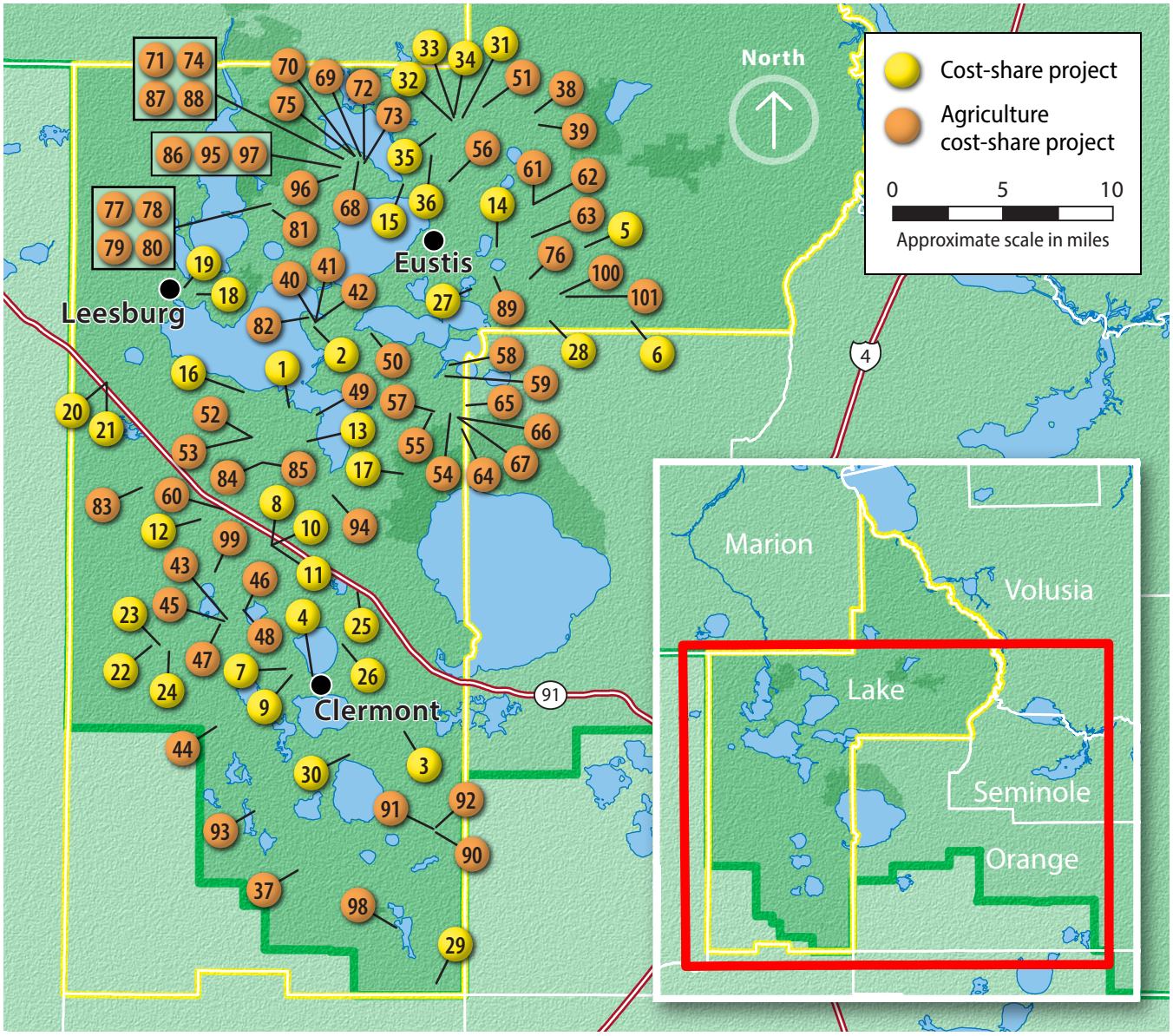
St. Johns River Water Management District

Cost-share and District-led projects in Lake 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 Lake 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 and other efforts benefitting the communities in Lake County.



Cost-Share Program:

In partnering with local communities throughout our 18-county district, important water projects are being completed every year. Through the Cost-Share Program, the District and Florida Department of Environmental Protection (DEP) together have awarded nearly $26.3 million for projects in communities throughout Lake County beginning in fiscal year 2015, leveraging approximately $79.2 million when combined with local matching funds. Lake County cost-share projects have provided an estimated benefit of 27 million gallons per day (mgd) of alternative water supply, nearly 1.6 million gallons (MG) of storage capacity, 0.23 mgd of water conserved, nearly 149,000 lbs/yr TN (total nitrogen in pounds per year [lbs/yr]) reduction, nearly 750 lbs/yr TP (total phosphorus) reduction, and 0.15 acres of flood protection.

