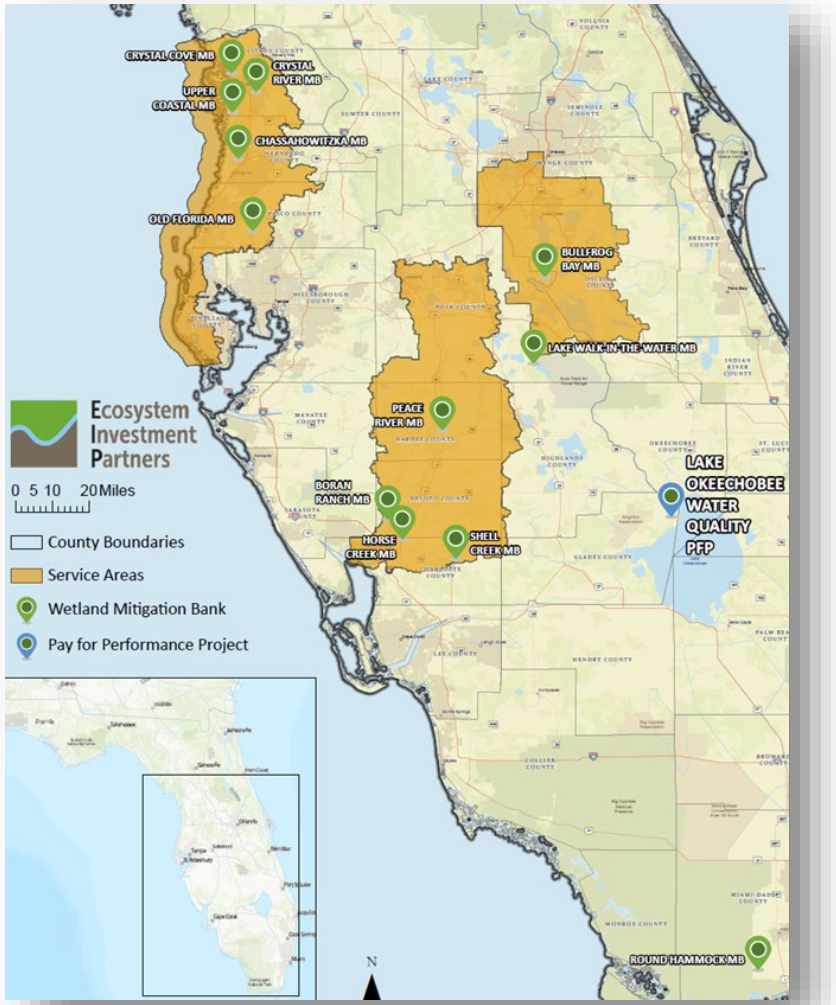
Lower Kissimmee Basin Stormwater Treatment Area Project (LKBSTA)

Community Meeting & Information Sessions
August 29, 2023

Ecosystem Investment Partners

Introduction



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

LAKE OKEECHOBEE TMDL COMPARISON BY WATER YEAR	WY 2023* (mt)	WY 2022 (mt)	WY 2021 (mt)	WY 2020 (mt)	WY 2019 (mt)	WY 2018 (mt)	WY 2017 (mt)
Lake Okeechobee Watershed Phosphorus TMDL	140	140	140	140	140	140	140
TP Loads to Lake Okeechobee by Water Year	438	285	520	324	445	1081	484
Average	**511**						
TP Loads above TMDL	**298**	**145**	**380**	**184**	**305**	**941**	**344**
Average	**371**						

C-38 (KISSIMMEE RIVER) TOTAL PHOSPHORUS LOADS BY WATER YEAR	WY 2023* (mt)	WY 2022 (mt)	WY 2021 (mt)	WY 2020 (mt)	WY 2019 (mt)	WY 2018 (mt)	WY 2017 (mt)
Upper Kissimmee Subwatershed (S-65)	99.3	70.2	67.7	74.8	86.7	117.9	72.7
Lower Kissimmee Subwatershed [(S-65E) - (S-65)]	113.7	17.7	120.3	54.0	94.5	304.9	101.4
Lake Istokpoga Subwatershed (S-68)	41.6	30.0	46.3	24.3	30.2	63.4	41.0
C-41A Basin [(S-84) - (S-68)]	15.6	14.7	31.7	11.0	16.0	51.9	24.4
Total	**270**	**133**	**266**	**164**	**227**	**538**	**239**
Average	**263**						

