

# Water Quality in the Lake Okeechobee Watershed

Okeechobee County Board of County Commissioners Meeting  
August 10, 2023



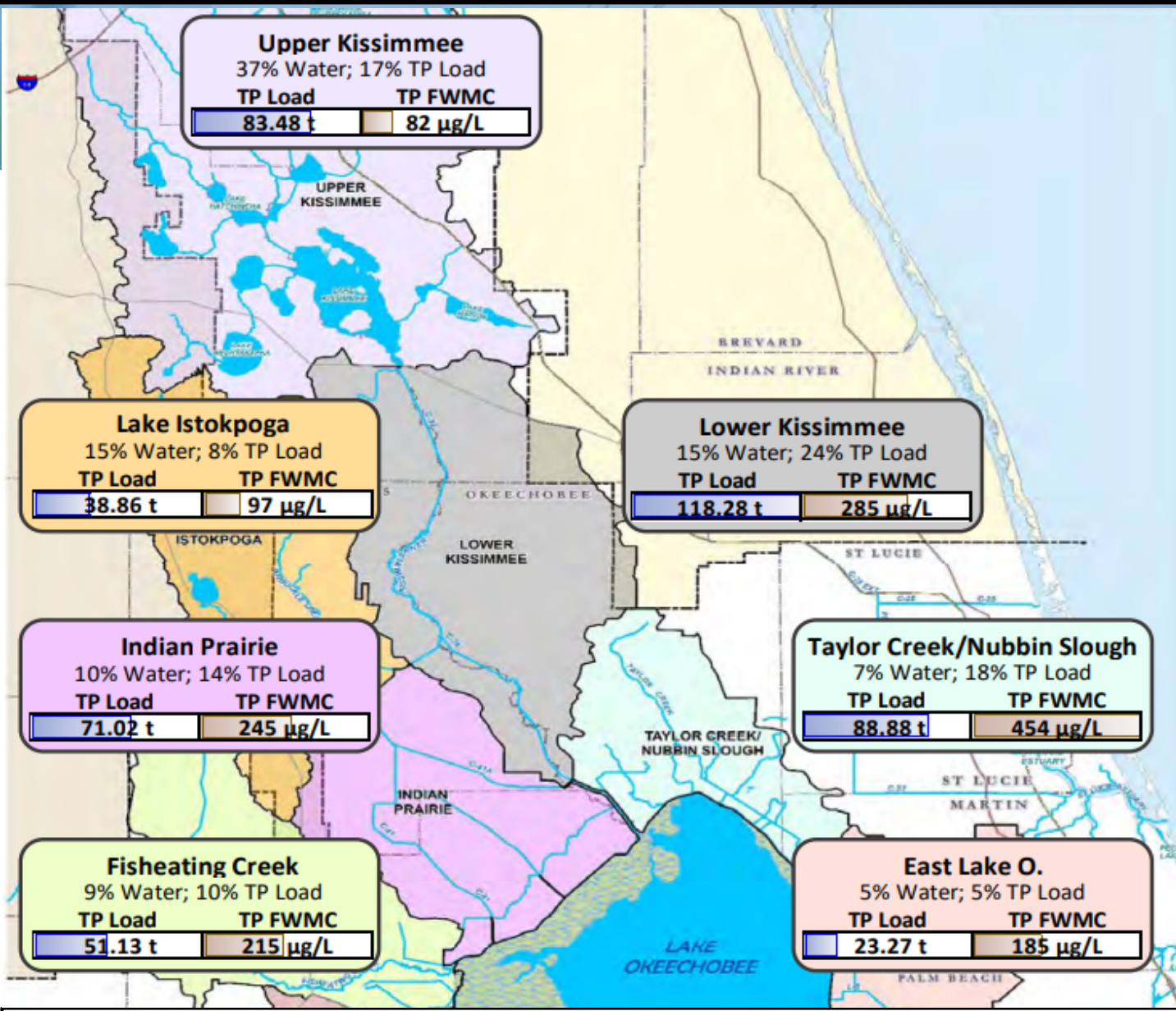
# Lake Okeechobee Watershed BMAP

- A Basin Management Action Plan (BMAP) was developed to address high phosphorus loads within the watershed before they get to Lake Okeechobee
- Achieve TMDLs using a combination of :
  - Research
  - Monitoring
  - **Source controls**
  - **Projects**



Lake Okeechobee

# Lake Okeechobee Watershed Water Quality



- Monitoring results show more phosphorus reductions are needed north of Lake Okeechobee
- Highest phosphorus concentrations come from:
  - Taylor Creek / Nubbin Slough (454 µg/L)
  - Lower Kissimmee (285 µg/L)
  - Indian Prairie (245 µg/L)

Subwatershed WY2018–WY2022

Relative flow and TP load contributions expressed as percentages of total

## Project Background

- May 2021 – District solicited proposals to design, construct and operate a Lower Kissimmee Stormwater Treatment Project to address high phosphorus loading rates
- December 2021 – EIP and the District entered into contract to further develop the Lower Kissimmee Basin STA with planning and preliminary design



