



# Little Manitou

Water Quality Discussion

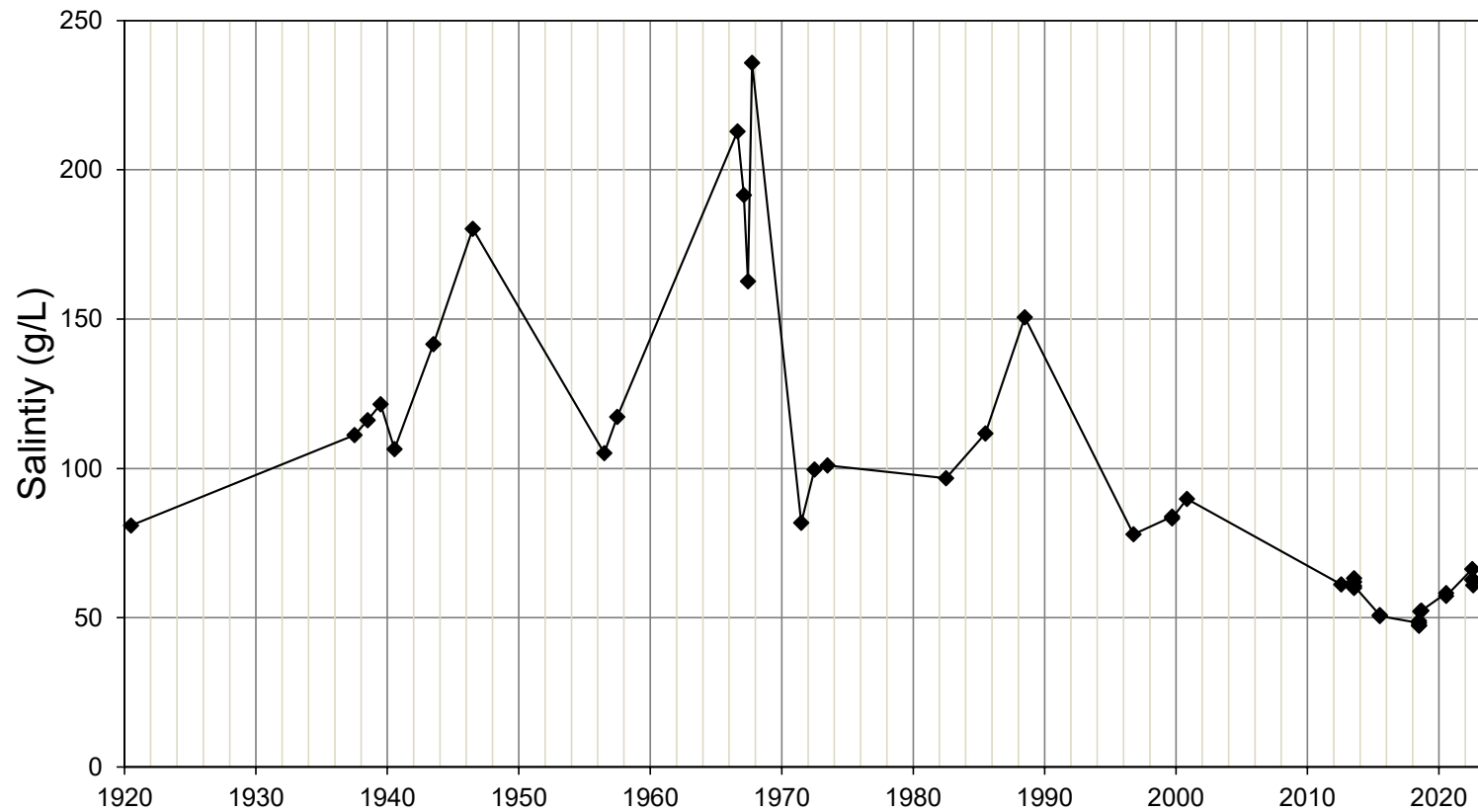
**28 April 2023**



## Agenda

