



Florida Department of Environmental Protection

Orange Creek Basin Lakes Allocation Update

**Mary Paulic
July 10, 2018**





What's Happening

- Agriculture credits assigned.
- Roadway loading adjustment.
- Florida Friendly Landscaping adjustment.

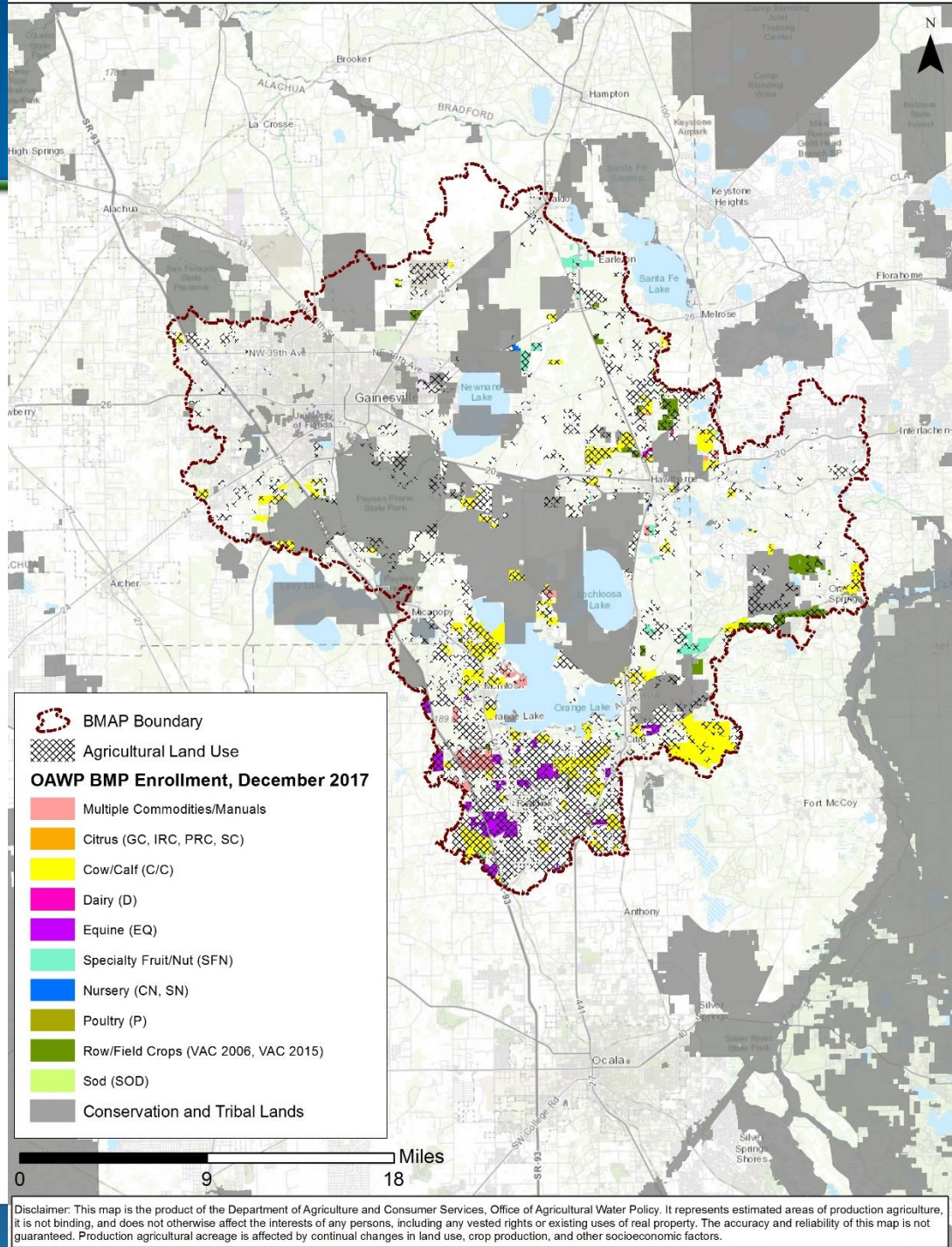


Agriculture NOI Credits

- Credit for Notice of Intent (NOI) for implementation of BMPs.
 - NOI data through December 2017.
 - Match NOI area with modeled land uses.
 - Estimate loading from proportion of acreage covered by NOI.
 - Apply 30% efficiency to BMPs to calculate credits (pounds of TN or TP).
 - Also need to consider attenuation for Lochloosa Lake.