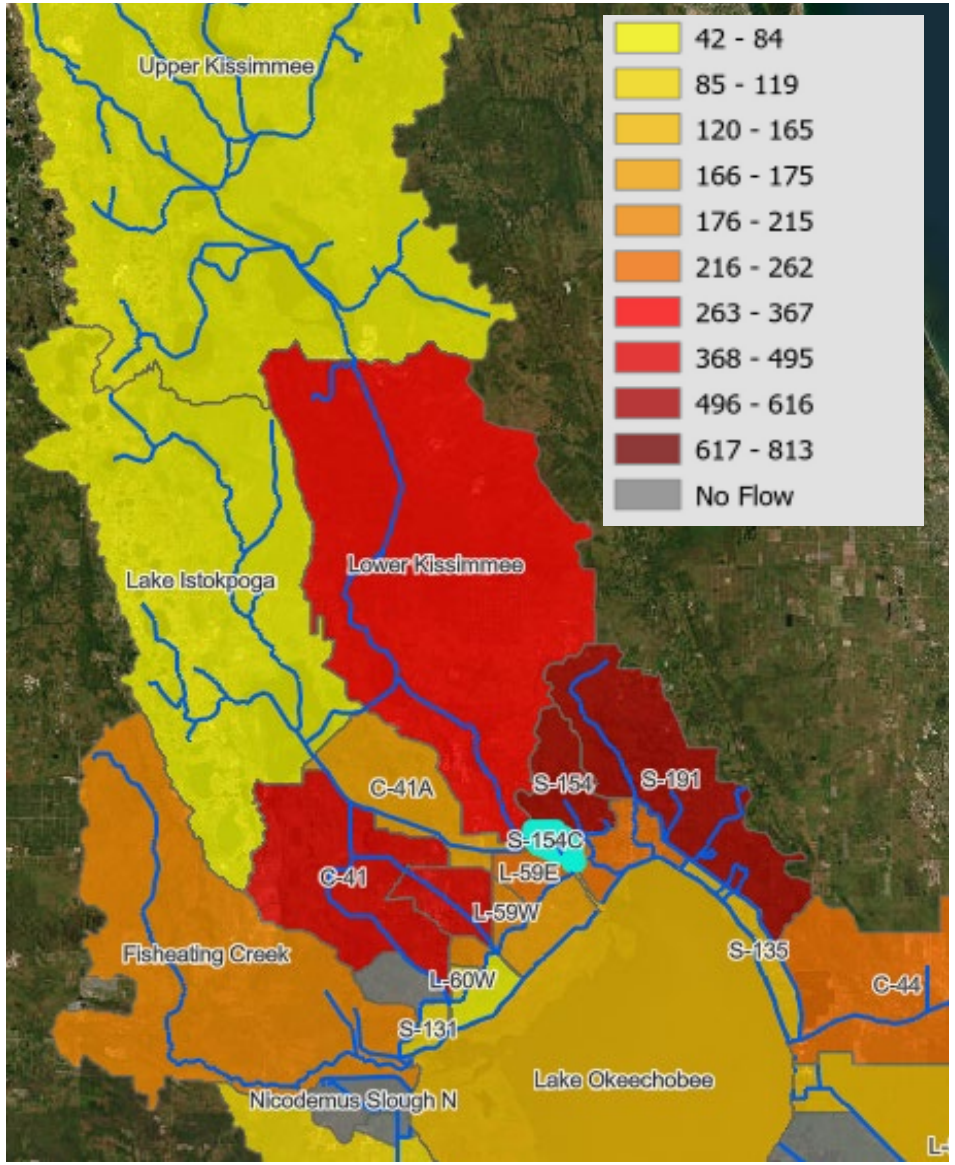
L-62 CANAL TOTAL PHOSPHORUS LOADS BY WATER YEAR	WY 2023* (mt)	WY 2022 (mt)	WY 2021 (mt)	WY 2020 (mt)	WY 2019 (mt)	WY 2018 (mt)	WY 2017 (mt)
S-154 Basin	2.8	12.4	14.2	7.7	13.2	30.9	16.3
S-154C Basin	0.1	1.0	0.6	0.4	1.8	5.2	2.1
Total	**2.9**	**13.4**	**14.8**	**8.1**	**15.0**	**36.1**	**18.4**
Average	**16**						

*Provisional data; subject to change

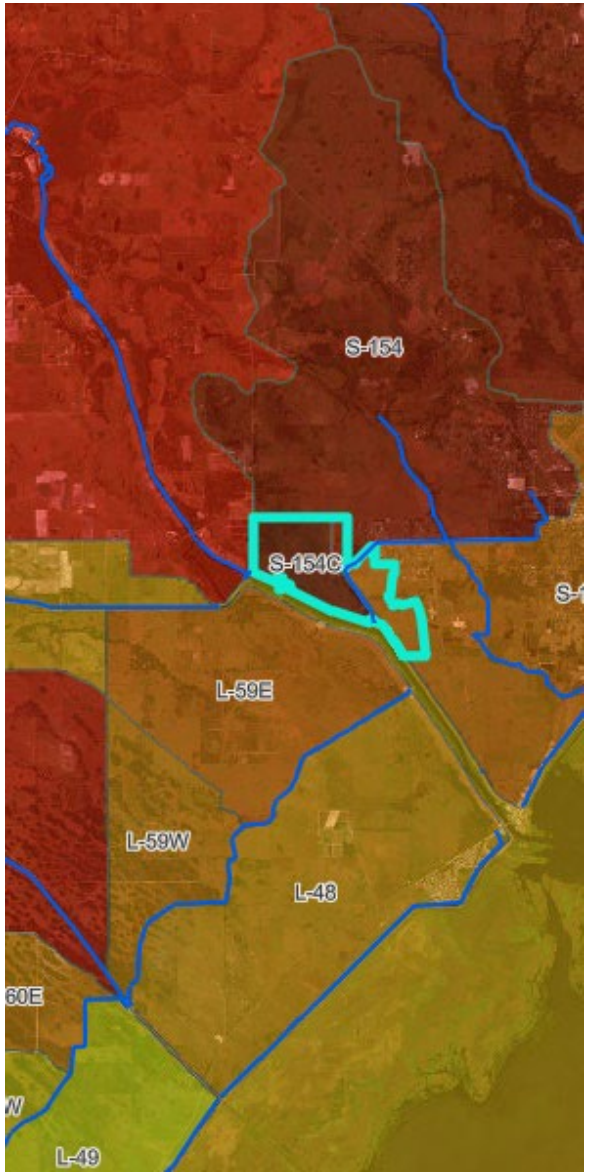
Source: South Florida Water Management District

