

Florida Department of Environmental Protection



Division of Environmental Assessment and Restoration

Jackson Blue Spring and Merritt's Mill Pond BMAP

Aquifer Vulnerability Assessment

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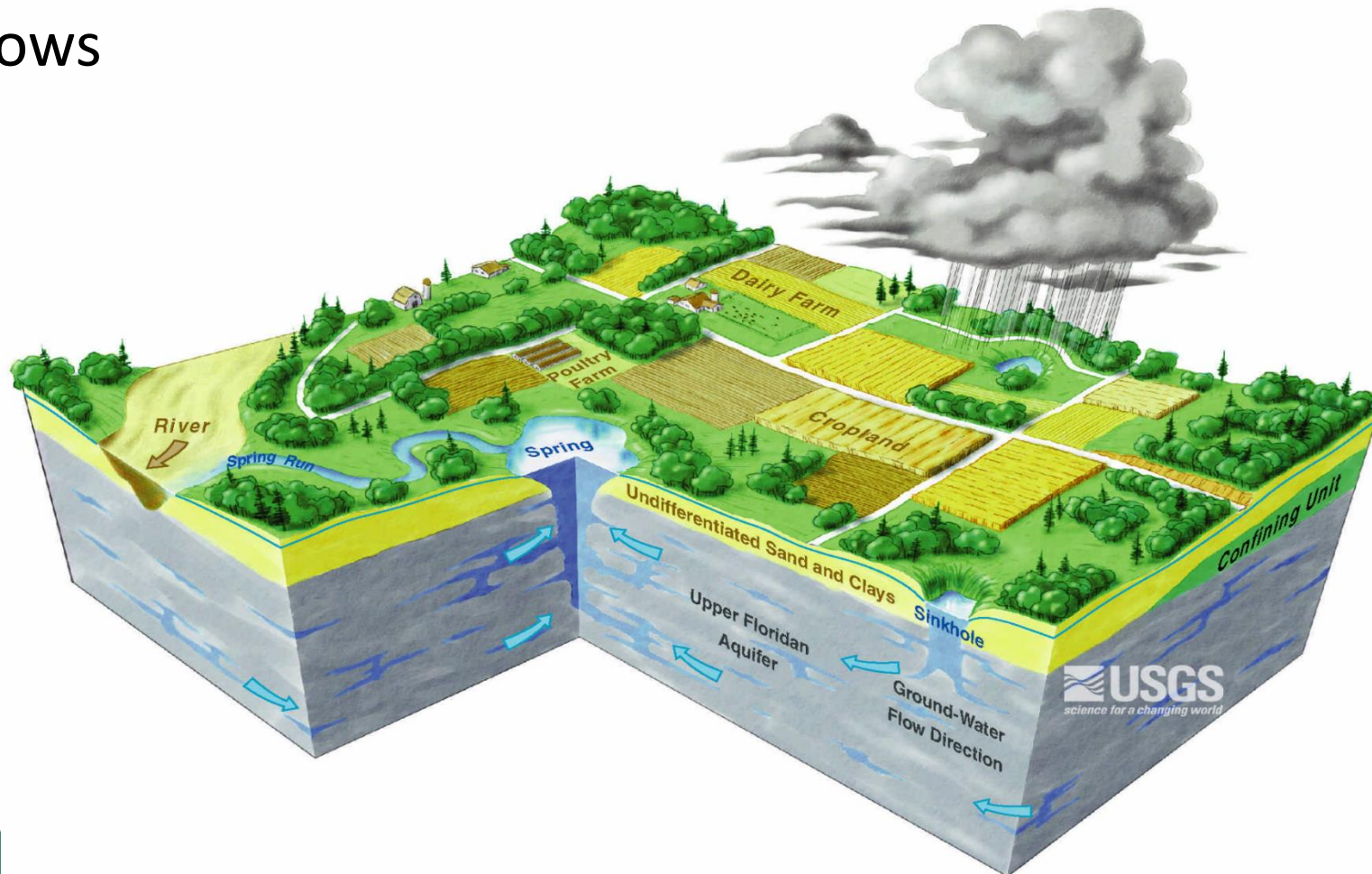


