

Champlain Basin Lake Monitoring Issues

Update to LCBP Citizen's Advisory Committee

Oliver Pierson
Lakes and Ponds Program
Vermont Department of Environmental Conservation
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Lake Champlain Long Term Monitoring & Cyanobacteria Monitoring

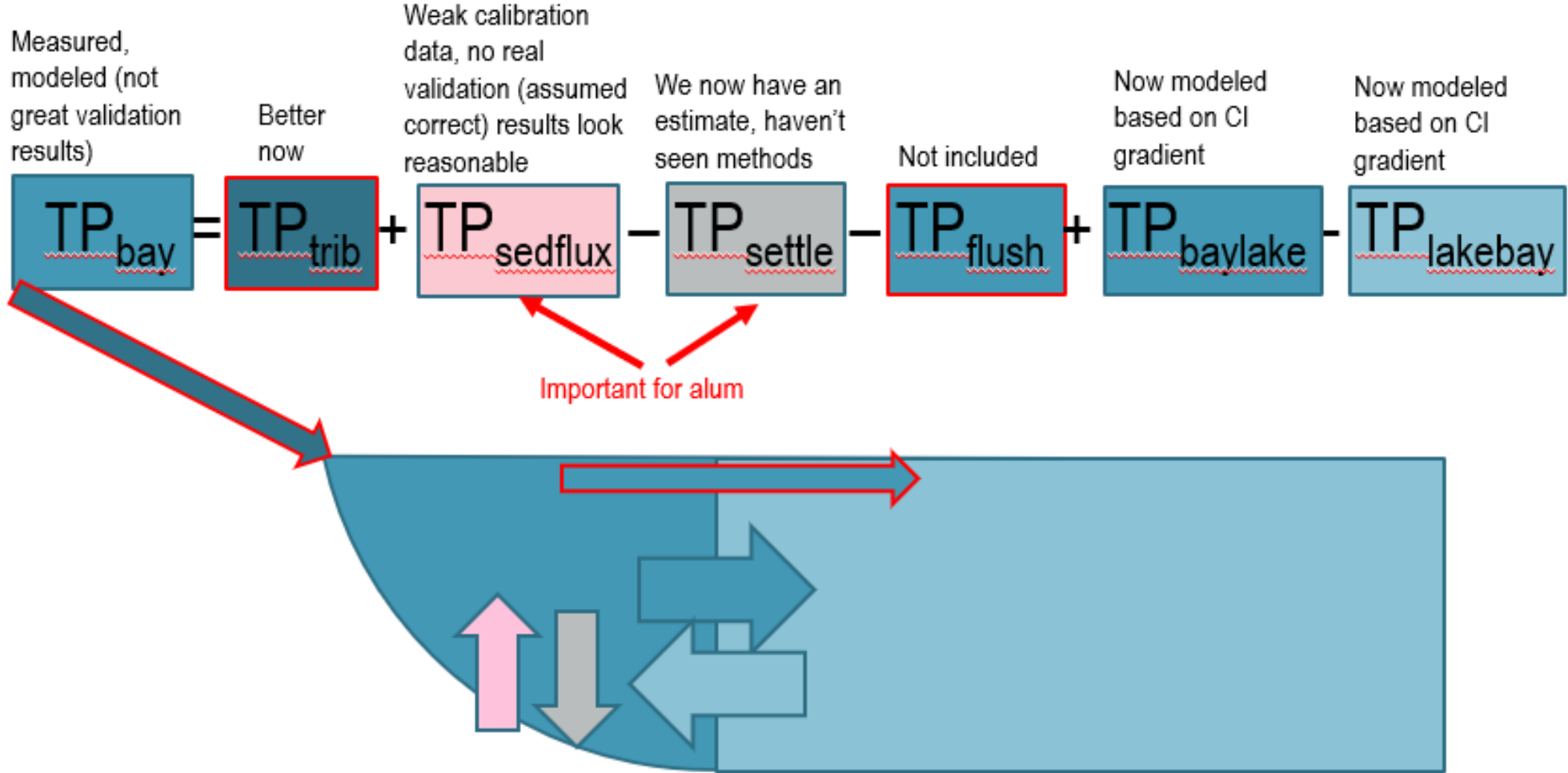
- 2020 Reports are available on DEC Website
- Prolonged **dry period** has kept Champlain water levels well below average
- Lake Temps (and air temps) rising, lake freezes over less often than in the past,
- Chloride levels increasing (deicing), below toxicity for drinking water quality & aquatic life
- In lake phosphorus concentrations are **stable** except northeast arm, which is increasing
- Phosphorus loading is **stable** except Missisquoi Bay, which is increasing
- Cyanobacteria blooms are **stable** except northeast arm, which is increasing
 - Missisquoi and St Albans still most impacted based on routine reports, increase in supplemental reports in Inland Sea
- Zebra Mussel Veliger densities increased from last year at 10 of the 13 stations
- Fishhook waterflea greatly increased into July and August before decreasing in the fall
- Cyanotoxins: NO confirmed microcystin detections in 2020 drinking water

