Quantifiable Objectives Update
Homosassa River

Chris J. Anastasiou, Ph.D.
Chief Scientist
Natural Systems and Restoration Bureau
Southwest Florida Water Management District

Quantifiable Objectives

Homosassa River Surface Water Improvement and Management (SWIM) Plan

A Comprehensive Conservation and Management Plan

August 2017

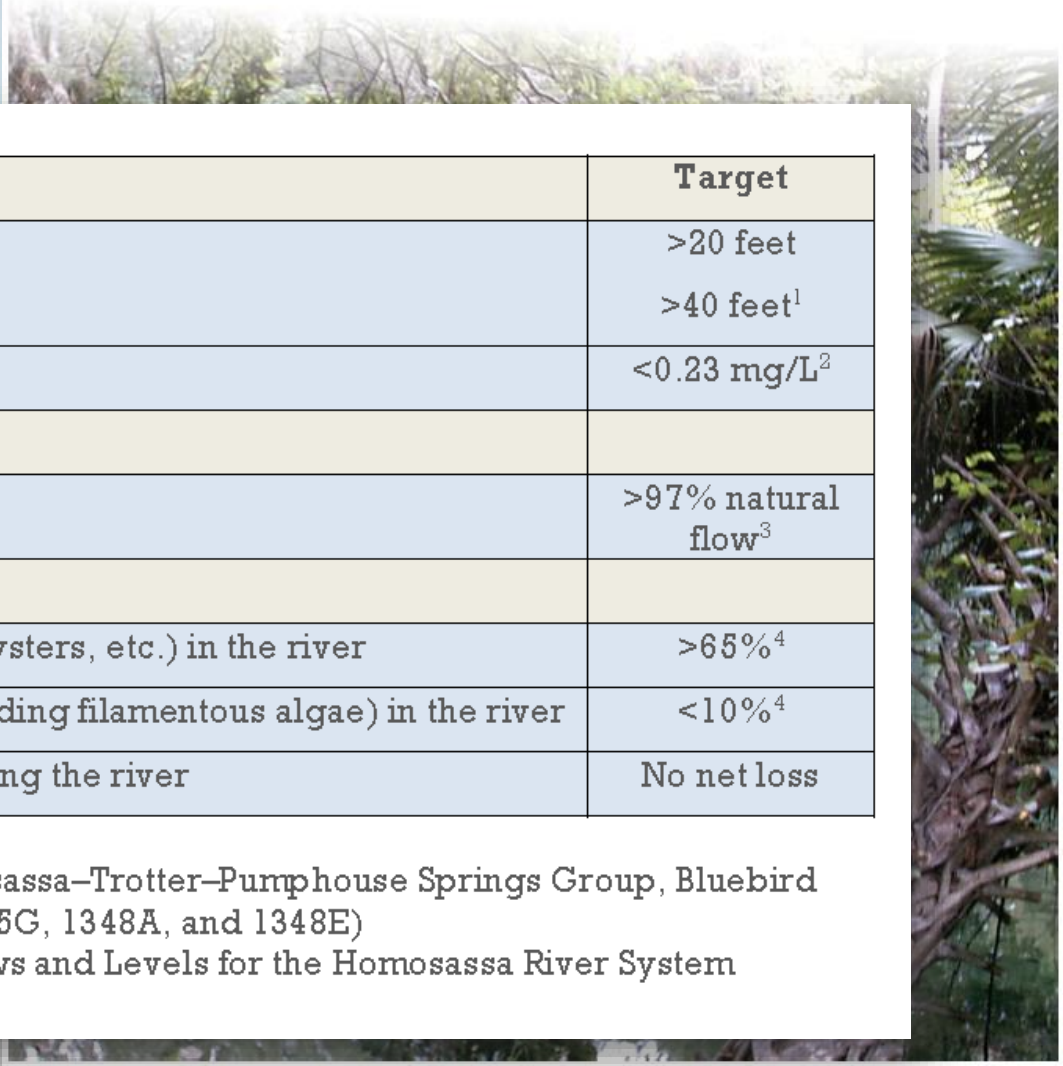


Table 1: Quantifiable Objectives

Water Quality	**Target**
Water clarity – river average	>20 feet
Water clarity – near the headspring	>40 feet[1]
Nitrate concentration in the river	<0.23 mg/L[2]
Water Quantity	
Minimum flow for the river system	>97% natural flow[3]
Natural Systems	
Coverage of desirable benthic habitat (SAV, oysters, etc.) in the river	>65%[4]
Coverage of invasive aquatic vegetation (including filamentous algae) in the river	<10%[4]
No net loss of shoreline in natural condition along the river	No net loss

[1] Based on data presented in Figure 17

[2] Bridger et al. 2014 – Nutrient TMDLs for Homosassa–Trotter–Pumphouse Springs Group, Bluebird Springs, and Hidden River Springs (WBIDs 1345G, 1348A, and 1348E)

[3] SWFWMD 2012 –Recommended Minimum Flows and Levels for the Homosassa River System