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

# Lower Kissimmee Basin Stormwater Treatment Area Project (LKBSTA)

Okeechobee County  
Board of County Commissions Meeting  
August 10, 2023



**Ecosystem  
Investment  
Partners**

# Introduction

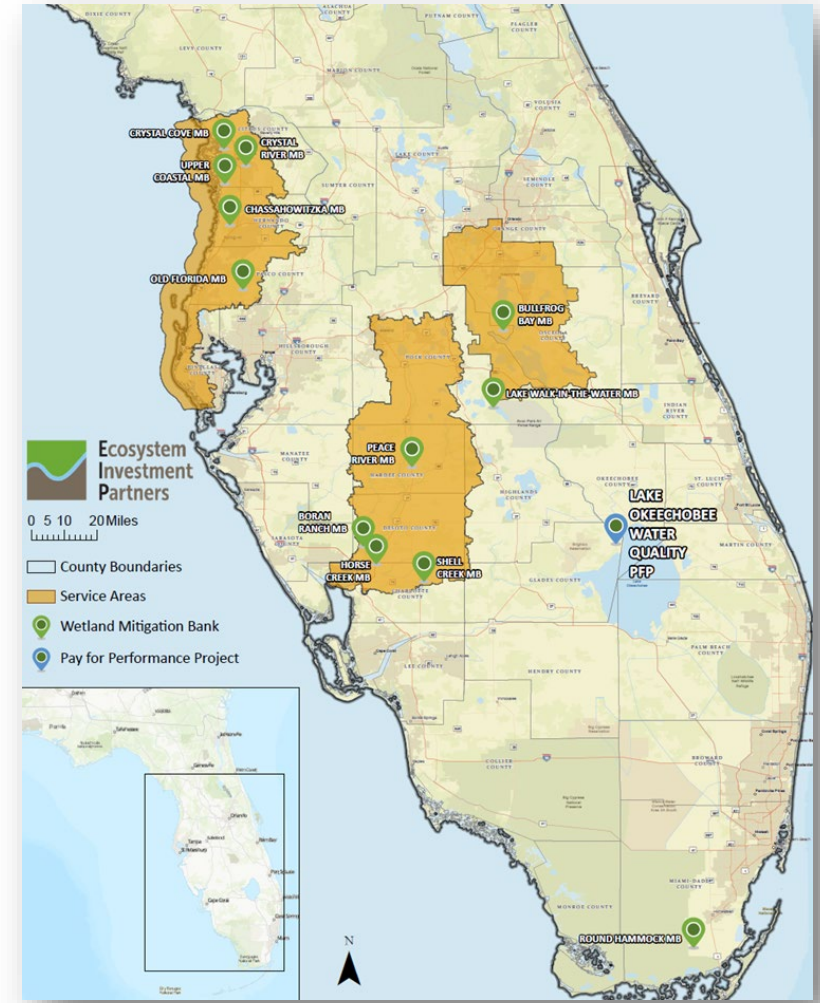


Coming Soon
 Water Quality
 Species Habitat
 Stream
 Wetland
 EIP IV
 EIP III
 EIP II

