



Florida Department of Environmental Protection
Division of Environmental Assessment and Restoration

***Wekiwa Spring and Rock Springs
Basin Management Action Plan
(BMAPs)***

***Moira R. Homann
May 23, 2018***





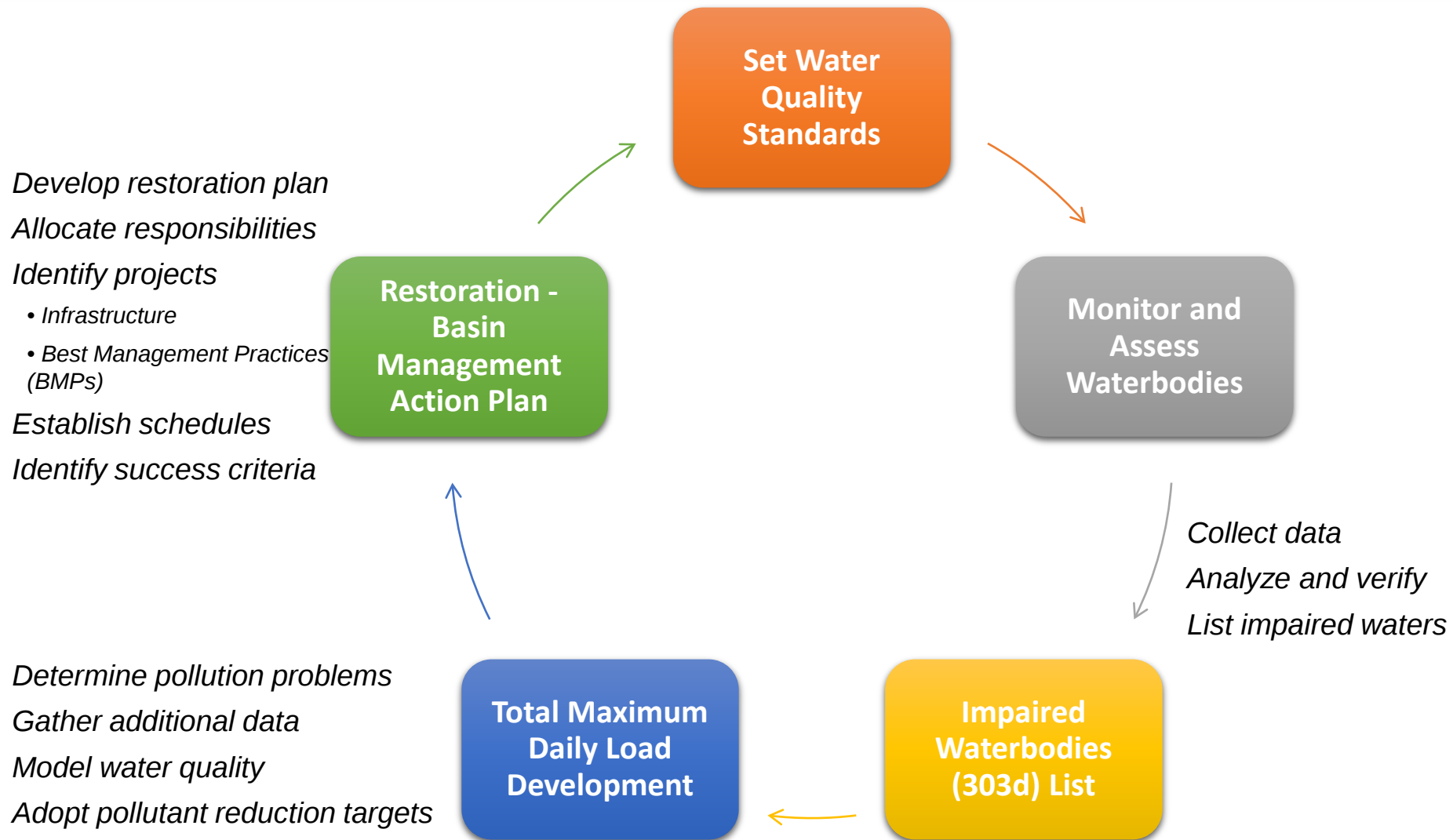
Thank you!

