

Florida Department of Environmental Protection



Water Quality Restoration Program

BMAP Status Updates

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April 23, 2014

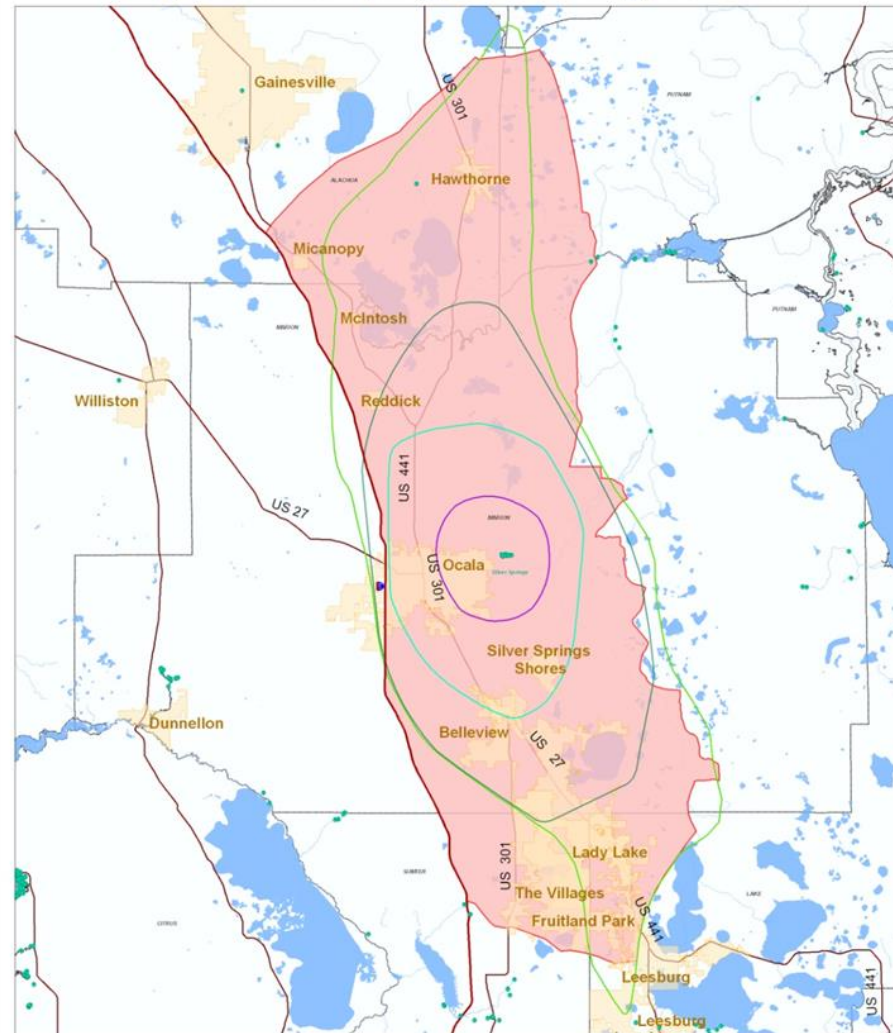




Focus Areas

- Purpose of focus areas is to concentrate remediation efforts where they will do the most good.
 - Best use of available dollars.
 - Prioritize project selection.
 - How to do this?

Proposed Silver Springs Basin Management Area



Legend

- Springs
- 2 Year Capture Zone
- 10 Year Capture Zone
- 100 Year Capture Zone
- 1000 Year Capture Zone
- Silver Springs BMAP Area version 1.1
- Florida Counties with Shoreline



The Silver Springs management area boundary was derived from the Silver Springs area, version 1.1, created June 14, 2013.

The purpose of this boundary is to delineate a management area boundary for the Silver Springs Basin Management Action Plan. The management area provides a basis for estimating nitrate loads to the springs from different sources and for identifying focus areas for remediation activities.

Estimated times of travel or capture zones were created from the Silver Springs Basin Management Area, version 1.1, created in July 2010 by the Florida Geological Survey. Data were obtained from the St. Johns River Water Management District and represent modeling estimates of time of travel. Conduit flow is not considered in these models.



