

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

# Technical Working Group Update

## Homosassa



Madison Trowbridge, Ph.D.

Springs Scientist

Natural Systems and Restoration

# SWIM Plans

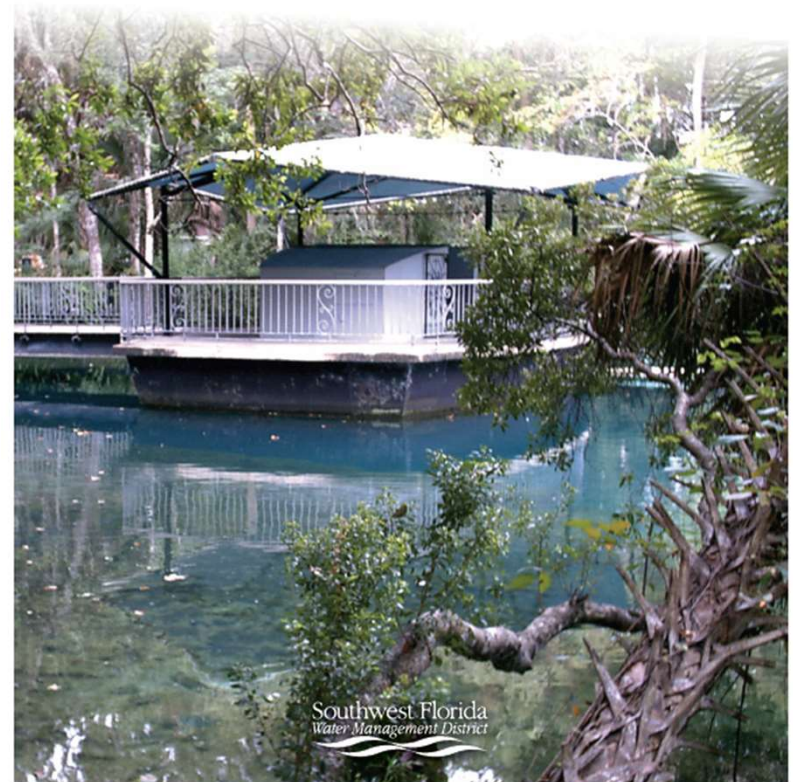
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- Surface Water Improvement & Management (SWIM) Plans
  - Issues & Drivers
  - Management actions
    - Quantifiable objectives
  - Projects and Initiatives

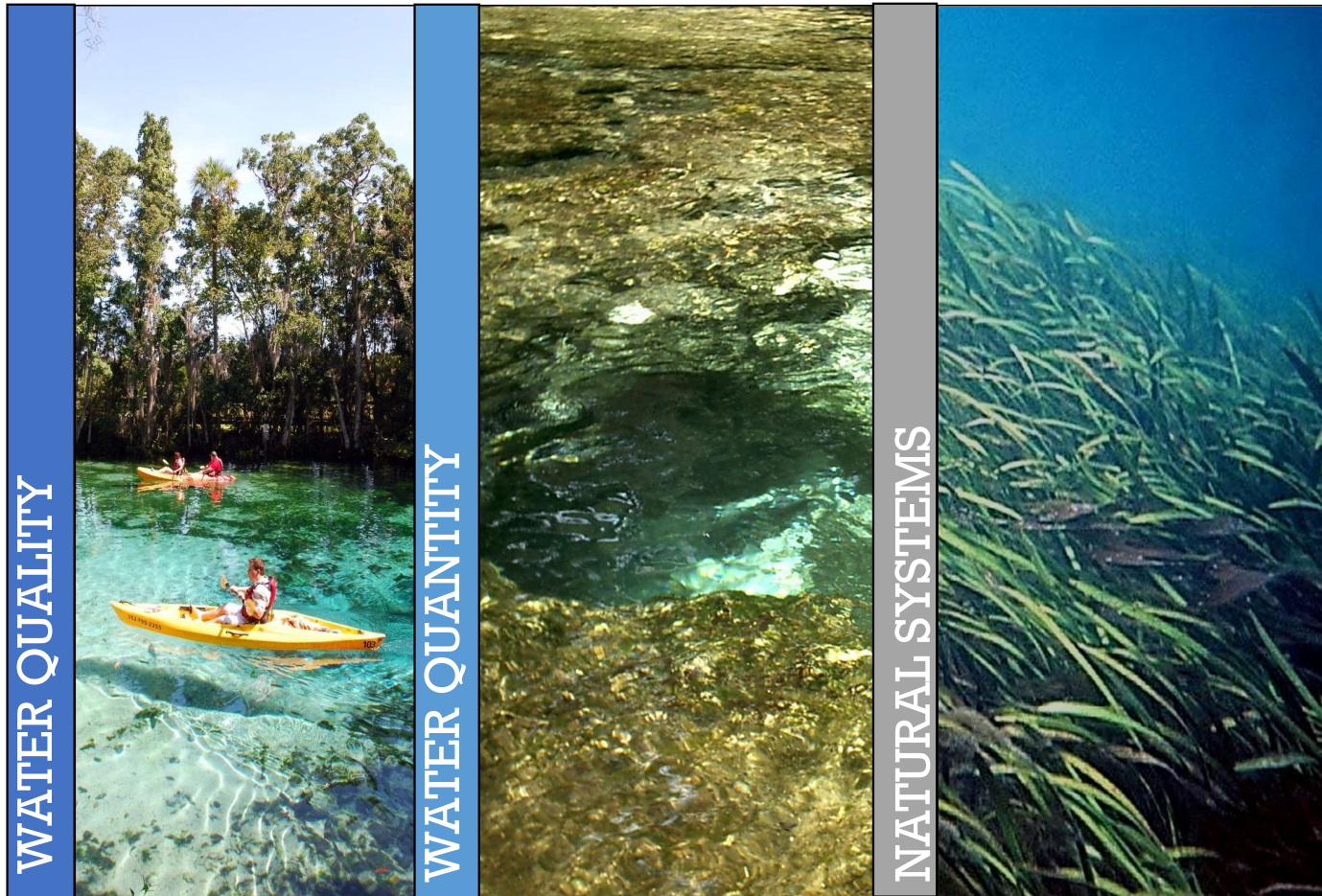
## Homosassa River Surface Water Improvement and Management (SWIM) Plan

A Comprehensive Conservation and Management Plan

August 2017



# Quantifiable Objectives



# Quantifiable Objectives: Order of Systems

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- Oldest to newest:
  - Rainbow (Nov 2015)
  - Crystal River/Kings Bay (Dec 2015)
  - Weeki Wachee (Mar 2017)
  - Chassahowitzka (Aug 2017)
  - Homosassa (Aug 2017)

