



Florida Department of Environmental Protection

Silver Springs BMAP Updates

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BMAP Document

- Draft of first chapter available at this meeting to discuss.
- A document with additional chapters will be posted before the June meeting to allow time for review.
- We will spend some time at each monthly meeting at least reviewing where the document is in development.
- Comments can be incorporated as we proceed.
- Anticipate a complete draft document by end of August.
- First Chapter Review.



Projects Update

- What is the status of projects? Who still owes us information?
- How many are completed, in construction, or planned?
- How should we handle projects that are in a conceptual phase, but do not have full funding or timelines to implement at this time?
 - Include in BMAP as a formally adopted project, at each annual progress report status of project is reported.
 - Include in BMAP as a planning list of activities that are under consideration for the next five years, but there is no obligation to complete.



Meetings

- Schedule meetings for the rest of the BMAP process.
- One monthly full stakeholder group meeting, tentative dates:
 - June 26
 - July 24
 - August 21
 - September 18



Meetings

- Smaller focused topic discussions in-between the full stakeholder meetings.
- Summary of findings from focused topic meetings brought back to full stakeholder meeting for final decisions.



Focused Meetings

- Purpose to address strategies for specific sources or issues.
 - May need multiple topics discussed at any one time
- June – start stormwater and wastewater discussion, before June 11
 - Stormwater and wastewater managers have been contacted to survey their availability
- July - future growth and monitoring plan
 - Compare future loading scenarios with current inventory
- August - monitoring plan, outreach, and research



BMAP Adoption

- Draft BMAP in August / September
 - BMAP sections are in development throughout discussion
- Public meeting in September –possibility for another meeting in July
- Finalize BMAP / Prepare for Secretarial adoption.
- Once adopted, noticed as an agency action for 21 days.



Small Farms Equine Manual



Tool for **non-commercial** horse owners (not operating as a business).

Intended for folks with a few horses.

Geared to small farms, ranchettes, hobbyists.

