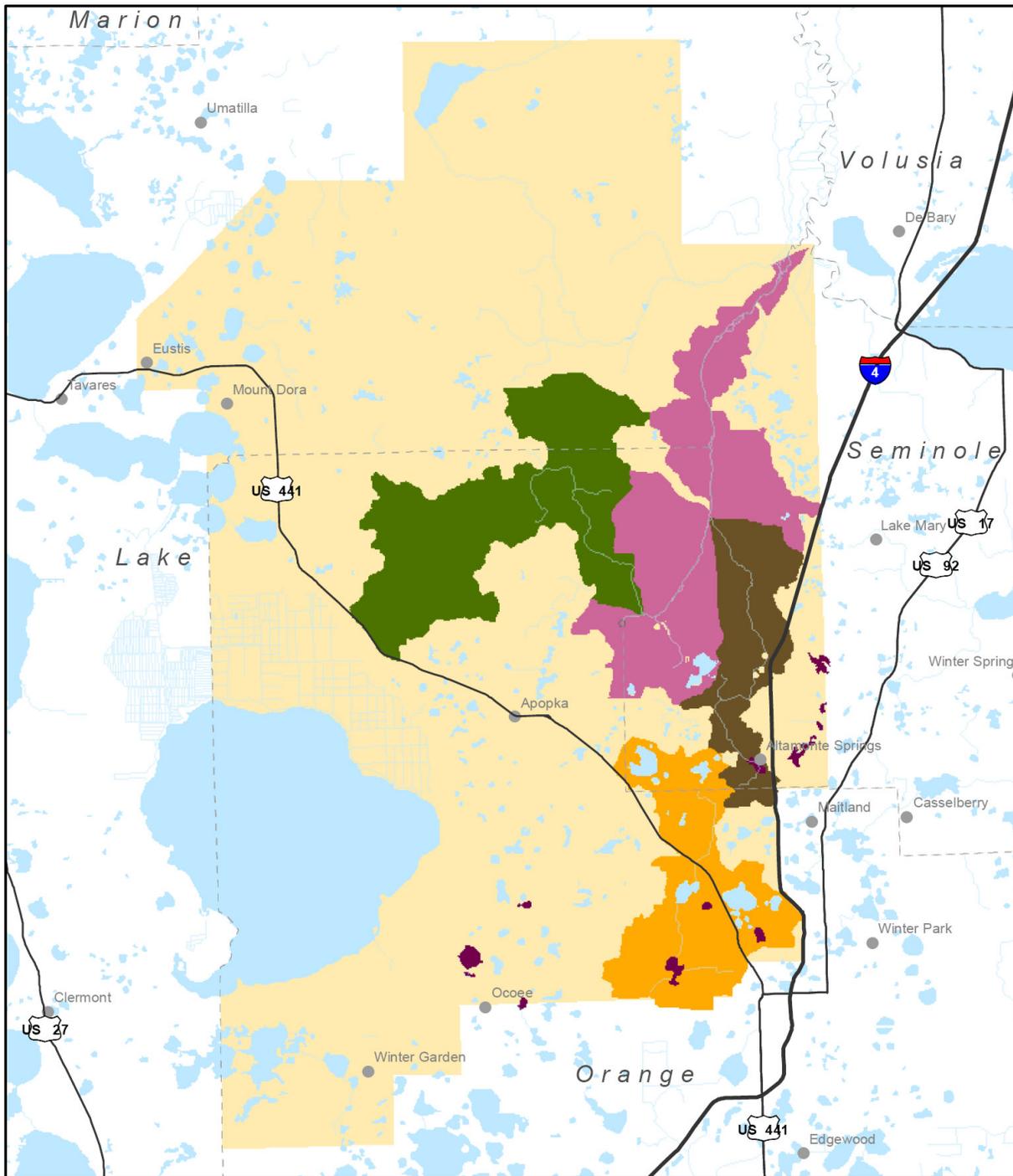


# Wekiva Basin TMDL Update

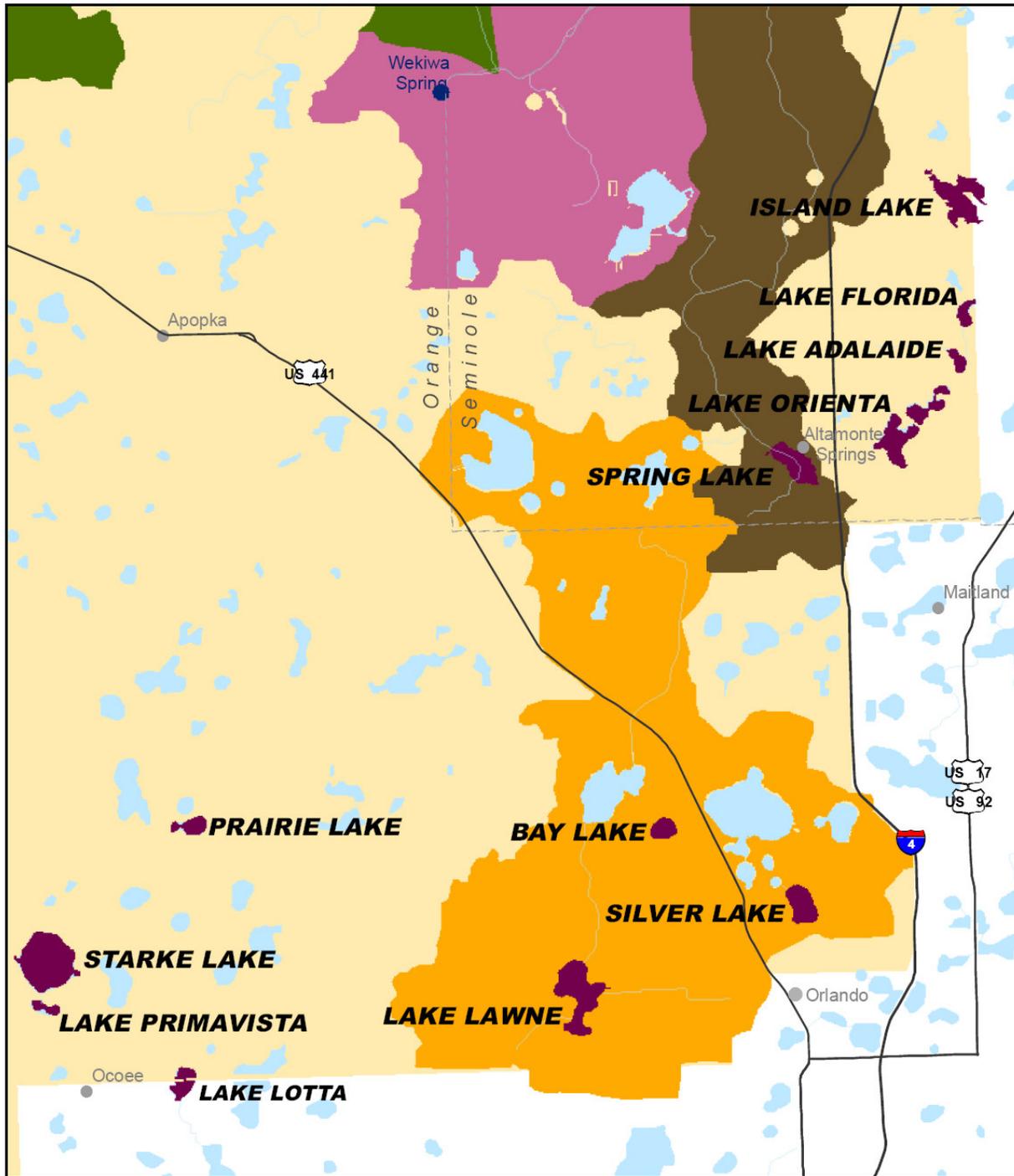
October 16, 2007

*Chris Ferraro, FL DEP*





- Wekiva Study Area
- Wekiva River Mainstem & Wekiwa Spring (Nutrients)
- Little Wekiva River (Coliforms)
- Little Wekiva Canal (Coliforms)
- Rock Springs Run (Nutrients)
- TMDL Lakes (Nutrients)



 TMDL Lakes  
(Nutrients)

