

Lower Kissimmee Basin Stormwater Treatment Area Project Update

South Florida Water Management District

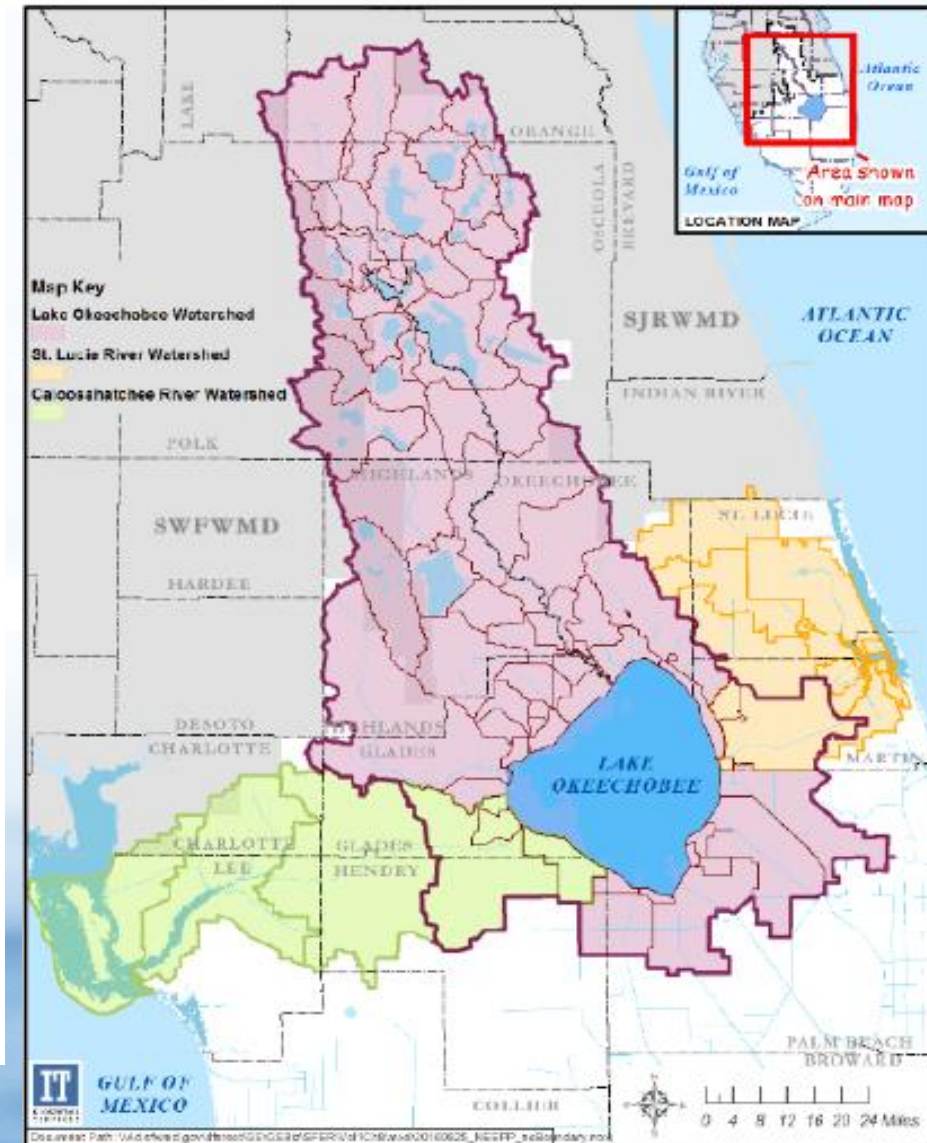
May 2, 2024

Agenda

- Introduction – Jennifer Reynolds
- Lake Okeechobee Watershed water quality – Megan Jacoby
- Lower Kissimmee Basin STA project update – Jenna Bobsein
- Next steps – Jennifer Reynolds
- Q&A
- Public comments

Northern Everglades and Estuaries Protection Program

- Purpose: Protect and restore surface water resources by improving hydrology and water quality for the Northern Everglades ecosystem
- Goals:
 - Improve Water Quality
 - Improve Water Quantity
- The District led Watershed Protection Plans track program benefits and lay out a pathway to achieving watershed goals