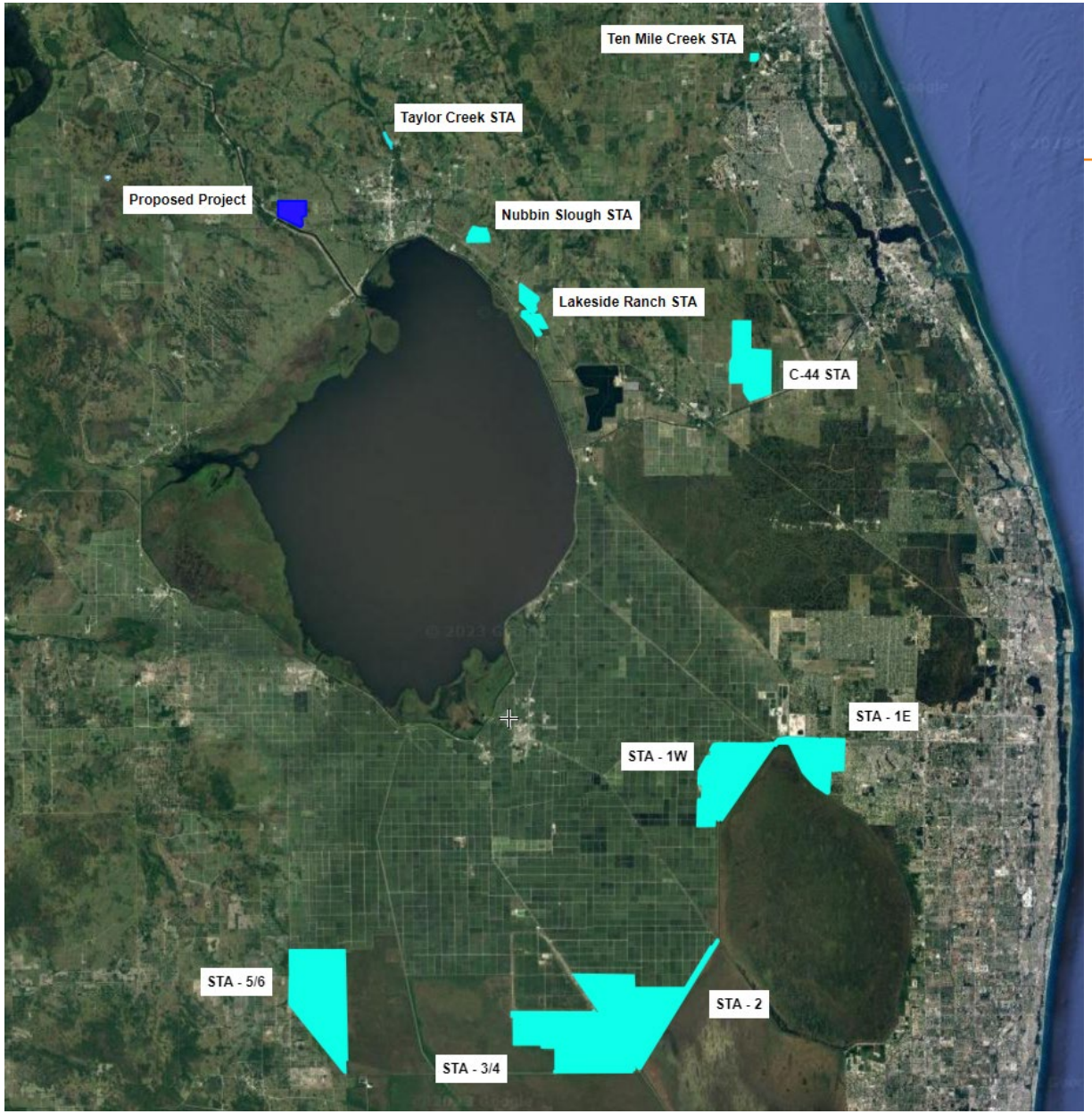
Subwatershed TP Concentrations

(ug/L) WY 2018-2022



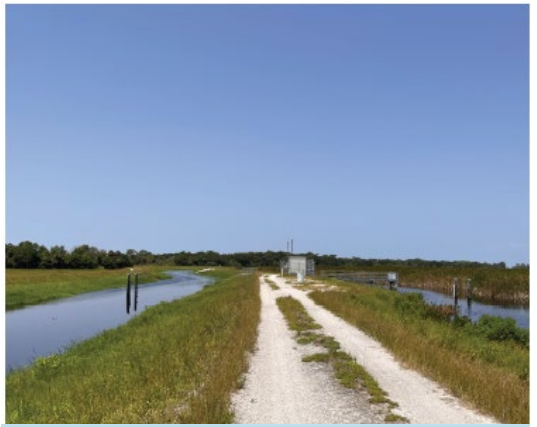
LKBSTA Location





Stormwater Treatment Areas

Emerging Aquatic Vegetation in an STA



Lakeside Ranch STA

STA Overflow Weir

Lakeside Ranch STA

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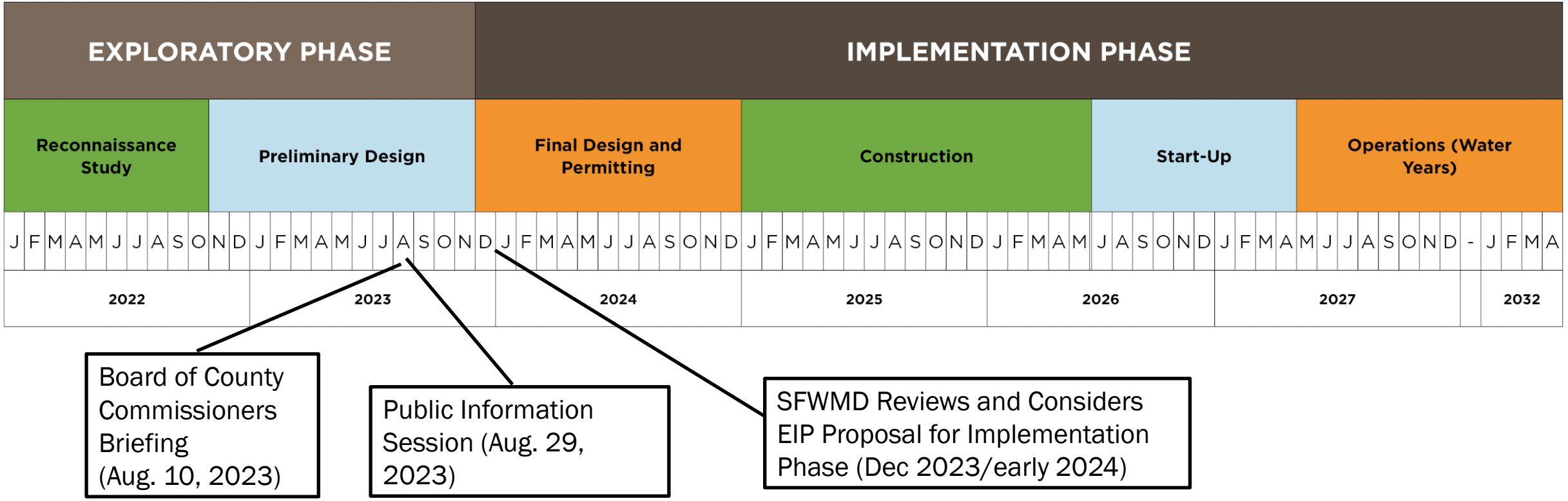
Contract

