



Florida Department of Environmental Protection

Jackson Blue Basin Management Action Plan (BMAP)

March 7, 2018

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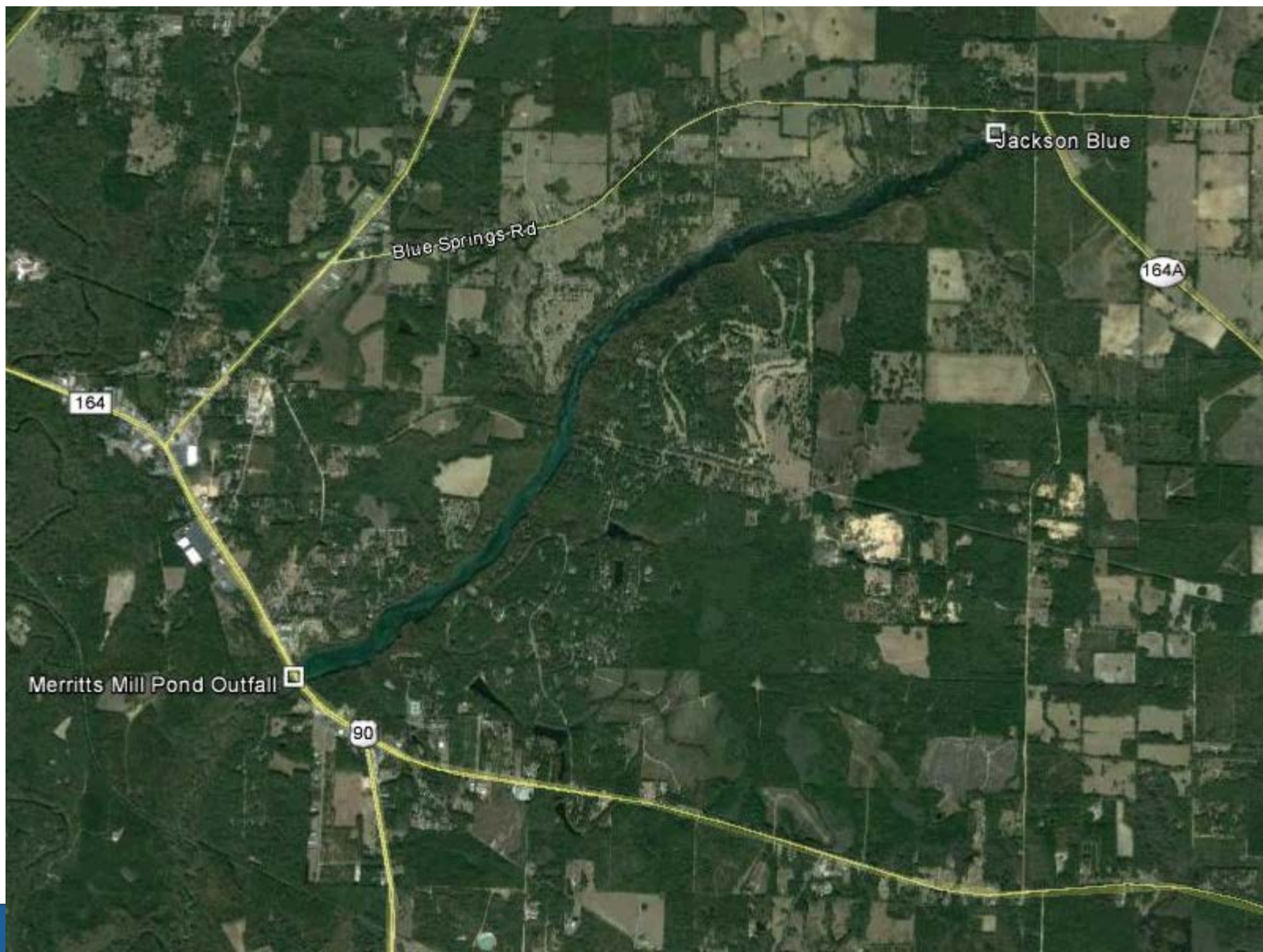
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Jackson Blue and Merritts Mill Pond





Water Quality Framework

Monitor and report progress annually

Adapt and change – new statewide annual report

Collect data

Analyze and verify

List “impaired” waters

REPEAT

Measure success and adapt

Set water quality standards

Monitor water quality

Determine pollution problems

Excessive nutrients

Bacteria, Metals, and Other Impairments

Establish restoration goals (TMDLs)