Prepared August 5, 2013, Division of Environmental Assessment and Restoration, Water Quality Restoration Program. For additional information contact Mary Paulic at mary.paulic@dep.state.fl.us or (850) 248-4800.

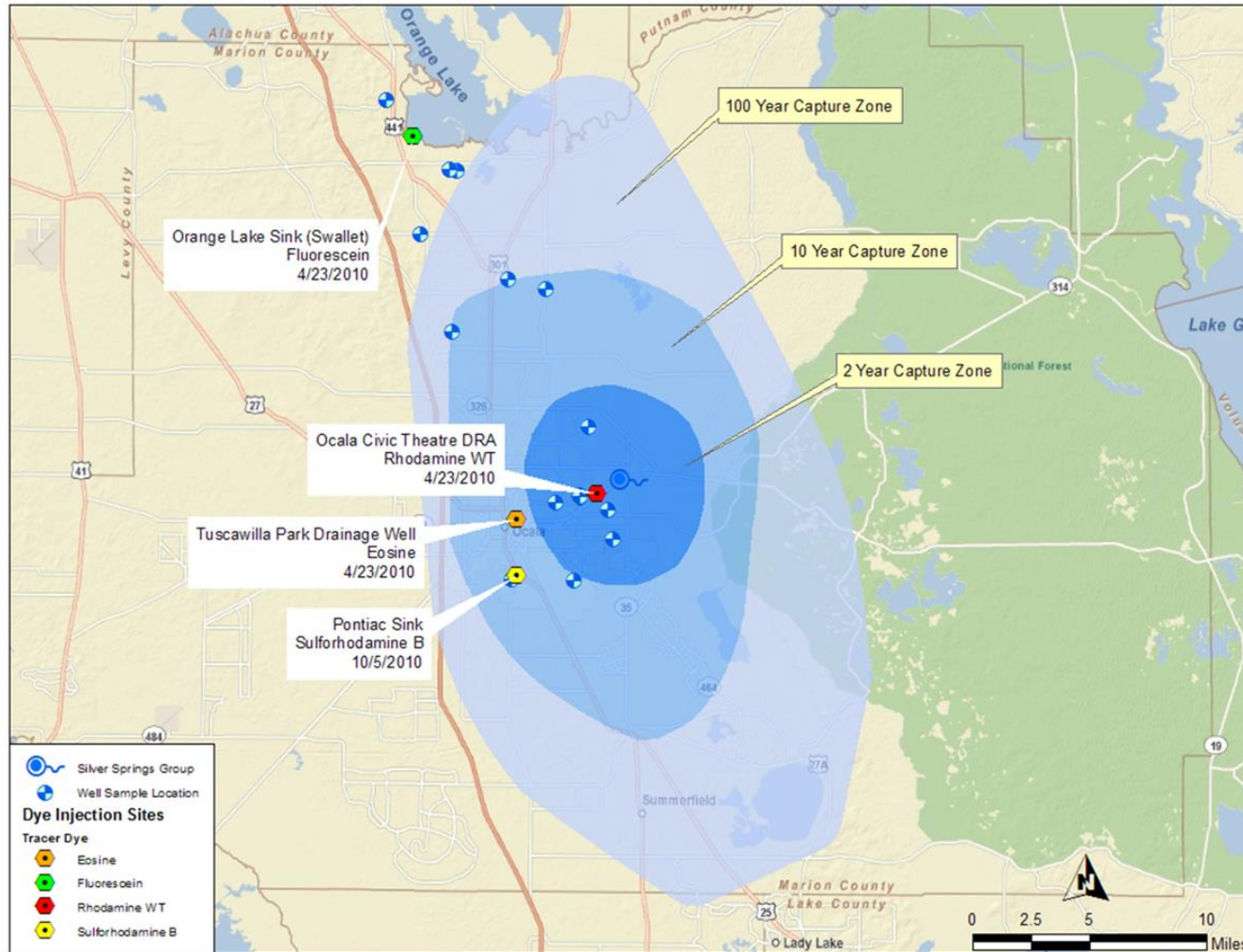
This file is provisional and subject to update and revision. It is not for engineering, survey, cadastral, or land conveyance purposes.