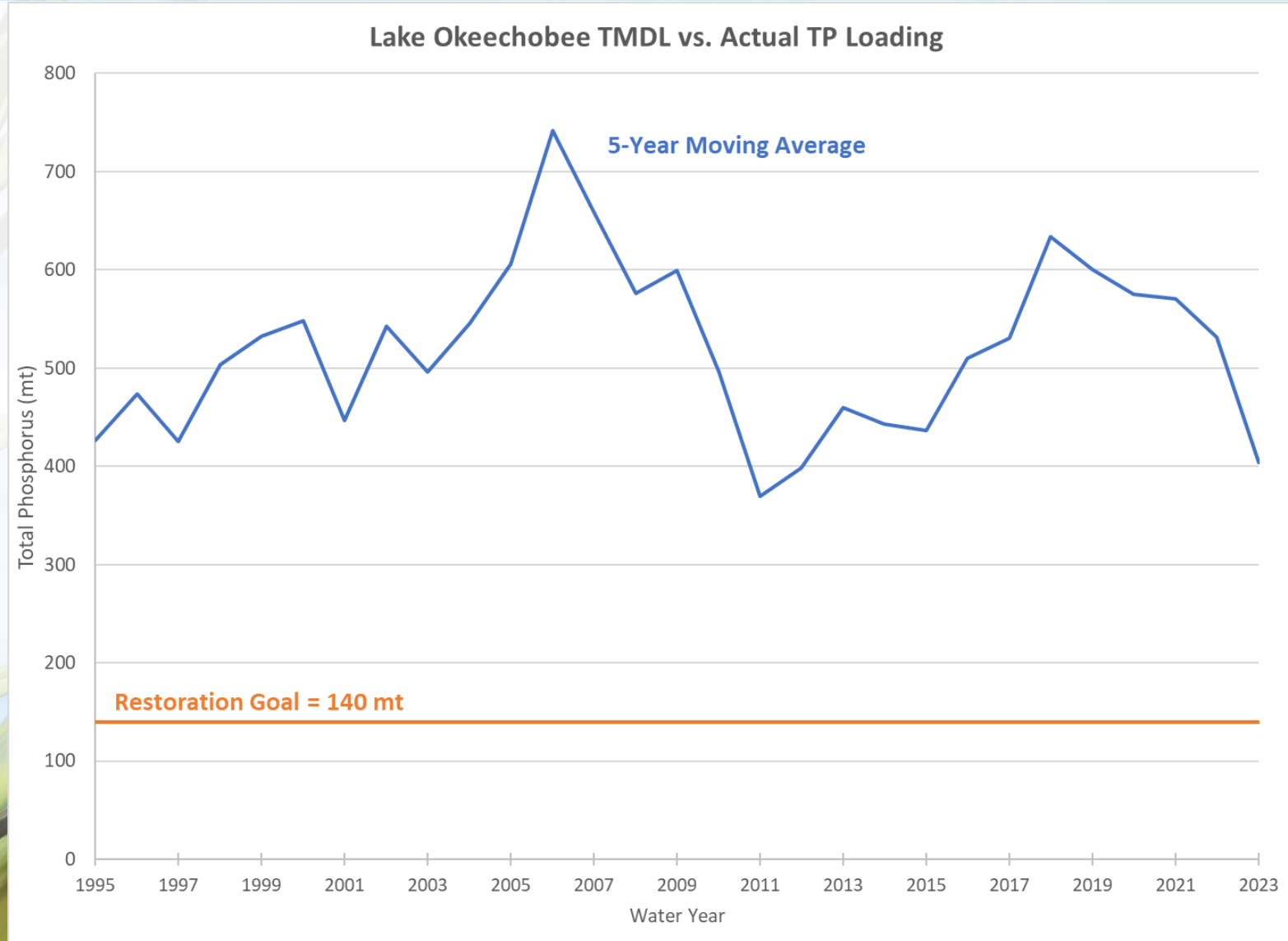
Lower Kissimmee Basin STA (LKBSTA) Project