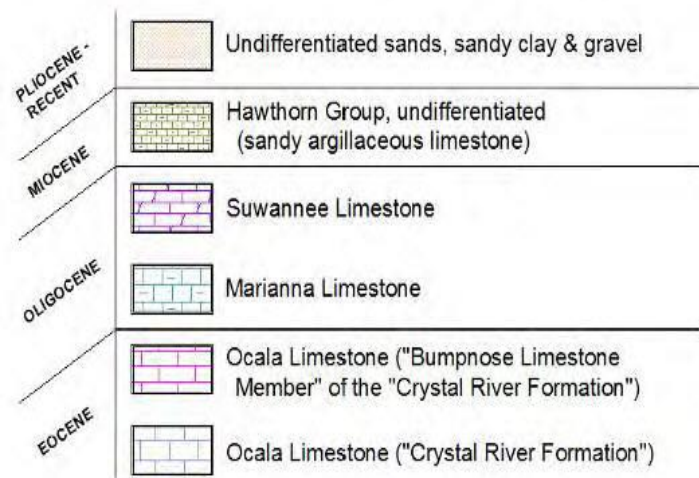
Take Home Message

- Floridan Aquifer flow to springs
- BMAP area geology and effect on subsurface flow
- Karstic limestone and Floridan Aquifer Vulnerability
- BMAP contributing area.
- Stakeholder questions and insights.

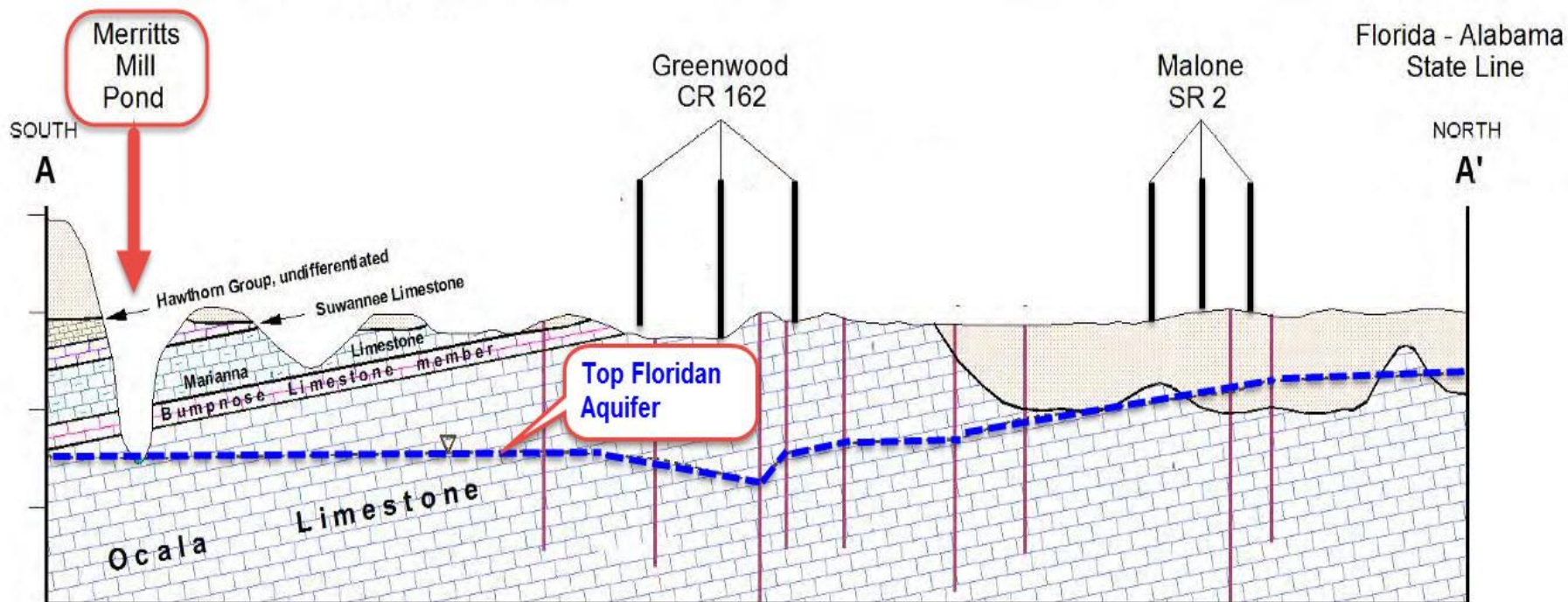
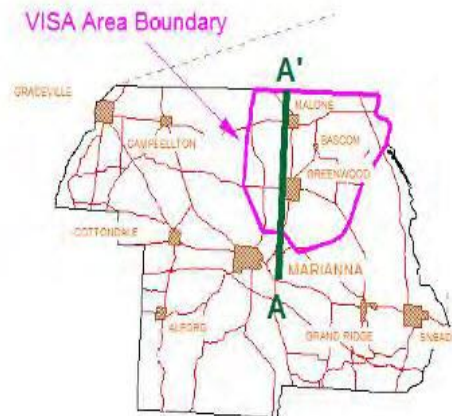
Aquifer Flow

