, and abandonment of up to 24 septic tanks with connection of those parcels to sanitary sewer in the Town of Ponce Inlet. The estimated nutrient load reduction water quality benefit to the Halifax River is 161 lbs/yr of TN. Project Status: Complete.
- 43. Port Orange White acres Utilities Improvements** — The project included installation of a gravity collector system and

replacing ditches with pipe and swales for stormwater treatment in a 47-acre low- and moderate-income residential development that currently has onsite septic systems and open ditches for stormwater conveyance and no treatment. The estimated nutrient load reduction water quality benefit is 3,121 lbs/yr of TN and 532 lbs/yr of TP. Project Status: Complete.

- 44. Riverside Conservancy Living Shoreline** — The project included the restoration of one quarter mile of living shoreline within southeast Volusia County, including the planting of mangroves and salt marsh plants and placement of oyster reef modules. The estimated benefit is 0.25 acres of wetlands restored or improved. Project Status: Complete.
- 45. Sanford and Volusia County Reclaimed Interconnect — Volusia Portion** — The project included construction of an interconnect between Sanford's reclaimed water distribution systems and Volusia County. The estimated alternative water supply benefit is 1.3 mgd. Project Status: Complete.
- 46. South Daytona Jones Street Stormwater Improvement** — The project included construction of a wet detention system for water quality improvements and to reduce localized flooding along Jones Street. The estimated nutrient load reduction water quality benefit is 79 lbs/yr of TN and 39 lbs/yr of TP. The estimated flood protection benefit is 1.4 acres. Project Status: Complete.
- 47. South Daytona Lantern Park Stormwater Pond** — The project involved the construction of a stormwater pond to provide storage volume and reduce nutrient runoff. The estimated nutrient load reduction water quality benefit to the Halifax River is 167 lbs/yr of TN and 81 lbs/yr of TP. Project Status: Complete.
- 48. South Daytona Septic-to-Sewer** — The project involved the abandonment of 184 septic systems and connection to the city's sewer

system. The estimated nutrient load reduction water quality benefit to the Halifax River is 2,044 lbs/yr of TN. Project Status: Complete.

- 49. South Daytona Windle Lane Stormwater Improvements** — The project included excavating and connecting two existing stormwater ponds, installing a pump station to aid in recovery during and after major storm events, and an outfall structure to stop tailwater from backing up in Reed Canal. The estimated nutrient load reduction water quality benefit is 70 lbs/yr of TN and 34 lbs/yr of TP and flood protection to a 50-acre residential area. Project Status: Complete.
- 50. Volusia County Advanced Wastewater Treatment for the Protection of Blue Spring** — The project involved expansion in capacity and improvement in treatment level to increase nitrogen removal from the Volusia County Southwest Regional water reclamation facility. The project also includes decommissioning the Four Towns wastewater package plant and directing the wastewater to the regional facility for advanced wastewater treatment. The estimated nutrient load reduction water quality benefit to Volusia Blue Spring is 27,000 lbs/yr of TN and 14,000 lbs/yr of TP, and an estimated alternative water supply benefit of 0.22 mgd. Project Status: Complete.
- 51. Volusia County Ariel Canal Water Quality Improvement** — The project included retrofitting an existing stormwater facility. The project will divert stormwater and base flow from Ariel Canal into a wet detention pond then route it to a BAM (biologically active media) treatment area. The estimated nutrient load reduction water quality benefit is 1,300 lbs/yr of TN and 201 lbs/yr of TP. Project Status: Complete.
- 52. Volusia County Gabordy Canal and 10th Street** — The project included the pumping of stormwater from the Gabordy Canal through a 2-acre treatment facility consisting of a 1-ft layer of sand and a 2-ft layer of BAM for denitrification and phosphorus absorption. The estimated nutrient load reduction water quality benefit is 4,300 lbs/yr of TN and 290 lbs/yr of TP. Project Status: Complete.
- 53. Volusia County Gemini Springs Baffle Box** — The project included the construction of two nutrient separating baffle boxes along Dirksen Drive in Volusia County, upstream of the marsh inflow to Gemini Springs Run. It will provide treatment for a 208-acre drainage basin. The estimated nutrient load reduction water quality benefit to the Gemini springshed is 854 lbs/yr of TN and 133 lbs/yr of TP. Project Status: Complete.
- 54. Volusia County North Peninsula Force Main** — The project included constructing a force main along SR A1A from Spanish Waters to Ocean Grove Drive. The estimated alternative water supply benefit is 0.01 mgd. The estimated nutrient load reduction water quality benefit is 3,900 lbs/yr of TN and 1,300 lbs/yr of TP. Project Status: Complete.
- 55. Volusia County Rio Way Drainage Improvements** — The project involved the expansion of the existing Riviera Oaks stormwater pond that connects to another pond on Rio Way. The project also includes the reconstruction of the Riviera Oaks stormwater control structure to attenuate extreme storm events and treat base flows. The estimated nutrient load reduction water quality benefit is 127 lbs/yr of TN and 34 lbs/yr of TP and provides flood protection to a 129-acre area. Project Status: Complete.
- 56. Volusia County Smyrna Dunes Park Septic-to-Sewer** — The project consisted of the abandonment of the septic tank and drain-field serving the public restroom facility located at Smyrna Dunes Park and installation of a lift station and sanitary sewer connection. The estimated nutrient load reduction water quality benefit is 163 lbs/yr of TN. Project Status: Complete.

