

Lake Colby Updates

Water Quality

- 13 years of monitoring through the Adirondack Lake Assessment Program (ALAP)
- Monitor Three Aquatic Stressors: Eutrophication, Acidification, Salinization
- **Eutrophication (Productivity)**
 - Trophic indicators (transparency, total P, & Chlorophyll-a) are relatively stable over time
 - Transparency is greater than 75% of lakes in ALAP (75 lakes)
 - Trophic indicators suggest a moderately productivity lake (mesotrophic-oligotrophic)
 - Two-thirds of the lakes in ALAP are moderately productive
- **Acidification**
 - Lake pH is circumneutral and is relatively stable over time
 - pH is greater than 70% of lakes in ALAP
- **Salinization**
 - Lake has high salt concentrations (sodium & chloride) from road salting in watershed
 - Salt concentrations are the highest in ALAP
 - Relatively stable over the last 10 years
 - Lake has calcium concentrations in the range to support Zebra mussels
 - Calcium concentrations are greater than 95% of the lakes in ALAP

Water Quality Indicator	Sampling Date			Average	Trend
	7/24/2015	8/20/2015	9/22/2015		
Transparency (m)	4.0	4.0	5.0	4.3	No change
Total Phosphorus (µg/L)	3.3	3.3	3.4	3.3	Decreasing
Chlorophyll-a (µg/L)	0.9	0.1	3.0	1.3	No change
Laboratory pH	6.3	6.5	7.6	6.8	No change
Sp. Conductance (µS/cm)	175.3	185.9	225.0	195.4	No change
Color (Pt-Co)	22.7	25.8	BDL	±12.3	No change
Alkalinity (mg/L)	27.8	28.2	30.4	28.8	No change
Nitrate-Nitrogen (µg/L)	59.0	40.8	14.2	38.0	Not analyzed
Chloride (mg/L)	37.9	40.9	49.6	42.8	No change
Calcium (mg/L)	10.0	10.2	11.3	10.5	Not analyzed
Sodium (mg/L)	20.8	23.0	24.5	22.8	No change