- Floridan Aquifer is main source of water to the springs.
- Effect of soils and subsurface geology on ground water flows





Location of Section A - A' in Jackson County:

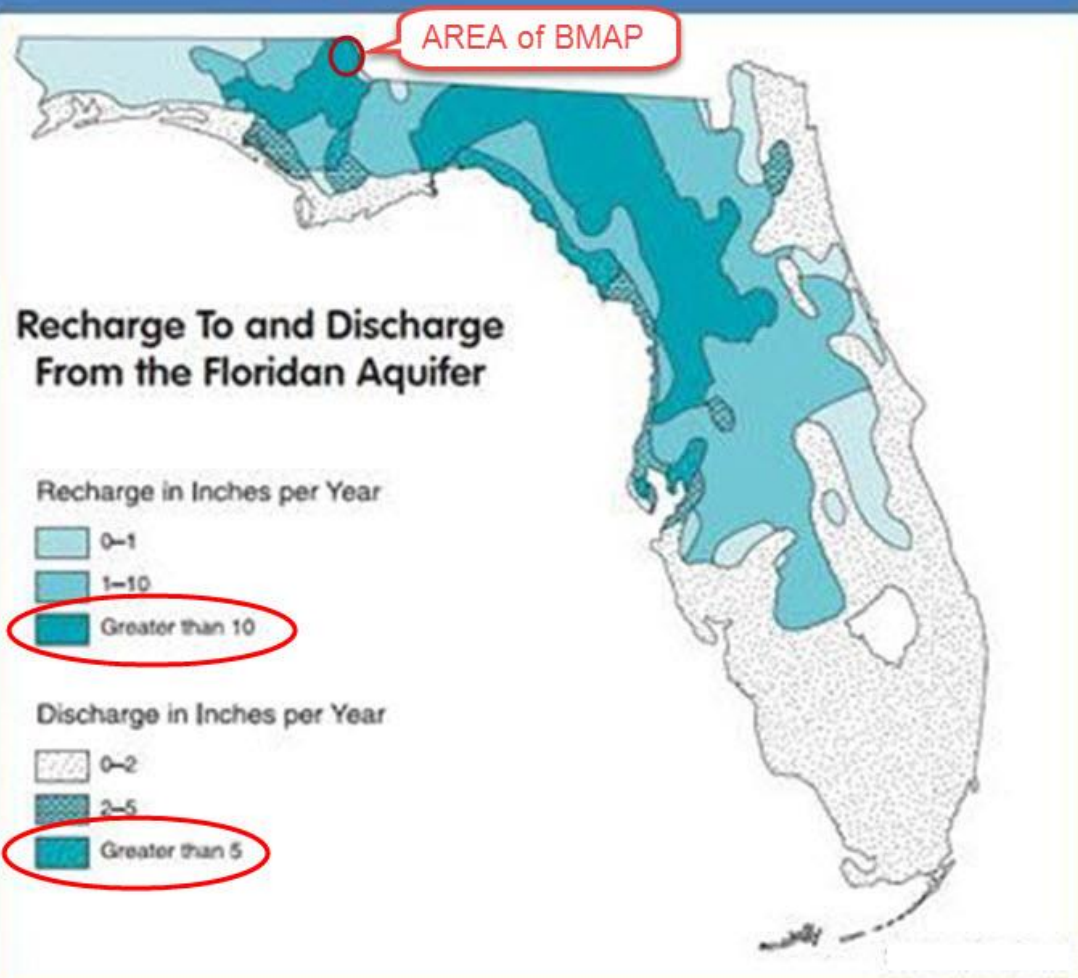




Karst Geology and Relationship to Aquifer Vulnerability

- Majority of the BMAP area:
 - Minimal porous sandy/gravel soils overlaying porous karst/limestone subsurface.
- Results in: Rapid and large volume water movement downward through karst subsurface.







