LAKE CARMI COORDINATION MEETING
10/26/2023

Agenda

- Alum study update – Keith Pilgram, Barr Engineering
- Alum permitting update – Mark Mitchell
- Summary of Lakes and Ponds supported sampling – Mark Mitchell (Karen will show graphs)
- Update on UVM's lake sampling – Andrew Schroth, UVM
- Agriculture update – Jeff Sanders, UVM Extension
- Ground water study update – Jon Kim, Vermont Geological Survey
- Lake Wise and projects around Lake – FCNRCD and Julia Crocker
- Private Road work – NRPC and Karen
- Franklin Watershed Association events – Pete Benevento

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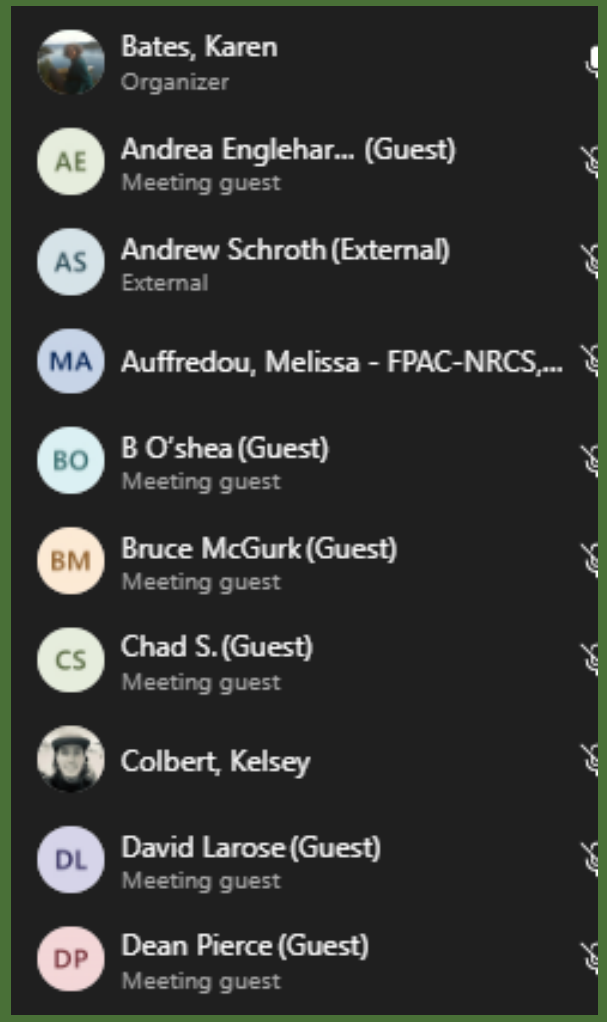
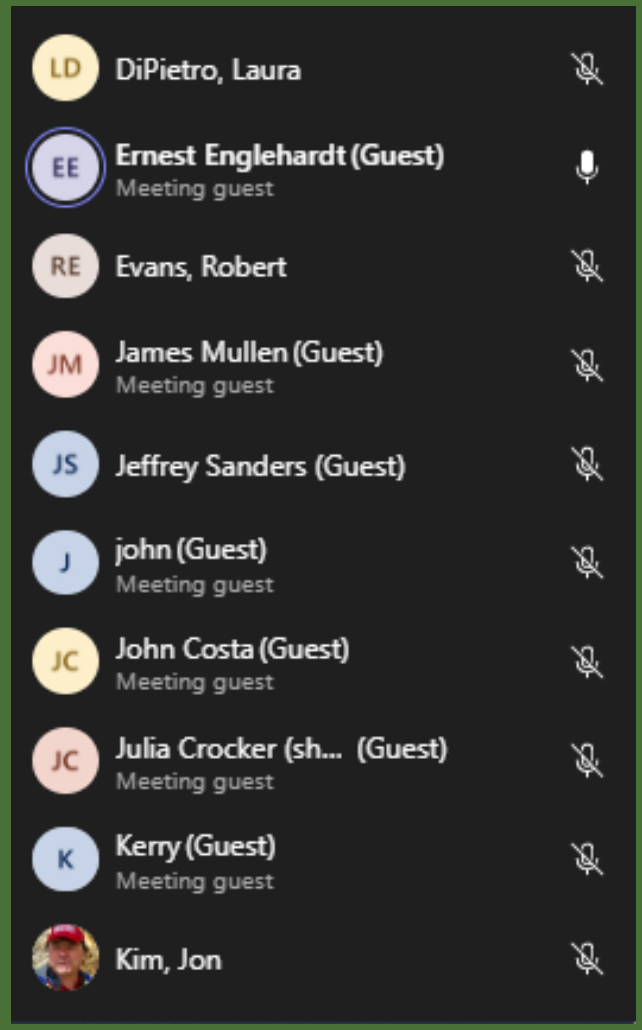
Meeting Particpants