**226+ Miles** of Streams Restored and Conserved

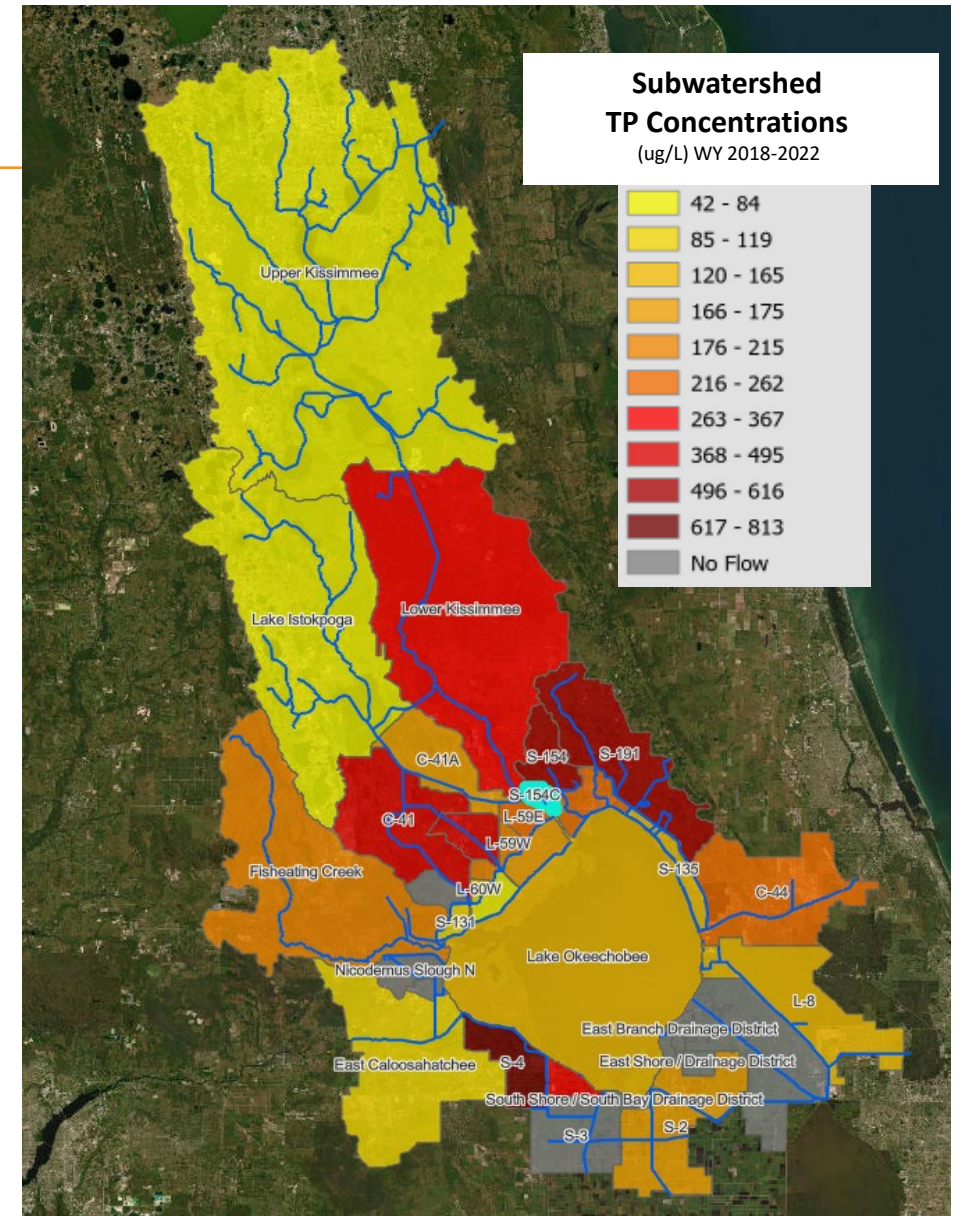
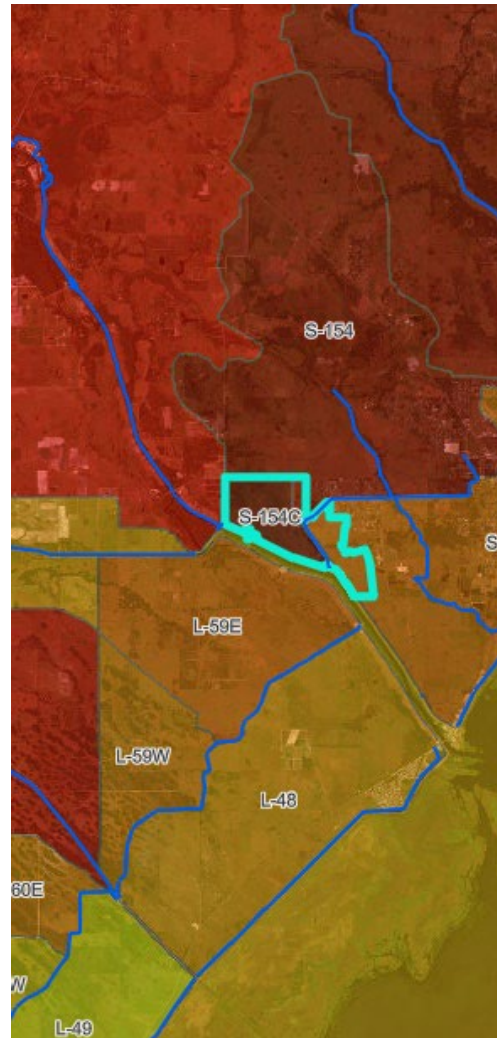
**46,900+ Acres** of Wetlands Restored and Conserved