Gather additional data

Evaluate water quality

Adopt pollutant reduction targets

Work with community leaders

Develop and implement restoration plans (BMAPs)

Allocate responsibilities

Identify projects

- Infrastructure
- Best Management Practices (BMPs)

Establish schedules

Identify success criteria



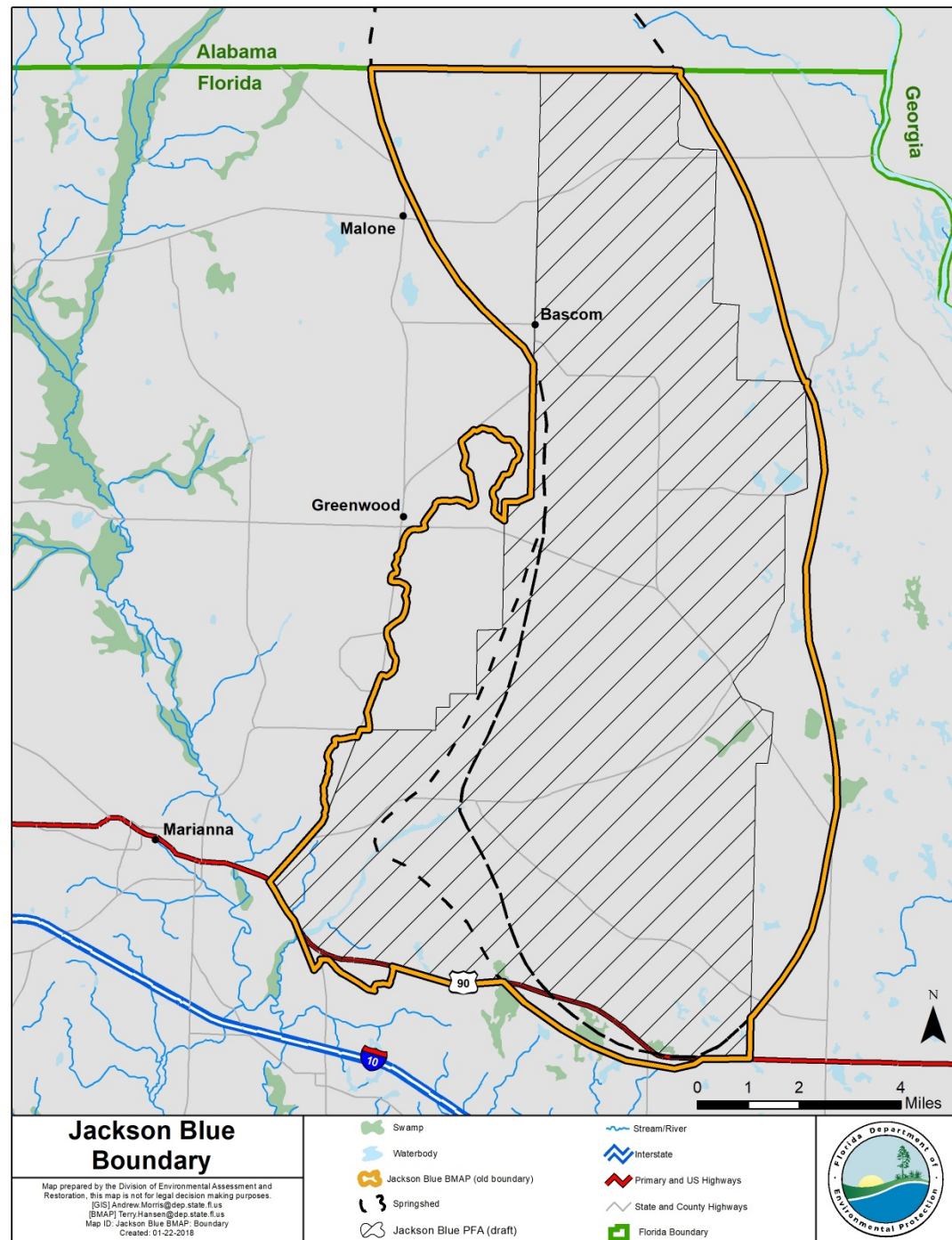
BMAP Area

Total contributing area:

154 square miles

- 8 % in Alabama
- 92 % in Florida

BMAP addresses Florida portion





Jackson Blue Total Maximum Daily Load (TMDL)

