2021 LaRosa Monitoring Results for Lake Morey Tributaries

Water Quality Review

Presented by Vermont Department of Environmental Conservation

2021 LaRosa Monitoring Information – Lake Morey

5 sites monitored in 2021

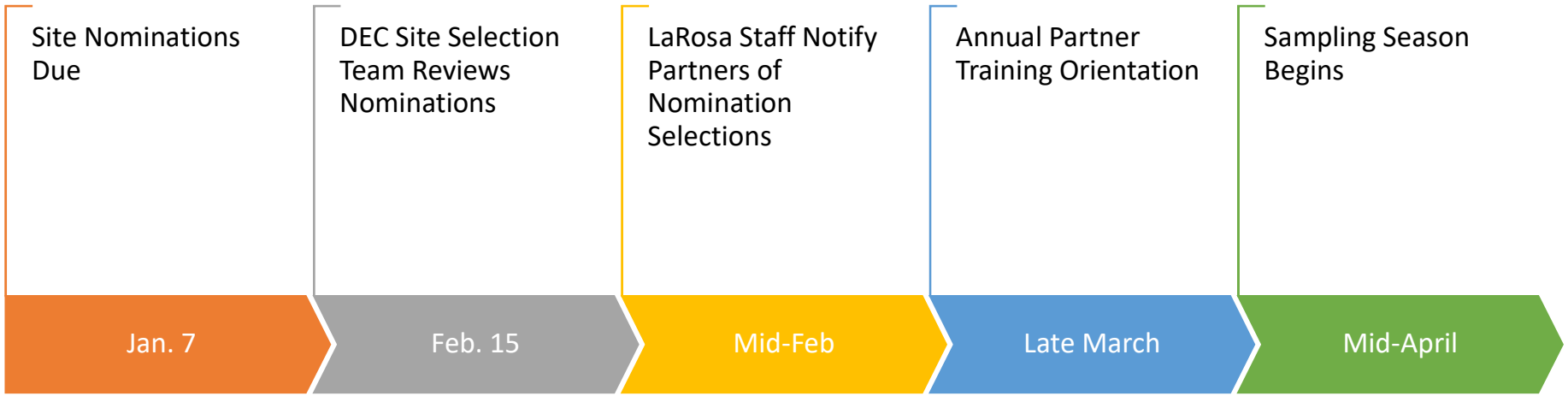
- Aloha Tributary – interstate, local road, forest, wetlands
- Big Brook – forest, wood roads, shoreline development
- Bonnie Oaks Tributary – interstate, forest
- Glens Falls Brook – forest, woods roads, shoreline development
- Pine Brook – forest, shoreline development

