



AGENDA ITEM

TITLE

Application for Southwest Florida Water Management District Cooperative Funding Initiative Application and Priority Ranking Letter for 2020

BRIEF OVERVIEW

In accordance with the guidelines for submittal of Southwest Florida Water Management District (SWFWMD) Cooperative Funding Initiative the Board is asked to commit to funding the following projects in the 2020 budget cycle and to rank the projects in order of importance.

Seven projects are proposed. Two are from the Department of Public Works (DPW), four are from the Utility Department (HCUD), and one is from the Solid Waste Department. Six projects request CFI funding and one project requests Springs funding.

1) Culbreath Road Area Flood Relief Project Design

Culbreath Road serves as a primary connection between the City of Brooksville and the State Road 52 / Interstate 75 interchange in northern Pasco County. Many Hernando County residents utilize Culbreath Road for daily commutes to jobs in Tampa. The road traverses a low-lying area and floods during tropical storms or El Nino events. When flooding occurs, the road is inundated for months necessitating long and time-consuming detours for commuters and costly repairs for the County. The Squirrel Prairie Watershed Management Plan, co-funded by Hernando County and the SWFWMD, identify this site as a priority BMP location on their list of recommended flood relief projects addressing street and residential flooding.

This is Phase two of a multi-year partnership with the Water Management District. Phase one included feasibility studies and conceptual planning. Future Phase three of the project will include actual construction of the roadway.

This second phase allocates funding for final engineering design, construction plan development, and regulatory permitting of roadway and stormwater improvements providing pollution abatement, flood relief, enhanced traffic safety, and reduced roadway maintenance costs. We are requesting \$250,000 in 2020.

Hernando County Cost:	\$250,000
<u>SWFWMD Cost:</u>	<u>\$250,000</u>
Total Cost:	\$500,000

2) Weeki Wachee Springshed Nitrogen Removal Stormwater Pond Retrofits

This project proposes to reduce nitrogen inputs into Weeki Wachee Spring by retrofitting ten (10) existing drainage retention areas with de-nitrification cells utilizing biosorption technology. The sites are all within three miles of the headspring and within the Florida Department of Environmental Protection's Basin Management Action Plan (BMAP) delineated Primary Focus Area (PFA). The project enables Hernando County to accrue Total Daily Maximum Load (TDML) nitrogen reduction credits required by the Weeki Wachee BMAP. The Spring Hill Lakes and Willow Sink Watershed Management Plans, co-funded by Hernando County and the SWFWMD, also identify many of these sites as priority BMP locations on their list of recommended flood relief projects.

This is Phase two of a multi-year partnership with the Water Management District. Phase one included design, construction plan preparation, and environmental permitting. This second phase authorizes expenditure of construction funding previously approved by the BOCC on September 26, 2017. No new funding is required.

This project phase includes bidding and contractor selection, construction, and inspection, and acceptance of the completed project.

Hernando County Cost:	\$875,000
<u>SWFWMD Cost:</u>	<u>\$875,000</u>
Total Cost:	\$1,750,000

3) Airport WRF Total Nitrogen Reduction

Hernando County's Airport Water Reclamation Facility (WRF) and its aquifer recharge basins (ARB) are located within the Weeki Wachee Priority Focus Area, as determined by the Florida Department of Environmental Protection in the Weeki Wachee Basin Management Action Plan (BMAP). This BMAP was developed in response to the USEPA's established total maximum daily load (TMDL). Weeki Wachee Springs and River have been determined to be impaired for nitrate.

This project will include construction of all assets needed to reach advanced wastewater treatment (AWT) for total nitrogen reduction. These assets may include denitrification basins, additional carbon feed system, effluent filters, and a compressed air system.

Total Project Cost is \$10,000,000. We are Requesting \$2,500,000 in 2020 and \$2,500,000 in 2021 (SWFWMD 50% cost share).

Hernando County Cost: (2020)	\$2,500,000
<u>SWFWMD Cost:(2020)</u>	<u>\$2,500,000</u>
Total Cost:(2020)	\$5,000,000

4) Landfill Leachate Pre-treatment

Hernando County's solid waste landfill produces leachate which is collected and conveyed to the Glen Water Reclamation Facility (WRF). Landfill leachate contains highly concentrated pollutants, such as nitrogen components. Hernando County's Glen WRF and its aquifer recharge basins (ARB) are located within the Weeki Wachee Priority Focus Area, as determined by the Florida Department of Environmental Protection (FDEP) in the Weeki Wachee Basin Management Action Plan (BMAP). This BMAP was developed in response to the USEPA's established total maximum daily load (TMDL) for nitrate. Weeki Wachee Springs and River have been determined to be impaired for nitrate.