- 57. Volusia County Thornby Park Stormwater Improvements** — The project included installing an upflow filter with adsorption media downstream of an existing wet-detention pond that serves Debarry Avenue and installing a nutrient separating baffle box along Providence Boulevard. The estimated nutrient load reduction water quality benefit to Lake Monroe is 183 lbs/yr of TN and 24 lbs/yr of TP. Project Status: Complete.
- 58. Volusia County Wastewater Infrastructure for Blue Spring** — The project included the construction of a master lift station and 3 miles of 12-inch force main from the Volusia County Del North wastewater treatment plant and connection to the Volusia County Southwest Regional Water Reclamation Facility for advanced wastewater treatment. The estimated nutrient load reduction water quality benefit to Blue Spring is 6,390 lbs/yr of TN and 2,065 lbs/yr of TP and an estimated alternative water supply benefit of 0.05 mgd. Project Status: Complete.
- 59. Volusia County Water Conservation** — This project included implementation of a water conservation infrastructure for Volusia County Utilities. The Sensus Flexnet system will be installed on production wells and flushing units to assist in the reduction of unaccounted for water use. The estimated water conservation benefit is 0.22 mgd. Project Status: Complete.
- 60. Volusia RCW Main Extension for I-4/SR 472 Activity Center** — The project included the construction of a reclaimed water main along Normandy Boulevard north to the Graves Avenue/Howland Boulevard intersection within the Volusia Blue Spring springshed. The estimated alternative water supply benefit is 0.1 mgd. Project Status: Complete.
- 61. Volusia School Board McInnis School Sewer Improvements** — The project includes decommissioning and demolishing an existing package plant at McInnis Elementary School, decommissioning two rapid infiltration basins

that serve the plant, and constructing a force main to connect to a new master lift station. The estimated nutrient reduction water quality benefit to DeLeon Springs is 50 lbs/yr of TN and the estimated alternative water supply benefit is 0.01 mgd. Project Status: Complete.