# Why were these waterbodies identified as impaired?

Coliforms - Above state standards

DO – Below state standards

Nutrients - Imbalance of Flora & Fauna

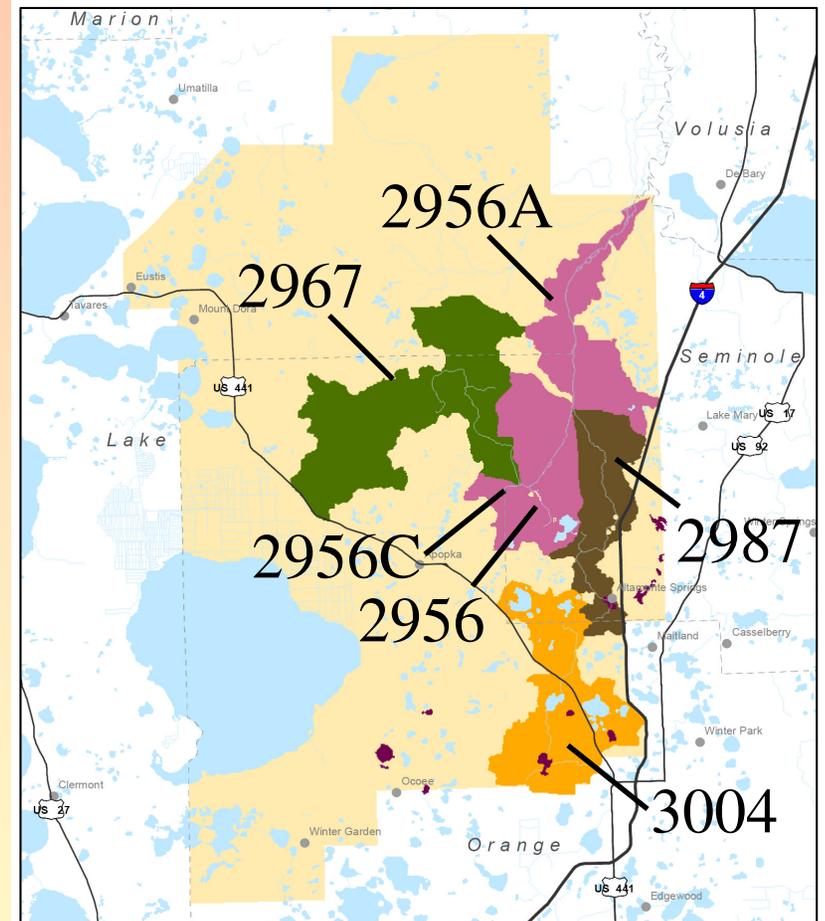
- Excessive periphyton coverage, relative to reference streams (SJRWMD)
- Dominance of Cyanobacteria (Lyngbia) (SJRWMD)
- Important ecosystem health indices (e.g. net primary productivity) were depressed, relative to reference streams (Wetland Solutions, Inc.)