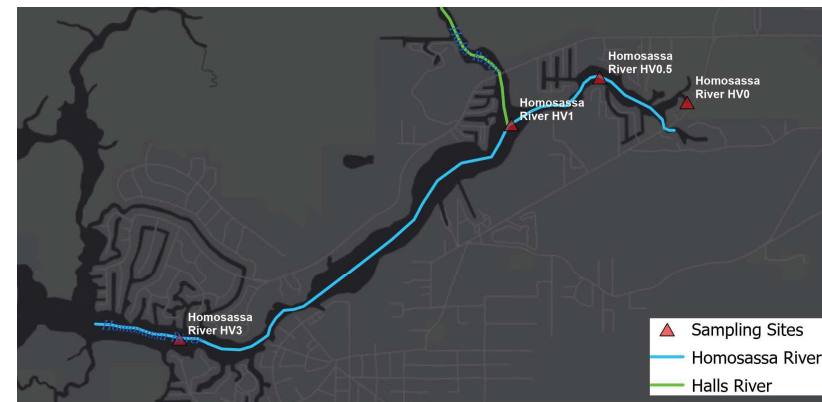
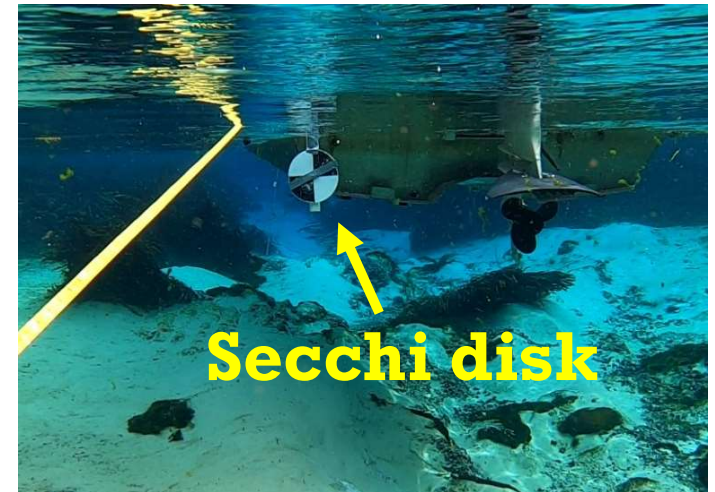
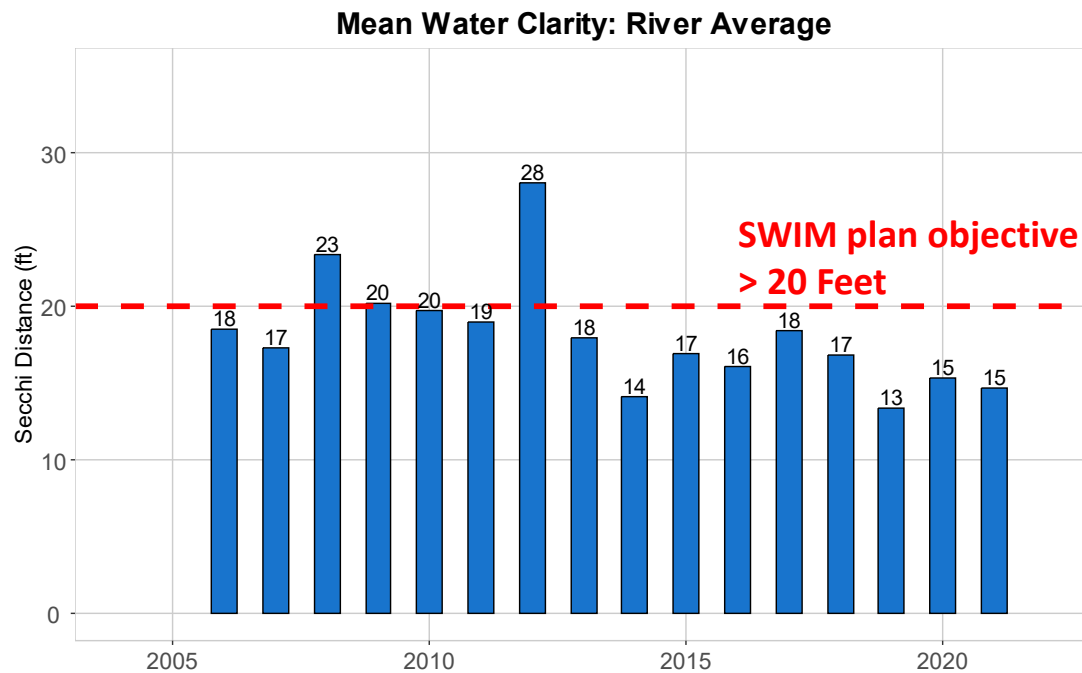


# Homosassa - Current Quantifiable Objectives

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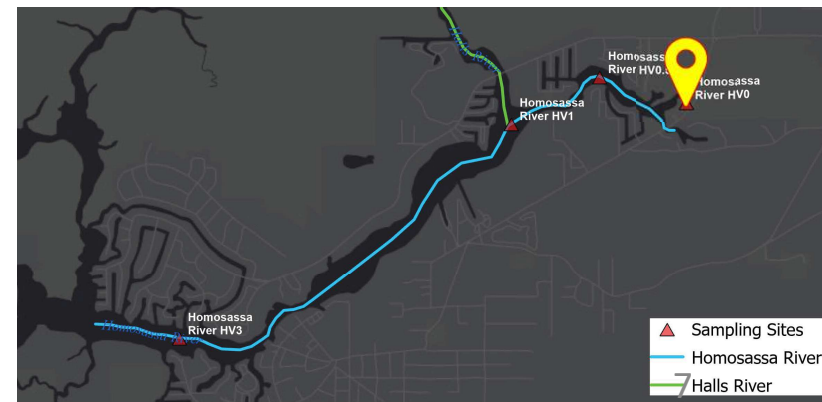
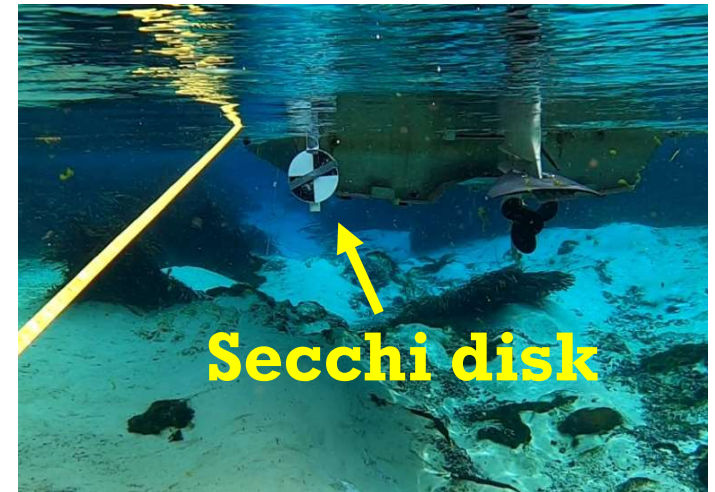
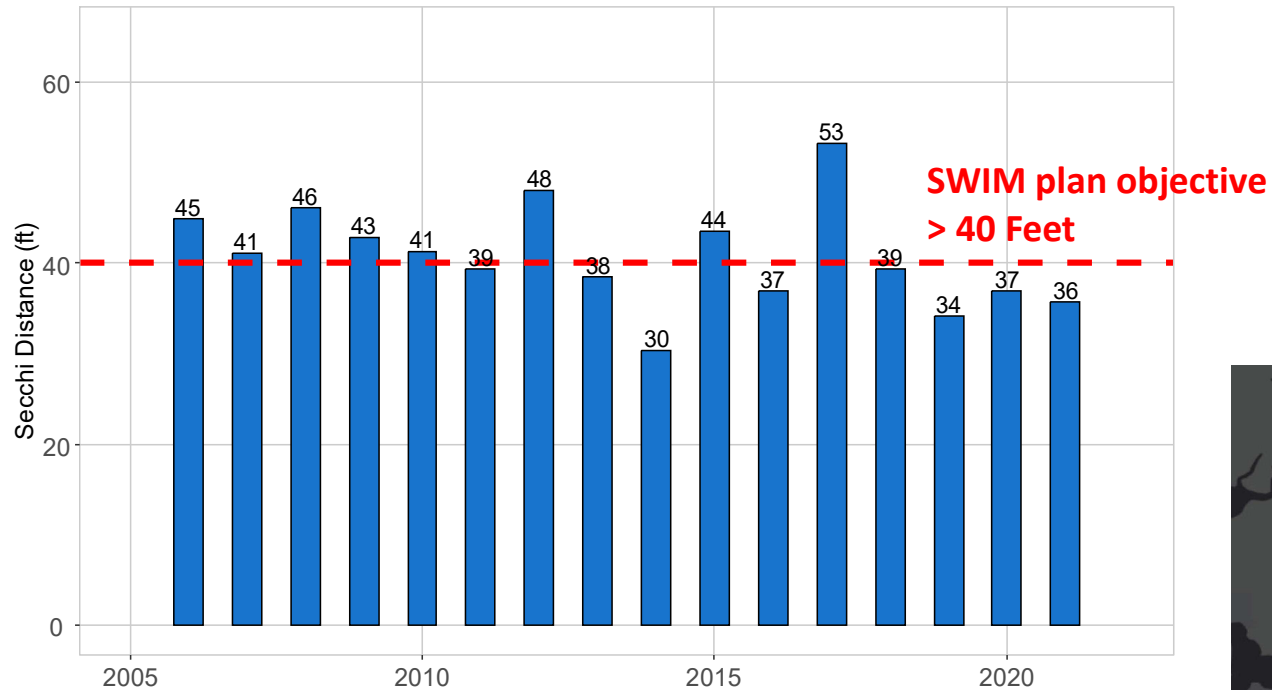
Water Quality	Target
Water clarity – river average	>20 feet
Water clarity – near the headspring	>40 feet
Nitrate concentration in the river	<0.23 mg/L
Water Quantity	
Minimum flow for the river system	>97% natural flow
Natural Systems	
Coverage of desirable benthic habitat (SAV, oysters, etc.) in the river	>65%
Coverage of invasive aquatic vegetation (including filamentous algae) in the river	<10%
No net loss of shoreline in natural condition along the river	No net loss

