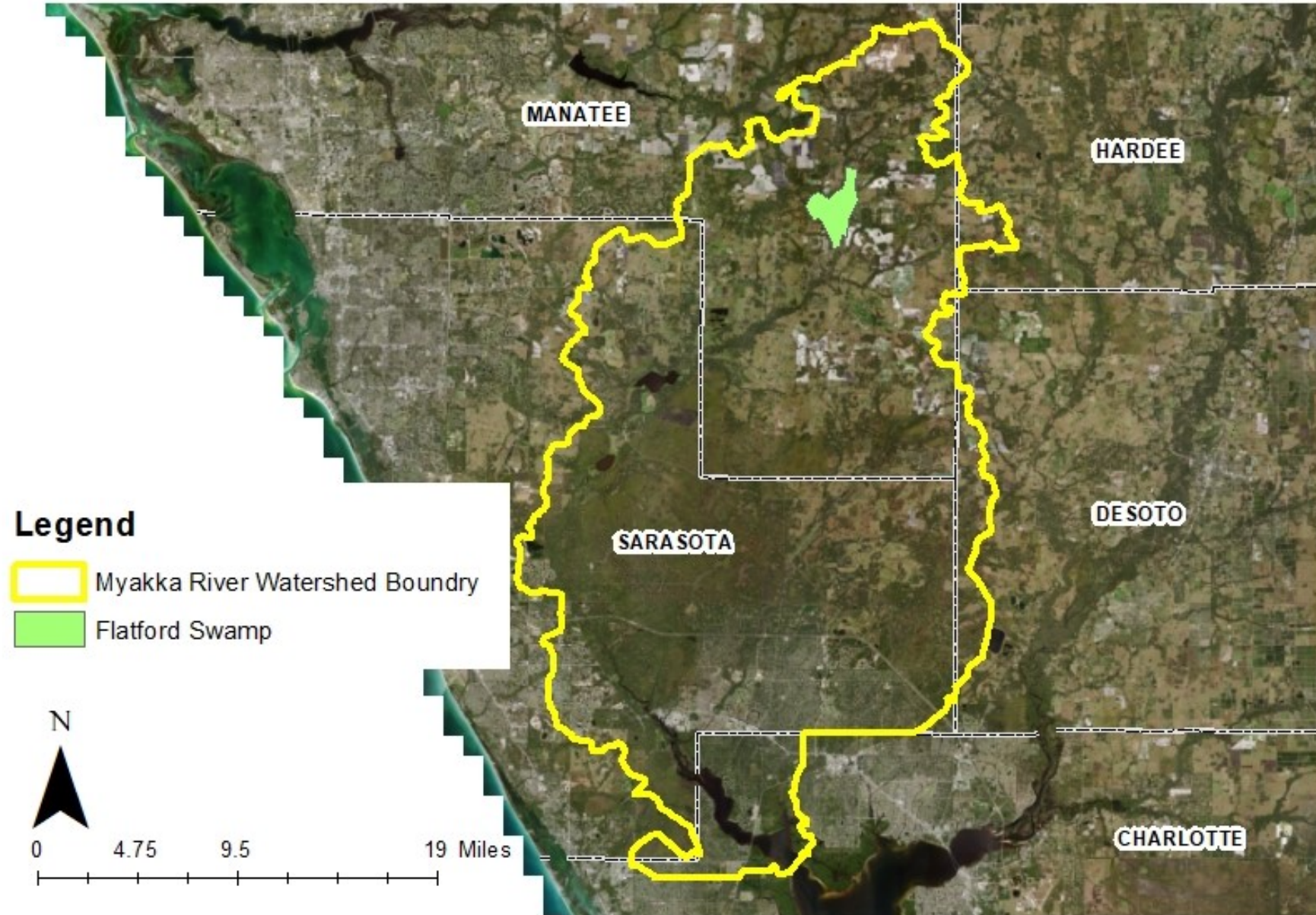


Aquifer Recharge at Flatford Swamp (H089)