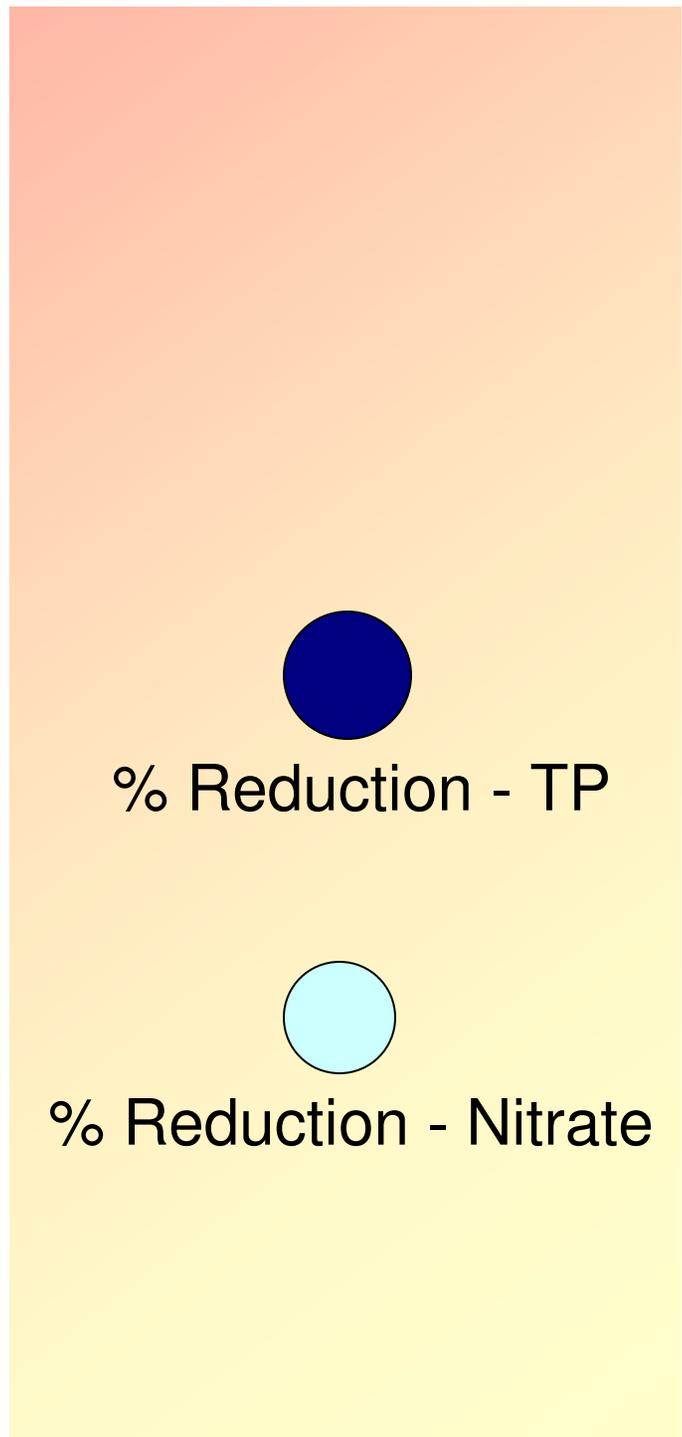
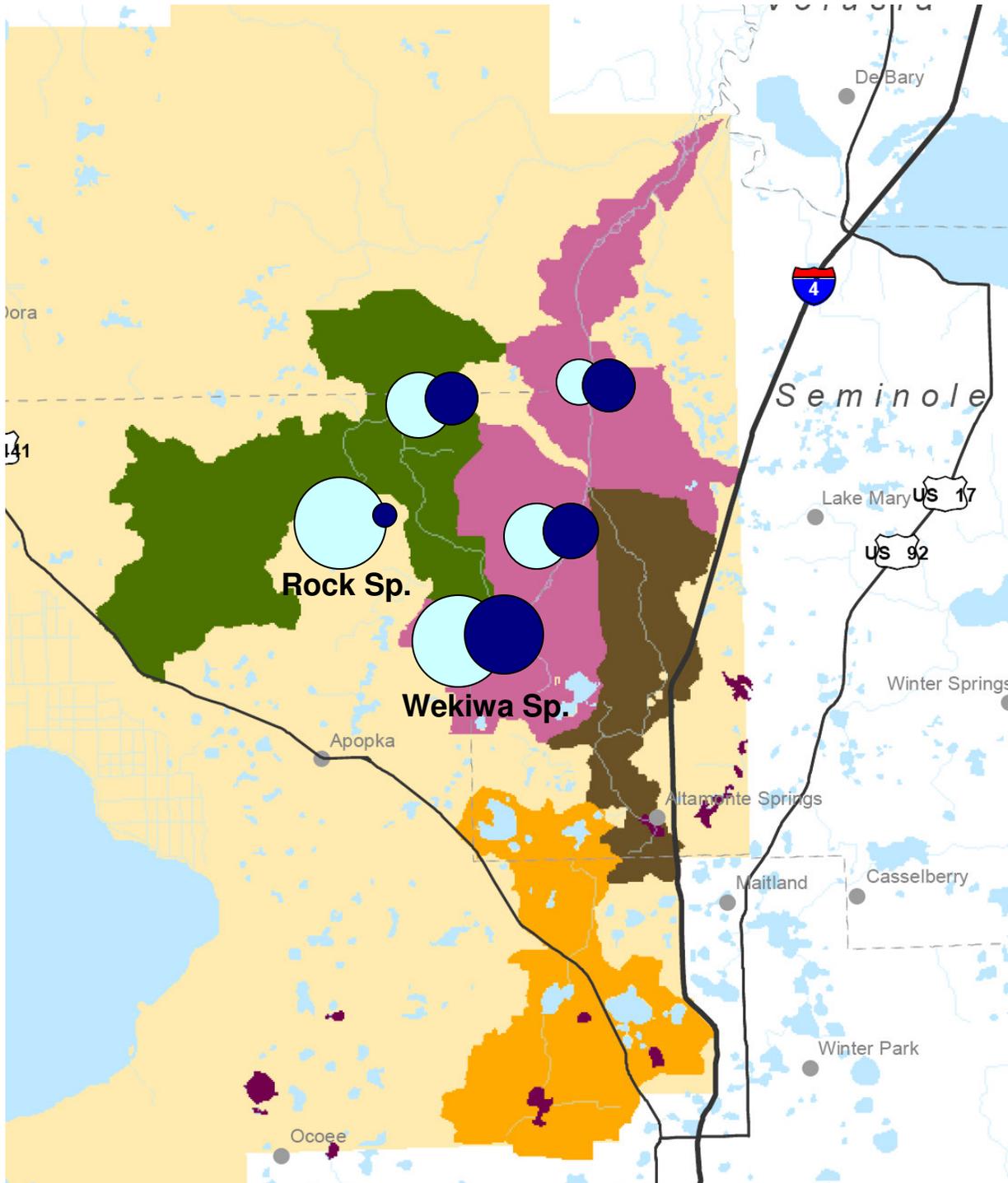
# Wekiva Basin TMDLs