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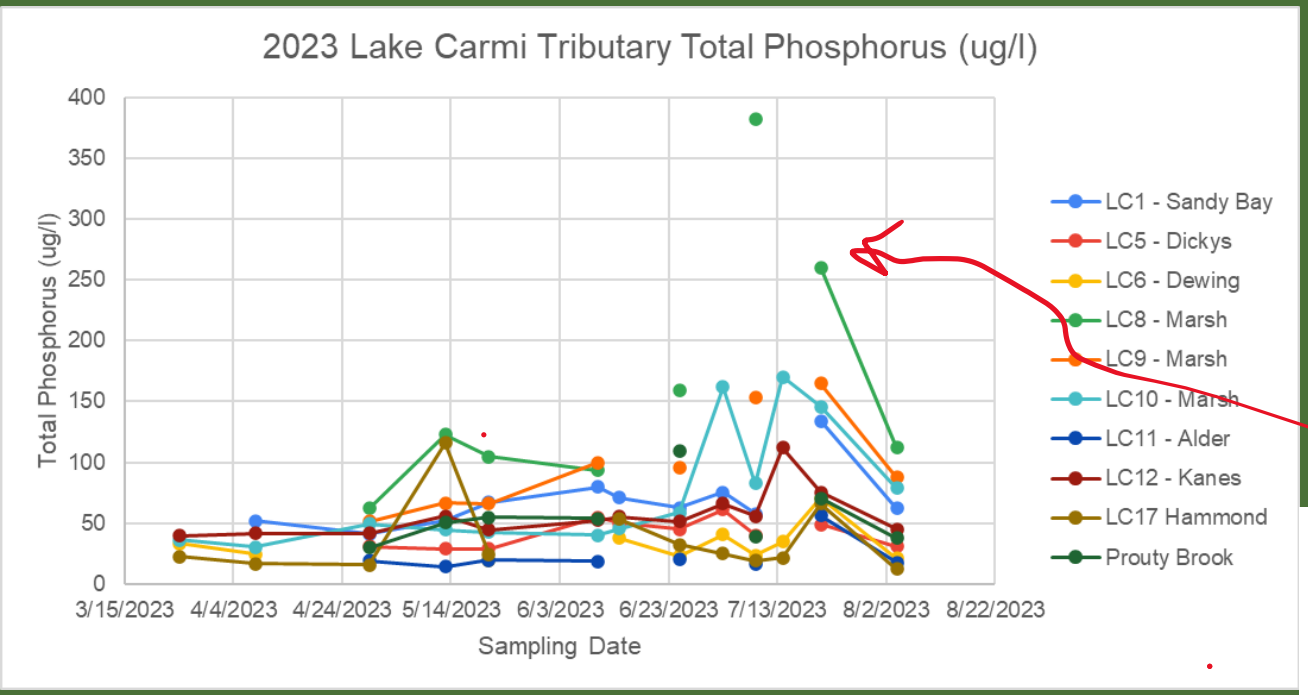
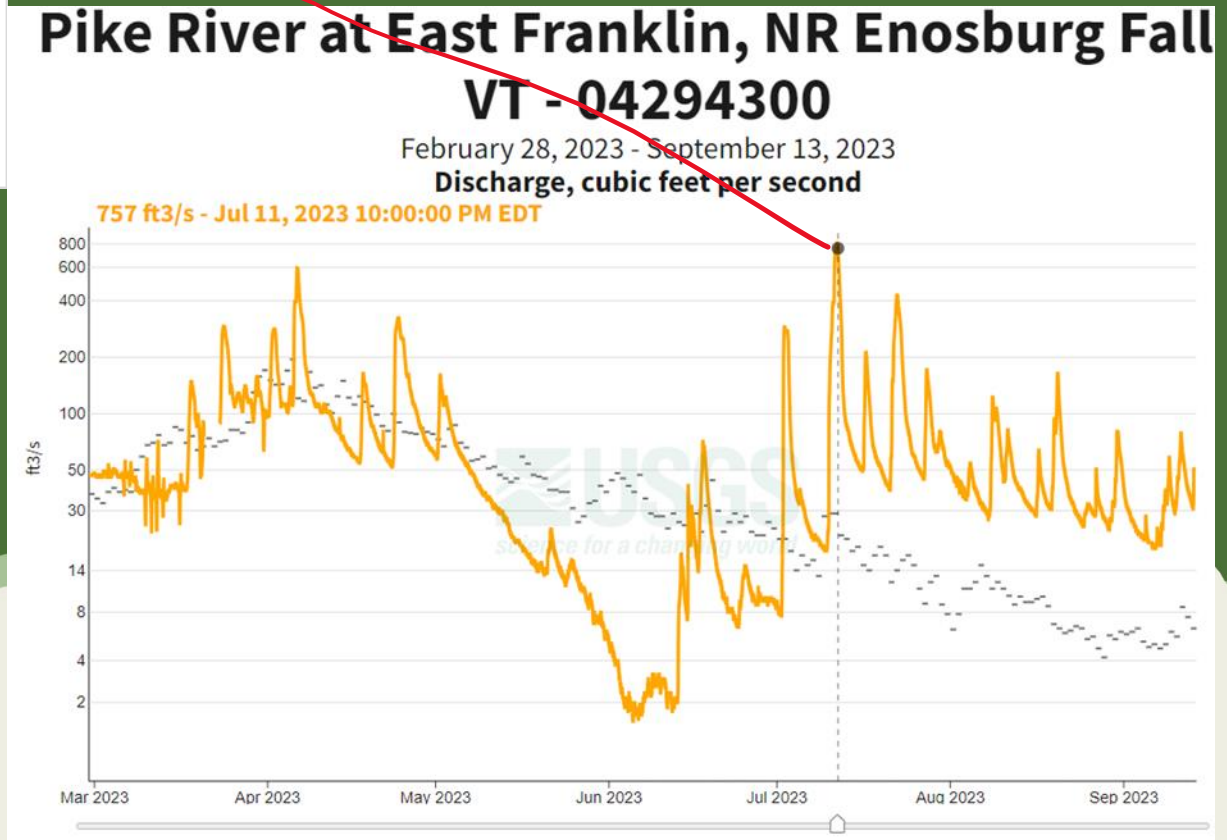
The 2023 tributary mean TP and DP at high flow (Julia Crocker)