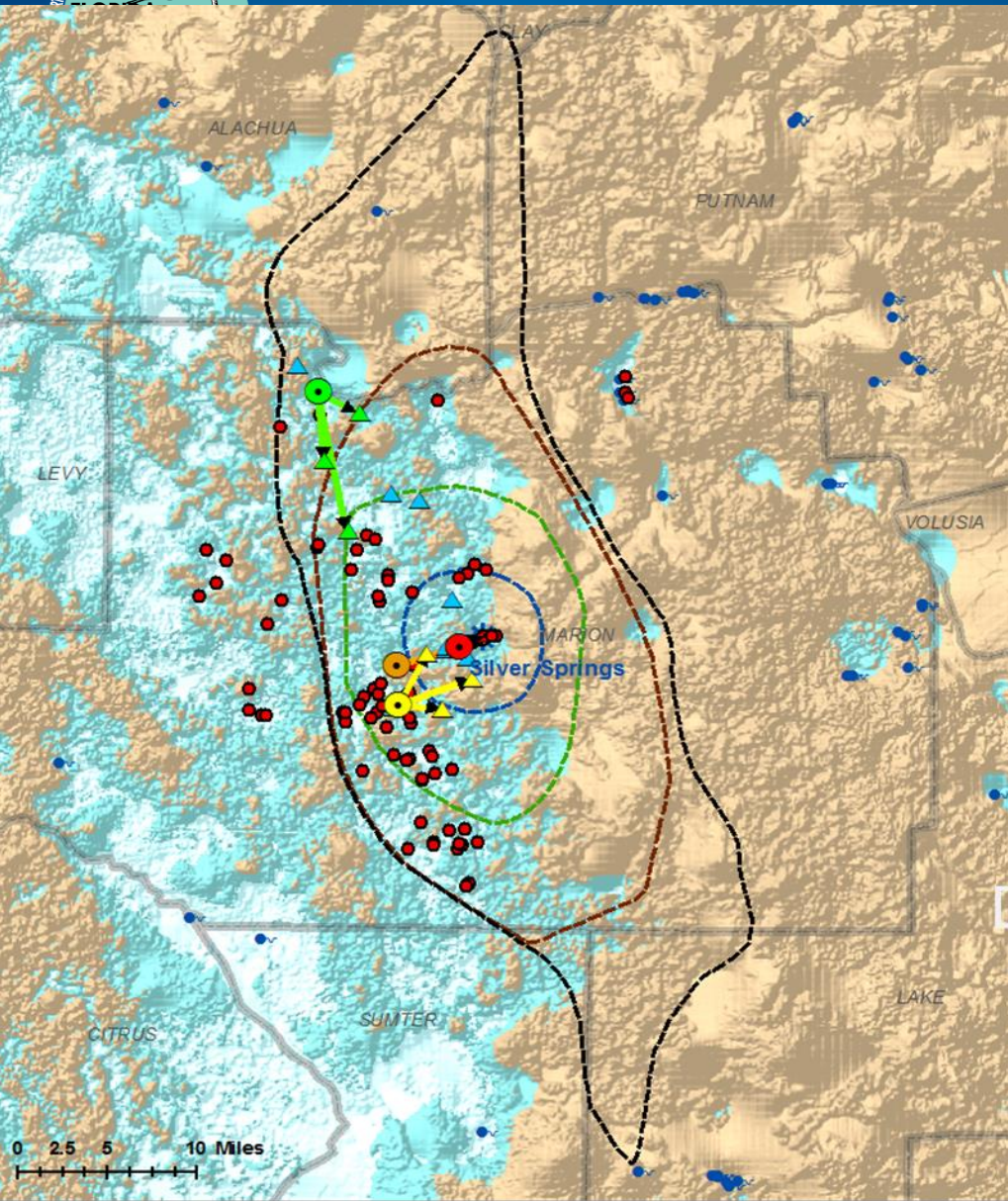
Considerations

- Target high recharge areas.
- Consider proximity to spring.
- Location of known conduits.
- Management options for type of source.