- Data: 1996-present (verified period).
- DEP is using the same lines of evidence as originally used by the SJRWMD to set the water quality targets (PLRGs), but with some adjustments that make them more useful for a TMDL.
- Fecal coliform TMDLs were developed with a load duration curve approach. Allows for calculation of % reduction needed to achieve coliform standards under critical flow conditions.

# Wekiva Basin TMDLs

- Wekiva River divided into three segments: Wekiwa Spring (2956C), upstream Wekiva River (2956), and downstream Wekiva River (2956A)
- WBID 2967 was divided into Rock Spring and Rock Spring Run
- % reductions were calculated separately for each segment because of differences in nitrate and TP concentrations



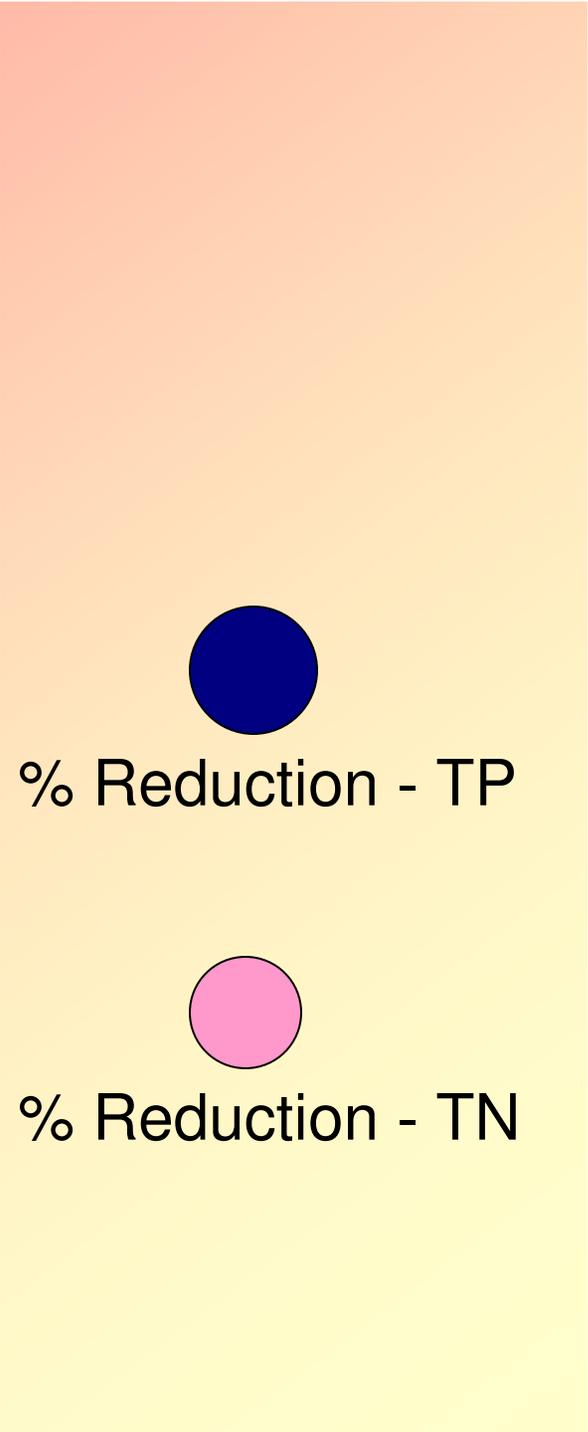
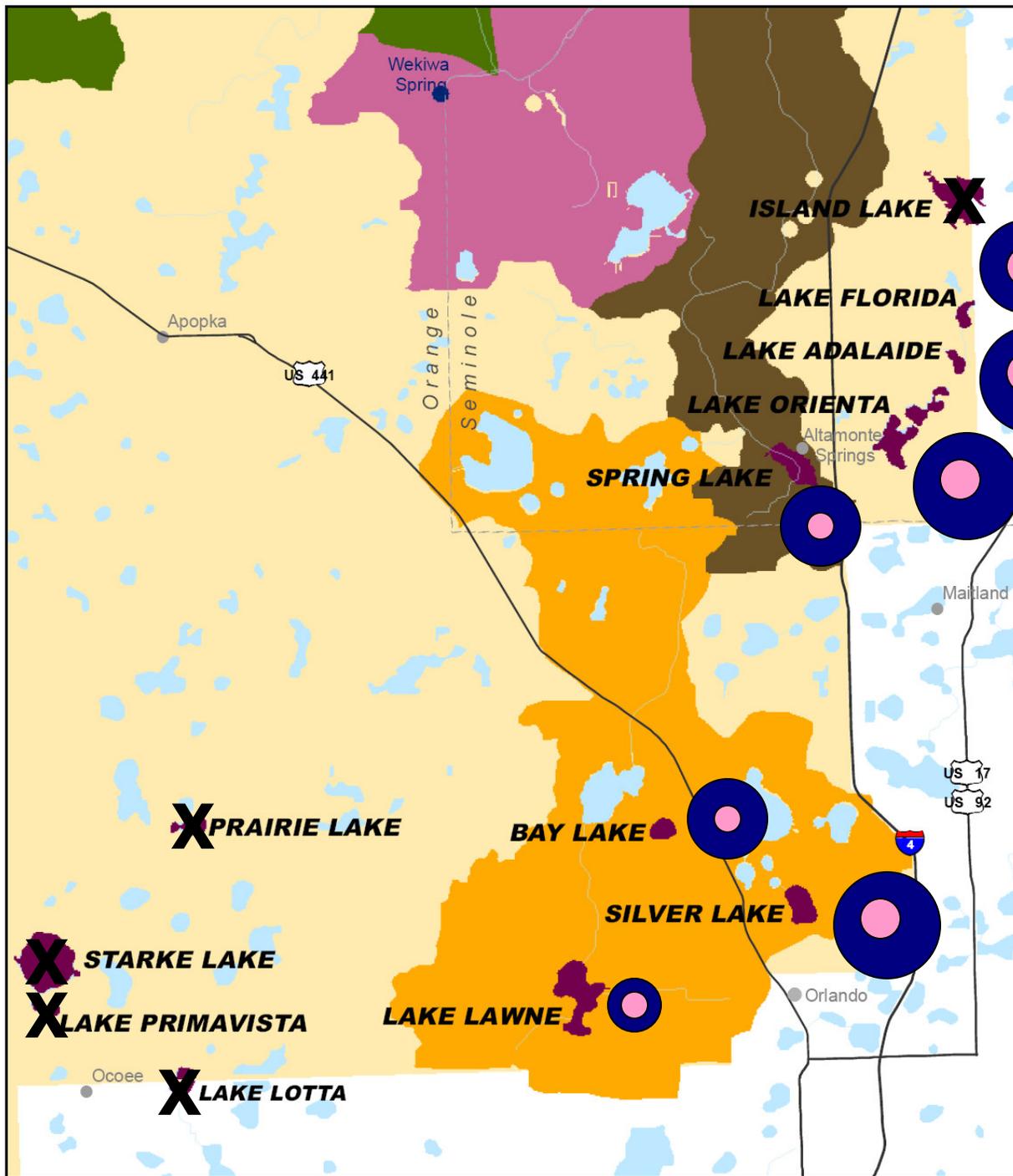