- OSTDS Advisory Committee members:
 - Represented the sectors that are affected by the OSTDS Remediation Plan.
 - Provided expertise and insight to lend to the process and for successful outcomes to reduce nitrogen loadings from OSTDS sources.
- **11 meetings (2016-2018)!**

Sector	Representative	Entity/Group
DOH	Bart Harriss/Stephanie Daugherty/Nancy Smith	Lake County Orange County Seminole County
County	Nicholas Mcray Julie Bortles Kim Ornberg	Lake County Orange County Seminole County
City	Kate Rodgers Danielle Marshall	City of Apopka City of Altamonte Springs
Environmental Interest	Michael D. Cliburn/Jay Exum	Friends of Wekiva, etc.
Homeowners	Bob Samson/Charles Whitaker	Property owners
Other interests	Roxanne Groover	Florida Onsite Wastewater Association (FOWA)



Water Quality Framework





Restoration Targets

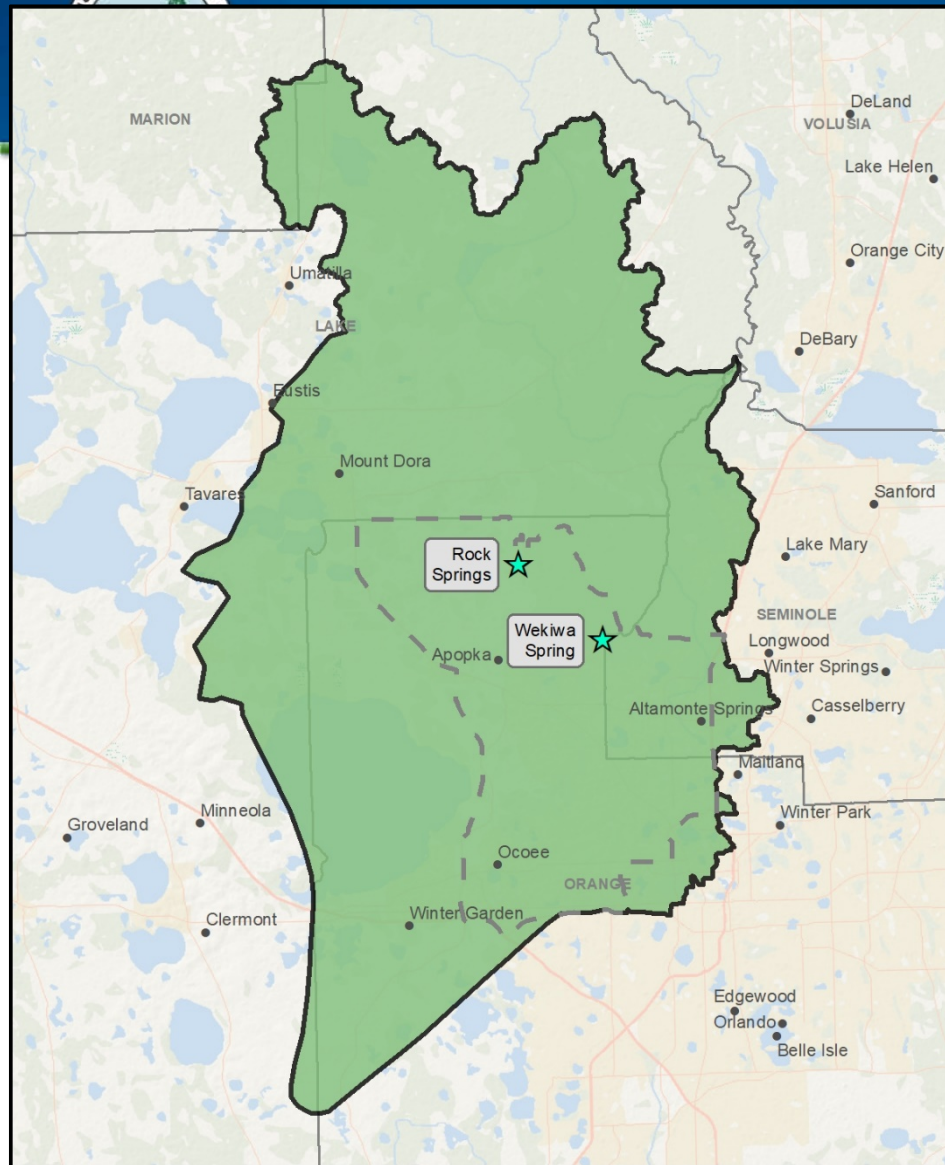
Waterbody	Waterbody Identification (WBID)	Parameter	TMDL (mg/L)
Wekiwa Spring	2956C	Nitrate, monthly average	0.286
Rock Springs	-	Nitrate, monthly average	0.286
Wekiwa Spring	2956C	TP, monthly average	0.065
Rock Springs	-	TP, monthly average	0.065