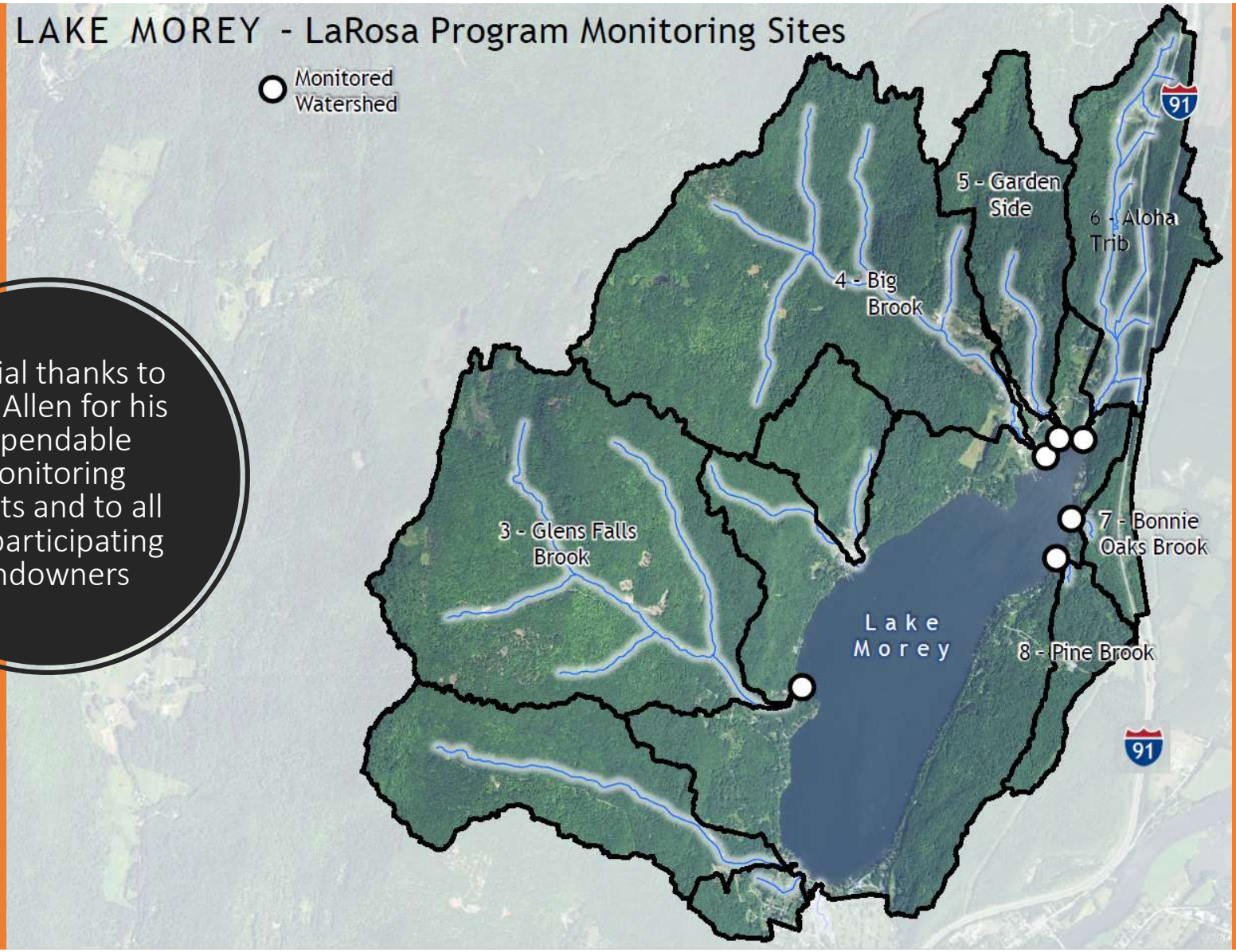
8 sampling events from May to August

2 high flow events

Sampling was also conducted in 2019 & 2020

2022 LaRosa Nominations Process





Special thanks to Greg Allen for his dependable monitoring efforts and to all the participating landowners

Chemical Parameters – Phosphorus & Chloride

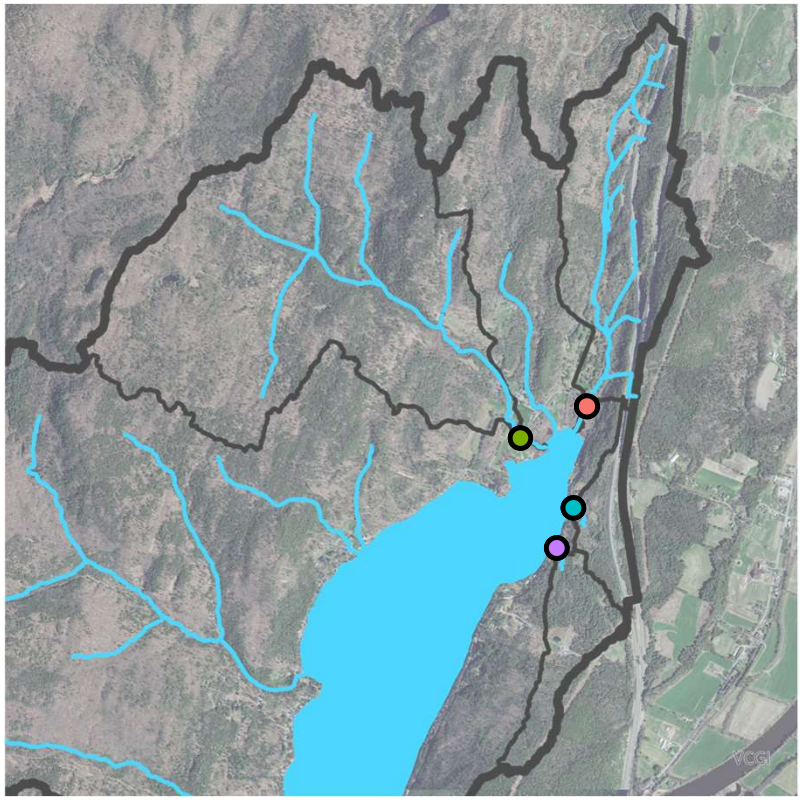
Total Phosphorus

- Impacts
  - Fuels cyanobacteria blooms that can be toxic
  - Swimming use
- Sources
  - Developed land runoff
  - Fertilizers
- Standards
  - Ranges from 12-27 mg/L (ppm)
  - 12 mg/L for small, high gradient streams
  - Based on baseflow conditions