- **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



Exploratory Phase Activities to Date

Biological / Environmental Studies

Geological Studies

Field Surveys

Project Concept Development

Treatment Performance Evaluations

Infrastructure Assessments

Operational Strategy Development

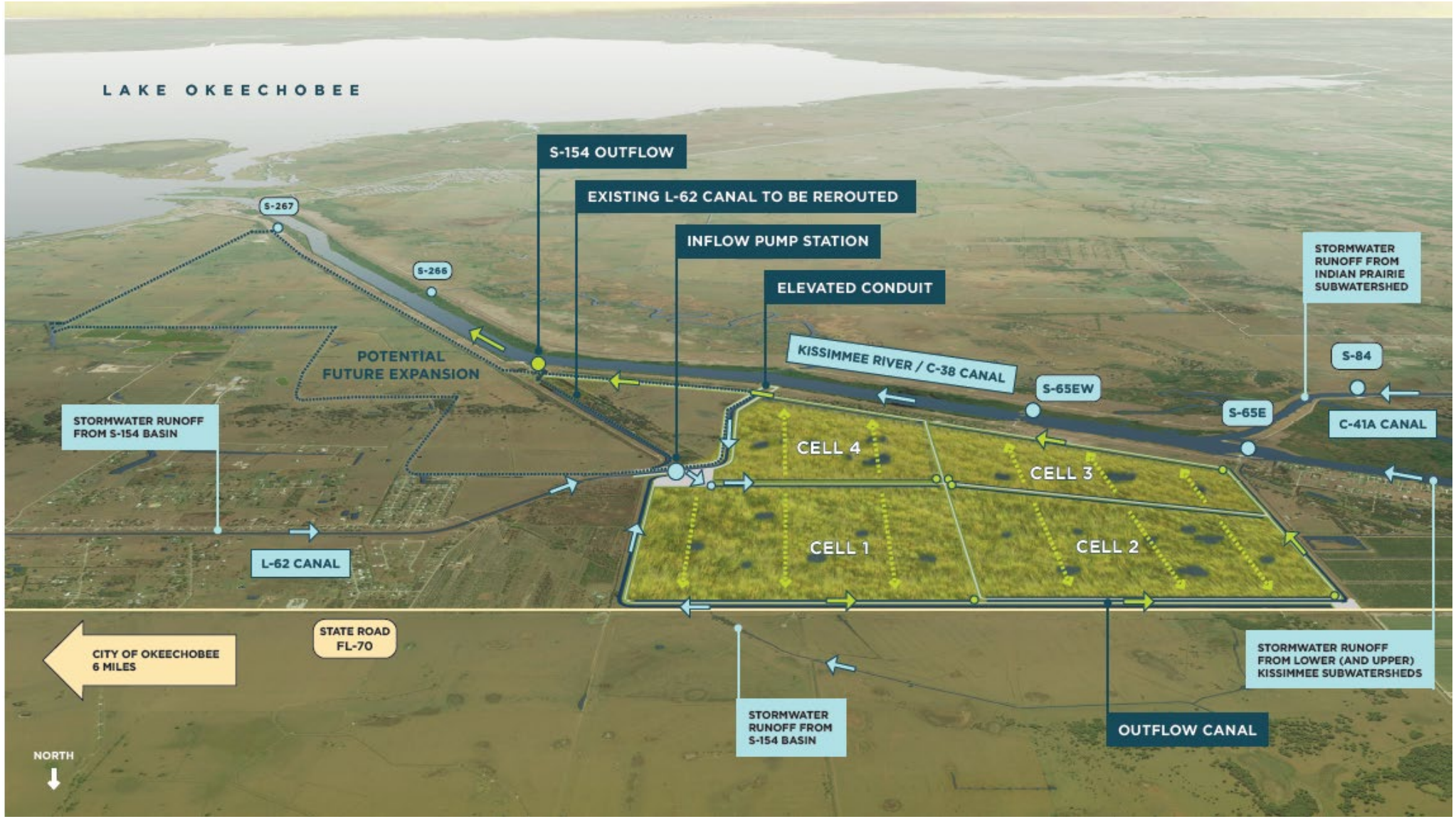
Permit Acquisition Coordination/Planning

