PROPOSED

2018 Five-Year Water Resource Development Work Program

Southwest Florida
Water Management District

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Introduction/Purpose

The District is required to prepare a Five-Year Water Resource Development Work Program (Work Program) as a part of its annual budget reporting process, pursuant to Subsection 373.536(6)(a)4, Florida Statutes (F.S.), as amended in 2016:

"*The program must describe the district's implementation strategy and include an annual funding plan for each of the five years included in the plan for the water resource and water supply development components, including alternative water supply development, of each approved regional water supply plan developed or revised under s. 373.709. The work program must address all the elements of the water resource development component in the district's approved regional water supply plans, as well as the water supply projects proposed for district funding and assistance. The annual funding plan shall identify both anticipated available district funding and additional funding needs for the second through fifth years of the funding plan. The work program must identify projects in the work program which will provide water; explain how each water resource and water supply project will produce additional water available for consumptive uses; estimate the quantity of water to be produced by each project; provide an assessment of the contribution of the district's regional water supply plans in supporting the implementation of minimum flows and minimum water levels and water reservations; and ensure sufficient water is available to timely meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event and to avoid the adverse effects of competition for water supplies.*"

This report represents the District's 17th Work Program and covers the period from fiscal year (FY) 2018 through FY2022. This Work Program is consistent with the planning strategies of the District's 2015 Regional Water Supply Plan (RWSP) and the Central Florida Water Initiative 2014 Regional Water Supply Plan (CFWI Plan). To meet statutory requirements updated in 2016, the Work Program includes the anticipated five-year funding for water supply development assistance projects, an assessment of the RWSP contribution to support minimum flows and levels (MFLs) and water reservations, identification of the water use caution area (WUCA) benefitted by each project, and includes an appendix showing projects intended to help implement Basin Management Action Plans.

Water Resource Development

Section 373.019(24), F.S., defines **Water Resource Development** as "*the formulation and implementation of regional water resource management strategies, including the collection and evaluation of surface water and groundwater data; structural and nonstructural programs to protect and manage water resources; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood control, surface and underground water storage, and groundwater recharge augmentation; and related technical assistance to local governments, government-owned and privately owned water utilities, and self-suppliers to the extent assistance to self-suppliers promotes the policies as set forth in s. 373.016.*" The intent of Water Resource Development (WRD) activities and projects is to enhance the amount of water available for reasonable-beneficial uses and for natural systems. The District is primarily responsible for implementing WRD activities and projects; however, additional funding and technical support may come from state, federal, and local entities. The WRD component of the District's RWSP identifies a series of data collection and analysis activities the District is undertaking which meet this statutory definition. The implementation strategy for this category is contained in the **WRD Data Collection and Analysis Activities** section of this report. In addition, the District undertakes a variety of more narrowly defined WRD "Projects." For annual budget reporting, these projects are categorized as regional projects designed to create an identifiable supply of water for existing and/or future reasonable-beneficial uses. The implementation strategy for this category is contained in the **WRD Projects** section of this report.

WRD Data Collection and Analysis Activities

The District has budgeted significant funds in FY2018 to implement and continue the WRD component of the RWSP. The activities summarized in Table 1 are mainly data collection and analysis activities that support the health of natural systems and the development of water supplies by local governments, utilities, regional water supply authorities, and others. The table indicates that approximately $29.9 million will be allocated toward these activities in FY2018 and an estimated $149 million will be allocated

between FY2018 and FY2022. Because budgets for the years beyond FY2018 have not yet been developed, future funding estimates for activities continuing through FY2022 are set equal to FY2018 funding. Funding for these activities is primarily from the District's Governing Board; in some cases, additional funding is provided by water supply authorities, local governments, the Florida Fish and Wildlife Conservation Commission (FWC), and the United States Geological Survey (USGS). Many of the activities were highlighted as major budget items in the District's Tentative Budget Submission, and references to the sub-activity code and the printed page number are provided. Each of the activities in Table 1 is further described below.

Hydrologic Data Collection

The District has a comprehensive hydrologic conditions monitoring program that includes the assembly of information on key indicators as rainfall, surface and groundwater levels and water quality, and stream flows. The program includes data collected by District staff and permittees as well as data collected as part of the District's cooperative funding program with the USGS. Data collected allows the District to gage changes in the health of water resources, monitor trends in conditions, identify and analyze existing or potential resource problems, and develop programs to correct existing problems and prevent future problems from occurring. The data collection activities support District flood control structure operations, water use and environmental resource permitting and compliance, MFLs evaluation and compliance, the Surface Water Improvement and Management (SWIM) program, the Southern Water Use Caution Area (SWUCA) recovery strategy, the CFWI, modeling of surface water and groundwater systems, and many resource evaluations and reports.

The categories of hydrologic data that are collected and monitored by District staff are discussed below. The District also evaluates the hydrologic data submitted by Water Use Permit (WUP) holders to ensure compliance with permit conditions and to assist with monitoring and documenting hydrologic conditions.

a) Surface Water Flows and Levels. Funding supports data collection at the District's 802 surface water level gauging sites, and cooperative funding with the USGS for discharge and water-level data collection at 164 river, stream, and canal sites. The USGS data are available to District staff and the public through the District's Water Management Information System (WMIS) and through the USGS Florida Water Science Center Web Portal.

b) Geohydrologic Data Well Network. The Geohydrologic Data Well Network is a monitor well network that supports various projects throughout the District including the CFWI, Water Resource Assessment Projects (WRAPs), Water Use Caution Areas (WUCAs), the Northern Tampa Bay Phase III program, the Springs Team, sea level rise and other salt-water intrusion assessments, and development of alternative water supplies. The network includes the Regional Observation and Monitor-well Program (ROMP) which has been the District's primary means for hydrogeologic data collection since 1974. Data from monitor well sites are used to evaluate seasonal and long-term changes in groundwater levels and quality, as well as the interaction and connectivity between groundwater and surface water bodies. During construction of new monitor well sites, valuable hydrogeologic information is collected including the lithology, aquifer hydraulic characteristics, water quality, and water levels.

c) Meteorologic Data. The meteorologic data monitoring program consists of measuring rainfall totals every 15 minutes at 135 near real-time rain gauges and 41 recording rain gauges. The funding is for costs associated with measurement of rainfall including sensors, maintenance, repair and replacement of equipment. Funding allows for the operation of a mixed-forest wetland evapotranspiration (ET) station by the USGS that directly measures actual ET, and one District ET site for reference ET. Funding provides for District participation in a cooperative effort between the USGS and all five Florida water management districts to map statewide potential and reference ET using data measured from the Geostationary Operational Environmental Satellites (GOES). Funding also includes a collaborative effort between the five districts to provide high-resolution radar rainfall data for modeling purposes.

d) Water Quality Data. The District's Water Quality Monitoring Program (WQMP) collects data from water quality monitoring networks for springs, streams, lakes, and coastal and inland rivers. Many monitoring sites are sampled on a routine basis, with data analysis and reporting conducted on an annual basis. The Coastal Groundwater Quality Monitoring network, which involves sample collection and analysis from approximately 375 wells across the District, is used to monitor the saltwater intrusion and/or the upwelling of mineralized waters into potable aquifers.

Table 1. FY2018 - FY2022 Water Resource Development Data Collection and Analysis Activities

WRD Data Collection and Analysis Activities	Budget Reference[1]	FY2018 Costs ($)	FY2019 Costs ($)	FY2020 Costs ($)	FY2021 Costs ($)	FY2022 Costs ($)	Total Costs ($)	Funding Source[2]
1) Hydrologic Data Collection								District, other WMDs, USGS, DEP, FWC
a) Surface Water Flows & Levels	1.2.1, p.63	$2,054,979	$2,054,979	$2,054,979	$2,054,979	$2,054,979	$10,274,895	
b) Geologic (includes ROMP)	1.2.1, p.63	$1,998,281	$1,998,281	$1,998,281	$1,998,281	$1,998,281	$9,991,405	
c) Meteorologic Data	1.2.1, p.63	$248,268	$248,268	$248,268	$248,268	$248,268	$1,241,340	
d) Water Quality	1.2.1, p.63	$792,974	$792,974	$792,974	$792,974	$792,974	$3,964,870	
e) Groundwater Levels	1.2.1, p.63	$557,733	$557,733	$557,733	$557,733	$557,733	$2,788,665	
f) Biologic Data	1.2.1, p.63	$1,324,267	$1,324,267	$1,324,267	$1,324,267	$1,324,267	$6,621,335	
g) Data Support	1.2.1, p.63	$2,453,980	$2,453,980	$2,453,980	$2,453,980	$2,453,980	$12,269,900	
2) Minimum Flows and Levels Program								District, other WMDs, USGS, DEP, FWC
a) Technical Support	1.1.2, p.59	$1,363,121	$1,363,121	$1,363,121	$1,363,121	$1,363,121	$6,815,605	
b) Establishment Projects	1.1.2, p.59	$729,127	$729,127	$729,127	$729,127	$729,127	$3,645,635	
c) Re-evaluation Projects	1.1.2, p.59	$110,868	$110,868	$110,868	$110,868	$110,868	$554,340	
3) Watershed Management Planning	1.1.3, p.61	$5,390,095	$5,390,095	$5,390,095	$5,390,095	$5,390,095	$26,950,475	District, Local Cooperators
4) Quality of Water Improvement Program	2.2.3, p.83	$589,340	$589,340	$589,340	$589,340	$589,340	$2,946,700	District
5) Stormwater Improvements-Implementation of Storage and Conveyance BMPs	2.3.1, p.85	$12,265,616	$12,265,616	$12,265,616	$12,265,616	$12,265,616	$61,328,080	District, USGS
Totals		**$29,878,649**	**$29,878,649**	**$29,878,649**	**$29,878,649**	**$29,878,649**	**$149,393,245**	

Source: SWFWMD FY2018 Tentative Budget Submission.

[1] Budget Reference contains the Budget Sub-Activity Code and the printed page number in the Tentative Budget Submission where project is referenced as a major budget item.
[2] Acronyms: WMDs - Water Management Districts, USGS - United States Geological Survey, DEP - Florida Department of Environmental Protection, FWC - Florida Fish and Wildlife Conservation Commission, ROMP - District Regional Observation and Monitor-well Program, BMPs - Best Management Practices.

e) Groundwater Levels. The funding provides for the maintenance and support of 1,593 monitor wells in the data collection network, including 823 wells that are instrumented with data loggers that record water levels once per hour, and 770 that are measured manually by field technicians once or twice per month.

f) Biologic Data. The District monitors ecological conditions as they relate to both potential water use impacts and changes in hydrologic conditions. Funding for biologic data collection includes support for routine monitoring of approximately 190 wetlands to document changes in wetland health and assess level of recovery in impacted wetlands. Funding also supports SWIM Program efforts for mapping and monitoring of seagrasses in priority water bodies including Tampa Bay, Sarasota Bay, Charlotte Harbor, and the Springs Coast area. Funding also supports an effort to map the estuarine hard bottom of Tampa Bay.

g) Data Support. This item provides administrative and management support for the WQMP, hydrologic and geohydrologic staff support, support for the chemistry laboratory, and support for the District's Supervisory Control and Data Acquisition (SCADA) system.

Minimum Flows and Levels Program (MFLs)

MFLs are hydrologic and ecological standards that can be used for permitting and planning decisions concerning how much water may be withdrawn from or near a water body without causing significant harm to water resources or ecology of the area. Chapter 373.042, F.S., requires the state water management districts or the Department of Environmental Protection (DEP) to establish MFLs for aquifers, surface watercourses, and other surface water bodies to identify the limit at which further withdrawals would be significantly harmful. Rivers, streams, estuaries, and springs require minimum flows; while minimum levels are developed for lakes, wetlands, and aquifers. MFLs are adopted into District rules, Chapter 40D-8, Florida Administrative Code (F.A.C.), and are used in the District's Water Use and Environmental Resource permitting programs.

The District's process for establishing MFLs includes an opportunity for interested stakeholders to review and comment on the proposed MFLs and to participate in public meetings. The process for establishing MFLs for flowing water bodies also includes an independent scientific peer review. The stakeholder input and peer review, when conducted, are considered by the Governing Board when deciding whether to adopt a proposed MFL. District monitoring programs also provide data for evaluating compliance with the adopted MFLs, determining the need for recovery strategies and analyzing the recovery of water bodies where significant harm has been established.

Watershed Management Planning

The District addresses flooding problems in existing areas by preparing and implementing Watershed Management Plans (WMPs) in cooperation with local governments. The WMPs define flood conditions, identify flood level of service deficiencies, and evaluate best management practices (BMPs) to address those deficiencies. The WMPs include consideration of the capacity of a watershed to protect, enhance, and restore water quality and natural systems while achieving flood protection. The plans identify effective watershed management strategies and culminate in defining floodplain delineations and constructing selected BMPs.

Local governments and the District combine their resources and exchange watershed data to implement the WMPs. Funding for local elements of the WMPs is provided through local governments' capital improvement plans and the District's Cooperative Funding Initiative. Additionally, flood hazard information generated by the WMPs is used by the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Rate Maps (FIRMs). This helps to better define flood risk and is used extensively for land use planning by local governments and property owners. Since the WMPs may change based on growth and shifting priorities, the District also cooperates with local governments to update the WMPs when necessary, giving decision-makers opportunities throughout the program to determine when and where funds are needed.

Quality of Water Improvement Program (QWIP)

The QWIP was established in 1974 through Chapter 373, F.S., to restore groundwater conditions altered by well drilling activities for domestic supply, agriculture, and other uses. The program's primary goal is to preserve groundwater and surface water resources through proper well abandonment. Plugging abandoned artesian wells eliminates the waste of water at the surface and prevents mineralized groundwater from contaminating surface water bodies. Thousands of wells constructed prior to current well construction standards were often deficient in casing, which interconnected aquifer zones and enabled poor-quality mineralized water to migrate into zones containing potable-quality water.

Plugging wells involves filling the abandoned well with cement or bentonite. Isolation of the aquifers is reestablished and the mixing of varying water qualities and free flow is stopped. Prior to plugging an abandoned well, geophysical logging is performed to determine the reimbursement amount, the proper plugging method, and to collect groundwater quality and geologic data for inclusion in the District's database. The emphasis of the QWIP is primarily in the SWUCA where the Upper Floridan aquifer is confined. Historically, the QWIP has proven to be a cost-effective method to prevent waste and contamination of potable ground and surface waters.

Stormwater Improvements - Implementation of Storage and Conveyance BMPs

The District's WMPs and SWIM programs implement stormwater and conveyance BMPs for preventative flood protection to improve surface water quality, particularly in urban areas, and enhance surface and groundwater resources. The BMPs involve construction of improvements identified and prioritized in the development of watershed management plans. Most of the activities are developed through cooperative funding with a local government entity, DEP, or other state funding.

The District has planned for approximately 40 storage and conveyance BMPs ongoing in FY2018. Three new BMPs that each exceed $1 million of District funds include the Upper Peninsula Regional Stormwater Improvement Area to design and prepare land for new flood relief and water quality treatment systems in the Old Tampa Bay and Hillsborough Bay Watersheds, stormwater drainage improvements around 8th Avenue and 44th Street South St. Petersburg, and construction of high capacity box culverts to reduce stormwater flooding along South Dale Mabry Highway in Tampa.

WRD Projects

The District has budgeted for 19 projects that meet the definition of WRD "Projects." As shown in Table 2, the total cost of these projects is approximately $92 million and a minimum of 55 million gallons per day (mgd) of additional water supply will be produced or conserved. At the start of FY2018 (October 1, 2017), the District has allocated approximately $14.3 million in the budget for these projects. This project funding is consistent with the Programmatic Budget activity code 2.2.1

District funding for a number of these projects is matched to varying degrees by local cooperators including local governments, partnering water management districts, state agencies, and others. District funds for these projects are generated through a variety of mechanisms described in the **Funding Sources** section of this report. Each of the projects in Table 2 is described in detail below.