[4] Based on data presented in Figure 23

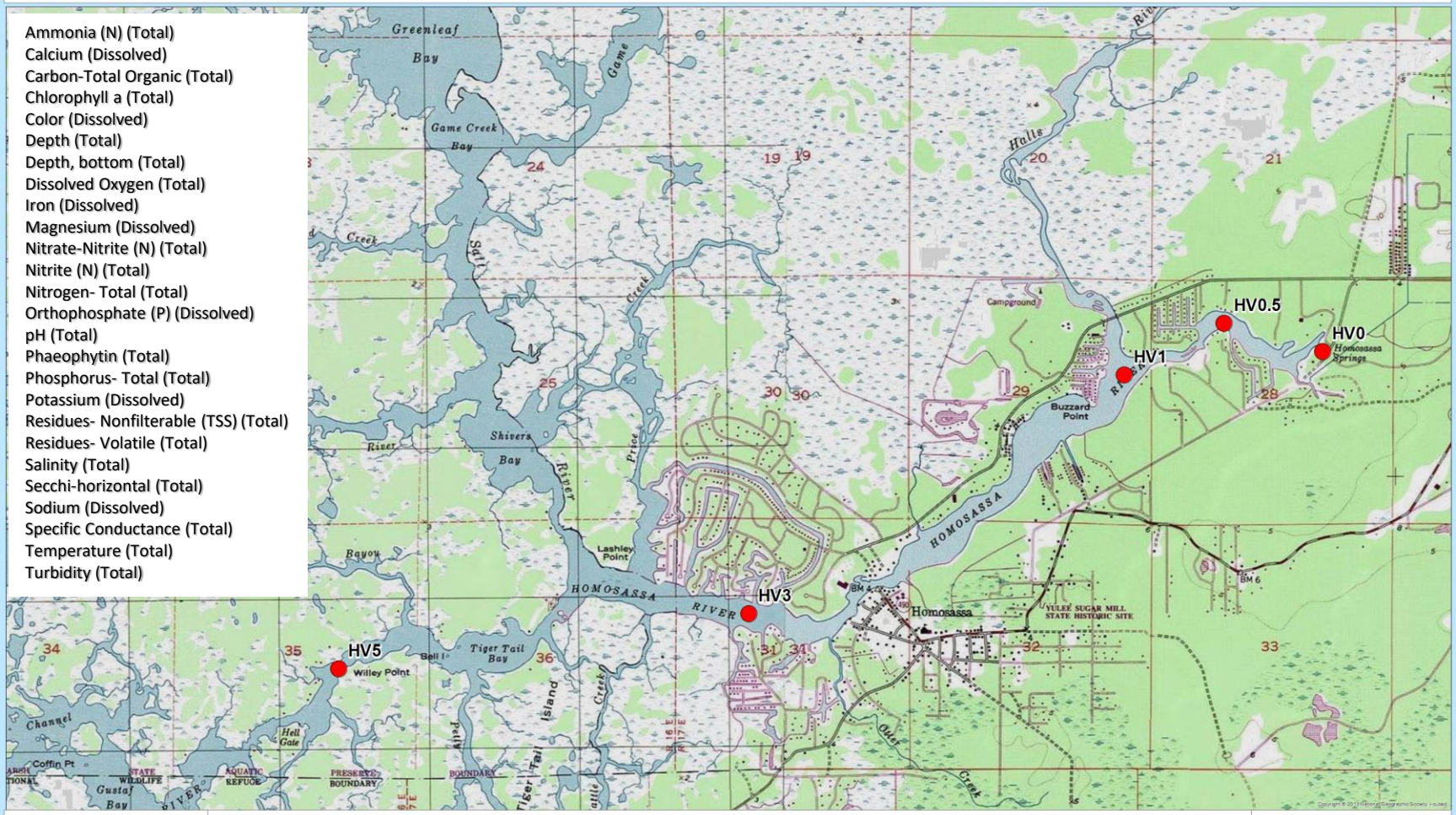
WATER QUALITY

Water Quality
Quantifiable Objectives

- Water Clarity
  - Near Headsprings >40 feet
  - River Average >20 feet
- Nitrogen Concentrations
  - Springs TMDL <0.23mg/L Nitrate

ACTIVE RIVER WATER QUALITY MONITORING STATIONS
HOMOSASSA RIVER

- Ammonia (N) (Total)
- Calcium (Dissolved)
- Carbon-Total Organic (Total)
- Chlorophyll a (Total)
- Color (Dissolved)
- Depth (Total)
- Depth, bottom (Total)
- Dissolved Oxygen (Total)
- Iron (Dissolved)
- Magnesium (Dissolved)
- Nitrate-Nitrite (N) (Total)
- Nitrite (N) (Total)
- Nitrogen- Total (Total)
- Orthophosphate (P) (Dissolved)
- pH (Total)
- Phaeophytin (Total)
- Phosphorus- Total (Total)
- Potassium (Dissolved)
- Residues- Nonfilterable (TSS) (Total)
- Residues- Volatile (Total)
- Salinity (Total)
- Secchi-horizontal (Total)
- Sodium (Dissolved)
- Specific Conductance (Total)
- Temperature (Total)
- Turbidity (Total)



