



Florida Department of Environmental Protection
Water Quality Restoration Program

Upper Ocklawaha Basin LOADING REDUCTIONS AND ALLOCATIONS

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Outline of Approach

- Models updated with 2009 land use.
- Models used land use data, EMCs, and imperviousness to estimate loading from different sources.
 - Transportation EMC have shifted over time.
 - Do we need to compare EMC used for model calculations against EMC used for project calculations?
- TMDL water quality targets and loading targets **DO NOT CHANGE!**
- Starting loading or baseline adjusted.



Approach

- GIS translates sources of loading by location.
 - Created land use database.
 - Includes lake basin and sub-basin for each land parcel.
 - Jurisdiction assigned to each land parcel.
- Mapped modeled categories of land use for each jurisdiction.
- Separate categories for all agriculture, muck farms, natural lands, and water/wetlands, and developed lands.
- Focus on developed land uses that generate urban stormwater.



Approach

- Aggregated developed land use into 3 categories.
 - High intensity.
 - Medium intensity.
 - Low intensity.
- Portion or percent of each developed land use category calculated by jurisdiction.
 - Acres (portion) of a land use category within a jurisdiction as a percent of the total acreage for that land use in the entire basin.
- Percent area is the basis for all calculations of loading reductions and allocations.



Data Updates

- Added FDOT jurisdiction to Palatlahaha River Basin.
 - Still need to adjust Turnpike area.
- Added educational credits to each lake basin table.
 - Except for Lake Apopka basin.
 - Apopka model does not separate stormwater from urban, agriculture, or natural areas.
- Separated out package plant from septic system loading and revised calculations of reductions.
 - Need to confirm number of septic systems.

