Board of County Commissioners

Shingle Creek and St. Johns River Basins Technical Studies

Work Session

April 8, 2025

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Agenda

- Purpose
- Background
- Study Approach
- Findings
- Stakeholder Engagement
- Summary
- Next Steps

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Purpose

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- Present results of Technical Studies
  - Shingle Creek Study Area
  - St. Johns River Study Area
- Objective
  - Consider whether Study Areas require additional protections
  - Plan for smart, sustainable growth while protecting vulnerable resources

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Agenda

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Background

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- 2021 – Orange County began a comprehensive review of its wetland permitting processes and standards
  - Consulting firm hired to develop a "State of the Wetlands" study
- 2022 – Additionally, the District 1 Commissioner submitted a Commissioner's report requesting a comprehensive work session on the Shingle Creek Basin detailing the history of the area, land ownership, water quality and quantity data, drainage protocols, and potential protective measures
  - Consider adding supporting policies in Vision 2050 for basin protections

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Background

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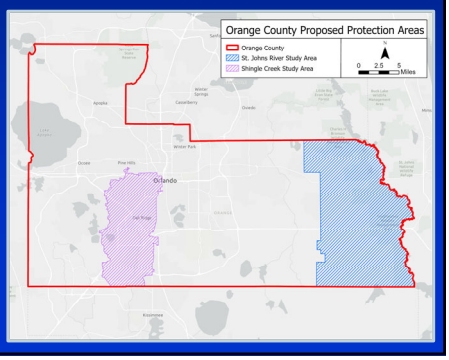
- 2023 – State of the Wetlands study was the scientific basis supporting the recent updates to Chapter 15 - Article X. Wetland Conservation Areas
- Study identified loss of wetland acreage over time
- Identified vulnerable remaining areas
  - St. Johns River
  - Shingle Creek
  - Cypress Creek
  - Groundwater vulnerable wetlands in SW Orange County



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Background

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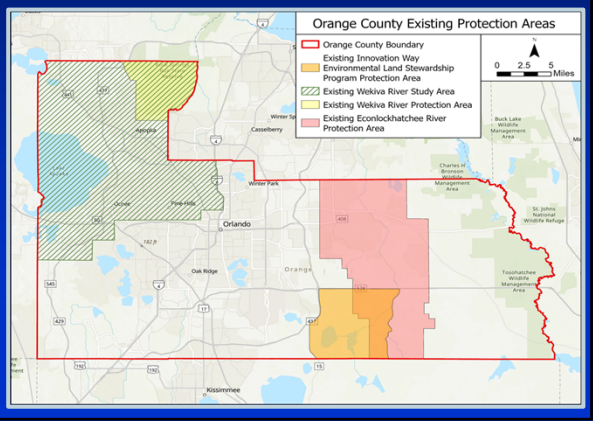
- **Current Special Protection Areas in Orange County**
  - 1991: Econlockhatchee River Protection Area
  - 1991: Wekiva River Protection Area
  - 2004: Wekiva Study Area
  - 2010: Innovation Way Environmental Land Stewardship Program (ELSP)
- **Benefits of Protection Areas**
  - Biodiversity support
  - Natural disaster mitigation
  - Reduction of infrastructure costs
  - Ecotourism



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Background

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- **Promote sustainable growth without restricting development**
- **Example regulations within existing SPAs**
  - Additional review during permitting process
  - Some language 'promotes' regulations in lieu of 'requiring' them
- **Any new SPAs should build off "lessons learned"**

ECON	WEKIVA	ELSP
• River Corridor Protection Zone • T/E species survey • Additional stormwater criteria • Rare upland habitat preservation • Cultural resources protection • Native landscaping required • Limits vegetation clearance	• Low intensity land use only • T/E species survey • Additional stormwater criteria • Rare upland habitat preservation • Cultural resources protection • Native landscaping • Limits veg clearance • Groundwater degradation prohibited	• Waterwise landscaping + fire protection • Wildlife corridor protection • No fill in 100-YR Econ floodplain • Non-native landscaping prohibited near preservation areas

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Background – Shingle Creek Study Area

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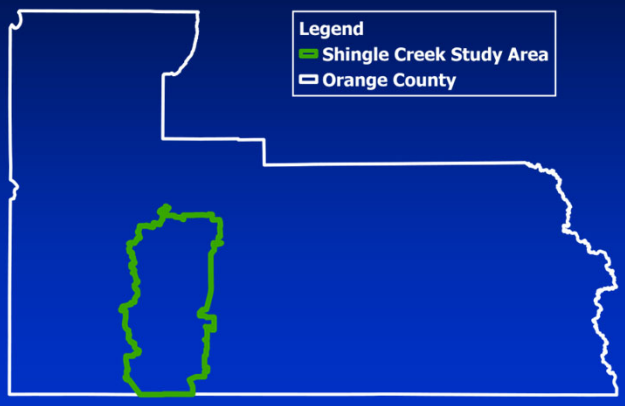
- Boundary is the Shingle Creek Hydrologic Basin within Orange County
- 4,520 acres of undeveloped land
  - Nearly 60% is publicly owned
- 20% increase in impervious area since 1985
- Flooding concerns within and south of boundary
- Remaining interconnected habitat in southern portion of basin



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Background – St. Johns River Study Area

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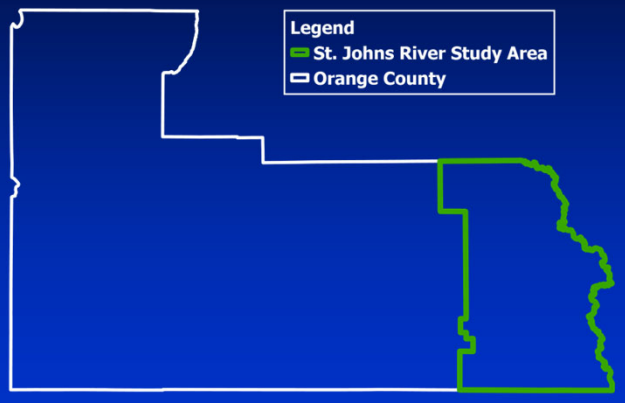
- Boundary aligns with St. Johns River Hydrologic Basin within Orange County
- 20% of County land area, < 1% population
- Fed-designated American Heritage River
- SJRWMD-designated Priority Waterbody
- 96% of the Study Area is Priority 1 Wildlife Corridor
- Vulnerable Wet Prairies concentrated in Study Area – 39% loss in OC since 1990
- Growing flood concerns from recent storms



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Agenda

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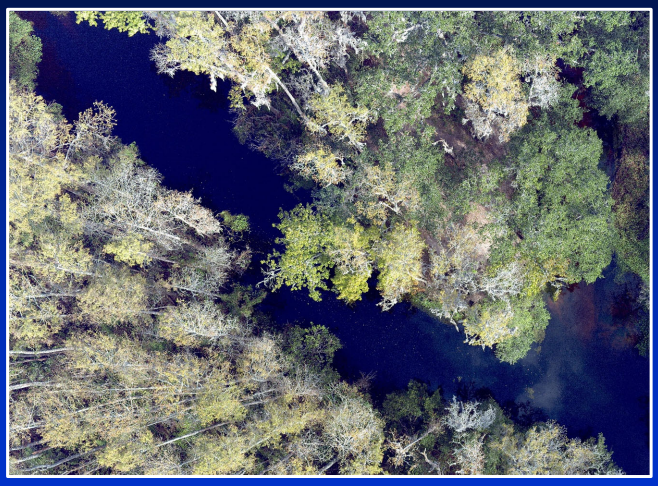
- Background
- **Study Approach**
- Findings
- Stakeholder Engagement
- Summary
- Next Steps



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Study Approach

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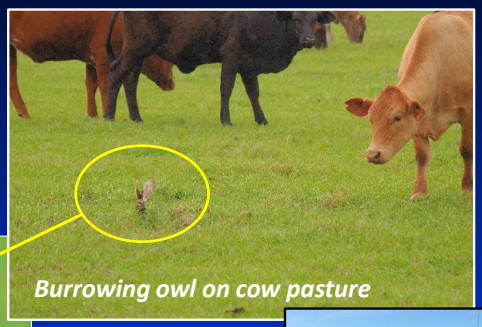
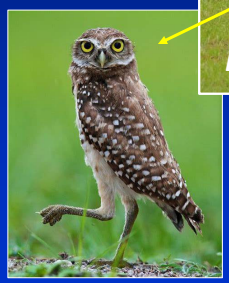
- Historical Trends of Natural Resources
- Ecological Significance
  - Terrestrial habitats
  - Wetland and aquatic communities
  - Biodiversity
  - Species of concern
- Water Resources
  - Hydrologic changes
  - Water quality
  - Flood inundation
  - Stormwater regulations
- Future Trends