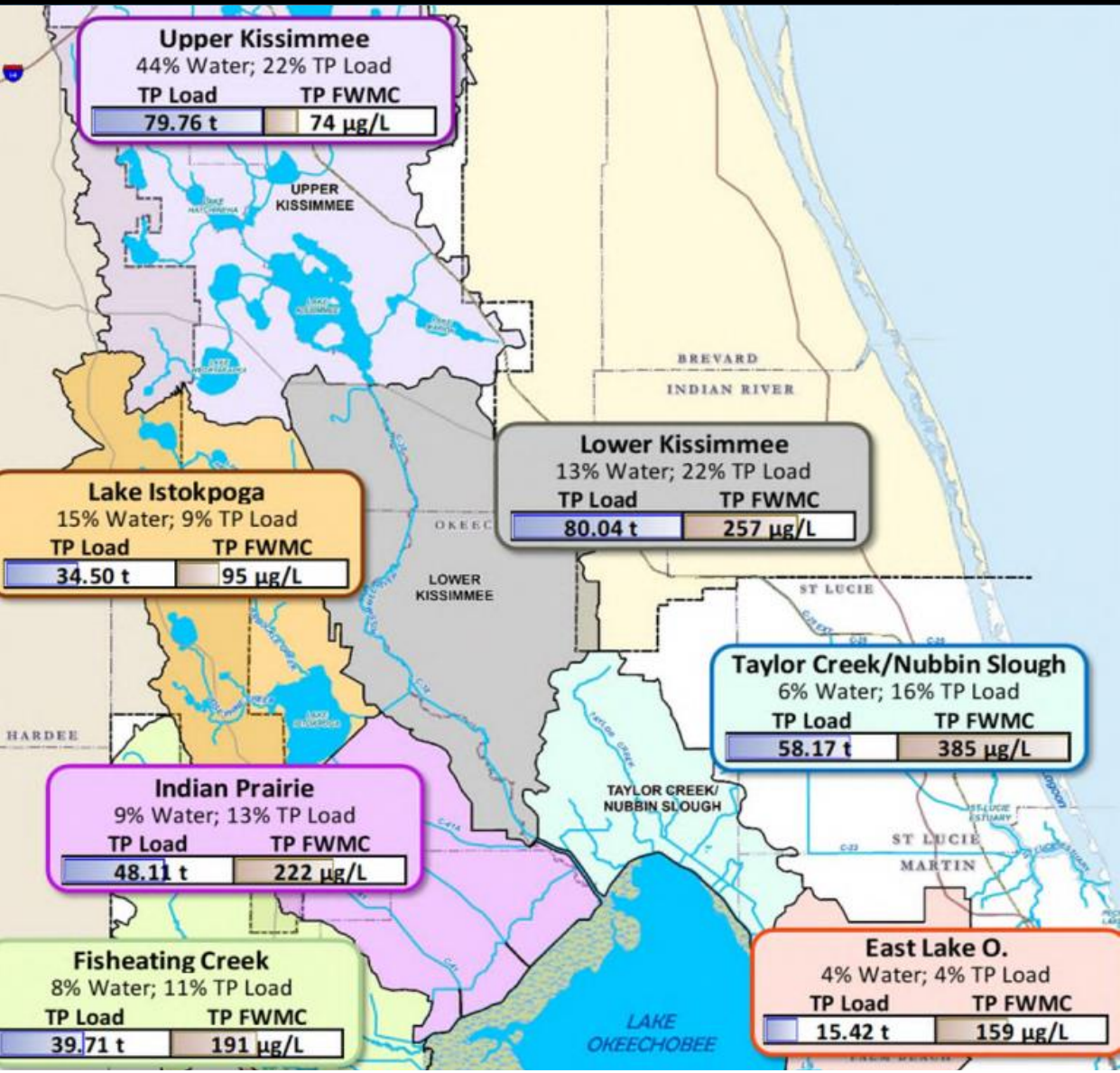
- To address high phosphorus loads within the Lake Okeechobee Watershed, a Basin Management Action Plan (BMAP) was developed in 2014
- The LKBSTA Project was included in the 2020 BMAP as a regional water quality improvement effort intended to reduce total phosphorus (TP) loads from priority areas of the Lake Okeechobee watershed