- TMDL report issued in January 2013
- Spring and Mill Pond impaired for excessive algae
- TMDL is 0.35 milligrams per liter (mg/L) nitrate as a monthly average
- BMAP goal is an unimpaired waterbody

Waterbody Identification (WBID)	Parameter	TMDL (mg/L)
Jackson Blue Spring (WBID 180Z), Merritts Mill Pond (WBID 180A)	Nitrate, as monthly average	0.35



Regulatory Framework

The process for preparing BMAPs is found in:

- Section 403.067, Florida Statutes (F.S.), known as the “Florida Watershed Restoration Act”
- The 2016 Florida Springs and Aquifer Protection Act lists requirements for BMAPs for Outstanding Florida Springs (OFS)
- PFA Report and NSILT developed by DEP for Jackson Blue Spring

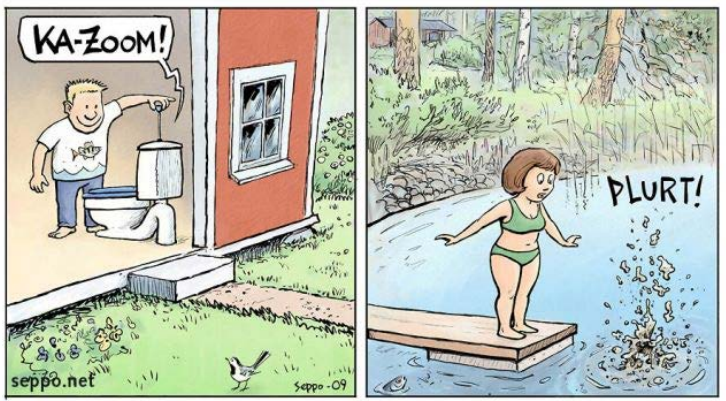
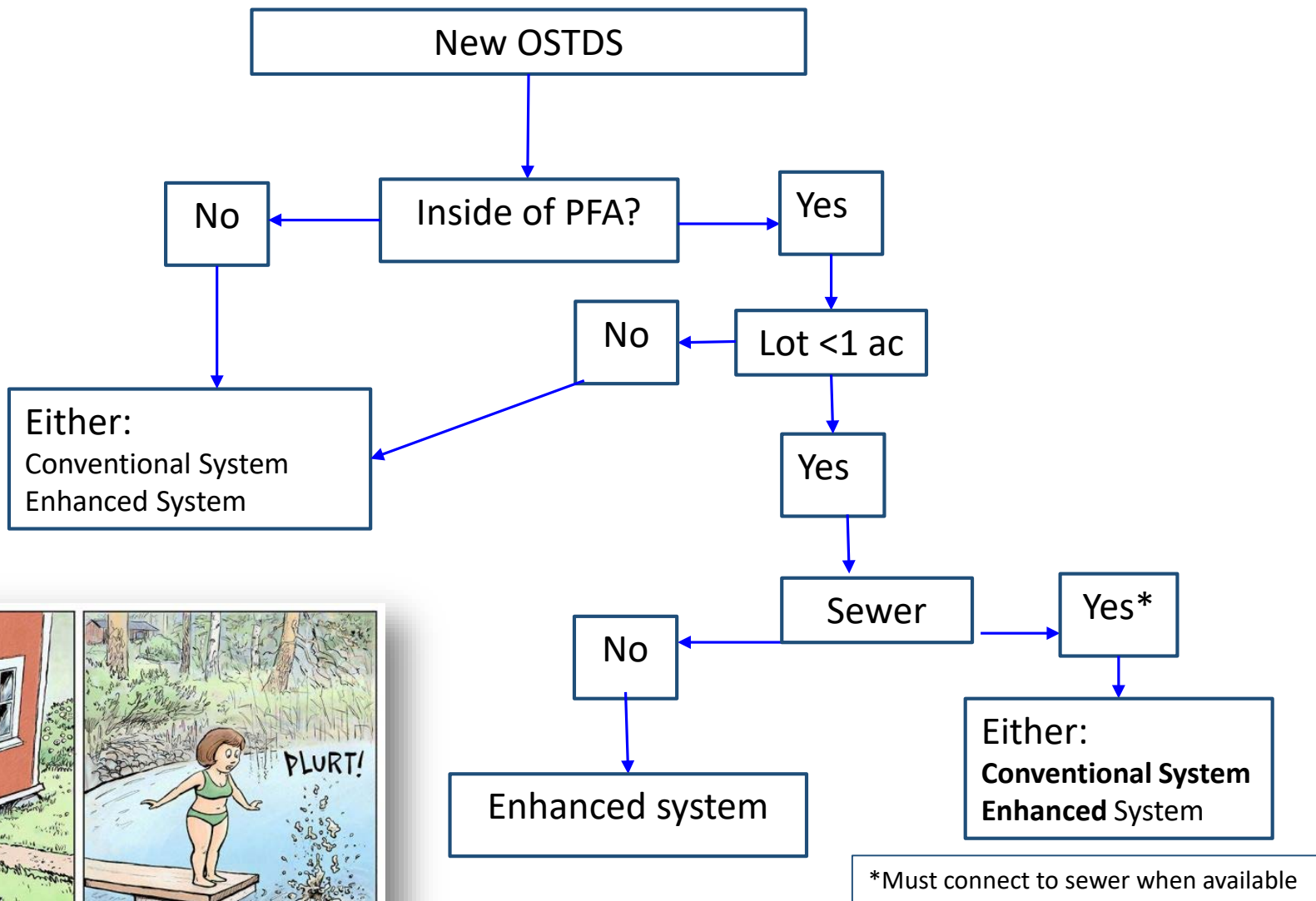