# Homosassa QO: Water Quality

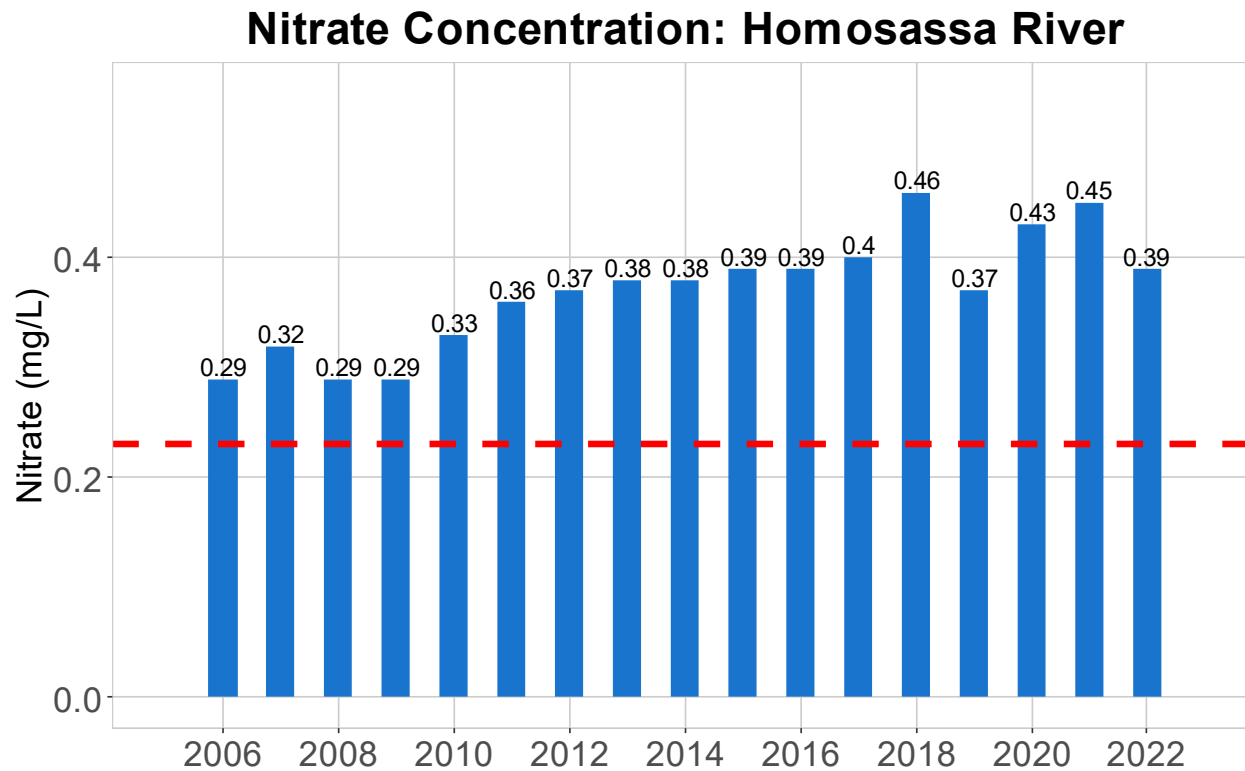
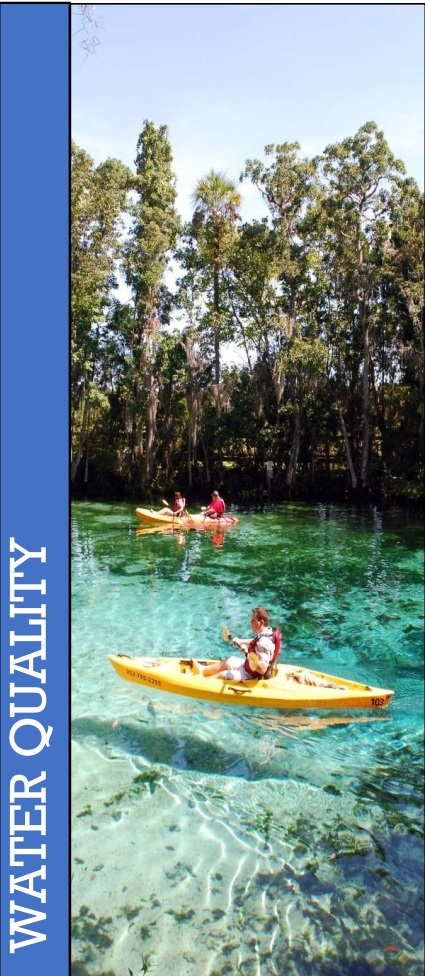


# Homosassa QO: Water Quality

Mean Water Clarity: Headspring



# Homosassa QO: Water Quality



**SWIM plan  
objective  
< 0.23 mg/L**



# Homosassa Q0: Water Quantity

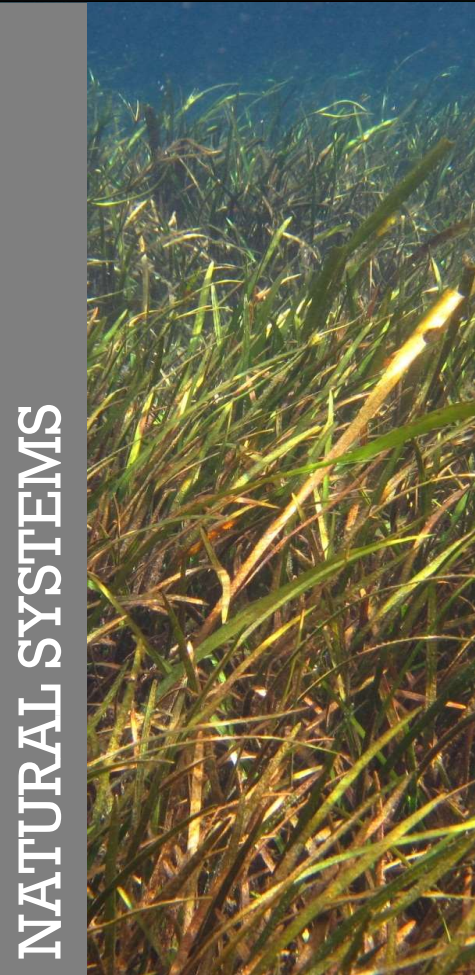
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- Minimum Flow for the River
- **MFL Status: 99% Natural Flow**

# Homosassa Q0: Natural Systems

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- No net loss of shoreline in natural condition
- **Status: No net loss**