Alternative Water Supply Feasibility Research and Pilot Projects

The following projects are research and/or pilot projects designed to further the development of the innovative alternative water sources described in the RWSP. Most of these projects are components of the District's exploration of Lower Floridan aquifer (LFA) in Polk County as a viable water source for inland utilities. The data gathered from the LFA investigations will improve the District's understanding of this potential alternative water supply, enhance groundwater modeling of the LFA, and determine the practicality of developing the LFA as an alternative source in areas facing future water supply deficits. Data from these projects will also add to the geologic inputs in the Districtwide Regional Model (DWRM) for the LFA to assess potential withdrawal-related impacts to water resources in the District.

a. South Hillsborough Aquifer Recharge Program (SHARP) (N287)

Background - This is an aquifer recharge pilot testing project that will assess the effects of using up to 2 mgd of treated excess reclaimed water from the South-Central Hillsborough County reclaimed water system to directly recharge a non-potable zone of the Upper Floridan aquifer at the County's Big Bend aquifer storage and recovery (ASR) test well site. The project consists of the design, permitting, and construction of a reclaimed water recharge well system with associated wellhead and appurtenances, interconnects, and monitor wells. Project tasks include a multiyear aquifer recharge pilot study and groundwater modeling to evaluate water level improvements and water quality, including metals mobilization. The project may allow Hillsborough County to utilize excess reclaimed water flows, improve water levels within the MIA of the SWUCA, and potentially provide a salinity barrier against saltwater intrusion; as well as additional mitigation offsets for future groundwater supplies.

Linkage to the Regional Water Supply Plan - This project is specifically mentioned in Chapter 7, Section 1 of the Tampa Bay regional volume of the 2015 RWSP (page 142).

Schedule - The project was initiated in FY2011. The schedule was extended to conduct an additional cycle test running through in June 2018. With positive results, an operational permit may be obtained in December 2018.

b. Bradenton Aquifer Protection Recharge Well (N842)

Background - The project is for 30 percent design and third-party review of one recharge well in the Avon Park production zone of the Upper Floridan aquifer and associated facilities to help prevent nutrient loading to the Manatee River and Tampa Bay and to replenish groundwater in the MIA. The third-party review will provide necessary information to support funding in future years to complete design, permitting and construction.

Linkage to the Regional Water Supply Plan - This project is not specifically mentioned in the 2015 RWSP but is consistent with the aquifer recharge projects discussed in Chapter 7, Section 6 of the Tampa Bay regional volume of the 2015 RWSP (page 135).

Schedule - The project is new for FY2018 and will commence by March 2018.

Table 2. FY2018 - FY2022 District Funding and Total Project Cost for Water Resource Development Projects

WRD Projects (WUCA, Project Number) [1]		Total Prior District Funding	FY2018 District Cost	FY2019 District Cost	FY2020 District Cost	FY2021 District Cost	FY2022 District Cost	Total Cost District + Cooperator	Funding Source[1 2]	Quantity developed or conserved[1]
1) Alternative Water Supply Feasibility Research and Pilot Projects (Programmatic Code 2.2.1.1)										
a)	South Hillsborough Aquifer Recharge Program (SHARP) (S) (N287)	$1,382,500	$0	$0	$0	$0	$0	$2,765,000	District, Hillsborough County	2 mgd
b)	Bradenton Aquifer Protection Recharge Well (S) (N842)	$0	$500,000	$900,000	$1,000,000	$100,000	$0	$5,000,000	District, City of Bradenton	NA
c)	PRMRWSA Partially Treated Water ASR (S) (N854)	$0	$120,500	$1,175,000	$2,475,000	$0	$0	$7,645,500	District, PRMRWSA	3 mgd
d)	Southern Hillsborough Aquifer Recharge Expansion (SHARE) Phase 1 (S) (N855)	$0	$2,265,000	$2,190,000	$395,000	$0	$0	$9,700,000	District, Hillsborough County	4 mgd
e)	Braden River Utilities ASR Feasibility (S) (N912)	$0	$1,945,625	$1,051,875	$0	$0	$0	$5,995,000	District, Braden River Utilities	NA
f)	Hydrogeologic Investigation of LFA in Polk County (S) (P280)	$8,991,076	$1,000,000	$1,989,059	$0	$0	$0	$11,980,135	District	NA
g)	Hydrogeologic Investigations of LFA Polk Central Regional Water Production Facility (S) (P924)	$244,550	$0	$0	$0	$0	$0	$244,550	District	NA
h)	Optical Borehole Imaging Data Collection from LFA Wells (S) (P925)	$100,200	$0	$0	$0	$0	$0	$167,000	District, USGS	NA
i)	Sources/Ages of Groundwater in LFA Wells (S) (P926)	$368,300	$0	$0	$0	$0	$0	$555,800	District, USGS	NA

Table 2 (Continued) FY2018 - FY2022 District Funding and Total Project Cost for Water Resource Development Projects

		Total Prior District Funding	FY2018 District Cost	FY2019 District Cost	FY2020 District Cost	FY2021 District Cost	FY2022 District Cost	Total Cost District + Cooperator	Funding Source[1] [2]	Quantity developed or conserved[1]
2) Facilitating Agricultural Resource Management Systems (FARMS) (Programmatic Code 2.2.1.2)										
a)	FARMS Projects (S, DPC, NTB) (H017) [3]	Annual Request	$6,002,560	$6,002,560	$6,002,560	$6,002,560	$6,002,560	Annual Request	District, FDACS, State, private farms	40 mgd
b)	Mini-FARMS Program (S, DPC, NTB) (H529) [3]	Annual Request	$100,000	$100,000	$100,000	$100,000	$100,000	Annual Request	District, FDACS	2 mgd
c)	IFAS BMP Implementation Team (S, DPC, NTB) (H579) [3]	Annual Request	$50,000	$50,000	$50,000	$50,000	$50,000	Annual Request	District, IFAS	NA
d)	FARMS Well Back-Plugging Program (S, DPC, NTB) (H015)	Annual Request	$30,000	$30,000	$30,000	$30,000	$30,000	Annual Request	District	NA
e)	FARMS Meter Accuracy Support (S, DPC, NTB) (P429) [3]	Annual Request	$25,000	$25,000	$25,000	$25,000	$25,000	Annual Request	District	NA
3) Environmental Restoration/Minimum Flows and Levels Recovery [4] (Programmatic Code 2.2.1.3)										
a)	MIA Recharge SWIMAL Recovery at Flatford Swamp (S) (H089)	$3,846,082	$2,000,000	$1,440,000	$6,000,000	$6,000,000	$6,000,000	$32,846,082	District	TBD
b)	Lower Hillsborough River Recovery Strategy (NTB) (H400)	$6,409,159	$0	$0	$0	$0	$0	$10,785,500	District, City of Tampa	TBD
c)	Pump Stations on Tampa Bypass Canal, Morris Bridge Sink (NTB) (H404)	$1,945,484	$185,000	$0	$0	$0	$0	$2,130,483	District	3.9 mgd
d)	Lower Hillsborough River Pumping Facility Construction (NTB) (N492)	$1,406,509	$0	$0	$0	$0	$0	$1,637,692	District, City of Tampa	TBD
e)	Lake Jackson Watershed Hydrology Investigation (S) (N554)	$206,118	$53,882	$40,000	$0	$0	$0	$400,000	District, Highlands County, City of Sebring	NA
Project Totals		**$24,899,978**	**$14,277,567**	**$14,993,494**	**$16,077,560**	**$12,307,560**	**$12,207,560**	**$91,852,742**		

1. The WUCA codes above are (S) - SWUCA, (DPC) - Dover/Plant City WUCA, (NTB) - Northern Tampa Bay WUCA. Other Acronyms: TBD - to be determined, NA - not applicable, mgd - million gallons per day, FDACS - Florida Department of Agriculture and Consumer Services, IFAS - University of Florida Institute of Agricultural Sciences, MIA - Most Impacted Area of the SWUCA, SWIMAL - Salt Water Intrusion Minimum Aquifer Level, USGS - United States Geological Survey.
2. Funding identified as the State of Florida is described in the *Funding Sources* section of this report.
3. Future funding budget estimates for which specific time frames are not yet determined are distributed evenly over four years.

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c. PRMRWSA Partially Treated Water ASR (N854)

Background - The project consists of site feasibility testing, 30 percent design, and third-party review of a partially treated water ASR injection project located at the Pease River Manasota Regional Water Supply Authority (PRMRWSA) ASR facility. Feasibility pilot testing will be implemented using partially treated surface water pumped from Reservoir No. 1 to recharge the Upper Floridan aquifer at two existing ASR wells and subsequently delivered back to the raw water reservoir system. The third-party review which will provide the necessary information to support funding in future years to complete design, permitting, and construction.

Linkage to the Regional Water Supply Plan - This project is not specifically mentioned as a project option in the RWSP but is in line with the District's commitment to maximizing ASR utilization to offset traditional water supplies as described in Chapter 4, Section 6 of the Southern regional volume of the 2015 RWSP.

Schedule - The project is new for FY2018 and has commenced. Future milestones will be determined after the third-party review.

d. Southern Hillsborough Aquifer Recharge Expansion (SHARE) Phase 1 (N855)

Background - This project is for a third-party review of the County's 30 percent design, completion of design and permitting, and the initiation of construction for Phase 1 of the South Hillsborough Aquifer Recharge Expansion (SHARE) project. Pending third-party review and approval, project will construct transmission mains, two recharge wells and associated monitoring wells, and install associated appurtenances. The SHARE project expands upon the county's current recharge project (N287) and upon completion will consist of up to seven recharge wells with a total recharge flow of up to 14 mgd in Southern Hillsborough.

Linkage to the Regional Water Supply Plan - This project is related to the SHARP project mentioned in Chapter 7, Section 1 of the Tampa Bay regional volume of the 2015 RWSP (page 142).

Schedule - The project is new for FY2018 and will commence by March 2018. Future milestones will be determined after the third-party review.

e. Braden River Utilities ASR Feasibility (N912)

Background - This project will perform a third-party review for reclaimed water ASR feasibility studies at two sites. Pending the review, the project may include the construction of an ASR well at each site, monitoring wells, and partial infrastructure necessary to sufficiently and cost-effectively perform two cycle tests in accordance DEP permit requirements.

Linkage to the Regional Water Supply Plan - This project is not specifically mentioned as a project option in the RWSP but is in line with the District's commitment to maximizing ASR utilization to offset traditional water supplies as described in Chapter 4, Section 6 of the Southern regional volume of the 2015 RWSP.

Schedule - The City funded and commenced the feasibility studies in 2017. The District will conduct the third-party review in early FY2018 and future milestones will be determined after the third-party review.

f. Hydrogeologic Investigation of the LFA in Polk County (P280)

Background - This project explores the LFA in Polk County to assess its viability as an alternative water supply source and to gain a better understanding of the Lower Floridan characteristics and groundwater quality. These data will enhance groundwater modeling of the LFA, and determine the practicality of developing the aquifer as an alternative supply in areas of Polk County facing future water supply deficits. The overall scope of the investigation is to drill exploratory wells at up to three key locations chosen for their proximity to water demand centers and to improve data coverage for groundwater resource monitoring and the Districtwide Regulation Model. If the tests prove that the water quality and productivity are suitable, the water and facilities could be made available to utilities in Polk County. Regardless of the suitability of the LFA for water supply at each site, the exploration wells will be significant additions to the District's well monitoring network.

Linkage to the Regional Water Supply Plan - This project is specifically described in Chapter 7, Section 1 of the Heartland regional volume of the 2015 RWSP (page 131).

Schedule - This project was initiated in FY2012. Exploratory drilling is ongoing at sites near Crooked Lake and the Town of Frostproof. Drilling at a third site near Lake Wales is expected to begin by Summer 2018. The project is expected to continue through December 2020.

g. Hydrogeologic Investigations of LFA Polk Central Regional Water Production Facility (P924)

Background - This project explores the LFA at Polk County's Central Regional Water Production Facility to assess its viability as an alternative water supply source as well as to gain a better understanding of the LFA characteristics and groundwater quality in Polk County. Hydrogeologic testing will include set-up for optical borehole imaging (conducted by the USGS separately), up to 80 feet of core samples, two packer tests, provision for age dating water quality sampling (conducted by the USGS separately), and monitoring of the LFA well for water quality and water levels.

Linkage to the Regional Water Supply Plan - This project is related to the Hydrogeologic Investigation of the LFA in Polk County (P280), which is described in Chapter 7, Section 1 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project is ongoing and testing is expected to be complete in 2018.

h. Optical Borehole Imaging Data Collection from LFA Wells (P925)

Background - This project collects optical borehole imaging data from LFA wells in Polk County. This data will aid in understanding the aquifer characteristics and groundwater quality in Polk County. The USGS will test and provide the processed data to the District. Nine LFA well sites have been identified for testing.

Linkage to the Regional Water Supply Plan - This project is related to the Hydrogeologic Investigation of the LFA in Polk County (P280), which is described in Chapter 7, Section 1 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project is ongoing and completion is anticipated by 2021.

i. Sources/Ages of Groundwater in LFA Wells (P926)

Background - This project collects isotope data from LFA wells from various sites in Polk County. The groundwater analysis will determine the sources and ages of the water from productive zones within the LFA and lower portions of the Upper Floridan aquifer. This data will aid in understanding the LFA characteristics (including flow paths) and groundwater quality in Polk County. The USGS will test and provide the processed data to the District. Six LFA well sites have been identified for testing.

Linkage to the Regional Water Supply Plan - This project is related to the Hydrogeologic Investigation of the LFA in Polk County (P280), which is described in Chapter 7, Section 1 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project is ongoing and completion is anticipated by 2021.

Facilitating Agricultural Resource Management Systems (FARMS)

The FARMS Program is an agricultural BMP cost-share reimbursement program consisting of many site-specific projects. The program is a public/private partnership developed by the District and the Florida Department of Agriculture and Consumer Services (FDACS). The purpose of the FARMS Program is to provide an incentive to the District's agricultural community to implement agricultural BMPs that will provide resource benefits including water quality improvement, reduced Upper Floridan aquifer withdrawals, and enhancements to the water resources and ecology.

The FARMS Program has five specific goals that are critical in the District's strategy to manage water resources:

(1) Offset 40 mgd of groundwater within the SWUCA by 2025;
(2) Improve surface water quality impacted by mineralized groundwater within the Shell, Prairie, and Joshua Creek watersheds;
(3) Improve natural systems impacted by excess irrigation and surface water runoff within the Flatford Swamp region of the upper Myakka River watershed;
(4) Prevent groundwater impacts within the northern areas of the District; and
(5) Reduce frost-freeze pumpage by 20 percent within the Dover/Plant City WUCA.

a. FARMS Projects (H017)

Background - FARMS projects employ many of the agricultural water conservation strategies described in the RWSP to reduce groundwater withdrawals by increasing the water use efficiency of agricultural operations. The projects have the added benefit of reducing agricultural impacts to surface water features. The projects are public/private partnerships where the District provides financial incentives to farmers to increase the water use efficiency of their operations. Each project's performance is tracked to determine its effectiveness toward program goals. Since actual use of permitted quantities is dependent on hydrologic conditions, one of the objectives of FARMS projects is to reduce groundwater use regardless of hydrologic conditions. FARMS projects not only offset groundwater use with surface water, but increase the overall efficiency of irrigation water use.

Linkage to the Regional Water Supply Plan - The FARMS Program is discussed in Chapter 7, Section 2 of each regional volume of the 2015 RWSP, which includes a list of active FARMS projects within the respective region.

Schedule - The FARMS Projects are an annual request. As of September 2016, there are 182 approved FARMS projects including 136 in the SWUCA and 22 frost-freeze protection projects in the Dover/Plant City WUCA. The projects are projected to have a cumulative groundwater offset of 27 mgd Districtwide. The projected offset for the frost-freeze protection projects within the Dover/Plant City WUCA is 41 million gallons per freeze event. District staff continue to work with growers during the operational phase of projects to document the net improvement of water resources and develop continued and new partnerships to implement additional projects.

b. Mini-FARMS Program (H529)

Background - Mini-FARMS (Mini-Facilitating Agricultural Resource Management Systems) is a scaled down version of the District's FARMS cost-share reimbursement program to implement agricultural BMPs on agricultural operations of 100 irrigated acres or less to conserve water and protect water quality within the District. Mini-FARMS is intended to assist in the implementation of the District's RWSP, SWUCA Recovery Strategy, Dover Plant City WUCA Recovery Strategy, the Shell and Prairie Creek Watershed Management Plan, and the District's Strategic Plan. Similar to the FARMS projects, the Mini-FARMS Program implements BMPs on agricultural operations to reduce Upper Floridan groundwater use and improve water quality conditions throughout the District. The maximum cost-share amount available from Mini-FARMS projects is $5,000 per agricultural operation per year; and the maximum cost-share rate is 75 percent of project costs.