OSTDS

- BMAP will contain an OSTDS remediation plan
- DEP and Florida Department of Health (FDOH) will work together to implement it
- New OSTDS
 - Meet the DOH Definition (64E-6F.A.C.) of **new** system
 - Inside PFA on lot < 1 acre
 - Unless sewer is available or described as becoming available in a BMAP project
- Existing OSTDS
 - Homeowners are encourage to upgrade to systems with higher levels of nitrogen reduction.
 - Funding Assistance Program is being developed
 - Upgrades are not mandatory



BMAP Policies – OSTDS





TMDLs / BMAP

- To achieve the TMDLs, BMAP implementation will be a 20-year process
- Plan will define nitrogen reduction milestones:
 - 30% reduction within 5 years
 - 50% reduction within 10 years
 - 20% reduction within 15 years
 - Use last 5 years to finish up and see results





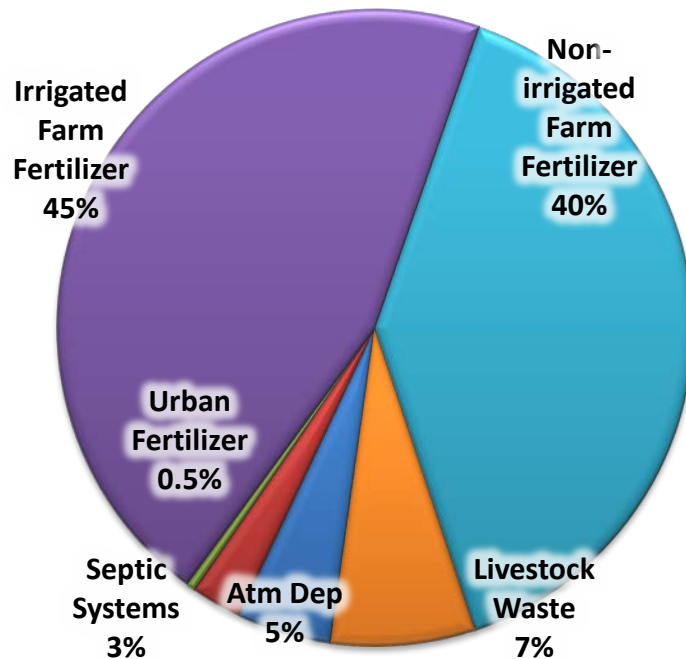
Nitrogen Load to Groundwater

Determine Vent/TMDL Loads:

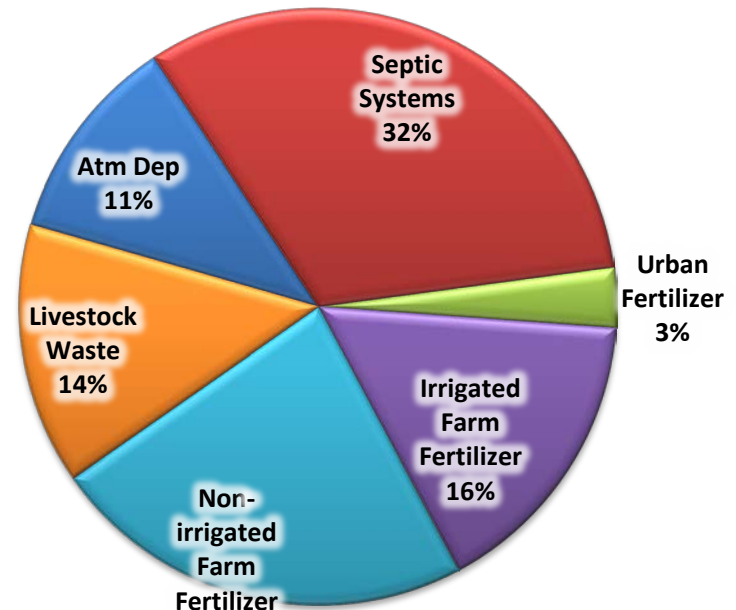
- Average discharge
- Average concentration
- TMDL concentration

Calculate load to reduce

Jackson Blue BMAP Area



Merrit's Mill Pond





Nitrogen Load to Groundwater (NSILT) in Springshed

Nitrogen Source	Estimated Percent Contribution
OSTDS	3%
Urban Turfgrass Fertilizer & Sports Turfgrass Fertilizer	<1%
Atmospheric Deposition	5%
Farm Fertilizer	85%
Livestock Waste	7%
Wastewater Treatment Facilities	0%
Total	100%



Reduction to Meet the TMDLs

Required Reduction to Meet the TMDLs		
Description	Nitrogen Loads (lb-N/yr)	Notes Regarding Data Used
Total Load at Spring Vents	719,000	Upper 95 % confidence interval – nitrate data and flow data from 2012 to 2017 (97.73 cubic feet per second [cfs] and 3.74 mg/L)
TMDL Load	67,000	TMDL target is 0.35 mg/L and using flow data from 2012 to 2017
Required Reduction	652,000	

cfs = cubic feet per second

mg/L = milligrams per liter



Gap Analysis

Nitrogen Source	Credits Based on Project Tables (lb-N/yr)	Description
OSTDS	3,300	Credits identified for stakeholder OSTDS projects (enhancement or sewer, approx. 200 tanks)
Urban Turf Fertilizer & Sports Turf Fertilizer	120	DEP approved credits (up to 6%) for public education activities as well as credits identified for stakeholder stormwater projects
Atmospheric Deposition		No reduction
Farm Fertilizer (FF)	94,000	15% BMP credit on FF load to groundwater, assuming 100% owner-implemented BMPs on all fertilized lands
Livestock	5,400	10% BMP credit on load to groundwater, assuming 100% owner-implemented BMPs at all livestock facilities
Wastewater Treatment Facility	0	Achieved by BMAP WWTF policy (achieving 3 or 6 mg/L)
Total Credits	102,800	
Required Reduction	652,000	Approximate Load Remaining: 550,000



Options to Reduce Remaining Load

Estimated Reduction Credits for Additional OSTDS Enhancement OR Sewer

Recharge Area	OSTDS Parcels Less Than One Acre in PFA	Credit for Enhancement (lb-N/yr)	Credit for Sewer (lb-N/yr)	OSTDS Parcels One Acre and Greater in PFA	Credit for Enhancement (lb-N/yr)	Credit for Sewer (lb-N/yr)
High	460	2422	3502	1504	7919	11,573
Medium	19	56	81	44	128	189
Total	479	2,477	3,612	1,548	8,047	11,761



Ag Options to Reduce Remaining Load

Estimated Reduction Credits for Advanced Agricultural Practices

Potential Actions	Estimated Reduction Credit (lb-N/yr) High Recharge	Estimated Reduction Credit (lb-N/yr) Medium Recharge
Precision Irrigation		
Precision Fertilization		
Soil Moisture Probes		
Controlled Release Fert.		
Rotational Production		
Cover Crops		
TOTAL		





Next Steps

- Next Meeting March 28, 2018
- BMAP adoption before July 1, 2018
- Water quality monitoring to determine improvements
- Annual review of project accomplishments and adherence to schedule
- Five-year revisions of BMAP and NSILT





QUESTIONS??





Basin Management Action Plan

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

<http://publicfiles.dep.state.fl.us/DEAR/BMAP/>