1. **Bishop's Gate Septic-to-Sewer** — The project includes abandoning septic tanks and connecting to sewer for 74 single-family townhomes, a clubhouse, and offices (equivalent to 10 additional units), and connections for 126 future units. The estimated nutrient load reduction water quality benefit to Lake Harris is 2,162 lbs/yr of TN. Project Status: Complete.
2. **Caldwell Citrus Gorgeous Groves** — The project includes the installation of a pipeline and a meter for distributing reclaimed water from the City of Tavares to irrigate large plots of citrus groves. The estimated alternative water supply benefit is 0.11 mgd. Project Status: Complete.
3. **Clermont Sunburst Wells 1 and 2** — The project includes the construction and test of two wells into the Lower Floridan aquifer (LFA) that will provide new information on the geology and hydrogeology of the LFA in south Lake County. It will provide the potential to develop a source of groundwater for public supply uses that can diminish or reverse current adverse trends in the water table and other unacceptable impacts. The estimated alternative water supply benefit is 4.4 mgd. Project Status: Complete.
4. **Clermont Victory Pointe Stormwater Treatment Area** — The project includes constructing bioswales, an enhanced stormwater treatment pond, and a filter marsh. The estimated nutrient load reduction water quality benefit to Lake Minneola is 11 lbs/yr of TN and 52 lbs/yr of TP. Project Status: Complete.
5. **Eustis Eastern Wastewater Treatment Plant (WWTP) Expansion** — The project includes expansion of the City of Eustis' WWTP capacity to serve the Sorrento area. This capacity increase will provide wastewater treatment for planned construction and will therefore prevent the need to install septic tanks within the Wekiwa Springshed. The estimated nutrient load reduction water quality benefit to Wekiwa Spring is 91,378 lbs/yr of TN. The project will also result in an alternative water supply benefit of 1 mgd. Project Status: Complete.
6. **Florida Governmental Utility Authority (FGUA) Mount Plymouth WWTP Nutrient Reduction Improvements** — The project includes the construction of a WWTP capacity expansion and treatment upgrade of one treatment train within an existing, two-train package-plant at Mount Plymouth golf course. The redevelopment of the existing golf course will require additional wastewater treatment capacity. The estimated nutrient load reduction water quality benefit to Wekiwa Spring is 263 lbs/yr of TN. Project Status: Complete.
7. **Groveland Crystal Lake Reclaimed Water Improvements** — The project includes the rehabilitation of the existing surface water withdrawal system with a new intake structure, pumps, piping, controls, and a new lake weir system to manage storage and control discharge. The new system will be connected to the existing reclaimed water system. The estimated alternative water supply benefit is 0.08 mgd. Project Status: Complete.

8. **Groveland Eagle Ridge Reclaimed Water Distribution: Phase 3** — The project includes the construction of a reclaimed water transmission line from the north service area to the south service area. The estimated alternative water supply benefit is 1.5 mgd. Project Status: Complete.
9. **Groveland Eagle Ridge Water Distribution Facility: Phase 2** — The project includes construction for the Eagle Ridge Water Distribution Facility Phase 2, which is a critical regional project with Clermont, Mascotte, Minneola, and other local government partners, as part of the South Lake Initiative. The estimated alternative water supply benefit is 0.21 mgd. Project Status: Complete.
10. **Groveland Lower Floridan Reclaimed Water Well at Sunshine Road** — This project will consist of the drilling and development of one production well into the Lower Floridan aquifer to reduce existing and future reclaimed water demand from the Upper to Lower Floridan aquifer. The estimated alternative water supply benefit is 2.3 mgd. Project Status: In Progress.
11. **Groveland Silver Eagle Reclaimed Water Storage Tank** — The project includes construction of a storage tank for reclaimed water. The estimated alternative water supply benefit is 1.5 million gallon (MG) reclaimed water storage capacity created. Project Status: Complete.
12. **Groveland South Lake County Lower Floridan Wellfield** — This project will consist of the drilling and development of two production wells into the Lower Floridan aquifer to shift the demand from the Upper to Lower Floridan aquifer and support future water demands for the city. The estimated alternative water supply benefit is 4.3 mgd. Project Status: In Progress.
13. **Howey-in-the-Hills Lower Floridan Aquifer** — The project includes the construction of two Lower Floridan aquifer wells and necessary surface equipment at Howey-in-the-Hills water treatment plant. The estimated alternative water supply benefit to the Harris Chain of Lakes is 1 mgd. Project Status: Complete.
14. **Lake County Lake Joanna Stormwater Enhancements** — This project consists of the construction of a nutrient-separating baffle box with media filtration to provide additional nutrient removal prior to discharge into Lake Joanna. The estimated nutrient load reduction water quality benefit to Lake Joanna is 1,928 lbs/yr of TN and 220 lbs/yr of TP. Project Status: Complete.
15. **Lake County Lake Yale Marsh Park Stormwater Enhancement** — The project includes the construction of a linear water quality treatment pond at Marsh Park on Lake Yale. The pond will create additional storage and littoral shelves with a mix of wetland plants. The pond will provide treatment to existing stormwater flows from County Road 450 and the adjacent upland basin totaling approximately 66 acres. The estimated nutrient load reduction water quality benefit to Lake Yale is 94 lbs/yr of TN and 12 lbs/yr of TP. Project Status: Complete.
16. **Lake County Magnolia Lane Water Quality** — The project includes the retrofit of next generation water quality treatment baffle box to an existing subdivision drainage system on the shores of Lake Harris. The estimated nutrient load reduction water quality benefit to Lake Harris is 78 lbs/yr of TN and 12 lbs/yr of TP. Project Status: Complete.
17. **Lake Soil and Water Conservation District for Water Savings** — The project includes assistance with agricultural operations to reduce irrigation water consumption by implementing practices that include soil moisture indicators, rain sensors, and more efficient irrigation equipment. The estimated water conservation benefit is 0.13 mgd. Project Status: Complete.