- DEP adopted nutrient TMDLs for the Wekiwa Spring and Rock Springs in 2008.
- The TMDL established targets to be protective of the aquatic flora and fauna:
 - Monthly average of 0.286 milligrams per liter (mg/L) of nitrate and 0.065 mg/L total phosphorus (TP)



Regulatory Framework

- Section 403.067, Florida Statutes (F.S.), known as the *Florida Watershed Restoration Act*.
- The 2016 Florida Springs and Aquifer Protection Act (2016-1), Sub-Sections 373.801– 373.813, F.S.
 - Lists requirements for BMAPs for Outstanding Florida Springs (OFS) including:
 - Priority Focus Area (PFA).
 - Identification and estimated pollutant load of each point source or category of non-point sources.
 - Onsite Sewage Treatment and Disposal Systems (OSTDS) Remediation Plan (if OSTDS >20% as a source or if the Florida Department of Environmental Protection [DEP] deems necessary).

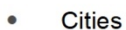


Wekiwa BMAP

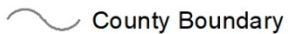
Map prepared by the Division of Environmental Assessment and Restoration. This map is not for legal decision making purposes.
 [BMAP] Moira Homann@dep.state.fl.us
 [GIS] Talia E. Smith@dep.state.fl.us
 [BMAP_GIS_Team_Support] STAR1-26-2018



