

Florida Department of Environmental Protection



Water Quality Evaluation and TMDL Program

Nutrient TMDL for Jackson Blue Spring (WBID 180Z) Merritts Mill Pond (WBID 180A)

April 22, 2014





Presentation Outline

- 1. What is a TMDL**
- 2. Verified List of Impaired Waters**
- 3. Water Quality Trends**
- 4. Water Quality Targets**
- 5. TMDL Allocation**
- 6. Questions**



What is a TMDL?

Total

Maximum

Daily

Load

- Establishes maximum amount of a pollutant that a water body can assimilate without causing exceedances of water quality standards (water quality criteria & designated uses)



What does proposing a TMDL mean?

- It means we are proposing a formal target for achieving the water quality component of restoration.
- When we identify a waterbody as impaired (not meeting it's standard), we use the *Best Available Science* and *Local Knowledge* to come up with this target.



Who Participated?



Citizens

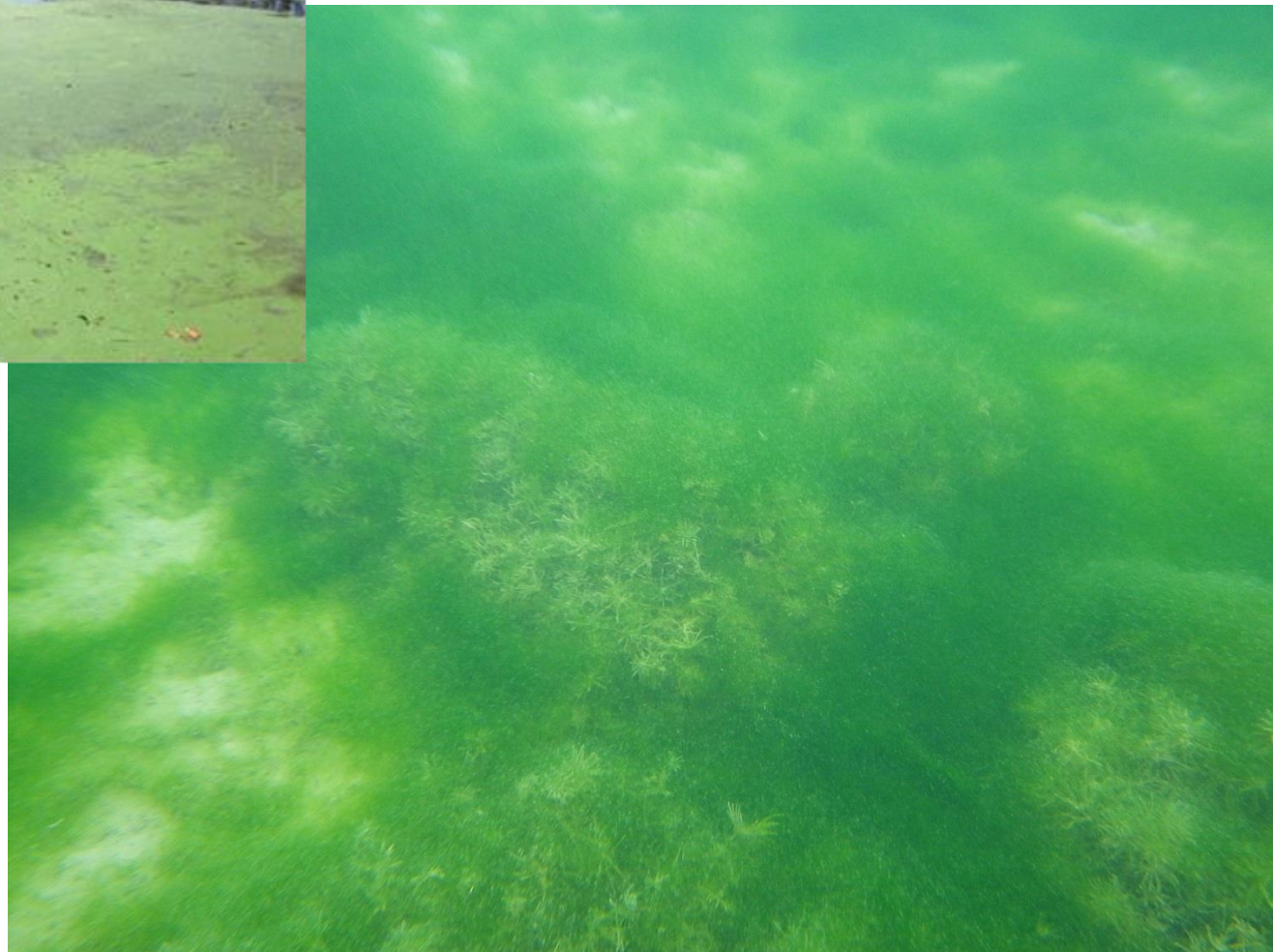
Public Workshop
Dec. 5, 2012
Chipola College