Total Chloride

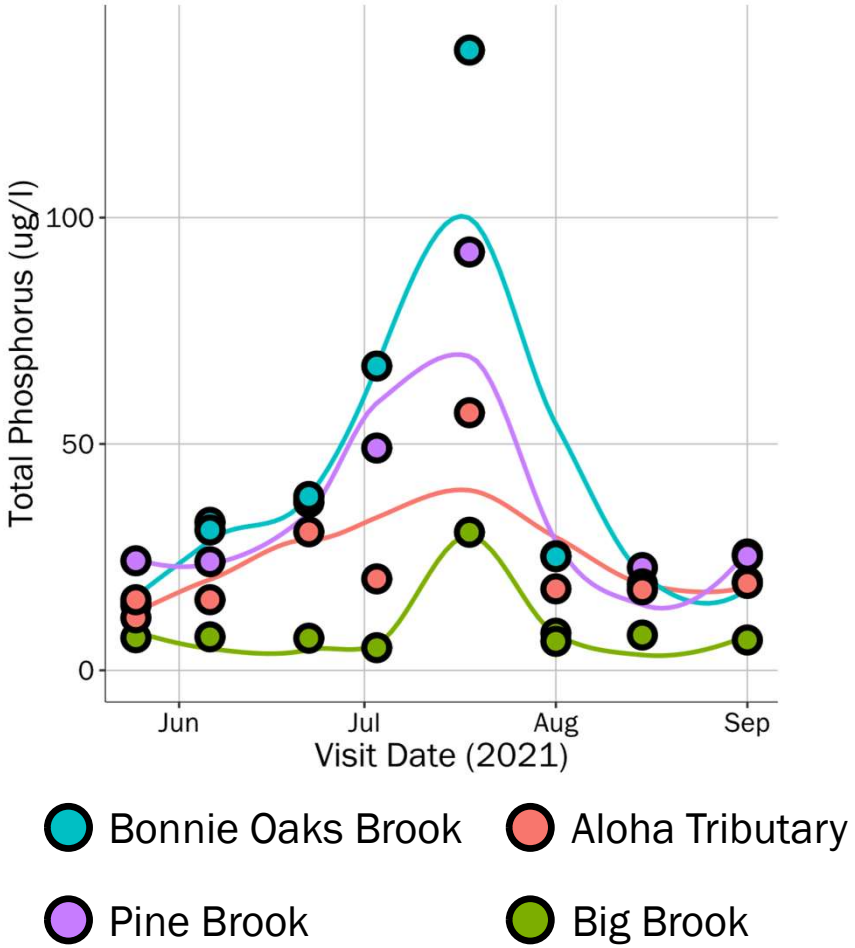
- Impacts
  - Affects chemical processes of biological organisms
- Sources
  - Road salt
  - Wastewater
  - Water softeners
- Standards (EPA)
  - 860 mg/L acute
  - 230 mg/L chronic
  - Studies show chloride can impact organisms at lower concentrations