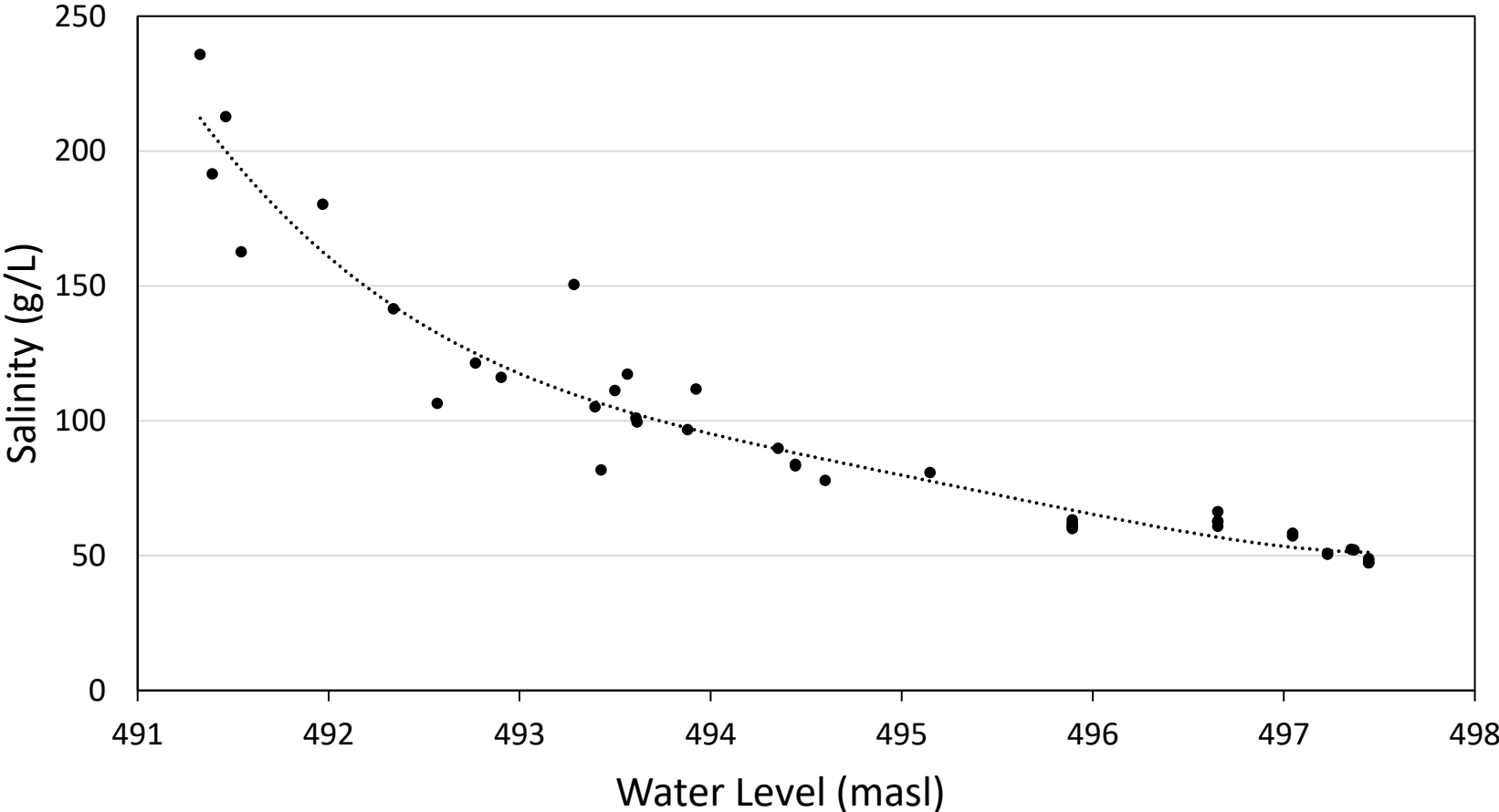
- Expectations
- Background data – Little Manitou
- Monitoring - 2023
- Next steps