**6,500 Tons** of Nutrient and Sediment Pollution Eliminated Annually



## Property Location

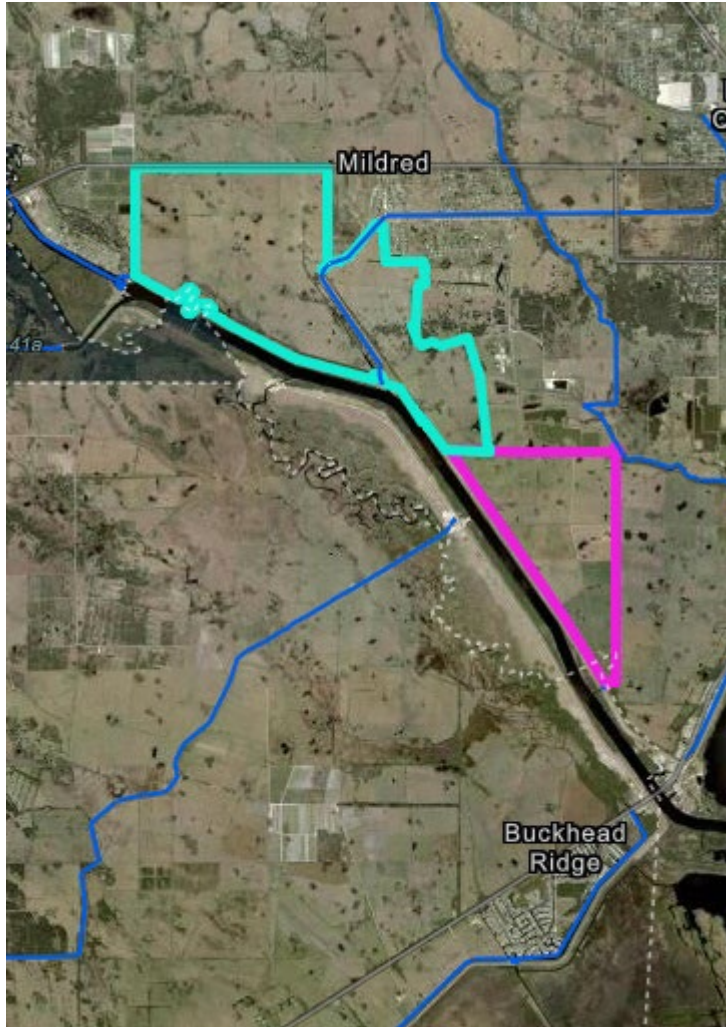
- **May 2021:** SFWMD solicited proposals to Design/Build/Operate a stormwater treatment project in the Lower Kissimmee Basin
- **December 2021:** EIP entered into contract with SFWMD







## RES Property



- **Spring 2023:** EIP evaluated the possible benefits of adding the RES property to the project.
- **May 11, 2023:** At SFWMD Governing Board Meeting, staff stated they were in discussions with EIP about the possible expansion of the contract to include the RES property.
- **September/October 2023:** SFWMD Governing Board expected to be presented proposal to begin “Exploratory Phase” for EIP land not included in the current proposed project and the RES property.

## Exploratory Phase Activities to Date

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Biological / Environmental Studies

Geological Studies

Field Surveys

Project Concept Development

Treatment Performance Evaluations

Infrastructure Assessments

Operational Strategy Development

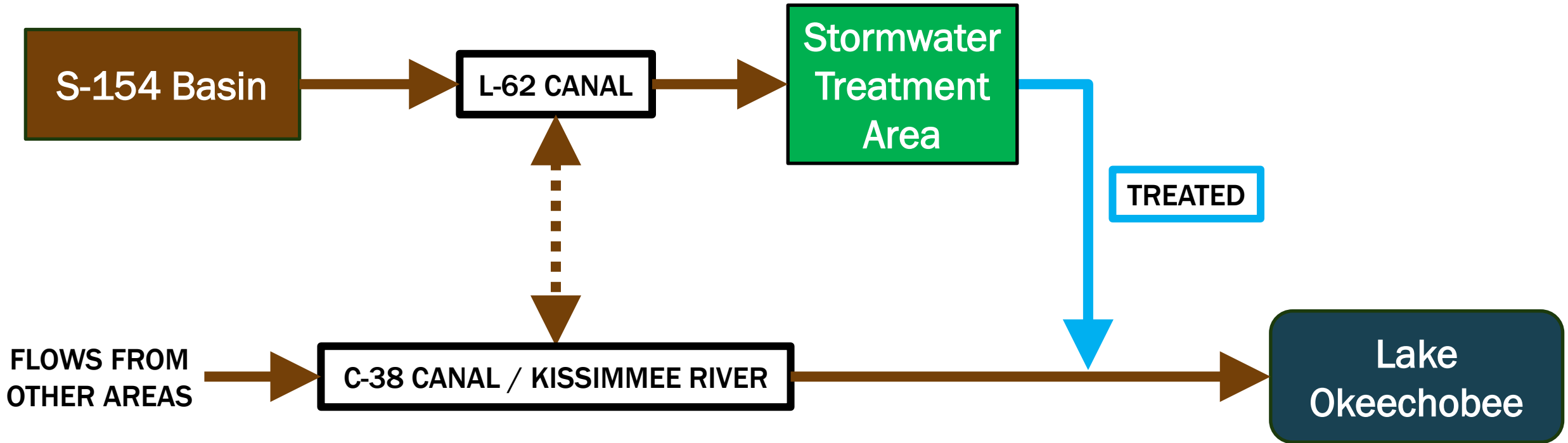
Permit Acquisition Coordination/Planning