Burrowing owl on cow pasture



Pine Lily

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Study Approach

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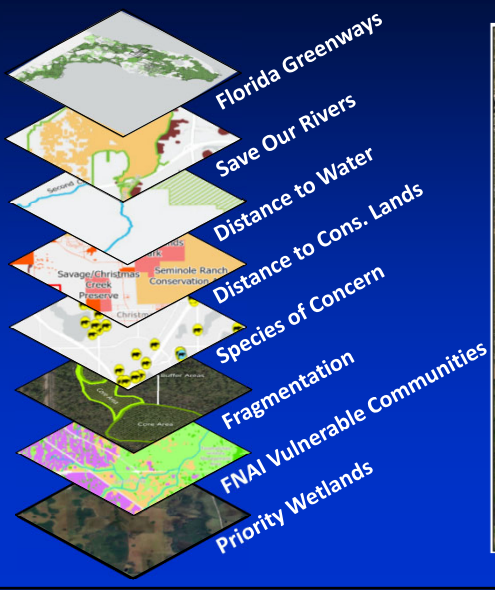
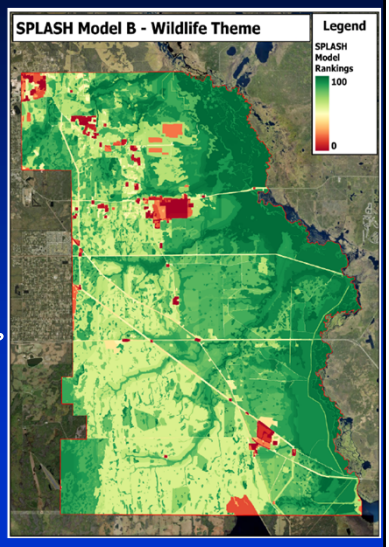
- Scientific justification for boundary refinement
- Incorporated numerous regionally relevant spatial input layers
- SPLASH Model: Special Protection of Landscapes and Significant Habitats Model





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- **Findings**
- Stakeholder Engagement
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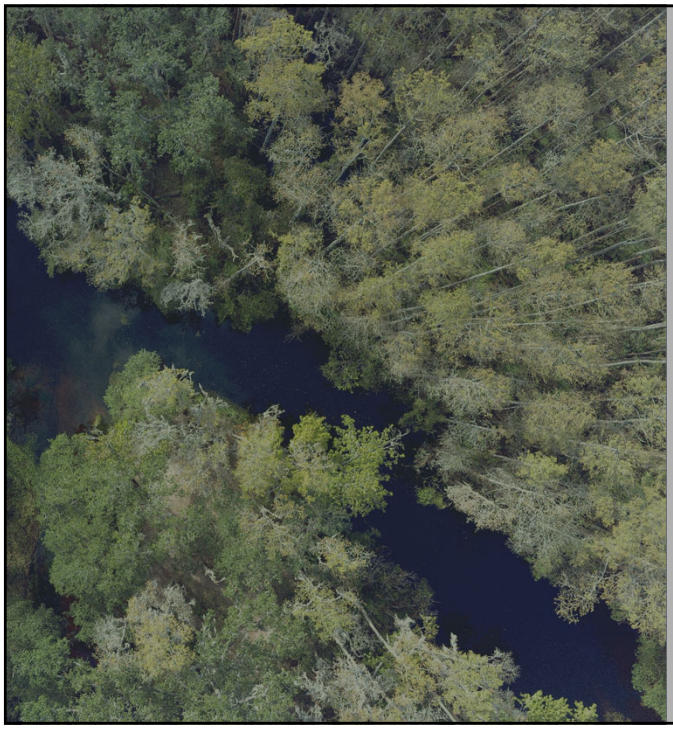

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TERRESTRIAL AND WILDLIFE RESOURCES

SHINGLE CREEK STUDY AREA

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SHINGLE CREEK SA - REGIONAL SIGNIFICANCE

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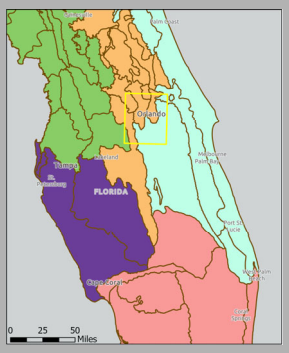
- Unique geomorphology
- Used historically by Jororo Tribe
- Headwaters of the Everglades
- Recognized as significant resource in 1985 by Save Our Rivers Program



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SHINGLE CREEK SA - NATURAL COMMUNITIES

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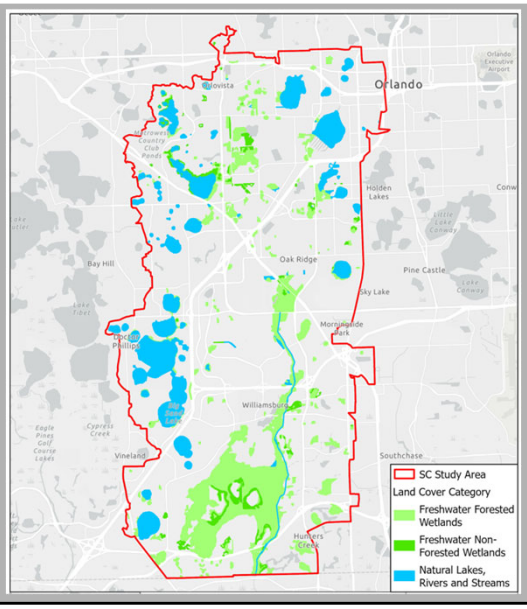
Wetland Community Category	Cover (acres)	Cover (percent)
Non-Forested Wetlands	5,079	54%
Forested Wetlands	511	5.5%
Natural Lakes and Streams	3,796	40.5%
Total	9,386	100%

- 51% Non-Forested Wetlands are outside of Conservation Lands
- 97% of Natural Lakes and Streams are outside of Conservation Lands



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SHINGLE CREEK SA - NATURAL COMMUNITIES

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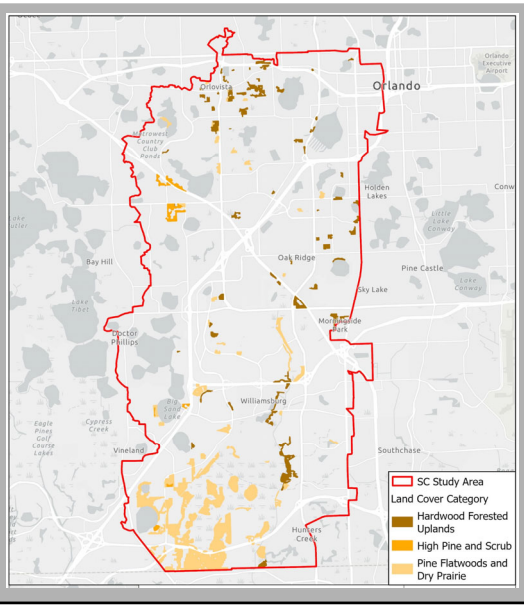
Upland Community Category	Cover (acres)	Cover (percent)
Hardwood Forested Uplands	523	21%
High Pine and Scrub	124	5%
Pine Flatwoods and Dry Prairie	1,853	74%
Total	2,500	100%

- 78% Pine Flatwoods are outside of Conservation Lands

Consider Upland Habitat Protections



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SHINGLE CREEK SA - NATURAL COMMUNITIES

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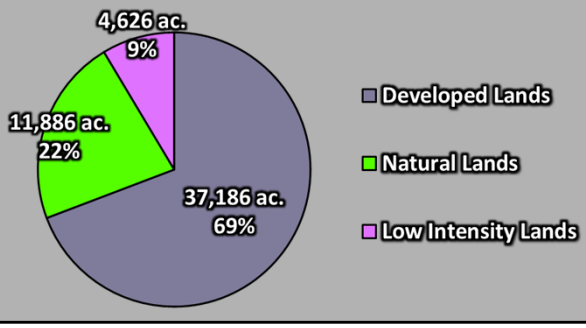
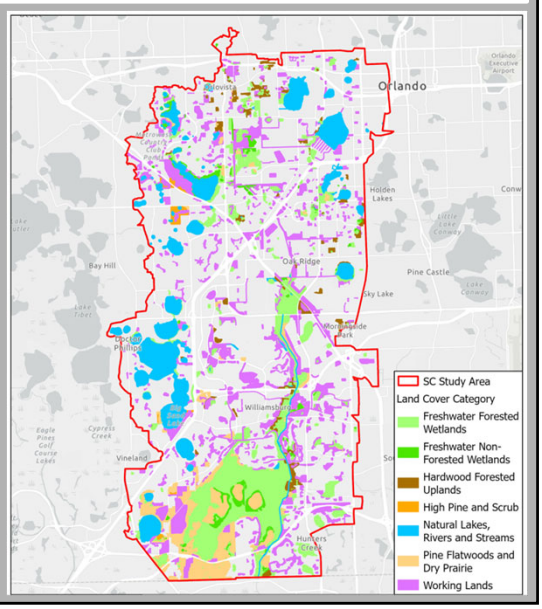
Low Intensity Land Use Examples
Stormwater Ponds
Utility Corridors
Artificial Waterways
Sports Fields
Infiltration Basins





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SHINGLE CREEK SA – WETLANDS AND AQUATIC

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Non-Forested Wetlands	Forested Wetlands	Natural Rivers, Lakes, and Streams
Basin Marsh	Basin Swamp	Sinkhole Lake
Depression Marsh*	**Bay Swamp***	Floating and Emergent Aquatic Vegetation
Wet Prairie*	**Dome Swamp***	Shingle Creek
	Floodplain Swamp	
	Hydric Hammock*	
	Wet Flatwoods	

*Vulnerable According to Chapter 15 Article X

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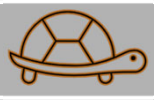
SHINGLE CREEK SA – TERRESTRIAL



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Hardwood Forested Wetlands

- Mesic Hammock*
- Xeric Hammock*

High Pine and Scrub

- Scrub*

Pine Flatwoods and Dry Prairie

- Mesic Flatwoods
- Scrubby Flatwoods*

*Vulnerable according to Existing SPAs

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SHINGLE CREEK SA - WILDLIFE SPECIES OF CONCERN

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Class	Number of Species	Number of Species with each Conservation Status					
		FE	FT	ST	SGCN	BCC	Other
Amphibians	2	-	-	1	2	-	-
Birds	42	1	5	8	38	14	1
Insects	3	-	1	-	1	-	1
Mammals	9	2	-	-	8	-	2
Reptiles	8	-	3	3	6	-	1
TOTAL	**64**	**3**	**9**	**12**	**53**	**14**	**5**