This project includes design and construction of a leachate pre-treatment plant at the landfill. Pre-treatment of leachate will ensure the Glen WRF can receive and treat landfill leachate while still complying with FDEP mandated nitrogen reduction limits for reclaimed water used to recharge the aquifer.

Total Project Cost is \$3,850,000. We are requesting \$175,000 in 2020 and \$1,750,000 in future years.

Hernando County Cost: (2020)	\$175,000
<u>SWFWMD Cost:(2020)</u>	<u>\$175,000</u>
Total Cost:(2020)	\$350,000

5) Anderson Snow Park Reclaimed Water Irrigation

Hernando County Utilities Department (HCUD) is in the process of finalizing an updated Reclaimed Water Master Plan (RWMP). The RWMP was funded through enterprise dollars and SWFWMD Cooperative Funding Project, N781. Potential reclaimed water customers were identified and the top three were ranked. One of these is reclaimed water irrigation for Anderson Snow Park. The park is an existing publicly owned sports complex consisting of baseball and soccer fields.

This project will consist of 2,500 ft. 6-inch diameter pipe and necessary upgrades to the existing irrigation system. Upgrades may include EPA WaterSense Irrigation Components.

Total Project Cost is \$400,000. We are requesting \$200,000 in 2020.

Hernando County Cost	\$200,000
<u>SWFWMD Cost:</u>	<u>\$200,000</u>
Total Cost:	\$400,000

6) Hernando Beach Water System Improvements

This project includes design, construction, tracking, and analysis of water use and water

loss in the coastal community, Hernando Beach. This is an area within our water distribution system that has been susceptible to problematic water leaks. In an area with a high-water table, sandy soils, and shallow karst limestone, leak detection in this area is challenging and we currently have no way to quantify the amount of water loss that is occurring.

The water distribution system in this area is supplied by two large diameter water mains (Osowaw Blvd and Cortez Blvd). By installing master meters at these two locations, we will be able to calculate the amount of water flowing on a real-time basis and balance that with the amount of water served to our customers. The existing customers' water meters will be retrofitted with a flush mounted antenna, and the existing Hernando Beach water tower will be retrofitted with a data collector to read the meters. Except for servicing the meters, we would no longer require a vehicle to travel the roads and read the meters.

The water meters could be read real-time collecting data to quantify the amount of water loss and alerting us of any issues. Construction also includes pressure reducing valves at the master meters to better regulate pressures in the Hernando Beach community.

Total Project Cost is estimated at \$250,000. We are requesting \$125,000 in 2020.

Hernando County Cost	\$125,000
<u>SWFWMD Cost:</u>	<u>\$125,000</u>
Total Cost:	\$250,000

7) Airport Water Reclamation Facility Expansion

Expand the Airport Water Reclamation Facility (WRF) from a permitted capacity of 3.5 MGD to 6 MGD. This expansion is required and is the critical path to take the Spring Hill (Osowaw) contact stabilization WRF offline. The Spring Hill WRF has out of date technology that does not nitrify nor denitrify wastewater. Subsequently, the effluent from the Spring Hill WRF currently discharges in the Weeki Wachee PFA and is releasing high concentrations of nitrogen into the springshed. The planned Airport WRF expansion will meet the new Weeki Wachee Basin Management Action Plan effluent limits for total Nitrogen (3mg/l). Total Project Cost is \$26,000,000. We are requesting springs funding in the amount of \$2,500,000 in FY2020 and \$2,500,000 in FY2021.

FINANCIAL IMPACT

No Financial Impact at this time.

The DPW projects (1,2) totaling \$2,250,000.00 will be funded thru the Stormwater Management MSTU Fund in the amount of \$1,125,000.00 (7552-09552-5909967) for the County's estimated cost share.

LEGAL NOTE

The Board is authorized to act upon this matter pursuant to Chapter 125, Florida Statutes.