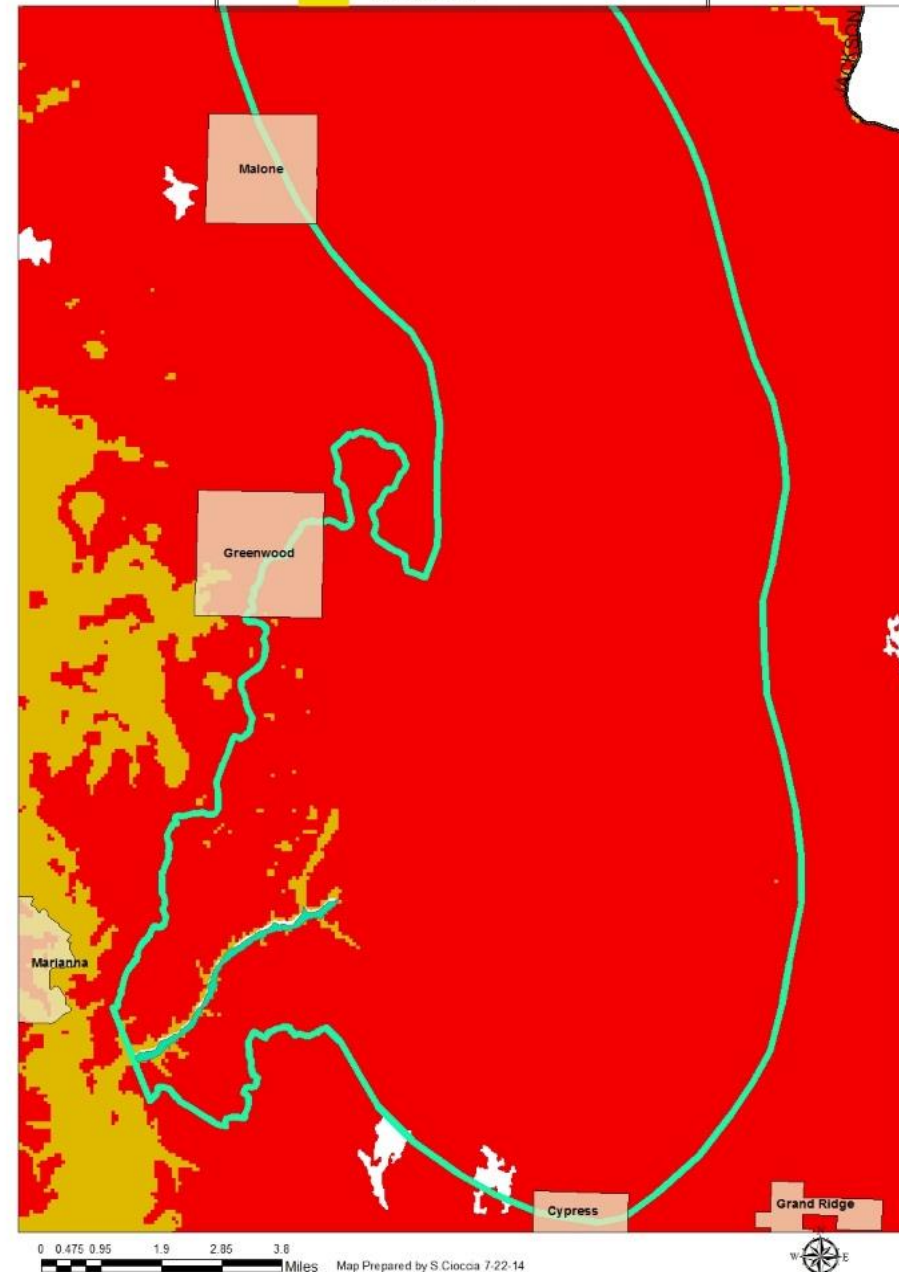
Aquifer Vulnerability Assessment Employed in Jackson Blue Spring BMAP

- FGS Developed a Statewide Aquifer Vulnerability Assessment which covers the BMAP area.
 - Florida Aquifer Vulnerability Assessment - FAVA (FAVA II – statewide coverage), September 2009
<http://www.dep.state.fl.us/geology/programs/hydrogeology/fava.htm>
 - FAVA incorporates the following geologic/hydrologic considerations:
 - Depth to water table
 - Hydraulic head difference
 - Thickness of confinement soil layers
 - Distance to karst features
 - Soil permeability
 - Aquifer system overburden (overlying soils)