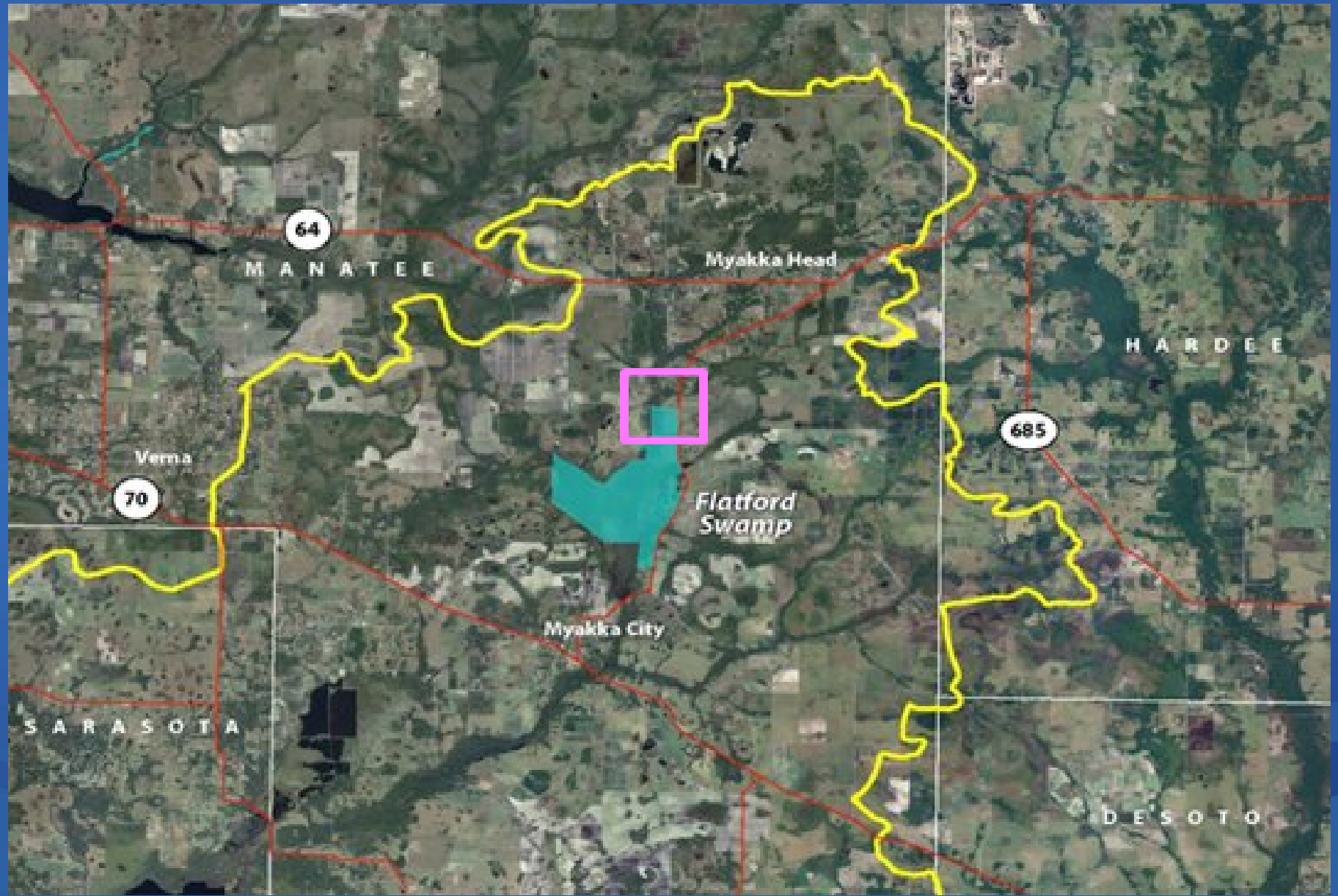
March 25, 2022

Sammy Smith
Hydrogeologist II
Water Resources