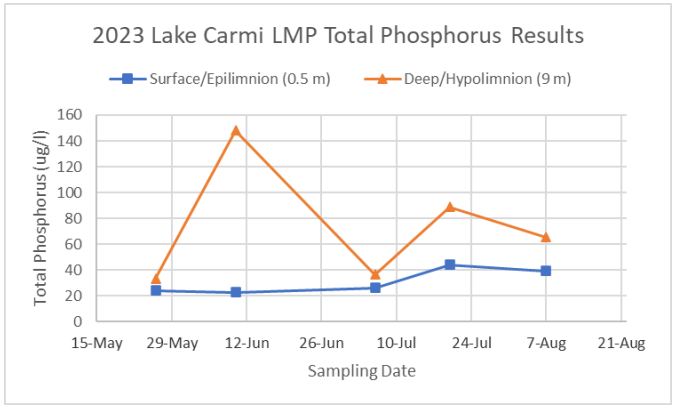
- Similar to last year
- Improvement in LC6 - Dewing Brook?.
- High flow events in May and July resulted in highest TP and DP

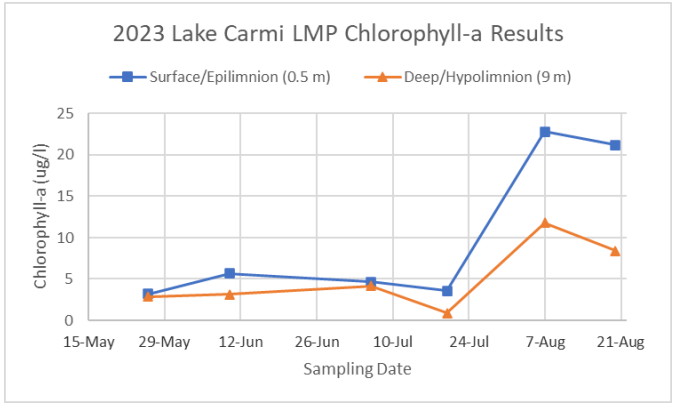

2023 Lake Carmi Tributary Total Phosphorus (ug/l)
Total Phosphorus (ug/l)
400
350
300
250
200
150
100
50
0
3/15/2023
4/4/2023
4/24/2023
5/14/2023
6/3/2023
6/23/2023
7/13/2023
8/2/2023
8/22/2023
Sampling Date
LC1 - Sandy Bay
LC5 - Dickys
LC6 - Dewing
LC8 - Marsh
LC9 - Marsh
LC10 - Marsh
LC11 - Alder
LC12 - Kanes
LC17 Hammond
Prouty Brook


