

Florida Department of Environmental Protection



Bureau of Watershed Restoration

Focus Area Strategy

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BMAP Management Area

- Provisional management area defined for BMAP. Out for review and comment till July 12.
- Role of management area:
 - Help identify who are stakeholders – at a minimum for communication purposes.
 - Define area for nitrate inventory.
 - Define area for project data collection.

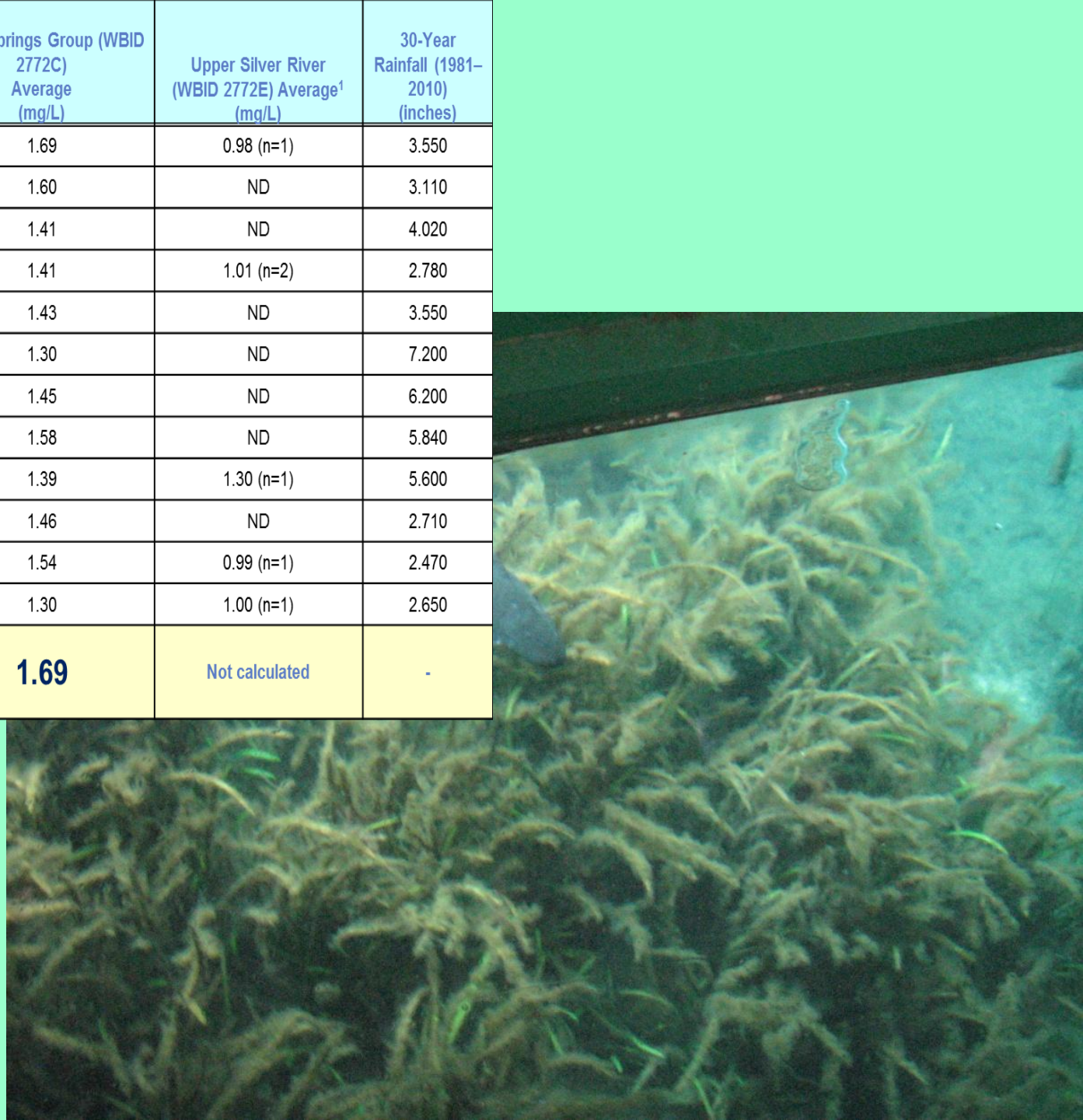


Focus Areas

- Purpose of focus areas is to concentrate remediation efforts where they will do the most good.
 - Concerns have been expressed that effort will be diluted if too spread out.
 - Best use of available dollars.
 - How to do this?