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SHINGLE CREEK SA - WILDLIFE SPECIES OF CONCERN

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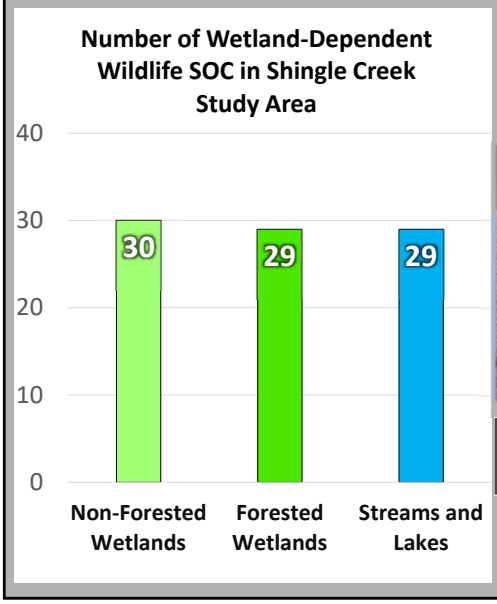

Florida Bonneted Bats
Eumops floridanus

Rafinesque's Big-Eared Bat
Corynorhinus rafinesquii

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SHINGLE CREEK SA - WILDLIFE SPECIES OF CONCERN

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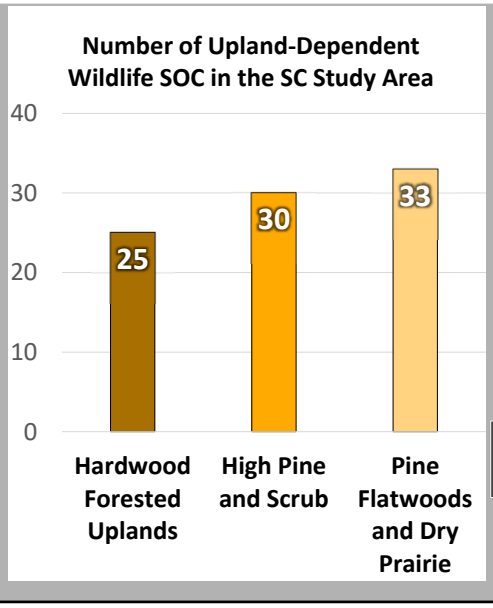
Scrub Grasshopper
Melanoplus indicifer



Red-headed Woodpecker
Melanerpes erythrocephalus

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SHINGLE CREEK SA - WILDLIFE SPECIES OF CONCERN

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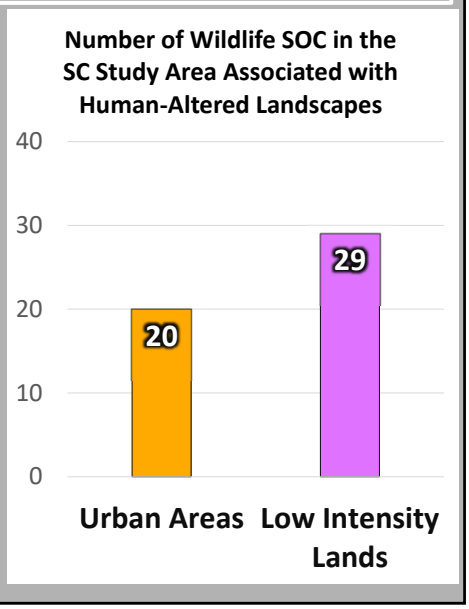
Wood Stork (*Mycteria americana*) and Wading Birds

Monarch butterfly
Danaus plexippus

Consider Benefits of Native Landscaping



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SHINGLE CREEK SA - PLANT SPECIES OF CONCERN

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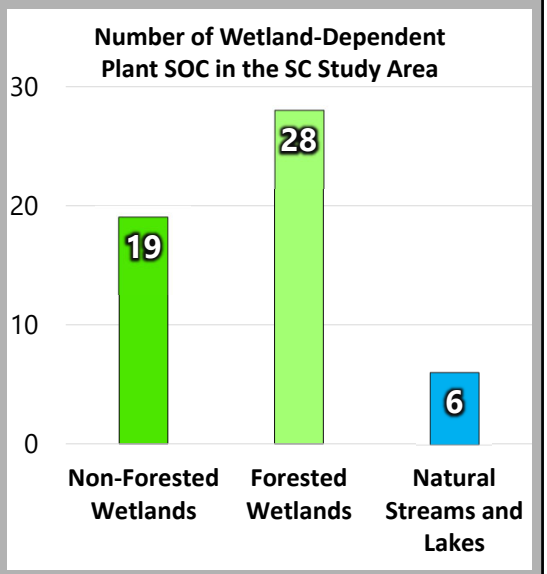
Hooded Pitcher Plant
Sarracenia minor

Yellow Fringed Orchid
Plantanthera ciliaris



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SHINGLE CREEK SA - PLANT SPECIES OF CONCERN

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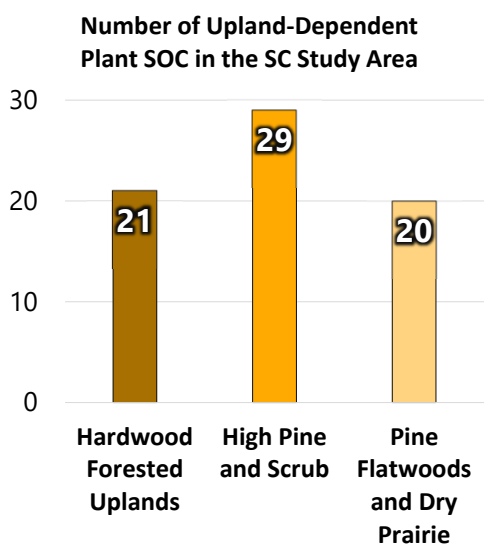

Scrub Lupine
Lupinus aridorum

Scrub Palm
Prunus geniculata

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SHINGLE CREEK SA - SIGNIFICANT RESOURCES

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Bats

8 species occur, Northern range of the FL Bonneted Bat

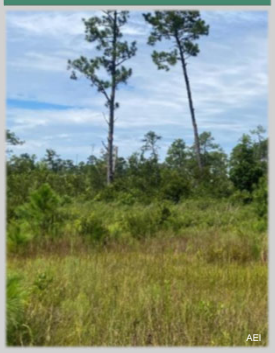
Gopher Tortoise

13% of historic suitable soil cover remains undeveloped

Scrub

Imperiled habitat, home to many endemic species

Pine Flatwoods



Fire dependent community

Consider Pre-Development Wildlife Surveys

Consider Setbacks from Managed Lands

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SHINGLE CREEK SA – POTENTIAL FUTURE HABITAT LOSS

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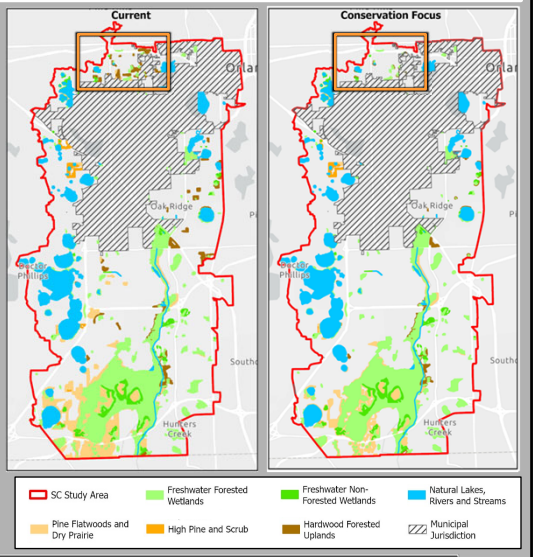
	Conservation Focus (Article X)	Development Focus (future land use)
Wetlands		
Forested Wetlands	0%	34%
Non-Forested Wetlands	0%	51%
Aquatic	0%	0%
Total Wetlands	**0%**	**22%**
Uplands		
Hardwood Forested Uplands	54%	66%
High Pine and Scrub	33%	42%
Pine Flatwoods and Dry Prairie	51%	64%
Total Uplands	**50%**	**63%**
Grand Total	**12%**	**32%**



Consider Rare Upland Habitat Protections

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SHINGLE CREEK SA - HUMAN BEAR INTERACTIONS

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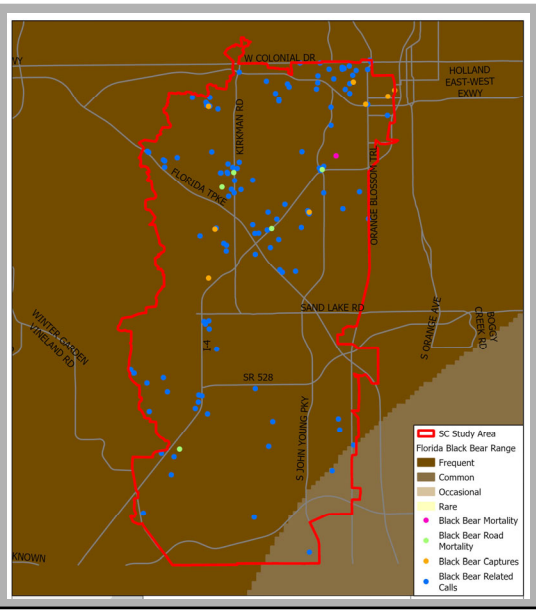