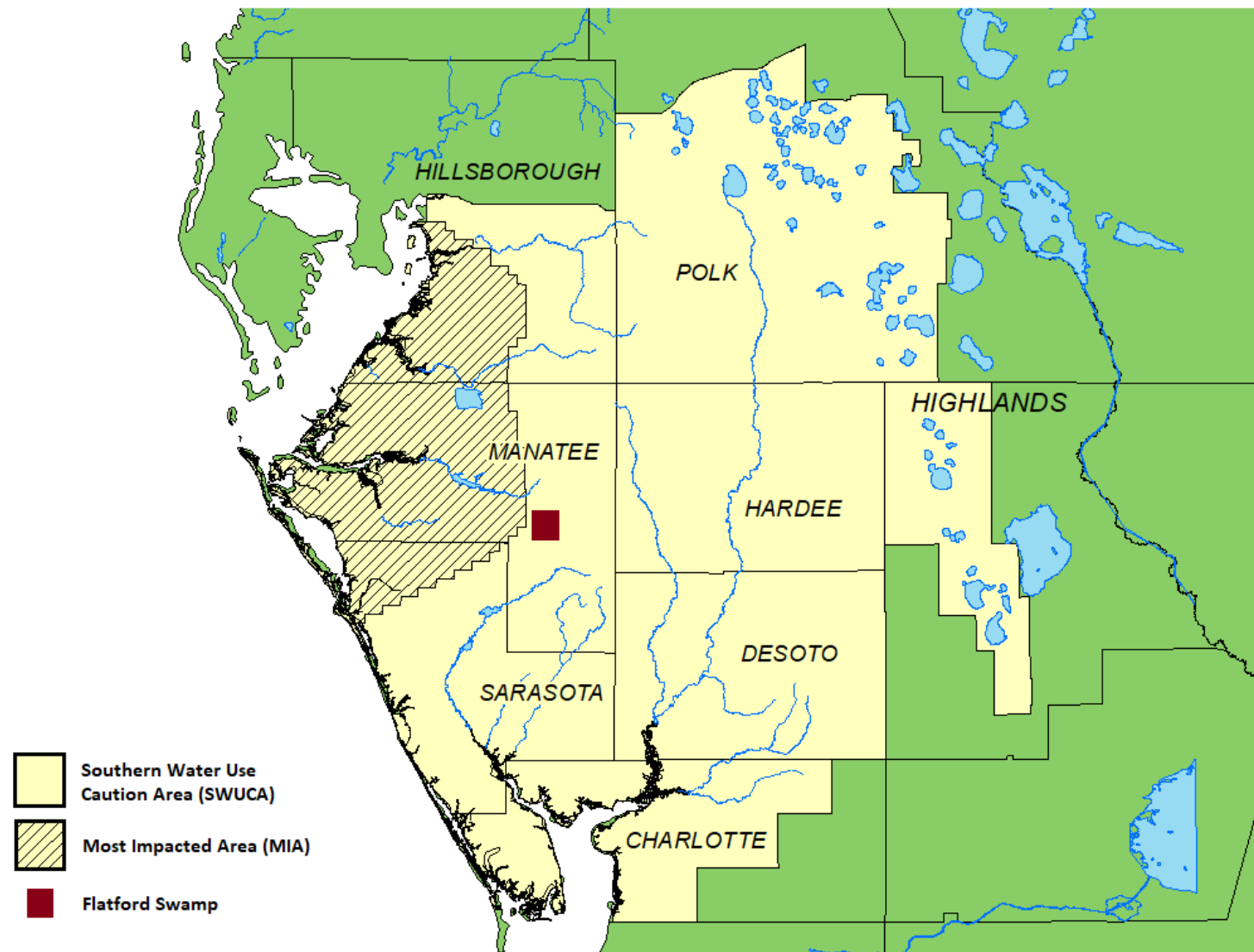
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT



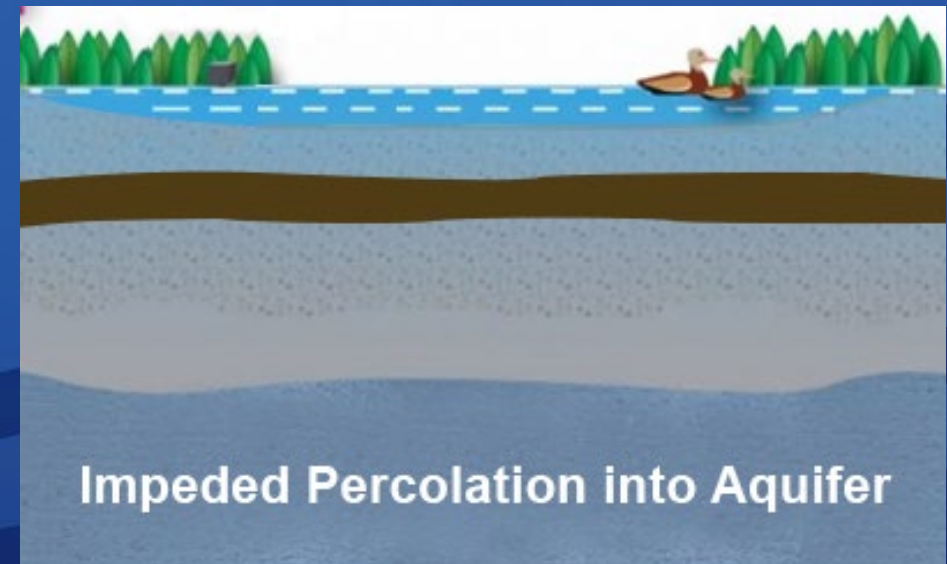
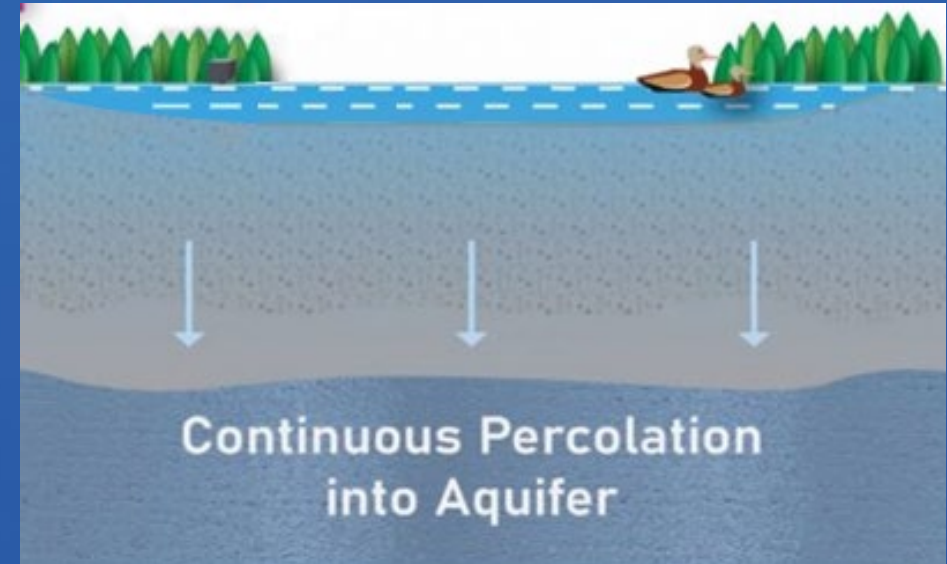
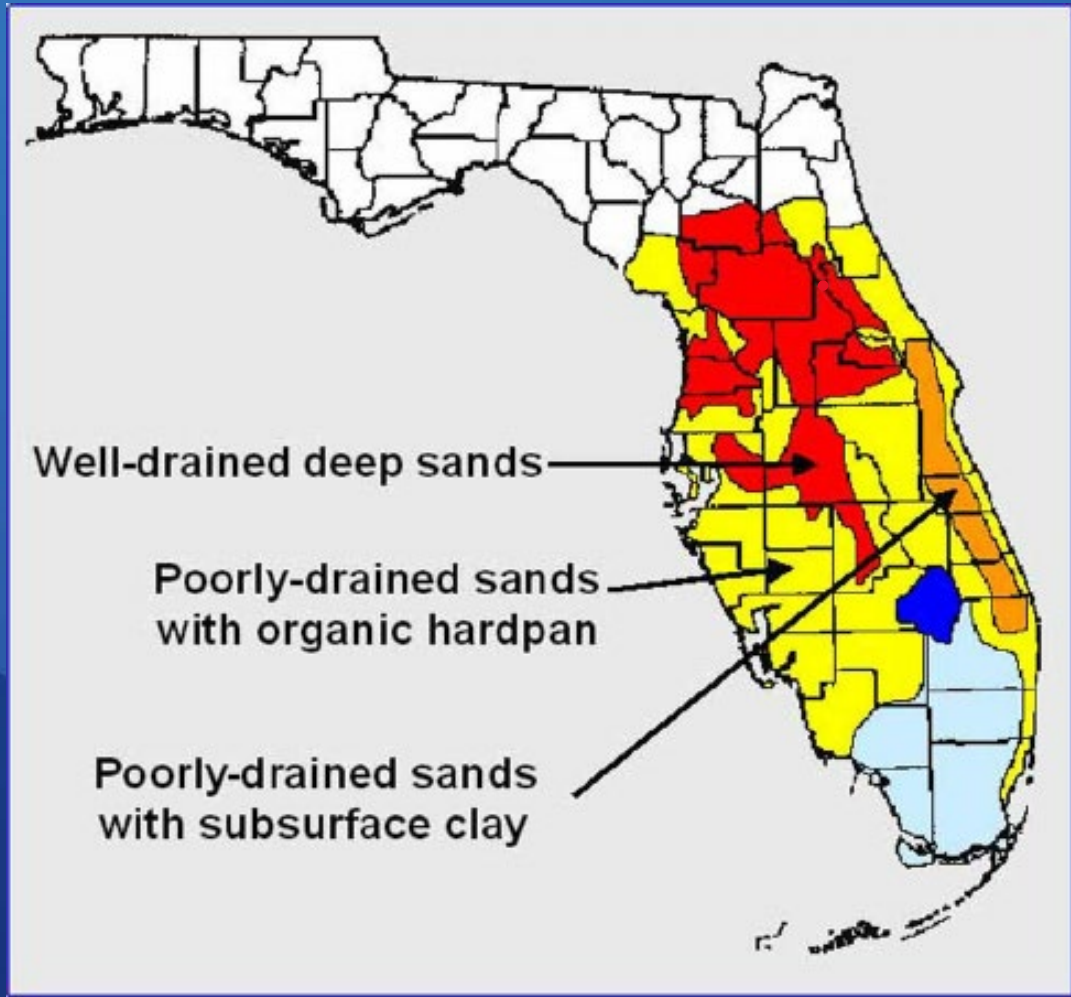
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT



SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

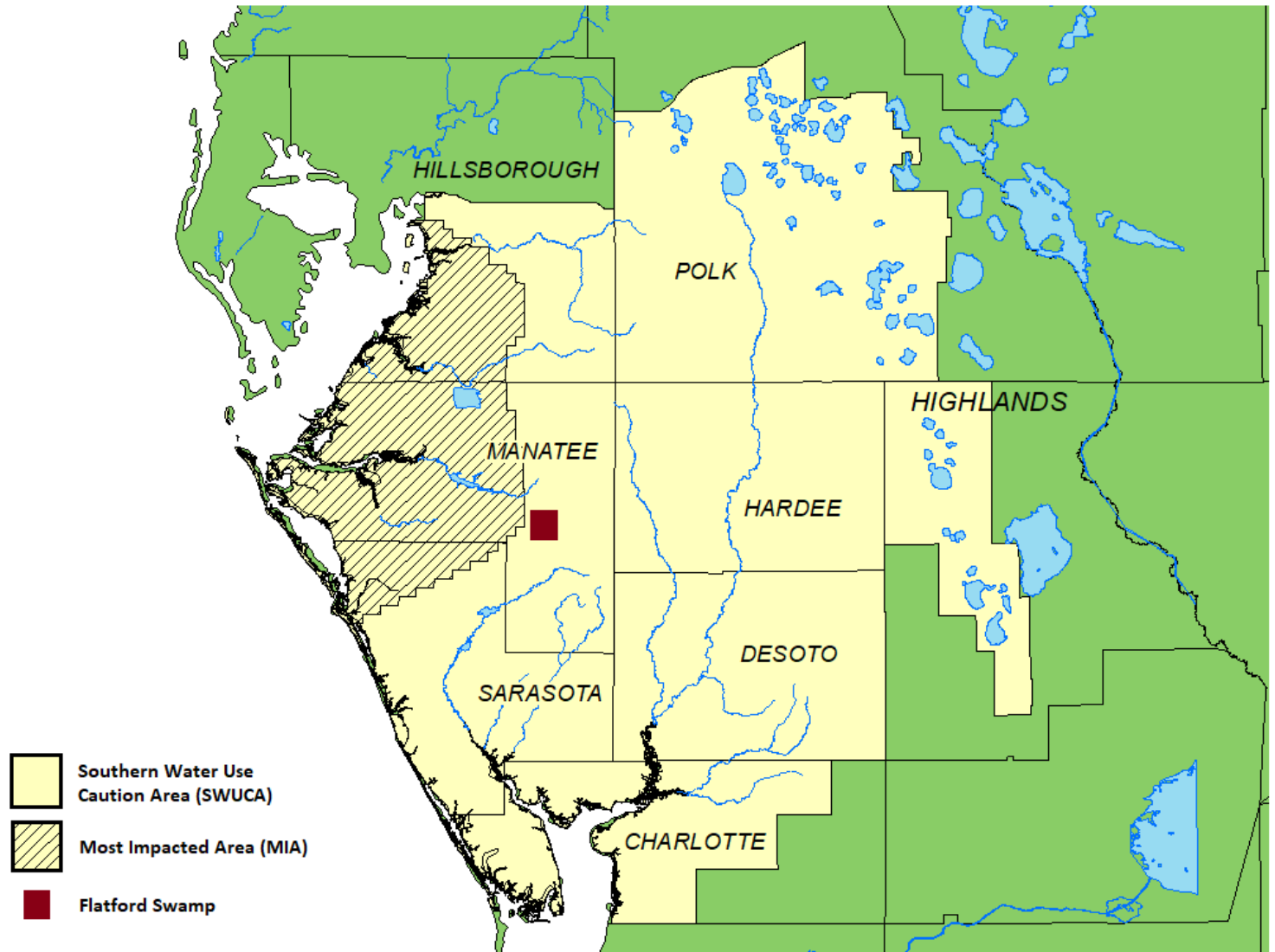


Geomorphology (Hardpan):



Multiple Benefits

- Trend back toward historic hydroperiod
- Improve aquifer level in the Southern Water Use Caution Area (SWUCA)
- Saltwater Intrusion (mitigation)



Integrated Modeling

Table 1 below outlines the combined average discharges at three tributaries in the original model which is now updated to a time period from 1994 through 2014.

Month	Average (cfs)	Minimum (cfs)	Maximum (cfs)
January	17.48	7.93	30.91
February	15.62	5.94	33.15
March	14.18	5.73	29.56
April	16.14	6.00	32.94
May	14.77	4.50	27.32
June	21.99	5.68	44.35
July	44.58	26.17	55.00
August	49.18	33.03	55.00
September	49.89	33.00	55.00
October	18.64	11.69	21.33
November	12.44	9.12	18.21
December	13.50	8.87	21.85
Annual Average	24.03	13.14	35.39

Table 1. Total Monthly Average Diversion Flows 1994 through 2014

Integrated Modeling: Scenario 2

Scenario 2 – In Scenario 2, pumping from Ogleby Creek and Maple Creek were eliminated and the Myakka River pumping rate was reduced to 2 MGD (3.09 cfs). The resulting excess flows diverted are shown below.

Month	Average (cfs)	Minimum (cfs)	Maximum (cfs)
January	3.09	3.09	3.09
February	3.09	3.09	3.09
March	2.93	2.14	3.09
April	2.84	1.76	3.09
May	2.76	1.66	3.09
June	2.89	1.86	3.09
July	3.09	2.93	3.09
August	3.09	3.09	3.09
September	3.09	3.09	3.09
October	3.09	3.09	3.09
November	3.09	3.09	3.09
December	3.09	3.09	3.09
Annual Average	3.01	2.67	3.09

Table 4. Total Monthly Average Diversion Flows 1994 through 2014, Scenario 2

How and Why the Treatment Plan Has Changed:

- May 2021: New direction
 - Meet Primary Drinking Water Standards prior to injection
 - Requires chemical disinfection
- Review of Literature & Studies