RECOMMENDATION

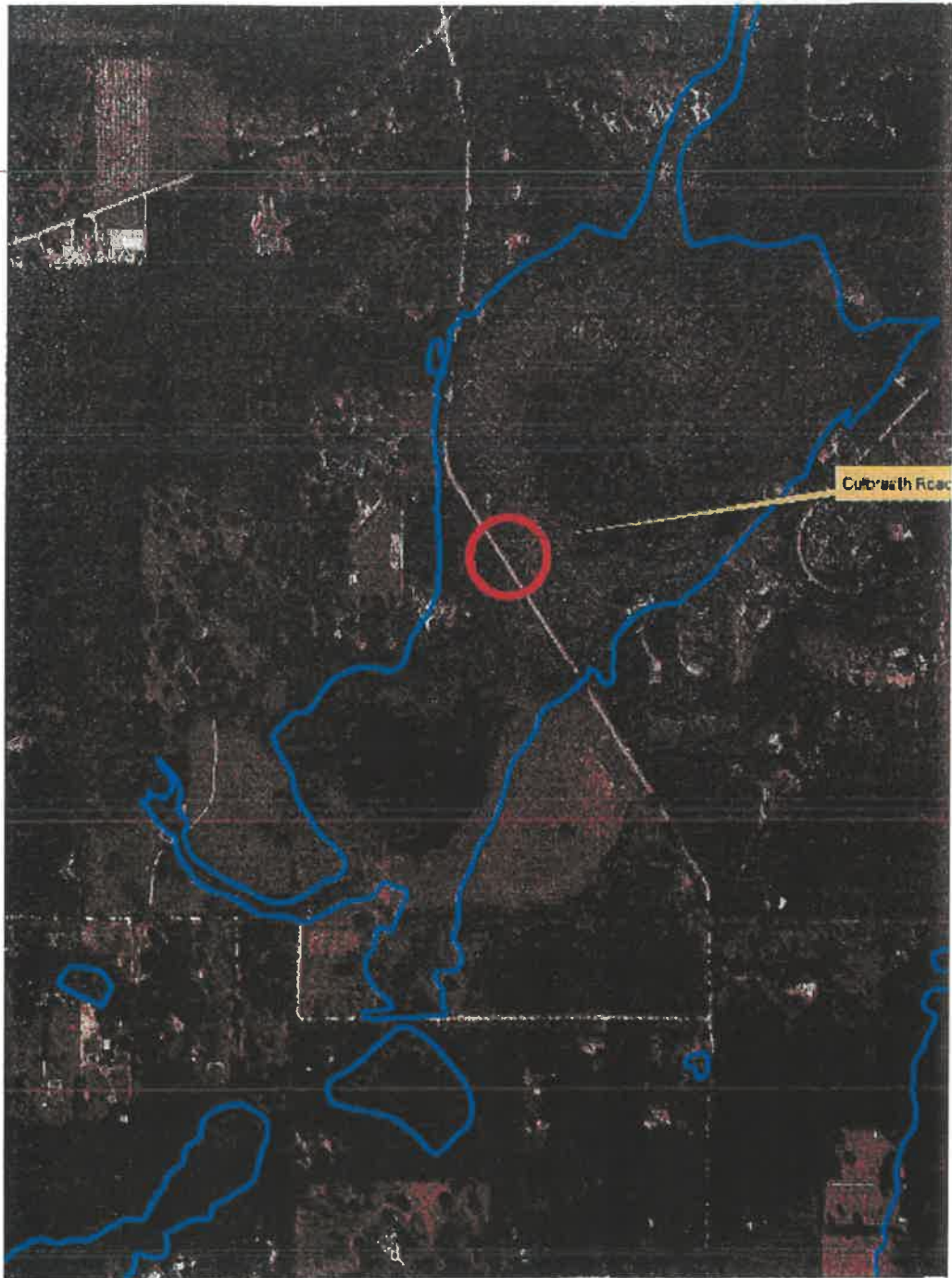
Staff recommends the Board approve funding for the listed projects, rank them in the order presented, and authorize the County Administrator to sign the application letter for the Southwest Florida Water Management District Cooperative Funding Initiative (CFI) and Springs Funding funds for the 2020 funding cycle.

1. Culbreath Road Area Flood Relief Project Design
2. Weeki Wachee Springshed Nitrogen Removal Stormwater Retrofits
3. Airport WRF Total Nitrogen Reduction
4. Landfill Leachate Pre-treatment
5. Anderson Snow Park Reclaimed Water Irrigation
6. Hernando Beach Water System Improvements
7. Airport Water Reclamation Facility Expansion (Springs Funding)