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SHINGLE CREEK SA - CLIMATE CHANGE IMPACTS

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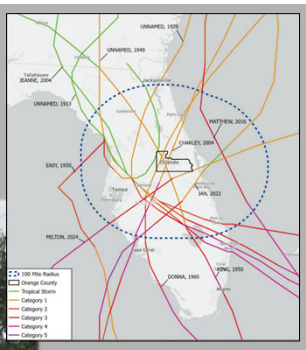
- Increased Storm Threats
  - Inland flooding
- Urban Heat Island (UHI)
- Mismatch of lifecycles and resource availability



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SHINGLE CREEK SA - KEY TAKEAWAYS

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- ✓ Identified as Regional Biodiversity Hotspot (FWC, 1994)
- ✓ Home to approximately 135 wildlife and plant species of concern
- ✓ Approximately 94% of historic uplands have been lost to development, including scrub habitat
- ✓ Future land use projections indicate loss of 50-63% of remaining uplands

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TERRESTRIAL + WILDLIFE RESOURCES

ST. JOHNS RIVER STUDY AREA

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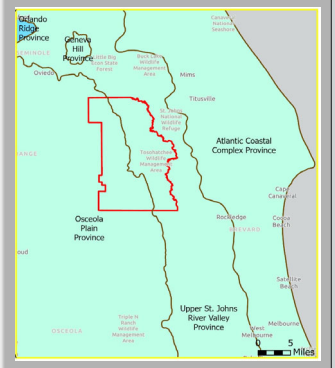
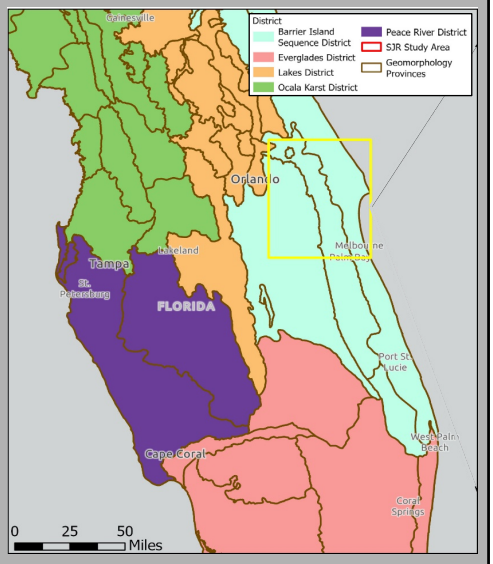
ST. JOHNS RIVER SA - REGIONAL SIGNIFICANCE

- Most wetland-rich landscape north of Everglades
- American Heritage River
- Used historically by Mayaca Tribe
- Broad estuarine lagoon system turned into freshwater floodplain





Consider Pre-Development Archaeological and Cultural Resources Surveys

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ST. JOHNS RIVER SA - NATURAL COMMUNITIES

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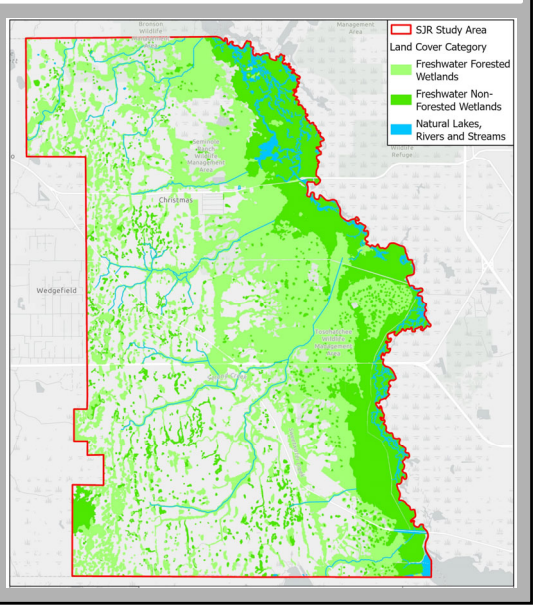
Wetland Community Category	Cover (acres)	Cover (percent)
Non-Forested Wetlands	19,662	33.7%
Forested Wetlands	36,541	62.7%
Natural Lakes and Streams	2,079	3.6%
Total	58,282	100%

- 85% of Non-Forested Wetlands are within Conservation Lands
- 44% of Forested Wetlands are outside of Conservation Lands



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ST. JOHNS RIVER SA - NATURAL COMMUNITIES

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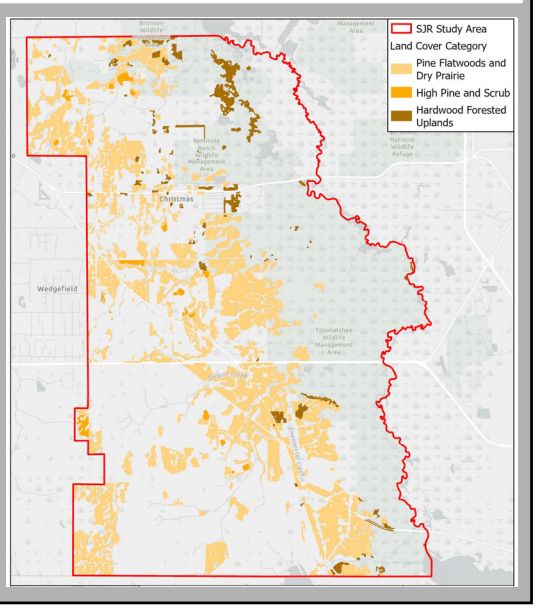
Upland Community Category	Cover (acres)	Cover (percent)
Hardwood Forested Uplands	1,594	7.8%
High Pine and Scrub	457	2.2%
Pine Flatwoods and Dry Prairie	18,517	90%
Total	20,568	100%

- 73% of Pine Flatwoods are Outside of Conservation Lands
- 70% of all Natural Upland Communities are Outside of Conservation Lands

Consider Pre-Development FNAI Natural Communities Mapping



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ST. JOHNS RIVER SA - NATURAL COMMUNITIES

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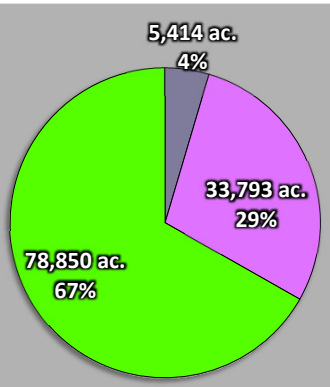
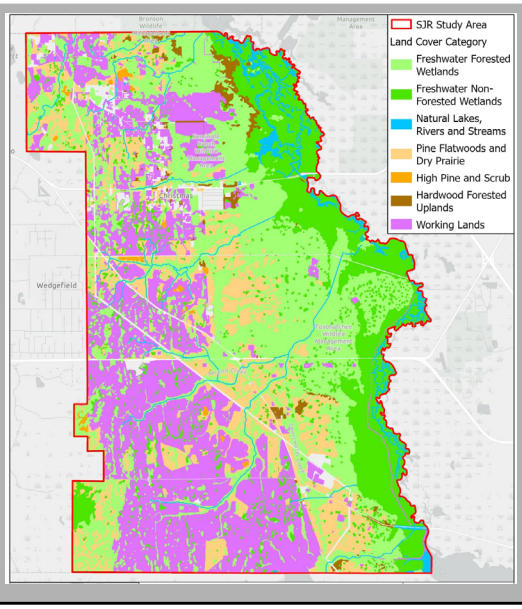


- Developed Lands
- Working Lands
- Natural Lands

Working Lands Examples
Pasture
Other Agriculture
Utility Corridors
Borrow Pits

Consider Open Space Use Restrictions



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ST. JOHNS RIVER SA - WETLANDS AND AQUATIC

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Non-Forested Wetlands	Forested Wetlands	Natural Rivers Lakes and Streams
Basin Marsh	Basin Swamp	Blackwater Stream
Depression Marsh*	**Bay Swamp***	Flatwoods/Prairie/ Marsh Lake
Floodplain Marsh	**Dome Swamp***	Floating and Emergent Aquatic Vegetation
Wet Prairie*	Floodplain Swamp	
	Hydric Hammock*	
	Wet Flatwoods	

***Vulnerable According to Chapter 15 Article X**

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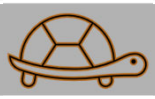
ST. JOHNS RIVER SA - NATURAL COMMUNITIES



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Hardwood Forested Wetlands	High Pine and Scrub	Pine Flatwoods and Dry Prairie
Mesic Hammock*	**Scrub***	Mesic Flatwoods
Xeric Hammock*	**Sandhill***	**Scrubby Flatwoods***
Upland Hardwood Forest		

***Vulnerable According to Existing SPAs**

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ST. JOHNS RIVER SA - WILDLIFE SPECIES OF CONCERN

40

Class	Number of Species	Number of Species with each Conservation Status					
		FE	FT	ST	SGCN	BCC	Other
Amphibians	1	-	-	-	1	-	-
Birds	54	1	5	9	48	22	1
Insects	1	-	-	-	-	-	1
Mammals	10	2	-	-	9	-	2
Reptiles	5	-	2	2	3	-	1
TOTAL	**71**	**3**	**7**	**11**	**61**	**22**	**5**