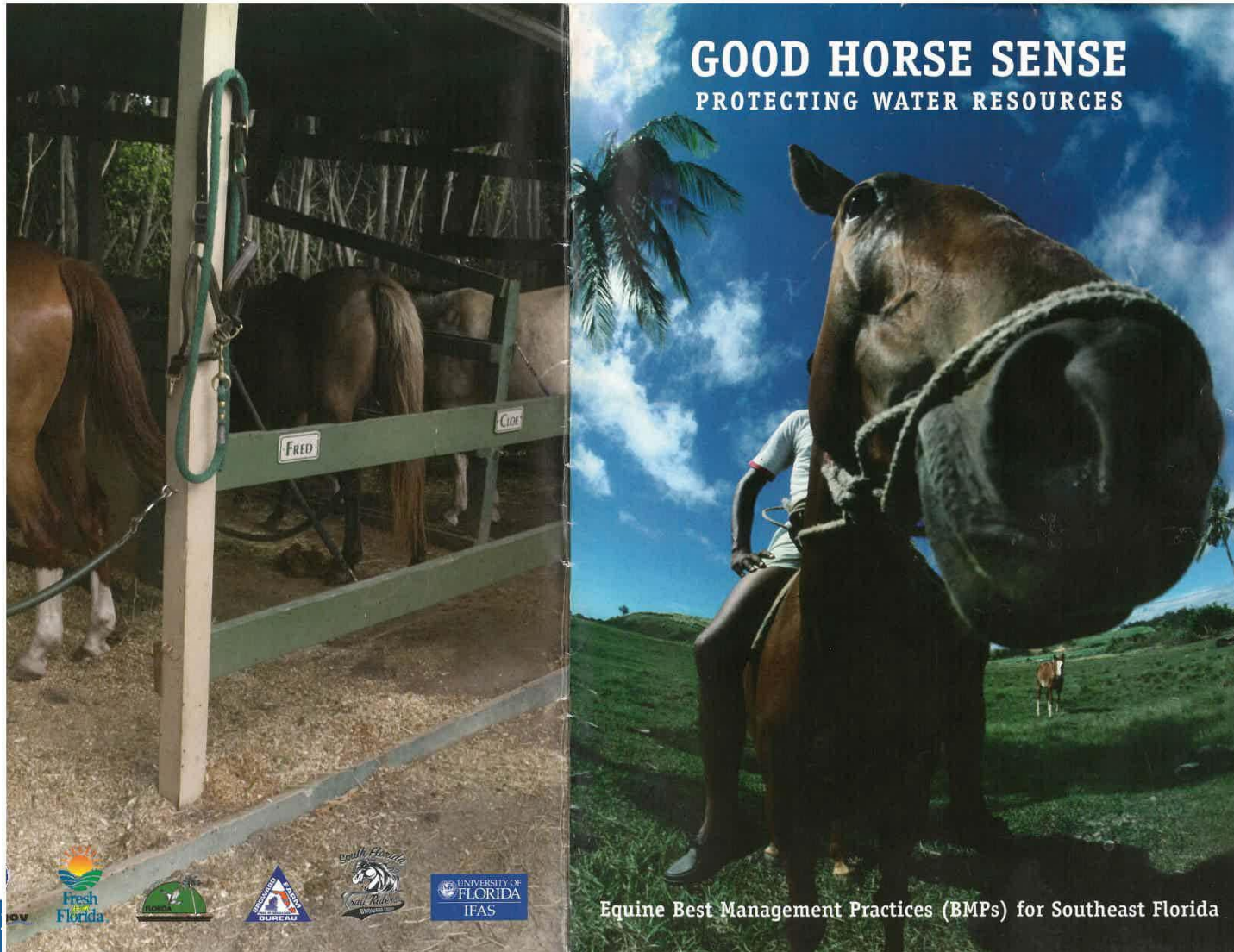


Use of Manual

- Education and outreach tool.
- Potential users include:
 - Planning departments
 - Stormwater education programs
 - Homeowners and farm owners
- Fills the void where a DACS issued Notice of Intent for BMPs is not appropriate.
- This is one of our tools.

Brochure

- We also have Fred and Cloe.





Strategy

- Need an implementation plan.
- Consider as part of larger Silver Springs education and outreach.
- How do we do this?
- DEP, IFAS, DACS, Marion County have been discussing an approach.



Considerations

- So far considerations and constraints have been identified:
 - Need a consistent message between NOI commercial and hobby farm equine
 - Not a regulatory approach
 - Cost share funds may be available for farms using BMPs under an NOI
 - Recognition for farm owner
 - Farms of Environmental Distinction currently in place