Planned Lower Kissimmee Basin STA Area
West portion of site, Okeechobee County

Lake Okeechobee Water Quality



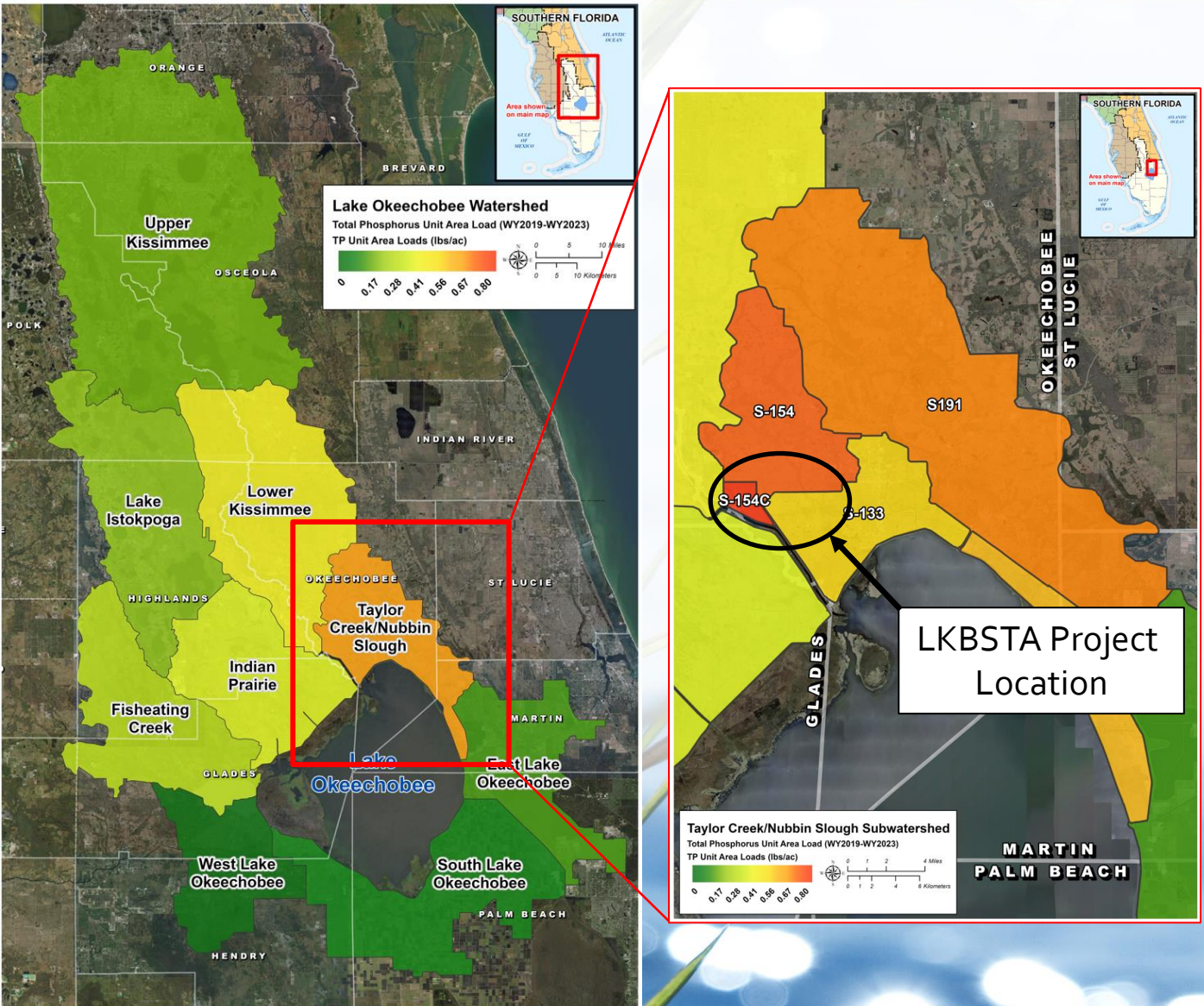


Lake Okeechobee Watershed Water Quality

- Monitoring results show more TP reductions are needed north of Lake Okeechobee
- Highest TP concentrations consistently come from Taylor Creek / Nubbin Slough subwatershed

Subwatershed WY2019-WY2023
Relative Flow and TP load contributions expressed as percentages of total