Construction Planning

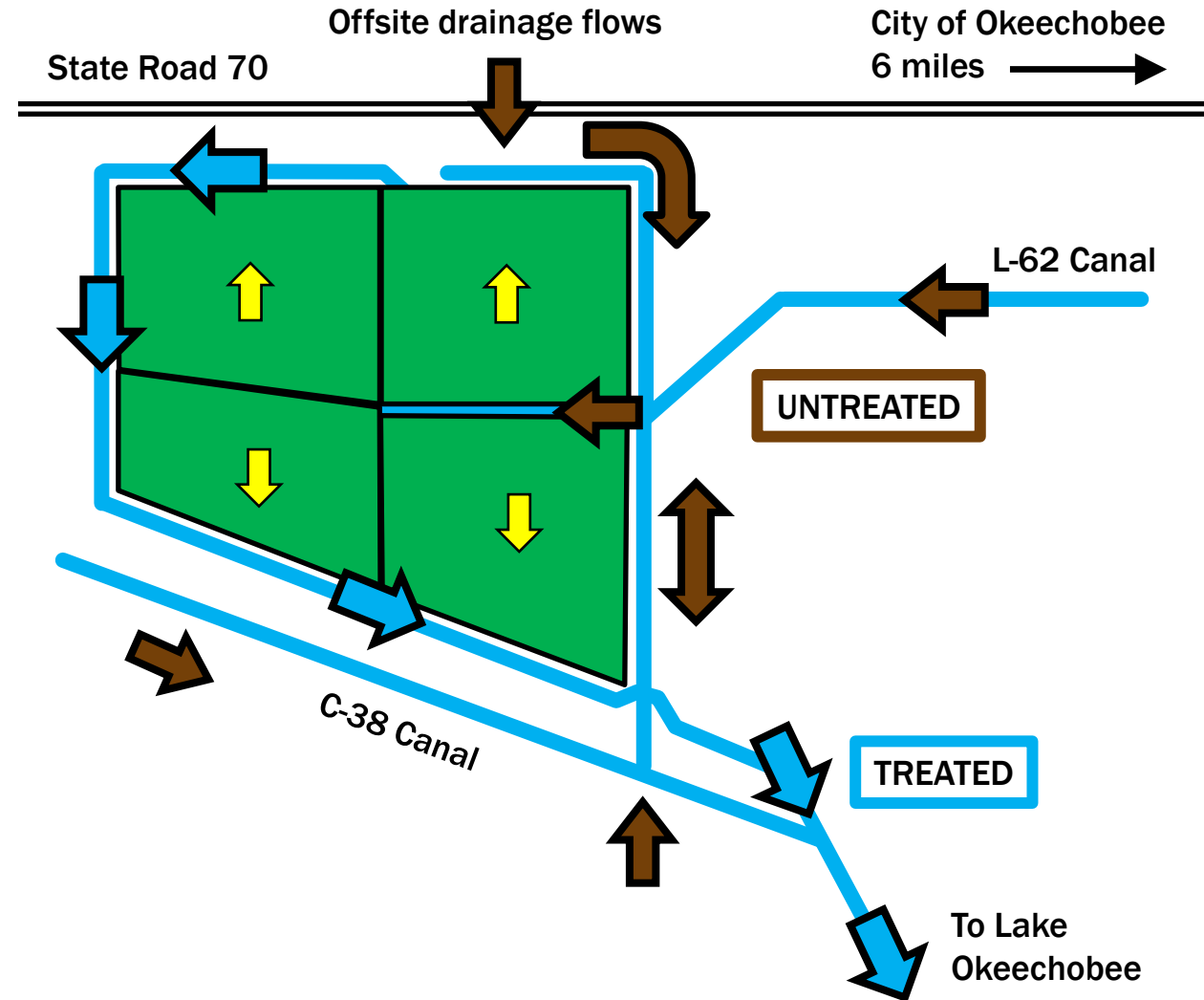
### Conclusions

- Project site should be graded flat to facilitate long-term wetland vegetation health and treatment performance
- Re-locating a segment of the L-62 canal enables efficient STA cell configurations and construction methods
- C-38 canal water can be treated if L-62 canal water is not available
- One inflow pump station can convey water from both the L-62 and C-38 Canals