# Little Manitou – Salinity vs. Time





# Little Manitou – Salinity with depth

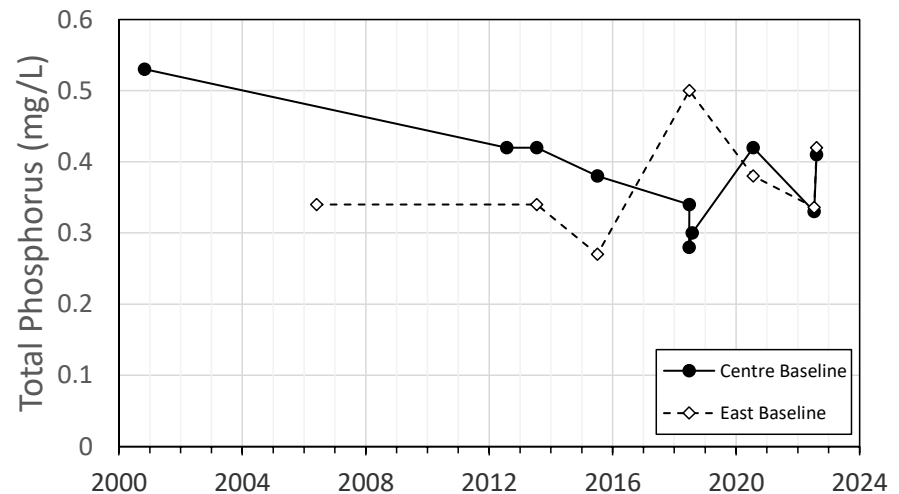
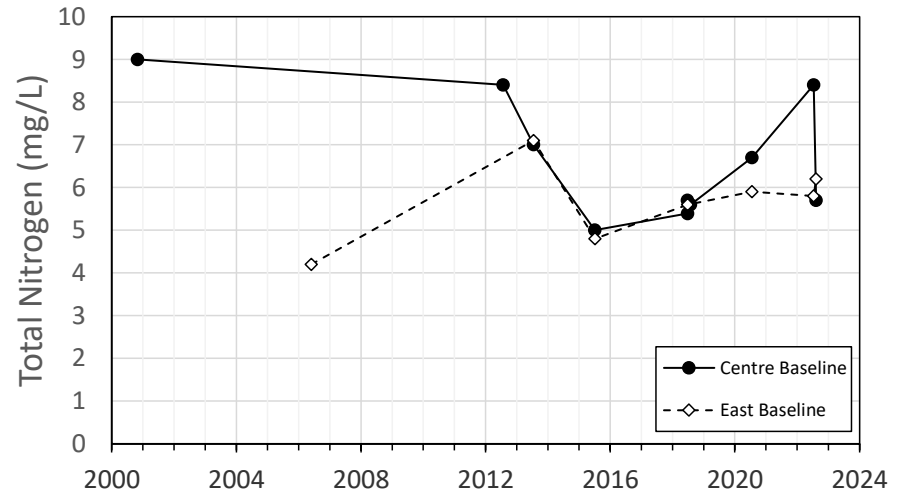