Linkage to the Regional Water Supply Plan - The Mini-FARMS Program is discussed in Chapter 7, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The Mini-FARMS projects are an annual request. As of September 2016, the District's portion of the Mini-FARMS Program has reimbursed 154 water conservation BMP projects since FY2006. The District's total reimbursement has been $578,523. The Mini-FARMS Program continues to be in strong demand from growers within the District.

c. Institute of Food and Agricultural Services (IFAS) BMP Implementation Project (H579)

Background - The primary goal of this project is to assist the IFAS in promoting statewide FDACS adopted agricultural BMPs, typical FARMS projects, and other practices. District participation in this project promotes the establishment of additional FARMS projects that provide water resource benefits throughout the District. Assistance is provided to growers by conducting site assessments,

selecting applicable BMPs, and filing notices of intent (NOIs) to implement the practices. Staff will follow up with growers to provide help understanding or implementing the BMPs if needed. Technical assistance may be provided directly or by coordinating with the appropriate FDACS staff or IFAS extension agents. Growers are informed of available BMP-related programs offered by FDACS, the water management districts, and other entities. Field demonstrations, workshops, and other educational opportunities are provided to growers and their employees. Technical assistance will also identify areas of future educational needs.

FDACS has developed and adopted ten BMP manuals covering poultry operations, cow/calf operations, citrus, vegetable and agronomic crops, nurseries, equine operations, specialty fruit and nut crops, sod operations, dairy, and agriculture wildlife for state imperiled species. Other documents and rules related to IFAS BMPs include: Best Management Practices for Agriculture in the Lake Okeechobee Watershed, Tri-County Agricultural Area Potato Farms, Conservation Plans for Specific Agricultural Operations, Florida Forest Service Silviculture Best Management Practices, and Aquaculture Best Management Practices, and Florida Forestry Wildlife Best Management Practices for State Imperiled Species. As of March 2017, 3,981 NOIs have been established within the District.

Linkage to the Regional Water Supply Plan - This project assists the FARMS Program in reaching its agricultural water conservation goals, which are critical to the District's strategy to manage water resources. The IFAS BMP Implementation Project is discussed in Chapter 7, Section 2 of each regional volume of the 2015 RWSP.

Schedule - This project is an annual request.

d. FARMS Irrigation Well Back-Plugging Program (H015)

Background - This is an ongoing program for financial and technical assistance to well owners within the SWUCA to back-plug irrigation wells that produce highly mineralized groundwater. Back-plugging is a recommended practice to rehabilitate irrigation wells by identifying and restricting the intrusion of highly mineralized groundwater that often occurs from deeper aquifer zones in certain areas of the District. This program is separate from the QWIP, which focuses on proper well abandonment. The Well Back-Plugging Program was initiated in 2002 to improve water quality in watershed systems of the SWUCA, and later became an addition to the FARMS Program in 2005.

Back-plugging can be far more cost-effective than new well construction. The procedure generally involves filling a lower borehole interval with gravel, then capping the filled interval with a neat cement plug. The best back-plugging results have been for wells with more defined stratification characteristics and with initial groundwater conductivity values exceeding 2,000 µ/cm.

Experience has shown that well back-plugging procedures often result in immediate relief from adverse effects of highly mineralized ground water used for irrigation, with dramatic improvement to crop yields. Participating growers frequently report significant improvement to plant growth and crop yields due to reduced mineralization of irrigation water after back-plugging their wells. Importantly, continued back-plugging efforts will maintain higher water quality standards in the downstream watershed area and continue to facilitate agriculture with sustainable, high quality water resources.

Linkage to the Regional Water Supply Plan - The FARMS Irrigation Well Back-Plugging Program is discussed in Chapter 7, Section 2 of each regional volume of the 2015 RWSP.

Schedule - This project is an annual request.

e. FARMS Meter Accuracy Support (P429)

Background - This project involves checking the accuracy of flow meters to verify that offsets obtained through FARMS projects are accurate. Water use permits with metering stipulations are required to have meters checked every five years to ensure the accuracy is within five percent. Once flow meter accuracy is verified, the results are shared with the landowner. If calibration or other repairs are needed, the landowner is responsible for making those repairs. Meter accuracy support will be offered through contracted services to eligible FARMS participants.

Linkage to the Regional Water Supply Plan - The FARMS Meter Accuracy Support is not

specifically mentioned in the 2015 RWSP but is a supporting component in the FARMS program discussed in Chapter 7, Section 2 of each regional volume of the 2015 RWSP.

Schedule - This project is an annual request.

Environmental Restoration and MFL Recovery Projects

Included in this section are five environmental restoration and MFL recovery projects that will benefit the water resources and support the implementation of MFLs. Chapter 2, Part B of the 2015 RWSP (each regional volume) outlines the District's strategy for establishing MFLs for surface waters, aquifers, and surface watercourses. Included this year is a project for the Flatford Swamp restoration, which was noted as a Surface Water Management project in prior budgets, but is now allocated as WRD since a project option has been selected. Three of the projects are portions of the recovery strategy to restore minimum flows to the Lower Hillsborough River (LHR). Flows in the LHR have been reduced by a variety of factors including increased use of the Hillsborough River Reservoir, surface water drainage alterations, reduction in surface storage, long-term rainfall patterns, and induced recharge due to groundwater withdrawals. The District set minimum flows for the LHR, Sulphur Springs, and the Tampa Bypass Canal in 2007 and the MFLs were incorporated as amendments to Rule 40D-8.041, F.A.C. The LHR's flows were below the adopted minimum flows in multiple dry years within the decade, and the development of a recovery strategy was required by Florida Statutes. The recovery strategy will ensure that natural resources associated with the LHR are protected from significant harm by increasing freshwater flows during the months of April, May, and June to support the estuarine nursery habitat.

a. MIA Recharge SWIMAL Recovery at Flatford Swamp (H089)

Background - Hydrologic alterations and excess runoff have adversely impacted the Flatford Swamp in the upper Myakka watershed, and quantities of water should be removed from the swamp and surrounding areas to restore hydroperiods close to historic levels. The District has been conducting BMP evaluations to explore potential beneficial uses of water. In 2016, evaluations began on an injection recharge option that would use excess flow affecting the swamp to recharge the Upper Floridan aquifer in the vicinity of the MIA of the SWUCA to slow saltwater intrusion. The recharge system would assist with the SWUCA Recovery Strategy's goal of meeting the SWIMAL to help recover and protect groundwater resources in/near the MIA. The evaluation includes a test well in the Flatford Swamp to explore groundwater quality and aquifer characteristics.

Linkage to the Regional Water Supply Plan - This project is discussed as an ongoing WRD Project in the Southern regional volume of the 2015 RWSP, Chapter 7, page 147 under its previous title "Upper Myakka/Flatford Swamp Hydrologic Restoration and Implementation." The SWIMAL is described in Chapter 2 (page 22).

Schedule - The feasibility study was completed at the beginning of 2017. Tasks for FY2018 involve constructing a test well at Flatford to explore groundwater quality and aquifer characteristics. Anticipated for FY2019 is the recharge testing program.

b. Lower Hillsborough River Recovery Strategy (H400)

Background - As established in 2007, the Lower Hillsborough River (LHR) recovery strategy outlined six projects and a timeline for their implementation. Four projects are jointly funded by the District and the City of Tampa, and two are being implemented by the District. These projects are: Tampa Bypass Canal diversions, modifications at Sulphur Springs to the lower weir, upper weir and pump station, the Blue Sink analysis and project, the Morris Bridge Sink project, the transmission pipeline evaluation and project, and the investigation of storage or additional supply options. Tampa Bypass Canal diversions have been implemented when needed, since December 31, 2017 under project H402. The modifications to the weirs and pump station at Sulphur Springs have been completed. The Blue Sink analysis has been completed and the pump station and pipeline project that will divert up to 2 mgd to the base of the Hillsborough River dam will be complete in October 2017. The design and construction of infrastructure to divert up to 3.9 mgd of water from Morris Bridge Sink through the Tampa Bypass Canal is ongoing and funded under project H404. Based on a peer-review completed in 2008, the transmission pipeline project is no longer considered a viable recovery project for the LHR. Additional water sources and supply options to help meet minimum flows are under consideration.

District funding in FY2018 will be used for biological sampling in support of the second five-year assessment of the minimum flows for the LHR. This information will be used in the five-year assessment that must be conducted by rule in 2018. In addition, available information will be used for the 2018 annual assessment that will be conducted internally as a requirement of the Water Use Permit issued for Morris Bridge Sink.

Linkage to the Regional Water Supply Plan - The MFL recovery strategy for the LHR is discussed in the Tampa Bay regional volume of the 2015 RWSP in Chapter 2 (page 36). The recovery strategy projects are described in Chapter 7 (page 147).

Schedule - The second LHR five-year assessment will be completed in 2018.

c. Pump Station on Tampa Bypass Canal, Morris Bridge Sink (H404)

Background - This project will construct a pump station and pipeline components to divert surface water from the Morris Bridge Sinkhole to the upper pool of the Tampa Bypass Canal. A second pump station will be used to transfer water to the canal's middle pool, where it can be conveyed through the reservoir to the LHR during low flow periods to help implement minimum flows.

Linkage to the Regional Water Supply Plan - This project is specifically described in the Tampa Bay regional volume of the 2015 RWSP. Chapter 2, Section 2 describes the project as a component of the recovery strategy (page 36) and water reservation established for the Morris Bridge Sink (page 39). The project is also listed in Chapter 7, Section 2.

Schedule - The project commenced in February 2016 and is on-going. Completion of the project depends upon the evaluation and feasibility of the Tampa Augmentation Project (TAP, project N751) in 2018.

d. Lower Hillsborough River Pumping Facilities (N492)

Background - This is a multiyear cooperative funding project with the City of Tampa that was revised in 2017. Since 2008, the District has operated temporary pumping stations (H402) at structures S-162, S-161 and at the Hillsborough River dam to transfer up to 7.1 mgd of water from the Tampa Bypass Canal to the Hillsborough River reservoir and up to 5.3 mgd from the reservoir to the river below the dam to meet required minimum flows. The temporary facilities were used to get the recovery strategy under way while the City evaluated options and designs for permanent pumping facilities at structure S-161 and the dam. In 2017 the City agreed to take over operation of the temporary pumping stations at structure S-161 and the dam. In addition, the city is constructing a control gate in the dam that can pass the full amount of water needed to meet minimum flows in the LHR. This control gate will replace the pump station at the dam and will be co-funded by the District under project N492.

Linkage to the Regional Water Supply Plan - This project is discussed in the Tampa Bay regional volume of the 2015 RWSP, Chapter 1 (page 6), Chapter 2 (page 36), and Chapter 7 (page 147).

Schedule - The city took over operation of the pump stations in the fall of 2017. The control gate is anticipated to be completed in 2018.

e. Lake Jackson Watershed Hydrology Investigation (N554)

Background - Lake Jackson is a 3,412-acre lake located in the City of Sebring, and is one of nine lakes in Highlands County with an established MFL. Lake Jackson has not met its MFL in over a decade. Residents and local officials have voiced concerns over persistent low water levels potentially related to storm water canal structures, potential flow through the shallow aquifer to the canals, and possible leakage in the lake's hardpan bottom. This hydrologic investigation will collect data and attempt to identify the causes of the low water level in Lake Jackson and Little Jackson Lake over the last decade and develop cost-effective recovery strategies. Aspects of the project include:

- An assessment of the storm water structures including the underwater portions and channel flow.
- Installation of groundwater, lake level, and weather monitoring networks in order to calculate a

more accurate lake water budget.

- Modeling the effects of a proposed subsurface wall on the lateral movement of water from Lake Jackson through the shallow aquifer to downstream sources, and calculating its potential improvement to the level of Lake Jackson.

The project will include a cost-benefit analysis if the investigation and modeling shows the subsurface wall or other recovery strategies may be beneficial to the lake water levels.

Linkage to the Regional Water Supply Plan - This project is specifically identified in Chapter 7, Section 2, in the Heartland regional volume of the 2015 RWSP (page 137).

Schedule - The project is ongoing. Quarterly field assessments of hydrologic conditions will commence in early FY2018 and will continue through 2019. A watershed management plan deliverable is expected in 2020.

Water Supply Development Assistance

Regional water supply authorities, local governments, and public and privately-owned water utilities typically have the lead role in implementing water supply development projects (Section 373.705, F.S.). The District provides funding assistance to these entities for projects that are consistent with the District's RWSP and meet one of the following criteria: the project supports establishment of a dependable, sustainable supply of water that would not otherwise be financially feasible to develop; the project provides substantial environmental benefits by preventing or limiting adverse water resource impacts, but needs funding assistance to be economically competitive with other project alternatives; or the project significantly implements the reuse, storage, recharge, or conservation of water in a manner that helps sustain regional water sources. Priority consideration for funding assistance is given to water supply projects that replace an existing source in order to help achieve an MFL, implement reuse that helps to eliminate domestic wastewater ocean outfalls, or reduces/eliminates the adverse effects of competition between legal water users and natural systems.

The District has 75 budgeted or ongoing water supply development projects in FY2018. As shown in Tables 3 through 9, the District is funding approximately $35.3 million in FY2018 for water supply development assistance. This amount includes $3 million of Springs Initiative funding provided by DEP and budgeted by the District. The project budgets shown are consistent with the Programmatic Budget activity code 2.2.2. The water supply development projects are categorized in the tables as surface water projects, regional potable water interconnects, reclaimed water projects, brackish groundwater development, aquifer recharge and ASR projects, and conservation projects. Some projects in the aquifer recharge and ASR category may also have reclaimed water components. Projects within each category are sorted by the project number.

Additional funding needs for water supply development projects for the second through fifth years of the Work Program are identified in the tables below. As the District budget is adopted on an annual basis, the future funding are projections based their estimated costs and schedules. The majority of water supply development projects are funded within one year, although some large projects may have a construction phase planned in a future year that will require a relatively large amount of funding. Projects that are listed but have no FY2018 funding represent ongoing projects that were funded in a prior year. The statute revisions also require identification of Projects that assist a recovery or prevention strategy are identified by location codes in the project titles to identify whether they are located with a WUCA or priority springs watershed.

The future funding in the tables only represents water supply development assistance of projects that have been proposed to the District through the Cooperative Funding Initiative. The District expects new water supply projects to be proposed every year. On average, the total for reclaimed water projects will require approximately $20 million each year, and future conservation projects may require approximately $1.25 million annually. The amount needed for new regional interconnects and water treatment facilities can vary greatly from year to year, peaking as large infrastructure projects move from design to construction phases.

In addition to water supply development, the District also supports water supply planning efforts through the Cooperative Funding Initiative to assist governmental entities in selecting the most beneficial projects and practices. The planning projects are listed separately from the water supply development projects in Table 10 because they are budgeted under the Programmatic Budget activity code 1.1.1. There we no new water supply planning projects approved in the FY2018 budget, but three ongoing reclaimed water master plans are included.