Southwest Florida Water Management District

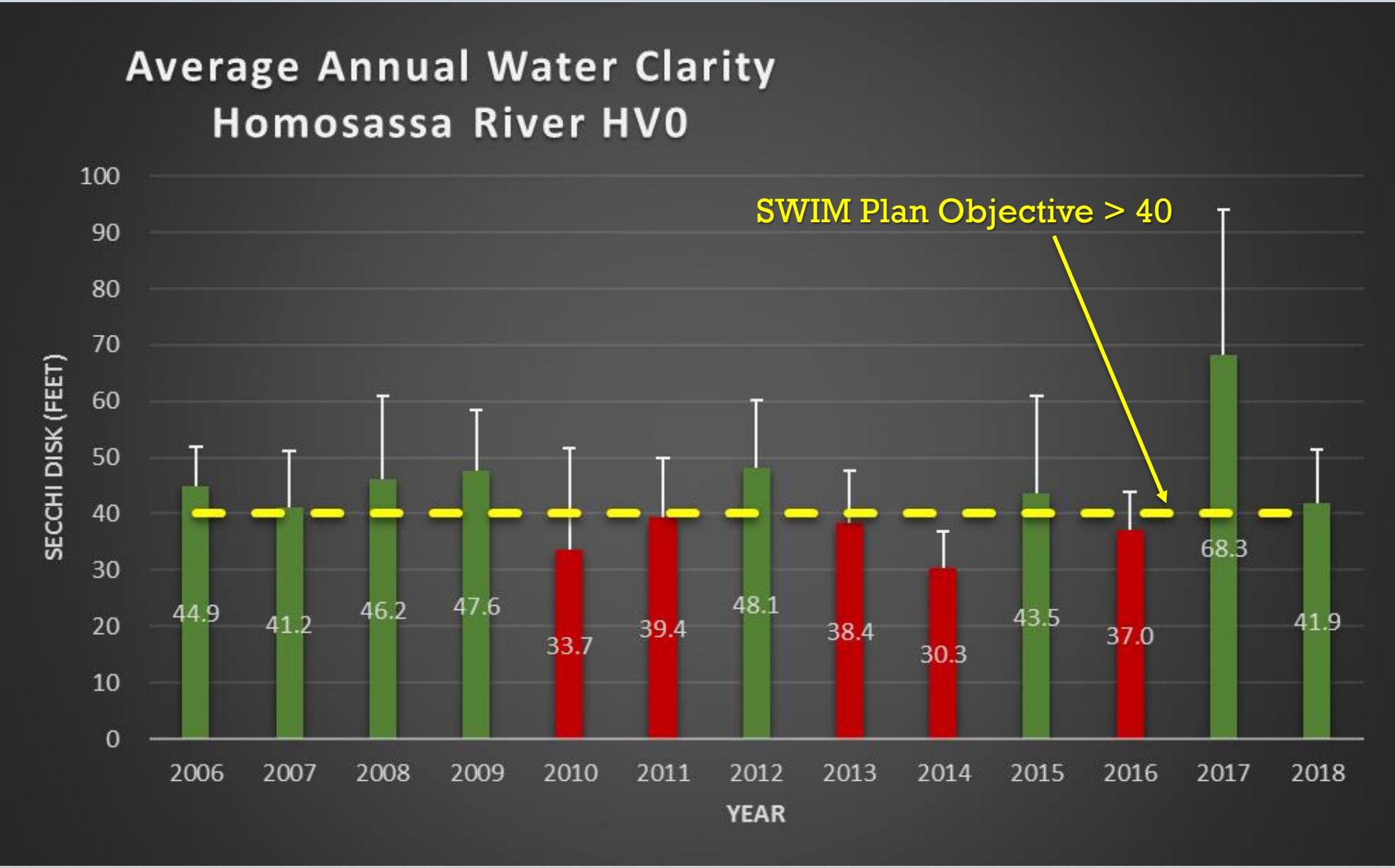
(1) Period of Recod for HV Stations: 2005-Present

Grab samples are collected irrespective of tide. Sample frequency is quarterly. Samples are analyzed at the SWFWMDLaboratory in Brooksville, FL. Field measurements are taken concurrently with grab samples using field deployable sondes.