REVIEW PROCESS

Lillian Hoyt	Completed	09/12/2018 2:57 PM
Grace Sheppard	Completed	09/12/2018 10:22 AM
Scott Harper	Completed	09/12/2018 12:02 PM
Gordon Onderdonk	Completed	09/14/2018 3:58 PM
Chris Hanning	Completed	09/12/2018 11:53 AM
Elaine Singer	Completed	09/17/2018 11:42 AM
Scott Herring	Completed	09/17/2018 11:44 AM
Jeffrey Rogers	Completed	09/17/2018 12:23 PM
Michelle Bishop	Completed	09/13/2018 11:47 AM
George Zoettlein	Completed	09/13/2018 12:19 PM
Sue Bishop	Completed	09/17/2018 2:55 PM
Jon Jouben	Completed	09/18/2018 12:52 PM
Jenine Wimer	Completed	09/18/2018 1:48 PM
Leonard Sossamon	Completed	09/18/2018 2:18 PM
Tina Duenninger	Completed	09/20/2018 9:16 AM

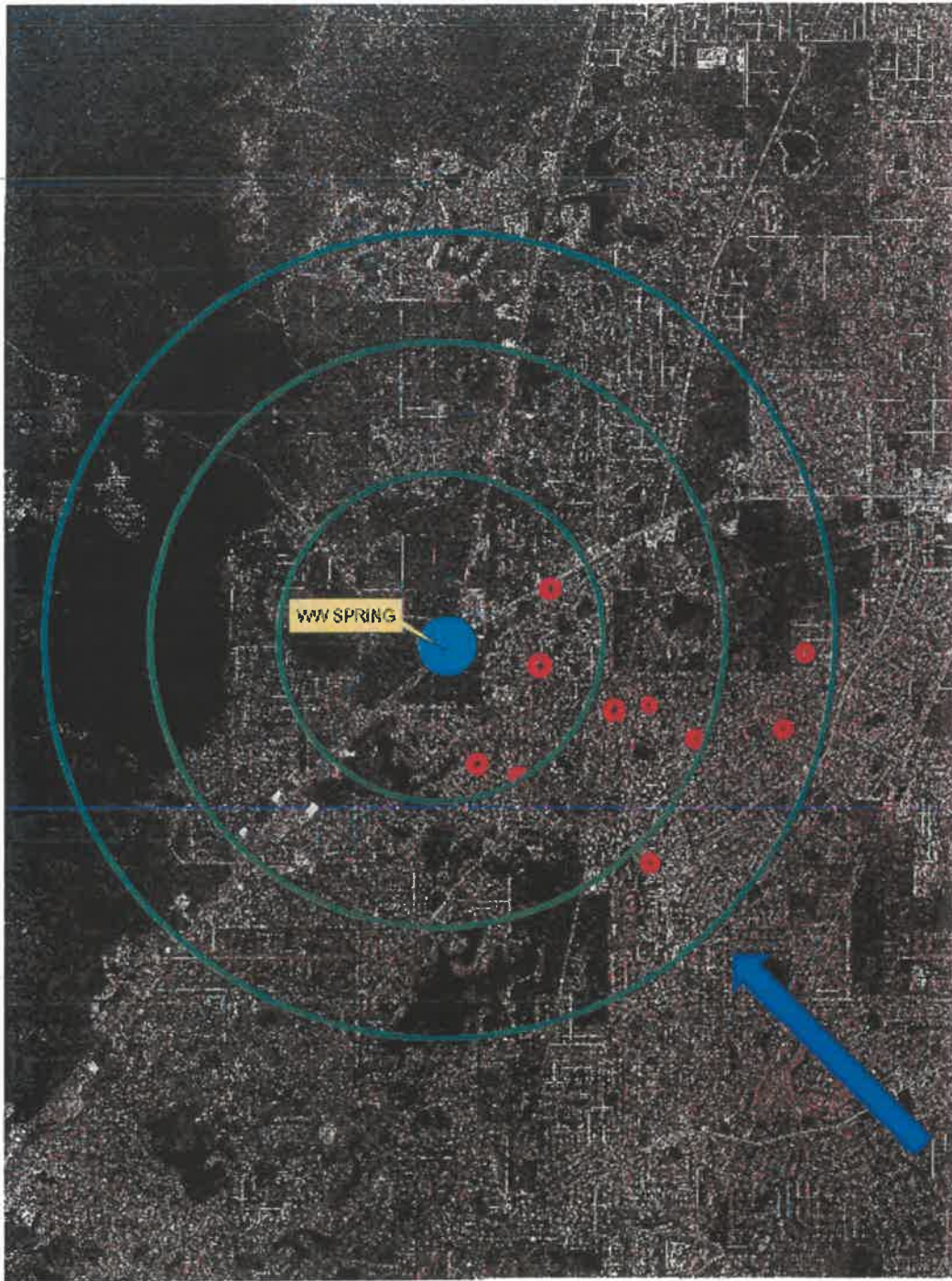
Culbreath Road Flood Relief Project



Attachment: Culbreath Map (14859 : 2020 Cooperative Funding Initiative Letter)