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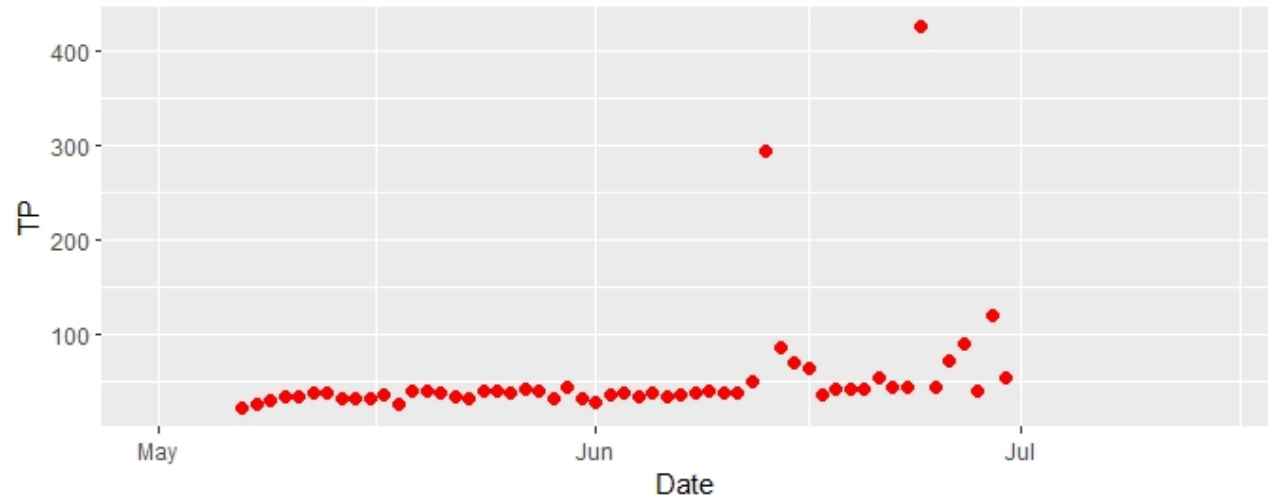
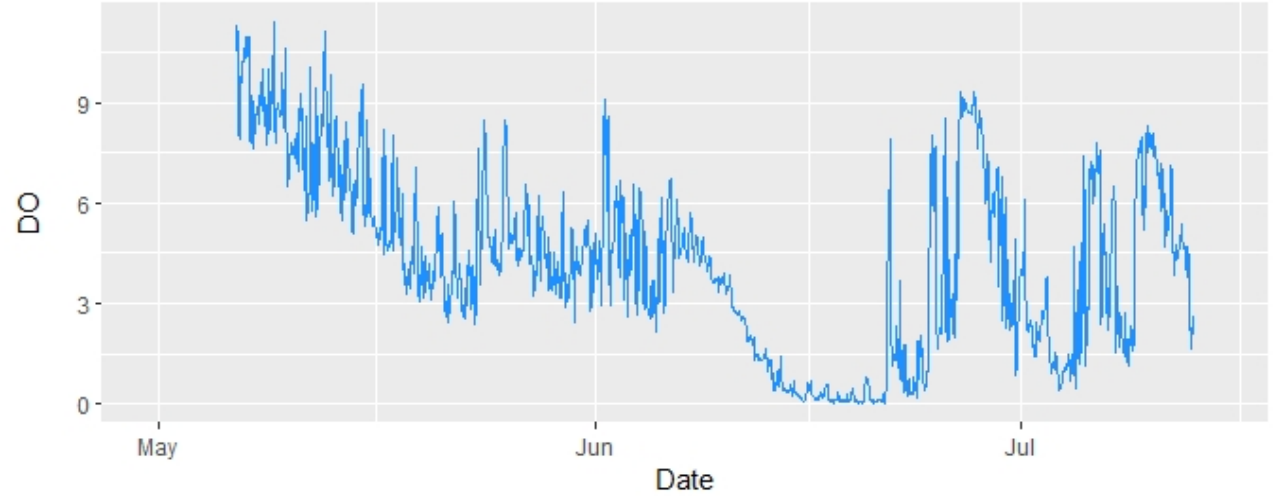
- Continue to develop annual severity index & VT Cyanobacteria Response Plan
 - How do we combine supplemental and routine reports?
 - Do routine reports adequately capture annual variation in bloom severity?
 - Build a respectable forecasting model using weather forecast data and bloom reports?
- Monitor increased TP concentration and blooms in Northeast Arm
- Install high-frequency monitoring buoys in lake and mouth of Lamoille
- Monitor beach closing trends statewide and ensure appropriate staff training
- Continue water chestnut eradication efforts
- Expand inland lake volunteer monitoring efforts

USACE-led St. Albans Bay Phase II Feasibility Study

- Study Goal is to evaluate phosphorus loading in the bay, identify viable treatment options (IL)
- Study has developed models, for this purpose, currently being calibrated



Lake Carmi Crisis Response Plan Update



- Overall progress towards TMDL P Reduction Targets
- Stream TP Concentrations: Reductions in particulate phosphorus, increase in dissolved phosphorus

Other Lake Water Quality Issues

- PFAS Testing
 - Statewide Effort including sites on the Winooski River, Otter Creek, Missisquoi River, Lake Dunmore, and Caspian Lake
 - Lake Memphremagog Effort w/ Canadians
- Lake Watershed Action Plans
 - 3 complete, 4 to be developed in Champlain Basin, 2 outside
 - DEC Technical Guidelines available
- Lake Reclassification
 - Effort to increase protections for lakes in VT through reclassification
- Inner Malletts Bay Recreation Issues: Town of Colchester