# Little Manitou – Sampling Locations

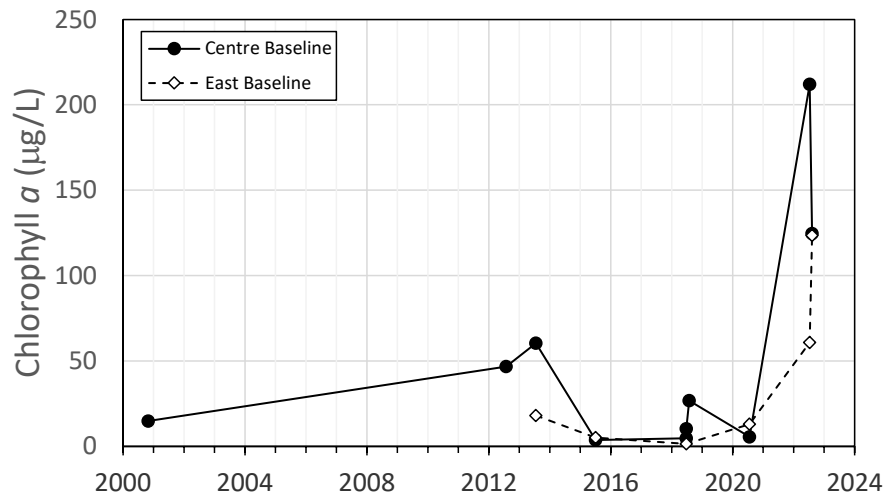


# Little Manitou – Nutrients

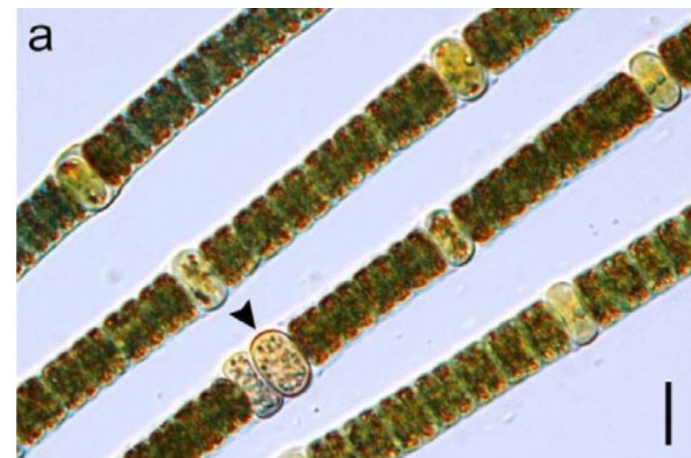
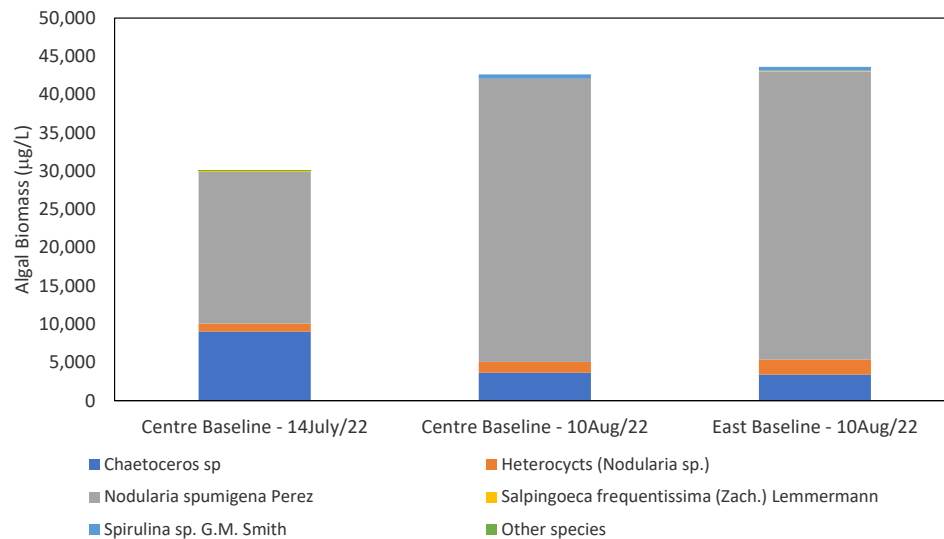
- In many lakes the nutrients nitrogen and phosphorus are considered limiting factors for algal growth.
- Little Manitou has very high nutrient levels and has had for a long time.