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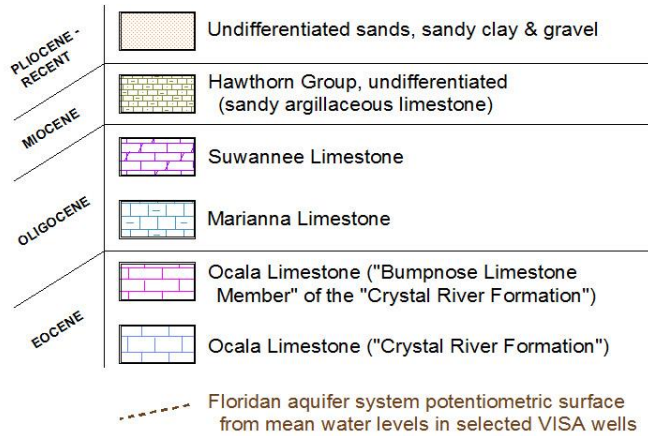




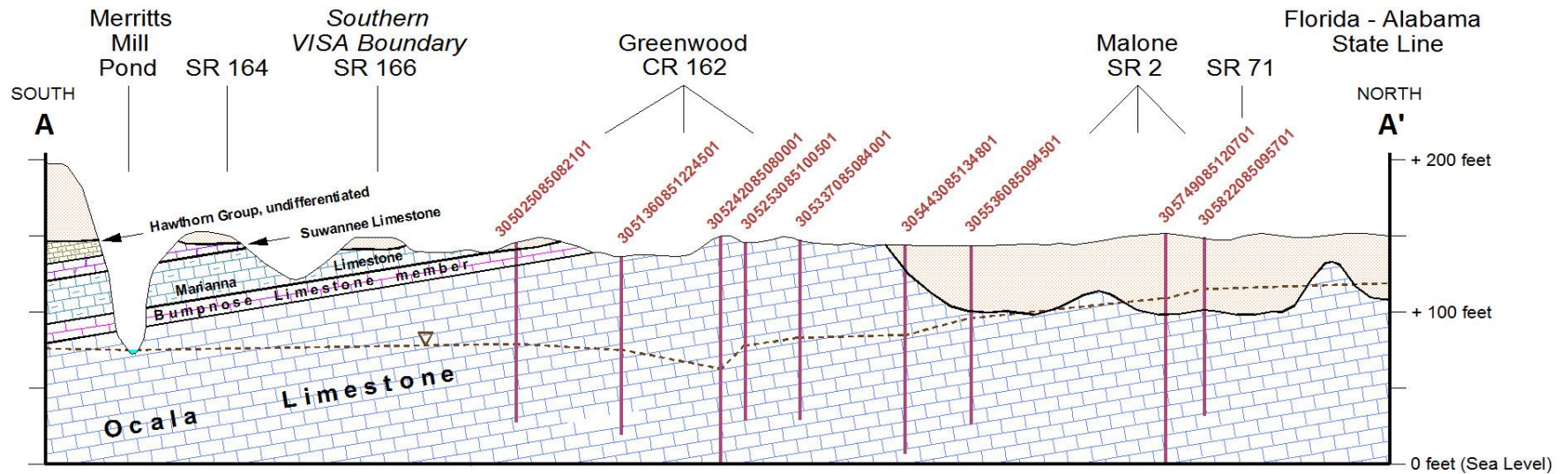
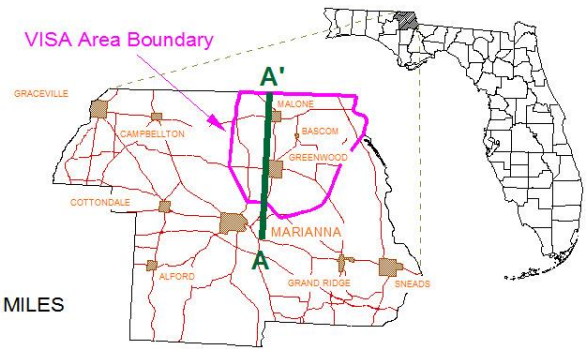
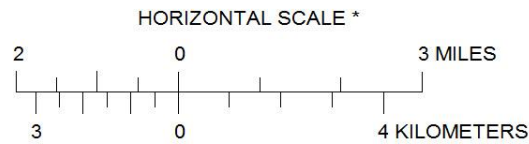
Verified Impairments