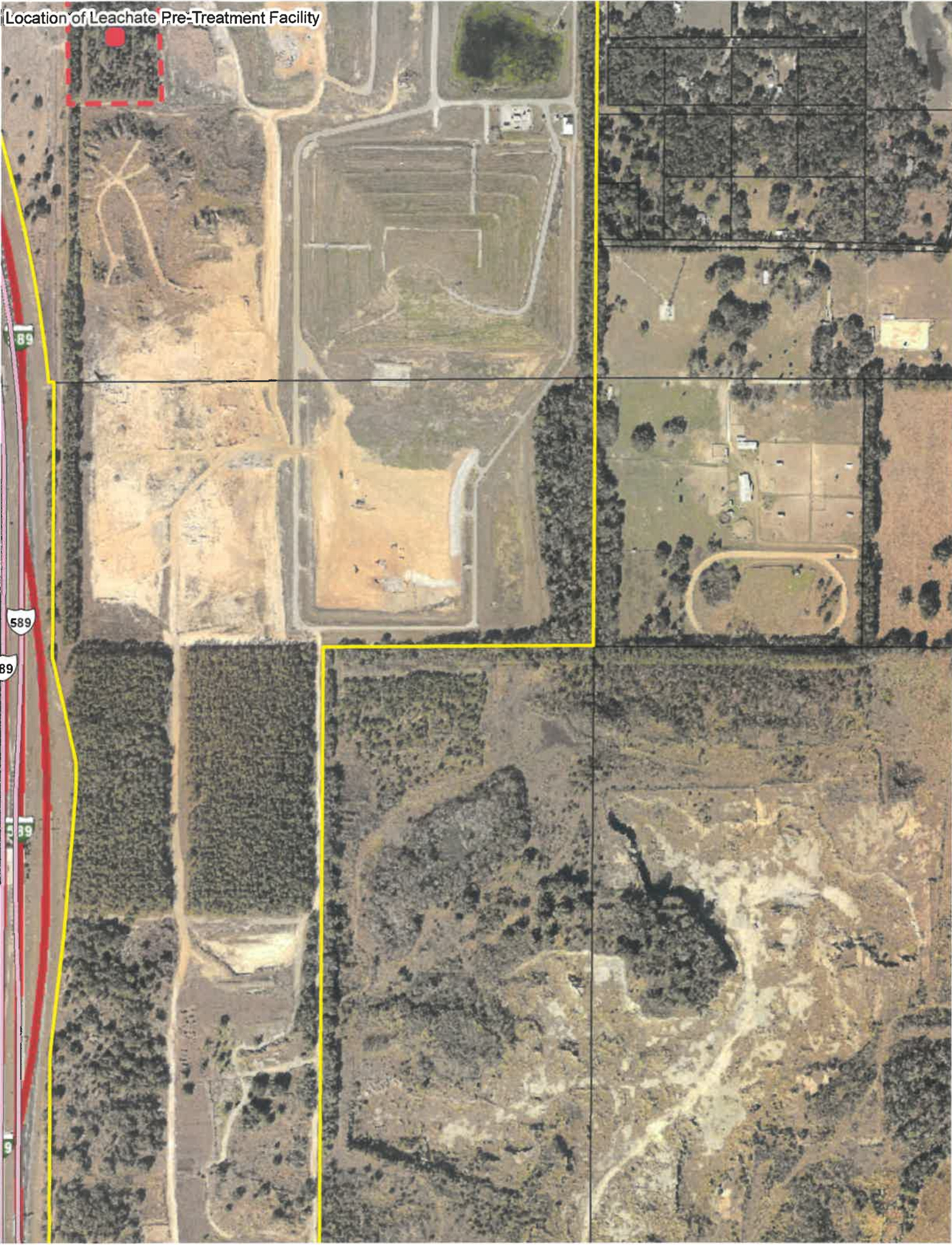
Map depicting location of Culbreath Road Flood Relief project. The blue lines represent the limits of the floodplain and extent of road inundation. Project provides flood relief and water quality treatment where no previously exists. The project is located within the Weeki Wachee Springshed as designated by the BMAP.