18. **Leesburg Heritage Estates Stormwater Park** — This project includes the construction of a series of dry retention swales along a length of an abandoned railroad right-of-way within the Heritage Estates neighborhood. It is part of an effort to create a neighborhood amenity with adjacent trails and public use areas. The estimated nutrient load reduction water quality benefit is 75 lbs/yr of TN and 13 lbs/yr of TP. Project Status: Complete.
19. **Leesburg Lake Griffin Stormwater Improvements** — The project involves the construction of a wet detention pond and its incorporation into an on-site forested wetland of 0.5-acre. Water quality benefit 150 lbs/yr of TN and 36 lbs/yr of TP. Project Status: Complete.
20. **Leesburg Turnpike Wastewater Facility Water Quality Improvements** — The project includes the construction of WWTF treatment upgrades that improve water quality being discharged to the WWTF sprayfield. The improvements result in nutrient load reductions to nearby surface water features. The estimated nutrient load reduction water quality benefit to Okahumpka Swamp and Little Lake Harris is 18,265 lbs/yr of TN. Project Status: Complete.
21. **Leesburg Turnpike Wastewater Treatment Facility Nuvoda Full Scale Pilot** — The project includes the introduction of Nuvoda Mobile Organic Biofilm into an existing wastewater treatment facility to assess if treatment efficiency of the facility is improved. The estimated nutrient load reduction water quality benefit to Lake Harris and Little Lake Harris is 18,265 lbs/yr of TN. Project Status: Not Started.
22. **Mascotte Lower Floridan Aquifer Wellfield (REDI)** — This project consists of drilling and development of two Lower Floridan aquifer wells co-located at an existing UFA wellfield to provide potable water for the City of Mascotte. The estimated alternative water supply is 3.45 mgd. Project Status: Complete.
23. **Mascotte State Road 50 (SR 50) Water Main Replacement: Phase 1 (REDI)** — The project consists of the replacement of 7,800 linear feet (LF) of old cast iron water main with PVC pipe. The estimated water conservation benefit is 0.05 mgd. Project Status: Complete.
24. **Mascotte SR 50 Water Main Replacement: Phase 2 (REDI)** — The project includes the replacement of approximately 5,500 LF of water main along SR 50 from west of Sunset Avenue to west of Palmwood Avenue. The estimated water conservation benefit is 0.05 mgd. Project Status: Complete.
25. **Minneola AWS Reclaimed Water Project** — The project includes the installation of 4,000 LF of 12-inch diameter piping, pumps and a backup process water source (Upper Floridan) at a wastewater treatment plant owned by the city of Minneola. The estimated alternative water supply benefit is 0.5 mgd and 0.07 MG of storage capacity created. Project Status: In Progress.
26. **Minneola Septic-to-Sewer: Phase 1** — The project involves the construction of sewer infrastructure with transmission, force mains and lift station, and abandoning 54 septic tanks and connecting to sewer. The estimated nutrient reduction water quality benefit to the Ocklawaha River is 1,218 lbs/yr of TN. Project Status: Complete.
27. **Mount Dora Overlook Baffle Box on Lake Gertrude** — The project includes installation of a baffle box prior to outfall into Lake Gertrude and Lake Dora. The estimated nutrient load reduction water quality benefit is 42 lbs/yr of TN and 10 lbs/yr of TP. Project Status: Complete.
28. **Mount Dora Reclaimed Water Interconnect with Apopka** — The project involves the installation of a reclaimed water interconnect between the cities of Mount Dora and Apopka. It provides additional reclaimed water for both cities and connects Mount Dora to the

other interconnecting utilities. The estimated alternative water supply benefit is 3 mgd. Project Status: Complete.

29. **Southlake Utilities Alternative Water Source for Irrigation** — The project includes converting an Upper Floridan aquifer well to the Lower Floridan aquifer (a lower quality water source) for irrigation supply. The estimated alternative water supply benefit is 0.55 mgd. Project Status: Complete.

30. **Sunshine Water Services Oranges Lower Floridan Aquifer Well** — This project includes the replacement of an existing Upper Floridan aquifer water supply well with a new Lower Florida aquifer well withing the Central Florida Water Initiative, an area of limited groundwater supply from the Upper Floridan. The estimated alternative water supply benefit is 4 mgd and will reduce withdrawals from the Upper Florida aquifer by 0.33 mgd. Project Status: In Progress.

31. **Umatilla Cassady Street Drainage Project** — The project includes the construction of inlets on each side of Cassady Street to eliminate roadway flooding. The project will prevent flooding for a 0.15-acre area along Cassady Street. Project Status: Complete.

32. **Umatilla Central Avenue Lift Station** — The project includes construction of a new lift station and force main to replace the existing lift station and force main. The estimated nutrient load reduction water quality benefit to Lake Enola is 38 lbs/yr of TN and 7 lbs/yr of TP. Project Status: In Progress.

33. **Umatilla Sanitary Sewer and Lift Station** — The project consists of smoke testing the entire sewer system to determine the locations of Inflow and Infiltration, repair those leaks, and purchase backup generators for three lift stations. The estimated nutrient load reduction water quality benefit is 1,932 lbs/yr of TN and 386 lbs/yr of TP. Project Status: Complete.