# Wekiva Basin TMDLs – Wekiva & Little Wekiva

<b>Waterbody WBID</b>	<b>Param.</b>	<b>% Reduction (Based on draft document)</b>	<b>Status</b>
<b>Wekiva River (Upstream)</b> 2956	Nitrate	68%	Internal review
	TP	61%	Internal review
<b>Wekiva River (Downstream)</b> 2956A	Nitrate	47%	Internal review
	TP	57%	Internal review
<b>Wekiwa Spring</b> 2956C	Nitrate	79%	Internal review
	TP	64%	Internal review
<b>Little Wekiva River</b> 2987	Fecal coliform	43%	Internal review
<b>Little Wekiva Canal</b> 3004	Fecal coliform	43%	Internal review

# Wekiva Basin TMDLs – Rock Springs

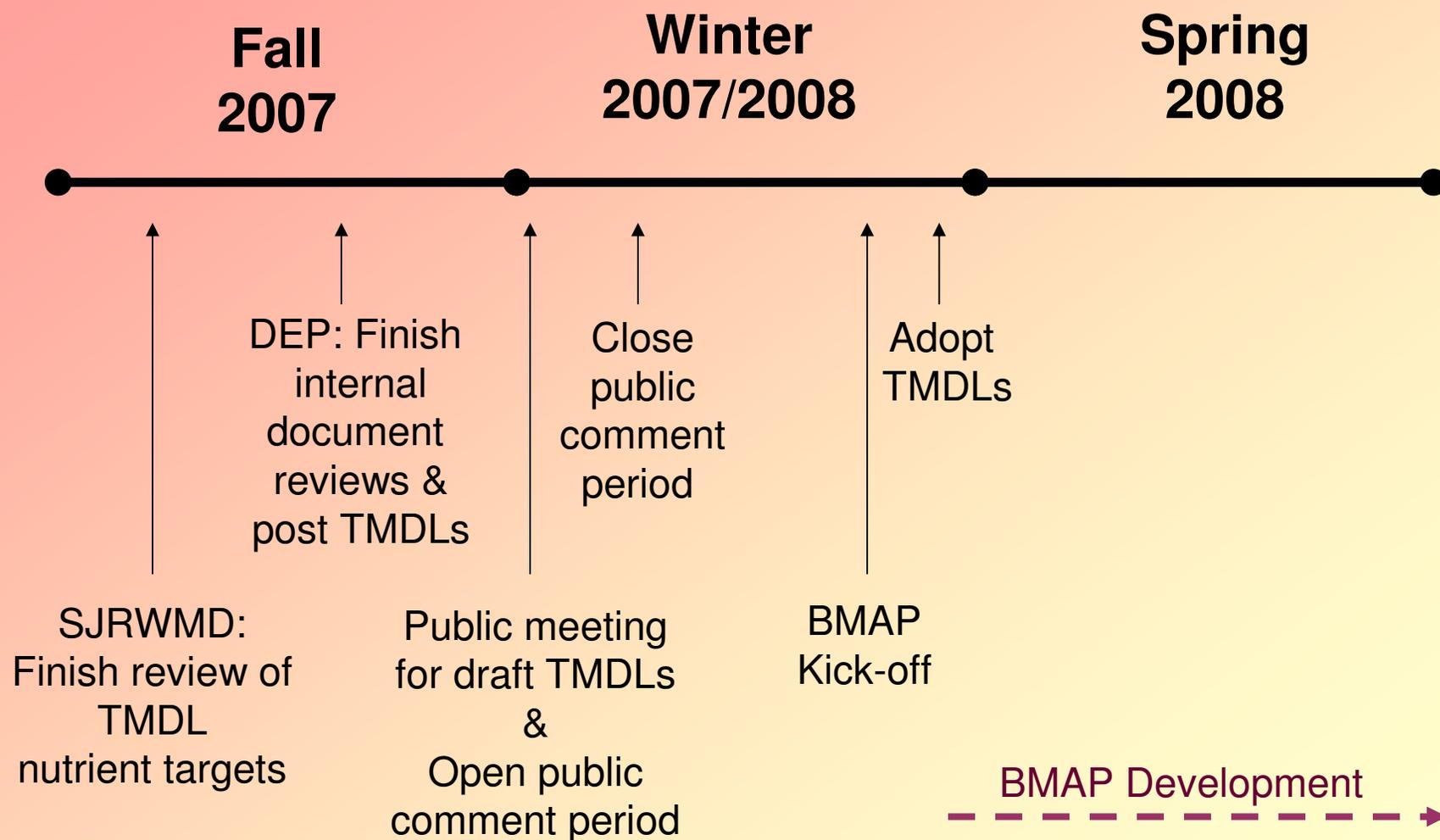
<b>Waterbody WBID</b>	<b>Param.</b>	<b>% Reduction (Based on draft document)</b>	<b>Status</b>
<b>Rock Springs Run</b> 2967	Nitrate	63%	Internal review
	TP	58%	Internal review
<b>Rock Spring</b> (also 2967)	Nitrate	81%	Internal review
	TP	23%	Internal review