Lake Okeechobee Watershed Water Quality

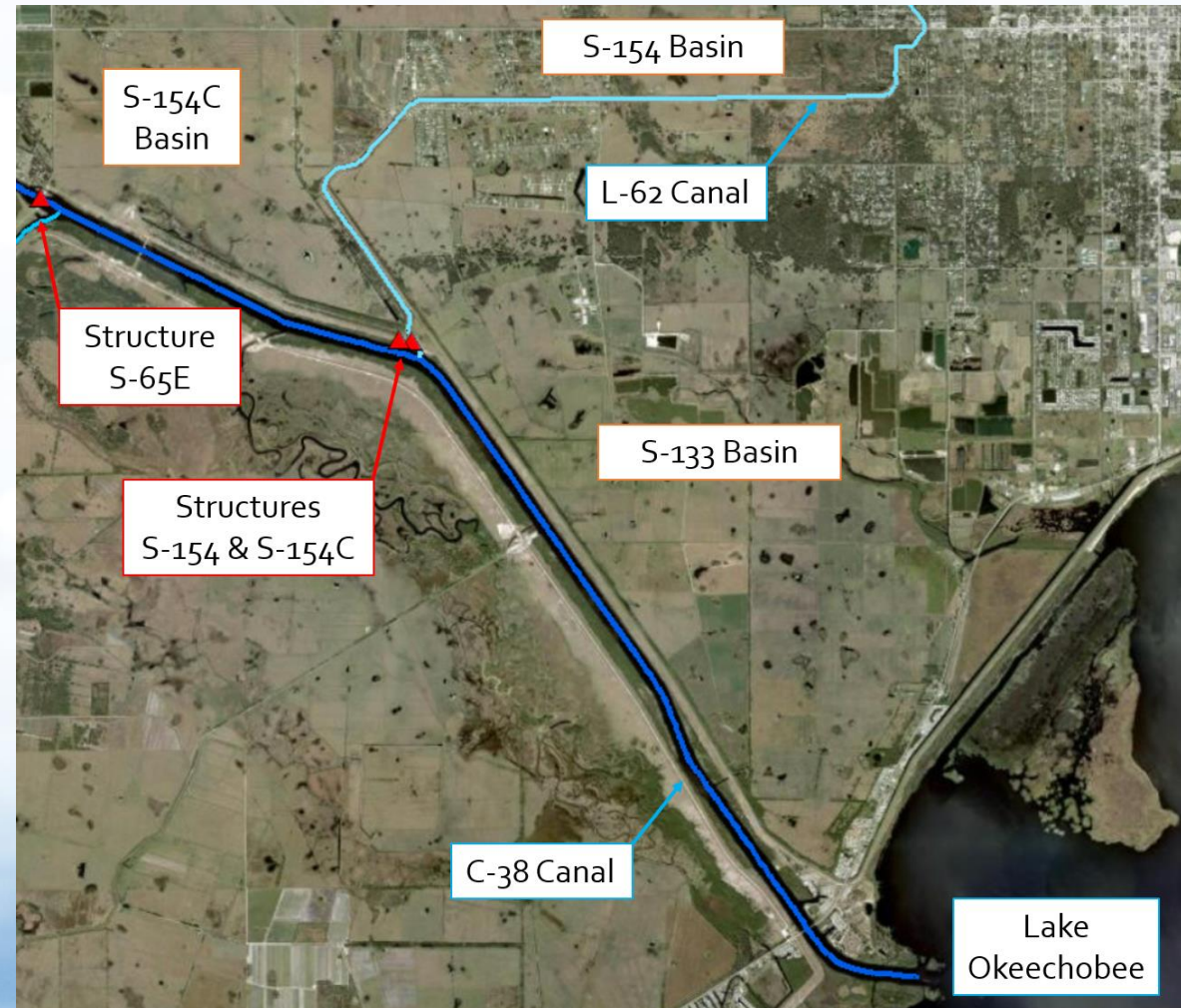


- S-154 and S-154C basins contain have the highest unit area loads in the Taylor Creek Nubbin Slough subwatershed
 - S-154 Basin – 0.7 lbs TP/acre
 - S-154C Basin – 0.8 lbs TP/acre

- Regional projects to improve water quality, particularly in long-standing high-nutrient areas, are necessary to achieve the TMDL for Lake Okeechobee

Why This Location?