34. **Umatilla Wastewater Collection System Rehabilitation: Phase 1** — The project includes rehabilitation of the city's sewer collection system, bringing them up to current design standards, repairing structures to eliminate leaks, replace corroded piping, and providing backup power. The estimated nutrient load reduction water quality benefit is 3,055 lbs/yr of TN. Project Status: Complete.

35. **Umatilla Wastewater Collection Rehabilitation: Phase 2** — The project includes lining and upgrading seven dilapidated lift stations to prevent exfiltration of raw sewage and infiltration of groundwater, including upgrades to the pumping, controls, and piping of the stations. The estimated nutrient load reduction water quality benefit is 1,971 lbs/yr of TN Project Status: Complete.

36. **Umatilla Wastewater Interconnection Pipeline** — The project includes construction of a wastewater interconnection pipeline between the cities of Umatilla and Eustis to allow wastewater generated in Umatilla to be pumped to the Eustis Advanced Wastewater Treatment (AWT) facility for treatment. The project also includes the decommissioning of the aging Umatilla WWTF. The estimated alternative water supply benefit is 0.16 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 7,800 lbs/yr of TN. 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 nearly $4.8 million in funding for an agricultural project in Lake County. Lake County agricultural cost-share projects have provided an estimated alternative water supply benefit of 0.83 mgd, 2.7 mgd of water conservation, 85,000 lbs/yr TN reduction, and 15,000 lbs/yr TP reduction. The following cost-share project list provides a description for each project and provides a description of benefits for

each project, including nutrient load reduction (total phosphorus [TP], total nitrogen [TN] per year [yr]) or alternative water supplied in million gallons per day [mgd]).

37. **5-D Blueberry GPS Rate Controlled Fertilizer Application Equipment** — This project includes the purchase and implementation of GPS rate-controlled fertilizer application equipment on approximately 70 acres of blueberries. The estimated annual nutrient loading reduction water quality benefit to the Upper Ocklawaha is 717 lbs/yr of TN and 105 lbs/yr of TP. Project Status: Complete.

38. **Benchmark Farms Center Pivot Field 1** — This project involves the installation of a center pivot and variable frequency drive pump to replace seepage irrigation and traveler sprinklers on approximately 126 acres of sod benefitting the Middle St. Johns River Basin. The estimated conservation is 0.103 mgd. The estimated nutrient load reduction water quality benefit is 658 lbs/year of TN and 72 lbs/year of TP. Project Status: Complete.

39. **Benchmark Farms Center Pivot Field 2** — This project involves converting from hard hose traveler to center pivot irrigation on approximately 40 acres of sod benefitting the Middle St. Johns River Basin. The estimated water conservation benefit is 0.008 mgd. The estimated nutrient load reduction water quality benefit is 65 lbs/yr of TN and 7 lbs/yr of TP. Project Status: Complete.

40. **Caldwell Citrus Groves Irrigation Retrofit** — This project involves performing an irrigation retrofit on an existing microjet system to install drip irrigation on approximately 103 acres of citrus benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.04 mgd. The estimated nutrient load reduction water quality benefit is 185 lbs/yr of TN and 41 lbs/yr of TP. Project Status: Complete.

41. **Caldwell Citrus Groves Precision Fertilizer Equipment** — This project involves the purchase and implementation of a mobile fertilizer system for use on approximately 103 acres of citrus benefitting Lake Harris and the Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 265 lbs/yr of TN and 58 lbs/yr of TP. Project Status: Complete.

42. **Caldwell Citrus Groves Variable Rate Fertilizer** — This project involves the purchase and implementation of a fertilizer spreader with Tree See technology and liquid fertilizer injection system for use on approximately 102 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 1,628 lbs/year of TN and 292 lbs/year of TP. Project Status: Complete.

43. **Cherrylake, Inc., Irrigation Retrofit** — This project involves performing an irrigation retrofit on the current micro-emitter system to enable selective shut-off of individual emitters as trees are harvested on approximately 694 acres of container nursery. The project benefits the Palatlakaha River and Ocklawaha River Basin. The estimated water conservation is 0.3 mgd. The estimated nutrient load reduction water quality benefit is 861 lbs/year of TN and 428 lbs/year of TP. Project Status: Complete.

44. **Cherrylake, Inc., Irrigation Retrofit and Weather Station** — This project involves the purchase and installation of a micro-emitter irrigation system and weather station benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.011 mgd. The estimated nutrient load reduction water quality benefit is 70 lbs/yr of TN and 8 lbs/yr of TP. Project Status: Complete.

45. **Cherrylake, Inc., Pressure Regulation** — This project involves updating irrigation valves and improving pressure regulation on approximately 1,102 acres of container

nursery benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.3 mgd. The estimated nutrient load reduction water quality benefit is 696 lbs/yr of TN and 197 lbs/yr of TP. Project Status: Complete.

46. **Cherrylake, Inc., Surface Water Pump Project** — This project involves the installation of a surface water pump with filtration and variable frequency drive for use on approximately 135 acres of container nursery benefitting the Palatlakaha River, Ocklawaha River Basin, and Central Florida Water Initiative (CFWI). The estimated water conservation benefit is 0.74 mgd. Project Status: Complete.

47. **Cherrylake, Inc., Variable Rate Fertilizer Application** — This project involves retrofitting three precision variable rate sprayers with LiDAR technology for use on approximately 855 acres of nursery benefitting the Palatlakaha River and CFWI. The estimated nutrient load reduction water quality benefit is 13,455 lbs/yr of TN and 1,643 lbs/yr of TP. Project Status: Complete.