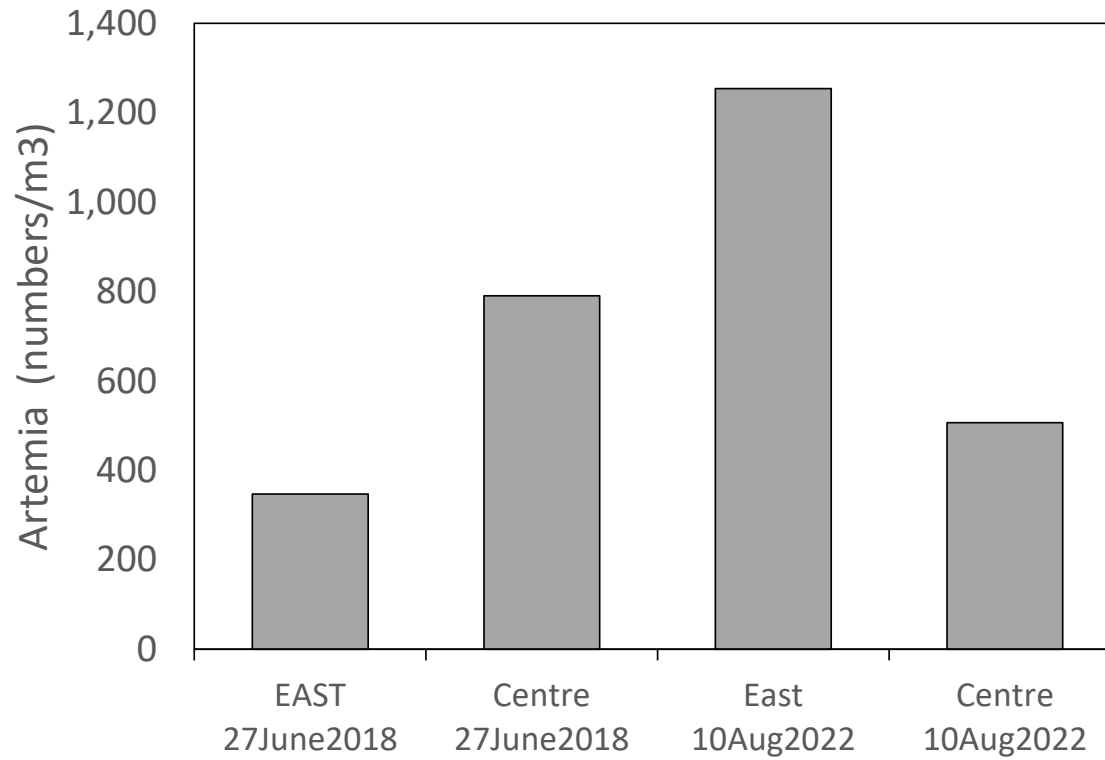
# Little Manitou – Algae



- *Nodularia* was recorded in Little Manitou in the 1970's
- Also, in other lakes – e.g. Big Quill.