Spring



Cities



County Boundary

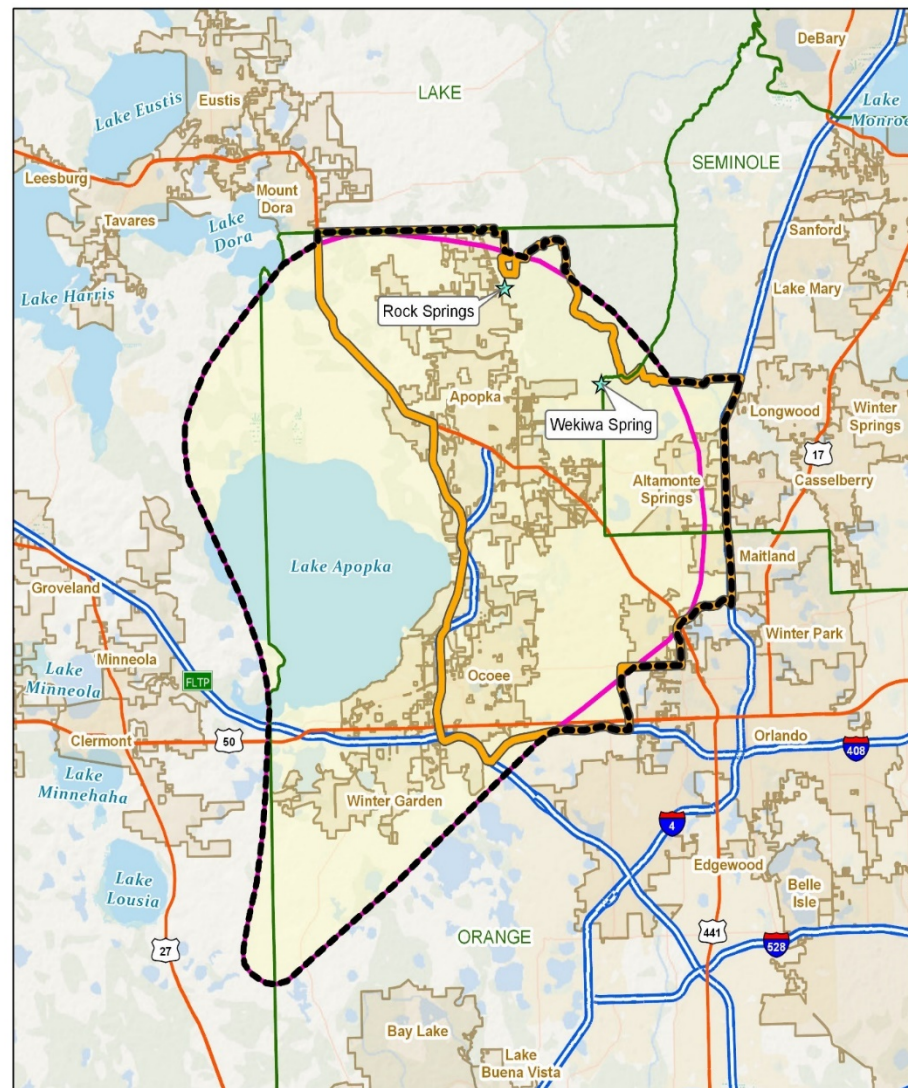


Priority Focus Area



BMAP Boundary

0 2 4 6 8 Miles

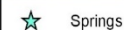


Wekiwa/Rock Springs General Areas

Map prepared by Division of Environmental Assessment and Restoration.
 This map is not for legal decision making purposes.
 MAP ID: Wekiwa_Report_Maps
 [BMAP] Moira Homann@dep.state.fl.us (850)245-8460
 [GIS] Talia E. Smith@dep.state.fl.us
 Date Created: 5/15/2018



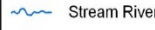
0 1.5 3 6 Miles



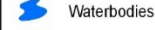
Springs



Springsheds



Stream River



Waterbodies



Florida Counties



Interstate



Primary and US Highways



Cities



PFA



BMAP



Florida Counties



Florida Counties



Florida Counties



Summary of Potential Credits to Meet the TMDL

Nitrogen Source	Credits to Load to Groundwater (lb-N/yr)	Description
UTF	17,906	DEP approved credits (6 %) for public education activities as well as credits identified for stakeholder stormwater projects.
STF	7,817	6 % BMP credit for sports fields and 10 % BMP credit for golf courses on STF load to groundwater, assuming 100 % BMP implementation on golf courses and sports fields.
FF	16,513	15 % BMP credit on FF load to groundwater, assuming 100 % owner-implemented BMPs on all fertilized lands
LW	832	10 % BMP credit on load to groundwater, assuming 100 % owner-implemented BMPs at all livestock facilities.
Nurseries	5,364	15% BMP credit on load to groundwater, assuming 100% owner-implemented BMPs at all nursery facilities.
WWTF	126,497	Achieved by WWTF policy for the PFA and projects in metrics workbooks.
OSTDS	125,684 – 183,692	Credits are based on lots of less than one acre inside the PFA being remediated by either enhancing onsite system or connecting to sewer. An estimated 1,416 lb-N/yr have been provided as OSTDS remediation projects which may be on these lots, on lots one acre or greater in the PFA, or in the larger BMAP area. Any projects on lots one acre or greater in the PFA or outside the PFA would add additional reductions to the estimates listed.
Total Credits from BMAP Policies and Submitted Projects	300,612 – 358,620	
Advanced Agricultural Practices and Procedures	8,032 - 40,158	Pursue additional practices over the next 20 years, contingent on funding.
Total Credits	308,644 - 398,778	Estimated load reduction to meet the TMDL is 209,428 lb-N/yr.



Current Load Compared to the TMDL and Estimated Reductions

Total Required Reduction to Meet the TMDL (lbs-N/yr)		
Description	Nitrogen Loads	Source
Total Load at Spring Vent	275,065	Upper 95% confidence interval - Nitrate and flow data from 2003-2017
TMDL	65,637	Upper 95% confidence interval - flow data from 2002-2017 and 0.286 mg/L
Total Required Reduction	209,428	

Total Credits from BMAP Policies and Submitted Projects	300,612 – 358,620
Total Credits*	308,644 - 398,778

*Including Advanced Agricultural Practices and Procedures credits



Reduction Milestones

- To achieve TMDL, BMAP implementation will be a 20-year process
- Wekiva Springs BMAP will define nitrogen reduction milestones:
 - 30 % reduction within 5 years – 62,828 lb-N/yr
 - 50 % reduction within 10 years – 104,714 lb-N/yr
 - 20 % reduction within 15 years – 41,886 lb-N/yr
 - Total reduction – 209,428 lb-N/yr





OSTDS Remediation Plan – Plan Elements

- DEP and Florida Department of Health (FDOH) will work together to implement the plan.
- Plan Elements.
 - Permits for installation of **NEW** OSTDS.
 - Applies to **lots < 1 acre in the PFA:**
 - Per statute, new OSTDS on lots of less than one acre are prohibited within PFAs.
 - Conventional systems prohibited unless:
 - System includes enhanced treatment of nitrogen.
 - Sewer connection is available within 5 years (permit applicant must demonstrate).
 - FDOH:
 - Permits the installation of new OSTDS pursuant to Chapter 64E-6, Florida Administrative Code (F.A.C.).
 - Permitting requirements with respect to the definition of "new" or "less than one acre" will be followed for this remediation plan.