- 62. Volusia Southwest Regional Wastewater Reclamation Facility Improvements** — The project involves the construction of a lift station, 1.5 MG equalization basin, headworks facility, 5.0 MG ground storage tank, high service pumps, and associated piping. The estimated water supply benefit is 5 MG reclaimed water storage capacity created and the alternative water supply benefit to the Volusia-Blue springshed is 0.39 mgd. The estimated nutrient load reduction water quality benefit is 364 lbs/yr of TN. Project Status: Not Started
- 63. West Volusia Water Suppliers Reclaimed Water Interconnect** — The project included construction of an interconnect to the reuse distribution systems of the cities of DeLand, Deltona, and Volusia County. The estimated alternative water supply benefit is 2.5 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 2015, the District and DEP have provided \$544,000 in funding for agricultural projects in Volusia County. Volusia County agricultural cost-share projects have provided an estimated benefit of 0.02 million gallons per day (mgd) of alternative water supplied, 0.17 mgd of water conservation, 2,300 lbs/yr TN reduction, and 600 lbs/yr TP reduction.

- 64. Alpha Fern Company Irrigation Retrofit** — This project involved an irrigation retrofit on approximately 25 acres of fern nursery benefitting the middle St. Johns River. The estimated water conservation

benefit is 0.010 mgd and the estimated nutrient load reduction water quality benefit is 80 lbs/yr of TN and 21 lbs/yr of TP.
Project Status: Complete.

- 65. Alpha Fern Company Irrigation Retrofit and Pump Controllers** — This project involved an irrigation retrofit with pump controllers with rain sensors on approximately 11 acres of cut foliage benefitting DeLeon Spring and the middle St. Johns River. The estimated water conservation benefit is 0.067 mgd and the estimated nutrient load reduction water quality benefit is 18 lbs/yr of TN and 2 lbs/yr of TP.
Project Status: Complete.
- 66. Donaldsons Ornamentals Inc. Irrigation Retrofit** — This project involved an irrigation retrofit on 19.63 acres of fern nursery, converting from older, less-efficient sprinklers to newer more-efficient nozzles and risers benefitting Volusia Blue Spring. The estimated water conservation benefit is 0.019 mgd and estimated nutrient load reduction water quality benefit is 96 lbs/yr of TN and 25 lbs/yr of TP.
Project Status: Complete.
- 67. Hammond Station Growers Irrigation Retrofit** — This project involved retrofitting sprinklers and risers on approximately 25 acres of fern benefitting the lower St. Johns River. The estimated water conservation benefit is 0.012 mgd and the estimated nutrient load reduction water quality benefit is 101 lbs/yr of TN and 61 lbs/yr of TP.
Project Status: Complete.
- 68. J & A Land Company Irrigation Retrofit** — This project involves an irrigation retrofit on approximately five acres of cut foliage benefitting the Middle St. Johns River Basin. The estimated water conservation benefit is 0.007 mgd. The estimated nutrient load reduction water quality benefit is 33 lbs/yr of TN and 33 lbs/yr of TP.
Project Status: Complete.

- 69. James Register Farm Irrigation Retrofit** — This project involved an irrigation retrofit to improve efficiency on 18.7 acres of cut foliage benefitting Crescent Lake. The estimated water conservation benefit is 0.023 mgd and the estimated nutrient load reduction water quality benefit is 104 lbs/yr of TN and 27 lbs/yr of TP.
Project Status: Complete.
- 70. Legacy Farms and Ornamentals** — This project involved converting from overhead sprinklers to center pivot irrigation on approximately 15 acres of hay benefitting the lower St. Johns River. The estimated water conservation benefit is 0.019 mgd and the estimated nutrient load reduction water quality benefit is 41 lbs/yr of TN and 2 lbs/yr of TP.
Project Status: Complete.
- 71. Legacy Farms and Ornamentals Emitter and Pump Installation** — This project involved an irrigation retrofit on approximately 18 acres of woody ornamentals benefitting the lower St. Johns. The estimated water conservation benefit is 0.008 mgd and the estimated nutrient load reduction water quality benefit is 16 lbs/yr of TN and 2 lbs/yr of TP.
Project Status: Complete.
- 72. Select Growers Inc. Nutrient Application Sprayer** — This project involved the purchase and implementation of precision nutrient application equipment benefitting the middle St. Johns. The estimated nutrient load reduction water quality benefit is 506 lbs/yr of TN and 100 lbs/yr of TP. Project Status: Complete.
- 73. The Magnolia Company Drain Tile, Retention Pond, Sensors and Water Pump** — This project involved the installation of drain tile and soil moisture sensors and the creation of a 1.5-acre tailwater recovery and reuse pond benefitting the lower St. Johns River. The estimated alternative water supplied is 0.02 mgd and the estimated nutrient load reduction water quality benefit is 84 lbs/yr of TN and 28 lbs/yr of TP. Project Status: Complete.