# Homosassa Q0: Natural Systems

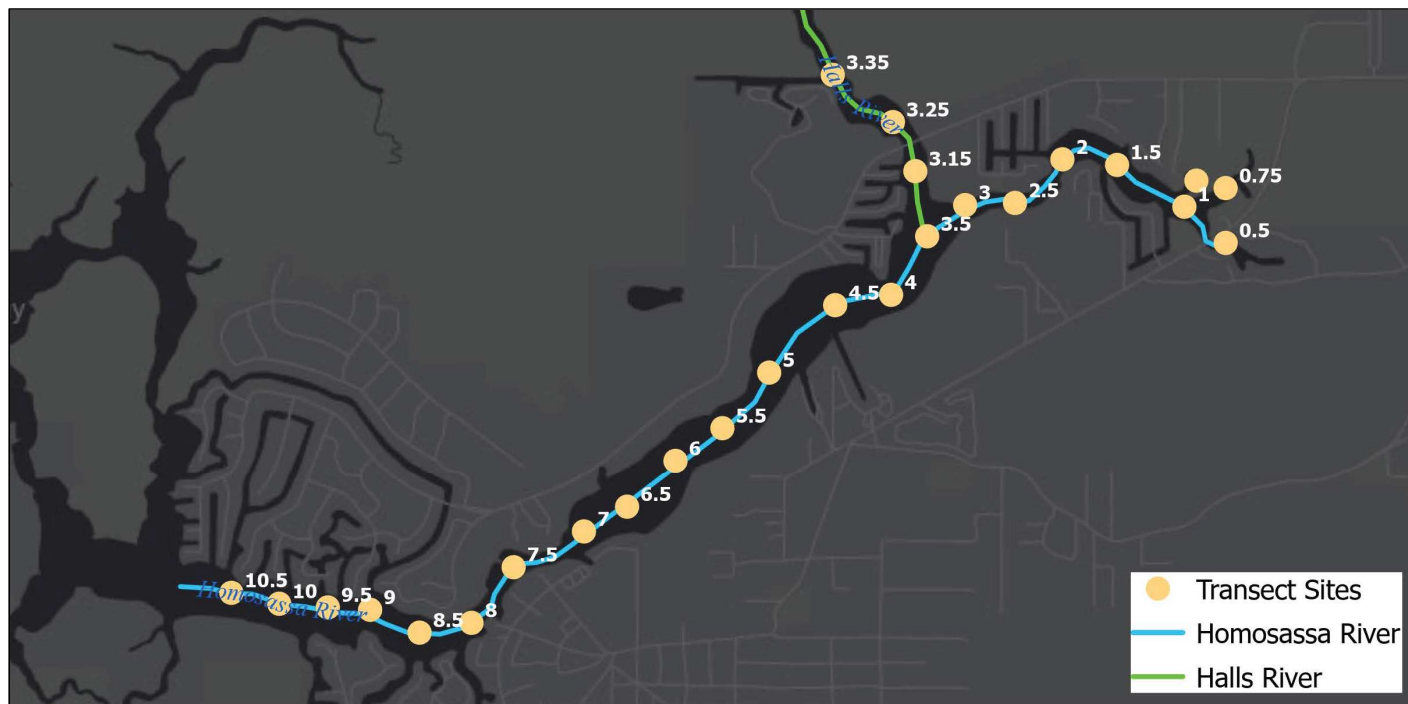
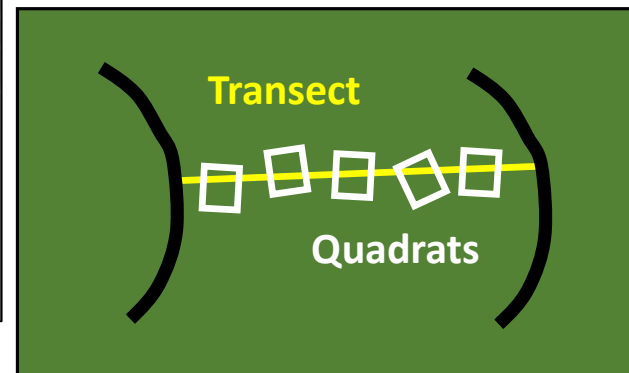
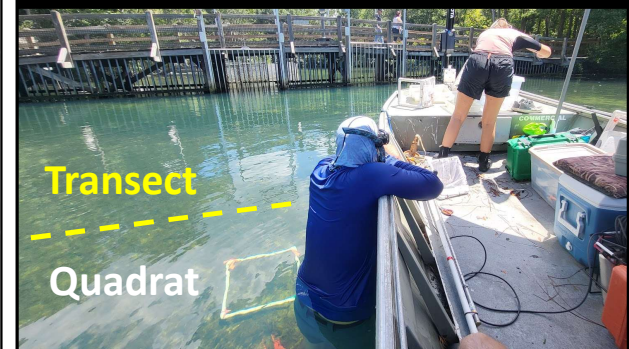


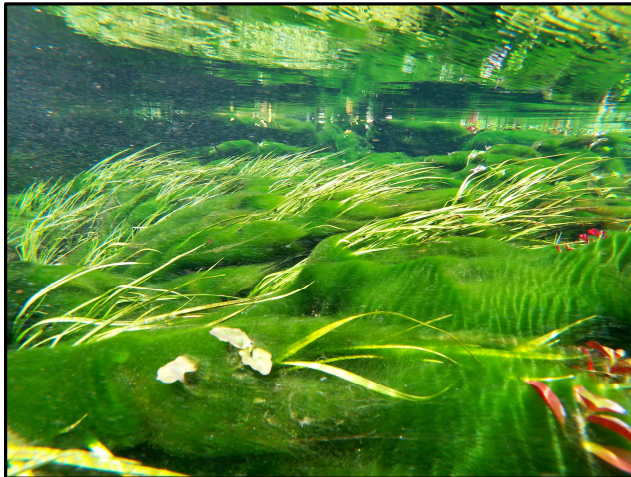
Photo taken at Transect 0.75





# Homosassa QO: Natural Systems

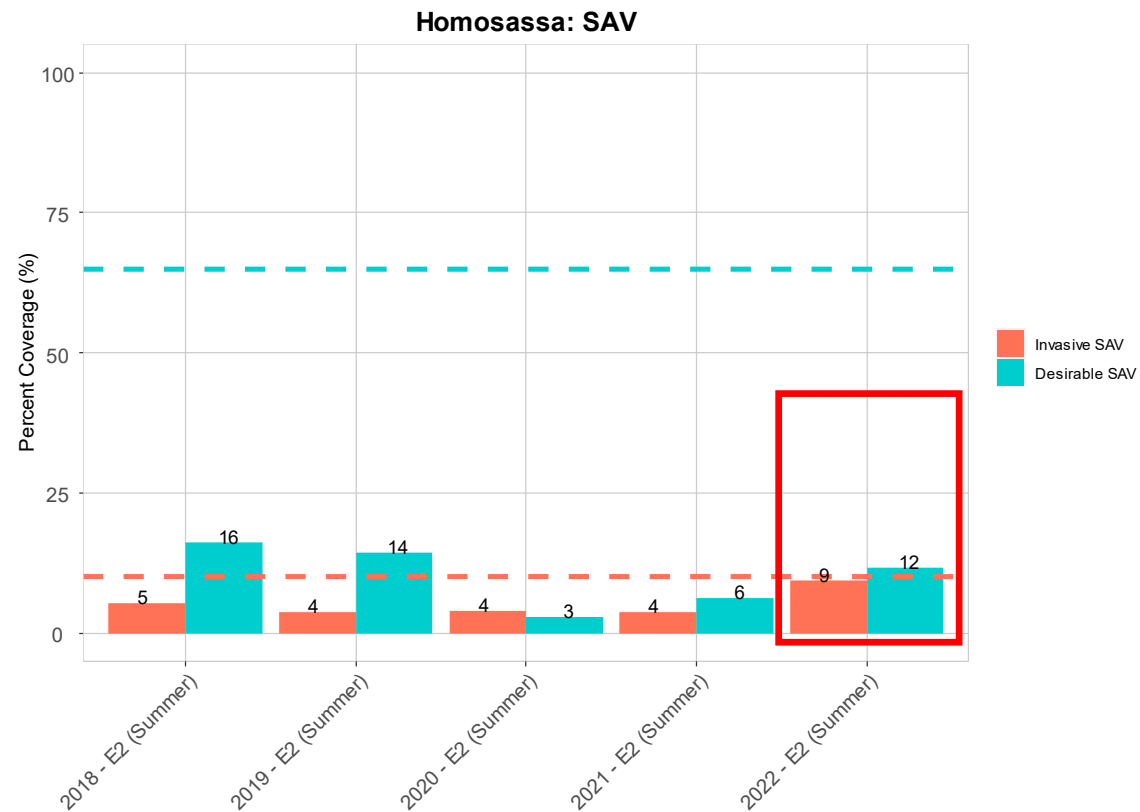
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# Homosassa Q0: Natural Systems

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# Homosassa QO: Current

	Water Quality	Target
	Water clarity – river average	>20 feet
	Water clarity – near the headspring	>40 feet
	Nitrate concentration in the river	<0.23 mg/L
	Water Quantity	
	Minimum flow for the river system	>97% natural flow
	Natural Systems	
	Coverage of desirable benthic habitat (SAV, oysters, etc.) in the river	>65%
	Coverage of invasive aquatic vegetation (including filamentous algae) in the river	<10%
	No net loss of shoreline in natural condition along the river	No net loss