Aquifer Vulnerability for BMAP Area

Floridan Aquifer System Contamination Potential

More Vulnerable
Vulnerable



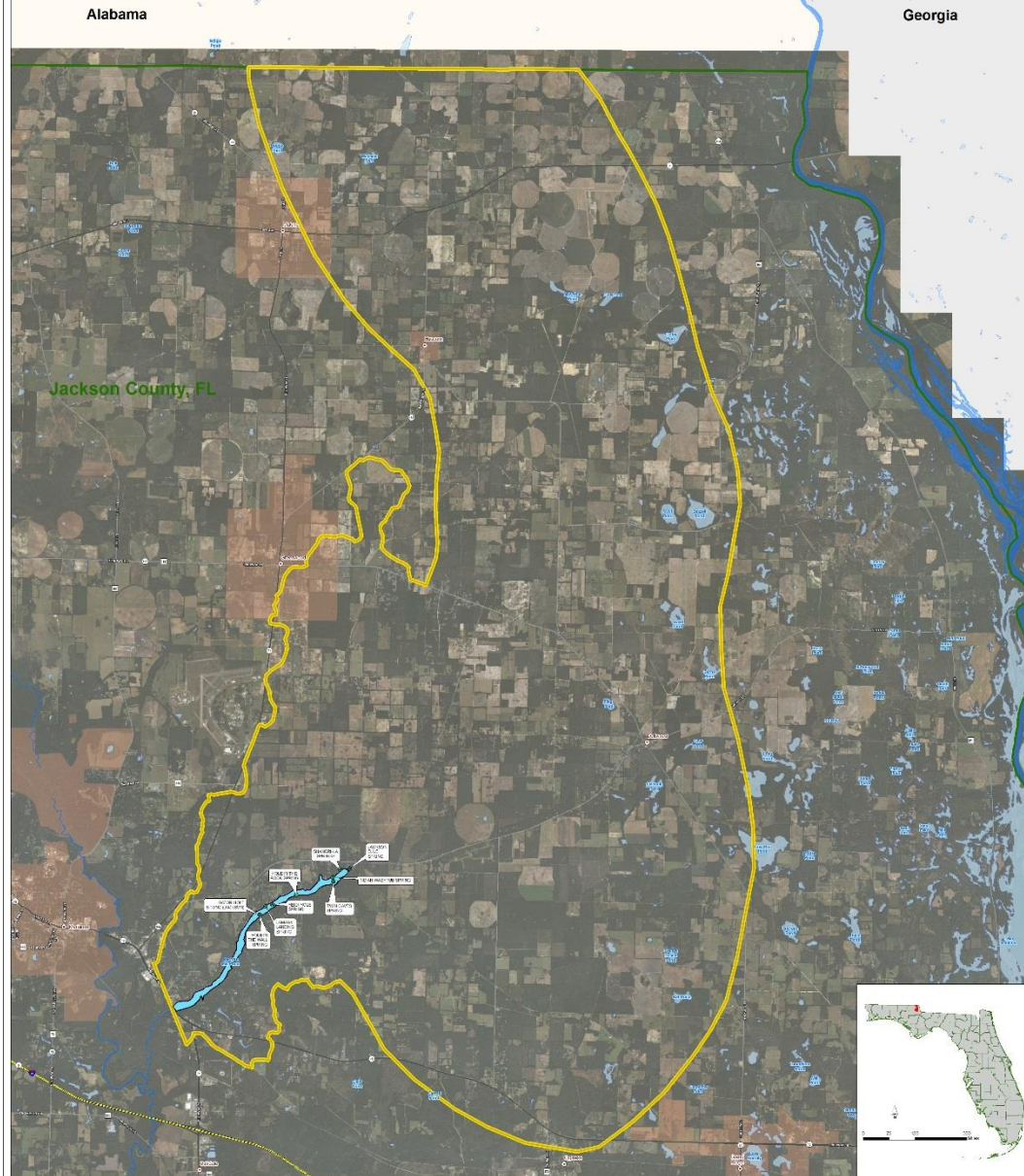
- Soils overlying Floridan Aquifer thin to absent and porous;
- Porous karstic limestone subsurface throughout the entire BMAP area
- High soil and subsurface porosity with rapid infiltration to Floridan Aquifer



BMAP Area

- Includes identified routes of surface and ground water flow to Blue Spring and Mill Pond;
- Include areas of highest aquifer vulnerability designation;
- Encompasses known area potentially contributing pollutant of concern (nitrate-nitrogen) to Jackson Blue Spring and Merritt's Mill Pond.

JACKSON BLUE SPRING BMAP AREA





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[http://publicfiles.dep.state.fl.us/DEAR/BMAP/Apalachicola-Chipola/Jackson Blue Spring BMAP/Meetings/](http://publicfiles.dep.state.fl.us/DEAR/BMAP/Apalachicola-Chipola/Jackson%20Blue%20Spring%20BMAP/Meetings/)

Questions?