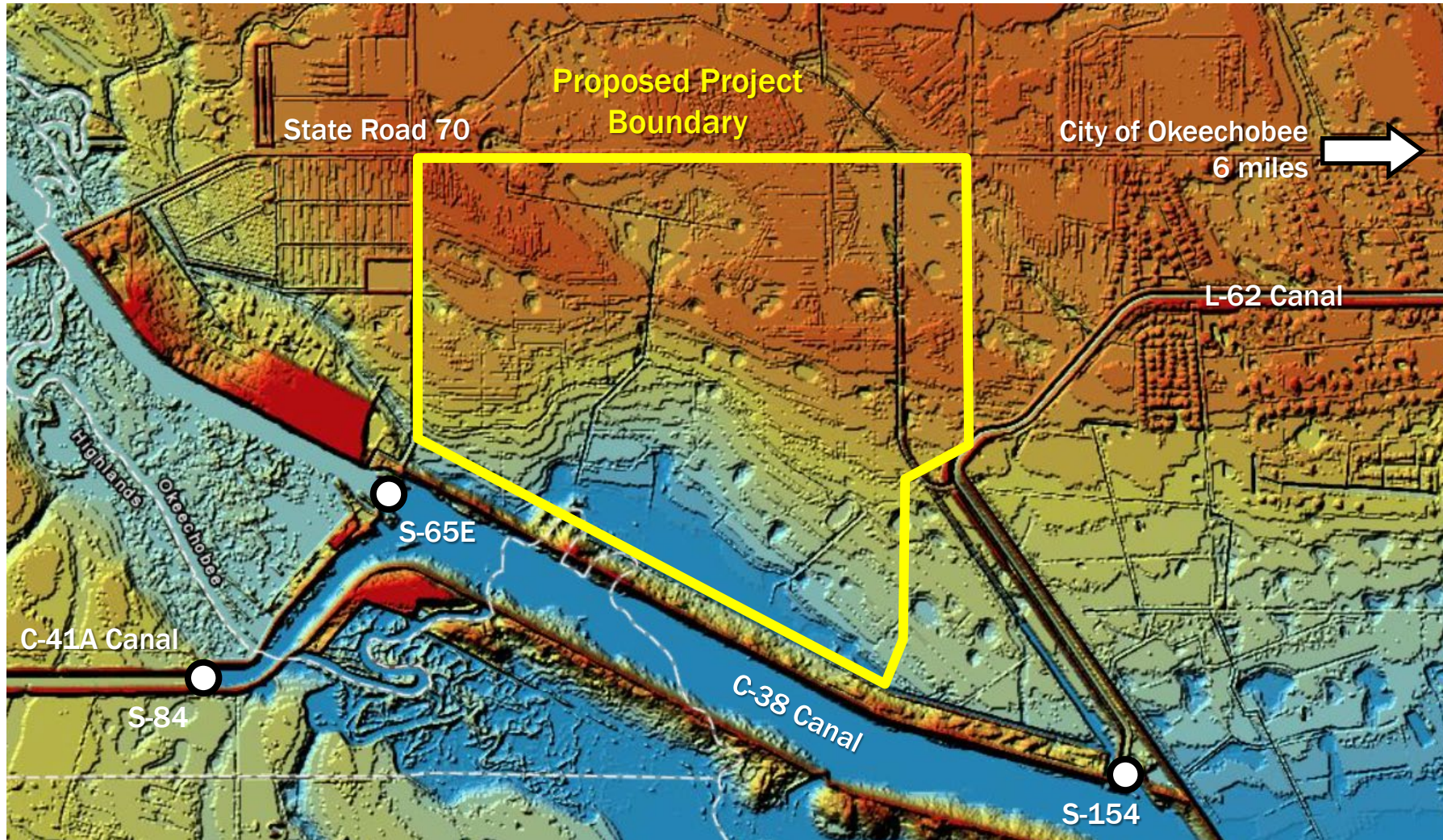
# Proposed Project – Concept



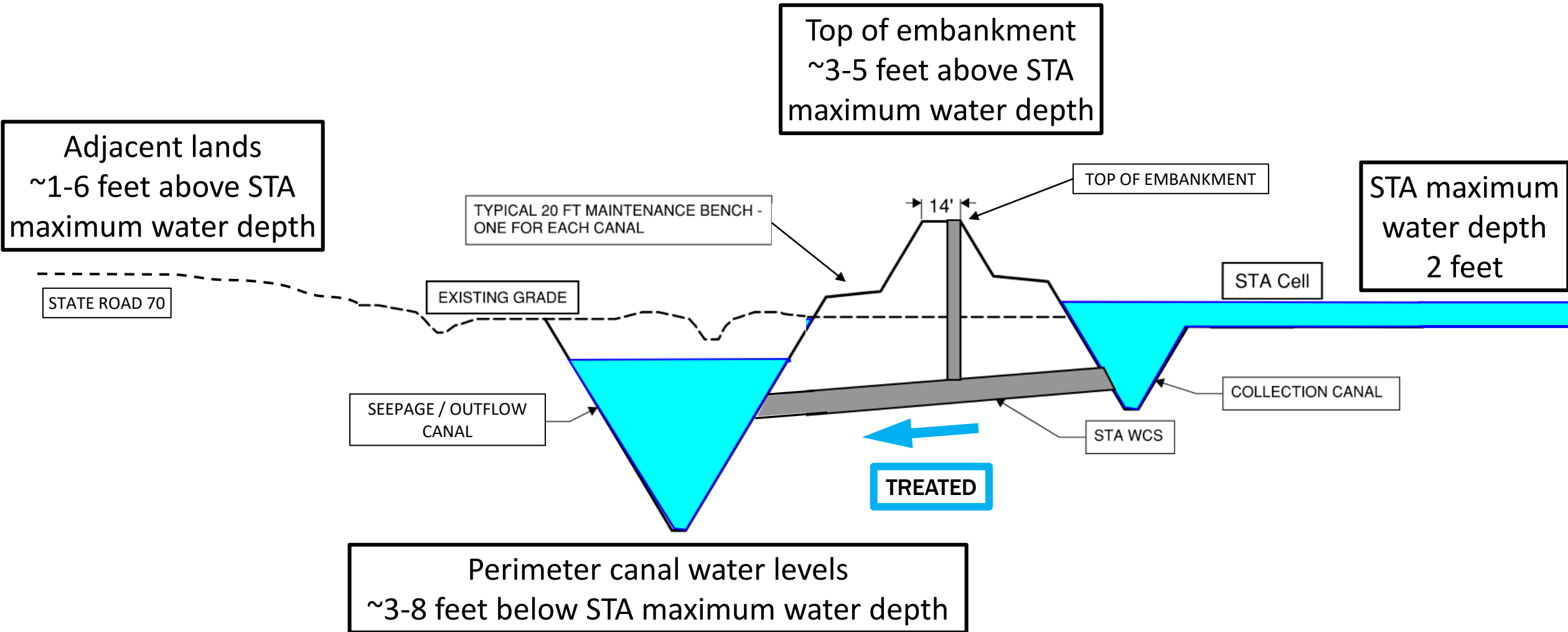
# Proposed Project – Concept (cont'd)