Agriculture



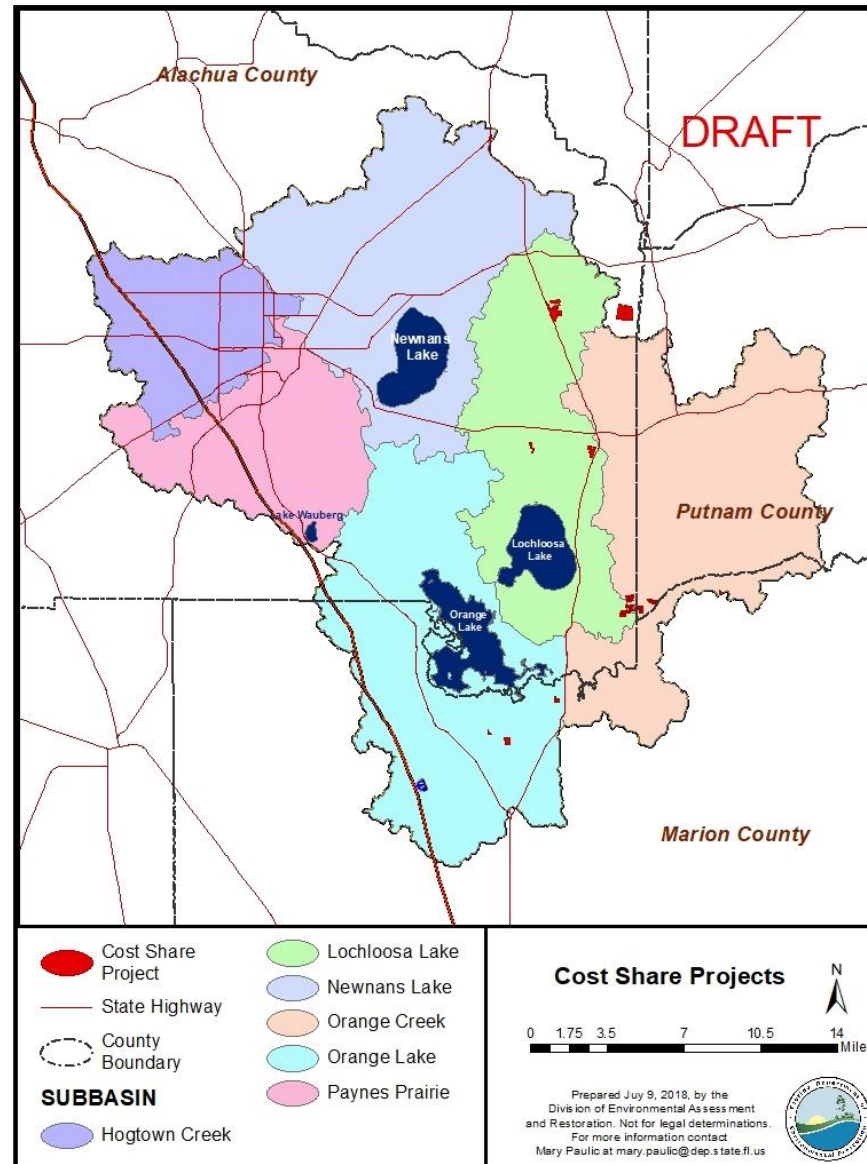


Agricultural Project Credits

- Credits for projects.
 - Cost share projects funded by SJRWMD.
 - Apply 30% efficiency to estimated reductions to obtain credit.
 - Also need to consider attenuation for Lochloosa Lake.