2009 Impaired Waters List

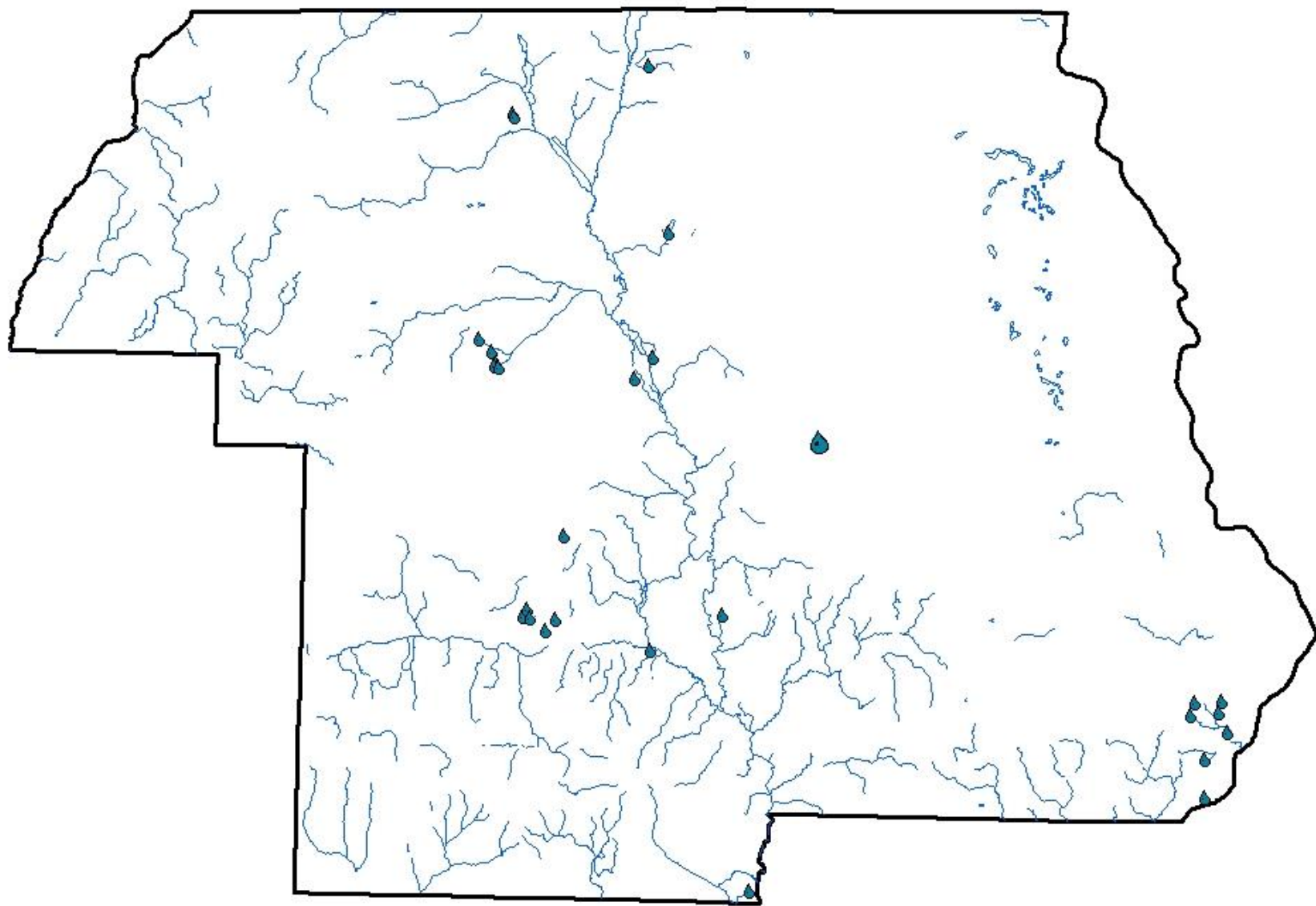
WBID	Waterbody Segment	Parameters Assessed Using the IWR	Priority for TMDL Development	Projected Year of TMDL Development
180Z	Jackson Blue Spring	Nutrients (algal mats by association with WBID 180A)	Medium	2012
180A	Merritts Mill Pond	Nutrients (algal mats)	Medium	2012