48. **Cherrylake, Inc., Variable Frequency Drive (VFD) Pump Pressure Regulation** — This project involves installing VFD controls on the water sources on approximately 22 acres of greenhouse and container nursery benefitting the CFWI and Ocklawaha River Basin. The estimated water conservation benefit is 0.003 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 18 lbs/yr of TN and 2 lbs/yr of TP. Project Status: Complete.

49. **Concetta G. Ronco Trust Fertigation** — This project involves the purchase and installation of a fertigation system for approximately 10 acres of citrus benefiting the Ocklawaha basin. The estimated nutrient load reduction water quality benefit is 108 lbs/yr of TN and 24 lbs/yr of TP. Project Status: Not Started.

50. **Far Reach Ranch Pump Automation** — This project involves installation of pump automation with soil moisture sensors and weather station and fertigation benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.013 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 99 lbs/yr of TN and 15 lbs/yr of TP. Project Status: Complete.

51. **Faryna Grove Care and Harvesting Liquid Fertilizer Equipment** — This project involves the purchase and implementation of liquid fertilizer application equipment on approximately 125 acres of citrus benefiting the Upper Ocklawaha. The estimated nutrient load reduction water quality benefit is 920 lb/yr of TN and 201 lbs/yr of TP. Project Status: Complete.

52. **Hooper's Landscape and Nursery Irrigation Retrofit 1** — This project involves an irrigation retrofit on 13 acres of citrus, redesign of an irrigation system on 10 acres of citrus, installation of a weather station and soil moisture probes and new filtration system with automatic back flush filters benefitting the Upper Ocklawaha River Basin. The estimated conservation is 0.012 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 286 lbs/yr of TN and 64 lbs/yr of TP. Project Status: Complete.

53. **Hooper's Landscape and Nursery Irrigation Retrofit 2** — This project involves an irrigation retrofit and pump automation on approximately 15 acres of landscape nursery benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.005 mgd. The estimated nutrient load reduction water quality benefit is 24 lbs/yr of TN and 3 lbs/yr of TP. Project Status: Complete.

54. **Lake Jem Farms Center Pivot Conversion Field 1** — This project involves performing an irrigation conversion to an overhead irrigation system on approximately 40 acres of sod benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.03 mgd. The project also provides an estimated

nutrient load reduction water quality benefit of 2,749 lbs/yr of TN and 302 lbs/yr of TP. Project Status: Complete.

55. **Lake Jem Farms Center Pivot Conversion Field 2** — This project involves performing an irrigation conversion from seepage irrigation to a center pivot with a surface water pump on approximately 42 acres of sod benefitting Lake Harris and the Ocklawaha River Basin. The estimated water conservation benefit is 0.026 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 149 lbs/yr of TN and 16 lbs/yr of TP. Project Status: Complete.

56. **Lake Jem Farms Precision Ag Equipment 1** — This project involves the purchase and implementation of precision agriculture equipment with variable speed drive and weather stations on approximately 500 acres of sod benefitting Lake Harris and the Ocklawaha River Basin. The estimated water conservation benefit is 0.047 mgd. The project also provides an estimated nutrient load reduction water quality benefit of 3,355 lbs/yr of TN and 363 lbs/yr of TP. Project Status: Complete.

57. **Lake Jem Farms Soil Moisture Sensors and Precision Ag Equipment 2** — This project involves the purchase and installation of soil moisture sensors, GPS leveling and mapping, and precision fertilizer application equipment for use on approximately 500 acres of sod benefiting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.053 mgd. The estimated nutrient load reduction water quality benefit is 2,848 lbs/yr of TN and 313 lbs/yr of TP. Project Status: Complete.

58. **Lake Jem Farms Surface Water Conversion and Precision Fertilizer Application** — This project involves the installation of a surface water pump and engine, linear overhead irrigation system and purchase of a variable rate fertilizer applicator for approximately 220 acres of sod benefitting Lake Beauclair and the Ocklawaha River Basin. The estimated water conservation benefit is 1.3 mgd. The project also provides a nutrient load reduction water quality benefit of 2,719 lbs/yr of TN and 299 lbs/yr of TP. Project Status: Complete.

59. **Lennon and Wilson Pump Automation** — This project involves implementing pump automation on approximately 31 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.003 mgd. The project also provides a nutrient load reduction water quality benefit of 131 lbs/yr of TN and 29 lbs/yr of TP. Project Status: Complete.

60. **Lennon Grove Service Irrigation Retrofit** — This project involves performing an irrigation retrofit on approximately 12.3 acres of citrus benefitting the Central Florida Water Initiative and Ocklawaha River Basin. The estimated water conservation benefit is 0.011 mgd and the estimated nutrient load reduction water quality benefit is 45 lbs/yr of TN and 10 lbs/yr of TP. Project Status: Complete.

61. **Liner Source Auto-Flushing Filters** — This project involves installing auto-flushing filters on the irrigation system on approximately 189 acres of nursery 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 52 lbs/yr of TN and 6 lbs/yr of TP. Project Status: Complete.

62. **Liner Source Liquid Fertilizer System with Automation** — This project includes the installation of an automated liquid fertilizer system on approximately 4.5 acres o greenhouse edibles. The estimated nutrient load reduction water quality benefit to the Middle St. Johns is 842 lbs/yr of TN and 248 lbs/yr of TP. Project Status: Complete.