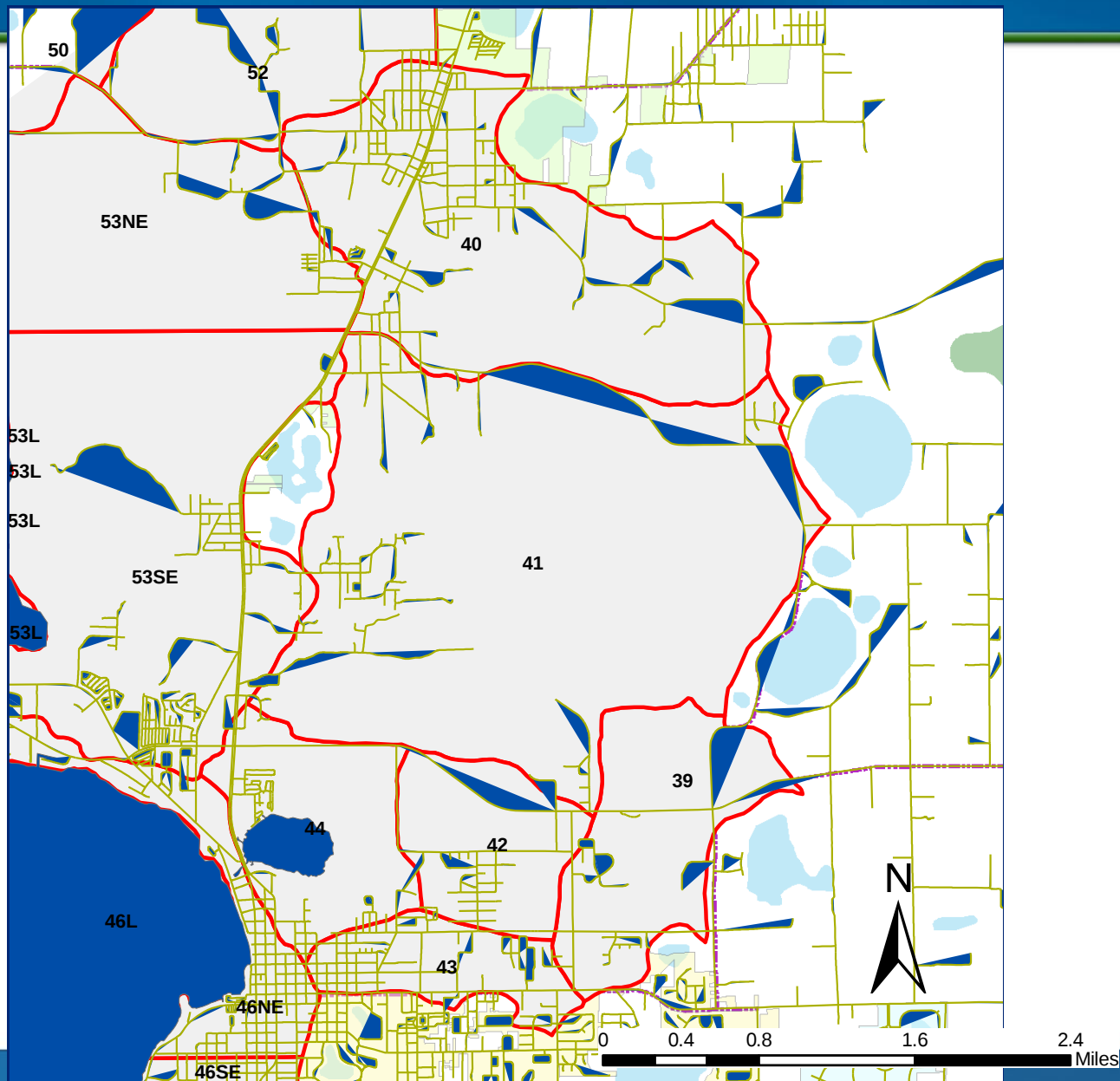


Loading Questions

- Was pound/acre considered?
 - Indirectly, but percent area seemed to work best.
- Does distance from a lake change the required reduction?
 - Attenuation factor included with lake models.
 - Tested impact with Trout Lake.



Trout Lake Sub-Basins





Trout Lake

Basin Number	pounds (lbs) TP/yr		
	Developed-High	Developed - Medium	Develop-Low
39	7.2	11.7	3.4
40	136.1	75.6	5.6
41	10.8	36.8	6.7
42	7.7	12.5	1.1
43	37.7	52.4	0.3
44	81.1	27.6	0.0
Sum	280.6	216.5	17.2

Jurisdiction	Developed-High-lbs TP/yr	Developed-Medium-lbs TP/yr	Developed-Low-lbs TP/yr	Total Reduction lbs TP/yr
Eustis	110.1	89.3	2.0	201.3
FDOT	31.1	1.0	0.0	32.1
Lake County	5.6	48.8	10.6	65.1
Umatilla	114.5	62.5	3.3	180.3
			Total	478.8