Agricultural Cost Share Projects





Draft Orange Lake and Newnans Lake Agriculture Credits

Lake Sub-basin	TP Loading lb/yr	Percent NOI	TP Reduction lb/yr	TP Credit lb/yr NOI	TP Project Credit lb/yr	Total TP Credit lb/yr
Hatchett Creek	283	10.3%	29.1	8.7		9
Little Hatchett Creek	24	49.4%	11.9	3.6		4
Newnans Lake	215	26.3%	56.4	16.9		17
Total Newnans Lake						30
Orange Lake	5,712	31.0%	1769.6	530.9	691	1,222
Camps Canal and River Styx	274	33.6%	92.1	27.6		28
Total Orange Lake						1,250

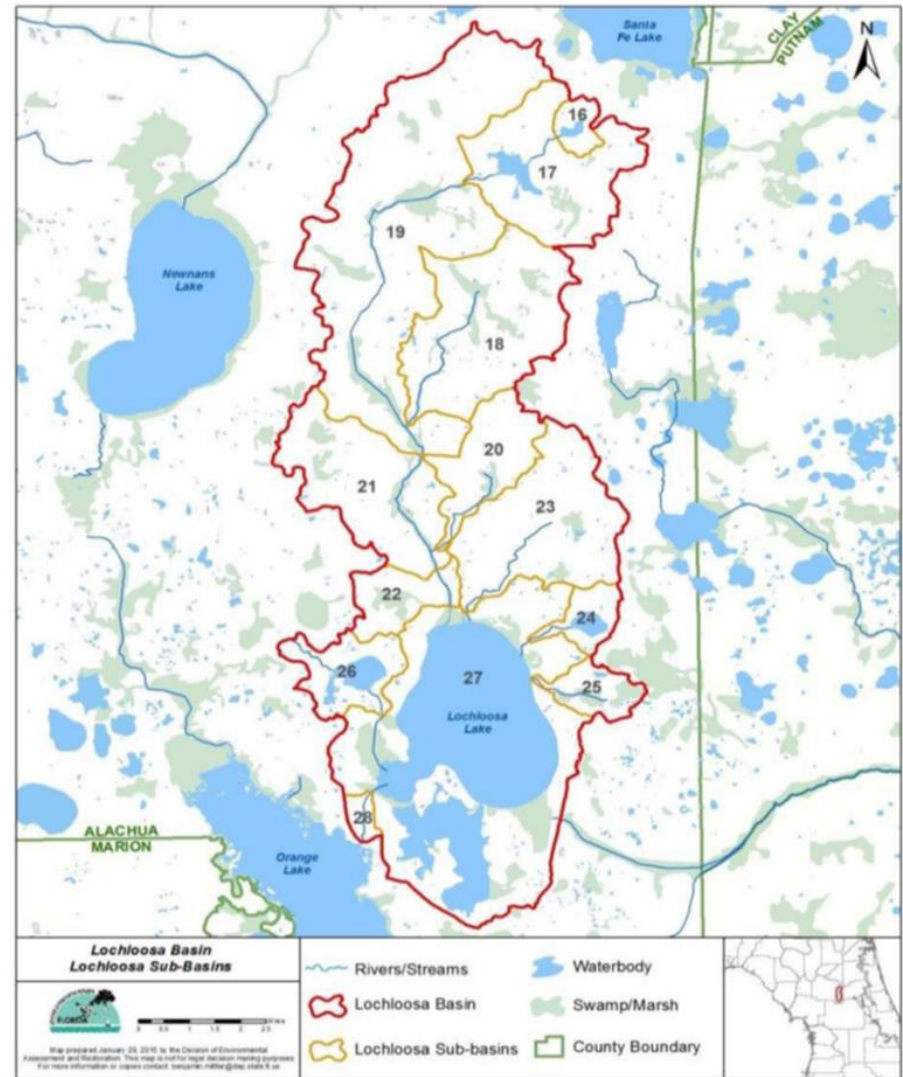
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Lake Sub-basin	TN Loading lb/yr	Percent NOI	TN Reduction lb/yr NOI	Total TN Credit lb/yr
Hatchett Creek	1,954	10.3%	201	60
Little Hatchett Creek	143	49.4%	71	21
Newnans Lake	1,483	26.3%	389	117
Total Newnans Lake				198



Lochloosa Lake Agriculture Credits

- Distance from lake a factor affecting magnitude of loading from a sub-watershed.
 - Attenuation of loading.
- Sub-watersheds 16-27 contribute to lake.
- Attenuation factor is the ratio of output/input.