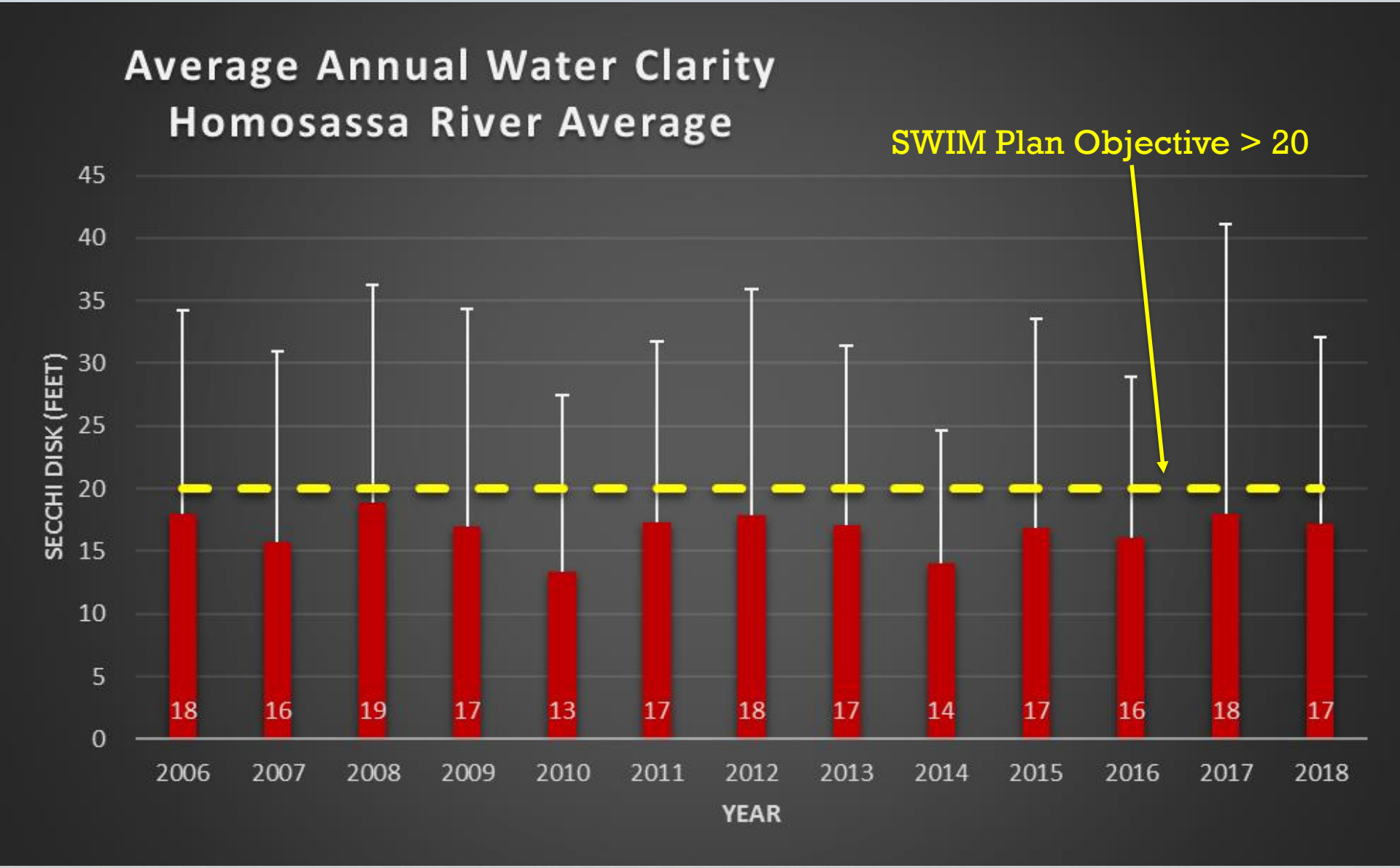
Natural Systems & Restoration
15 OCT 2018
Aerial Year 2017