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

LOWER KISSIMMEE BASIN STORMWATER TREATMENT AREA PROJECT



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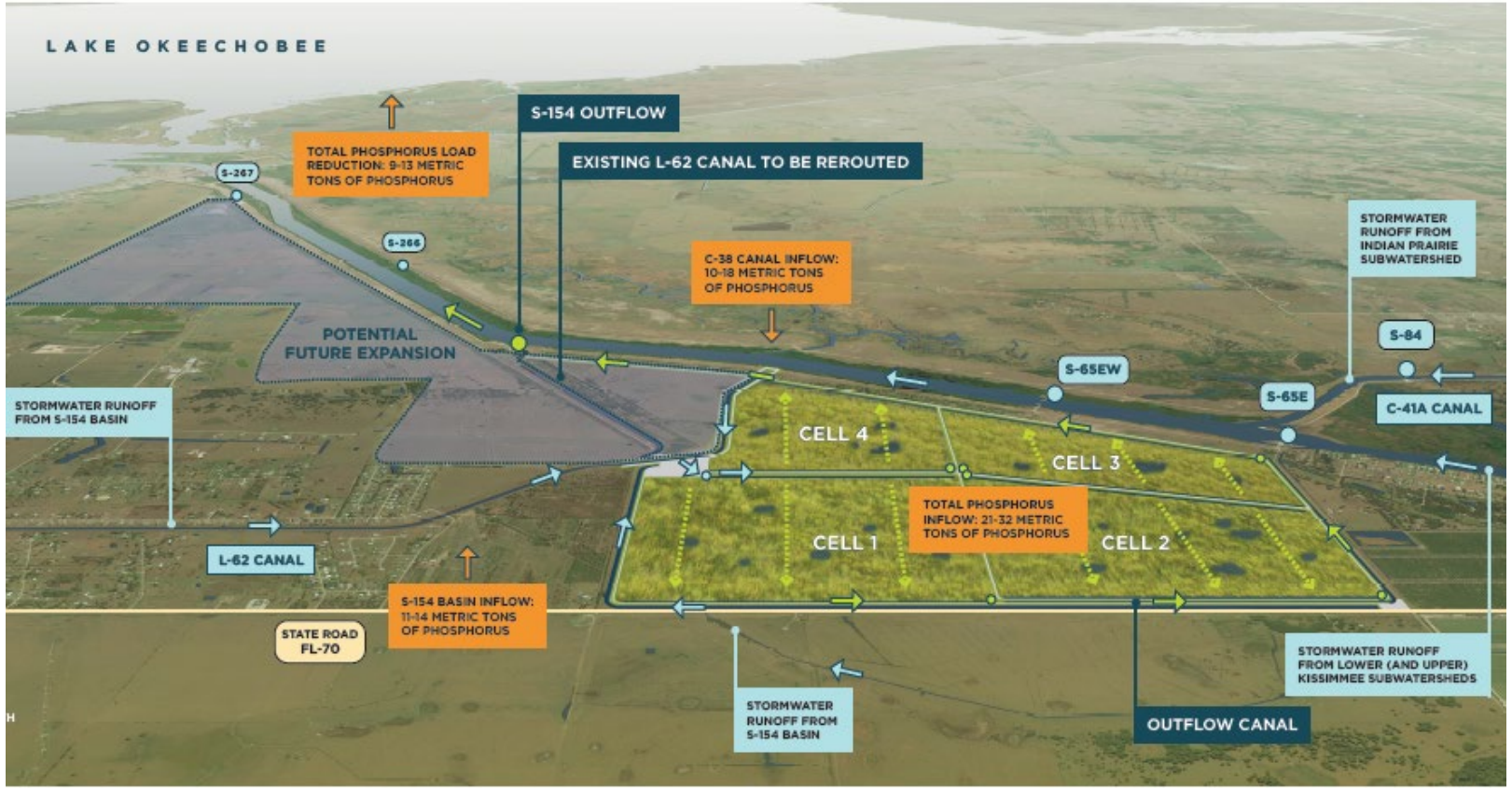
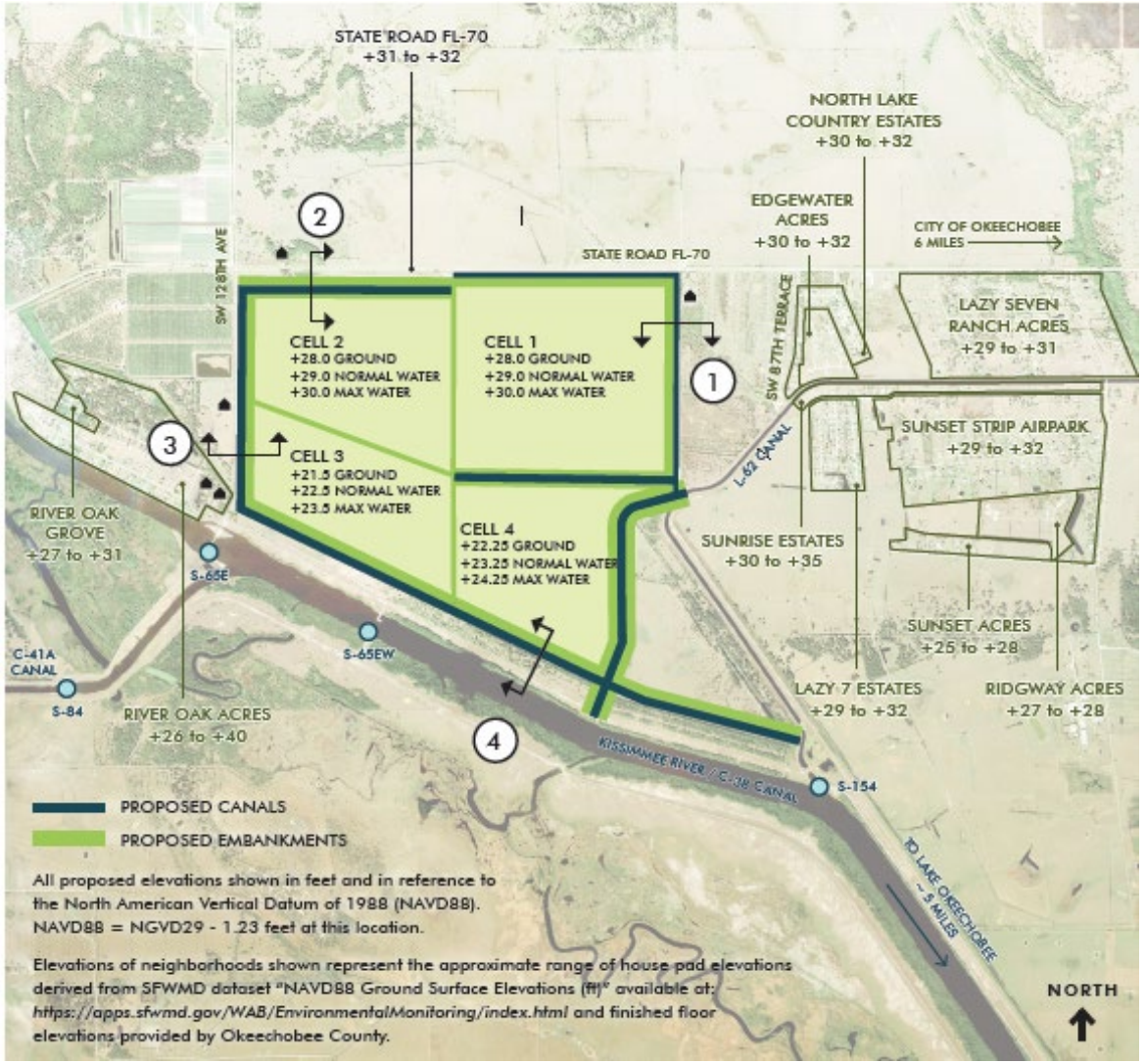
Project Benefits