- L-62 Canal
 - Will address high TP loads from the S-154 and S-154C basins
- C-38 Canal
 - Can also treat high TP loads in the C-38 canal from upstream basins
- Lake Okeechobee



Project Benefits

- Project is estimated to remove 20-22 mt of TP per year
- Additional project benefits
 - Hydrologic enhancement, groundwater recharge, habitat improvement
- Public recreation opportunities
 - Hiking, bicycling, wildlife viewing



Addressing Water Quality Needs

	S-154 Basin	S-154C Basin	Other LOW Basins
TP load (mt) (WY2019-WY2023)	10.1	0.8	
TP planning target (mt)	3.3	0.5	
Estimated LKBSTA reductions (mt)	6.8	0.3	~ 14
Reductions still needed (mt)	0	0	

Project Background

- September 2019: District and FDEP begin a public exploration of a project to address Lake Okeechobee pollution
- January 2020: In coordination with Lake Okeechobee stakeholders comprised of 28 governmental agencies and local entities, including Okeechobee County, a conceptual project is placed in the Lake Okeechobee BMAP Update to address the S-154 and S-154C basins
- October 2020: Grant funding from FDEP was made available for the project
- March 2021: District solicited proposals to design, construct and operate the Lower Kissimmee Stormwater Treatment Project to address high phosphorus loading rates
 - Respondents must own land in the S-154, S-154C, or S-133 basins

Project Background (continued)

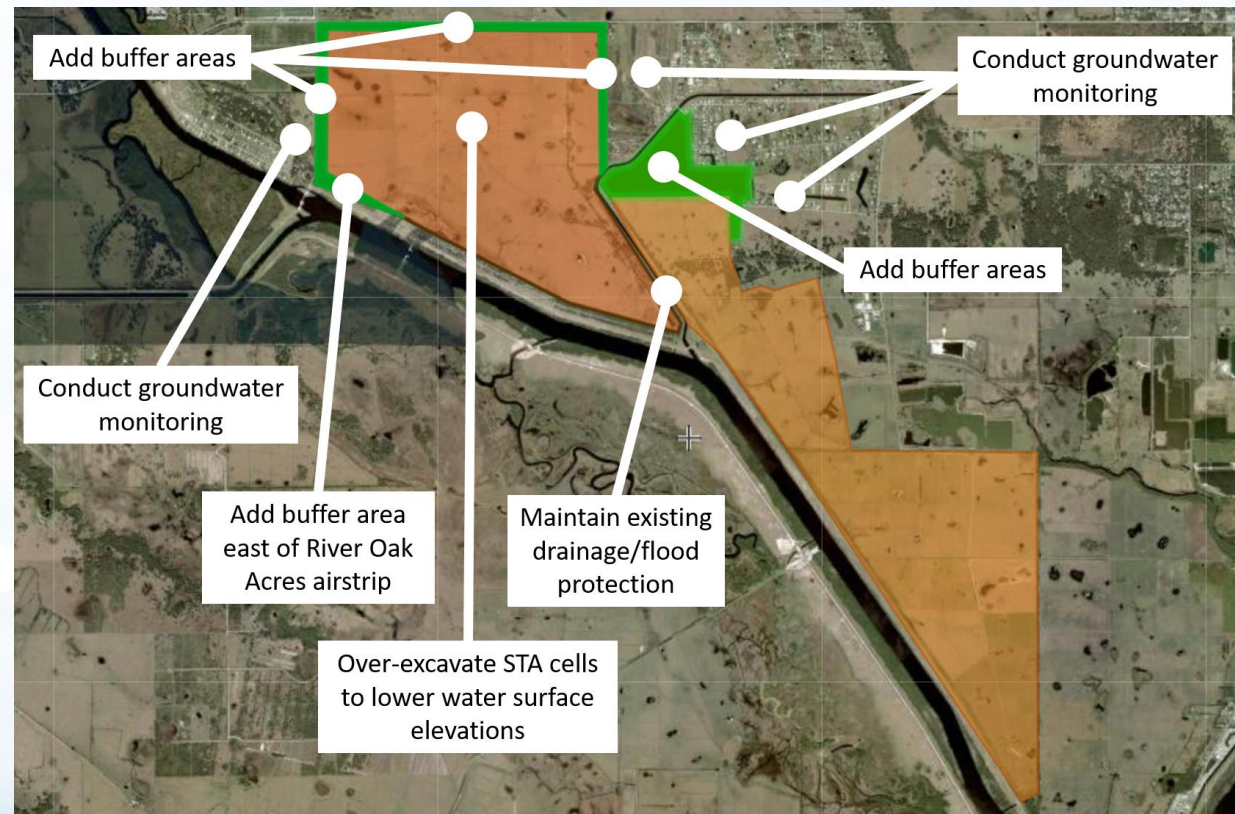
- April 2021: 2 proposals received from qualified respondents: Ecosystem Investment Partners (EIP) and Resource Environmental Solutions (RES)
- May 2021: EIP proposal selected and Governing Board authorization to enter into negotiations
- December 2021: EIP and the District entered into a contract to further develop the Lower Kissimmee Basin STA with planning and preliminary design
 - September 2022: Reconnaissance Study deliverable
 - February 2023: Design Documentation Report deliverable
- April 2023: RES parcel becomes available to add to the project footprint