- Decision to use chloramination + SBS
- Governing Board Approval (December 2021)
- Revision of infrastructure ongoing

Current Project Status:

- Construction is ongoing (anticipated completion in June 2022)
- Application for renewal of Operational Testing Permit submitted in December 2021
- Begin Operational Testing – Late Summer 2022

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT



Website Updates:

The screenshot shows a web browser window displaying the Southwest Florida Water Management District website. The browser's address bar shows the URL `swfwmd.state.fl.us/projects/aquifer-recharge-flatford-swamp`. The website's header features the district's logo and the text "WATER.MATTERS.ORG". A navigation menu includes links for "Home", "Projects", and "Aquifer Recharge at Flatford Swamp". Below the navigation menu is a large banner image of a swampy area with green vegetation. The main content area is titled "Aquifer Recharge at Flatford Swamp" and contains a paragraph describing the project: "This project will investigate the recharging of excess surface water, treated to primary drinking water standards, into the Upper Floridan aquifer more than 1,000 feet below the land's surface. The recharged water will help improve groundwater levels and reduce the rate of saltwater intrusion from the Gulf of Mexico in the SWUCA's Most Impacted Area." To the right of the main content is a sidebar with a "View Flatford Swamp Location Map" link and a "Contact Us" section listing the Project Manager, Lisann Morris, P.E., as a Senior Professional Engineer with the contact number (352) 796-0515, ext. 5662. The bottom of the screenshot shows a Windows taskbar with various application icons and a system tray displaying the date and time as 10:53 AM on 3/3/2022.