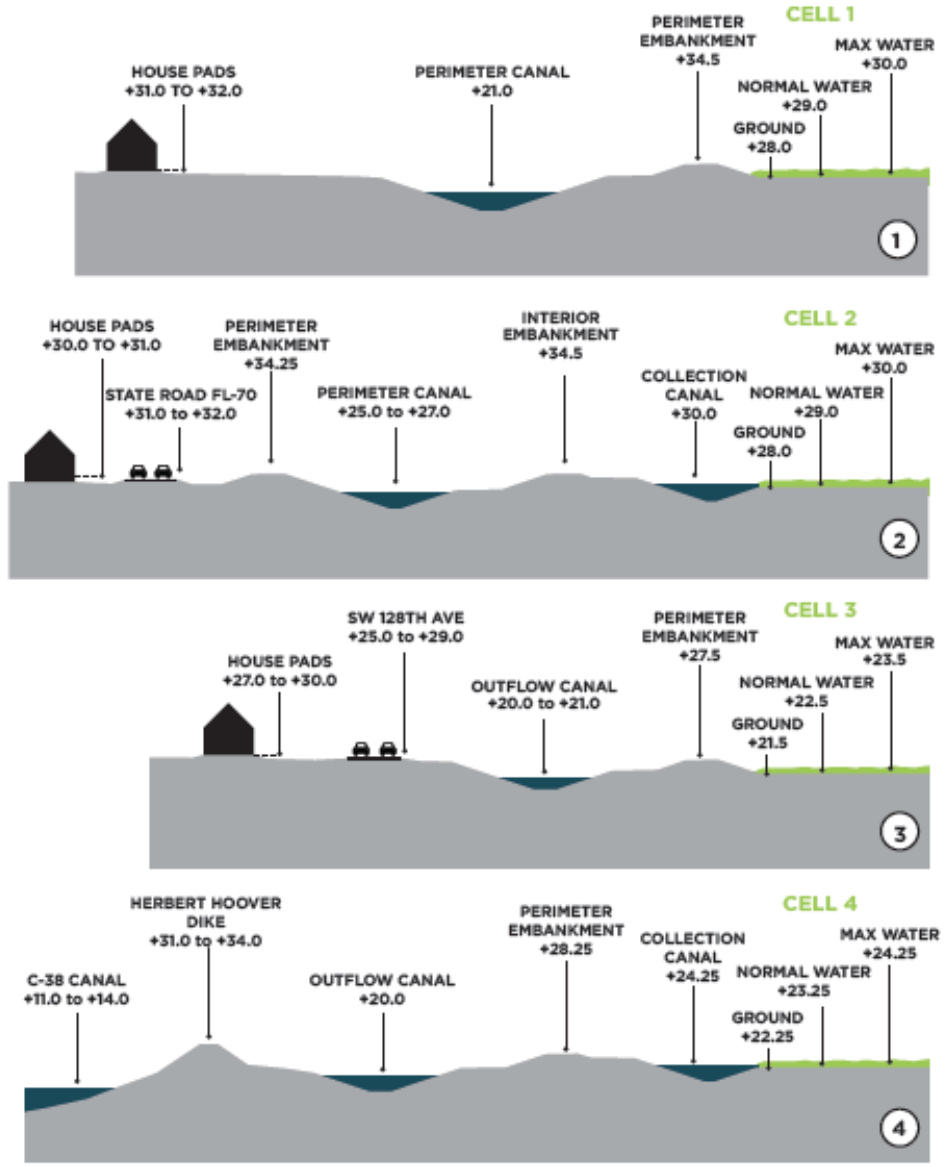


	PROPOSED PROJECT
Project Components	1,600 acre STA (4 cells) 375 cfs inflow pump station
Projected Annual Inflow TP Load	S-154 = 11-14 mt C-38 Canal = 10-18 mt (includes 1-3 mt from Lake O) **Total = 21-32 mt**
Projected Annual TP Load Reduction with Project	9-13 mt (~41-43%)