Table 3. Surface Water Projects

Project Number	Water Supply Development Assistance - Surface Water Projects (Programmatic Budget 2.2.2.1)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)	Rank
N881	Arcadia Golf Course Reclaimed Water Storage Reservoir	$0	$225,000	$0	$0	$0	$0	$300,000	0.100	H
Total Surface Water Projects		**$0**	**$225,000**	**$0**	**$0**	**$0**	**$0**	**$300,000**	0.100	

Table 4. Regional Potable Interconnects

Project Number	Water Supply Development Assistance - Regional Potable Water Interconnects (Programmatic Budget 2.2.2.2)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)	Rank
H094	Polk County Partnership*	$18,500,000	$10,000,000	$0	$0	$0	$0	$28,500,000	NA	1A
N416	PRMRWSA Regional Loop System Phase 1 DeSoto to Punta Gorda	$6,000,000	$0	$0	$0	$0	$0	$12,000,000	NA	O
N823	PRMRWSA Regional Integrated Loop System Phase 3B	$760,000	$470,000	$4,159,500	$5,366,000	$3,544,500	$0	$28,600,000	NA	H
Total Regional Interconnect Projects		**$25,260,000**	**$10,470,000**	**$4,159,500**	**$5,366,000**	**$3,544,500**	**$0**	**$69,100,000**	0.000	

*H094 Polk County Partnership dollars have been redistributed to the PRWC Projects ((N882, N905, and N928)

Table 5. Reclaimed Water Projects

Project Number	Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Benefit (mgd)	Rank
H076	TECO Polk Power Station Reclaimed Water Interconnects	$49,587,565	$0	$0	$0	$0	$0	$97,345,270	10.000	O
N024	Polk County NWRUSA Storage and Pumping Station	$2,613,020	$0	$0	$0	$0	$0	$5,226,041	NA	O
N339	Winter Haven #3 Reclaimed Interconnect, Storage, and Pumping	$2,750,000	$0	$0	$0	$0	$0	$5,500,000	0.800	O
N536	Auburndale Polytechnic Reclaimed Water Storage and Transmission	$1,500,000	$0	$0	$0	$0	$0	$3,000,000	1.500	O
N555	Town of Dunedin San Christopher Reclaimed Water Storage Tanks	$1,082,910	$0	$0	$0	$0	$0	$2,022,910	2.000	O
N556	Charlotte County Reclaimed Water Expansion Phase 3	$4,403,750	$311,250	$0	$0	$0	$0	$9,430,000	2.230	1A
N667	City of North Port Reclaimed Water Transmission Main Phase 3	$669,420	$0	$0	$0	$0	$0	$1,329,420	0.360	O
N696	Hernando County US19 Reclaimed Water Transmission, Phase 1	$9,029,633	$0	$0	$0	$0	$0	$12,029,633	1.700	O
N697	Pasco County Tampa Bay Golf/Country Club Reclaimed Water Expansion	$150,000	$0	$0	$0	$0	$0	$300,000	0.100	O
N711	Lakewood Ranch Stewardship District Reclaimed Water Transmission	$2,150,000	$150,000	$0	$0	$0	$0	$4,600,000	1.000	O

Table 5. Reclaimed Water Projects (continued)

Project Number	Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Benefit (mgd)	Rank
N743	Starkey Ranch Reclaimed Water Transmission Project B	$601,000	$354,000	$0	$0	$0	$0	$1,910,000	0.410	1A
N751	City of Tampa Augmentation Project	$1,500,000	$0	$0	$0	$0	$0	$3,000,000	Study	O
N755	Hillsborough County Integrated Water Resource Feasibility/Design Phase 3	$250,000	$200,000	$0	$0	$0	$0	$900,000	Study	1A
N772	Polk County NERUSA Loughman/Ridgewood Reclaimed Water Transmission	$250,500	$1,002,000	$0	$0	$0	$0	$2,505,000	0.345	1A
N776	Hillsborough County 19th Ave Reclaimed Water Transmission Main	$1,000,000	$1,713,671	$0	$0	$0	$0	$5,762,671	1.200	H
N778	Pasco County Bexley South Reclaimed Water Transmission Phase 2	$112,500	$0	$0	$0	$0	$0	$225,000	0.200	O
N791	Pasco County Starkey Ranch Reclaimed Water Transmission Project C	$336,661	$11,266	$108,873	$0	$0	$0	$913,600	0.430	1A
N792	Pasco County Reclaimed Water Transmission Main Ridge Golf Course	$200,000	$1,050,000	$0	$0	$0	$0	$2,500,000	0.680	1A
N796	City of Winter Haven Reuse Interconnect and Aquifer Recharge	$150,000	$0	$0	$0	$0	$0	$300,000	Study	O
N804	Hillsborough County Sun City Golf Courses Reclaimed Water Expansion	$1,125,000	$1,125,000	$0	$0	$0	$0	$4,500,000	1.500	1A
N805	City of Tarpon Springs Westwinds/Grassy Pointe Reclaimed Water System	$297,708	$0	$0	$0	$0	$0	$595,417	0.070	O
N817	Hillsborough County Countywide Reclaimed Water Major User Connect	$250,000	$250,000	$0	$0	$0	$0	$1,000,000	0.350	1A
N837	Pasco County Cypress Preserve Reclaimed Water Transmission	$0	$17,500	$157,500	$0	$0	$0	$350,000	0.190	H
N862	Polk County Utilities NERUSA CR 547 Reclaimed Water Transmission Phase 1	$0	$50,000	$384,750	$0	$0	$0	$869,500	0.377	H
N863	Hillsborough County Summerfield Sports Complex	$0	$77,500	$0	$0	$0	$0	$155,000	0.022	H
N868	Polk County Utilities NERUSA Ernie Caldwell Blvd Reclaimed Water Transmission	$0	$1,056,500	$0	$0	$0	$0	$2,113,000	0.414	H
N888	Haines City Rapid Infiltration Basin and Reuse Improvements	$0	$112,500	$112,500	$0	$0	$0	$300,000	NA	H
N898	Haines City Reclaimed Water Tank and Pump Stations Project	$0	$225,000	$0	$705,000	$2,820,000	$0	$5,000,000	NA	M
N899	Polk County Utilities Reclaimed Water Recharge Study in DPC WUCA & NW Polk	$0	$250,000	$250,000	$0	$0	$0	$1,098,000	1.500	H
N918	Polk County Utilities NERUSA FDC Grove Road Reclaimed Water Transmission	$0	$848,000	$0	$0	$0	$0	$1,696,000	0.142	H
N920	West Villages District Reclaimed Water transmission to South Sarasota County	$0	$356,000	$0	$0	$0	$0	$712,000	0.250	H

Table 5. Reclaimed Water Projects (continued)

Project Number	Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Benefit (mgd)	Rank
P130	City of Crystal River/Duke Energy Reclaimed Water Interconnection	$4,290,000	$0	$0	$0	$0	$0	$6,573,625	0.440	O
WC02	Citrus County Sugarmill Woods Advanced Wastewater Treat	$4,000,000	$0	$0	$0	$0	$0	$8,000,000	NA	O
Total Reclaimed Water Projects		**$88,299,667**	**$9,160,187**	**$1,013,623**	**$705,000**	**$2,820,000**	**$0**	**$191,762,087**	**28.210**	

Table 6. Brackish Groundwater Projects

Project Number	Water Supply Development Assistance - Brackish Groundwater Development Projects (Programmatic Budget 2.2.2.4)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)	Rank
N600	Punta Gorda Reverse Osmosis Project - Brackish Wellfield Investigation	$1,500,000	$0	$0	$0	$0	$0	$3,000,000	Study	O
N780	Punta Gorda Reverse Osmosis Project - Facility Construction	$1,000,000	$6,575,000	$6,575,000	$0	$0	$0	$29,200,000	4.000	O
N882	PRWC West Polk County Lower Floridan Deep Wells	$4,650,000	$0	$0	$0	$0	$0	$166,754,000	15.000	O
N905	PRWC Southeast Wellfield Lower Floridan	$5,900,000	$0	$0	$0	$14,389,717	$64,200,272	$352,385,000	30.000	O
Total Brackish Groundwater Projects		**$13,050,000**	**$6,575,000**	**$6,575,000**	**$0**	**$14,389,717**	**$64,200,272**	**$551,339,000**	**49.000**	

Table 7. Aquifer Recharge and Aquifer Storage and Recovery Projects

Project Number	Water Supply Development Assistance - Aquifer Recharge & Aquifer Storage and Recovery Projects (Programmatic Budget 2.2.2.5)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)	Rank
K120	City of North Port Dry Season Potable Water ASR	$988,570	$0	$0	$0	$0	$0	$2,022,640	0.200	O
K269	Sarasota County North Reclaimed Water ASR	$1,686,382	$0	$0	$0	$0	$0	$3,207,900	0.300	O
L608	City of Palmetto Reclaimed Water ASR	$2,167,112	$0	$0	$0	$0	$0	$4,126,224	NA	O
N435	Bradenton Surface Water ASR	$2,207,553	$142,447	$0	$0	$0	$0	$4,700,000	0.410	1A
N665	City of Clearwater Groundwater Replenishment Project Phase 3	$3,685,600	$8,000,000	$4,672,400	$0	$0	$0	$32,716,000	2.400	1A
N833	City of North Port Permanent ASR Facilities	$110,000	$230,000	$0	$0	$0	$0	$680,000	TBD	H
Total Aquifer Recharge/ASR Projects		**$10,845,217**	**$372,447**	**$0**	**$0**	**$0**	**$0**	**$32,762,364**	**3.310**	

Table 8. Water Conservation Projects

Project Number	Water Supply Development Assistance - Conservation Rebates, Retrofits, Etc. Projects (Programmatic Budget 2.2.2.7)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Benefit (mgd)	Rank
N655	City of St. Petersburg Toilet Replacement Program Phase 15	$50,000	$0	$0	$0	$0	$0	$100,000	0.014	O
N716	Polk County Customer Portal Pilot Project	$10,000	$0	$0	$0	$0	$0	$20,000	0.090	O
N728	City of St. Petersburg Sensible Sprinkling Program Phase 7	$50,000	$0	$0	$0	$0	$0	$100,000	0.041	O
N757	Bay Laural Irrigation Controller/ET Sensor Upgrade	$41,678	$0	$0	$0	$0	$0	$83,356	0.024	O
N779	Marion County Toilet Rebate Program Phase 4	$16,000	$16,000	$0	$0	$0	$0	$64,000	0.010	1A
N789	Pasco County ULV Toilet Rebate Program Phase 10	$50,000	$0	$0	$0	$0	$0	$100,000	0.014	O
N806	Manatee County Toilet Rebate Project Phase 10	$113,250	$0	$0	$0	$0	$0	$226,500	0.420	O
N808	City of Venice Toilet Rebate and Retrofit Project	$29,450	$0	$0	$0	$0	$0	$58,900	0.013	O
N815	City of Arcadia South Distribution Looping Project	$236,250	$0	$0	$0	$0	$0	$315,000	NA	O
N819	City of St. Petersburg Toilet Rebate Program Phase 16	$50,000	$0	$0	$0	$0	$0	$100,000	0.014	O
N820	Polk County Landscape & Irrigation Evaluation Program	$41,400	$0	$0	$0	$0	$0	$82,800	0.042	O
N822	WRWSA Enhanced Regional Irrigation Evaluation/Conservation Incentives	$100,000	$0	$0	$0	$0	$0	$200,000	0.087	O
N840	Venice Advanced Metering Analytics Project	$0	$11,000	$0	$0	$0	$0	$22,000	0.004	H
N845	Pasco County Florida Water Star Pilot Project	$0	$35,000	$0	$0	$0	$0	$70,000	0.013	H
N846	Polk County Landscape and Irrigation Evaluation	$0	$42,500	$0	$0	$0	$0	$85,000	0.042	H
N849	Venice Toilet Rebate and Retrofit Project Phase 6	$0	$22,500	$0	$0	$0	$0	$45,000	0.005	H
N852	Pasco County ULV Toilet Rebate Program Phase 11	$0	$50,000	$0	$0	$0	$0	$100,000	0.014	H
N860	Citrus County Water Sense Labeled Irrigation Controller Account Credit	$0	$16,875	$0	$0	$0	$0	$33,750	0.017	H
N875	St Petersburg Florida Water Star Rebate Pilot Project	$0	$24,850	$0	$0	$0	$0	$49,700	0.009	H
N876	New Port Richey Toilet Rebate Program Phase 4	$0	$7,470	$0	$0	$0	$0	$14,940	0.002	H
N877	Manatee County Toilet Rebate Project Phase 11	$0	$113,250	$0	$0	$0	$0	$226,500	0.040	H

Table 8. Water Conservation Projects (continued)

Project Number	Water Supply Development Assistance - Conservation Rebates, Retrofits, Etc. Projects (Programmatic Budget 2.2.2.7)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Benefit (mgd)	Rank
N890	St Petersburg Residential Clothes Washer Rebate Pilot Project	$0	$12,350	$0	$0	$0	$0	$24,700	0.002	H
N909	St Petersburg Sensible Sprinkling Program Phase 8	$0	$50,000	$0	$0	$0	$0	$100,000	0.056	H
N921	Bay Laurel Center CDD Irrigation Controller/ET Sensor Upgrade Project	$0	$43,760	$0	$0	$0	$0	$87,520	0.023	H
N922	Bay Laurel Center CDD Florida Water Star Rebate Pilot	$0	$26,250	$0	$0	$0	$0	$52,500	0.010	H
P920	Polk Regional Water Cooperative Outdoor BMPs	$166,075	$0	$0	$0	$0	$0	$332,150	0.052	O
P921	Polk Regional Water Cooperative Indoor Conservation Incentives	$121,275	$0	$0	$0	$0	$0	$242,550	0.087	O
P922	Polk Regional Water Cooperative Florida Water Star Builder Rebate Program	$350,000	$0	$0	$0	$0	$0	$350,000	0.066	O
Total Conservation Rebates, Retrofits, Etc.		**$1,425,378**	**$471,805**	**$0**	**$0**	**$0**	**$0**	**$3,286,866**	**1.211**	

Table 9. Total Summary of Funding for Water Supply Development Projects

Water Supply Development Assistance Project Totals (Programmatic Budget 2.2.2)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)
Surface Water Projects	$0	$225,000	$0	$0	$0	$0	$300,000	0.100
Regional Potable Water Interconnects	$25,260,000	$10,470,000	$4,159,500	$5,366,000	$3,544,500	$0	$69,100,000	0.000
Reclaimed Water Projects	$88,299,667	$9,160,187	$1,013,623	$705,000	$2,820,000	$0	$191,762,087	28.210
Brackish Groundwater Development Projects	$13,050,000	$6,575,000	$6,575,000	$0	$14,389,717	$64,200,272	$551,339,000	19.000
Aquifer Recharge and Aquifer Storage & Recovery Construction Projects	$10,845,217	$8,372,447	$4,672,400	$0	$0	$0	$47,452,764	3.310
Conservation Rebates, Retrofits, Etc. Projects	$1,425,378	$471,805	$0	$0	$0	$0	$3,286,866	1.211
Total Funding	**$138,797,830**	**$35,274,439**	**$16,420,523**	**$6,071,000**	**$20,754,217**	**$64,200,272**	**$861,572,717**	**81.831**

Table 10. Water Supply Planning Projects

Project Number	Water Supply Planning (Programmatic Budget 1.1.1.1)	Prior District Funding	FY2018 Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	Total Project Cost	Supply (mgd)	Rank
N781	Hernando County Reclaimed Water Master Plan	$75,000	$0	$0	$0	$0	$0	$150,000	NA	O
N816	Oldsmar Reclaimed Water Master Plan	$37,500	$0	$0	$0	$0	$0	$75,000	NA	O
P928	PRWC Peace Creek Integrated Water Supply Plan	$950,000	$0	$450,000	$550,000	$0	$0	$122,885,000	5.000	O
Total Planning Projects		**$1,062,500**	**$0**	**$450,000**	**$550,000**	**$0**	**$0**	**$123,110,000**	**5.000**	

The WUCA location codes above are (S) - SWUCA, (DPC) - Dover/Plant City WUCA, (NTB) - Northern Tampa Bay WUCA. (Springs) indicates project is located in vicinity of a priority springshed. Other Acronyms: ASR - aquifer storage and recovery, BMPs - best management practices, ET - Evapotranspiration, mgd - million gallons per day, NERUSA/NWRUSA - The Northeast/Northwest Regional Utility Service Areas of Polk County Utilities, PRMRWSA - Peace River Manasota Regional Water Supply Authority, PRWC - Polk Regional Water Cooperative, TECO - Tampa Electric Company, WRWSA - Withlacoochee Regional Water Supply Authority.