63. **Liner Source Precision Fertilizer Application** — This project involves the purchase and implementation of an air boom sprayer and automatic filter cleaners for use on

approximately 84 acres of outdoor container nursery benefitting the Middle St. Johns River Basin. The project also provides a nutrient load reduction water quality benefit of 198 lbs/yr of TN and 21 lbs/yr of TP. Project Status: Complete.

64. **Long and Scott Farms Center Pivot Irrigation** — The project involves performing an irrigation conversion from seepage to pivot irrigation and installation of flashboard risers on approximately 131 acres of row crops benefitting Lake Harris and the Ocklawaha River Basin. The estimated water conservation benefit is 0.17 mgd. The project also provides a nutrient load reduction water quality benefit of 953 lbs/yr of TN and 257 lbs/yr of TP. Project Status: Complete.

65. **Long and Scott Farms Irrigation Conversion** — This project involves relocating an existing linear irrigation system and converting to center pivot on approximately 76 acres of sod benefitting the Apopka-Beauclair Canal. The estimated water conservation benefit is 0.1 mgd. The project also provides a nutrient load reduction water quality benefit of 544 lbs/yr of TN and 60 lbs/yr of TP. Project Status: Complete.

66. **Long and Scott Farms Irrigation Conversion** — This project involves performing an irrigation conversion from seepage to drip on approximately 90 acres of vegetables benefitting the Ocklawaha River Basin. The estimated conservation is 0.05 mgd. The estimated nutrient load reduction water quality benefit is 617 lbs/yr of TN and 136 lbs/yr of TP. Project Status: In Progress.

67. **Long and Scott Farms Precision Fertilizer Equipment with GPS** — This project involves the purchase and implementation of precision fertilizer equipment with GPS on approximately 1,075 acres of row crops benefitting Lake Apopka and the Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 278 lbs/yr of TN and 61 lbs/yr of TP. Project Status: Complete.

68. **May and Whitaker Blueberry GPS Fertilizer Equipment** — This project includes the purchase and implementation of GPS rate-controlled fertilizer application equipment on approximately 88 acres of blueberries. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha is 871 lbs/yr of TN and 128 lbs/yr of TP. Project Status: Complete.

69. **May and Whitaker Blueberry Irrigation Retrofit** — This project involves an irrigation retrofit on approximately 13 acres of blueberries and purchase a precision fertilizer spreader for approximately 70 acres of blueberries benefitting the Lake Yale Canal and Ocklawaha River. The estimated water conservation benefit is 0.011 mgd. The project also provides a nutrient load reduction water quality benefit of 756 lbs/yr of TN and 111 lbs/yr of TP. Project Status: Complete.

70. **May and Whitaker Citrus Irrigation Retrofit** — This project involves an irrigation retrofit on approximately 50 acres of citrus benefitting the Lake Yale Canal and Ocklawaha River. The estimated water conservation benefit is 0.007 mgd. The project also provides a nutrient load reduction water quality benefit of 56 lbs/yr of TN and 12 lbs/yr of TP. Project Status: Complete.

71. **May and Whitaker Family Partnership Irrigation Retrofit** — This project involves an irrigation retrofit with soil moisture sensors and a weather station on approximately 16 acres of blueberries benefiting the Upper Ocklawaha. The estimated water conservation benefit is 0.057 mgd and the estimated nutrient load reduction water quality benefit is 200 lbs/yr of TN and 29 lbs/yr of TP. Project Status: Complete.

72. **May and Whitaker Family Partnership Precision Fertilizer** — This project includes the purchase and implementation of precision fertilizer application equipment with tree sensing technology on approximately 265 acres of citrus. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha is 2926 lbs/yr of TN and 640 lbs/yr of TP. Project Status: Complete.

73. **May and Whitaker Family Partnership Precision Fertilizer 2** — This project involves the purchase and implementation of variable rate fertilizer application equipment benefitting the Upper Ocklawaha. The estimated nutrient load reduction water quality benefit is 442 lbs/yr of TN and 97 lbs/yr of TP. Project Status: Complete.

74. **May and Whitaker Irrigation Retrofit and Precision Fertilizer** — This project involves performing an irrigation retrofit from overhead to drip irrigation on approximately 30 acres of blueberries and the implementation of boom fertilizer application to direct fertilizer to roots on approximately 370 acres of citrus benefitting Lake Yale and the Ocklawaha River Basin. The estimated water conservation benefit is 0.02 mgd. The project also provides a nutrient load reduction water quality benefit of 797 lbs/yr of TN and 141 lbs/yr of TP. Project Status: Complete.

75. **May and Whitaker Precision Fertilizer Application 2** — This project involves the purchase and implementation of a hoop boom sprayer on approximately 50 acres of blueberries and a variable rate sprayer with GPS on approximately 350 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 7,579 lbs/yr of TN and 1,576 lbs/yr of TP. Project Status: Complete.

76. **McGregor's Greens LLC Recirculating Hydroponics** — This project involves retrofitting the existing irrigation system to recirculating hydroponics on approximately 3.2 acres of greenhouse-grown herbs benefitting the Middle St. Johns and Ocklawaha rivers. The estimated water conservation benefit is 0.008 mgd. The project also provides a nutrient load reduction water quality benefit of 1,565 lbs/yr of TN and 730 lbs/yr of TP. Project Status: Complete.