Project Communication

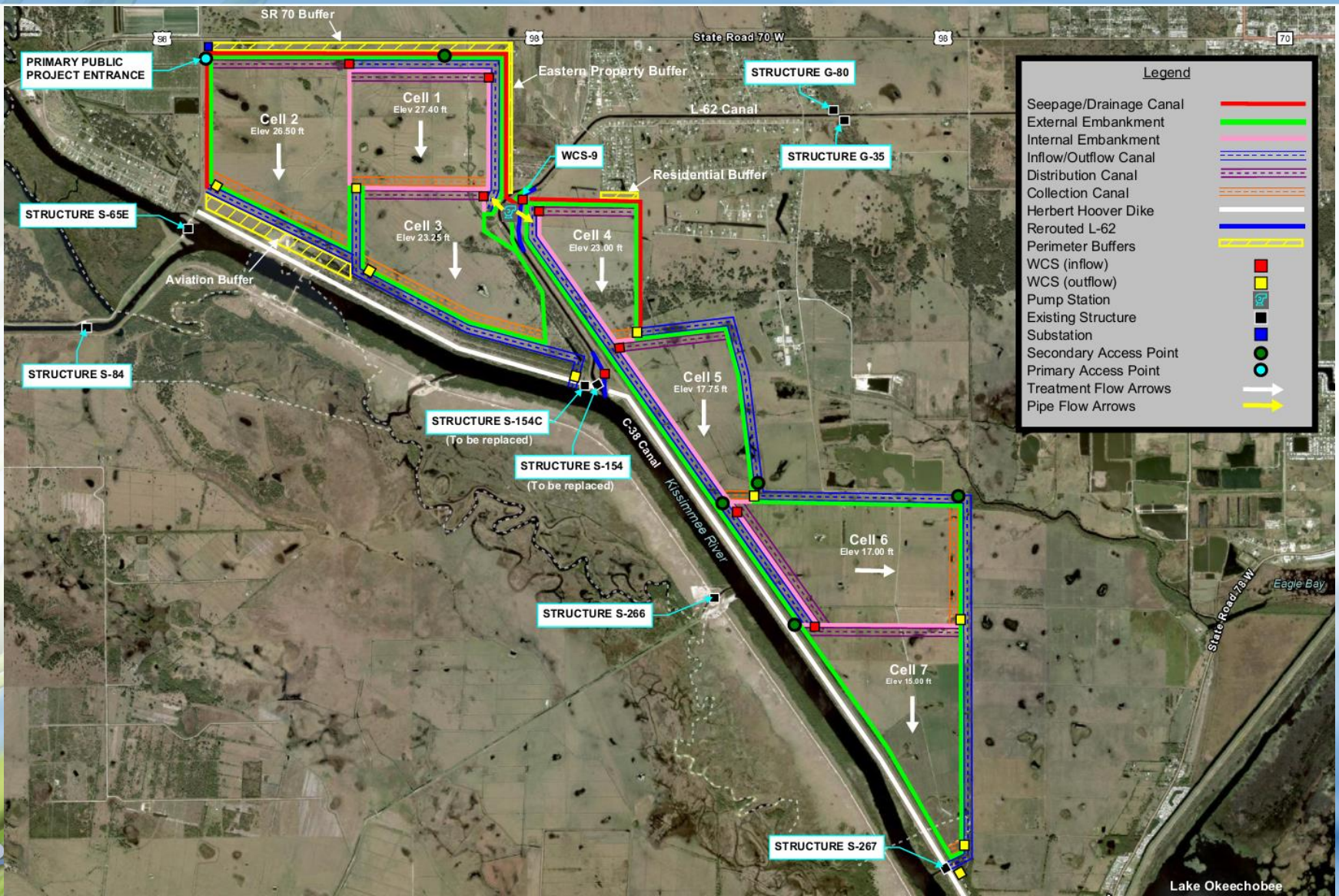
- Project discussed at NEEPP workshop
 - July 2020 (SFWMD)
- Request for Proposals
 - March 2021 (solicitation conference)
- Project discussed at SFWMD Governing Board:
 - May 2021 (SFWMD)
 - December 2021 (SFWMD)
 - May 2023 (SFWMD)
 - December 2023 (Okeechobee County BOCC)
- Project Presentations:
 - County Coalition for the Responsible Management of Lake Okeechobee, St. Lucie and Caloosahatchee Estuaries and Lake Worth Lagoon
 - May 2022 (SFWMD)
 - September 2023 (EIP)
 - Okeechobee County BOCC
 - August 2023 (SFWMD and EIP)
- Community Meetings / Listening Sessions:
 - August 2023 (SFWMD and EIP)