Project Ranking Codes:
O - The Project is ongoing with funds from prior year(s), and no additional project funding is required in FY2018.
1A - Priority ranking for District Initiatives and multiyear funding for ongoing projects.
H - High Priority. District staff recommended project funding to Governing Board.
M - Medium Priority. The project was recommended by staff but may require additional information to move forward, has less stellar resource benefit, or other issue.
L - Low Priority. The project is not likely to move forward, or has minimal resource benefit, or was considered the responsibility of local entity.

Descriptions of Water Supply Development Projects

Descriptions of the water supply development and water supply planning projects included in the District's FY2018 budget are provided below, sorted by category and project code. The inclusion of these projects in the Work Program provides a mechanism for DEP to formally evaluate the projects for consistency with the goals of the District's 2015 RWSP. By adoption, the projects are incorporated into the District's RWSP and become potentially eligible for state funding.

Surface Water Projects

N881 Arcadia Golf Course Reclaimed Water Storage Reservoir

Description - This project will design, permit and construct a 600,000-gallon storage pond, approximately 600 feet of reclaimed water transmission mains, and other necessary appurtenances to supply additional reclaimed water to the Arcadia Golf Course. The District anticipates recategorizing the project under Reclaimed Water (category 2.2.2.3) early in FY2018.

Linkage to RWSP - Though not specifically listed, the expansion of reuse in Arcadia is mentioned as a water supply development project in the Southern regional volume of the 2015 RWSP, Chapter 5, Section 3, page 111.

Schedule – The project will begin in FY2018 and the end date is to be determined.

Regional Potable Interconnects

H094 Polk County Partnership

Description - This project includes support of regional cooperation within the Polk County and the development of regional AWS projects that can achieve 30 mgd of base supply. The District Governing Board adopted Resolution No. 15-07 providing timing and guidance for this project including $40 million to be provided in $10 million increments based on achievement of certain milestones. The first $30 million was committed in FY2015 through FY2017 for meeting milestones in support of AWS development, execution of project plan agreements, and approval of cooperator's governance and establishment of the Polk Regional Water Cooperative (PRWC). In April 2017, the Governing Board approved the PRWC's selection of three AWS projects, meeting the milestone of the final $10 million for FY2018. The three projects are West Polk County Deep Wells (N882), Polk Southeast Wellfield (N905), and the Peace Creek Integrated Water Supply Plan (N928). The Governing Board approved the use of H094 funding allocations to the initial phases of these projects.

Linkage to RWSP - The formation of regional entity in Polk County to develop a regional grid system is listed as an ongoing water supply development project in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 1.1, page 117.

Schedule - The project began in FY2015 and the Polk Regional Water Cooperative (PRWC) was founded in 2016. The District anticipates remaining funds will be allocated to PRWC projects as they achieve their milestones.

N416 PRMRWSA Regional Loop System, Phase 1 DeSoto to Punta Gorda

Description - This project is part of the PRMRWSA's Regional Integrated Loop Pipeline System providing a regional water transfer and delivery system for existing and future water sources within the PRMRWSA's four-county service area. This project will design and construct a potable water transmission interconnection between the PRMRWSA's Project Prairie pump station in DeSoto County and the City of Punta Gorda's Shell Creek Water Treatment Facility. The design will include approximately 6.3 miles of 24-inch diameter pipeline extending from the southern terminus of the PRMRWSA's DeSoto Regional Transmission Main, south to the Shell Creek Facility in Charlotte County. The project will enable delivery of up to 4 mgd from the Peace River Facility to the Shell Creek Facility, and up to 2 mgd from the Shell Creek to the regional system. Benefits of the project include critical back-up supply for DeSoto County, increased water system reliability and resource sharing opportunities for the City of Punta Gorda and the region, and new supply availability along U.S. 17, a growth corridor in Charlotte County.

Linkage to RWSP - The project is listed in the Southern regional volume of the 2015 RWSP, Chapter 5,

pages 116 and 117.

Schedule - The project began in FY2016, is ongoing, and the end date is currently projected for 2020.

N823 PRMRWSA Regional Integrated Loop System Phase 3B

Description - This project is part of the PRMRWSA's Regional Integrated Loop Pipeline System providing a regional water transfer and delivery system for existing and future water sources within the PRMRWSA's four-county service area. The Phase 3B Interconnect project will extend the PRMRWSA's regional transmission system from its current northern terminus located immediately west of the Sarasota County landfill along Cow Pen Slough, north about 4.2 miles to SR-72. The project may also include pumping, chemical trim, metering and storage facilities. This transmission main extension will facilitate delivery of regional water supplies to the northern portion of Sarasota County's service area and, in conjunction with future Phase 3C and 3D interconnections, will enable interconnection of Manatee County's water system with the regional water supply system.

Linkage to RWSP - The project is listed in the Southern regional volume of the 2015 RWSP, Chapter 5, pages 116 and 117.

Schedule - The project commenced in 2016, is ongoing, and the end date is currently projected for 2020.

Reclaimed Water Projects

H076 TECO Polk Power Station Reclaimed Water Interconnects

Description - The project will design, permit and construct approximately 102,000 feet of reclaimed water transmission mains from the Southwest Polk County service area and Mulberry, pumping infrastructure (one 10 mgd and one 2 mgd), 10 mgd of advanced treatment (filtration and membranes), a 0.5 million gallon storage tank and a 2 mgd concentrate deep disposal well. The project will utilize effluent from the City of Lakeland, Polk County, and the City of Mulberry at TECO's Polk Power Station expansion. The project will supply 10 mgd of reclaimed water in the SWUCA and in the District-related portion of the CFWI. The project is sized to a 2045 build-out capacity of 17 mgd (7 mgd future expansion funding by TECO only).

Linkage to RWSP - The project is listed as a water supply development project in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 3, page 124.

Schedule - The project began in FY2010 and will be completed in early FY2018.

N024 Polk County NWRUSA Storage and Pumping Station

Description - This project consists of a feasibility study that includes construction of an exploratory well followed by the design, permitting, construction, and testing of a 1 mgd reclaimed water LFA ASR facility. The project includes construction of two monitoring wells and design and construction of associated surface facilities to connect the ASR well to the associated wastewater and reclaimed water facilities, preparation and completion of necessary well construction permits, cycle testing, and application for an operation permit.

Linkage to RWSP - The project is listed as a water supply development project in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 3, page 124.

Schedule - The project began in FY2009 and will be completed in early FY2018.

N339 Winter Haven #3 Reclaimed Interconnect, Storage, and Pumping

Description - The project consists of design, permitting, and construction of 23,000 feet of 20-inch reclaimed water interconnect between the City's two reuse systems, a 5 mgd reclaimed water pump station and a five million gallon storage tank. The project will transfer reclaimed water from the southern region to the northern service area for residential customers and excess capacity to existing rapid infiltration basins (RIBs) for recharge.

Linkage to RWSP - The project is listed as a water supply development Project in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 3, page 124.

Schedule - The project began in FY2012. The task schedule was amended and the project currently scheduled to be completed in December 2023.

N536 Auburndale Polytechnic Reclaimed Water Storage and Transmission

Description - The project is for design, permitting, and construction of a 2 million gallon storage tank, high service pump station, and approximately 10,500 feet of 16-inch diameter reclaimed water line from the City's Allred Wastewater Treatment Plant to the Florida Polytechnic University. The project will provide 1.5 million gallons of reclaimed water for irrigation and other uses at the new Florida Polytechnic University campus and Lake Myrtle Park.

Linkage to RWSP - The project is listed as a water supply development project in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 3, page 124.

Schedule - The project began in FY2014 and the end date is projected for FY2018.

N555 Town of Dunedin San Christopher Reclaimed Water Storage Tanks

Description - The project is for design, permitting, and construction of a 2.0 mgd pump station, telemetry, a 2.0 million gallon storage tank, along with piping and appurtenances to receive 0.1 mgd of effluent from the adjacent Coca-Cola plant that is currently discharged to the St. Joseph Sound. The project will result in 2.0 mgd of pumping capacity, 2.0 million gallons of diurnal storage, and 0.10 mgd of reclaimed water to existing and future customers in the Northern Tampa Bay Water Use Caution Area (NTBWUCA).

Linkage to RWSP - The project is listed as a water supply development project in the Tampa Bay regional volume of the 2015 RWSP, Chapter 6, Section 2, page 133.

Schedule - The project began in FY2014 and is ongoing. The end date is scheduled for early FY2018.

N556 Charlotte County Reclaimed Water Expansion Phase 3

Description - The project is for design, permitting and construction of approximately 51,000 feet of 4- to 16-inch diameter reclaimed transmission mains, retrofit of a 95 million gallon storage pond along with aeration, filtration, flow meter, telemetry, post chlorination system, transfer stations, an up to 5 mgd pump station, and other necessary appurtenances. The main transmission portions are located in western Charlotte County along County Road 775 (Placida Road) and along Cape Haze Drive. The project supplies reclaimed water in the central and western areas of the County for residential developments, commercial property, golf course irrigation and a County park in the SWUCA.

Linkage to RWSP - The project is listed as a water supply development project in the Southern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 130.

Schedule - The project began in FY2014, is ongoing, and the end date is scheduled in March 2019.

N667 City of North Port Reclaimed Water Transmission Main Phase 3

Description - The project consists of design, permitting, and construction of reclaimed water transmission infrastructure that includes 7,400 feet of 16- to 18-inch pipeline. The project will provide access to 0.36 mgd of reuse water for irrigation to the North Port Dog Park and other commercial and condominium properties, while improving the reliability to existing and future customers. The project is integral in laying the foundation for the long-term expansion of the reuse system to the east along Price Boulevard to Toledo Blade Boulevard where service will be provided to major commercial activity centers.

Linkage to RWSP - The project is listed as a water supply development project in the Southern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 130.

Schedule - The project began in FY2015, is ongoing, with end date scheduled in June 2018.

N696 Hernando County US19 Reclaimed Water Transmission, Phase 1

Description **-** The project consists of constructing a 16-inch reclaimed water main from the Glen Water Reclamation Facility to the intersection of US 19 and Trenton Avenue in Hernando County. It also includes a new ground storage tank at the facility. The project will provide up to 1.7 mgd of reclaimed water to the Timber Pines Subdivision and golf course. The new reclaimed water main will tie into the existing reclaimed water distribution system in Timber Pines.

Linkage to RWSP - The project is listed as a water supply development project in the Northern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 103.

Schedule - The project began in FY2016, is ongoing, and is scheduled for completion by November 2019.

N697 Pasco County Tampa Bay Golf/Country Club Reclaimed Water Expansion

Description - The project is for the design, permitting, and construction of approximately 1,200 feet of eight-inch reclaimed water distribution piping and associated appurtenances from the County's existing reclaimed water transmission main along Old Pasco Road to the existing storage pond and irrigation pump station at the Tampa Bay Golf and Country Club. It will provide up to 0.10 mgd of reclaimed water to a golf course customer situated within the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2016, is ongoing, and will be completed in early FY2018.

N711 Braden River Lakewood Ranch Stewardship District Reclaimed Water Transmission

Description - This project is for construction of a reclaimed water transmission main extension to serve Lakewood Ranch via Braden River Utilities. This transmission main will move additional reclaimed water flows sourced from the City of Sarasota further east and north to meet residential and recreation irrigation demands. The project will also allow for the routing and distribution of reclaimed water from the City of Bradenton. The easterly transmission main will consist of approximately 17,000 feet of 16- to 20-inch pipeline. The northern transmission main will consist of approximately 13,200 feet of 12- to 20-inch pipeline. The project also includes an 11.4 million gallon storage reservoir at the northern terminus and a passive denitrification pilot system.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project was initially funded in FY2017, is ongoing, and completion is anticipated by January 2019.

N743 Starkey Ranch Reclaimed Water Transmission Project B

Description - This project is for design, permitting, and construction of approximately 17,500 feet of reclaimed water transmission mains to provide up to 0.41 mgd of reclaimed water to mixed-use irrigation customers (residential, commercial, and civic) in the Starkey Ranch development within the NTBWUCA.

Linkage to RWSP - This project is a scaled-down component of the "Reuse Expansion Pasco/New Port Richey System 2016-2035" project listed in the Tampa Bay regional volume of the 2015 RWSP in Chapter 5, Section 3.

Schedule - The project began in FY2016 and is ongoing. The end date is scheduled in June 2019.

N751 City of Tampa Augmentation Project

Description - The Tampa Augmentation Project Study will investigate reusing up to 20 mgd of highly treated reclaimed water from the City's advanced wastewater treatment plant to recharge the aquifer adjacent to the Tampa Bypass Canal through RIBs and wetlands restoration. The City is implementing a program to address regulatory requirements, evaluate the feasibility of RIBs and wetlands, determine surface water yield, and construct a one-acre RIB to conduct pilot trials. In addition to potable water supply benefits, there are associated environmental benefits including a reduction of nitrogen loading to Hillsborough Bay, additional freshwater flows to help meet MFLs, and wetlands restoration.

Linkage to RWSP - This project is listed as a water supply development project in the Tampa Bay regional volume of the 2015 RWSP, Chapter 5, Section 3, page 116 as the Tampa Bypass Canal Augmentation 2016-2035, City of Tampa.

Schedule - The project began in FY2016 and has end date scheduled for April 2018.

N755 Hillsborough County Integrated Water Resource Feasibility/Design Phase 3

Description - This is the feasibility investigation and preliminary design/modeling to evaluate the technical, regulatory, and financial feasibility of using up to 25+ mgd of excess reclaimed water to significantly increase direct and indirect aquifer recharge in Hillsborough County. Phase 2 focused on hydrological modeling of recharge capabilities for regionally significant areas of Hillsborough County including portions of the Dover/Plant City WUCA, the NTBWUCA, and the MIA of the SWUCA. Phase 3 will include more refined geophysical testing in the areas selected in Phase 2. Phase 3 will also include preliminary design(s) for reclaimed infrastructure from partnering systems, including interconnections that are determined necessary for meeting project objectives.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 3 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and has end date scheduled for December 2018.

N772 Polk County NERUSA Loughman/Ridgewood Reclaimed Water Transmission

Description - This project is for design, permitting, and construction of approximately 12,400 feet of 12- to 24-inch reclaimed water transmission mains and other necessary appurtenances to supply approximately 915 residential irrigation customers in the Ridgewood Lakes Development expansion and Loughman - Del Webb Development expansion areas of Polk County Utilities' Northeast Regional Utility Service Area (NERUSA).

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2017 and the end date is scheduled for December 2019.

N776 Hillsborough County 19th Ave Reclaimed Water Transmission Main

Description - The project is for construction of approximately 19,000 feet of 20- to 30-inch reclaimed water transmission mains and other necessary appurtenances to supply 2,000 residential irrigation customers in the Harbour Isle and Waterset South developments, and provide future additional residential irrigation and recharge projects in the Apollo Beach area. The project will supply 1.20 mgd of reclaimed water for residential irrigation, and enable the future supply of up to 8.60 mgd to the SHARP Project (N287) and additional residential irrigation customers in the MIA of the SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is

related to the SHARP project mentioned in Chapter 7, Section 1 of the Tampa Bay regional volume of the 2015 RWSP (page 131), and is consistent with the District's commitment to maximize reclaimed water reuse to offset traditional water supplies.

Schedule - The project began in FY2017 and the end date is scheduled for December 2019.

N778 Pasco County Bexley South Reclaimed Water Transmission Phase 2

Description - This project is for construction of approximately 3,000 feet of 16-inch reclaimed water transmission mains and other necessary appurtenances to provide irrigation to residential, commercial, recreational, and aesthetic irrigation customers in the Bexley South Master Planned Unit Development. The system will supply 0.20 mgd of reclaimed water to mixed use irrigation customers in the NTBWUCA.

Linkage to RWSP - This project is a scaled-down component of the "Reuse Expansion Pasco/New Port Richey System 2016-2035" project listed in the Tampa Bay regional volume of the 2015 RWSP in Chapter 5, Section 3.