# Proposed Project – Concept (cont'd)



# Proposed Project – Canals and Embankments



## Proposed Project – Canals and Embankments (cont'd)

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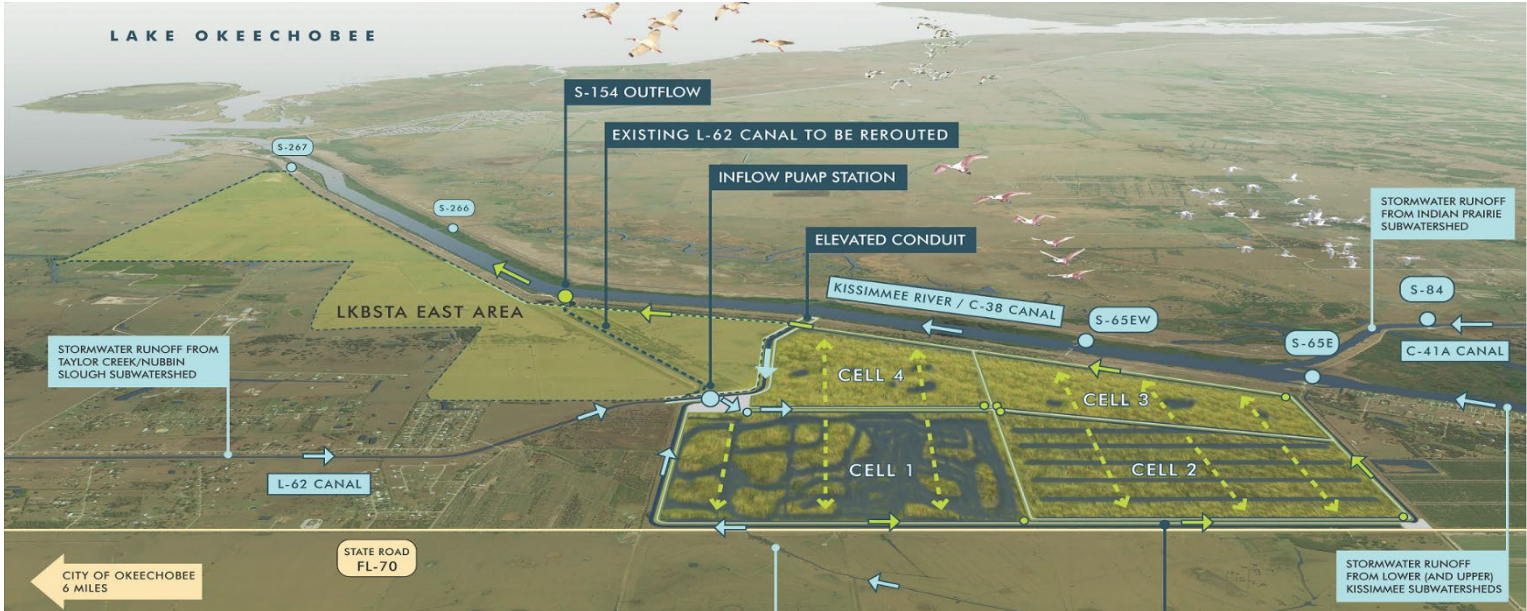
# Proposed Project – Water Control Structures



## Proposed Project – Public Access and Recreation



# Next Steps



## August 29, 2023

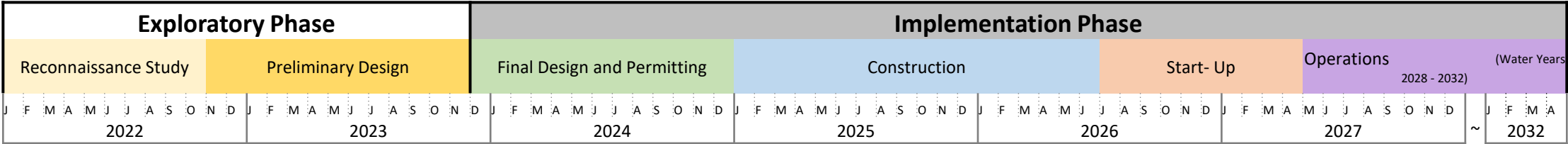
- EIP to hold public information session at Okeechobee Civic Center