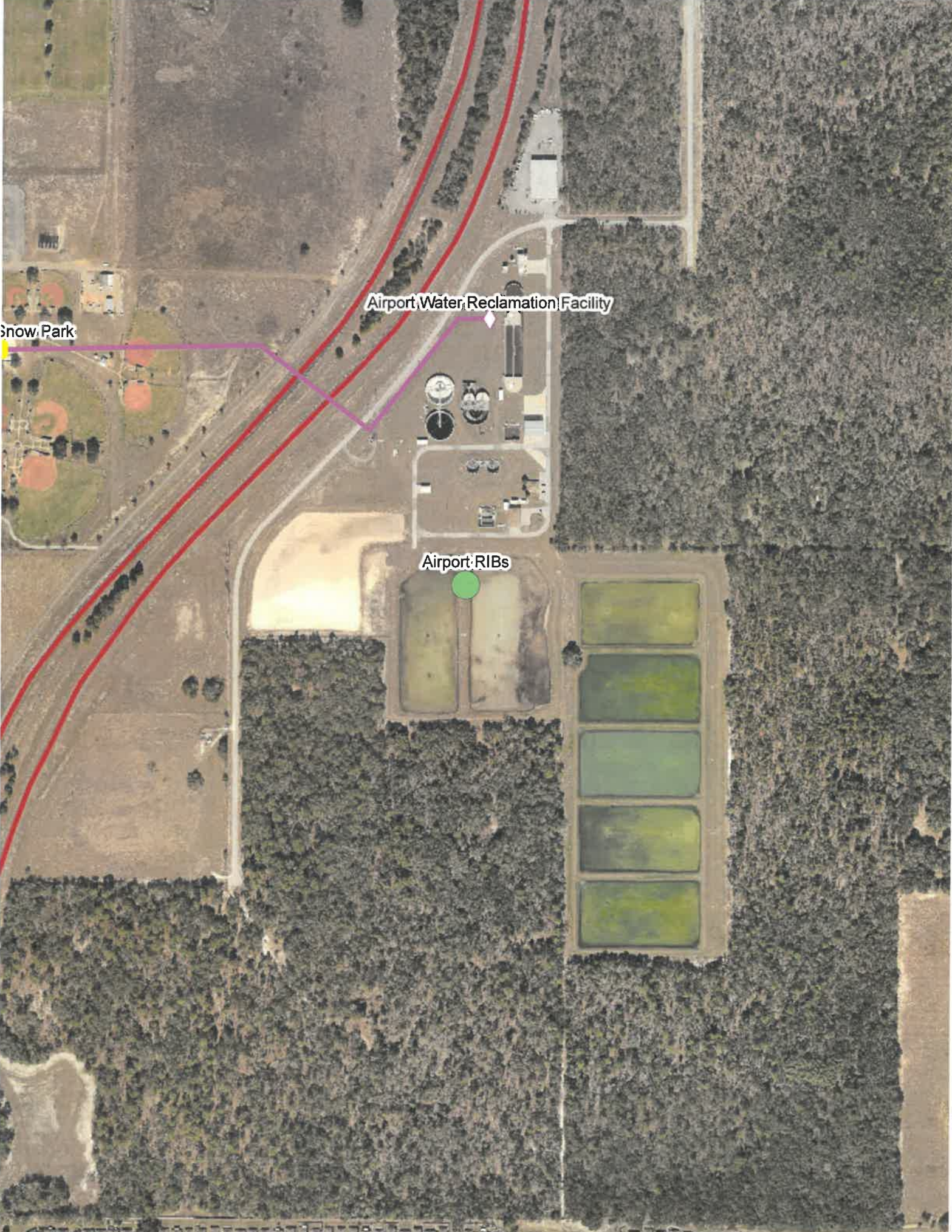
Weeki Wachee Springshed Nitrogen Removal Stormwater Retrofits



Map depicting location of WW Springshed DRA retrofit projects. Concentric circles represent one, two, and three miles from WW Spring. Ground water flow is generally from the southeast as depicted by arrow. All projects are within the Primary Focus Area as designated by the BMAP.