77. **Orange Bend Harvesting Irrigation Retrofit** — This project involves an irrigation retrofit on approximately 35 acres of citrus benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.005 mgd. The project also provides a nutrient load reduction water quality benefit of 136 lbs/yr of TN and 30 lbs/yr of TP. Project Status: Complete.

78. **Orange Bend Harvesting Precision Fertilizer Application** — This project involves the purchase and implementation of variable rate fertilizer equipment for use on approximately 146 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 1,744 lbs/yr of TN and 381 lbs/yr of TP. Project Status: Complete.

79. **Orange Bend Harvesting Precision Liquid Fertilizer Equipment** — This project involves the purchase and implementation of a GPS variable-rate-controlled liquid fertilizer boom and supply trailer for approximately 325 acres of citrus benefitting Lake Harris. The estimated nutrient load reduction water quality benefit is 6,286 lbs/yr of TN and 1,375 lbs/yr of TP. Project Status: Complete.

80. **Orange Bend Harvesting Tailwater Recovery Pond** — This project involves the construction of a tailwater recovery pond and irrigation drain tile system on approximately 10 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.1 mgd. The project also provides a nutrient load reduction water quality benefit of 1,076 lbs/yr of TN and 232 lbs/yr of TP. Project Status: Complete.

81. **Orange Bend Harvesting Variable Rate Fertilizer and Tree Sensing Technology** — This project involves the purchase and implementation of a fertilizer spreader with Tree See technology and liquid fertilizer injection system for use on approximately 110 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 5,309 lbs/yr of TN and 953 lbs/yr of TP. Project Status: Complete.
82. **Orange Bend Harvesting Variable Rate Fertilizer and Tree Sensing Technology 2** — This project involves the purchase and implementation of a variable rate sprayer with GPS technology on approximately 225 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 2,140 lbs/yr of TN and 468 lbs/yr of TP. Project Status: Complete.
83. **Organica World Rainwater Harvesting** — The project includes construction of a rainwater capture and recovery system for a hydroponic greenhouse operation benefitting the CFWI. The estimated water conservation benefit is 0.02 mgd. Project Status: Complete.
84. **Richard Davis Cover Crop for Citrus Middles** — This project involves purchasing equipment for the establishment of cover crop in citrus row middles benefitting the Ocklawaha River Basin. The estimated nutrient load reduction benefit is 2907 lbs/yr of TN and 403 lbs/yr of TP. Project Status: Complete.
85. **Richard Davis Irrigation Retrofit** — This project involves performing an irrigation retrofit on approximately 24 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.02 mgd. The project also provides a nutrient load reduction water quality benefit of 73 lbs/yr of TN and 16 lbs/yr of TP. Project Status: Complete.
86. **Sevorg Trading Company Fertilizer Injection System** — This project involves the purchase and implementation of a fertilizer injection system for 100 acres of citrus trees benefitting Lake Yale. The estimated nutrient load reduction water quality benefit is 368 lbs/year of TN and 82 lbs/yr of TP. Project Status: Complete.
87. **Sevorg Trading Company Precision Fertilizer Application** — This project involves the purchase and implementation of a double boom fertilizer soil applicator to apply liquid nutrients and soil amendments directly to the root zone on approximately 100 acres of citrus. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha River Basin is 226 lbs/yr of TN and 36 lbs/yr of TP. Project Status: Complete.
88. **Sevorg Trading Company Soil Moisture Sensors** — This project involves the purchase and installation of soil moisture sensors on approximately 215 acres of blueberries and citrus. The estimated water conservation benefit is 0.02 mgd. The project also provides an estimated nutrient load reduction water quality benefit to the Upper Ocklawaha River Basin of 491 lbs/yr of TN and 86 lbs/yr of TP. Project Status: Complete.
89. **Simpson Fruit Company Variable Rate Fertilizer** — This project involves the purchase and implementation of a variable rate fertilizer spreader with GPS control system, power blast sprayer and six zone eye system for use on approximately 460 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated nutrient load reduction water quality benefit is 6,808 lbs/yr of TN and 1,183 lbs/yr of TP. Project Status: Complete.
90. **Southern Hill Farms, Inc., Fertilizer Injector System** — This project involves the installation of a fertigation system on approximately 20 acres of strawberries benefitting the Upper Ocklawaha River Basin. The estimated

nutrient load reduction water quality benefit is 188 lbs/yr of TN and 55 lbs/yr of TP. Project Status: Complete.