Lake Morey Tributaries, 2021



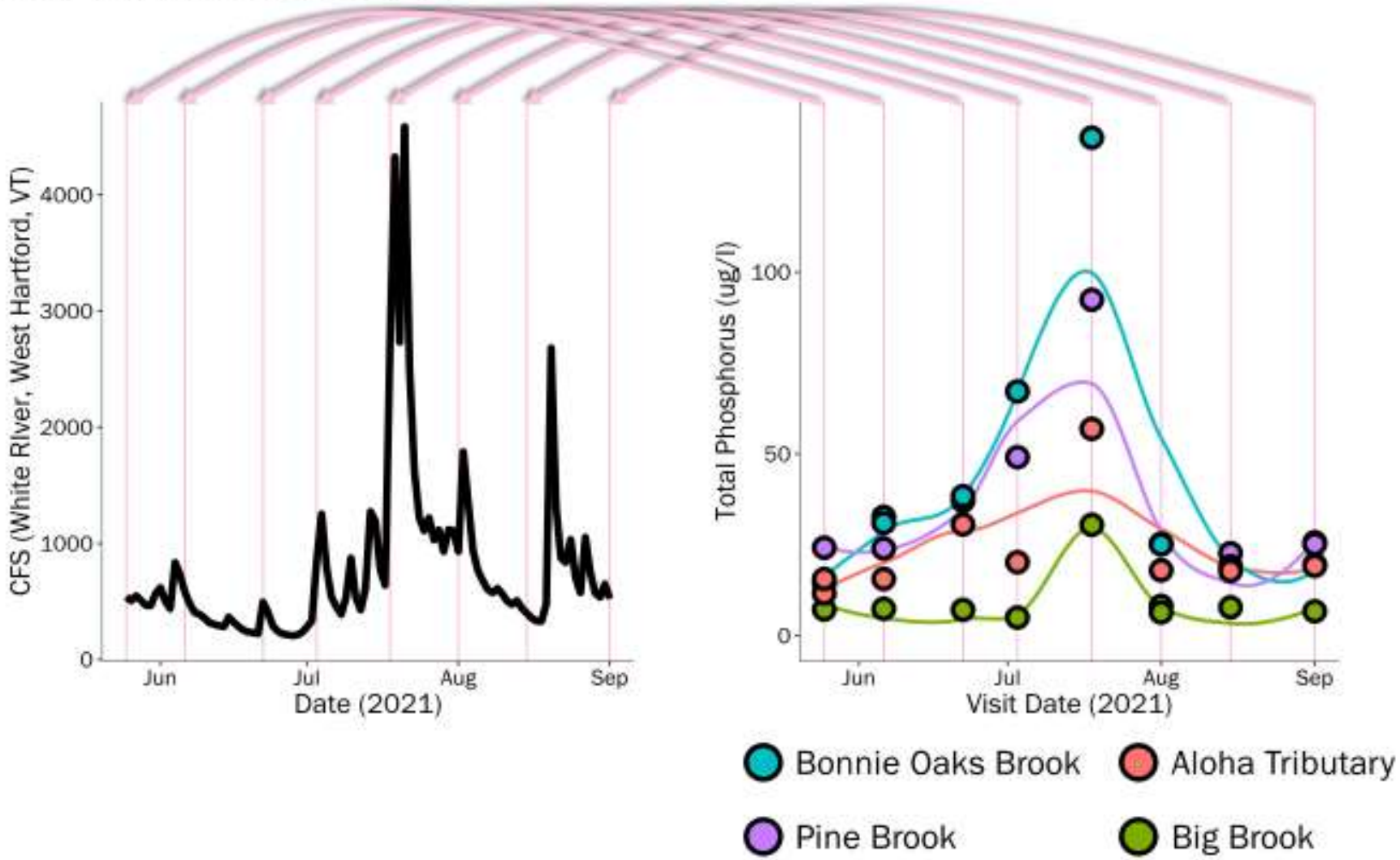
Phosphorus

This peak in mid July occurred across all monitored tributaries

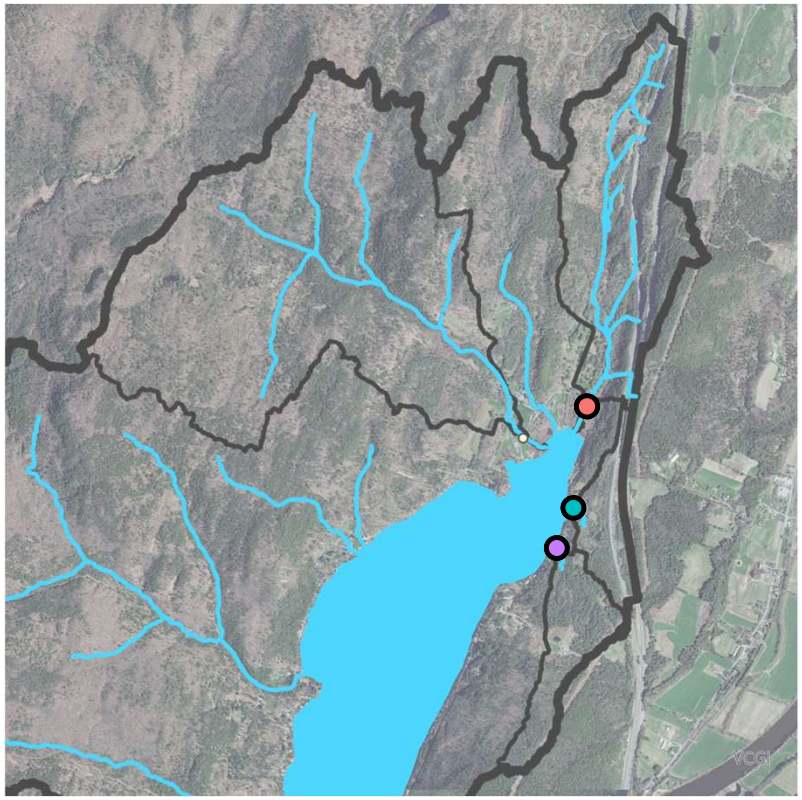


Lake Morey Tributaries, 2021

and flow