# QO: Homosassa TWG Discussions

## Indicators

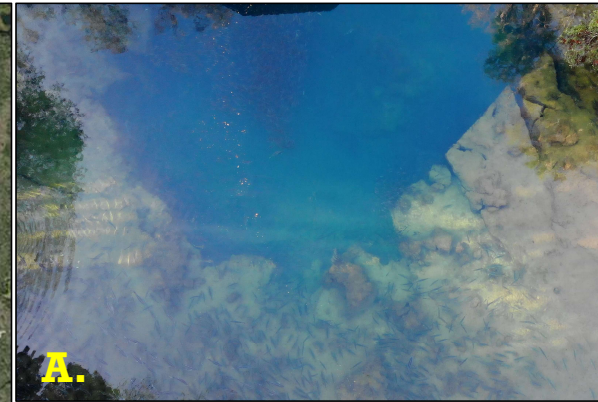
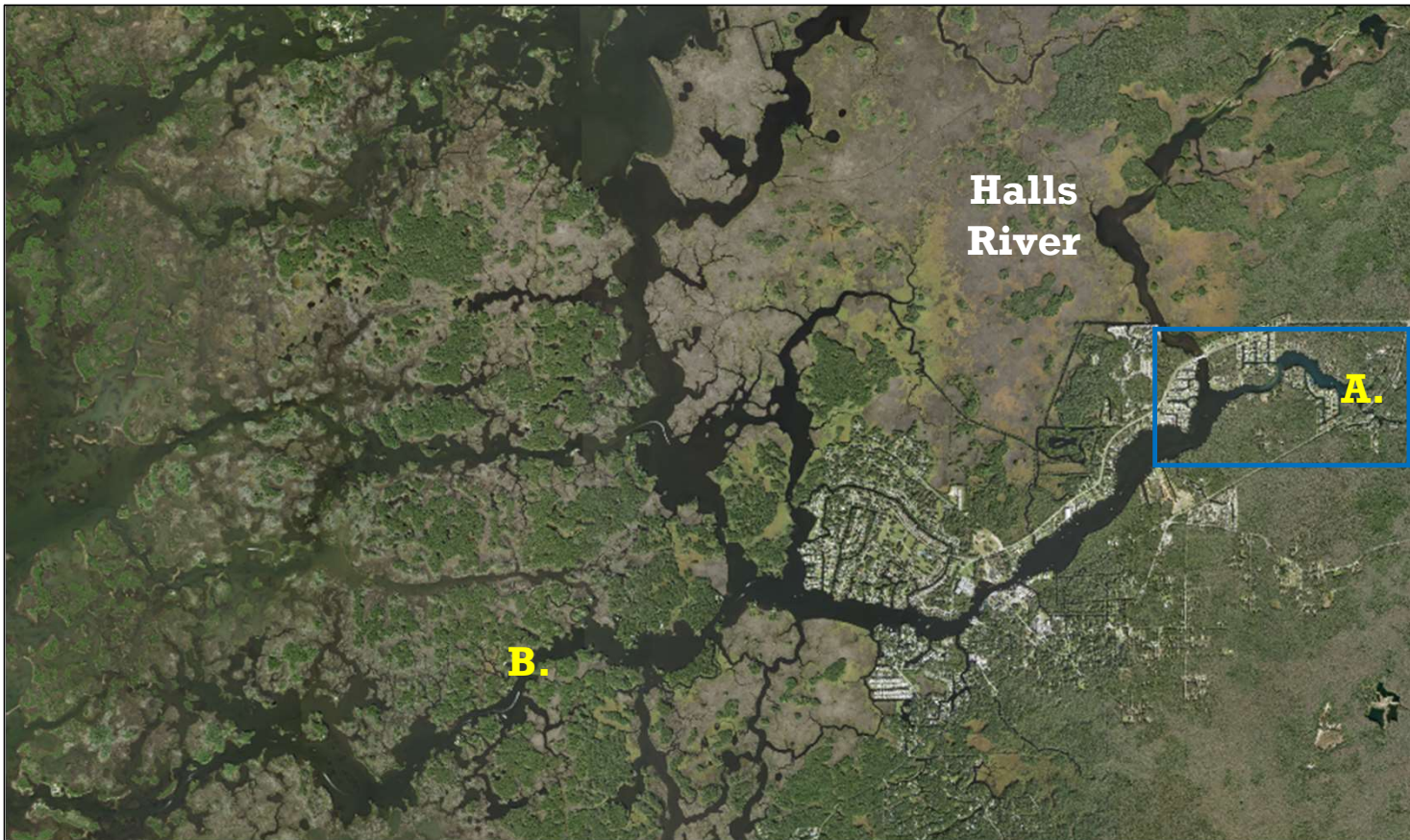
Water clarity	Threshold
Near the headspring	40 ft
Middle portion of river	11 ft

## Quantifiable Objectives

Water quality	Target
Nitrate concentration in the springs	< 0.23 mg/L
Water quantity	
Minimum flows for the springs and river	> 95% natural flow
Natural systems	
Coverage of desirable submerged aquatic vegetation in the tidal freshwater habitat.	> 40%
Coverage of desirable submerged aquatic vegetation in the transition zone.	> 25%
Coverage of desirable submerged aquatic vegetation in the estuarine zone.	> 10%
Coverage of invasive aquatic vegetation in the tidal freshwater habitat, transition zone, and estuarine zone.	< 10%
No net loss of shoreline in natural condition along the river.	No net loss.