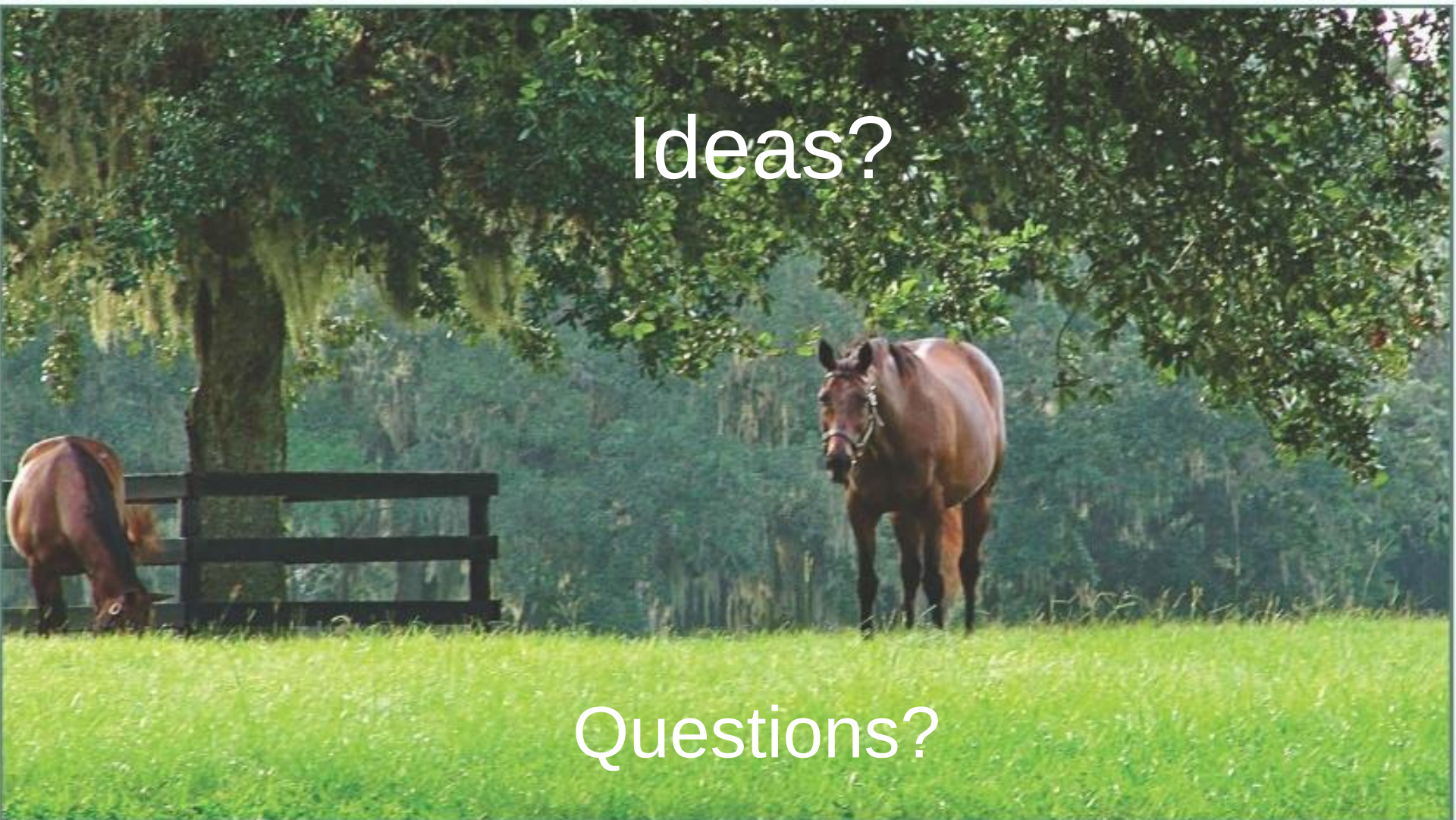
Strategy

- Multiple avenues for interacting with individual horse owners (farm implementation):
 - Feed stores, clubs, trade associations
 - Possible 4H Club or other IFAS outreach
 - Requirements for recognition of BMP usage
 - Outreach program already in place, how to coordinate between them is problem
- Need more discussion on how this manual could be used local governments as part of outreach programs or in planning departments.
 - Potential uses?



Proposal

- Propose as a project within the BMAP.
- Deadline for finalizing within 12-18 months following adoption of BMAP.
- Complete implementation details post BMAP adoption.
- Adding Fred and Cloe brochure as a supplement to BMP manual.



Ideas?

Questions?

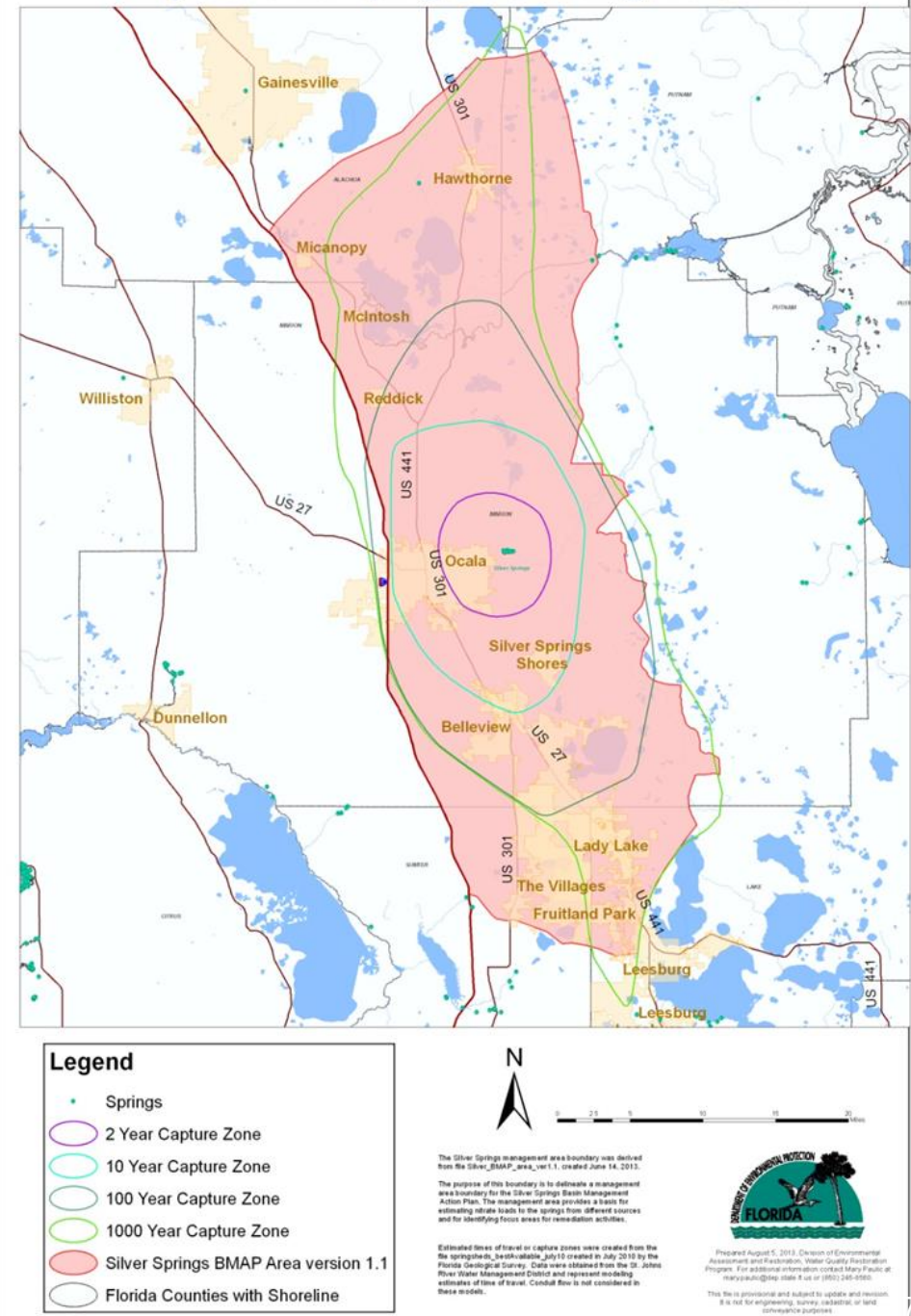


Focus Areas

- Purpose of focus areas is to locate remediation efforts where they will do the most good.
 - Best use of available dollars.
 - Prioritize project selection.
 - Help with future project development, planning tool

How to do this?