Location of Leachate Pre-Treatment Facility

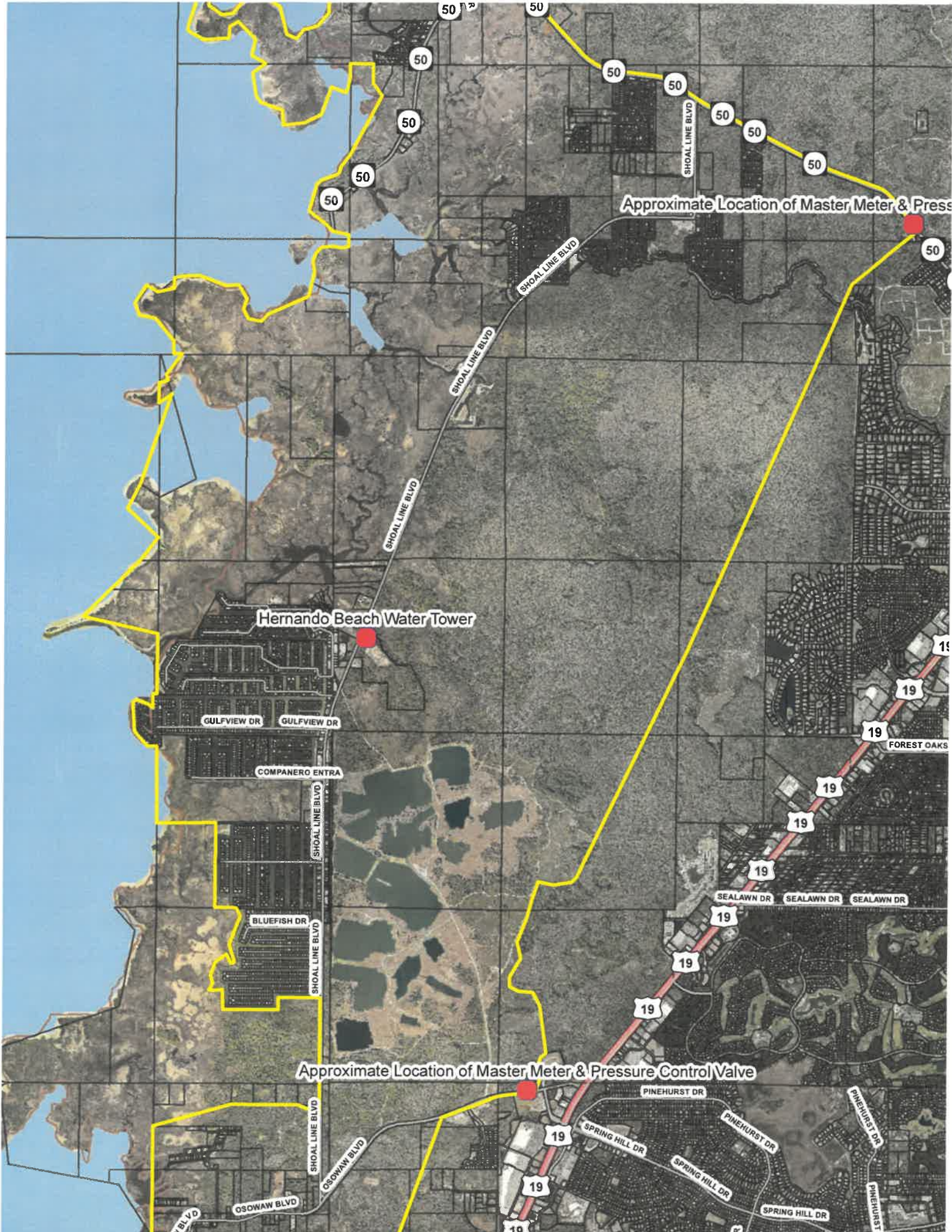


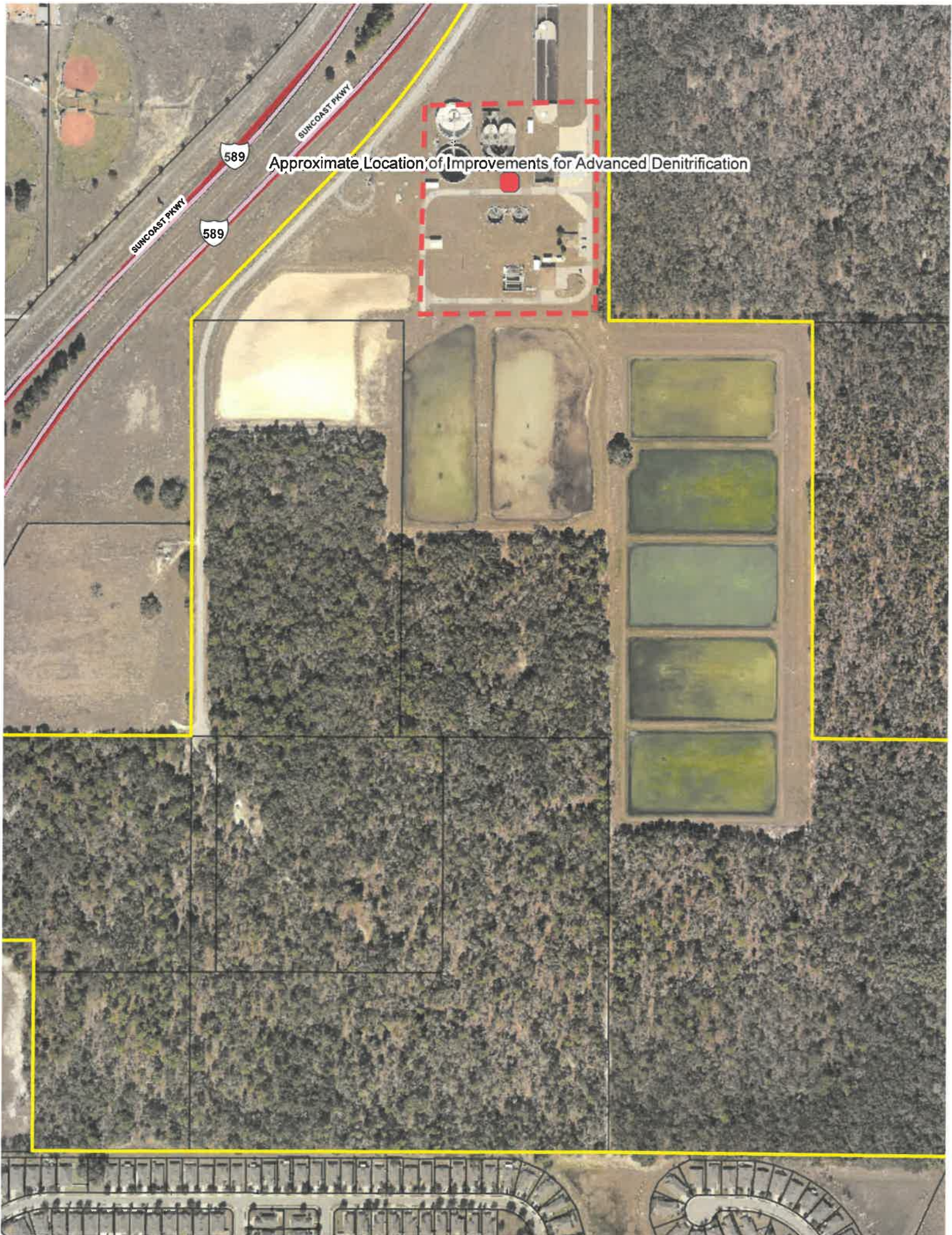


Snow Park

Airport Water Reclamation Facility

Airport RIBs





Approximate Location of Improvements for Advanced Denitrification

SUNCOAST PKWY

589

SUNCOAST PKWY

589



September 25, 2018

SWFWMD Governing Board
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604

Ref: FY 2020 Cooperative Funding Initiative Application Funding and Priority Letter

Dear Governing Board Members,

As a result of action taken by the Hernando County Board of County Commissioner on September 25, 2018, the following projects have been approved for funding in Fiscal Year 2020 and are ranked by priority:

2020 Cooperative Funding Initiative Projects

<u>Rank</u>	<u>Project Name</u>	<u>Hernando County Funding Approved.</u>
1.	Culbreath Road Area Flood Relief Project Design	\$250,000
2.	Weeki Wachee Springshed Nitrogen Removal Stormwater Retrofits.	\$875,000
3.	Airport WRF Nitrogen Reduction	\$2,500,000
4.	Landfill Leachate Pre-treatment	\$175,000
5.	Anderson Snow Park Reclaimed Water Irrigation	\$200,000
6.	Hernando Beach Water Leak Analysis	<u>\$125,000</u>
Total County Cost for Co-op Funded Projects for Fiscal 2020		\$4,125,000
Total SWFWMD Cost for Co-op Funded Projects for Fiscal 2020		<u>\$4,125,000</u>
Total Joint Project Costs for Co-op Funded Projects for Fiscal 2020		\$ 8,250,000

We look forward to working with the District on these projects. Ranking by Basin is provided in Attachment A.

Sincerely,

Leonard B. Sossamon
County Administrator

Attachment: 2020 CFI Priority Letter (14859 : 2020 Cooperative Funding Initiative Letter)

Hernando Co. FY 2020 Cooperative Funding Initiative Application Funding and Priority Letter

Attachment A. Project Ranking by Basin

Coastal Rivers Basin

1. Culbreath Road Area Flood Relief Project Design
2. Weeki Wachee Springshed Nitrogen Removal Stormwater Retrofits.
3. Airport WRF Nitrogen Reduction
4. Landfill Leachate Pre-treatment
5. Anderson Snow Park Reclaimed Water Irrigation
6. Hernando Beach Water Leak Analysis