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ST. JOHNS RIVER SA - WILDLIFE SPECIES OF CONCERN

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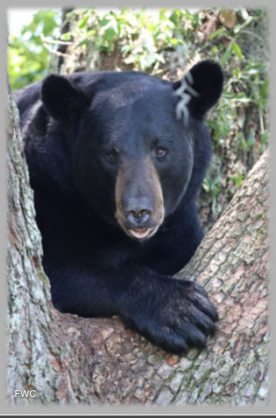
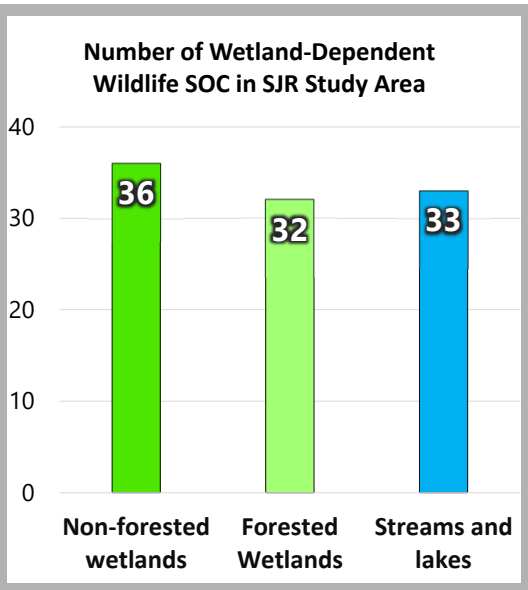


Florida Black Bear
Ursus americanus floridanus



Worthington's Marsh Wren
Cistothorus palustris

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ST. JOHNS RIVER SA - WILDLIFE SPECIES OF CONCERN

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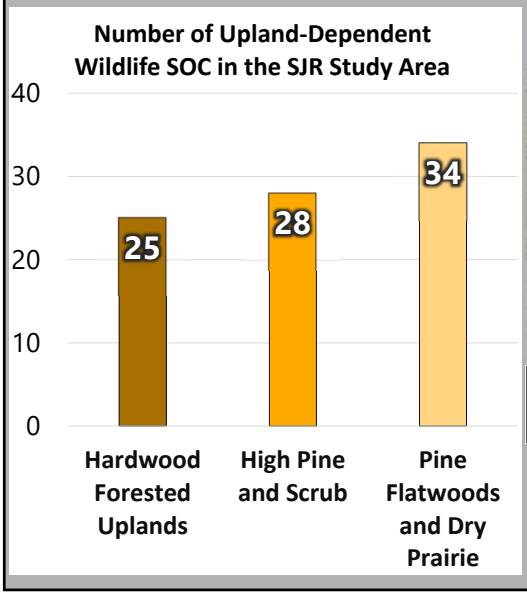

Gopher Tortoise
Gopherus polyphemus

Eastern Indigo Snake
Drymarchon couperi

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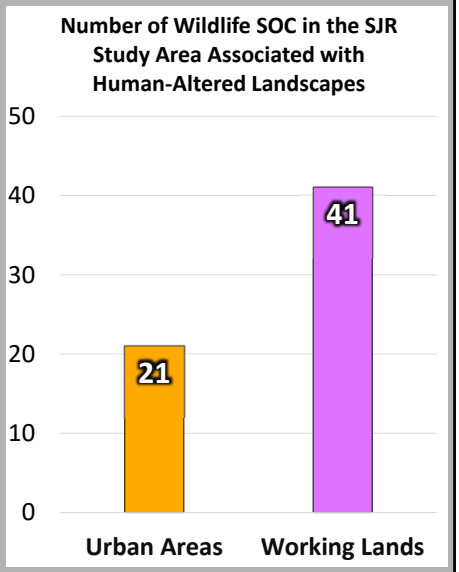
ST. JOHNS RIVER SA - WILDLIFE SPECIES OF CONCERN

43

Sandhill Crane
Grus canadensis

Florida Panther
Puma concolor coryi



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ST. JOHNS RIVER SA - PLANT SPECIES OF CONCERN

44

Class	Number of Species	Number of Species with each Conservation Status					
		FE	FT	SE	ST	SGCN	Other
Ferns	6	-	-	4	-	4	6
Bromeliads	3	-	-	2	1	3	2
Dogbanes	5	-	-	3	1	5	3
Grasses	5	-	-	2	1	3	5
Orchids	14	-	-	2	10	10	8
Other Angiosperms	38	8	3	14	13	35	31
TOTAL	**71**	**8**	**3**	**27**	**26**	**60**	**55**

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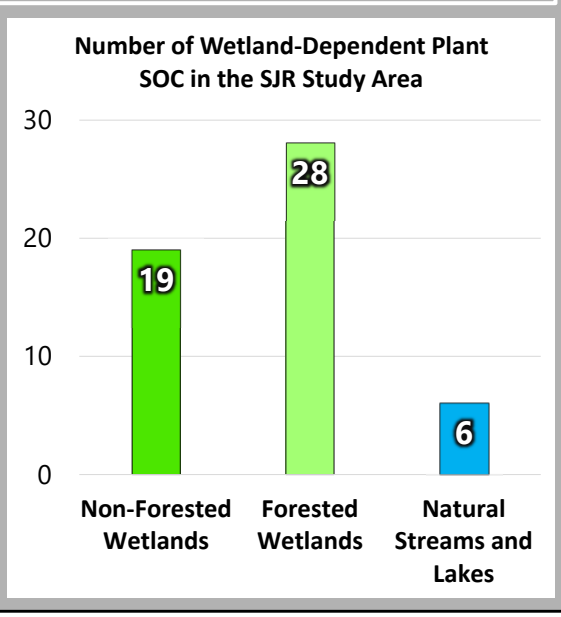
ST. JOHNS RIVER SA - PLANT SPECIES OF CONCERN

45

Green Fly Orchid
Epidendrum conopseum

Celestial Lily
Nemastylis floridana



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ST. JOHNS RIVER SA - PLANT SPECIES OF CONCERN

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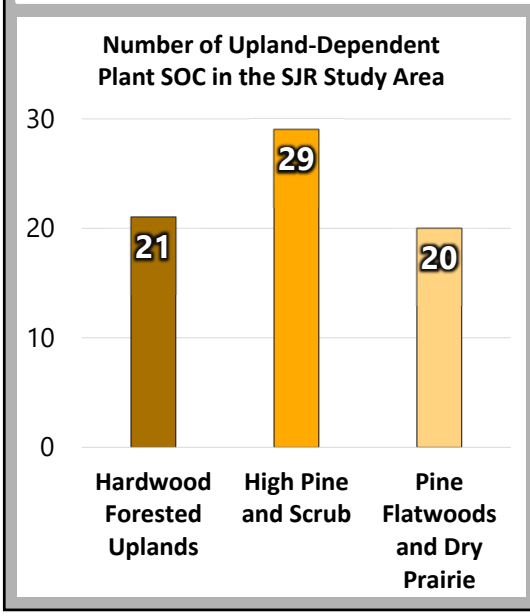

Florida Butterfly Orchid
Encyclia tampensis

Pine Lily
Lilium catesbaei

46

ST. JOHNS RIVER SA - NATURAL COMMUNITIES

47

Sandhill

Imperiled habitat, 80 acres remain in SJR Study Area

Hydric Hammock

Recognized as one of most significant occurrences in FL

Isolated Marshes/Wet Prairie

Vital habitat for numerous wildlife

Working Lands

Mimic natural communities, wildlife have adapted

47

ST. JOHNS RIVER SA – SPECIES OF CONCERN

48

Florida Panther

Over 96% Study Area is a Priority 1 Wildlife Corridor

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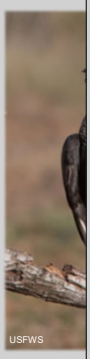

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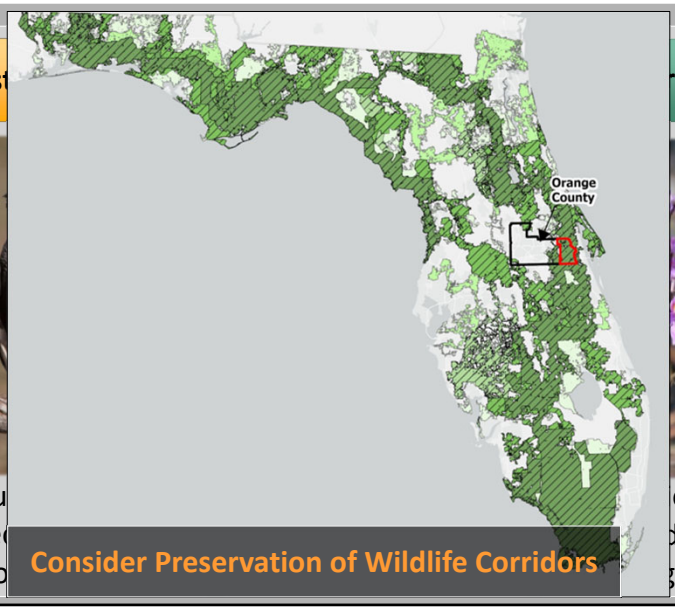

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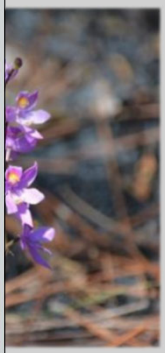