Proposed Silver Springs Basin Management Area





Guiding Principles

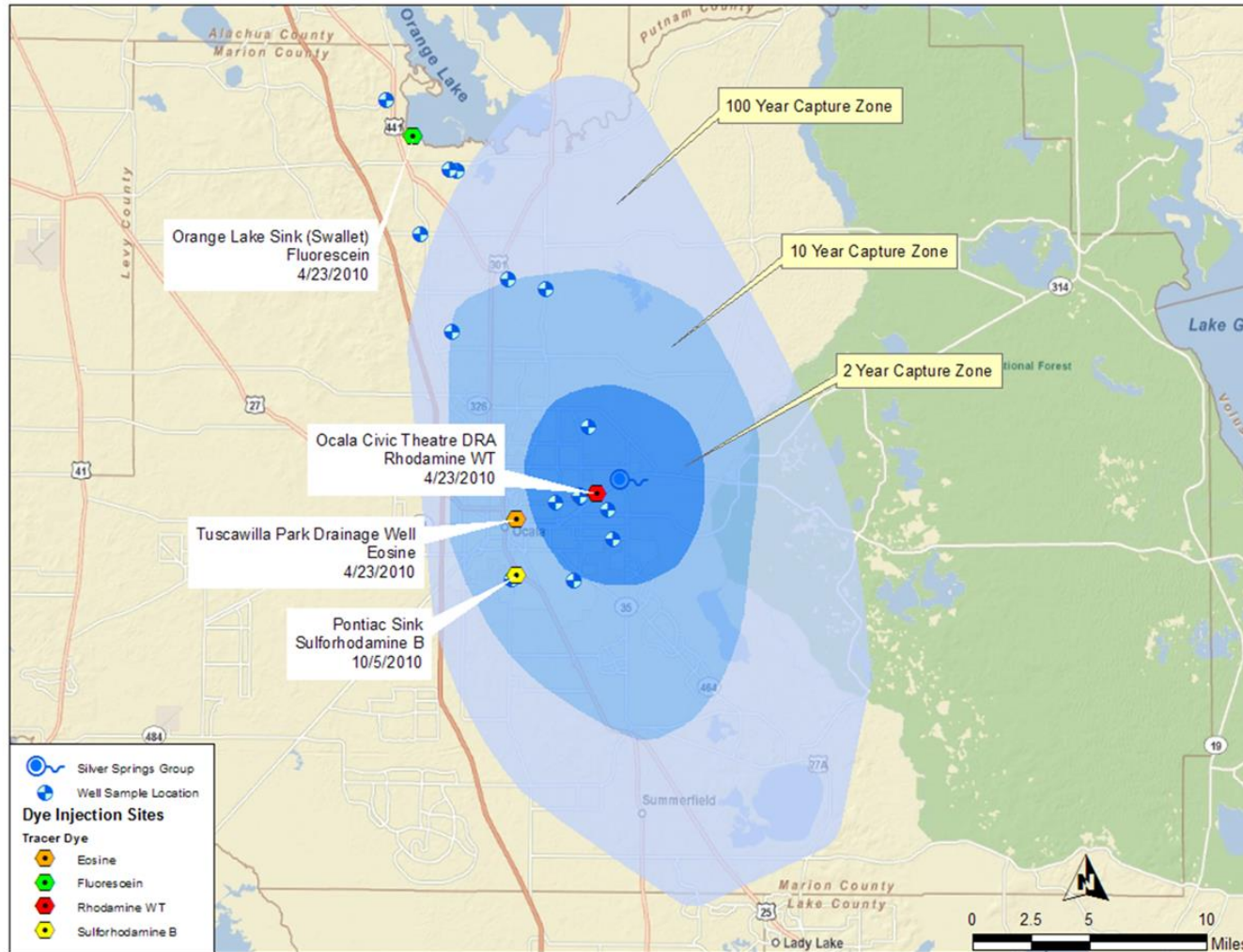
- Develop guiding principles that help focus efforts for the BMAP – Define focus areas.
- **Factors to consider.**
- Type of source by recharge area
 - Contribution and geographic extent
- Target high recharge areas, unconfined or semi-confined Floridan aquifer, vulnerable locations.
- Consider proximity to spring, time of travel.



Principles

- Location of known conduits, movement to springs is faster than distant alone would predict.
- Different management options for type of source. Some take longer to implement than others. Costs will vary.
- This is the first 5 year cycle of the BMAP, but we still need to be thinking ahead and planning future steps.