	POTENTIAL FUTURE EXPANSION		
Project Components	2,700 acre STA (6 cells) 500 cfs inflow pump station	3,800 acre STA (8 cells) 625 cfs inflow pump station	Innovative Treatment Area
Projected Annual Inflow TP Load	S-154 = 13-14 mt C-38 Canal = 18-26 mt (includes 2-6 mt from Lake O) **Total = 31-40 mt**	S-154 = 14-15 mt C-38 Canal = 19-36 mt (includes 2-10 mt from Lake O) **Total = 33-51 mt**	TBD
Projected Annual TP Load Reduction with Project	14-17 mt (~43-45%)	20-22 mt (~43-61%)	3-6 mt
Anticipated Total Expansion Project TP Reductions	**23-28 metric tons**		

Project Elevations and Drainage





Next Steps

August 29, 2023

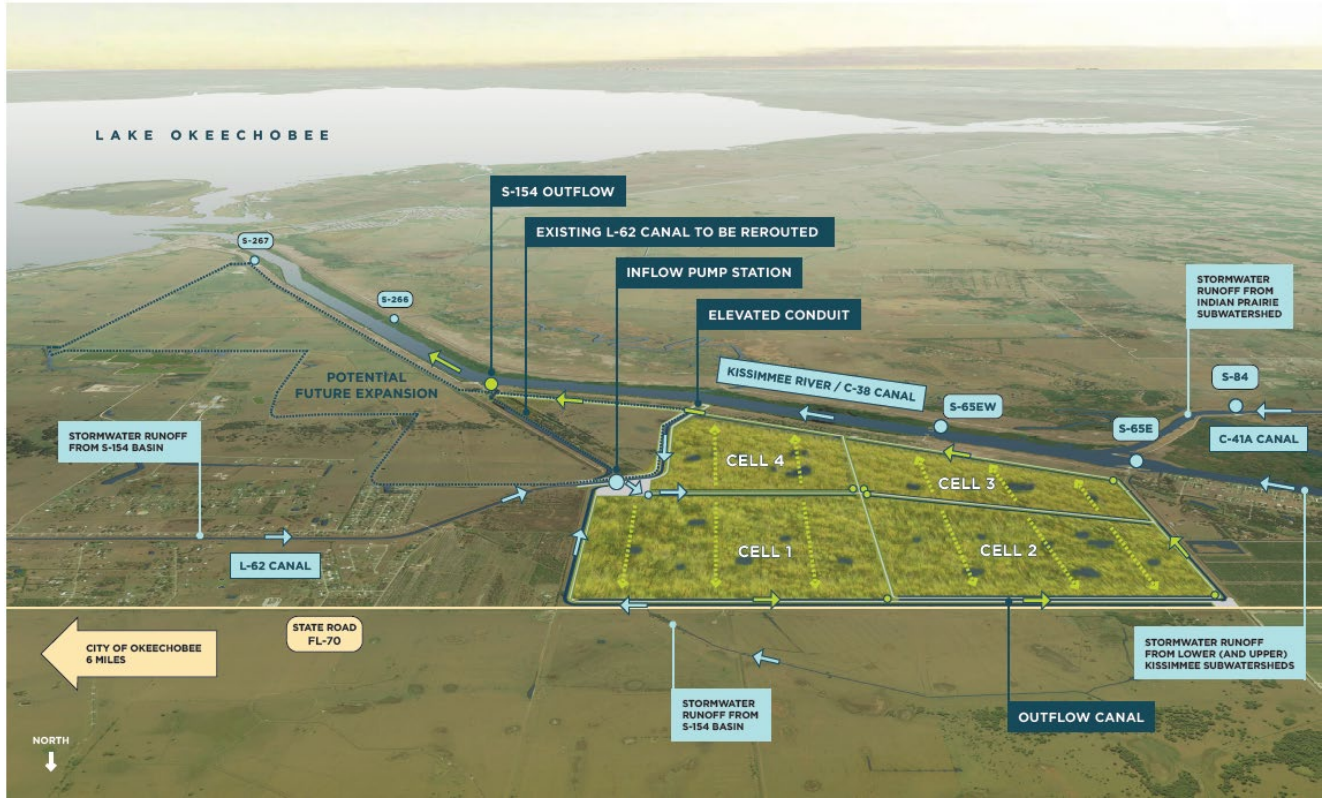
- EIP to hold public information session at Okeechobee Civic Center

September/October 2023

- BOCC briefing (proposed)

November/December 2023

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



EXPLORATORY PHASE		IMPLEMENTATION PHASE			
Reconnaissance Study	Preliminary Design	Final Design and Permitting	Construction	Start-Up	Operations (Water Years)

J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	-	J	F	M	A
2022												2023												2024												2025												2026												2027													2032			

Federal Aviation Administration- Advisory Circular on Hazardous Wildlife Attractants on or near Airports

- Advises against Land-use practices that attract or sustain hazardous wildlife populations within a 5-mile radius of the facility.
- Stormwater Management facilities and constructed wetlands are listed as land uses of possible concern.
- Suggests engaging a “Qualified Airport Wildlife Biologist” to determine if facility could attract hazardous wildlife.

Questions

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