91. **Southern Hill Farms Precision Fertilizer and Irrigation Retrofit** — This project involves the purchase of precision fertilizer application equipment for 40 acres of blueberries and to purchase and install irrigation controllers for 118 acres of mixed fruits and vegetables benefitting the Upper Ocklawaha and CFWI. The estimated conservation is 0.005 mgd. The estimated nutrient load reduction water quality benefit is 1396 lbs/yr of TN and 204 lbs/yr of TP. Project Status: Complete.
92. **Southern Hill Farms Soil Moisture Sensors** — This project involves the purchase of soil moisture sensors to be used on approximately 120 acres of mixed fruits and vegetables. The estimated water conservation benefit is 0.005 mgd. The estimated nutrient load reduction water quality benefit is 28 lbs/yr of TN and 4 lbs/yr of TP to the Upper Ocklawaha. Project Status: Complete.
93. **Summer Lake-Grace Grove Pump Automation** — This project involves the purchase and installation of an automated irrigation system on approximately 180 acres of citrus benefitting the Palatlakaha River. The estimated water conservation benefit is 0.02 mgd. The estimated annual nutrient load reduction water quality benefit is 85 lbs/yr of TN and 19 lbs/yr of TP. Project Status: Complete.
94. **Twin Lakes-Cherrylake Partnership Irrigation Automation** — This project involves the Installation of irrigation automation on approximately 140 acres of citrus benefitting the Upper Ocklawaha River Basin. The estimated water conservation benefit is 0.014 mgd. The project also provides a nutrient load reduction water quality benefit of 77 lbs/yr of TN and 17 lbs/yr of TP. Project Status: Complete.
95. **Wild Goose Farms Irrigation Retrofit** — This project involves performing an irrigation retrofit on approximately 39 acres of blueberries benefitting the Ocklawaha River Basin. The estimated water conservation benefit is 0.03 mgd. The project also provides a nutrient load reduction water quality benefit of 313 lbs/yr of TN and 46 lbs/yr of TP. Project Status: Complete.
96. **Wild Goose Farms Irrigation Retrofit Phase 3** — This project involves performing an irrigation retrofit on approximately 13 acres of blueberries benefitting the Ocklawaha River Basin. The estimated conservation is 0.008 mgd. The estimated nutrient load reduction water quality benefit is 302 lbs/yr of TN and 63 lbs/yr of TP. Project Status: Complete.
97. **Wild Goose Farms Precision Fertilizer Equipment** — This project includes the purchase and implementation of precision fertilizer application equipment for 170 acres of blueberries and 100 acres of citrus. The estimated nutrient load reduction water quality benefit to the Upper Ocklawaha is 2787 lbs/yr of TN and 488 lbs/yr of TP. Project Status: Complete.
98. **William Davis Irrigation Retrofit 1** — This project involves performing an irrigation retrofit on approximately 20 acres of citrus benefitting Boggy Marsh, the Ocklawaha River Basin and CFWI. The estimated water conservation benefit is 0.002 mgd. The project also provides a nutrient load reduction water quality benefit of 290 lbs/yr of TN and 64 lbs/yr of TP. Project Status: Complete.
99. **William Davis Irrigation Retrofit 2** — This project involves performing an irrigation retrofit on approximately 11 acres of citrus benefitting the Upper Ocklawaha River Basin and CFWI. The estimated water conservation benefit is 0.002 mgd. The project also provides

a nutrient load reduction water quality benefit of 13 lbs/yr of TN and 3 lbs/yr of TP. Project Status: Complete.

100. **Wilson Training Center Compost Spreader** — This project involves the purchase and implementation of a compost spreader on approximately 38 acres of pasture benefitting the Middle St. Johns River Basin. The estimated nutrient load reduction water quality benefit is 362 lbs/yr of TN and 72 lbs/yr of TP. Project Status: Complete.

101. **Wilson Training Center Static Pile Compost Aeration** — This project involves installation of a static pile aeration composting system for a 38-acre equine training center benefitting the Middle St. Johns River Basin. The estimated nutrient load reduction water quality benefit is 511 lbs/yr of TN and 91 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:

Lake Apopka restoration — The District in engaged in a multi-pronged approach of diet and exercise to restore Lake Apopka. Beginning in 1996, at the direction of the Florida Legislature, the District bought farms along the north shore to end discharges of phosphorus into the lake other restoration work has included operation of a marsh flow-way to filter nutrients from the lake water, planting native submerged aquatic vegetation, building more storage areas and harvesting gizzard shad and the phosphorus in their bodies.

Emeralda Marsh Conservation Area (EMCA) peat removal project — Beginning in the 1940s, the marshes in what is now the conservation area were drained and the exposed muck soils were used for row-crop agriculture and cattle grazing. Due to these agricultural practices, the exposed wetland soils oxidized and subsided and were subject to fertilizer and pesticide applications during farming operations. A project is currently underway to remove peat deposits in one area of the conservation area that contain high phosphorus levels, thus reducing nutrient discharges to Like Griffin and the Ocklawaha Basin.

Emeralda Marsh Hydrologic Connection Improvements — Several projects, funded by the Florida Fish and Wildlife Conservation Commission, improving the hydrologic connections between portions of the EMCA and Lake Griffin have been constructed by the District. These projects provide better connectivity and circulation between the EMCA wetlands and Lake Griffin as well as improved access and recreational opportunities.

Lake County is divided between two water supply planning regions:

Central Springs/East Coast water supply planning region — The District works in partnership with the Southwest and South Florida water management districts, Florida Department of Environmental Protection, 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*.

Central Florida Water Initiative (CFWI) — The District works in partnership with the South Florida Water Management District, Southwest Florida Water Management District, Florida Department of Environmental Protection, Florida Department of Agriculture and Consumer Services, local utilities and other stakeholders in the central Florida region to implement effective and consistent water resources planning, development, and management. Learn more about this planning region and its adopted regional water supply plan at *www.cfwiwater.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 Lake County, District properties include Emeralda Marsh Conservation Area and the Lake Apopka North Shore (including the Lake Apopka Wildlife Drive). For a current listing of District conservation areas, visit ***www.sjrwmd.com/lands***.

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