Routing of Water

Sub-watershed Number	Name	Acres	Reach Connection
16	Lake Elizabeth Creek	556.7	Flows into Reach 17
17	Morans Prairie	4,584.5	Flows into Reach 19
18	Unnamed Slough North	5,746.0	Flows into Reach 19
19	Lochloosa Creek SR20	12,949.5	Flows into Reach 21
20	Unnamed Slough South	2,248.2	Flows into Reach 21
21	Lochloosa Creek South	4,603.3	Flows into Reach 22
22	Lochloosa Creek	1,444.2	Flows into Reach 27
23	West Hawthorne Branch	5,071.8	Flows into Reach 27
24	Lake Jeffords	887.7	Flows into Reach 27
25	Unnamed Drain	1,020.3	Flows into Reach 27
26	Watson Prairie	1,849.9	Flows into Reach 27
27	Lochloosa Lake	15,306.0	Flows into Reach 28
28	Cross Creek	321.3	Discharges to Orange Lake



Attenuation Factor

Segment Number	Average TN attenuation	Average TP attenuation
16	0.410565784	0.414171863
17	0.434876005	0.356122337
18	0.635831686	0.521713468
19	0.811677586	0.741892956
20	0.741081331	0.660094337
21	0.931983718	0.907786422
22	0.992361429	0.987966714
23	0.940467143	0.919720714
24	0.846202429	1.332469143
25	0.910034429	0.867578143
26	0.573759714	0.731810286



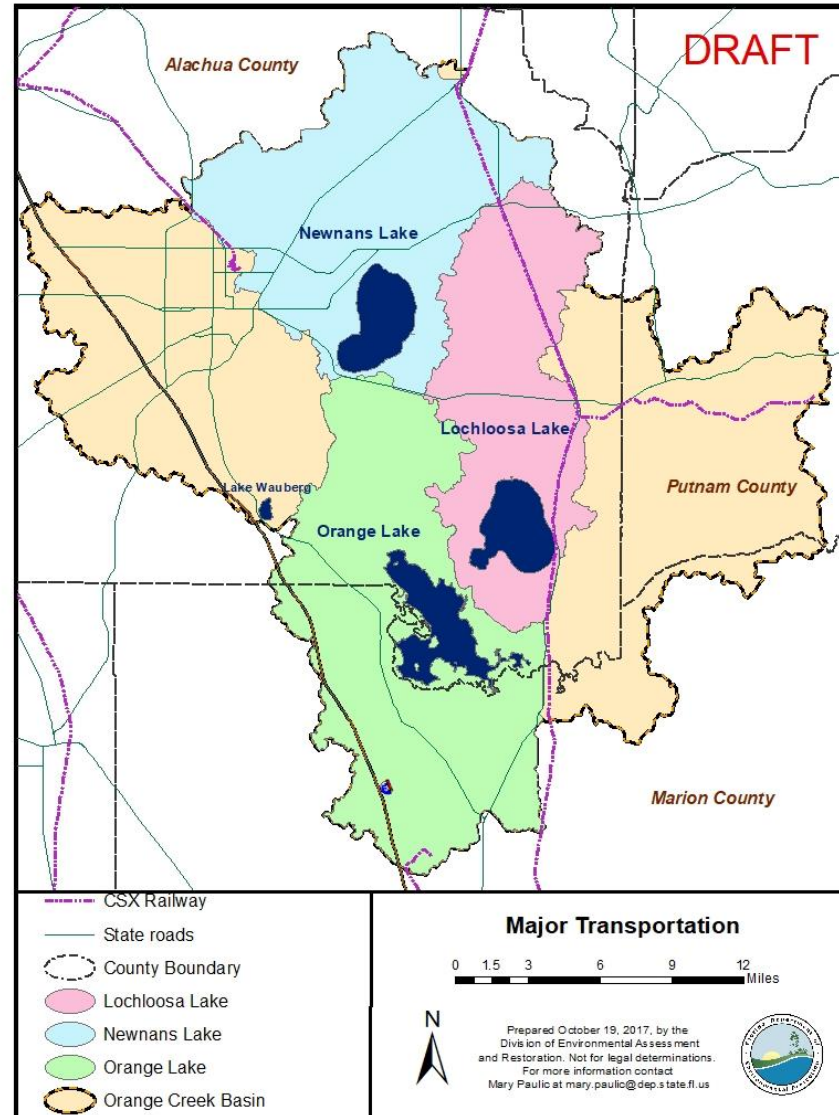
Draft Lochloosa Lake Agriculture Credits