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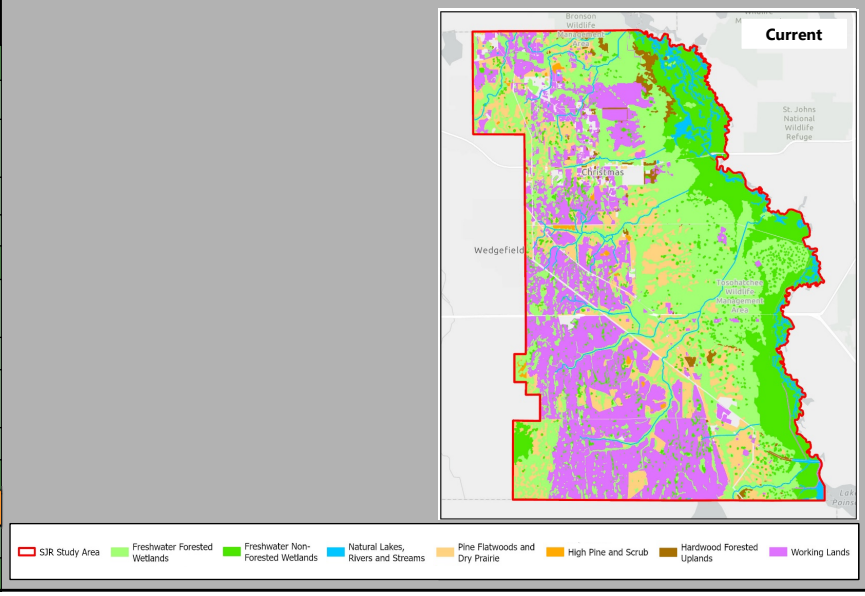
ST. JOHNS RIVER SA - POTENTIAL FUTURE HABITAT LOSS

49

Habitat Type	Percent Loss
Wetlands	
Forested Wetlands	0%
Non-Forested Wetlands	0%
Aquatic	0%
Total Wetlands	**0%**
Uplands	
Hardwood Forested Uplands	1%
High Pine and Scrub	20%
Pine Flatwoods and Dry Prairie	1%
Total Uplands	**1%**
Other Significant Wildlife Habitat	
Working Lands	72%
Total Other	**72%**
Grand Total	**22%**



49

ST. JOHNS RIVER SA - CLIMATE CHANGE IMPACTS

50

- Sea Level Rise
  - Marsh migration
  - Impact on Species of Concern
- Species migration to suitable habitats

May experience some potential backwater effects resulting from downstream SLR

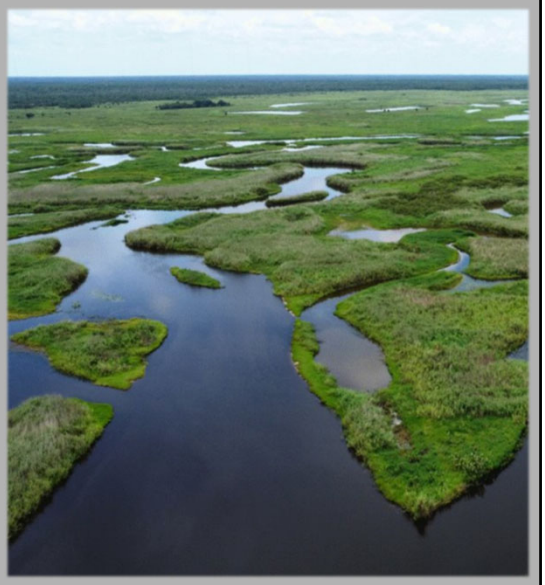
Consider Expanded Buffers Around Natural Communities

50

ST. JOHNS RIVER SA - KEY TAKEAWAYS

51

- ✓Over 96% of Study Area is a Priority 1 Wildlife Corridor
- ✓Home to over 140 plant and wildlife species of concern
- ✓Contains County's largest remaining wet prairie habitat
- ✓Florida's most wetland-dominated watershed north of the Everglades
- ✓Working lands provide valuable wildlife habitat and connectivity



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WATER RESOURCES

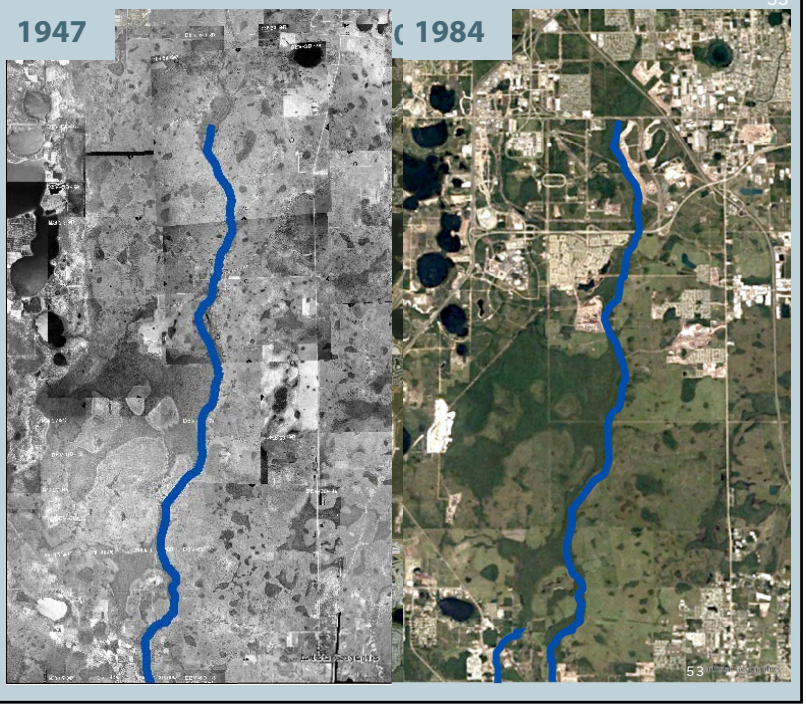
SHINGLE CREEK STUDY AREA

52

52

HYDROLOGIC CHANGES SHINGLE CREEK SA

- Channelized in 1920's
- As development continued, more canals and stormwater ponds connected to the creek for drainage
- Today, Shingle Creek serves as a major flood water conveyance system for the Upper Kissimmee Watershed



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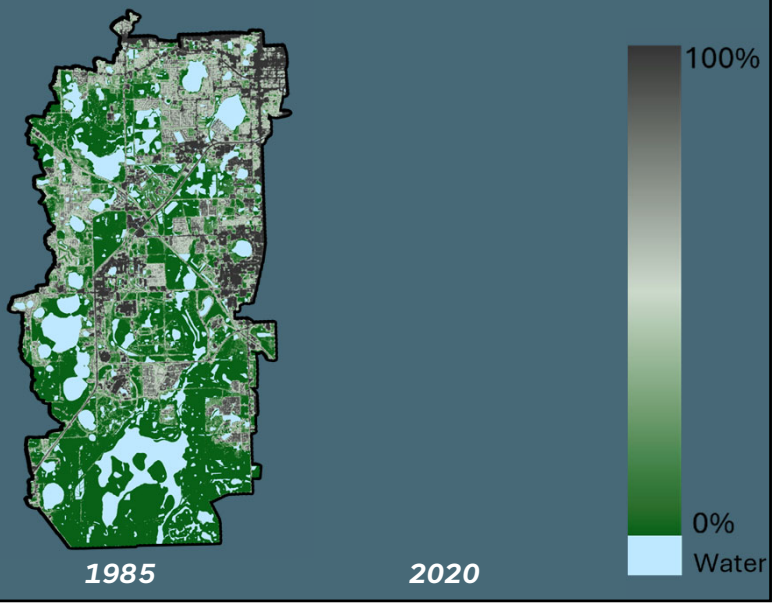
SHINGLE CREEK SA - HYDROLOGIC CHANGES

54

↑ *Development*
↑ *Imperviousness*
- *1985 – 19%*
- *2020 – 40%*

↓ *Infiltration*
↓*Groundwater Recharge*
↑ *Surface Runoff/Discharge*

Implications
- *Water quality*
- *Wetland health*
- *Greater Everglades*
- *Flooding*



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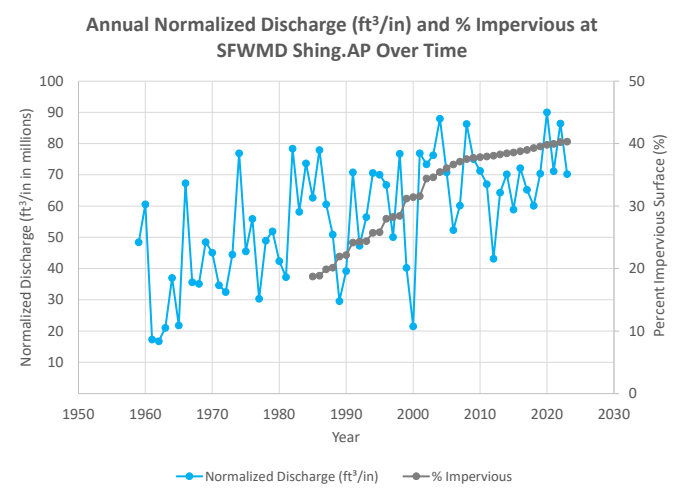
SHINGLE CREEK SA - HYDROLOGIC CHANGES

55

- Historic flow data
  - **1% increase in impervious = 1% increase in discharge**
- Future development
  - Increases in impervious area will result in higher discharge
- Downstream challenges
  - Discharge limited basin
  - **Largest** contributor to Lake Toho
  - Lake Toho impairment
    - Excess nutrients
    - Invasive plants
    - Mercury