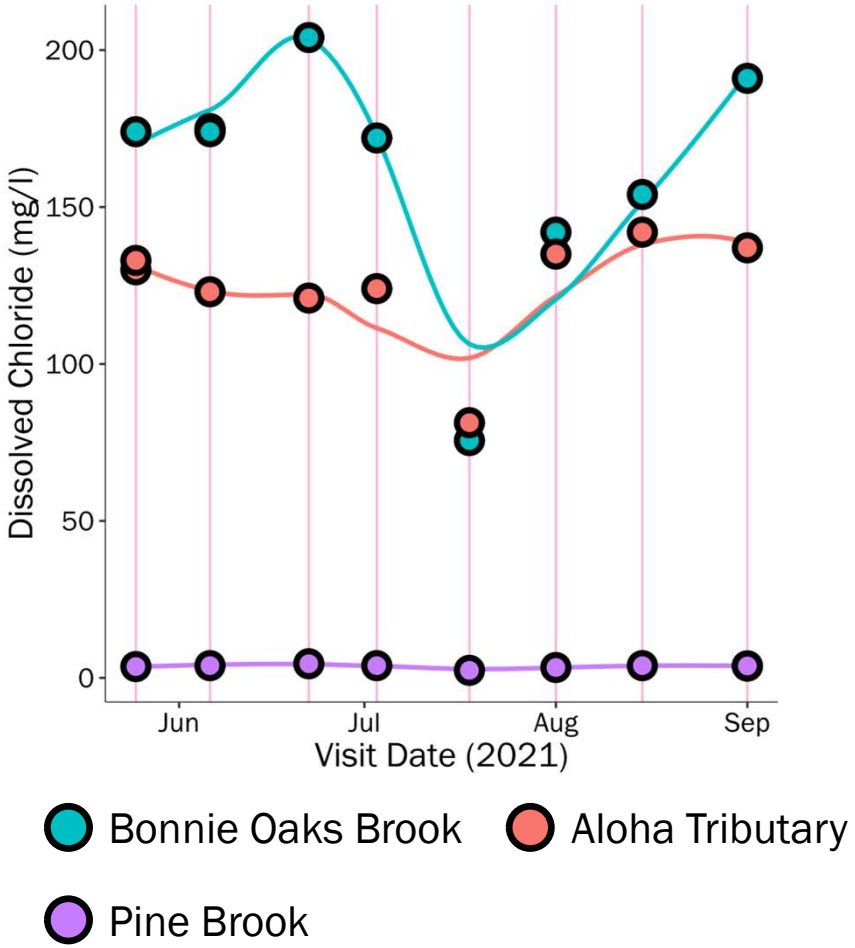


Lake Morey Tributaries, 2021



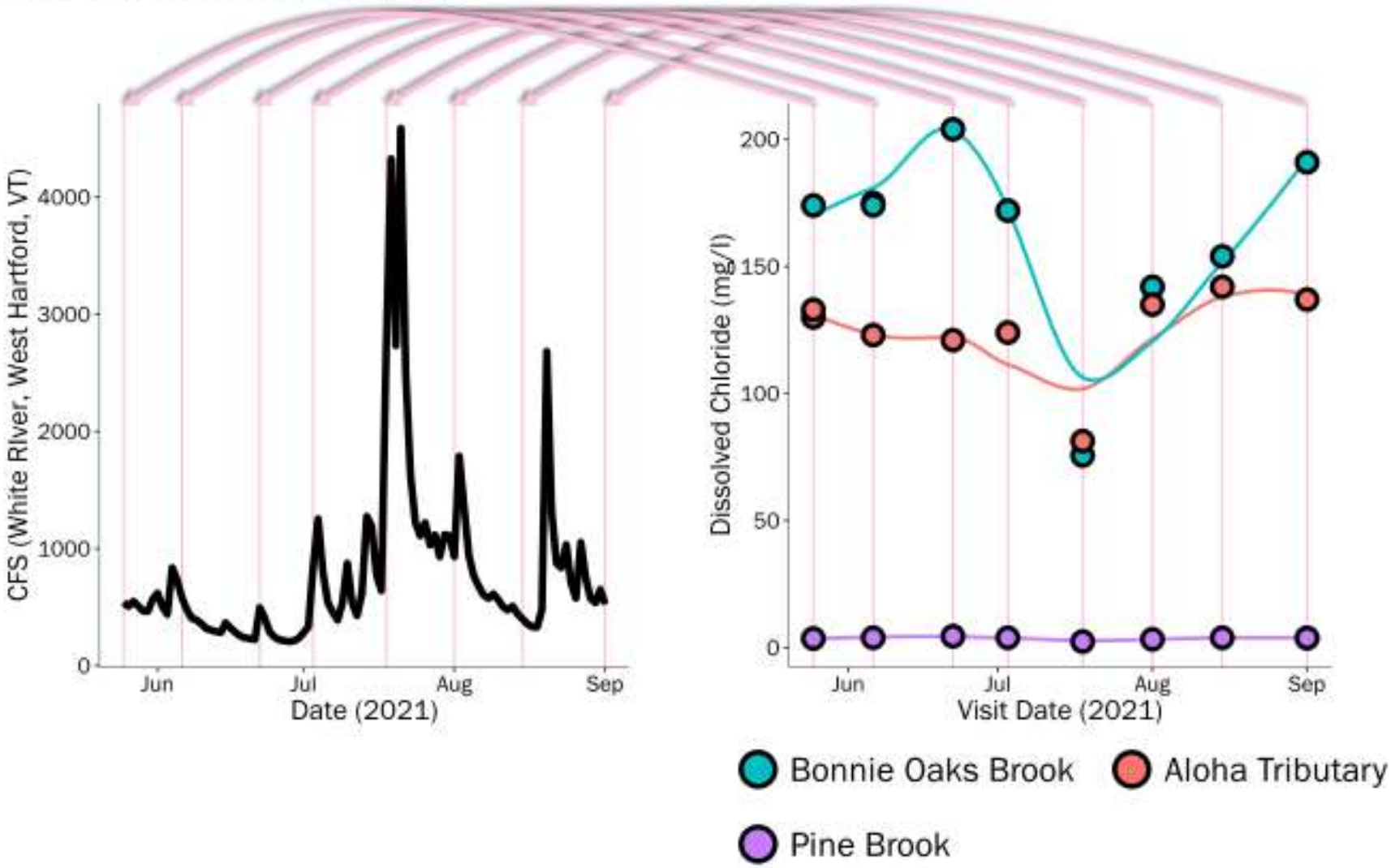
Chloride

This dip in mid July occurred across all monitored tributaries

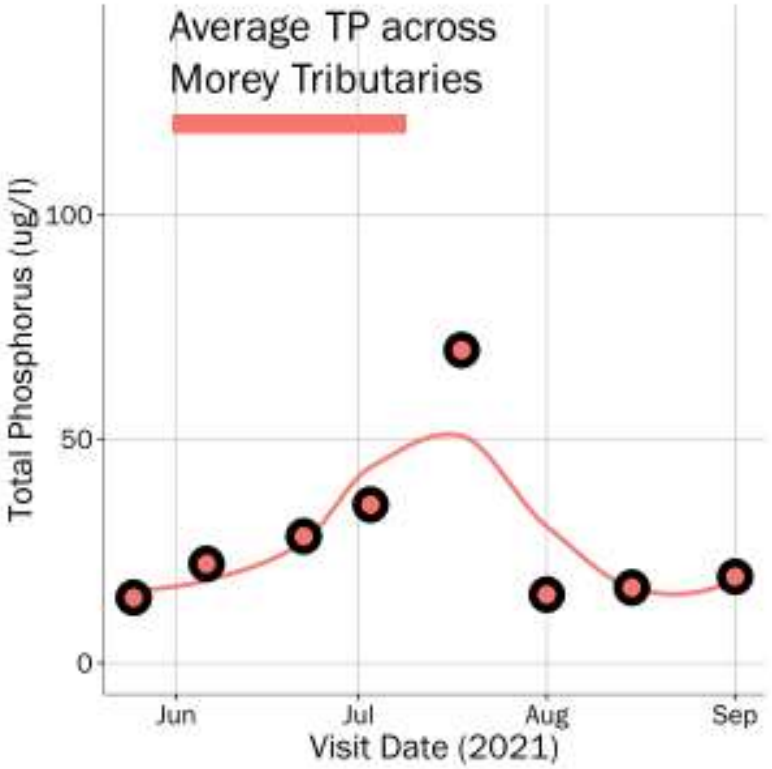


Lake Morey Tributaries, 2021