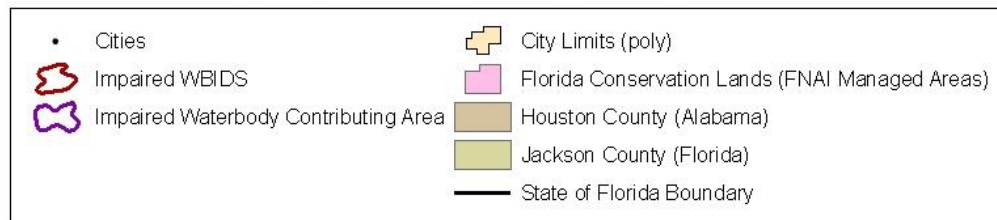
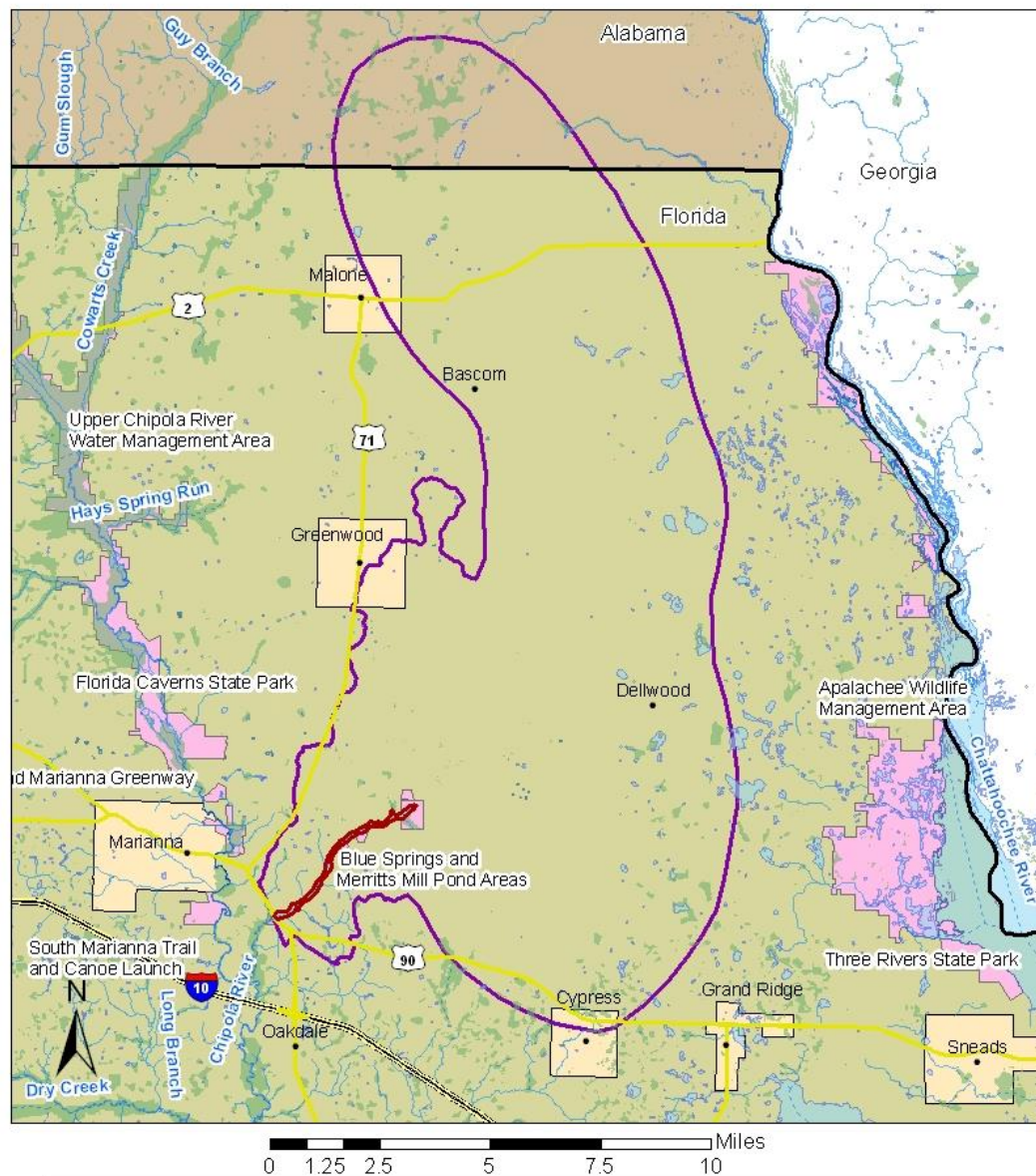