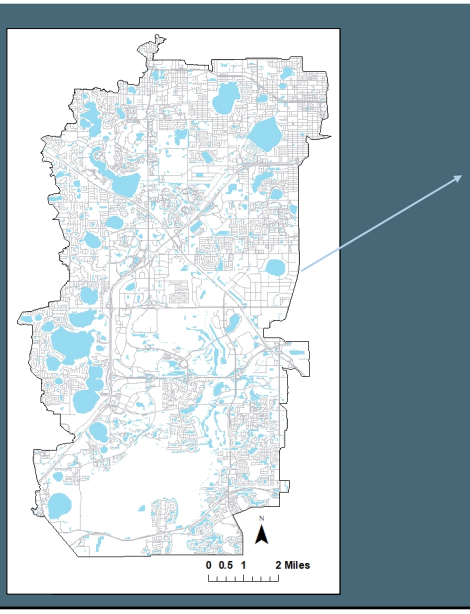
Consider Managing Overall Imperviousness within the Basin

55

SHINGLE CREEK SA - WATER QUALITY

56

- Shingle Creek Watershed
  - 80 sq miles w/in Orange County
  - 71 named lakes / ponds
  - 9 canals
- Headwaters of Florida Everglades
  - **5% of Lake O inflows**
  - Heavily urbanized
  - Downstream impairments
  - Downstream flooding
- Part of Lake O BMAP
  - $140 million in projects funded (STAR 2023)



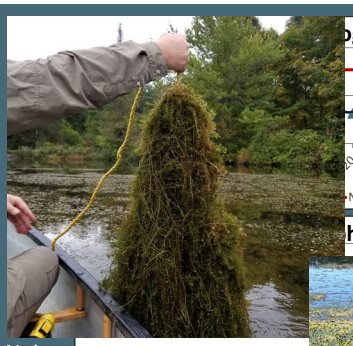
56

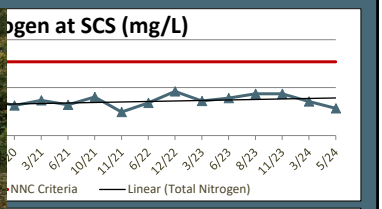
SHINGLE CREEK SA - WATER QUALITY

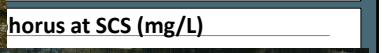
57

- Shingle Creek
  - Nutrients (macrophytes)
  - ↑ trends for Chlorophyll-a + TN
- Shingle Creek Headwaters
  - Nutrients (Algal Mats)
- 4 waterbodies with TMDLs
  - Nutrients, Bacteria, DO
- 1 Primary BMAP
  - Lake Okeechobee

Consider Additional Stormwater Regulations







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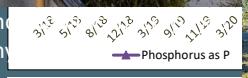

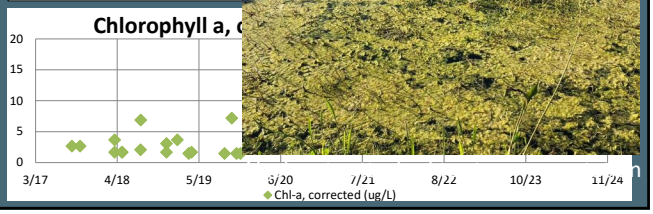

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SHINGLE CREEK SA - FLOOD INUNDATION

58

- Vulnerability Assessment Model
- Significant floodplain within undeveloped area
- FEMA Flood Zones (2009) don't reflect recent development
- Flood Level of Service deficiencies in Upper Kissimmee (SFWMD)

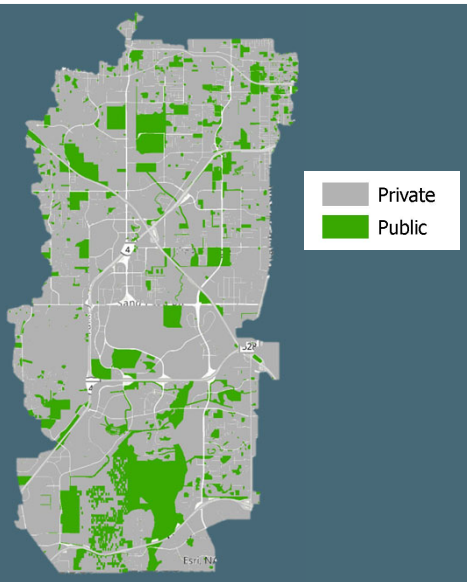
Continue revising FEMA SFHAs + Incentivize Low Impact Development

58

SHINGLE CREEK SA - KEY TAKEAWAYS

59

- ✓ Increases in impervious area will lead to stresses on water resources
  - Can be offset by smart planning that increases densities + open space
- ✓ Continued development may lead to downstream challenges
  - Increased surface runoff
  - Water volume increases to Lake Toho
  - Water quality concerns
- ✓ Special development protections will promote sustainable growth and prevent further water resource degradation



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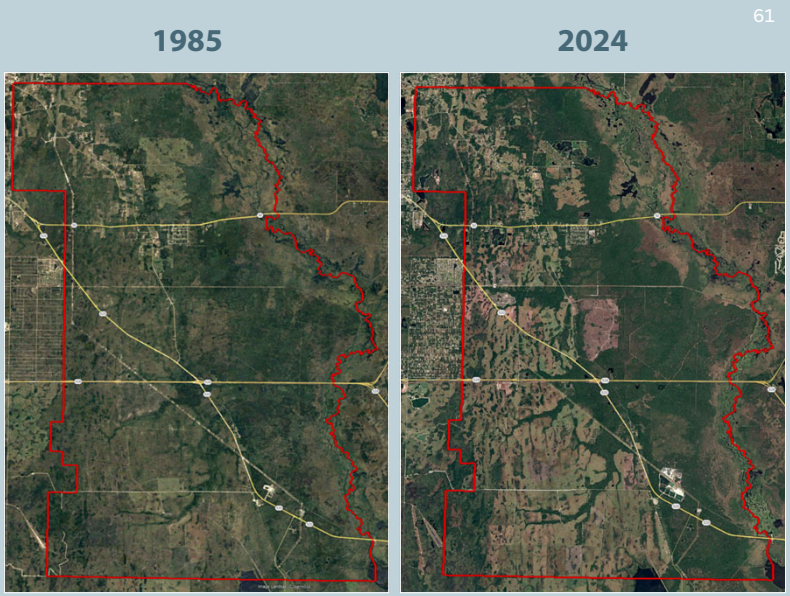
WATER RESOURCES

ST. JOHNS RIVER STUDY AREA

60

ST. JOHNS RIVER SA

- Florida's longest river
- Minimal land use changes
  - 42% publicly-owned
  - Low-intensity land use
  - Undisturbed habitat
- Vision 2050 plans include predominantly rural use
- Development pressures in Central FL may push into rural areas



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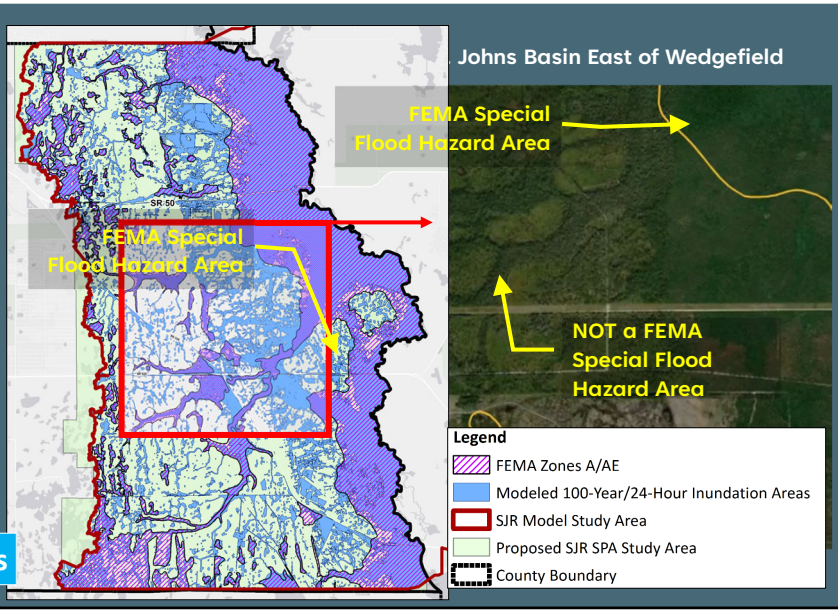
ST. JOHNS RIVER SA - FLOOD INUNDATION

62

- Vulnerability Assessment model
- FEMA Flood Zones (2009) do not fully represent flood risk
- **Potentially 10,000 acres of additional flood inundation extent**
- Implications for floodplain compensation

Consider revising FEMA SFHAs



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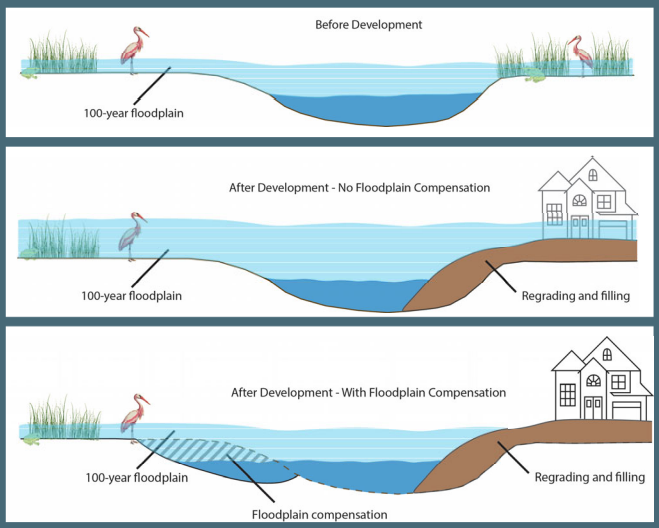
ST. JOHNS RIVER SA - FLOOD INUNDATION