## September/October 2023

- BOCC briefing (proposed)

## November/December 2023

- SFWMD reviews and considers EIP's proposal for Implementation Phase



# Questions

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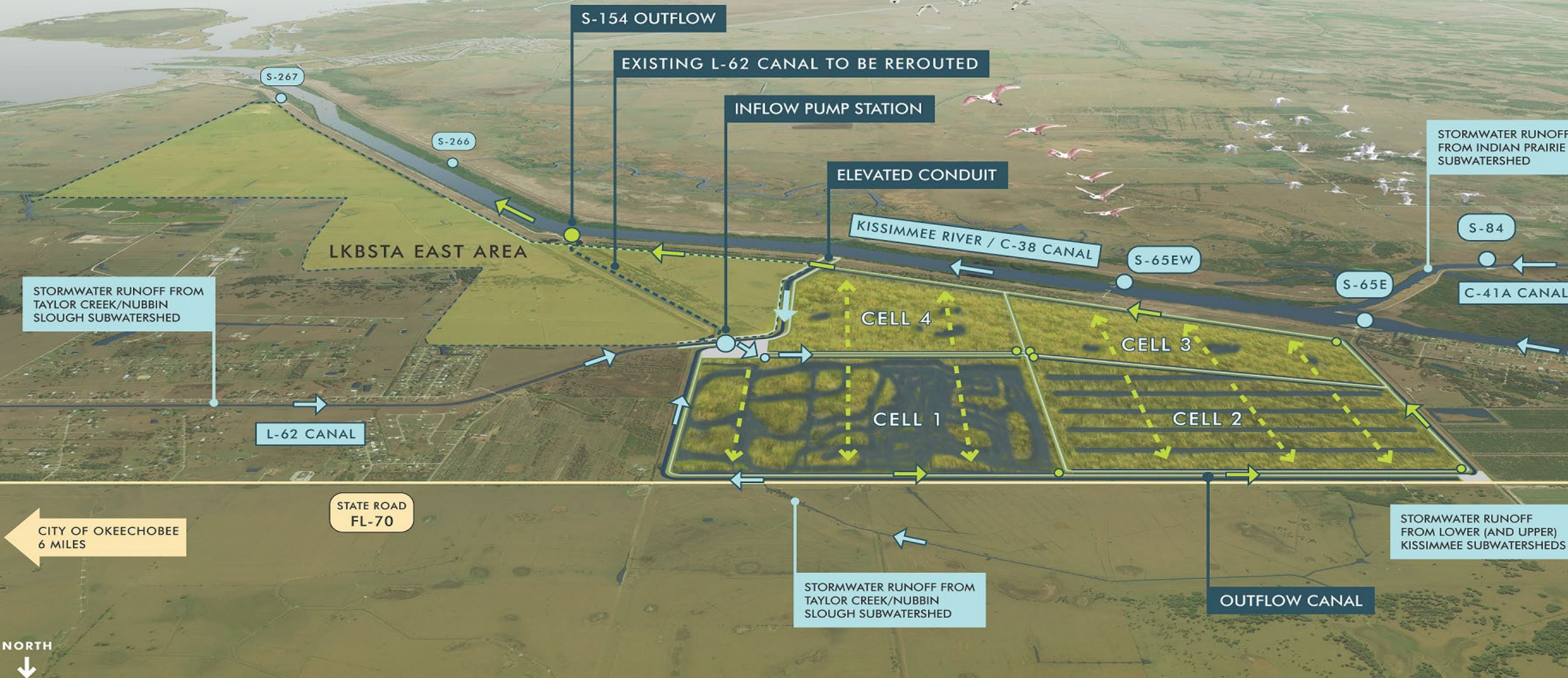
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# LOWER KISSIMMEE BASIN STORMWATER TREATMENT AREA



LAKE OKEECHOBEE



S-154 OUTFLOW

EXISTING L-62 CANAL TO BE REROUTED

INFLOW PUMP STATION

ELEVATED CONDUIT

KISSIMMEE RIVER / C-38 CANAL

STORMWATER RUNOFF FROM INDIAN PRAIRIE SUBWATERSHED

STORMWATER RUNOFF FROM TAYLOR CREEK/NUBBIN SLOUGH SUBWATERSHED

S-84

C-41A CANAL

S-65EW

S-65E

LKBSTA EAST AREA

CELL 4

CELL 3

CELL 1

CELL 2

L-62 CANAL

STATE ROAD FL-70

STORMWATER RUNOFF FROM LOWER (AND UPPER) KISSIMMEE SUBWATERSHEDS

CITY OF OKEECHOBEE 6 MILES

STORMWATER RUNOFF FROM TAYLOR CREEK/NUBBIN SLOUGH SUBWATERSHED

OUTFLOW CANAL