# Wekiva Basin TMDLs – Lake Nutrient TMDLs

<b>Waterbody &amp; WBID</b>		<b>% Reduction</b> (Based on draft document)		<b>Status</b>
Island Lake	2994D	N/A		Delisted (Wetland)
Lake Lotta	3002G	N/A		Delisted (Lakewatch)
Prairie Lake	3002N	N/A		Delisted (Lakewatch)
Lake Primavista	3002E	N/A		Delisted (Lakewatch)
Starke Lake	3002D	N/A		Delisted (Lakewatch)
<b>Lake Adalaide</b>	<b>2998E</b>	<b>TN: 37%</b>	<b>TP: 72%</b>	Internal review
<b>Bay Lake</b>	<b>3004G</b>	<b>TN: 27%</b>	<b>TP: 68%</b>	Internal review
<b>Lake Florida</b>	<b>2998A</b>	<b>TN: 40%</b>	<b>TP: 71%</b>	Internal review
<b>Lake Lawne</b>	<b>3004C</b>	<b>TN: 30%</b>	<b>TP: 53%</b>	Internal review
<b>Lake Orienta</b>	<b>2998C</b>	<b>TN: 38%</b>	<b>TP: 75%</b>	Internal review
<b>Silver Lake</b>	<b>3004D</b>	<b>TN: 40%</b>	<b>TP: 78%</b>	Internal review
<b>Spring Lake</b>	<b>2987A</b>	<b>TN: 29%</b>	<b>TP: 67%</b>	Internal review

# Wekiva Basin TMDLs – Next Steps



# **Wekiva Basin BMAP Development**

## **Wekiva/Little Wekiva River, Rock Spring Run, & Wekiwa Spring**

Orlando, Apopka, Altamonte Springs, Wekiwa Springs,  
Seminole County, Lake County, Orange County,  
Wekiwa Springs State Park, DOT, SJRWMD, others

## **Lakes**

Ocoee, Altamonte Springs, Orlando,  
Longwood, Seminole County, Orange  
County, DOT, SJRWMD, others



# Wekiva Basin BMAP Development

- Begin meeting in early 2008
- Initial focus
  - Compile existing projects and research (knowns/unknowns)
  - Identify and begin to address additional data needs for source identification
  - Identify MS4 service areas
  - Initiate project collection
- Much of this information has already been developed for the Lake Jesup and Upper Ocklawaha BMAPs.

## **For more information...**

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