Month	Silver Springs (WBID 2772A) Average (mg/L)	Silver Springs Group (WBID 2772C) Average (mg/L)	Upper Silver River (WBID 2772E) Average ¹ (mg/L)	30-Year Rainfall (1981– 2010) (inches)
January	1.18	1.69	0.98 (n=1)	3.550
February	1.16	1.60	ND	3.110
March	1.05	1.41	ND	4.020
April	1.1	1.41	1.01 (n=2)	2.780
May	0.91	1.43	ND	3.550
June	0.98	1.30	ND	7.200
July	1.09	1.45	ND	6.200
August	1.09	1.58	ND	5.840
September	1.07	1.39	1.30 (n=1)	5.600
October	1.14	1.46	ND	2.710
November	1.13	1.54	0.99 (n=1)	2.470
December	0.98	1.30	1.00 (n=1)	2.650
Maximum Monthly Average	1.18	1.69	Not calculated	-

The Present





Overall Strategy

Start with larger BMAP management area.

- Consider geological and physical characteristics of BMAP area. Where aquifer is most vulnerable. These can include, but are not limited to:

1. Recharge rates.
2. Thickness of overburden.
3. Confined or unconfined aquifer.
4. Conduit flow, sinkhole and cave locations.
5. Other?

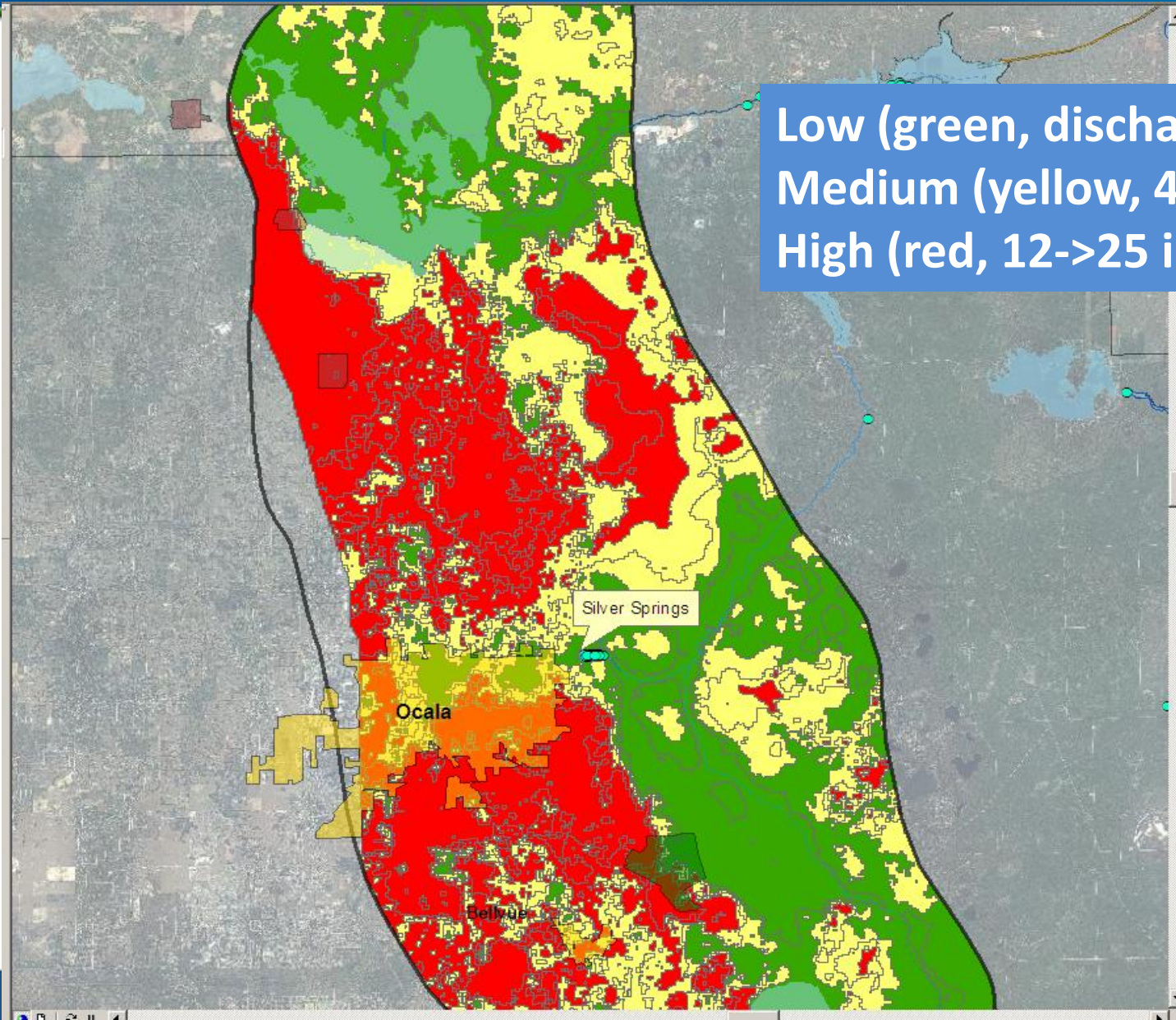


Overall Strategy (continued)

Add in data.

- Consider nitrate inventory data to find sources and locations with high loadings of nitrate to ground water.
- Consider locations and level of effort for current and planned projects and management strategies.
 - Project is a broadly defined term.
 - Includes management and planning initiatives.

Recharge- 3 ranges



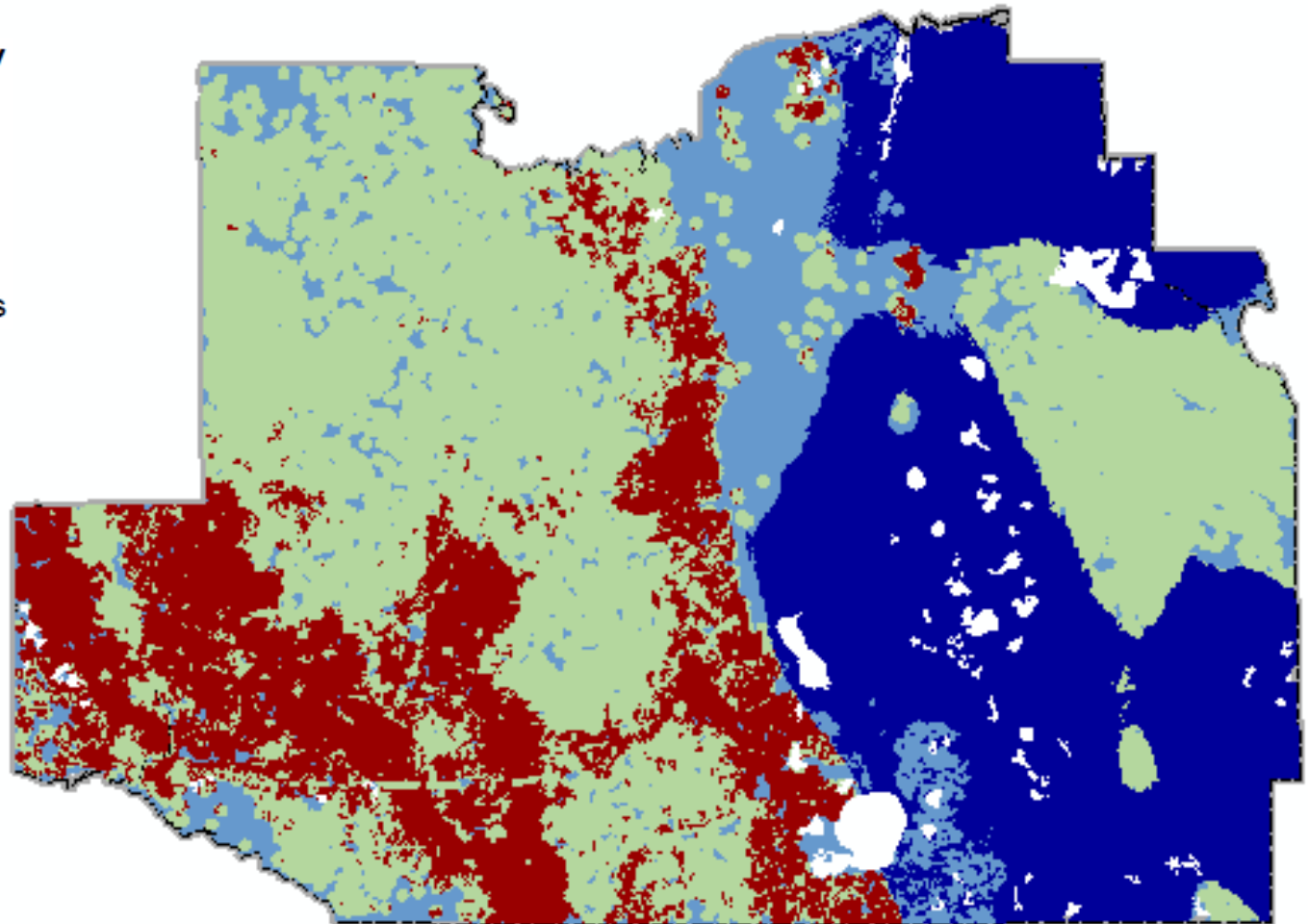
Low (green, discharge -4 in)
Medium (yellow, 4-12 in)
High (red, 12->25 in)