0 0.15 0.3 0.6 Miles

Water Quality Quantifiable Objective - Clarity



Water Quality Quantifiable Objective - Clarity



ACTIVE SPRINGS WATER QUALITY MONITORING STATIONS (GRAB SAMPLES)
HOMOSASSA RIVER

- Ammonia (N) (Total)
- Calcium (Dissolved)
- Carbon-Total Organic (Total)
- Chlorophyll a (Total)
- Color (Dissolved)
- Depth (Total)
- Depth, bottom (Total)
- Dissolved Oxygen (Total)
- Iron (Dissolved)
- Magnesium (Dissolved)
- Nitrate-Nitrite (N) (Total)
- Nitrite (N) (Total)
- Nitrogen- Total (Total)
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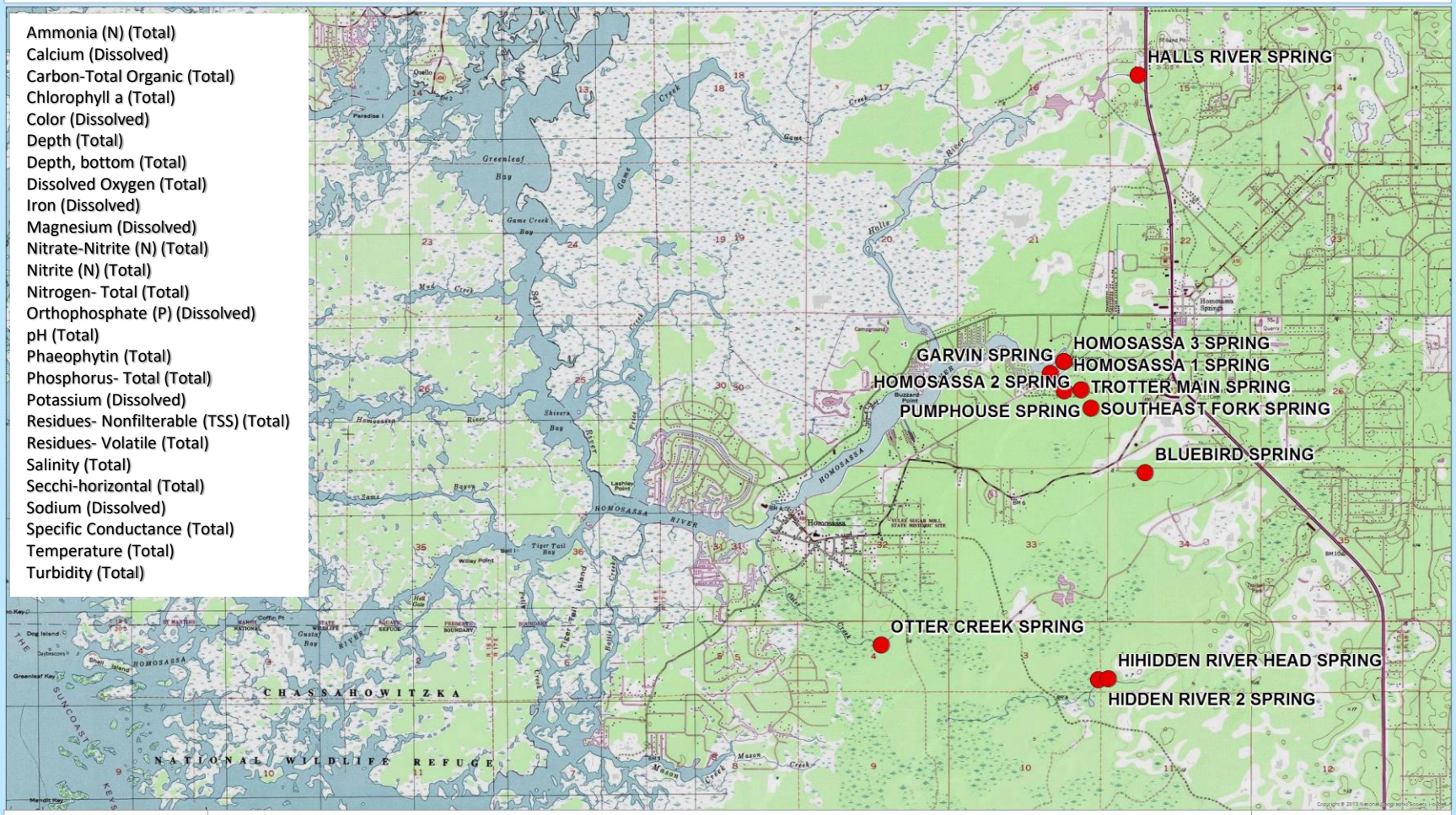