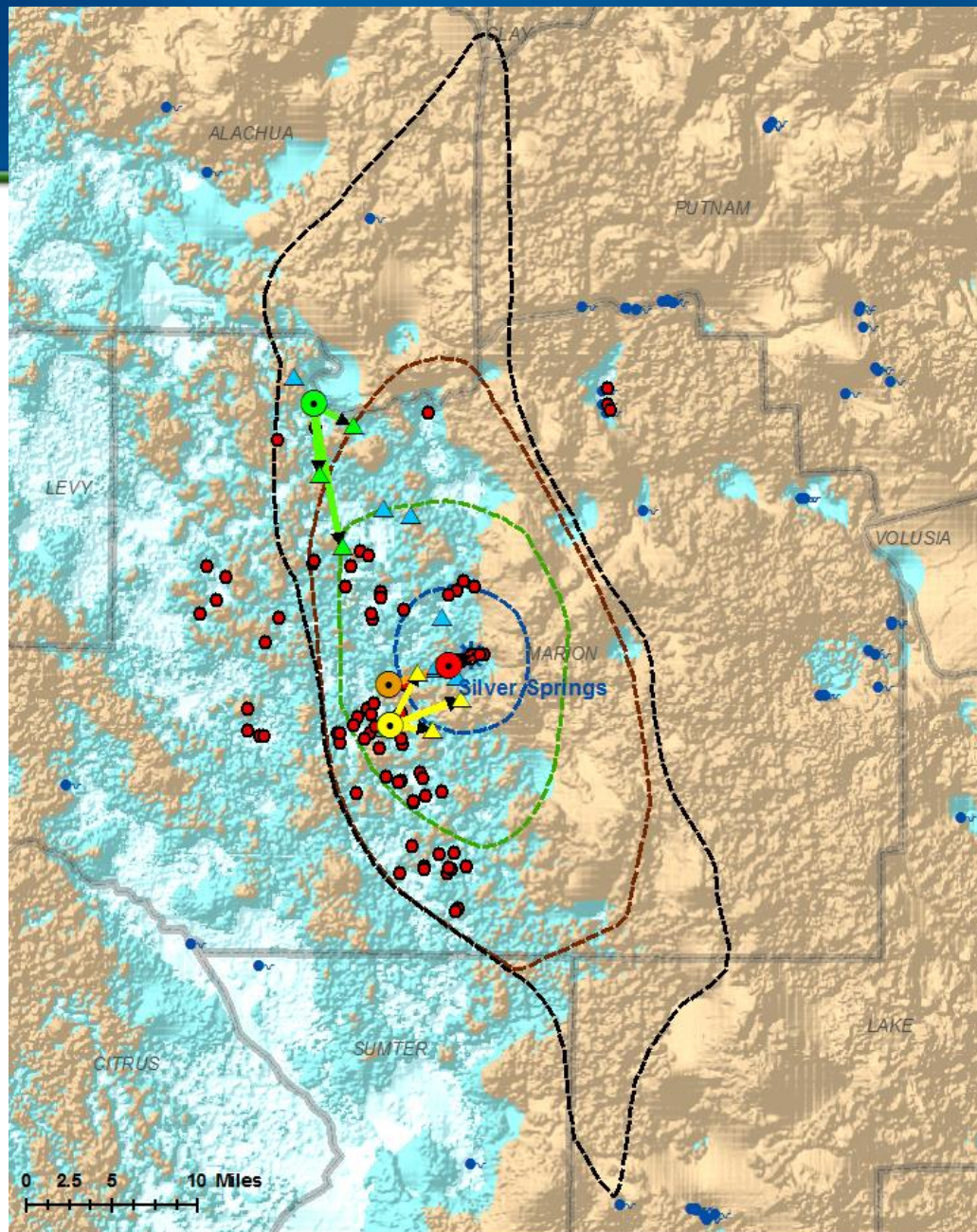
Conduit Travel



Courtesy of SJRWMD

Thickness of Sediments Overlying Upper Floridan

Aquifer with Cave Locations and Capture Zones



0 - 20 20 - 50 50 - 100 feet

• Caves

1000-year Capture Zone

100-year Capture Zone

10-year Capture Zone

2-year Capture Zone