Schedule - The project began in FY2017 and the end date is scheduled for December 2018.

N791 Pasco County Starkey Ranch Reclaimed Water Transmission Project C

Description - Phase C of the project is for the design and construction of reclaimed water transmission mains in the next phase of the Starkey Ranch development. The project will include approximately 5,700 feet of 12- to 16-inch transmission mains and other necessary appurtenances to provide up to 0.29 mgd of reclaimed water to mixed-use irrigation customers (residential, commercial, and institutional).

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled in 2021.

N792 Pasco County Reclaimed Water Transmission Main Ridge Golf Course

Description - The project will extend approximately 20,000 feet of 12-inch reclaimed water transmission main along DeCubellis Road from Starkey Boulevard to Ridge Road, and along Moon Lake Road from Ridge Road to the Water's Edge community's existing irrigation pond. The project will provide 0.68 mgd of reclaimed water to residential customers and a golf course customer.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for June 2020.

N796 City of Winter Haven Reuse and Aquifer Recharge Feasibility

Description - The project is for a site feasibility investigation of an aquifer recharge project using reclaimed water provided by the City of Winter Haven's Wastewater Treatment Plant No. 3. If constructed, the aquifer recharge project will be a cooperative development partnership with an existing property owner/developer on 300 acres. This project will evaluate the feasibility of delivering 0.5 mgd for indirect aquifer recharge to improve groundwater levels in the SWUCA and potentially lake levels in Winter Haven.

Linkage to RWSP - This project is phase 2 of the Winter Haven Reclaimed Water Interconnect, Storage, and Pumping Project (N339), listed in the Heartland regional volume of the 2015 RWSP, Chapter 6, Section 3, page 124.

Schedule - The project was budgeted in FY2017 and commenced in September 2017. The study is

scheduled for completion in September 2019.

N804 Hillsborough County Sun City Golf Courses Reclaimed Water Expansion

Description - This project consists of the design, permitting, and construction of approximately 15,500 feet of 6- to 16-inch transmission lines interconnected to existing Hillsborough County reclaimed transmission water lines and other necessary appurtenances to provide an alternative supply of 2.0 mgd to irrigate up to seven golf courses at Sun City Center, all located within the MIA of the SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for May 2019.

N805 City of Tarpon Springs Westwinds/Grassy Pointe Reclaimed Water System

Description - This project is for design, permitting, and construction of approximately 13,500 feet of 4- to 6-inch reclaimed water transmission/distribution mains and other necessary appurtenances to supply approximately 310 residential irrigation customers in Tarpon Springs. The project will supply 0.07 mgd of reclaimed water in the NTBWUCA.

Linkage to RWSP - This project is a phase of the Reuse Expansion Tarpon Springs System 2016-2035, City of Tarpon Springs, listed as a water supply development project in the Tampa Bay regional volume of the 2015 RWSP, Chapter 5, Section 3, page 117.

Schedule - The project began in FY2017 and the end date is scheduled for December 2019.

N817 Hillsborough County Countywide Reclaimed Water Major User Connect

Description - This project is for the design, permitting, and construction of 2,600 feet of reclaimed water transmission main and necessary appurtenances to provide an alternative supply for the irrigation of two golf courses located at the Tournament Players Club and the Summertree Crossings Golf Club in Hillsborough County, located respectively within the NTBWUCA and within the MIA of the SWUCA. When connected, the project will supply 0.15 mgd of reclaimed water to the two golf courses.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for June 2019.

N837 Pasco County Cypress Preserve Reclaimed Water Transmission

Description - This project is for the design, permitting, and construction of approximately 3,000 feet of 10- to 14-inch reclaimed water transmission mains and other necessary appurtenances to supply approximately 557 single family homes, 284 multi-family homes, and approximately 15 acres of common areas in the Cypress Preserve community. When connected, the project will supply an estimated 0.19 mgd of reclaimed water in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing reclaimed water reuse to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in early FY2018 and is anticipated to end in 2021.

N862 Polk County Utilities NERUSA CR 547 Reclaimed Water Transmission, Phase 1

Description - This project is for the design, permitting, and construction of approximately 6,900 feet of 10- to 16-inch reclaimed water transmission mains and necessary appurtenances to supply approximately 1,060 residential irrigation customers in the Williams Preserve, Greenfield Village and Shell Property Areas of NERUSA. When connected, the project will supply an estimated 0.377 mgd of reclaimed water to residential customers in the "Ridge Area" of the CFWI.

Linkage to RWSP - This project evolved from project options described in the 2015 RWSP, Heartland regional volume, Chapter 5, Section 3, Page 106.

Schedule - The project will begin in FY2018 and the end date is in 2021.

N863 Hillsborough County Summerfield Sports Complex Reclaimed Water Transmission

Description - This project is for the design, permitting, and construction of an interconnected transmission line, a reclaimed water pump station; and other necessary appurtenances to supply contracted reclaimed water flows to athletic fields located at the Summerfield Sports Complex in Hillsborough County. When connected, the project will supply 0.065 mgd of reclaimed water within the MIA of the SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar projects described in Chapter 5, Section 3 of the Tampa Bay regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and completion is anticipated within the Summer 2018.

N868 Polk County Utilities NERUSA Ernie Caldwell Blvd Reclaimed Water Transmission

Description - This project is for the design, permitting, and construction of approximately 10,300 feet of 16- to 24-inch reclaimed water transmission mains and necessary appurtenances to supply approximately 1,100 residential irrigation customers in the Ridgewood Lake DRI Property Areas of NERUSA. When connected, the project will supply approximately 0.414 mgd of reclaimed water to residential customers in the "Ridge Area" of the CFWI.

Linkage to RWSP - This project evolved from project options described in the 2015 RWSP, Heartland regional volume, Chapter 5, Section 3, Page 106.

Schedule - The project will begin in FY2018 and the end date is proposed for 2023.

N888 Haines City Reclaimed Water MFL Recharge & Advanced Treatment Feasibility Study

Description - This project is for the evaluation of reclaimed water recharge sites, components and advanced treatment necessary to assist in meeting Minimum Flows and Levels (MFLs) on Lake Eva in the "Ridge Lakes" area of the CFWI.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components described in Chapter 5, Section 3 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is anticipated to be in Fall 2018.

N898 Haines City Reclaimed Water Tank and Pump Stations Project

Description - This project is for the conceptual sizing, preliminary design, 30 percent design, and third-party review of an expansion to the City's reclaimed water storage and pumping infrastructure. The infrastructure may include a reclaimed water storage tank, a low-pressure reuse transfer pump station, a high-pressure reuse pump station, telemetry controls and other necessary appurtenances to supply existing reuse customers and to enable future expansion of the City's reuse system. District funding is for the 30 percent design and third-party review, as this project has a conceptual estimate of nearly $5 million. The third-party review which will provide the necessary information to support funding in future years to complete design, permitting, and construction.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components described in Chapter 5, Section 3 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is anticipated to be in Fall 2018.

N899 Polk County Reclaimed Water Recharge Study in Dover/Plant City WUCA & Northwest Polk Areas

Description - This project request is for the second phase of an ongoing feasibility study by Polk County to develop a reclaimed water project concept to utilize up to 1.5 mgd of reclaimed water for aquifer recharge or other innovative methods to supplement groundwater supplies in Polk County's Northwest Regional Utility Service Area. Phase 1 of this study was funded by the County and is ongoing. Phase 1 includes a review of the potential reclaimed water supply and recharge project options and a desktop analysis of those water supply options including costs, regulatory feasibility, and operation. The County will select which reclaimed water supply option to further evaluate as part of a pilot study. Phase 2 of this study proposes to include District funding and begin in FY2018. Phase 2 will include a field scale investigation of the selected water supply project concept. Pilot testing and/or aquifer recharge testing will be included in this phase. Additional activities may include installing recharge and monitoring wells, collecting lithologic cores, aquifer performance testing and groundwater modeling. Phase 2 will also include the conceptual design and permitting of the selected reclaimed water supply/recharge project.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components described in Chapter 5, Section 3 of the Heartland regional volume of the 2015 RWSP.

Schedule - Phase 2 will begin in FY2018 and the end date is projected at the end of 2019.

N918 Polk County NERUSA FDC Grove Road Reclaimed Water Transmission Project

Description - This project is for the design, permitting, and construction of approximately 13,600 feet of 6- to 8-inch reclaimed water transmission mains and other necessary appurtenances to supply approximately 400 residential irrigation customers in the Natures Reserve, Polak/Cambria, County Walk Estates, Taylor Made Property/Sunridge, Holly Grove Villas and other areas of NERUSA. When connected, the project will supply 0.142 mgd of reclaimed water to residential customers in the "Ridge Area" of the CFWI.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components described in Chapter 5, Section 3 of the Heartland regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is proposed for 2020.

N920 West Villages to Sarasota County South Reclaimed Water Transmission Project

Description - This project is for the design, permitting, and construction of approximately 5,000 feet of 12-inch reclaimed water transmission mains and necessary appurtenances to supply approximately 620 residential irrigation customers in the West Villages Community. When connected, the project will supply 0.25 mgd of reclaimed water to residential customers in SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components described in Chapter 5, Section 3 of the Southern regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is proposed for 2019.

P130 City of Crystal River/Duke Energy Reclaimed Water Interconnection

Description - This project is for the design, permitting, and construction to connect the Meadowcrest wastewater treatment facility's reclaimed water to the City of Crystal River's existing reclaimed water line

that delivers water to the Duke Energy Complex. This project is receiving $3,000,000 in Springs Initiative funding in FY2018.

Linkage to RWSP - The project is not specifically mentioned in the 2015 RWSP but increases the utilization of the Duke Energy interconnection discussed in Chapter 1 of the Northern regional volume, Section 1.2, page 5.

Schedule - The project began in FY2017 and the end date is scheduled for December 2022.

WC02 Citrus County Sugarmill Woods Advanced Wastewater Treatment

Description - The project includes designing, permitting, and construction of advanced treatment facilities at the Sugarmill Woods wastewater treatment facility to provide 2.0 mgd of additional nutrient removal using conventional and denitrification filters. The project will reduce nutrient loading within the Chassahowitzka Springs springshed.

Linkage to RWSP - This project is listed as a water supply development project in the Northern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 115.

Schedule - The project began in FY2016 is near completion in early FY2018.

Brackish Groundwater Projects

N600 Punta Gorda Reverse Osmosis Project - Brackish Wellfield Investigation

Description - The Punta Gorda Reverse Osmosis project consists of two phases. Phase 1 is an exploratory well testing program that includes the design and construction of four wells for exploration to 2,000 feet below land surface, aquifer performance testing, data collection, groundwater modeling analysis, and report preparation. If the project is determined feasible, phase 2 will be the design, permitting, and construction of a new reverse osmosis water treatment facility co-located at the Shell Creek Water Treatment Plant Facility. Project Code N600 is for Phase 1, the brackish wellfield investigation.

Linkage to RWSP - This project is discussed in the Southern regional volume of the 2015 RWSP, Chapter 5, Section 5, page 120 and in Chapter 6, Section 4, page 135.

Schedule - This project began in FY2015 and the brackish wellfield investigation was completed in Fall 2017. The project code may remain active through the RO facility construction (N780).

N780 Punta Gorda Reverse Osmosis Project - Facility Construction

Description - The Punta Gorda Reverse Osmosis project consists of two phases. Phase 1 is an exploratory well testing program that includes the design and construction of four wells for exploration to 2,000 feet below land surface, aquifer performance testing, data collection, groundwater modeling analysis, and report preparation. If the project is determined feasible, phase 2 will be the design, permitting, and construction of a new reverse osmosis water treatment facility co-located at the Shell Creek Water Treatment Plant Facility. Project code N780 is for Phase 2, the reverse osmosis facility's final design, permitting, and construction. The facility will consist of a 4 mgd brackish groundwater treatment system, blending tank, and concentrate disposal facilities.

Linkage to RWSP - This project is discussed in the Southern regional volume of the 2015 RWSP, Chapter 5, Section 5, page 120 and in Chapter 6, Section 4, page 135.

Schedule - The reverse osmosis facility design work is undergoing a third-party review. If accepted, the facility construction may be completed by 2021.

N882 PRWC West Polk County Lower Aquifer Deep Wells

Description - This project with the PRWC is for a wellfield study of the Lower Floridan aquifer to verify geology and water quality in northwestern Polk County. The project also includes the conceptual design, pilot testing, and preliminary design of a 15 mgd water treatment facility, conceptual and preliminary design of a regional transmission system, a customer rate analysis, and third-party reviews of designs

and costs. The project will assist the PRWC in determining participation in future design and construction, as well as develop initial phasing and funding plans. The project Cooperative Funding Initiative (CFI) agreement was executed in August 2017 and utilizes $4,650,000 in District funds from the Polk Partnership Project (H094).

Linkage to RWSP - The Northwest Wellfield is specifically described as a project option in Heartland regional volume of the 2015 RWSP, Chapter 5, Section 5, page 115. The regional transmission component of this project is related to the regional water grid system described in the Chapter 5, Section 1, pages 93, 94.

Schedule - The project CFI agreement was executed in August 2017 and is effective through December 2021.

N905 PRWC Southeast Wellfield Project

Description - This project with the PRWC is for a second wellfield study of the Lower Floridan aquifer to verify geology and water quality in the area of the proposed Southeast Wellfield. The project also includes the conceptual design, pilot testing, and preliminary design of a water treatment facility, conceptual and preliminary design of a regional transmission system, a customer rate analysis, and third-party reviews of designs and costs. It's anticipated the Southeast Wellfield will have a 10 mgd initial capacity and will be expanded to 30 mgd in later phases. The project will assist the PRWC in determining participation in future design and construction, as well as develop initial phasing and funding plans. The project CFI agreement was executed in August 2017 and utilizes $5,900,000 in District funds from the Polk Partnership Project (H094).

Linkage to RWSP - The Southeast Wellfield is specifically described as a project option in Heartland regional volume of the 2015 RWSP, Chapter 5, Section 5, page 115. The regional transmission component of this project is related to the regional water grid system described in the Chapter 5, Section 1, pages 93, 94.

Schedule - The project CFI agreement was executed in August 2017 and is effective through December 2022.

Aquifer Recharge and Aquifer Storage and Recovery Projects

K120 City of North Port Dry Season Potable Water ASR

Description - The City of North Port ASR Program was initiated in 1998 as an investigational study looking at the feasibility of storing partially treated surface water with a goal to design, permit, construct, and start-up a 1 mgd permanent ASR facility. The City's goal is to provide up to 100 million gallons of seasonal storage to supply potable water and possibly augment environmental flows in the Myakkahatchee Creek. The original project included five phases. The final phase, cycle test 6, will confirm the results of the previous cycle testing, test a larger volume, and evaluate any adjustments based on results.

Linkage to RWSP - This project is discussed in the Southern regional volume of the 2015 RWSP, Chapter 6, Section 5, page 136.

Schedule - The cycle test six is being completed ahead of schedule in early FY2018.

K269 Sarasota County North Reclaimed Water ASR

Description - The project will design, permit, construct, and test a 1 mgd reclaimed water Upper Floridan ASR well in the MIA of the SWUCA. The project will beneficially use reclaimed water and potentially contribute improvements to aquifer levels in the MIA to help meet the SWIMAL.

Linkage to RWSP - This project is discussed in the Southern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 130.

Schedule - The project was initiated in 2000 and has experienced permitting delays. The schedule was amended and the completion date is in March 2019.

L608 City of Palmetto Reclaimed Water ASR

Description - The project is for design, construction, testing, and operational permitting of a 1.2 mgd reclaimed water ASR well to help reduce demands on potable water supplies and eliminate the need for surface water discharge of excess reclaimed water to Terra Ceia Bay. The project is estimated to store 144 million gallons per year of reclaimed water during wet weather periods to help offset future groundwater use. Offsets will occur when components of related reclaimed water supply projects are constructed. Reclaimed water that's normally discharged from the City's wastewater treatment plant to Terra Ceia Bay will be stored in the ASR well. The City has been in communication with Manatee County and the City of Bradenton about the future regional system development, and this project could ultimately be an integral part of a more regional system.