# Q0: Homosassa TWG Discussions

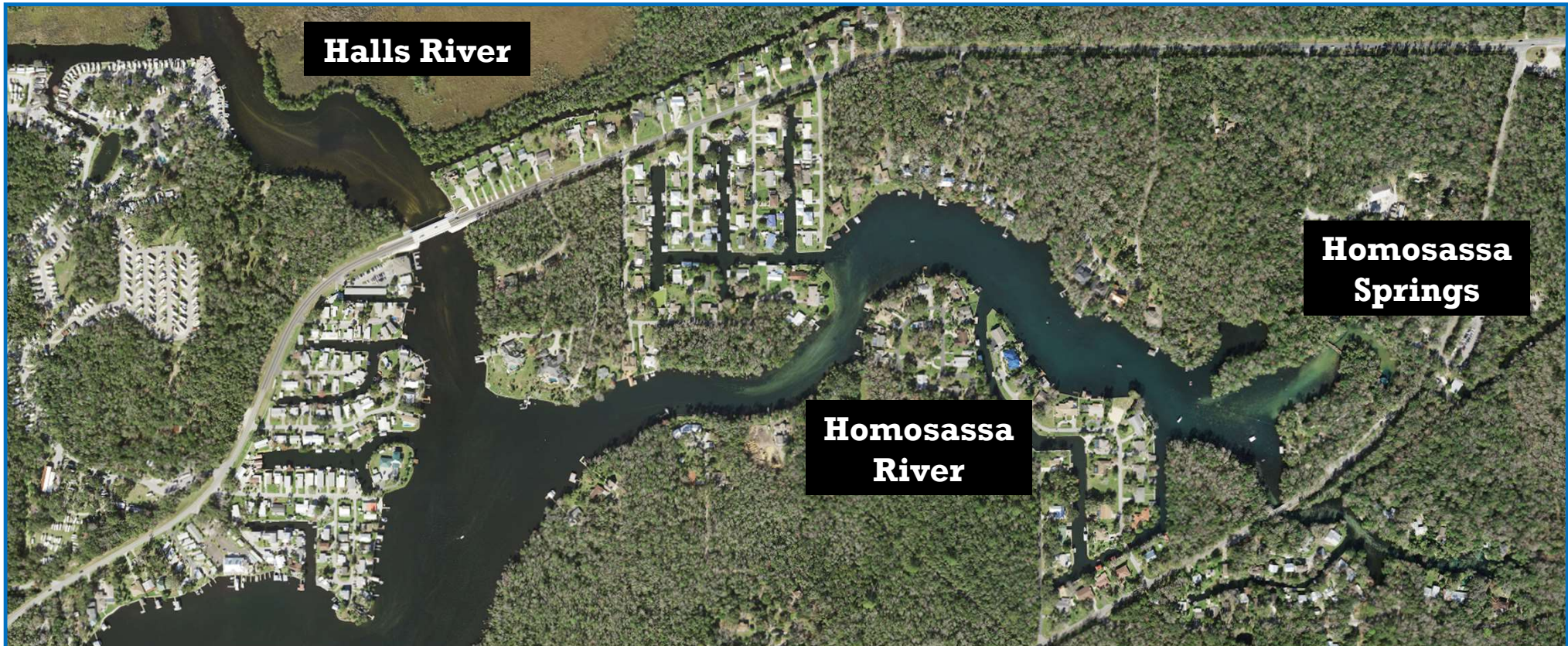
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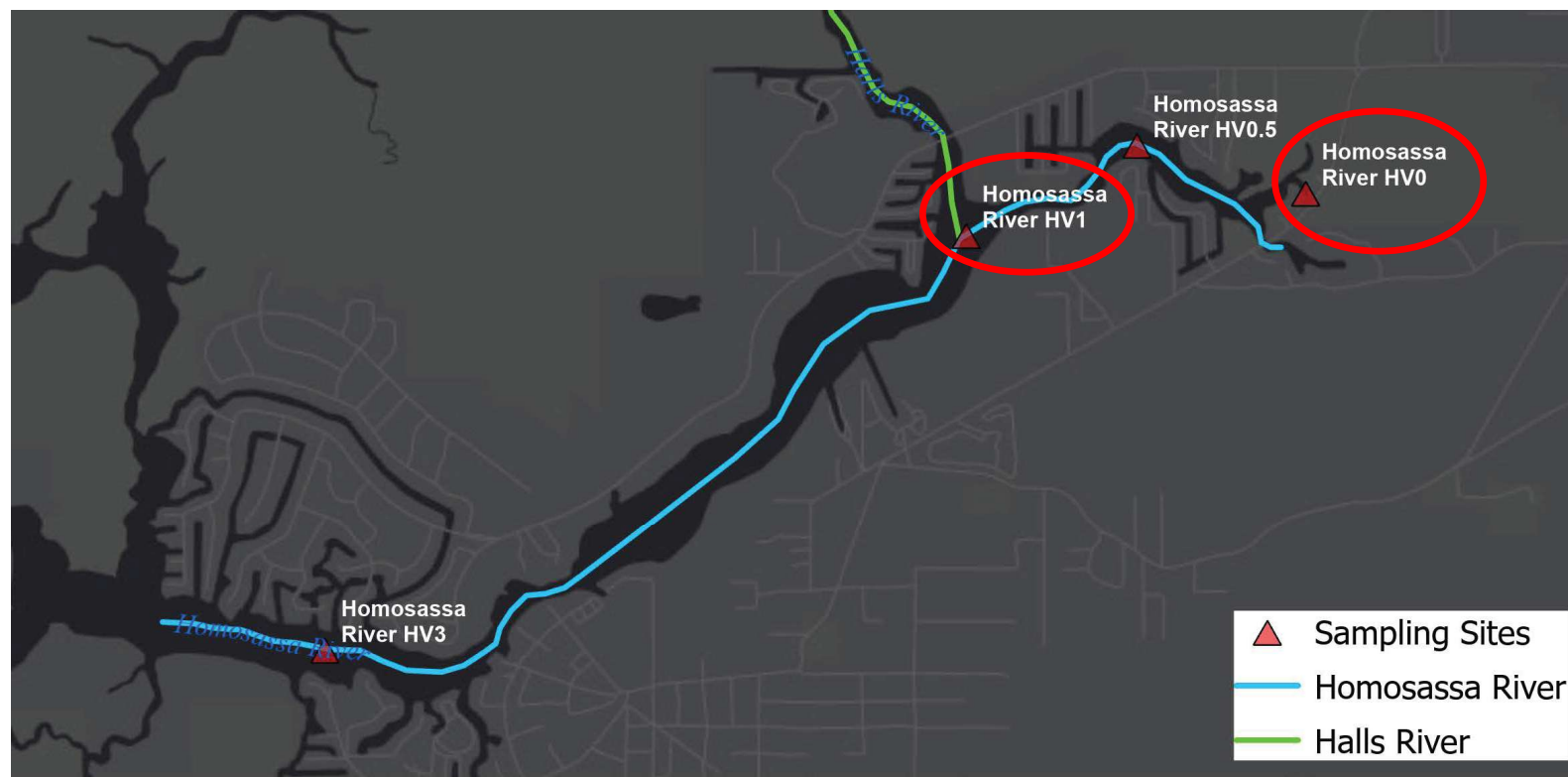
# Q0: Homosassa TWG Discussions

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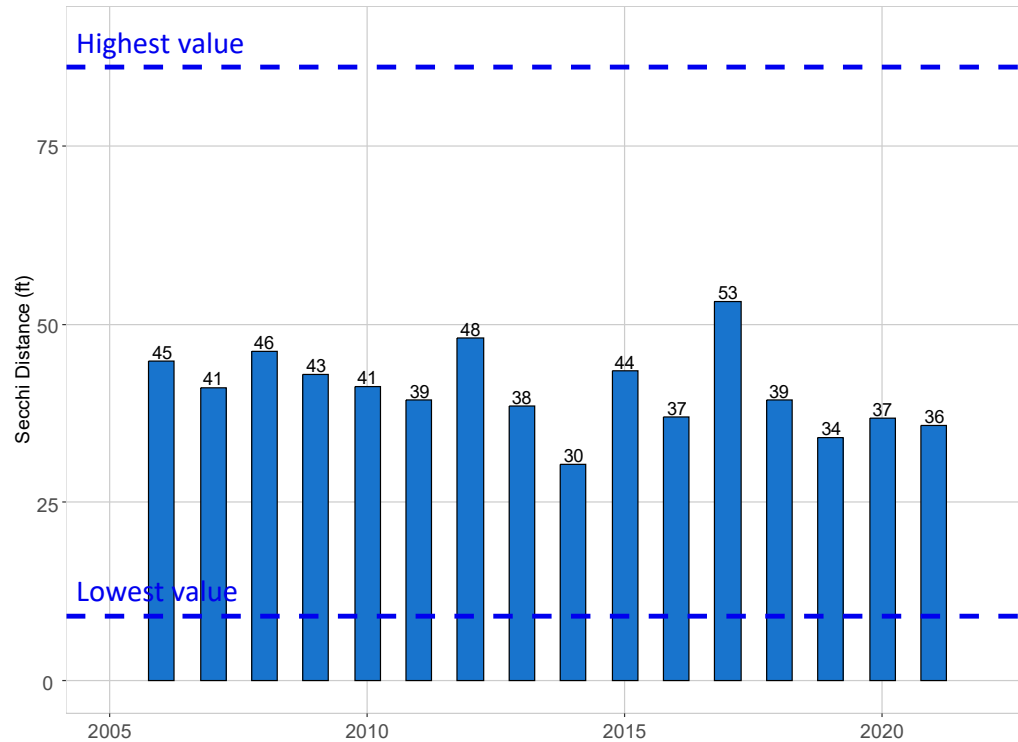
# Q0: Homosassa –water clarity