63

- 'Cup for cup' compensation
- County currently accepts floodplain compensation in connected SFHAs
- Potential loss of valuable flood storage
- Potential increase of flood risk to surrounding properties

Consider mapping County-determined floodplains



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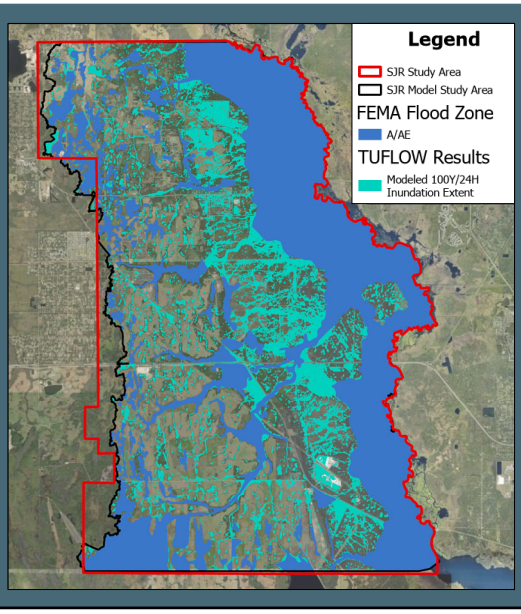
ST. JOHNS RIVER SA - FLOOD INUNDATION

64



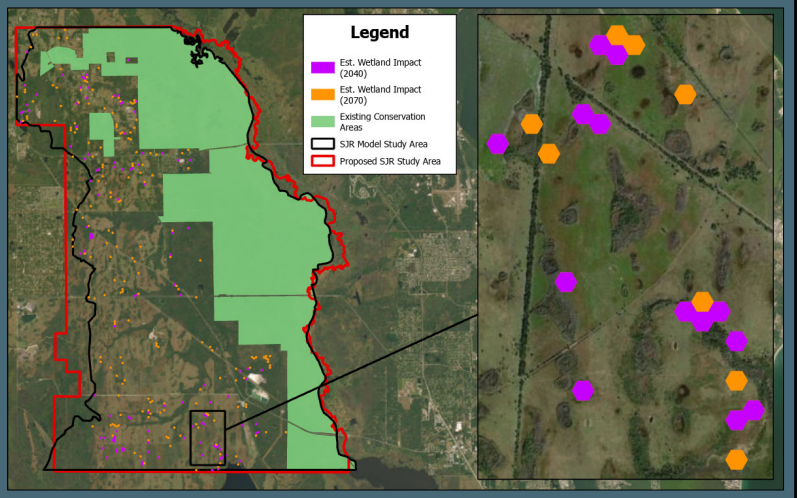
Consider requiring floodplain compensation in identified areas

64

ST. JOHNS RIVER SA - FLOOD INUNDATION

65

- Future flood inundation
  - 1990 – 2020 wetland impact patterns (4% loss)
  - Filled predicted wetland impact areas
- Predicted 2% future wetland loss
- Future wetland impacts:
  - 1 acre of impacts
  - ↑ 0.6 acres flood extent
  - ↓ 0.9 ac-ft flood storage



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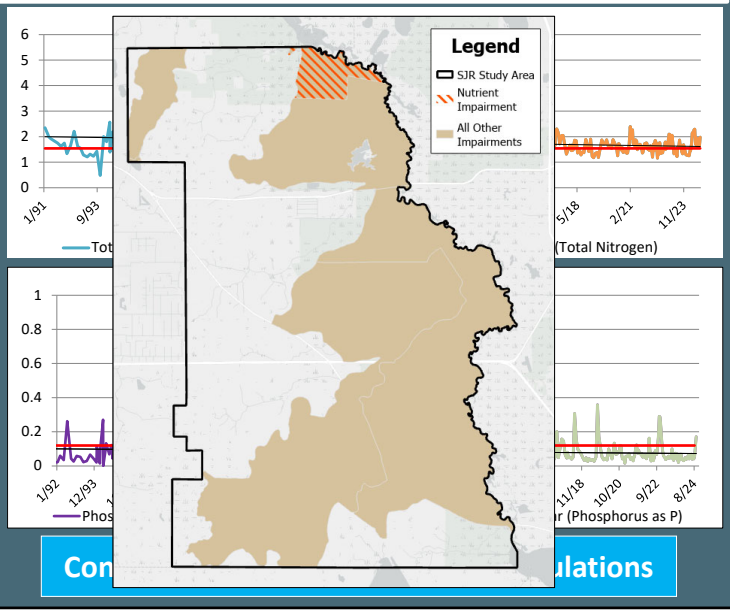
ST. JOHNS RIVER SA - WATER QUALITY

66

- SJR Impairments:
  - Nutrients (macrophytes)
    - Northeast corner
  - Fecal coliform, iron, silver
    - Majority of SJR within Study Area
- FDEP Numeric Nutrient Criteria
  - Exceeded TN and TP
  - Long term – decreasing trends
  - Last 10 years – no trends
  - SJRWMD shows increasing TP and decreasing TN 10YR trend
- Downstream waterbodies impaired for nutrients



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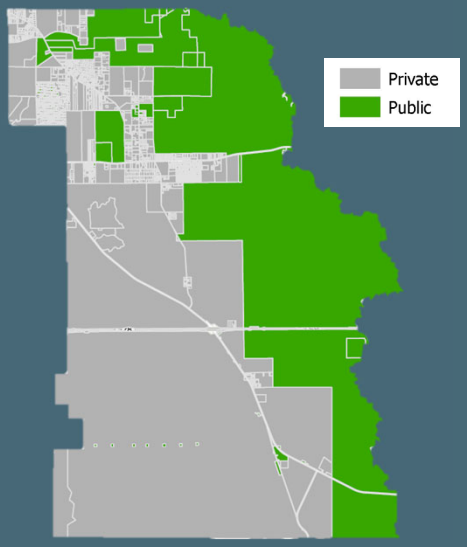
ST. JOHNS RIVER SA - KEY TAKEAWAYS

67

- ✓ Prepare for future development through tailored regulations
  - Flood inundation extent
  - Development in 'At-Risk' wetlands
- ✓ Likely more Special Flood Hazard Areas exist than currently known
- ✓ 1 acre of wetland impacts =
  - +0.6-acre of inundation extent
  - -0.9-acre-ft of storage capacity
- ✓ Ensure improving water quality trends within the river continue



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Agenda

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- Purpose
- Background
- Study Approach
- Findings
- **Stakeholder Engagement**
- Summary
- Next Steps

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Stakeholder Engagement

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- Stakeholder network
  - General Public
  - Property Owners
  - Development Community
  - Advisory Boards
  - NGOs
  - County website portal
- Opportunity to listen and hear priorities and needs of local community members
- Discuss proposed protections and options moving forward

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Stakeholder Engagement

70

- Discuss Wetlands and Wildlife Protection Aspects

  Topics for consideration:

  ✓Increased buffer widths

  ✓Setbacks from managed lands

  ✓Rare upland habitat protections

  ✓Open space use restrictions

  ✓Preservation of wildlife corridors

  ✓Pre-development wildlife and natural community surveys

  ✓Pre-development cultural/archaeological resource surveys

70

Stakeholder Engagement

71

- Discuss Water Resources Protection Aspects

  Topics for consideration:

  ✓Manage overall imperviousness within the basins

  ✓Develop additional stormwater regulatory standards specific to basin

  ✓Incentivize Low Impact Development

  ✓Revise FEMA Special Flood Hazard Area + Flood Insurance Rate Maps

  ✓Map County-determined floodplains

  ✓Require floodplain compensation in identified areas based on modeling

  ✓Consider benefits of water conservation/native landscaping

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Agenda

72

- Purpose
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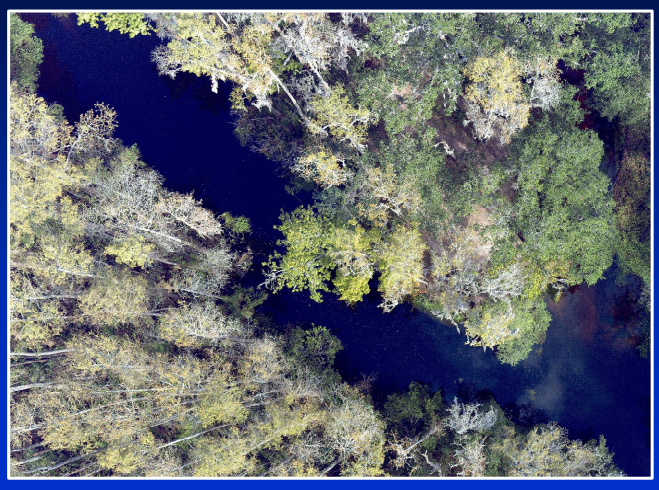

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Summary

73

- Valuable natural resources are found within both Study Areas
- Each Study Area is unique in its culture and history
- A variety of issues have been identified within the Study Reports warranting consideration
- Consideration of special development protections will require significant stakeholder engagement
- SPAs help plan for and guide smart, sustainable growth
- Comprehensive Plan (Vision 2050) language identifying Special Basins must be approved prior to SPA consideration

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Agenda

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- Purpose
- Background
- Study Approach
- Findings
- Stakeholder Engagement
- Summary
- Next Steps

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Next Steps

- **Spring 2025**
  - Draft Technical Studies released
  - April 8th BCC Work Session
  - Begin stakeholder engagement
- **Summer/Fall 2025**
  - Develop Regulatory Standards
  - Business Impact Evaluation
  - BCC Work Session
- **Winter 2025**
  - Finalize regulatory standards
  - Adoption Hearings