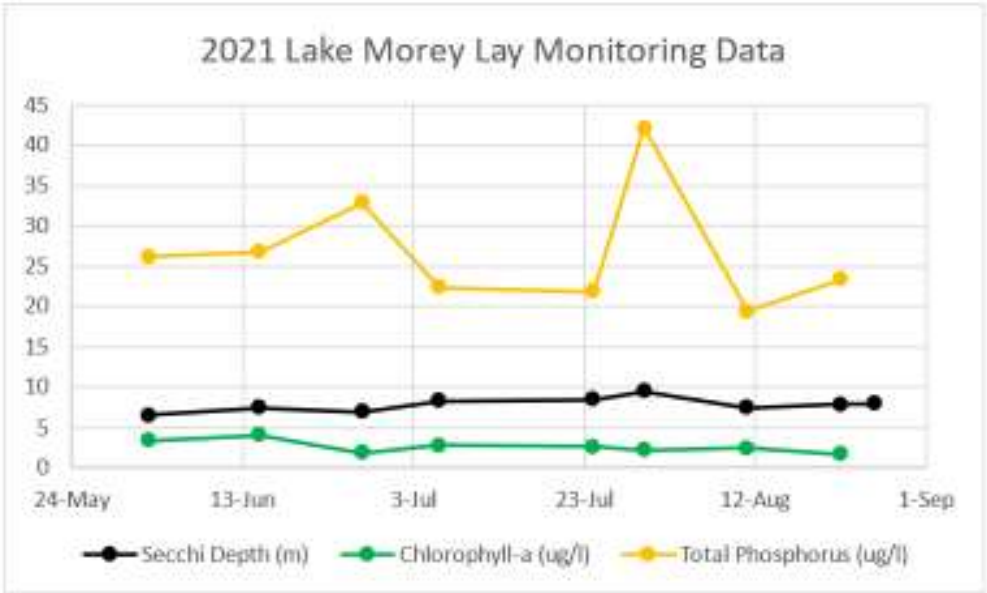
and flow

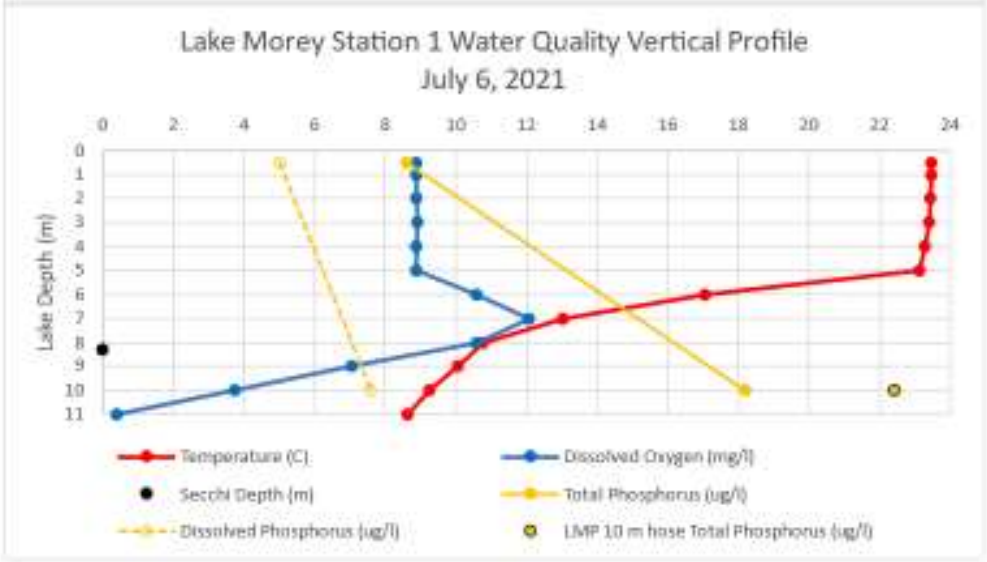


Lake Morey, 2021

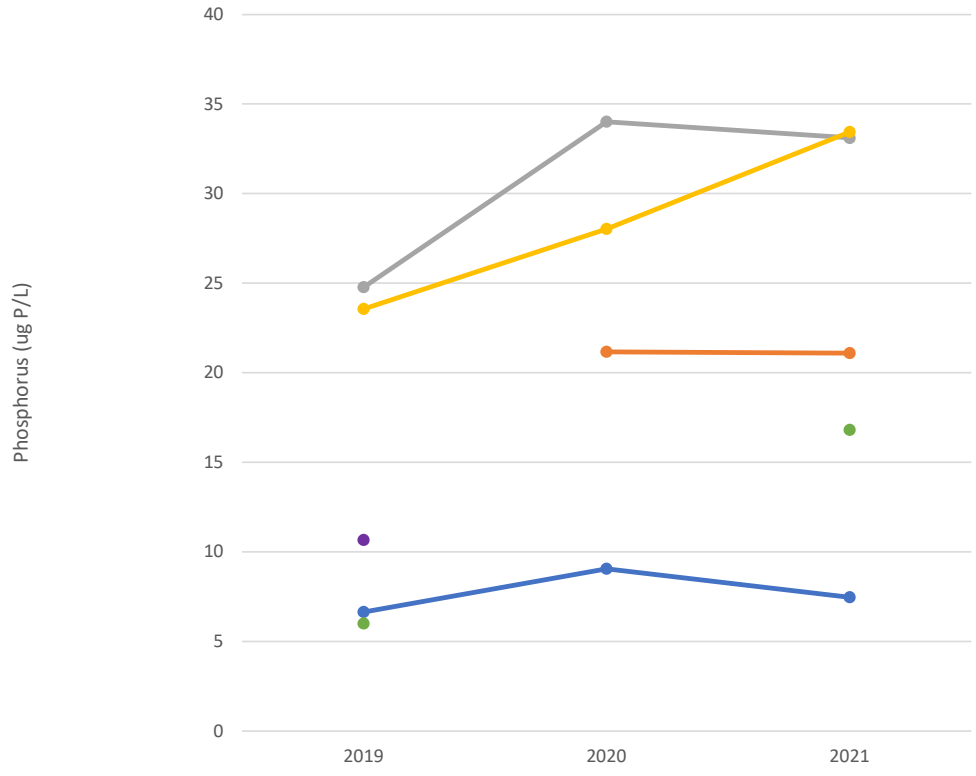


Note the peak in average stream concentrations in **Mid July**