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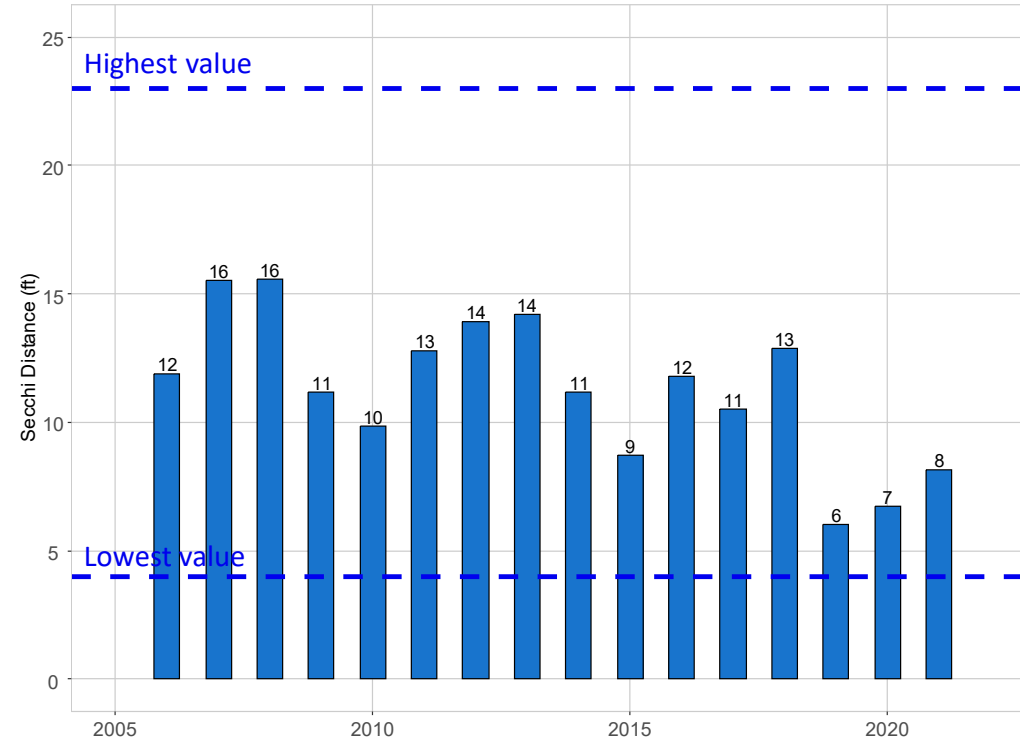
# Q0: Homosassa TWG –water clarity

Mean Water Clarity: Headspring



2006 – 2021 average : 40 ft

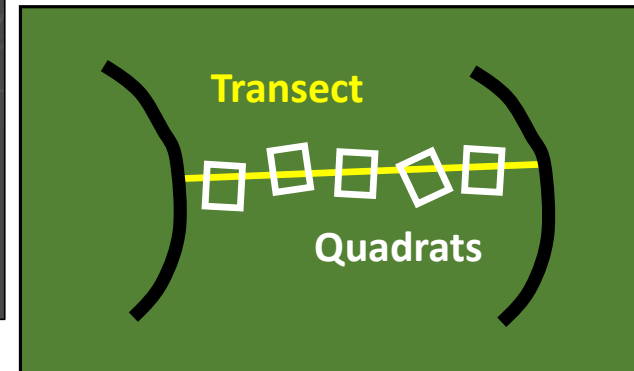
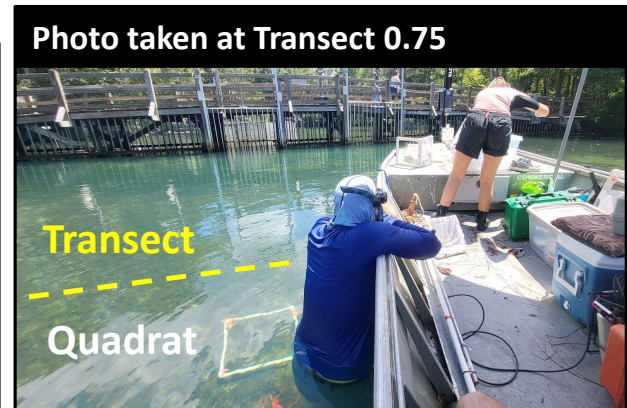
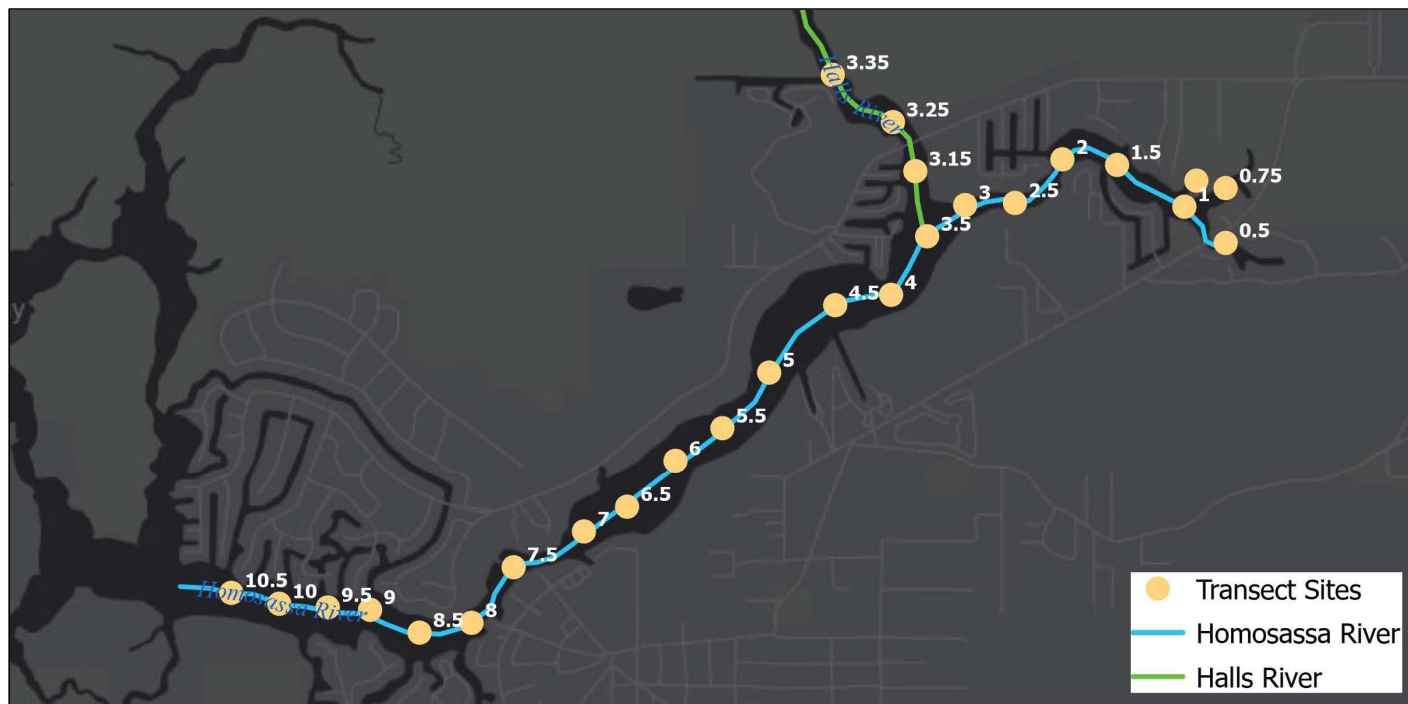
Mean Water Clarity: Middle