Southwest Florida Water Management District

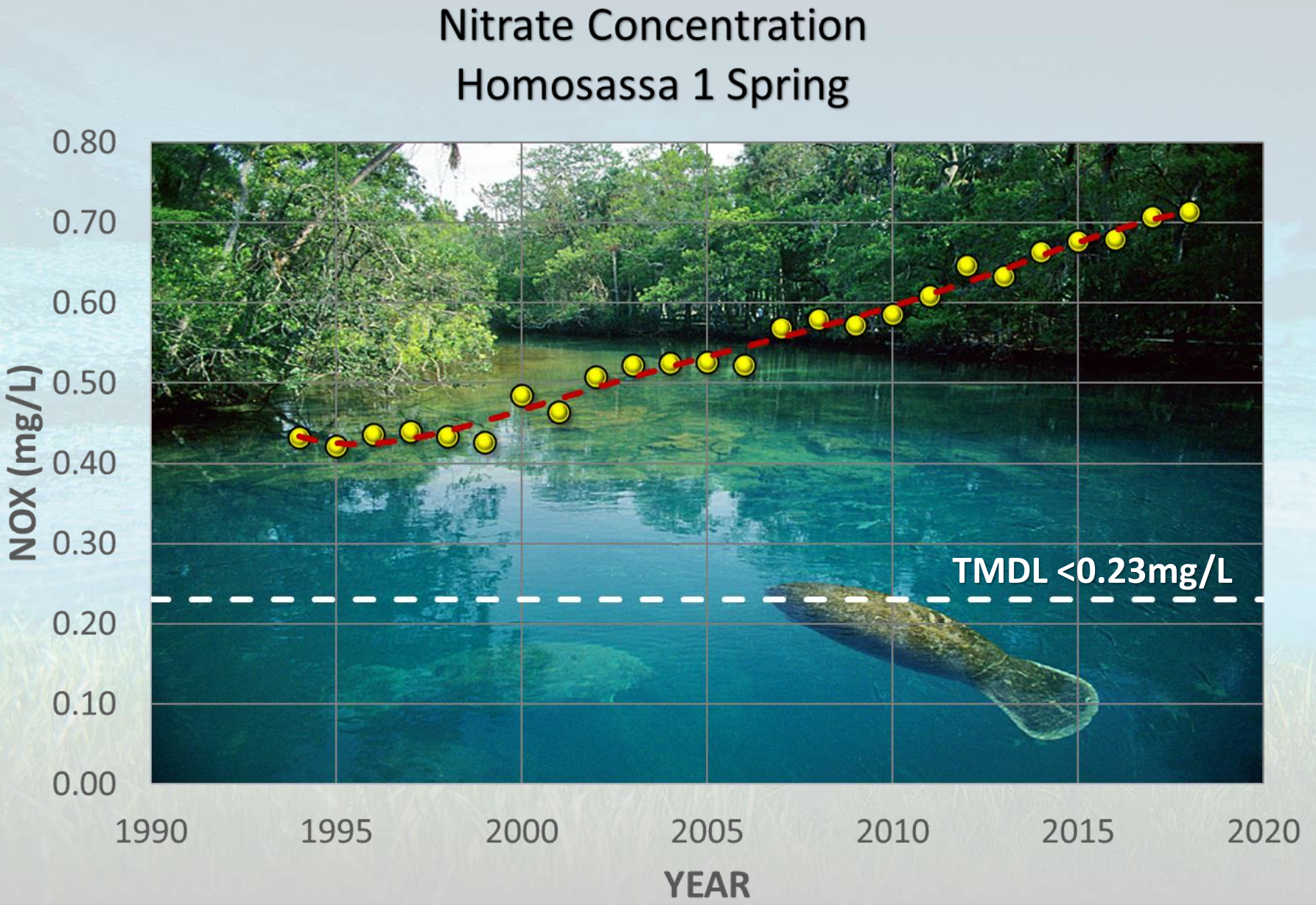
(1) Period of Recod for Pumphouse, Trotter, and Homosassa 1, 2, 3: 1993-Present
(2) Preiod of Record for Bluebird: 2007-Present
(3) Period of Record for Otter Creek: 2011-Present
(4) Period of Record for Hall River: 2010-Present
(5) Period of Record for Hidden River Head and Hidden River 2: 1994-Present

Grab samples are collected AT or NEAR LOW TIDE within the spring vent via sample tube and/or sample pump. Samples are analyzed at the SWFWMD Laboratory in Brooksville, FL. Field measurements are taken in concert with grab samples using field deployable sondes.

Natural Systems & Restoration
18 JAN 2018
Aerial Year 2017

0 0.225 0.45 0.9 Miles

Water Quality Quantifiable Objective - Nitrate



Water Quantity
Quantifiable Objective

- Minimum Flow for the River > 97% of Natural Flow
- **Maintaining 99% of Natural Flow**