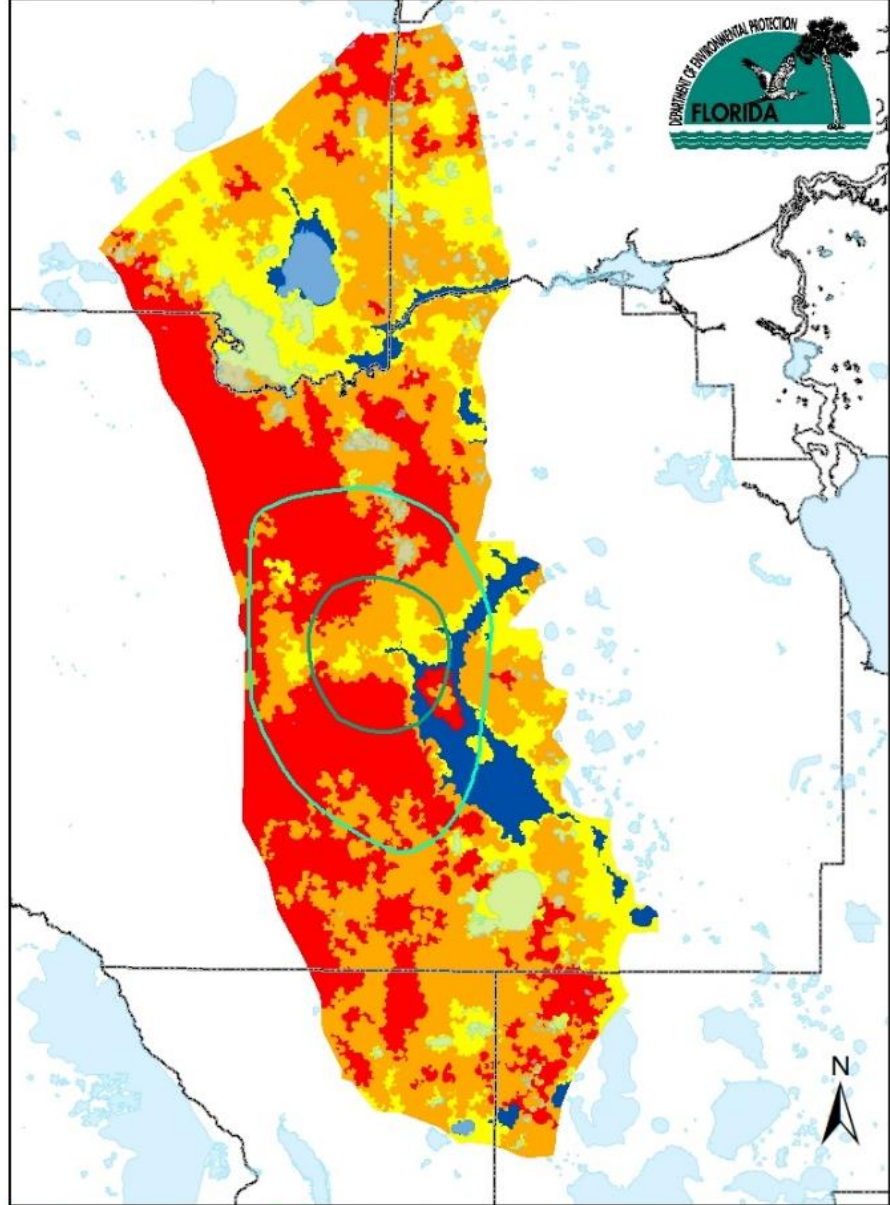
Dye studies to measure
time of travel in groundwater:

▲ Sulforhodamine B

▲ Eosine

▲ Fluorescein

▲ dye not detected



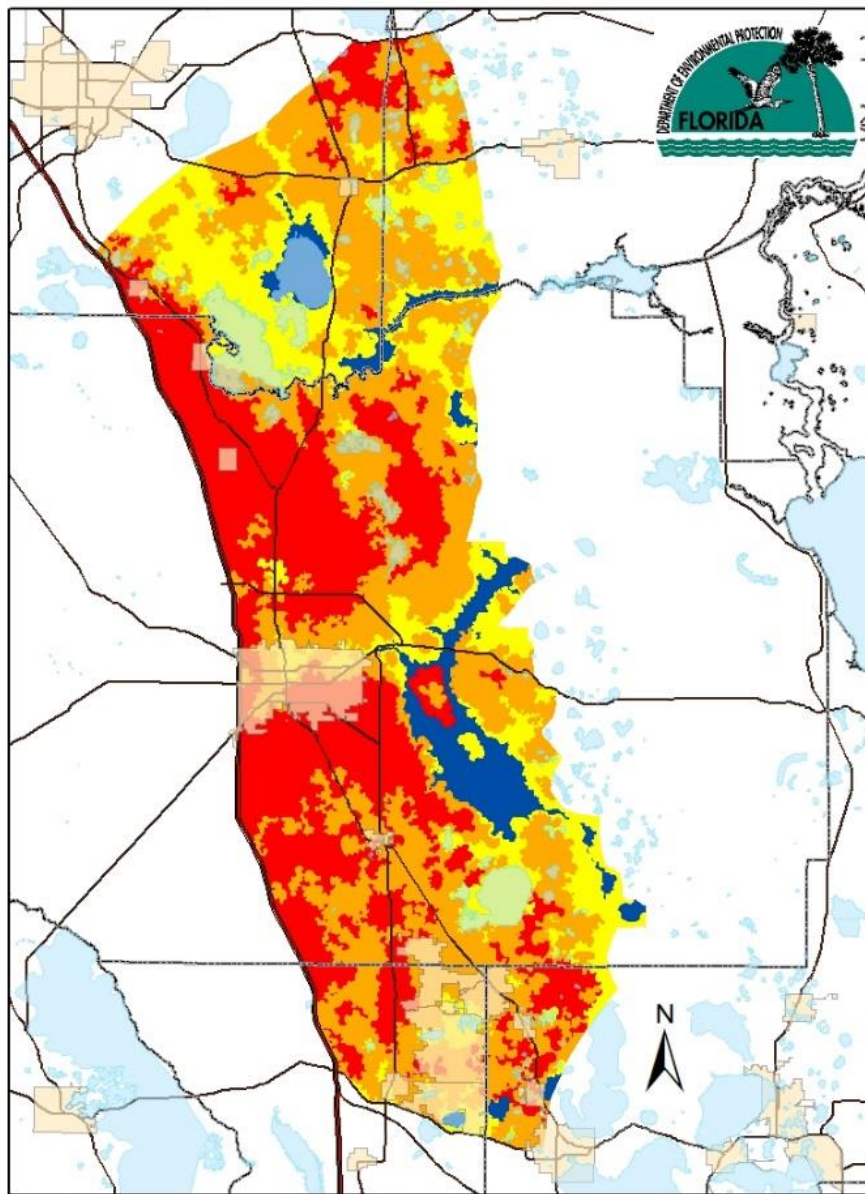
- Silver_2yr_capture
- Silver_10yr_capture
- Lakes (areas)
- County Boundary
- Discharge
- High Recharge
- Medium Recharge
- Low Recharge