Enhanced Project Design

- Proposed design changes based on stakeholder input
 - Add buffer areas between project and residential communities
 - Remove open water areas (no FEB)
 - Maintain existing flood control and FEMA flood zones
 - Manage and monitor seepage to maintain existing groundwater levels

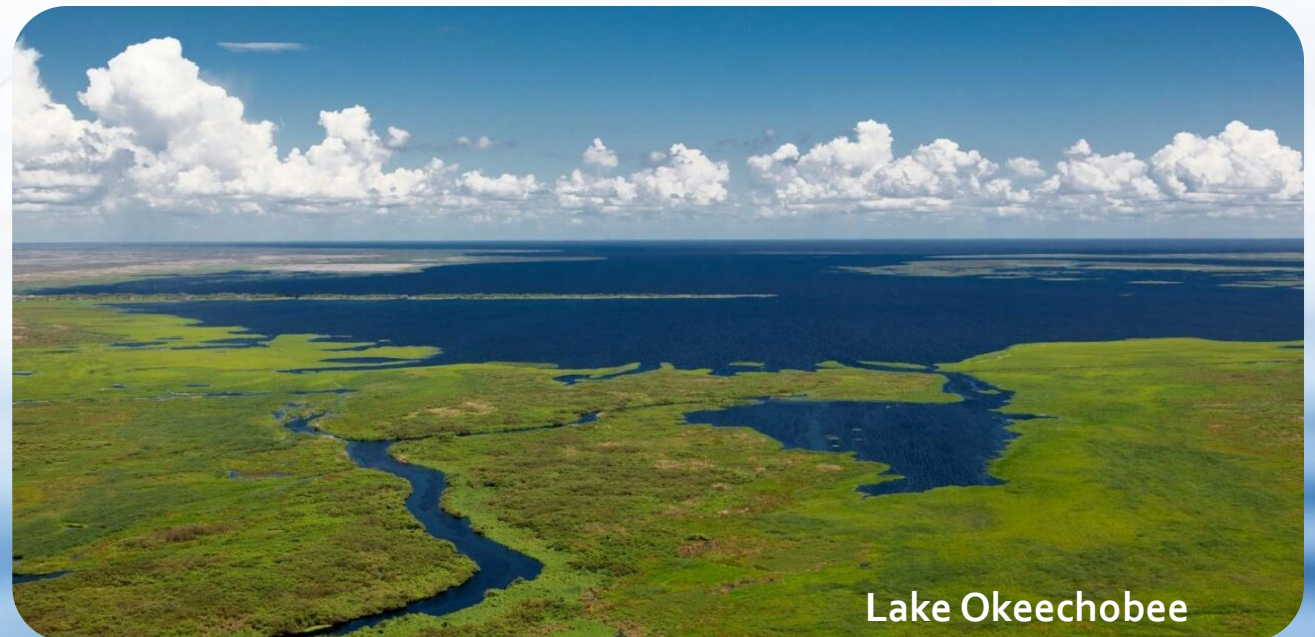


Project Today



Next Steps

- May Governing Board resolution
 - Contract amendment for expanded preliminary design
- Continued public engagement
- Additional questions? Submit to LKBSTA@sfwmd.gov



Lake Okeechobee

Q&A

Public Comment

If you would like to make a comment – use the Raise Hand feature in Zoom

LKBSTA@sfwmd.gov