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Sub-Basin	Project TP Credit lb/yr	Project TN Credit lb/yr	NOI TN Credit lb/yr	NOI TP Credit lb/yr	Total TN Credit lb/yr	Total TP Credit lb/yr
Lochloosa Lake Total	189	610	1320.9	168.0	1931	357
Segment 17	121	421	48.7	4.7	469.2	125.3
Segment 23	61	178	108.3	12.6	286.8	73.9
Segment 20	2	4	181.8	17.7	185.6	20.0
Segment 21	5	7			7.3	5.0
Segment 18			315.7	31.6	315.7	31.6
Segment 19			185.2	38.6	185.2	38.6
Segment 24			37.1	6.8	37.1	6.8
Segment 26			57.4	9.4	57.4	9.4
Segment 27			386.8	46.6	386.8	46.6



Transportation



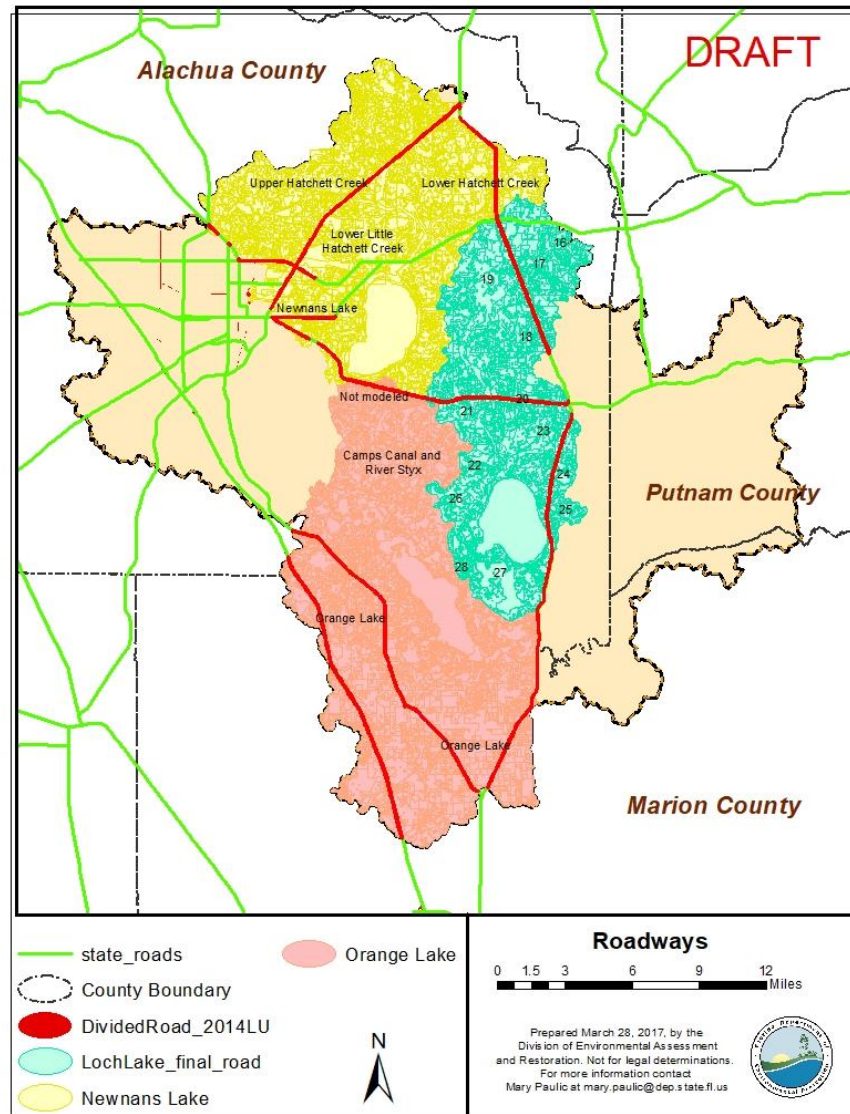


Transportation Loading Adjustment

- Identified additional acres of 4 lane divided highway from land use maps.
 - Assigned to FDOT rather than local governments.
- Questions: Additional state roads in basin that are not delineated in land use maps and currently included as part of reduction for local government. Should state roads be reassigned to FDOT?



State Roads





Draft Changes to Reductions

Newnans Lake

Jurisdiction	Old TP Reduction lb/yr	New TP Reduction lb/yr	Old TN Reduction lb/yr	New TN Reduction lb/yr
Alachua County	466	465	4,108	4,105
Gainesville	467	467	4,121	4,114
FDOT, District 2	86	87	813	823
Waldo	27	27	239	238

Draft



FYN Credits

- Extended Florida Yards and Neighborhoods credit to Hawthorne, Waldo, Micanopy, McIntosh, and Reddick based on county programs.

Jurisdiction	Credit for Educational Activities as Percent
Alachua County	6.00%
FDOT, District 2	2.00%
Gainesville	6.00%
Waldo	3.500%
Marion County	5.50%
McIntosh	3.00%
Micanopy	3.50%
Reddick	3.00%
Hawthorne	4.00%
FDOT, District 5	0.50%



Orange Lake

Draft

Jurisdiction	Orange Lake Stormwater Loading TP lb/yr	Orange Lake TP Education Credit lb/yr	Change TP lb/yr
Alachua County	67	4	
FDOT, District 2	25	1	
Marion County	556	31	