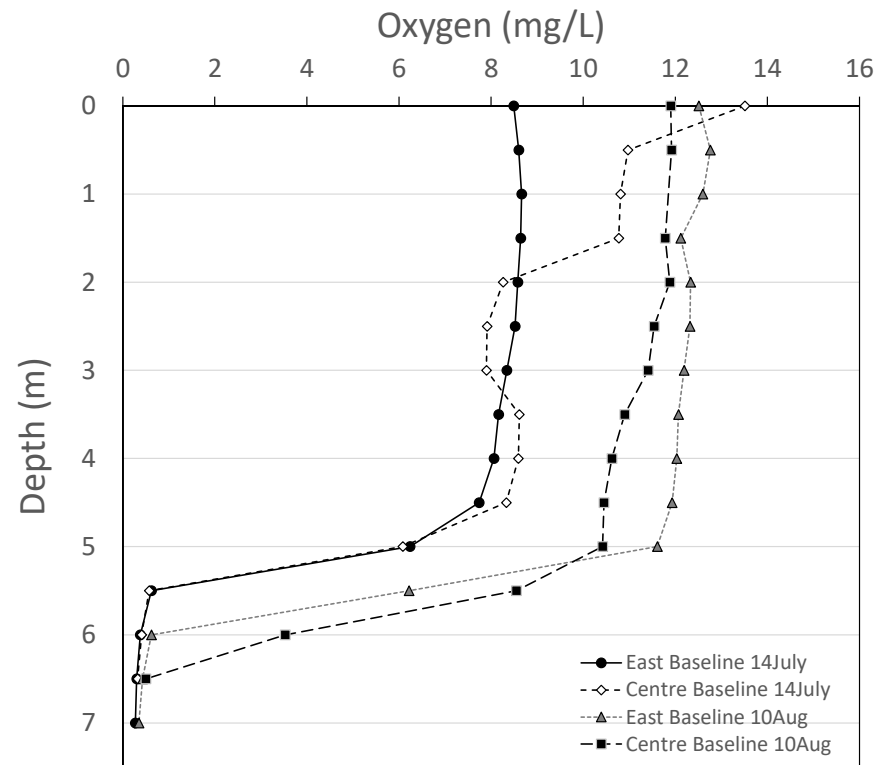
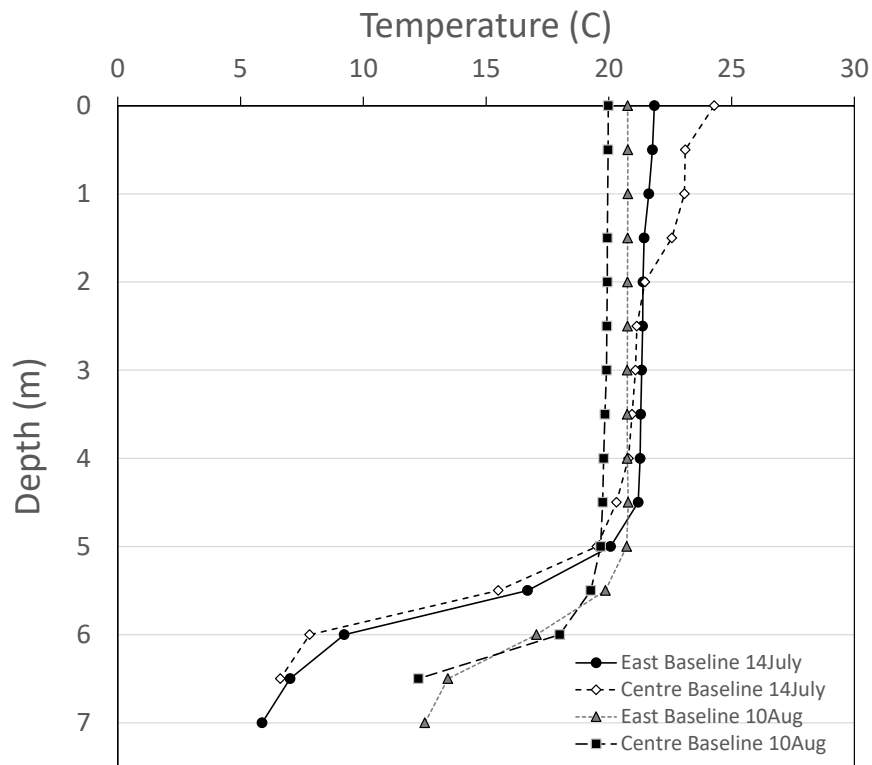


# Little Manitou – Brine Shrimp





# Little Manitou – Field Measurements 2022





## Monitoring 2023

- **Baseline Stations (West, Centre, East)**
  - 3x: end of May, towards end of June, mid-summer
  - Hwy 365: end of May, mid-summer
- **Shoreline Stations**
  - Presently no planned sampling in 2023. Depends on conditions
- **Ministry of Health – Beach Monitoring**
  - Resort Village's beach foreman and a planning/development officer to assist with Healthy Beach Program at Little Manitou Lake.



## Next Steps

- Little Manitou – previous samples provide an understanding of lake ecology.
- Based on existing data 2022 algal biomass was high, but there are data gaps.
- Satellite imagery – hindcast to better understand bloom occurrence on the lake.
- 2023 data to be collected.