Pike River at East Franklin, NR Enosburg Fall
VT - 04294300
February 28, 2023 - September 13, 2023
Discharge, cubic feet per second
757 ft3/s - Jul 11, 2023 10:00:00 PM EDT
ft3/s
800
600
400
200
100
50
30
14
8
4
2
Mar 2023
Apr 2023
May 2023
Jun 2023
Jul 2023
Aug 2023
Sep 2023

TP (High flow even	2015-2017 Mean	2020-2023 Mean	2020 Mean	2021 Mean	2022 Mean	2023 Mean	20
LC1 - Sandy Bay	>100	67.5	76.0	55.1	70.3	68.7	
LC5 - Dickys	35-65	47.9	68.1	32.7	48.5	42.1	
LC6 - Dewing	35-65	43.3	42.9	43.7	53.4	33.0	
LC8 - Marsh	>100	133.9	NA	112.4	127.4	162.1	
LC9 - Marsh	>100	89.6	NA	65.6	104.9	98.2	
LC10 - Marsh	65-100	67.5	75.6	50.3	68.1	76.0	
LC11 - Alder	20-35	29.9	NA	42.3	24.6	22.9	
LC12 - Kanes	65-100	62.6	60.1	69.9	63.5	56.8	
LC17 Hammond	35-65	40.3	NA	40.8	44.5	35.6	
LC20 Marsh Tile	NA	NA	NA	58.1	81.0	NA	
Prouty Brook	NA	62.5	NA	69.4	62.5	55.7	

DP (High flow even	2015-2017 Mean	2020-2023 Mean	2020 Mean	2021 Mean	2022 Mean	2023 Mean	20
LC1 - Sandy Bay	NA	52.5	63.4	41.1	52.0	53.4	
LC5 - Dickys	NA	25.5	30.0	20.4	28.2	23.5	
LC6 - Dewing	NA	30.8	38.4	23.8	35.1	26.1	
LC8 - Marsh	NA	90.2	NA	60.8	83.2	126.7	
LC9 - Marsh	NA	69.0	NA	49.9	79.1	78.0	
LC10 - Marsh	NA	51.9	56.6	34.4	52.8	63.8	
LC11 - Alder	NA	17.4	NA	18.8	17.9	15.6	
LC12 - Kanes	NA	44.5	46.3	37.0	49.1	45.6	
LC17 Hammond	NA	21.5	NA	22.0	21.9	20.5	
LC20 Marsh Tile	NA	NA	NA	35.6	28.6	NA	
Prouty Brook	NA	28.1	NA	36.9	25.9	21.7	





2023 LAKE LAY MONITORING DATA (P. BENEVENTO)

Internal phosphorus loading from lake bottom sediment - Values related to aeration system and weather.

- Total Phosphorus
  - Before July 11 flooding: - surface meetings 22 ug/l standard
  - After flooding: significant increase both bottom and surface
- Chlorophyll-a (algae/cyanobacteria)
  - After flooding – initial increase followed by delayed increase.
- Secchi transparency - correspons to chlorophill-a
  - declines from a high, then levels out around 2 m in July/August before decreasing again,

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Mullen Shore Road

Road serves multiple camps. West side of lake.

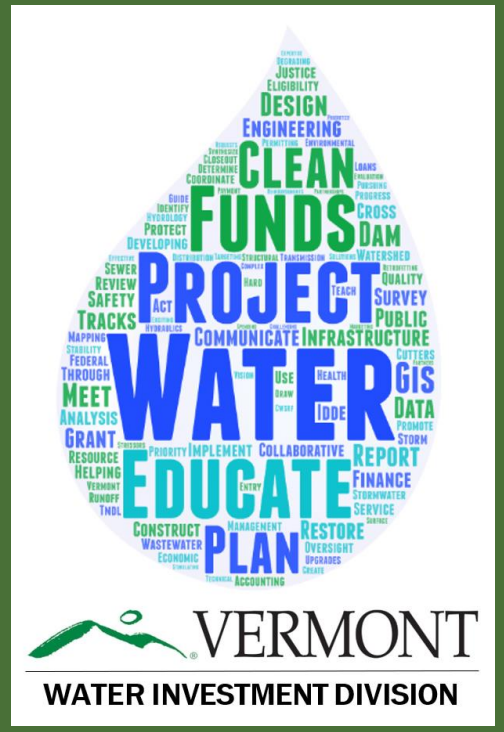
Segment IDs: PR461, PR462, PR463, PR464, PR465

Slope: 7-14%

Segment scores: Does not meet

Default priority: High priority, very high priority

BMPs needed: remove high shoulder, drainage



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