NATURAL SYSTEMS

Natural Systems Quantifiable Objectives

- Coverage of Desirable Benthic Habitat
  - > 65% Coverage

- Coverage of Invasive Aquatic Vegetation
  - <10% Coverage

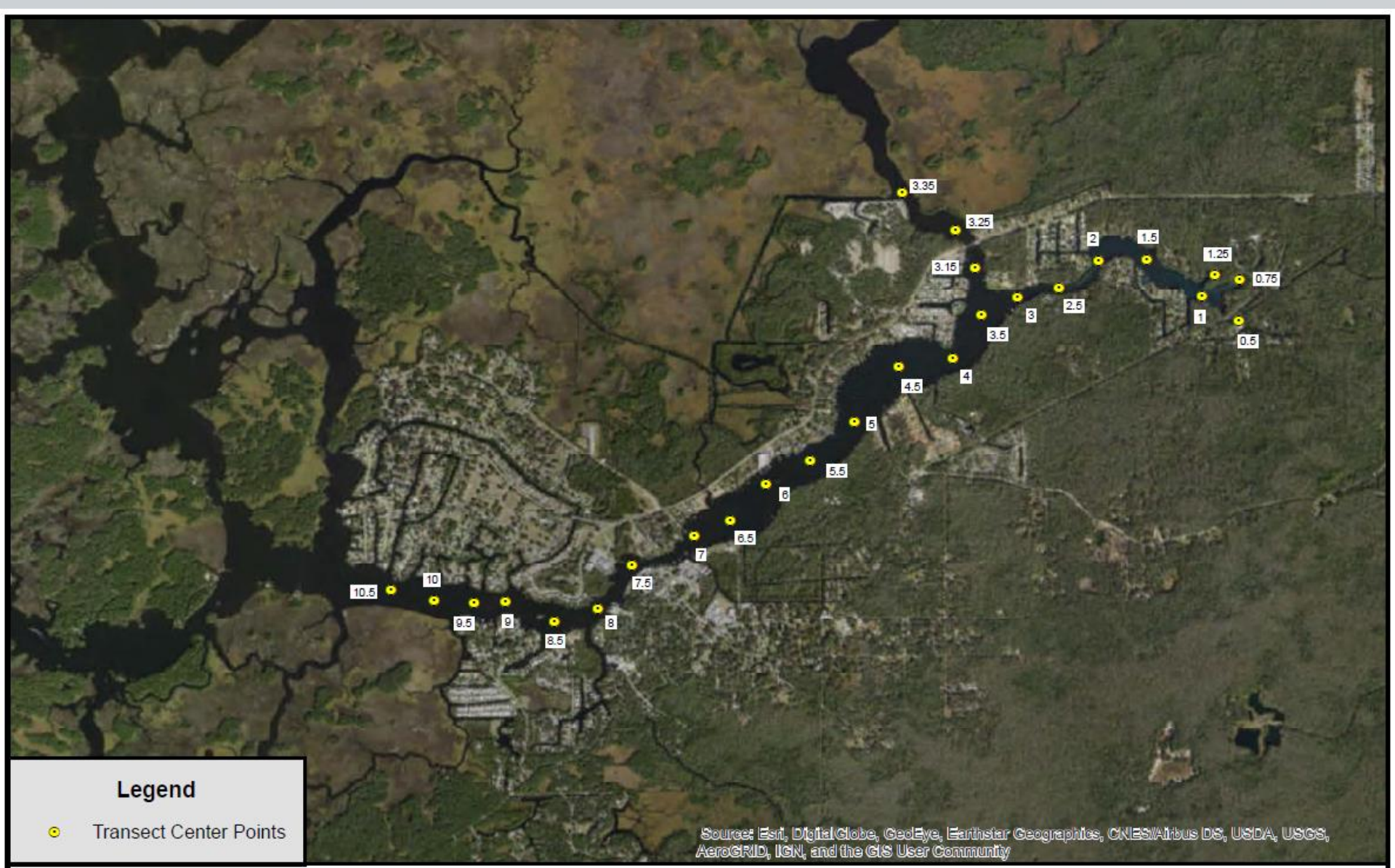
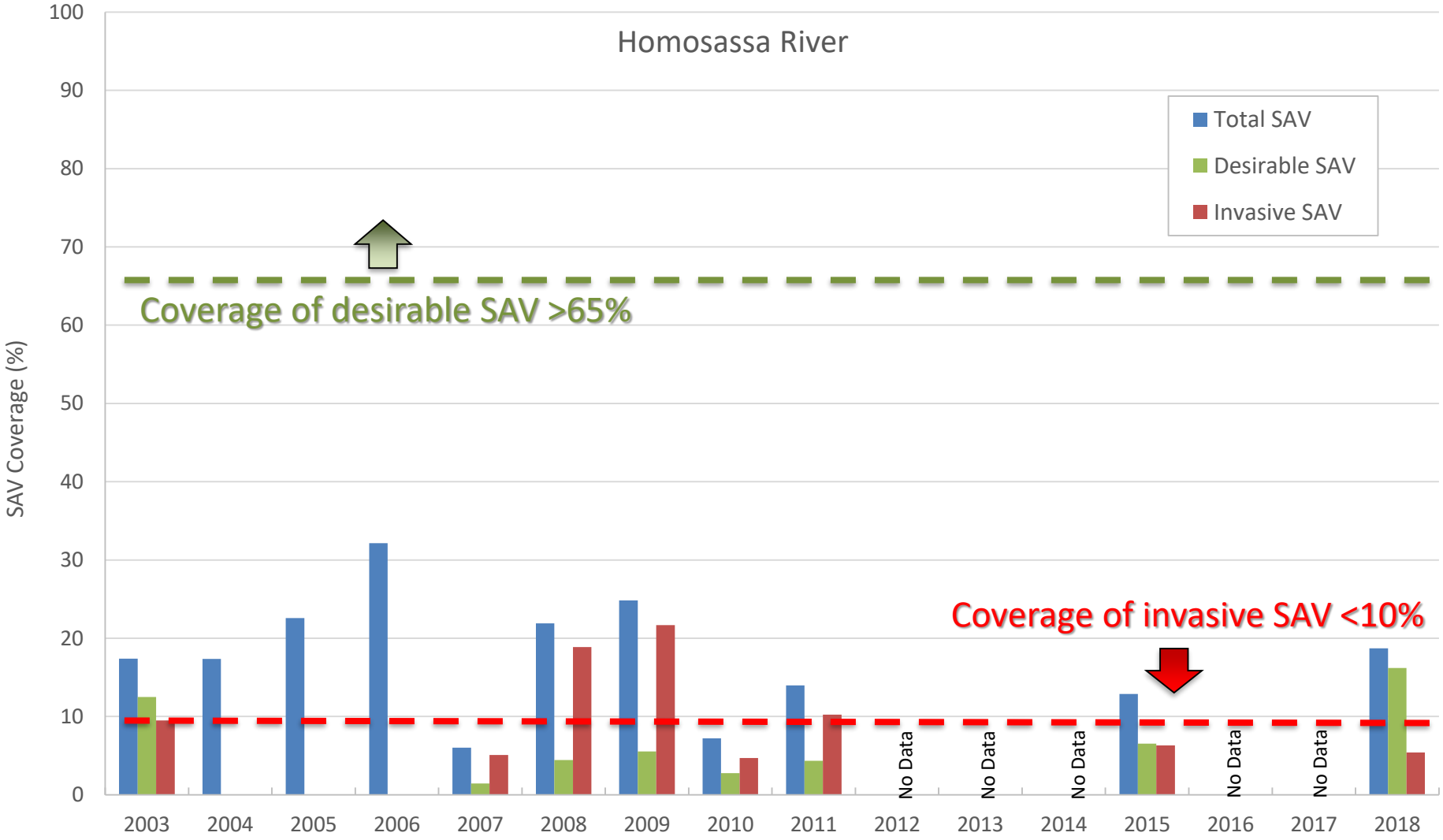