Recharge Rates for Silver Springs Basin



Prepared May 20, 2014, contact
Mary Paulic at mary.paulic@dep.state.fl.us
for details

Recharge Rates



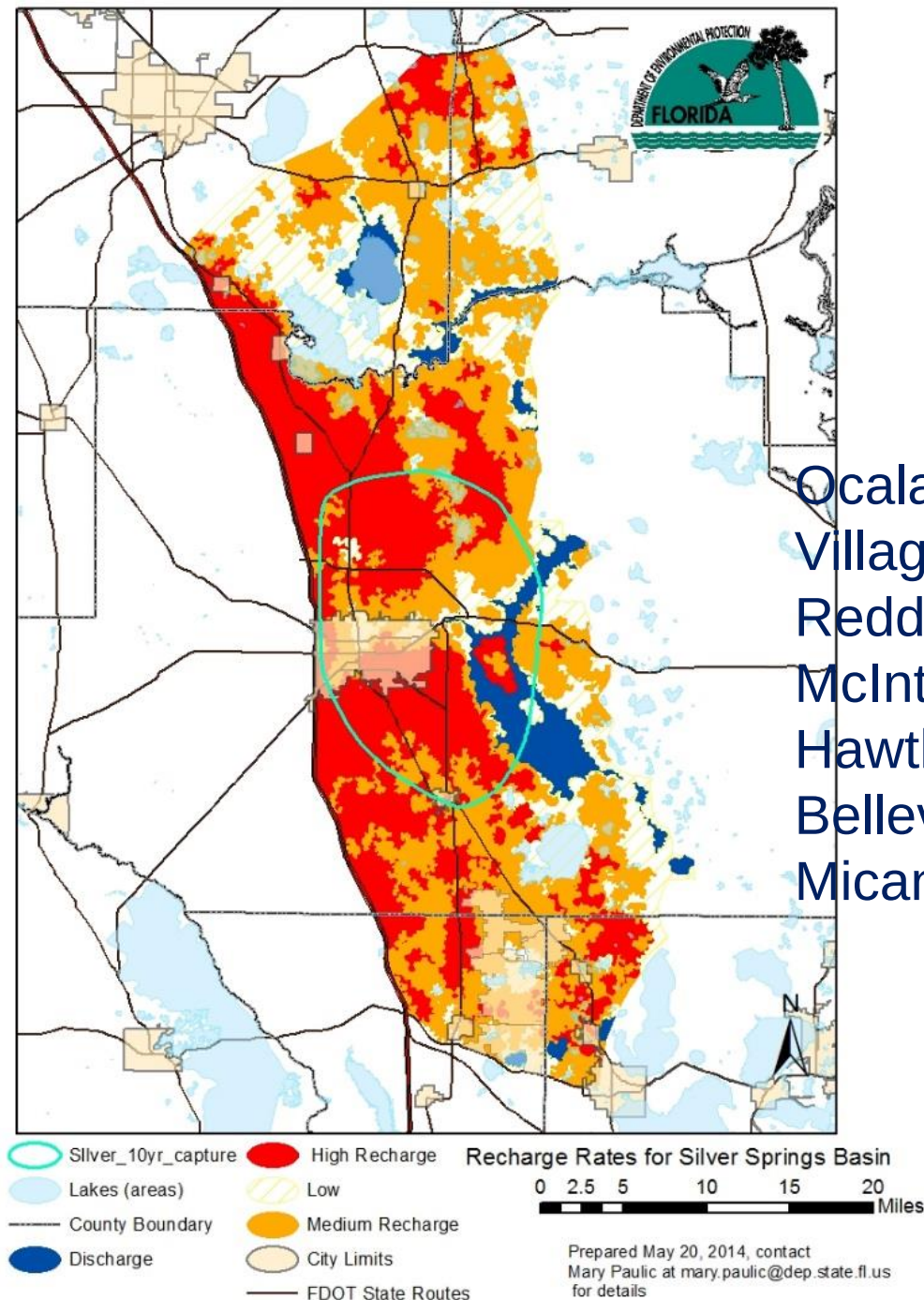
0 2.5 5 10 15 20 Miles



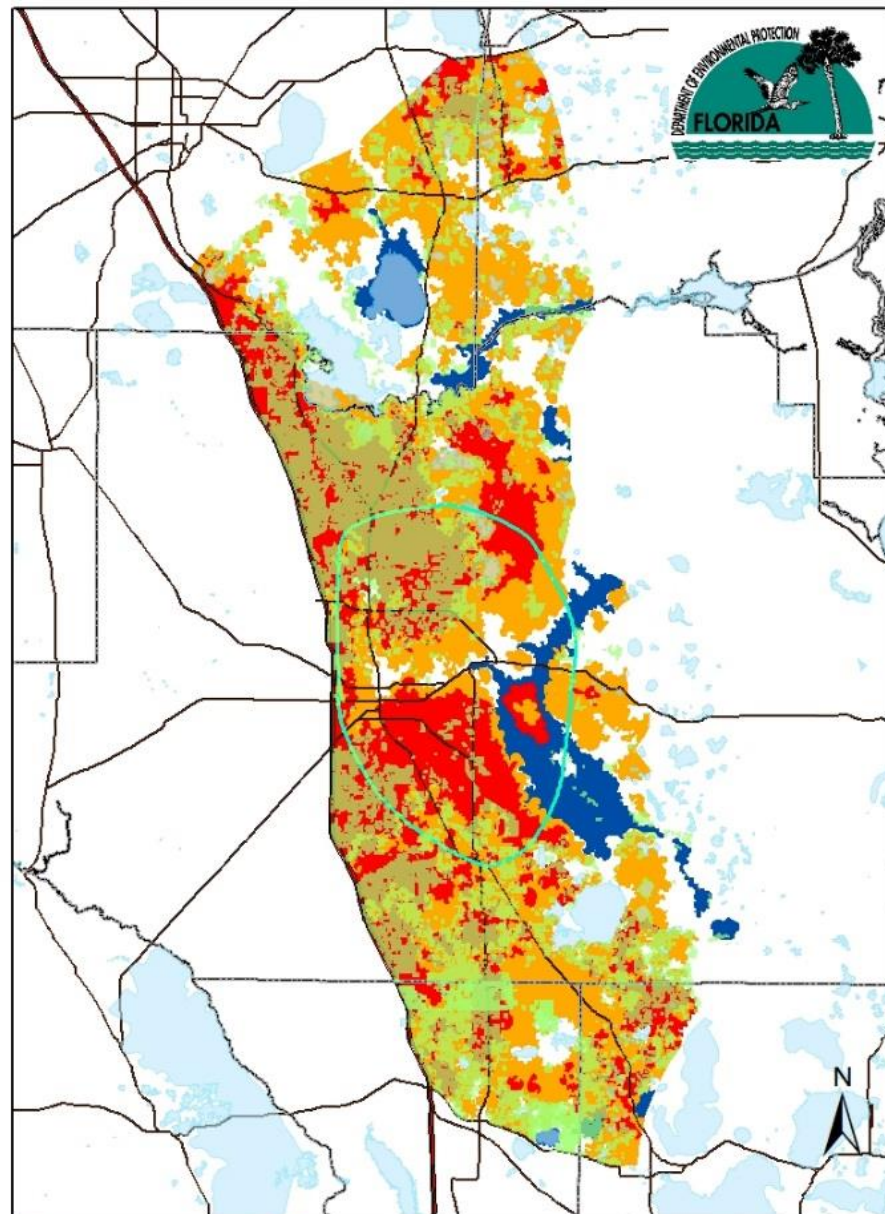
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City Locations with Recharge Rate

Recharge Rate by City

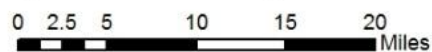


Ocala – mix of high, medium, low
Villages – largely medium, some low
Reddick – high
McIntosh – high
Hawthorne – medium
Bellevue – medium
Micanopy – medium



- 2009 Agriculture
- Silver_10yr_capture
- Lakes (areas)
- County Boundary
- Discharge
- High Recharge
- Medium Recharge
- FDOT State Routes

Agriculture and Recharge Rates



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Agriculture and Recharge Rates –medium and high



Focus Area Selection

- Where do we focus are efforts for this first BMAP iteration?
- Option 1: Focus on areas close to spring such as within 10 year time of travel. Downside, puts most of burden on a few stakeholders.
- Option 2: All stakeholders have a role, some will just have a bigger role.
- Other Options?



Next Steps

- Next full stakeholder meeting on June 26.
- Action Items to follow-up.
- Stormwater and wastewater managers meeting planned before June 26.

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.