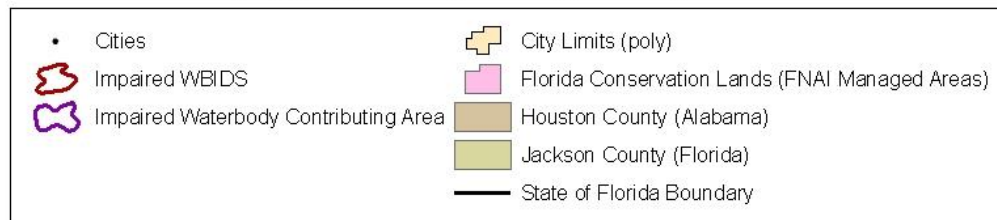
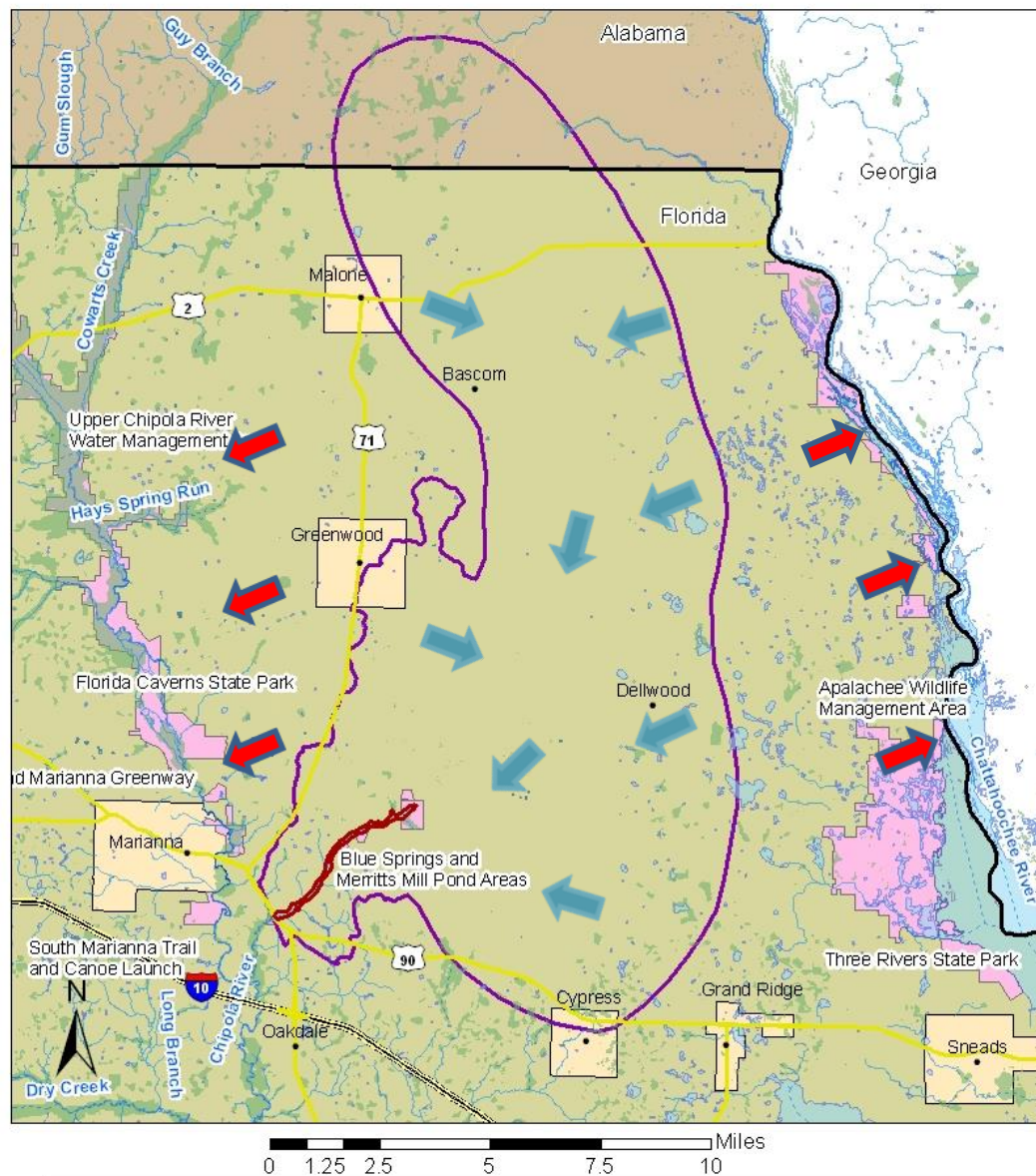
Location of Section A - A' in Jackson County:



* Vertical scale exaggerated. Section modified from Moore (1955).





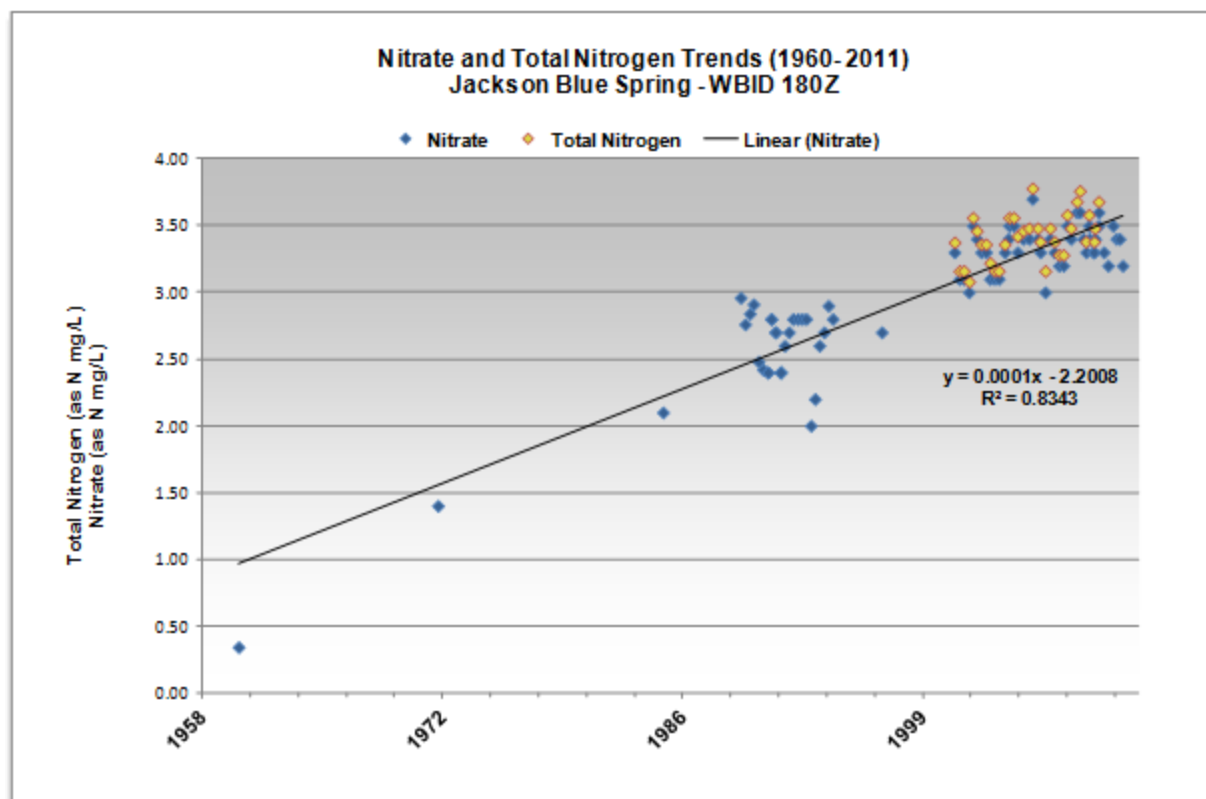




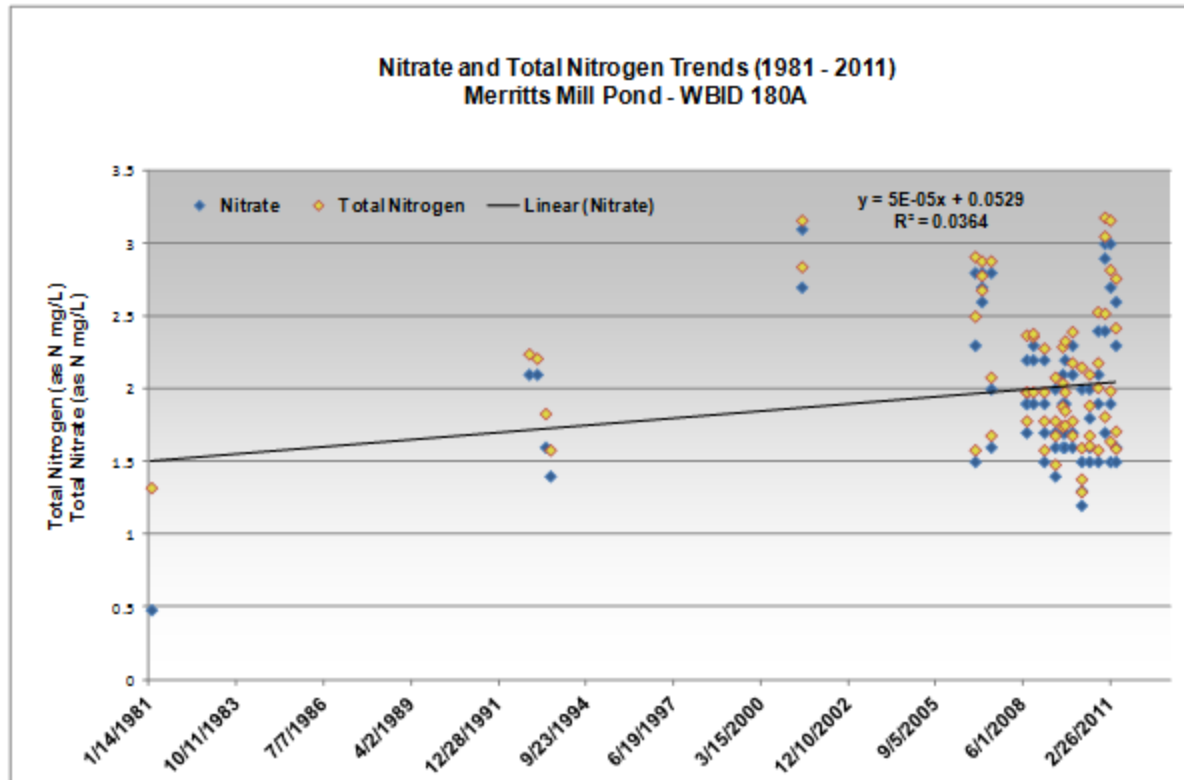
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Jackson Blue Trends



Merritts Mill Pond Trends





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Nitrogen WQ Targets

The target nitrate concentration for Jackson Blue Spring and Merritts Mill Pond was selected to be protective, such that it would precede the change in periphyton growth.

0.35 mg/L

This is proposed as a monthly average as the periphyton sampling period was based on a 28 day deployment and the response of algae to nutrients, is on the order of days to weeks.



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Representation of TMDL Allocations

WBID	Parameter	TMDL (mg/L)	TMDL % Reduction	Wasteload Allocation for Wastewater ¹	Wasteload Allocation for NPDES Stormwater% Reduction ¹	LA % Reduction	MOS
Jackson Blue Spring (WBID 180Z), Merritts Mill Pond (WBID 180A)	Nitrate as monthly average	0.35	90%	N/A	N/A	90%	Implicit



Reassessment of the TMDL

Once the target concentration is consistently achieved, the WBID will be re-evaluated to determine if an imbalance of flora and fauna still exists as a result of algal smothering.

If such a condition still exists, the TMDL will be reassessed as part of the Department's watershed assessment cycle.

The target concentration may be changed if the Department determines that further reductions are needed to address the imbalance.

The purpose of a TMDL is to set a pollutant reduction goal that, if achieved, will result in attainment of the designated uses for that waterbody.



For More Information on the TMDL

TMDL website:

<http://www.dep.state.fl.us/water/tmdl/index.htm>

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