Aquifer Recharge at Flatford Swamp

Home » Projects » Aquifer Recharge at Flatford Swamp

About Residents Business Programs & Projects Resources Recreation

Aquifer Recharge at Flatford Swamp

This project will investigate the recharging of excess surface water, treated to primary drinking water standards, into the Upper Floridan aquifer more than 1,000 feet below the land's surface. The recharged water will help improve groundwater levels and reduce the rate of saltwater intrusion from the Gulf of Mexico in the SWUCA's Most Impacted Area.

SWUCA Recovery and Natural System Improvement

View Flatford Swamp Location Map

Contact Us

Project Manager
Lisann Morris, P.E.
Senior Professional Engineer
(352) 796-0515, ext. 5662

Website Updates:

The screenshot shows a web browser window displaying the Southwest Florida Water Management District website. The browser's address bar shows the URL `swfwmd.state.fl.us/projects/aquifer-recharge-flatford-swamp`. The website's header includes the district's logo, the text "WATERMATTERS.ORG", a search icon, and a "MENU" button. Below the header, a navigation bar contains links for "Home", "Projects", and "Aquifer Recharge at Flatford Swamp". A secondary navigation bar features buttons for "About", "Residents", "Business", "Programs & Projects", "Resources", and "Recreation".

The main content area of the page states: "The District will continue to work with key stakeholders and potentially affected parties. Please contact the **project manager** or **technical lead** with any questions."

Project Schedule

- Step 1:** Desktop and modeling evaluation. Permit test well. – Complete
- Step 2:** Drill test and monitor wells. Collect aquifer characteristics and water quality. – Complete
- Step 3:** Conduct pilot study and construct diversion infrastructure. – Complete
- Step 4:** Construct disinfection system. – Mid 2022
- Step 5:** Begin recharge surface water test. Continue appropriate testing. – Mid 2022
- Step 6:** Evaluate all testing results. – 2023

Project Updates

January

- District staff presented at the December Governing Board on the cost and scope change needed to meet primary standards at the well head as now required by FDEP. The Board approved of

The bottom of the screenshot shows a Windows taskbar with various application icons and a system tray displaying the date and time as 10:54 AM on 3/3/2022, along with weather information (74°F Sunny).

Website Updates:

The screenshot shows a web browser window with the URL swfwmd.state.fl.us/projects/aquifer-recharge-flatford-swamp. The website header includes the Southwest Florida Water Management District logo and the text "WATERMATTERS.ORG". A navigation menu is visible with links: Home, Projects, Aquifer Recharge at Flatford Swamp, About, Residents, Business, Programs & Projects, Resources, and Recreation. The main content area displays updates for the project, including a paragraph about approval for operation and testing, and two bulleted lists of updates for February and Projected March.

Southwest Florida Water Management District
WATERMATTERS.ORG

Home » Projects » **Aquifer Recharge at Flatford Swamp**

About **Residents** **Business** **Programs & Projects** **Resources** **Recreation**

approval for operation and testing.

- Moved a point on the third transect as part of the wetland monitoring program to be more representative of the landscape
- Majority of the facilities, including electrical, are complete

February

- Staff continue to work with the contractor on implementing the additional treatment required and appropriate contract amendments have been initiated. Staff has begun revising the operational testing plan.
- Staff are working on procuring a leasing agreement for appropriate chemicals and equipment

Projected March

- Monitoring construction of chloramine system
- Continued wetland monitoring
- Continue to monitor UIC renewal
- Continue water quality sampling of surface water to assist with chemical use

Windows taskbar at the bottom shows the date 3/3/2022 and time 10:54 AM. The system tray displays weather information: 74°F Sunny.

Potential Future Build-Out:

- Fully dependent on results of operational testing of the first well
- If results are favorable – we will request Governing Board permission to go operational and apply for an operations permit
- Next phase? – potentially to the west (Coker-Ogleby Creek)
- Total number of wells at build-out? (Depends on results of testing and GB decision-making)

Questions?