- 74. Tollison Foliage Precision Fertilizer Applicator** — This project involved the purchase and implementation of precision fertilizer application equipment for approximately 29 acres of tree fern benefiting upper and lower Lake Louise. The estimated nutrient load reduction water quality benefit is 203 lbs/yr of TN and 53 lbs/yr of TP. Project Status: Complete.
- 75. Underhill Ferneries Irrigation Retrofit** — This project involved converting approximately 24 acres of fern to a more-efficient sprinkler system benefitting the lower St. Johns River. The estimated water conservation benefit is 0.008 mgd and the estimated nutrient load reduction water quality benefit is 61 lbs/yr of TN and 16 lbs/yr of TP. Project Status: Complete.
- 76. Underhill Ferneries Precision Fertilizer** — This project involved the purchase and implementation of precision fertilizer application equipment benefitting the lower St. Johns River. The estimated nutrient load reduction water quality benefit is 945 lbs/yr of TN and 248 lbs/yr of TP. Project Status: Complete.
- 77. William Barrie Ferneries Irrigation Retrofit** — The project replaced an existing irrigation system for a 5.25-acre property with a more efficient irrigation system. The estimated water conservation benefit is 0.001 mgd and the estimated nutrient load reduction water quality benefit is 8 lbs/yr of TN and 2 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 efforts in Volusia County include:

Volusia Prevention and Recovery Strategy (VPRS)

— In January 2022, the District joined partners and interested stakeholders in celebrating the

groundbreaking of a project that is integral to the success of the VPRS. The VPRS is a comprehensive strategy to protect Blue Spring and six Volusia County lakes from current and potential impacts of groundwater withdrawals, as part of the District's minimum flows and levels program. The strategy calls for groundwater withdrawals in the region to be maintained at or below sustainable limits, or for impacts from the withdrawals to be offset through reuse of reclaimed water, aquifer recharge and water supply projects, as well as through conservation and regulatory measures to protect water resources. The District and DEP contributed funding to various phases of the project. This final phase consists of the construction of a surface water pump station on Lake Monroe and a transmission line that will allow the city of Deltona to pump and treat up to 4 million gallons a day of surface water. This water will be used to not only supplement the city's reclaimed water system, but also allow them to provide any excess to other interconnected reclaimed water systems in the region and to recharge projects that would benefit Blue Spring.

Tiger Bay Canal weir — The weir across Tiger Bay Canal enhances recharge to the aquifer system, benefits nearby Indian Lake and decreases stormwater discharges to the Tomoka/Halifax river system. The weir is designed to hold an additional three feet of water in a wetland system that has been stressed by low water levels. Water stored by the weir will rehydrate the 150-acre wetland, enhance recharge to the Upper Floridan aquifer and directly benefit the hydrologically connected Indian Lake. Up to 3 million gallons of water per day (mgd) are projected to recharge the aquifer system and Indian Lake.

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 data-driven, 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 Volusia County, District properties include Buck Lake Conservation Area, Clark Bay Conservation Area, Crescent Lake Conservation Area, Heart Island Conservation Area, Lake George Conservation Area, Lake Monroe Conservation Area, Palm Bluff Conservation Area and Seminole Ranch Conservation Area. For a current listing of District conservation areas, visit www.sjrwmd.com/lands.

Project status as of February 2025



St. Johns River Water Management District

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