# 2021 Ticklenaked Pond LaRosa Monitoring Results

Water Quality Review

## Monitoring Highlights

#### 7 sites monitored in 2021

- Scotch Burn 2.5
- Lower Eastern Farm Drainage to Scotch Burn
- Scotch Burn 2.3
- Scotch Burn 2.0
- Scotch Burn Trib 1, 0.3
- Scotch Burn Trib 1, 0.2
- Scotch Burn 1.5

10 sampling events from May to September

One confirmed high flow event

Same sites also sampled in 2020









## Chemical Parameters – Phosphorus & Nitrogen

### **Total Phosphorus**

- Impacts
  - Fuels cyanobacteria blooms that can be toxic
  - Swimming use
- Sources
  - Developed land runoff, roads, driveways
  - Fertilizers lawn and agriculture
- Vermont Water Quality Standards
  - Ranges from 12-27 ug/L (ppb)
  - 12 ug/L for small high gradient streams
  - Based on baseflow conditions

### **Total Nitrogen**

- Impacts
  - Can fuel specific types of cyanobacteria blooms
  - Too much nitrogen, as nitrate, in drinking water can be harmful to young infants or young livestock.
- Sources
  - Fertilizers lawn and ag
  - Sewage
- Vermont Water Quality Standards
  - Not to exceed 5.0 mg/l as nitrate, in Class B(1) and B(2) waters.
  - Not to exceed 2.0 mg/l as NO3-N at flows exceeding low median monthly flows, in Class A(1) and A(2) waters at or below 2,500 feet altitude, National Geodetic Vertical Datum.

## Average Total Phosphorus in Scotch Burn Upstream to Downstream

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#### Base Flow Phosphorus Results 2020-21



#### ■ SB 2.5 ■ SB 2.3 ■ SB 2.0 ■ SB Trib 1, 0.3 ■ SB Trib 1, 0.2 ■ SB 1.5

#### Total Nitrogen Results 2020-21

■ SB 2.5 ■ SB 2.3 ■ SB 2.0 ■ SB Trib 1, 0.3 ■ SB Trib 1, 0.2 ■ SB 1.5



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Recommendations for 2022 Ticklenaked Tributary Monitoring

- Will continue to monitor the same sites in 2022.
- Will add nitrogen to Scotch Burn 2.5.
- Try to get 10 sampling events, including two flow events in 2022
  - We were unable to get two significant flow events in 2021 b/c of drought conditions in Northern VT