Linkage to RWSP - This project is discussed in the Southern regional volume of the 2015 RWSP, Chapter 6, Section 2, page 130 and Chapter 6, Section 5, page 136.

Schedule - The project began 2007 and is being completed in early FY2018. The City is applying for an operational permit.

N435 Bradenton Surface Water ASR

Description - This project will include design, third-party review, permitting and construction of an ASR well (ASR-2), pilot testing of a pretreatment arsenic mobilization control system, and associated facilities to help meet current and future potable water supply demands. The ASR system will store approximately 150 million gallons of surface water during high flows in the MIA of the SWUCA that can be used during the dry season.

Linkage to RWSP - This project is listed as an ongoing project in the Southern volume of the 2015 RWSP, Chapter 6, Section 5, pages 133 and 134.

Schedule - This project began in FY2014 and will continue until 2021.

N665 City of Clearwater Groundwater Replenishment Project Phase 3

Description - This project is for design, permitting, and construction for the full-scale water purification plant, the injection water treatment system, and the injection and monitor well systems at the Clearwater Northeast Water Reclamation Facility to recharge 2.4 mgd annual average of purified reclaimed water. A feasibility study and site/pilot testing have been cooperatively funded in prior years (N179). The project is expected to allow for the City to increase their reclaimed water utilization, reduce surface discharges, improve groundwater levels in the NTBWUCA, and increase the City's future water supply potential from their existing wellfields.

Linkage to RWSP - This project is discussed in the Tampa Bay regional volume of the 2015 RWSP, Chapter 6, Section 2, page 133.

Schedule - The project commenced in FY2015 and has activities scheduled through March 2022.

N833 City of North Port Permanent ASR Facilities

Description - The project is for the design, permitting, construction, and start-up of permanent ASR well facilities at the City's Myakkahatchee Creek Water Treatment Plant. This effort follows the K120 feasibility study. The City's goal is to provide up to 100 million gallons per year of seasonal storage to supply their potable water needs and possibly augment environmental flows in Myakkahatchee Creek.

Linkage to RWSP - This project is discussed in the Tampa Bay regional volume of the 2015 RWSP, Chapter 6, Section 2, page 133.

Schedule - The city has commenced design, and construction is anticipated to run through Fall 2018.

Water Conservation Projects

N655 City of St. Petersburg Toilet Replacement Program Phase 15

Description - This project provides financial incentives to customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less. This project will provide rebates for the replacement of approximately 600 high-flow toilets. The project conserves approximately 14,256 gpd.

Linkage to RWSP - This project is discussed in the Tampa Bay regional volume of the 2015 RWSP, Chapter 6, Section 1, page 126.

Schedule - The project began in FY2017 and will be completed in early FY2018.

N716 Polk County Customer Portal Pilot Project

Description - This is a six-month pilot project for an online software program that will enable more effective distribution of conservation information and activities. The software will allow customers to readily access their water use information from a computer or electronic device and compare it to surrounding accounts. The software will be made available for approximately 5,000 residential accounts in Polk County's Northeast region, where per capita water consumption is highest.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project is commenced in FY2017 and has end date scheduled for March 2018.

N728 City of St. Petersburg Sensible Sprinkling Program Phase 7

Description - The project provides approximately 300 irrigation system evaluations to single family, multifamily, and commercial customers. This will include program administration and evaluations with recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping™ practices and other efficient irrigation BMPs. Approximately 300 rain sensor devices will be provided and installed for project participants who do not have a functioning device. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 42,000 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2016 and has end date scheduled for June 2018.

N757 Bay Laural Irrigation Controller/ET Sensor Upgrade

Description - This project will make available approximately 300 ET weather-based irrigation controllers and ET sensors to utility customers that have existing in-ground irrigation systems. An irrigation contractor will be installing the new ET controller and ET sensor at residential homes, and providing an orientation with the homeowner to assist in familiarizing the resident with the new equipment. The project will conserve an estimated 24,234 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for November 2019.

N779 Marion County Toilet Rebate Program, Phase 4

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 400 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project will conserve an estimated 10,190 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for August 2019.

N789 Pasco County ULV Toilet Rebate Program, Phase 10

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 500 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 13,982 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for June 2018.

N806 Manatee County Toilet Rebate Project Phase 10

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 1,500 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 39,570 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for January 2019.

N808 City of Venice Toilet Rebate and Retrofit Project

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 290 high-flow toilets. In addition, 400 water conservation kits will be distributed that include educational materials, low-flow showerheads, and leak detection dye tablets. Also included are program promotion and surveys necessary to ensure the success of the program. The project conserves approximately 13,151 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is

consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for June 2019.

N815 City of Arcadia - South Distribution Looping Project

Description - The City of Arcadia Water Distribution System contains numerous areas that are served by a single main and required consistent flushing to maintain disinfectant residuals within these areas to meet the water quality standards mandated by the DEP and the Environmental Protection Agency. The project includes design, permitting, and construction of approximately 4,500 feet of new potable water lines and associated components necessary to eliminate system dead ends and loop the system to maximize circulation, reduce water age, and minimize flushing. There are three dead end lines that serve the southern portion of the distribution system and serve a Catholic Charities Development (Casa San Juan Bosco), a low income neighborhood (Forest Pines), the Arcadia Trailer Park and the Arcadia Airport. This is considered a utility-based supply side conservation project, and will reduce routine flushing in three areas by allowing potable water circulation in the southern area of the City.

Linkage to RWSP - The reduction of water distribution system losses is part of the District's water conservation strategy defined in the 2015 RWSP, Chapter 4, Section 2, of the Southern planning volume. The project was not specifically mentioned as a project option in the RWSP, but is consistent with similar project components.

Schedule - The project began in FY2017 and will continue through October 2019.

N819 City of St. Petersburg Toilet Rebate Program, Phase 16

Description - This project provides financial incentives to customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 500 residential and commercial high-flow toilets. Also included are educational materials, program promotion/marketing, and surveys necessary to ensure the success of the program. The project conserves approximately 10,100 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for December 2018.

N820 Polk County Landscape & Irrigation Evaluation Program

Description - This project will make available approximately 300 irrigation system evaluations to single family, multifamily, and commercial customers. This will include program administration and evaluations with recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping™ practices, and other efficient irrigation BMPs. Approximately 150 rain sensor devices will be provided and installed for project participants who do not have a functioning device. Also included are educational materials, program promotion, follow-up evaluations, and surveys necessary to ensure the success of the program. Approximately 300 conservation kits will be made available to project participants. The project will conserve an estimated 42,000 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for December 2019.

N822 WRWSA Enhanced Regional Irrigation Evaluation/Conservation Incentives

Description - This project will make available approximately 416 irrigation system evaluations within Marion, Citrus, and Hernando counties and the Villages Development District. Participating utilities will choose between either Core evaluations or Enhanced evaluations. Core evaluations provide recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping™ practices and other efficient irrigation BMPs. Standard rain sensor devices will be provided and installed for project participants who do not have a functioning device. Enhanced evaluations, in addition to the core services, will provide installation of an advanced ET controller and ET sensor device (in place of a standard rain sensor) and will perform the recommend irrigation system modifications. The entire project includes program administration, educational materials, program promotion, follow-up evaluations, and surveys necessary to ensure the success of the program. The project will conserve an estimated 86,944 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for September 2020.

N840 City of Venice Advanced Metering Analytics Project

Description – This project will implement a software program that will promote and encourage water conservation by utility customers. This project will allow software platform setup, including a utility side dashboard, and will initially be available for 5,000 customers. The program is expected to expand as advanced metering infrastructure (AMI) is installed throughout the City over the next several years. The software will perform multiple conservation related functions including: providing a customer portal log-in and graphing customer water use over time, promoting utility conservation incentives and rebates based on property appraiser data and water use data, detecting and alerting customers to leaks on a daily basis, and aiding in education of customers about watering restrictions. The project will conserve an estimated 3,800 gpd in SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is to be determined.

N845 Pasco County Florida Water Star Pilot Project

Description – A pilot program with financial incentives to home builders for building homes to Florida Water Star (FWS) standards and submitting proof of FWS certification for these homes. FWS homes meet specific water-efficiency criteria inside the homes in appliances and fixtures and outside the homes in landscape and irrigation design and installation. This project will provide a $700 rebate per home for home builders to assist with the additional costs associated with building and certifying approximately 100 FWS-certified homes. The project will conserve an estimated 13,200 gpd in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP, but is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP. The Florida Water Star program is discussed as a conservation incentive program in Chapter 4, Section 2

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled in September 2020.

N846 Polk County Landscape and Irrigation Evaluation

Description - This project will make available approximately 300 irrigation system evaluations to single family, multi-family, and commercial customers. This will include program administration and

evaluations with recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping practices and other efficient irrigation best management practices. Approximately 150 rain sensor devices will be provided and installed for project participants who do not have a functioning device. Also included are educational materials, program promotion, follow-up evaluations, and surveys necessary to ensure the success of the program. Approximately 300 conservation kits will also be made available to project participants. The project will conserve an estimated 42,000 gpd in the SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for July 2020.

N849 City of Venice Toilet Rebate and Retrofit Project, Phase 6

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 250 high-flow toilets. These include educational materials, low-flow shower heads, and leak detection dye tablets. Also included are program promotion and surveys necessary to ensure the success of the program. The project conserves approximately 4,868 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project was scheduled in the FY2018 budget but will likely be withdrawn by the city.

N852 Pasco County Toilet Rebate Program – Phase 11

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 500 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 13,640 gpd.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for February 2019.

N860 Citrus County WaterSense® Labeled Irrigation Controllers

Description - This project provides financial incentives to residential customers for the installation of approximately 75 WaterSense® labeled irrigation controllers at residential homes in the Citrus County service area. Also included are education materials, program promotion, surveys and an orientation with the homeowner to assist in familiarizing the resident with the new equipment. The project will conserve an estimated 16,658 gpd in the Northern Planning Region of the District.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP, but is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP. The WaterSense® fixtures are discussed in Chapter 5, Section 2.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for April 2020.

N875 St. Petersburg Florida Water Star Rebate Pilot Project

Description - A pilot program with financial incentives to home builders for building homes to Florida Water Star (FWS) standards and submitting proof of FWS certification for these homes. FWS homes meet specific water-efficiency criteria inside the homes in appliances and fixtures and outside the homes in landscape and irrigation design and installation. This project will provide a $700 rebate per home for home builders to assist with the additional costs associated with building and certifying approximately 71 FWS-certified homes. The project will conserve an estimated 9,400 gpd in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP, but is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP. The Florida Water Star program is discussed as a conservation incentive program in Chapter 4, Section 2

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for February 2020.

N876 New Port Richey Toilet Rebate Program, Phase 4

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 80 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 1,874 gpd in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for August 2019.

N877 Manatee County Toilet Rebate Project, Phase 11

Description - This project provides financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets which use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 1,500 high-flow toilets. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project conserves approximately 39,571 gpd in the SWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for July 2019.

N890 St Petersburg Residential Clothes Washer Rebate Pilot Project

Description – A pilot program with financial incentives to residential customers for the replacement of high flow clothes washer with an EPA Energy Star certified high efficiency model. The EPA Energy Star program now includes a maximum standard for water use for clothes washers. This project will include rebates and program administration for the replacement of approximately 100 high flow clothes washers up to $125 per rebate. Also included are educational materials, program promotion, and surveys necessary to ensure the success of the program. The project will conserve an estimated 1,500 gpd

NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is to be determined.

N909 St. Petersburg Sensible Sprinkling Program, Phase 8

Description - This project will make available approximately 300 irrigation system evaluations to single family, multi-family, and commercial customers. This will include program administration and evaluations with recommendations for optimizing the use of water outdoors through Florida-Friendly Landscaping™ practices and other efficient irrigation best management practices. Approximately 300 rain sensor devices will be provided and installed for project participants who do not have a functioning device. Also included are the educational materials, program promotion, follow-up evaluations, and surveys necessary to ensure the success of the program. The project will conserve an estimated 56,000 gpd in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for April 2020.

N921 Bay Laurel Center 2018 Irrigation Controller/ET Sensor Upgrade Project

Description - This project, with Bay Laurel Center Community Development District, will make available approximately 300 evapotranspiration (ET) weather-based irrigation controllers and ET sensors to utility customers that have existing in-ground irrigation systems. An irrigation contractor will be installing the new ET controller and ET sensor at residential homes, and providing an orientation with the homeowner to assist in familiarizing the resident with the new equipment. The project will conserve an estimated 22,794 gpd in the Northern Planning Region of the District.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for June 2020.

N922 Bay Laurel Florida Water Star Rebate Pilot Project

Description - A pilot program with financial incentives to home builders for building homes to Florida Water Star (FWS) standards and submitting proof of FWS certification for these homes. FWS homes meet specific water-efficiency criteria inside the homes in appliances and fixtures and outside the homes in landscape and irrigation design and installation. This project will provide a $700 rebate per home for home builders to assist with the additional costs associated with building and certifying approximately 75 FWS-certified homes. The project will conserve an estimated 9,900 gpd in the NTBWUCA.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP, but is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP. The Florida Water Star program is discussed as a conservation incentive program in Chapter 4, Section 2

Schedule - The project will begin in FY2018 and the end date is tentatively scheduled for February 2020.

P920 Polk Regional Water Cooperative Outdoor BMPs

Description - This cooperative project with the PRWC and the DEP will provide financial incentives or hardware installation services to customers for the replacement of various outdoor irrigation and landscape components. Approximately 50 Florida-Friendly Landscape™ rebates of up to $2,000 each will be distributed. The BMPs involve converting existing landscaped area using high volume irrigation to a landscaped area that has no irrigation or will use micro-irrigation. The rebate amount will vary based on the actual square footage of irrigation converted. Approximately 220 smart irrigation ET controllers will be installed by a licensed irrigation contractor along with homeowner education on proper unit operation. Approximately 590 wireless rain sensors to be purchased and distributed to homeowners. Also included are program promotion and educational materials. If all conservation items are implemented, the estimated savings will be 52,300 gpd. The DEP is providing $166,075 for the project.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for May 2021.

P921 Polk Regional Water Cooperative Indoor Conservation Incentives

Description - This cooperative project with the PRWC and the DEP will provide financial incentives to residential customers for the replacement of approximately 1,500 conventional toilets with high-efficiency toilets which use 1.28 gallons per flush or less. Another smaller component of the project will include the toilet plus installation for select utility customers, for approximately 300 units. The final project component will be the acquisition and distribution of approximately 1,300 conservation kits to homeowners (shower heads, faucet aerator, etc.). The program also includes promotion and educational materials. If all conservation items are implemented, estimated savings is 87,370 gpd in the CFWI and the SWUCA. The DEP is providing $121,275 for the project.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for May 2020.

P922 Polk Regional Water Cooperative Florida Water Star Builder Rebate Program

Description - This cooperative project with the PRWC and the DEP will provide up to 500 rebates to home builders within Polk County who build homes to Florida Water Star^{sm} standards and submit proof of Florida Water Star^{sm} certification. Approximately $1,400 in additional costs per home will be incurred by builders to meet Florida Water Star^{sm} criteria. The rebate amount of $700 covers approximately 50 percent of the cost, and the home builder will provide the remaining funds. The DEP is providing $350,000 for the project. There is no monetary contribution by the District or Polk County; only program administration. If all 500 rebates are issued, approximately 66,165 gpd could be conserved.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP, but is in line with the District's commitment to maximizing water conservation to offset traditional water supplies as described in Chapter 6, Section 1 of each regional volume of the 2015 RWSP. The Florida Water Star program is discussed as a conservation incentive program in Chapter 4, Section 2

Schedule - The project began in FY2017 and the end date is scheduled for May 2020.