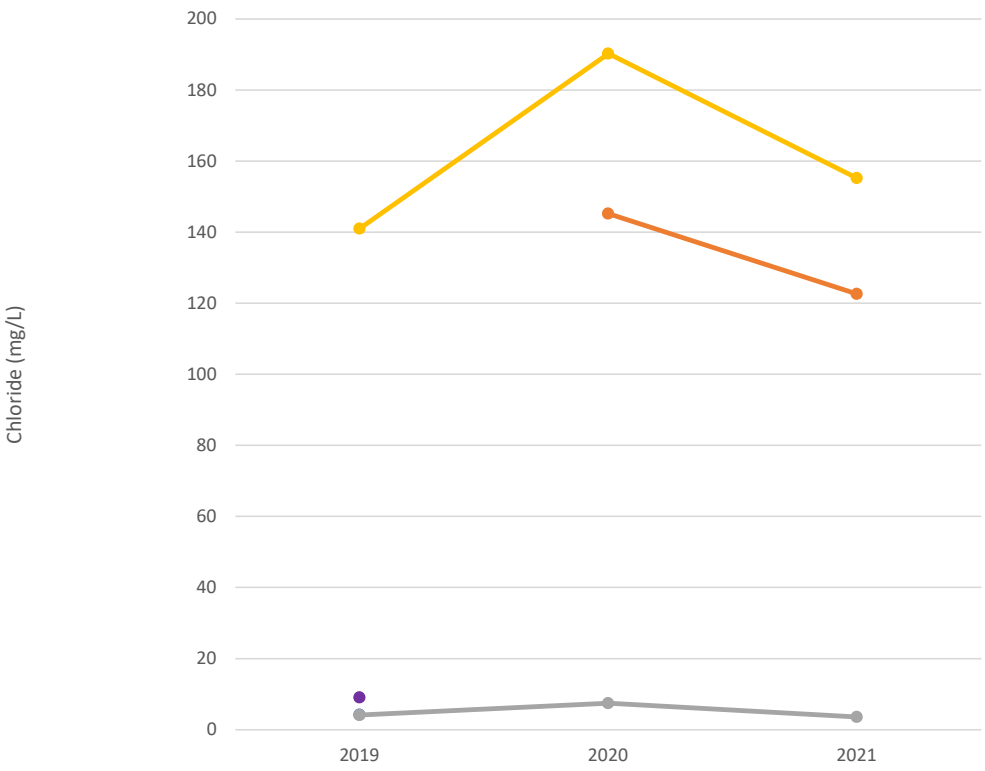


Annual Summer Geometric Mean of Total Phosphorus (ug P/L)



	2019	2020	2021
Big Brook	6.65	9.06	7.47
Aloha Tributary		21.16	21.09
Pine Brook	24.78	34.01	33.11
Bonnie Oaks Tributary	23.56	28.03	33.44
Garden Side	10.66		
Glens Falls Brook	6.00		16.82

Annual Summer Geometric Mean of Chloride (mg/L)



	2019	2020	2021
Big Brook	4.19		
Aloha Tributary		145.29	122.66
Pine Brook	4.14	7.47	3.61
Bonnie Oaks Tributary	140.99	190.25	155.24
Garden Side	9.03		

Sulfate Results