OSTDS Remediation Plan – Plan Elements (Con't)

- Plan Elements (continued).
 - **EXISTING** OSTDS.
 - Remediation policy applies to **OSTDS within the PFA on lots of less than one acre.**
 - Requirement for FDOH to issue repair or modification permit.
 - System must include nitrogen reduction enhancements (specified in BMAP), unless sewer connection is available within 5 years (permit applicant must demonstrate)
 - Policy is effective following completion of milestones:
 - Completion of master wastewater treatment feasibility plans
 - Rulemaking
 - Funding
 - ***But no later than 5 years after BMAP adoption***
 - All conventional OSTDS in areas subject to the remediation policy for existing systems are required to adopt enhanced treatment of nitrogen no later than 20 years after BMAP adoption



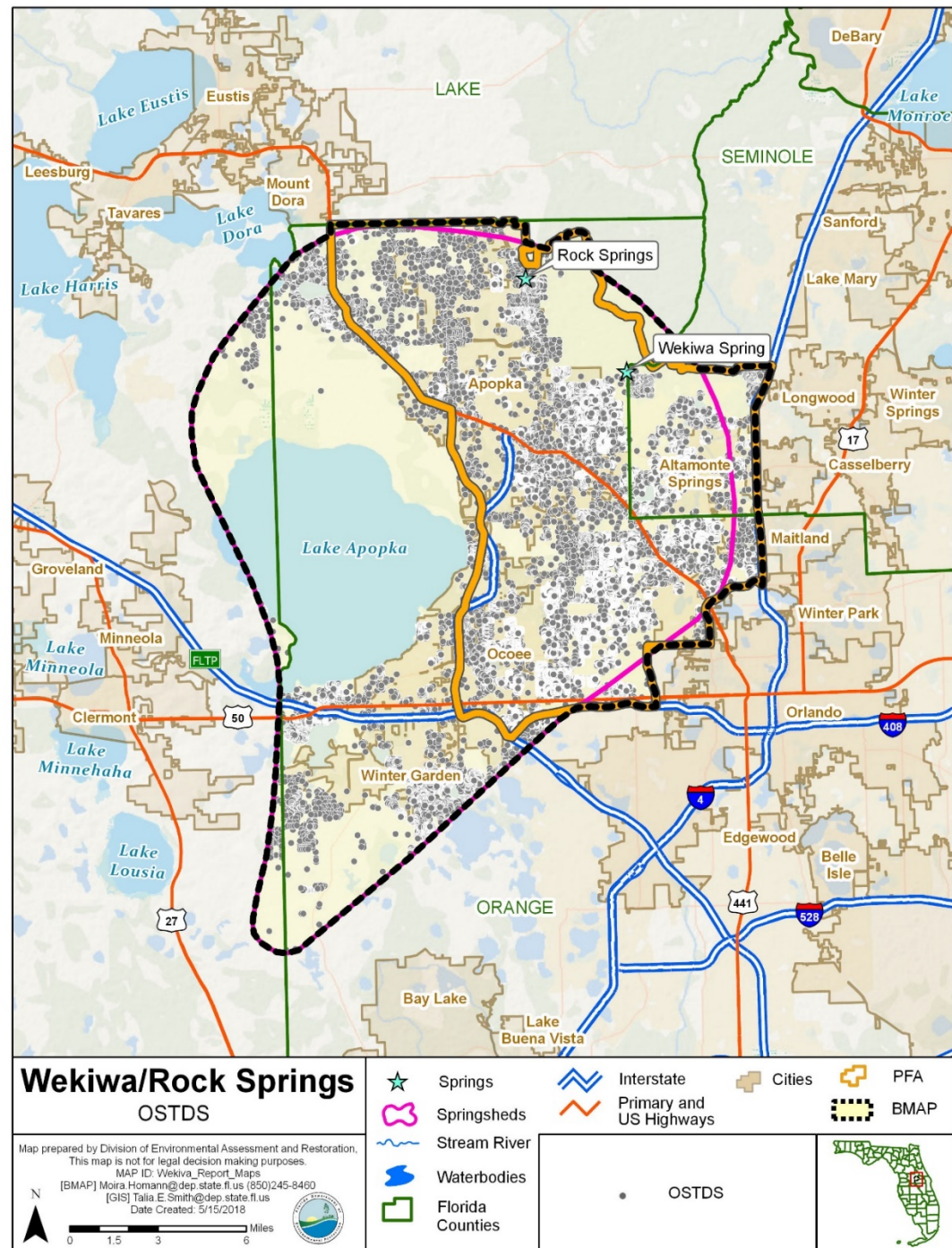
Remediation Policy

Existing OSTDS

Recharge Area	<u>OSTDS Parcels</u> <u>Less Than One</u> <u>Acre in Size in</u> <u>PFA</u>	Credit for Enhancement (lb-N/yr)	Credit for Sewer (lb-N/yr)
High	23,447	110,560	161,587
Medium	5,742	15,042	21,984
Low	158	83	121
Total	29,347	125,684	183,692



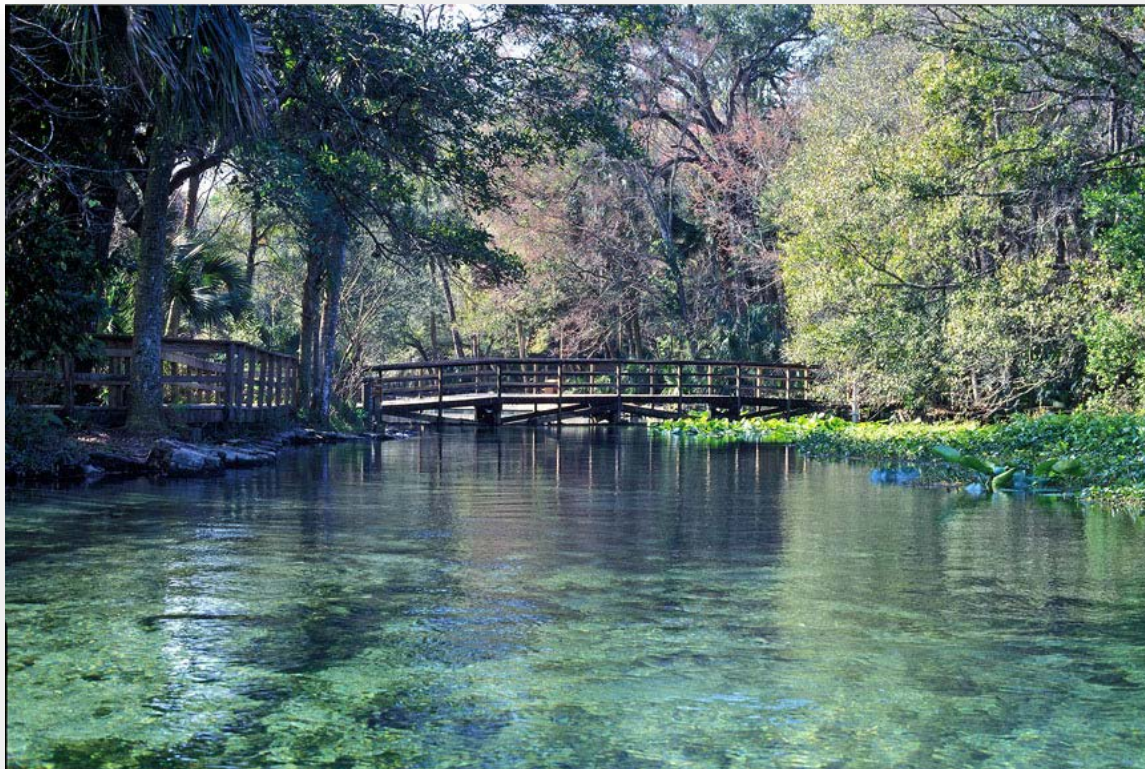
Policy Area – Existing Septic Systems





Next Steps

- Monitoring (surface and groundwater) to measure
 - Water quality and biological response in the impaired springs, river, and/or groundwater
- Annual review of project accomplishments and adherence to schedule
- Five-year revisions of BMAP and NSILT (if needed)
- Comments due by May 31, 2018
- BMAP Adopted by July 1, 2018





Thank you!