Marion County Aquifer Vulnerability Assessment

Relative Vulnerability

- Most Vulnerable
- More Vulnerable
- Vulnerable
- Less Vulnerable
- Major Water Bodies





Goal

Establish Focus Areas

- Identify sources with highest loading.
- What other management strategies are needed? Where is additional effort needed?
- Cost has to be considered.
- Practical application.



Projects and Management Strategies

Topics for Discussion

- Defining Projects
- Examples of Projects
- Time Period for Projects
- Entering Data



What are Projects?

Project has a broad definition

- It can include structural BMPs such as:
 - stormwater ponds or DRAs.
- Also includes operation and maintenance of wastewater and stormwater infrastructure.
- Planning and management strategies.
- Plans for management of wastewater:
 - Upgrades to waste water treatment plants
 - Sewering of areas served by septic tanks



Examples of Projects

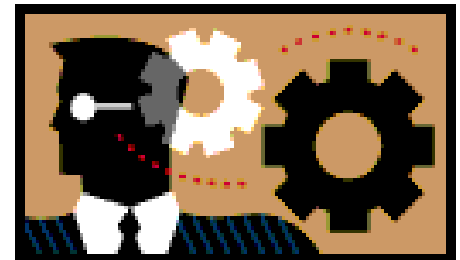
- Urban structural BMPs – stormwater ponds, swales.
- Street sweeping.
- Public education and outreach.
- Ordinances – such as fertilizer ordinance.
- Spring protection zone.
- Maintenance and operation of BMPs.
- Land purchases that are part of conservation and preservation strategies.
- Florida Friendly Landscaping.
- Agriculture BMPs –acreage covered under a notice of intent. [example project.xlsx](#)



Time Period

What is starting date for collection of data?

- TMDL evaluated data up to 2011.
- Starting date of 2009 for projects?
 - Full effect of BMP may not have been observed in TMDL data.
 - Or should we start earlier?





Database

- Entering data in Access 2003.
 - Data entry form created.
 - Where possible would like GIS information about the location of a project.
 - Considering putting all information into a geodatabase in Arc GIS.
- [silver.mdb](#)
[Silver Springs Basin Management Action Plan](#)
[Project Data Entry.docx](#)



Next Step

Sufficiency of Effort

- Set 5 year target of achievable restoration goals.
- Consider identification of additional projects or management strategies needed for restoration of Silver Springs.
- Locating focus areas will help direct where new projects are located.
- Summary of current projects will identify gaps in management strategies.

Is this the future?



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.