Water Supply Planning Projects

N781 Hernando County Reclaimed Water Master Plan

Description - The project is a master plan update of countywide reclaimed water routing, sizing, and

costing of infrastructure necessary to expand current components into one regionalized reclaimed water system. The plan will evaluate future reclaimed service areas, revise growth projections, identify potential reuse customers, and plan for increased flows that may be associated with future septic-to-sewer conversions. The plan will provide updated and accurate estimations of components, costs, and routing necessary to effectively maximize the utilization and benefits of reclaimed water supplies within Hernando County.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water reclamation to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and the end date is scheduled for December 2018.

N816 City of Oldsmar Reclaimed Water Master Plan

Description - This project is a reclaimed water master plan update for the City of Oldsmar to identify new customers, routing, and preliminary cost estimates for reclaimed water system expansion options. The project will evaluate the existing reuse system and outline a plan for expansion based on cost, anticipated use, and available supply. Pending final construction and permitting of the City's new 1 mgd ASR well, the City's reclaimed water availability will increase as a result of the additional storage. A strategic expansion will ensure system extensions are hydraulically feasible and the resource is fully and efficiently utilized.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to maximizing water reclamation to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project began in FY2017 and will be completed in early FY2018.

P928 PRWC Peace Creek Integrated Water Supply Plan

Description - The project is a feasibility study of the initial phase of the Peace Creek Integrated Water Supply Plan focusing on the determination of viable options to increase alternative water supplies for the PRWC. The project includes a feasibility study comprising of eight tasks including project administration, formation of a watershed partnership, selection and evaluation of aquifer recharge sites, preparation of a preliminary design (30 percent) report, completion of a third-party review, development of an integrated water supply plan, site permitting, and development of a preliminary water rate analysis. The feasibility study will determine if the evaluated sites can be utilized for increased water supply for the PRWC.

Linkage to RWSP - This project is not specifically mentioned as a project option in the RWSP but is consistent with similar project components and is in line with the District's commitment to offset traditional water supplies as described in Chapter 6, Section 2 of each regional volume of the 2015 RWSP.

Schedule - The project CFI agreement was executed in August 2017 and is effective through April 2022

Funding Sources

The District provides significant financial assistance for water resource development and water supply development projects through the District's Cooperative Funding Initiative, which consists of the cooperative funding program and other District Initiatives. The financial assistance is provided primarily to governmental entities, but private entities may also participate in these programs. Portions of state funding are allocated to the District through the DEP and legislative appropriations for the Springs Initiative, the Florida Forever Program, the Water Protection and Sustainability Program, the District's West-Central Florida Water Restoration Action Plan, and the District's FARMS Program. These sources are described below.

District Funding

Cooperative Funding Initiative - The District's primary funding mechanism is the Cooperative Funding Initiative (CFI), which includes funding for major regional water supply and water resource development projects and localized projects throughout the District's 16-county jurisdiction. The CFI is a matching grant program that enables the Governing Board, through its regional sub-committees, to jointly participate with local governments and other entities to incentivize proper development, use, and protection of the regional water resources of the District. Projects of mutual benefit are generally funded 50 percent by the District and 50 percent by the public or private cooperators. Communities or counties qualifying under the Rural Economic Development Initiative (Section 373.0656, F.S.) may be eligible for greater matching shares. Any state and federal funds received for the projects are applied directly against the project costs, with both parties benefitting equally. The CFI has been highly successful; since 1988, the District has provided over $1.5 billion in incentive-based funding assistance for a variety of water projects addressing its four areas of responsibility: water supply, natural systems, flood protection and water quality. In FY2018, the District's adopted budget includes nearly $78 million for CFI projects and grants. Of the $78 million, approximately $6.5 million is included from the DEP for Springs Initiative projects, $2 million is included from local revenue for projects where the District is serving as the lead party, and $50 million of District grant funds. The District funds will be leveraged through cooperative partnerships with public and private partners, which will result in an additional $50 million in matching cooperator funds. This will result in total investment for sustainable alternative water supply development and other water resource management projects of approximately $128 million.

District Initiatives - District Initiatives are funded in cases where a project is of great importance or a regional priority. The District can increase its percentage match and, in some cases, provide total funding for the project. Examples of District Initiatives include: (1) the QWIP program to plug deteriorated, free-flowing wells that waste water and cause inter-aquifer contamination, (2) the water loss reduction program to conserve water by having District staff inspect meters and detect leaks in public water system pipelines, (3) data collection and analysis to support other District activities such as the MFL program, (4) the FARMS Program and other various agricultural research projects that help increase the water-use efficiency of agricultural operations, and (5) the water supply investigations and MFL Recovery projects which may not have local cooperators.

State Funding

Springs Initiative - The DEP Springs Initiative is a special legislative appropriation that has provided revenue for protection and restoration of major springs systems. The District has allocated Springs Initiative funding to implement projects to restore aquatic habitats, and to reduce groundwater withdrawals and nutrient loading within first-magnitude springsheds to improve the water quality and quantity of spring discharges. Projects include the reestablishment of aquatic and shoreline vegetation near spring vents, installation of wastewater force mains to allow for the removal of septic tanks and increase reclaimed water production, and implementation other BMPs within springshed basins.

The first year of the appropriation was FY2013, and $1.1 million was allocated by the District to an industrial reuse project to transfer reclaimed water from the City of Crystal River to the Duke Energy power generation complex. In FY2014, the District allocated $1.35 million of Springs Initiative appropriations to two stormwater improvement projects and one wastewater/reclaimed water project. In FY2015, $6.46 million of Springs Initiative funding was budgeted for four wastewater/reclaimed water projects. In FY2016, $13.4 million of Springs Initiative funding is allocated to one water supply

development project (Hernando County US-19 Reclaimed Water Transmission, $6.0 million) and four surface water management projects that will reduce nutrients from septic infiltration in priority springsheds. In FY2017, $10.14 million was budgeted for six District projects including the City of Crystal River/Duke Energy Reclaimed Water Interconnection, four springs water quality improvement projects to remove septic tanks and provide municipal sewer in sensitive locations, and a regional stormwater treatment system to reduce nutrient input to Kings Bay. In FY2018, $6.5 million is budgeted for three projects to improve wastewater treatment in the Crystal River/Kings Bay watershed and one project to restore wetlands in and adjacent to Crews Lake in the Weekie Wachee springshed. One of the wastewater treatment projects is budgeted as Water Supply Development Assistance because it will generate reclaimed water supply.

Water Protection and Sustainability Program - The State's Water Protection and Sustainability Program was created in the 2005 legislative session to provide matching funds for the District's CFI and District Initiative programs for alternative water supply development assistance. The first year of funding was 2006 and the Legislature allocated $100 million for alternative water supply development assistance, with $25 million allocated to the District. The District was allocated $15 million in FY2007 and $13 million in FY2008. In FY2009, the District was allocated $750,000 for two specific projects. No additional funds have been allocated for the program from FY2010 through FY2018, but during the 2009 legislative session Chapter 403.890, F.S was created to establish the Water Protection and Sustainability Program Trust Fund as a component of the DEP. The formation of the Trust Fund indicates the state's continued support for the program.

The Water Protection and Sustainability Program funding can be applied toward a maximum 20 percent of the construction costs of eligible projects. Additionally, the District's budget must contribute funding equal to 100 percent of the state funding for alternative water supply development assistance, which the District exceeds annually. If continued, this funding program could serve as a significant source of matching funds to assist in the development of alternative water supplies.

West-Central Florida Water Restoration Action Plan - The West-Central Florida Water Restoration Action Plan (WRAP) is an implementation plan for components of the SWUCA Recovery Strategy adopted by the District. The document outlines the District's strategy for ensuring that adequate water supplies are available to meet growing demands, while at the same time protecting and restoring the water and related natural resources of the area. The WRAP prescribes measures to implement the recovery strategy and quantifies the funds necessary, making it easier for the District to seek funding for the initiative from state and federal sources. In 2009, the Legislature officially recognized the WRAP by creating Section 373.0363, F.S., as the District's regional environmental restoration and water-resource sustainability program for the SWUCA. In FY2009, the District received $15 million in funding for the WRAP. No new state funding has been provided from FY2010 through FY2018.

The Florida Forever Program - The Florida Forever Act, as passed in 1999, was a $10 billion, 10-year, statewide program. During the 2008 session, the Legislature passed bill to extend the Florida Forever program for 10 more years at $300 million annually, and reducing the water management districts' annual allocation from $105 million to $90 million, with $22.5 million (25 percent) to be allocated to the District, subject to annual appropriation. For FY2010, the Legislature did not appropriate funding for the Florida Forever program other than for the state's debt service. The 2010 Legislature appropriated $15 million total, with $1.125 million allocated to the District in FY2011. From FY2012 through FY2018, the Legislature has not appropriated funding for the District. Eligible projects under the Florida Forever program include land acquisition, land and water body restoration, ASR facilities, surface water reservoirs and other capital improvements. Since 1999, the District has allocated $95 million of Florida Forever funding for water resource development projects ($81.6 million for land acquisition and $13.4 million for water body restoration) primarily for the purchase of lands around Lake Hancock as the first step in restoring minimum flows to the upper Peace River.

The state's Florida Forever Trust Fund holds prior-year funds for this District and other water management district's accounts. For FY2018, $4.3 million is budgeted from the prior-year funds held in the Trust Fund. The funds held in district accounts have been generated through the sale of easements to the U.S. Department of Agriculture/Natural Resources Conservation Services for the Wetland Reserve Program and the sale of land or easements for rights-of-way. These funds are available for potential land acquisitions consistent with the guidance provided by the DEP. This District conducts a biennial Surplus Lands Assessment to identify and sell lands that do not meet the District's core mission. The proceeds from sold lands are used to purchase other lands that provide substantive environmental benefits.

State Funding for the FARMS Program - Operating under Chapter 40D-26, F.A.C., the FARMS

Program, through the District, utilizes additional state funding when available. Since the inception of the program, the District has received $6.4 million in state appropriations and $1.3 million from the FDACS. No funding was provided by state appropriations from FY2010 through FY2018.

U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP) - The EQIP provides technical, educational, and financial assistance to eligible farmers and ranchers to address soil, water and related natural resource concerns on their lands. The program provides assistance to farmers and ranchers to comply with federal, state of Florida, and tribal environmental laws that encourage environmental enhancement. The purpose of the program is achieved through the implementation of a conservation plan that includes structural, vegetative, and land management practices. The program is carried out primarily in priority areas such as watersheds, regions, or multistate areas where significant resource concerns exist. Agricultural water supply and nutrient management through detention/retention or tailwater recovery ponds can be pursued through this program.

In addition to the EQIP, the FARMS Program has partnered with NRCS through the Agriculture Water Enhancement Program (AWEP) and the Florida West Coast Resource Conservation and Development (RC&D) to bring additional NRCS cost-share funding to the SWUCA. The AWEP was created by the 2008 Farm Bill with similar goals as the EQIP program including conserving and/or improving the quality of ground and surface water. The RC&D is a nonprofit organization that promotes sustainable agriculture and local community food systems in Hillsborough, Manatee, Pinellas, and Sarasota counties.

The District's FARMS Program works cooperatively with the NRCS EQIP, AWEP, and RC&D programs on both financial and technical levels. In this effort, FARMS staff has coordinated dual cost-share projects whenever possible. By an agreement between the District, FDACS, and the NRCS, the maximum funding for using both FARMS and EQIP is 75 percent of total project cost. On a technical level, agency interaction includes the NRCS mobile irrigation lab investigating potential irrigation system efficiencies using FARMS cost-share projects, using NRCS engineering designs for regulatory agricultural exemptions, and coordinating the cost-shares on specific project-related infrastructure. For example, FARMS may assist with an alternative source of irrigation water and EQIP may assist with an irrigation delivery system upgrade. The mutually beneficial relationship extends cost-share dollars and provides more technical assistance to participants in both programs.

Summary/Conclusions

The WRD and water supply development projects and activities identified in the Work Program reflect the District's continuing commitment to ensure that adequate water resources are available to meet both existing and future reasonable-beneficial needs. The FY2018 budget for WRD Data Collection and Analysis activities and WRD Projects is approximately $29.9 million and $14.3 million respectively.

Funding for WRD Data Collection and Analysis is expected to remain constant over the next five years. The funding includes support of watershed management activities that will be critical for flood protection, water quality, and springshed health. The WRD Projects funding is projected to be constant or increase slightly over the next five years, as the District develops multiple aquifer recharge projects and continues the annual implementation of FARMS projects. The FARMS projects are anticipated to cost approximately $6 million each year to maintain agricultural irrigation efficiencies that reduce groundwater withdrawals, improve aquifer levels, and protect the quality of surface water resources.

Water supply development funding in FY2018 is approximately $35.3 million, which includes $3.0 million from the Springs Initiative allocated to the Citrus County Northwest Quadrant Sewer Extension. With the District's cooperative funding assistance, utilities will continue to implement reclaimed water and conservation projects to extend the availability of existing water supplies. Reclaimed water projects account for 26 percent of the budget for water supply development assistance in FY2018 at $2.9 million; however, the District anticipates that approximately $20 million will be needed annually for reclaimed water projects for long term planning. Conservation projects account for approximately $0.5 million of the FY2018 budget. These projects typically have lower costs but account for over one third of the water supply development projects. Most are fully funded in one year; however, multiple conservation projects are proposed by cooperators each year. Future conservation project budgets are anticipated to be $1.0 to $1.5 million annually as highly cost-effective rebate programs are accomplished and more flushing-reduction, cooling tower, water use audits, and irrigation improvement projects are implemented. Funding for regional potable water interconnects in FY2018 is $10.47 million, which accounts for 30 percent of the FY2018 water supply development budget. The funding for brackish groundwater development in FY2018 is approximately $6.6 million for the Punta Gorda brackish groundwater project. The list of brackish groundwater projects also includes the PRWC's Southeast and West Lower Floridan aquifer projects, however the initial funding for these projects is coming from Polk County Partnership incentive funding budgeted in prior years.

Appendix A

District Projects for Implementing Basin Management Action Plans

In 2016, the Florida Legislature amended Section 373.036, F.S., to require the identification of all specific projects that implement a Basin Management Action Plan (BMAP) or a recovery or prevention strategy in the Water Resource Development Work Program. The District's Work Program has historically identified water resource development projects that support MFL recovery and prevention, but has not included specific descriptions of projects primarily intended to implement BMAPs. The DEP provided guidance recommending this appendix to include these projects. The projects below are categorized in the District's Programmatic Budget activity code 2.3.1 - Surface Water Management, unless otherwise noted.

Alafia River Basin

Balm Boyette Habitat Restoration (W398)

Background - The Balm Boyette Scrub Preserve is a 4,933-acre tract acquired by Hillsborough County Parks, Recreation and Conservation Department through their Environmental Lands Acquisition Protection Program (ELAPP). The eastern third of the tract was mined for phosphate ore in the 1960s. Prior to mining, there were three wetland tributaries that formed the headwaters of a forested wetland referred to as Stallion Hammock and an interior meandering creek called Pringle Branch. Pringle Branch is a tributary of Fishhawk Creek and the Alafia River. This project will restore approximately 90 acres of wetland and upland habitats. This will help habitat function, improve water quality, and restore hydrology. The project cost is $2,277,174 and was budgeted in FY2014 from funds provided by the DEP that originated from a settlement with Mulberry Phosphates.

Linkage to Alafia River BMAP - This project will reduce total nitrogen and total phosphorous loads to the Alafia River.

Schedule - Final design and permitting are complete with construction anticipated to begin in Spring of 2018.

Rainbow River Basin

Rainbow Springs Infrastructure Development Project (P113)

Background - This project includes the construction of a force-main and connection of four package plants in or near the City of Dunnellon. This project is taking steps to manage impacts to the springs by decreasing the number of package wastewater facilities in the immediate vicinity and therefore reducing their nutrient load contributions to the Rainbow River, a SWIM priority water body. The project cost is $2,279,183 and funding was provided by the DEP.

Linkage to Rainbow River BMAP - This project is listed in Table 14, Chapter 4.3.1 of the Final Basin Management Action Plan for the Implementation of Total Maximum Daily Loads adopted by the DEP in the Rainbow Springs Basin Management Area, page 61.

Schedule - The project is postponed as the wastewater facilities may be transferred to the FGUA, and may proceed at an undetermined date.