2006 – 2021 average: 11 ft



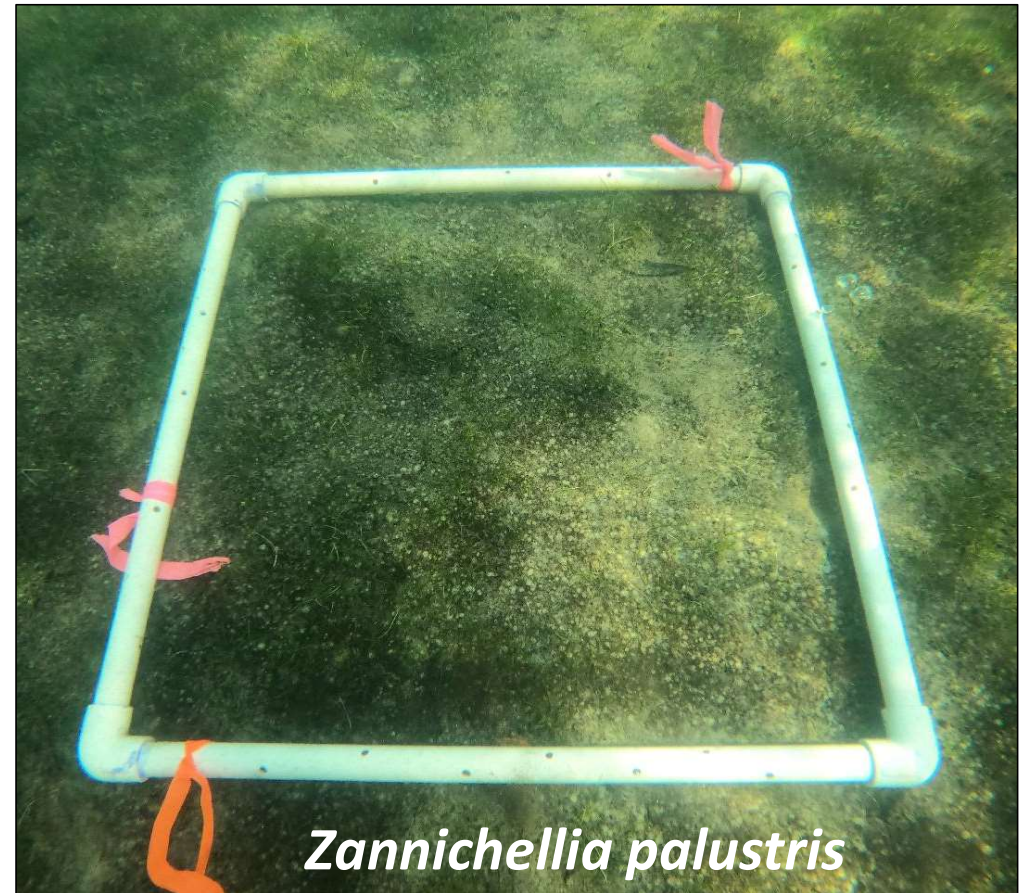
# Q0: Homosassa – natural systems



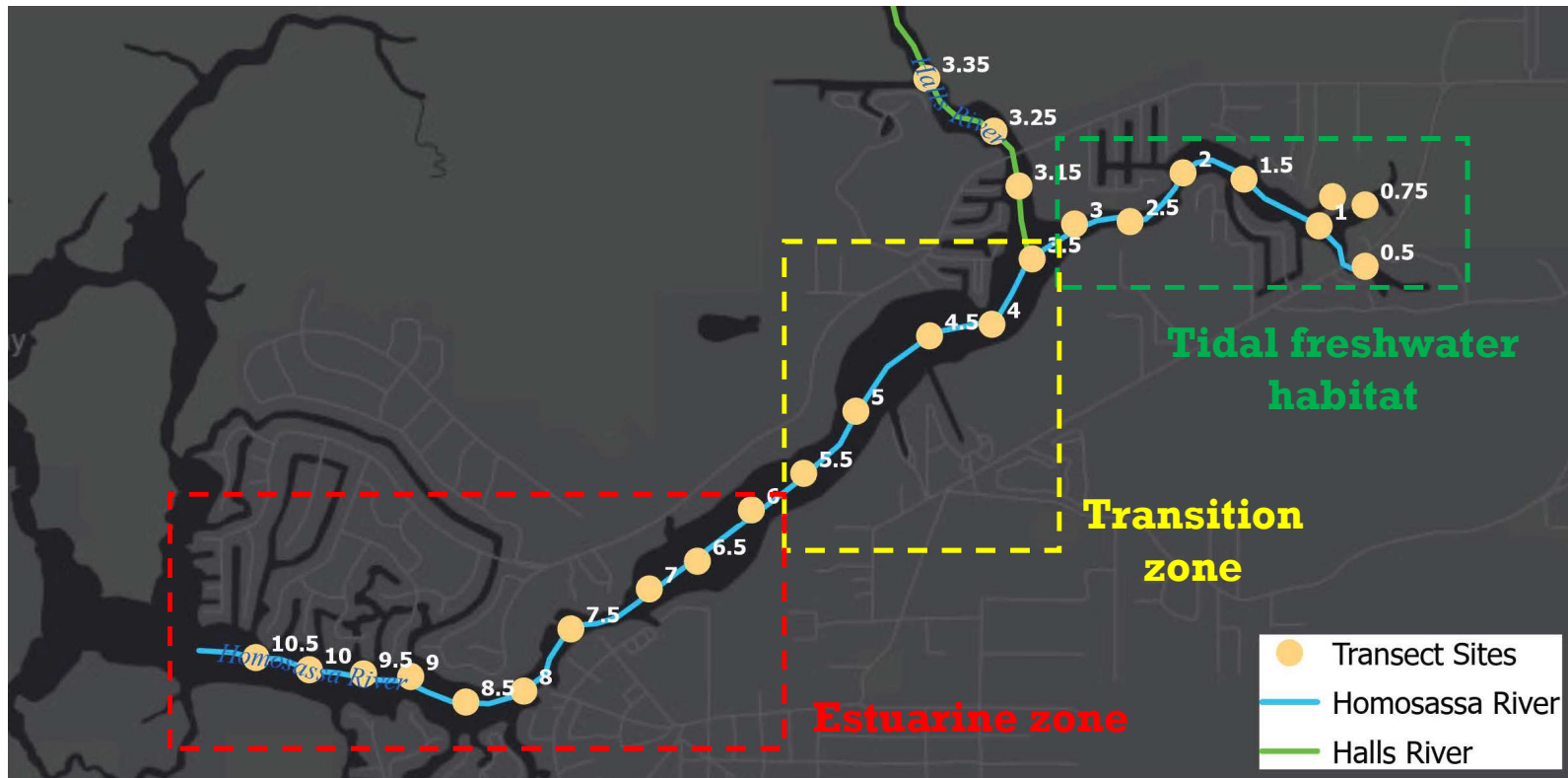


# Q0: Homosassa – natural systems

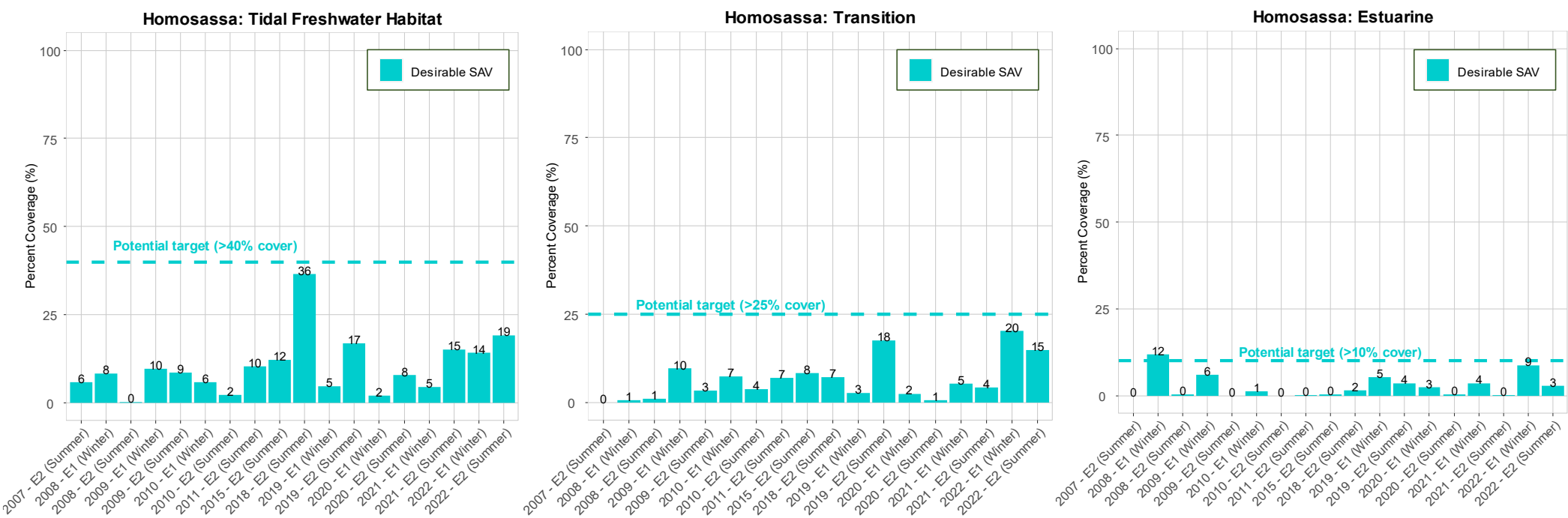
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# Q0: Homosassa – natural systems



# Q0: Homosassa – natural systems





# QO: Homosassa TWG – review

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# Questions?

**Madison Trowbridge, Ph.D.**

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Natural Systems and Restoration Bureau

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Southwest Florida  
*Water Management District*