Figure 1-4.
Homosassa River Showing Sampling Transect Locations
Citrus County, Florida

Source: Water & Air Research, Inc., 2018.

water & air RESEARCH, INC.

SAV % Cover 2003 – 2018



NATURAL SYSTEMS

Natural Systems Quantifiable Objectives

- No net loss of shoreline in natural condition along the river, BUT…
- Significant ecological shifts are occurring, especially in the lower river

Quantifiable Objectives

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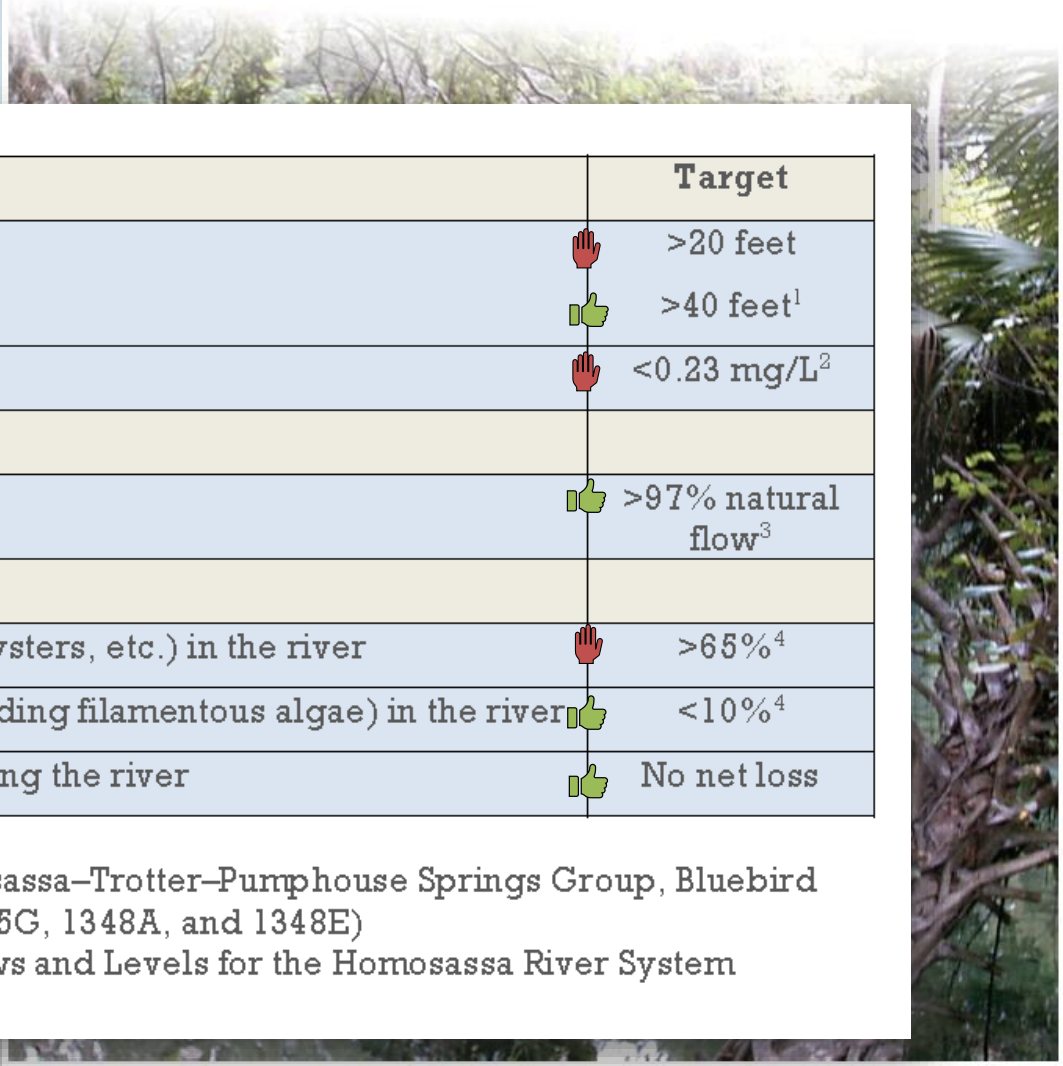

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