McIntosh	48	1	1
Micanopy	54	2	2
Reddick	20	1	1
Hawthorne			
FDOT, District 5	172	1	
Total Stormwater Loading and Education Credits	943	40	



Newnans Lake

Draft

Jurisdiction	Newnans Lake Stormwater Loading TP lb/yr	Newnans Lake TP Education Credit lb/yr	Change TP lb/yr	Newnans Lake Stormwater Loading TN lb/yr	Lake Newnans Lake TN Education Credit lb/yr	Change TN lb/yr
Alachua County	554	33		4,926	296	
FDOT, District 2	103	2		974	19	
Gainesville	555	33		4,942	296	
Waldo	32	1	1	287	10	9
Total Stormwater Loading and Education Credits	1,244	85		11,128	755	



Lochloosa Lake

Draft

Jurisdiction	TP Stormwater Loading lb/yr	TP Education Credit lb/yr	Change TP lb/yr	TN Stormwater Loading lb/yr	TN Education Credit lb/yr	Change TN lb/yr
Alachua County	658	39		4,835	290	
FDOT, District 2	583	12		5,091	102	
Gainesville						
Hawthorne	290	12	9	2,034	81	61
FDOT, District 5						
Total Stormwater Loading and Education Credits	1,531	63		11,960	473	



Next Steps

- Finalize agriculture reductions and any additional transportation loading adjustments.
- Draft workplan for the third cycle of the Orange Creek BMAP.
- 2018-2019 proposed Group 1 List of Impaired Waters.
- Next meeting in early fall 2018.
 - Water quality status update.
 - Final public meeting to present Supplemental Report.
- Request for project updates for 2018 annual report – late November 2018.



Lake Wauberg Work Plan

- Propose shallow ground water sampling at UF recreation site downstream of septic system drainfield.
- Phytoplankton sampling of Lake Wauberg.
- Repeat shallow ground water sampling at Paynes Prairie Campground after septic system replaced.

A photograph of an empty lecture hall with rows of blue plastic seats. The seats are arranged in a tiered fashion, facing towards the front of the room. The background is a plain white wall.

• Any comments or questions???