Platte Lake Watershed Sampling Program

John Ransom
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ABOUT MYSELF

- Grew up in Upper Platte Watershed
- B.S. from Lake Superior State Fisheries and Wildlife Mgmt.
- M.S. from U of Southern Miss. Coastal Sciences
- Conservation Specialist at the Benzie Conservation District
- Live in the Upper Platte Watershed with my wife and dogs
OVERVIEW

- “A Day in the Life”
  - From the lab to the lake and back
- Status and Trends
  - The Lake - tells it’s story
  - The River - “the source of the…”
  - Other data sources
A DAY IN THE LIFE
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A DAY IN THE LIFE
A DAY IN THE LIFE
A YEAR IN THE LIFE
STATUS AND TRENDS - TEMPERATURE

[Map showing temperature variations across different regions with colors representing different temperature ranges.]
STATUS AND TRENDS – LAKE PROFILE

DO profile - clinograde

Platte Lake
July 20, 2017

Dissolved Oxygen
(mg/L and %)

DO profile – positive heterograde

Crystal Lake
July 17, 2017

Dissolved Oxygen
(mg/L and %)
STATUS AND TRENDS – LAKE PROFILE

DO profile - clinograde

Platte Lake
July 20, 2017

Depth (ft)

Dissolved Oxygen
(mg/L and %)

Temperture (F°)

Lower Herring Lake
July 25, 2017

Dissolved Oxygen
(mg/L and %)

Temperture (C°)
STATUS AND TRENDS – SECCHI DEPTH

\[ y = -0.0004x + 32.41 \]

\[ R^2 = 0.0062 \]
STATUS AND TRENDS – LAKE PHOSPHORUS

y = 0.0005x - 10.991
R² = 0.0092
STATUS AND TRENDS – RIVER PHOSPHORUS

Average difference = 1.96

Average difference = 5.21

ANOVA
p < 0.005
STATUS AND TRENDS – RIVER PHOSPHORUS

PR at Stone
PR at Vet’s
PR at Haze
PR at Pioneer
PR at USGS
STATUS AND TRENDS – RIVER PHOSPHORUS
OTHER DATA – MACROINVERTBRATE SURVEY

Stream Quality Index

Sampling Date

P1 Reynolds Rd
P2 Veteran’s Park
P3 Indian Hill Rd

> 48 Excellent
33 - 48 Good
19 - 33 Fair
< 19 Poor
CONCLUSIONS

- Extensive sampling
  - Better understanding of the watershed
  - Pin-point trouble areas
  - Creates more questions!
- Working on grant funded projects
- Template for Watershed mgmt.
QUESTIONS?

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