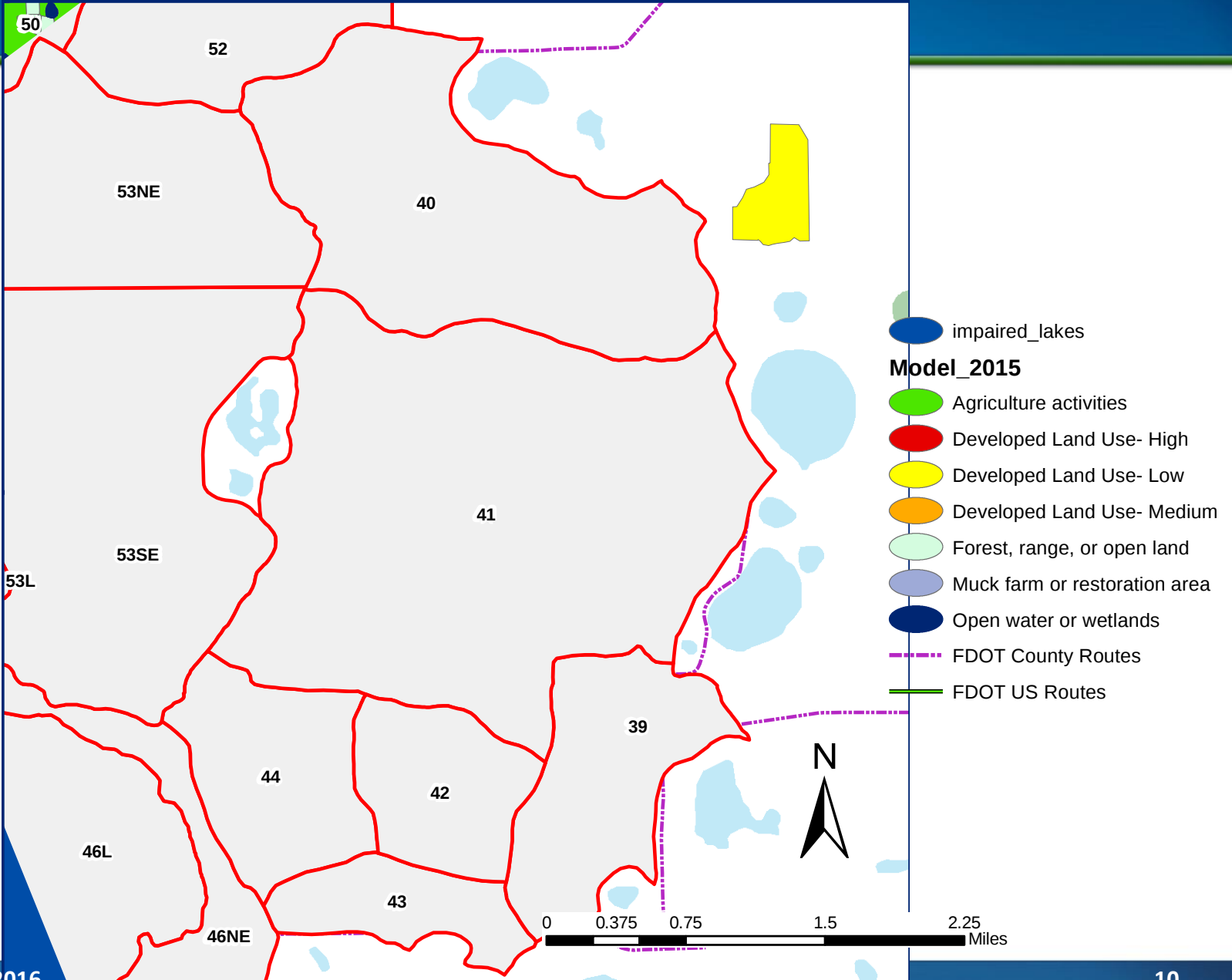
Trout Lake Comparison

Jurisdiction	Total Watershed Reduction Developed lbs TP/yr	Total Reduction Developed lbs TP/yr -by Sub-basin	Difference lbs TP/yr
Eustis	211.9	201.3	-10.6
FDOT	29.0	32.1	3.1
Lake County	72.3	65.1	-7.3
Umatilla	165.5	180.3	14.7
Total	478.7	478.8	

If negative difference, sub-basin reduction is lower than total watershed reduction.



Trout Lake Land Use





Projects

- Corrections to project credits.
 - Umatilla, Eustis, and Mt. Dora projects and Tavares street sweeping and baffle boxes.
 - Adjustment made to project credit based on area within specific lake basin.
- Missing data for structural BMPs!!!
- Project location. Typically counted all projects in a basin.



Loading Reduction Summary

- Handouts



Reductions

- How do we achieve reductions?
 - Over what time frame?
 - Do we expect reductions from all communities even if reduction is very small?



Education

- What is included as part of Florida Yards and Neighborhoods Program or Florida Friendly landscaping?
- How are county education programs applied within cities?
 - Do cities receive credit for participation in county program?



Charge

- Identify additional management strategies for priority waterbodies within 12 to 18 months after adoption of BMAP.
 - Work has been started, but additional effort is needed.
 - We are at the 18 month mark!



Goals and Schedule

January to June 2016 Goals:

- Finalize apportionment of reductions.
 - Collect available additional project information.
- ~~Finalize the BMAP and complete the adoption process.~~ Instead adopt allocation and any new projects without full BMAP revision.
- Meetings in November and December 2015, January and March 2016.
- ~~Final BMAP meeting January 2016.~~ Probably May/June.
- Public meeting to present Changes - undecided if needed.



Next Steps

- Questions?
- Follow-up assignments.
- Future meeting planning.
 - Next BMAP meeting date.

The background of the slide is a photograph of an empty lecture hall. Rows of blue plastic seats are visible, arranged in a tiered fashion. The seats are facing away from the camera, towards a white wall at the front of the room. The text "Any comments or questions???" is overlaid in the center of the image in a large, bold, yellow font.

• Any comments or questions???