Dye Studies



Courtesy of SJRWMD



Thickness of Sediments Overlying Upper Floridan Aquifer with Cave Locations and Capture Zones

• Caves

- 1000-year Capture Zone
- 100-year Capture Zone
- 10-year Capture Zone
- 2-year Capture Zone

Dye studies to measure
time of travel in groundwater:
Dye studies to measure
time of travel in groundwater:

- ▲ Sulforhodamine B
- ▲ Eosine
- ▲ Fluorescein
- ▲ dye not detected



Next Steps

- What are our next steps?



Monitoring Plan

- Teleconference on April 21, 2014:
 - DEP, SJRWMD, Marion County, and Silver Springs Alliance
 - Focused on status of current activities by different agencies
 - Three basic components (tentatively)
 - Ground water monitoring network
 - Primarily SJRWMD and SWFWMD sampling
 - Surface water monitoring network (Silver River)
 - Targeted monitoring network



Farm Tour

- Two potential options. Hold tour as a part of meeting or hold on a different date from meeting.
- Try again to visit Adena South when weather conditions improve, ideally fairly soon.
- Organize another tour for May to view equine, cow/calf, pasture management, and maybe row crop BMPs.



Future Meetings

- Schedule meetings for the rest of the year.
- May, June, July, and August meeting dates to work on identifying focus areas and future management strategies, future growth, education and outreach, and monitoring plan
- Tentative date for draft BMAP is August.



Meeting Strategies

- Increased frequency of meetings
- Options:
 - One major meeting per month and one smaller focused meeting.
 - Focused meeting can be by teleconference or webinar
 - Hold meetings every 3 weeks



BMAP

- What does this short time frame mean for the completion of the BMAP?



BMAP Template

- ACKNOWLEDGMENTS
- LIST OF ACRONYMS AND ABBREVIATIONS
- SUMMARY
- CHAPTER 1 : CONTEXT, PURPOSE, AND SCOPE OF THE PLAN
- 1.1 Goals and Objectives
- 1.2 Regional Setting of the Silver Springs Basin
 - Significant geology
 - Descriptive studies
- 1.3 BMAP Development Process
- 1.4 TMDLs
- 1.5 Water Quality Summary



BMAP Template

- CHAPTER 2 : FOCUS AREAS and FUTURE GROWTH
- 2.1 BMAP Assumptions and Considerations
- 2.2 Nitrogen Inventory as a Tool
- 2.3 Role of Focus Areas
- 2.4 Focus Area Loading and Recharge Rates
- 2.5 Managing Pollutant Loads from Future Growth



BMAP Template

- CHAPTER 3 : REGULATORY LINKS AND MANAGEMENT STRATEGIES
- 3.1 Regulatory Links to BMAP Enforcement
- 3.2 Overview of Management Strategies
 - Planning strategies
- 3.3 Agricultural BMP Implementation
 - 3.3.1 Agricultural BMPs
 - 3.3.2 BMP Enrollment
 - 3.3.3 FDACS OAWP Role in BMP Implementation and Follow-Up
 - 3.3.4 Florida Forest Service Role in BMP Implementation and Monitoring



BMAP Template

- Chapter 4 Detailed Management Actions.
- Responses to specific sources or focus areas.
- Longterm goals and objectives.
- Ongoing and future research needs.



BMAP Template

- CHAPTER 5: ASSESSING PROGRESS AND MAKING CHANGES
 - 5.1 Monitoring Objectives
 - 5.1.1 Water Quality Indicators
 - 5.1.2 Monitoring Network
 - 5.1.4 Quality Assurance/Quality Control (QA/QC) Mechanisms
 - 5.1.5 Data Management Mechanisms for Data Storage and Retrieval
 - 5.1.6 Tracking and Follow-up Actions
 - 5.2 Commitment to Plan Implementation
- APPENDIX A: REFERENCES

Questions?





Website and FTP Addresses

- <http://www.dep.state.fl.us/water/watersheds/bmap.htm> - website for meeting announcements.
- http://www.dep.state.fl.us/water/tmdl/final_tmdl.htm - website for TMDL documents, under Ocklawaha Basin.
- http://publicfiles.dep.state.fl.us/DEAR/BMAP/Silver_springs/ - FTP site for meeting notes and presentations.