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Sherridon Orphan Mine Site Reclamation Plan

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People, Passion, Performance. Trusted Globally.




Acknowledgements

- Manitoba
  - Science, Technology, Energy, and Mines
- Study team
  - WARDROP Engineering Inc.
  - Gartner Lee Limited
  - SENES Consultants

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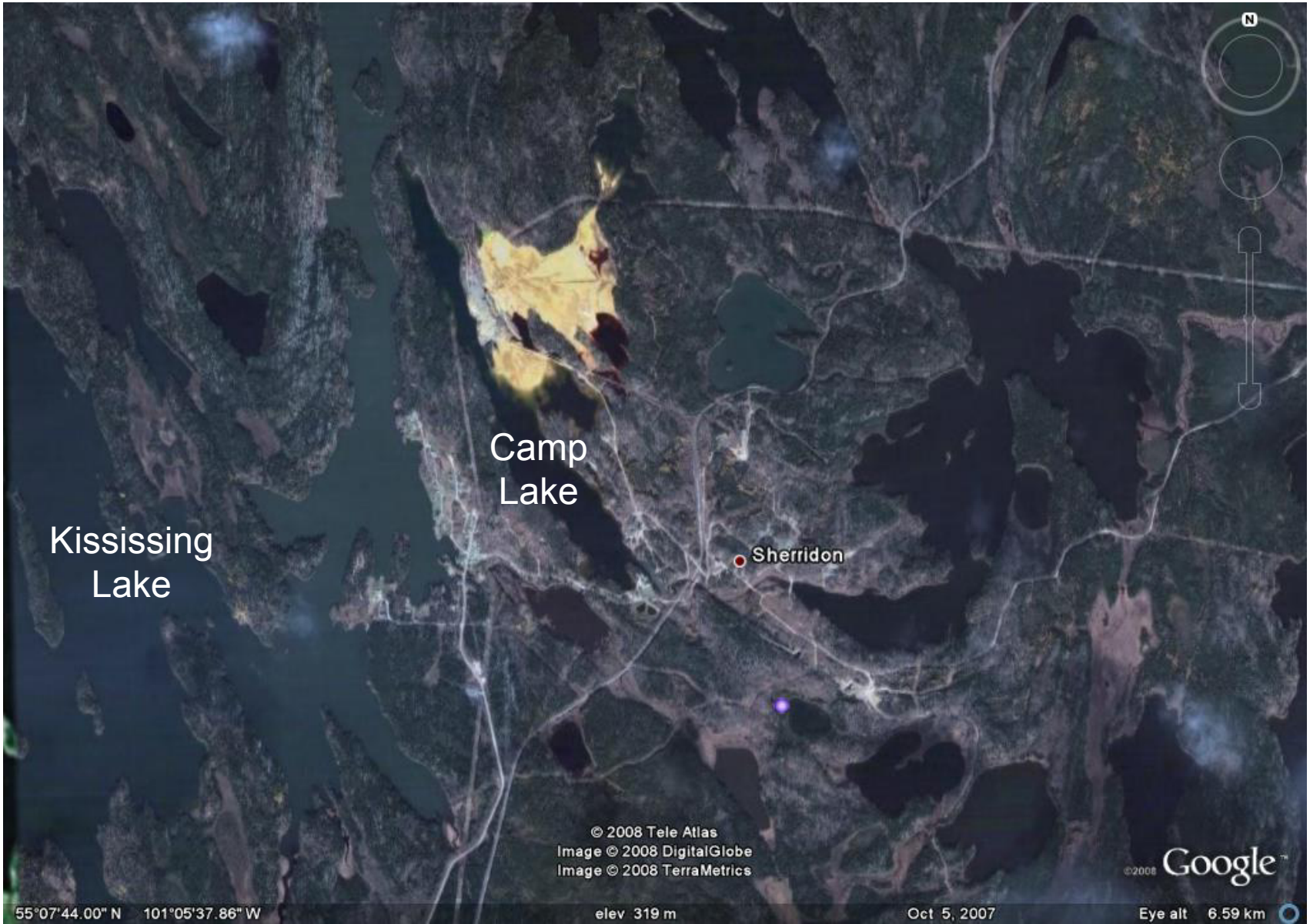
Project Location

Project Location

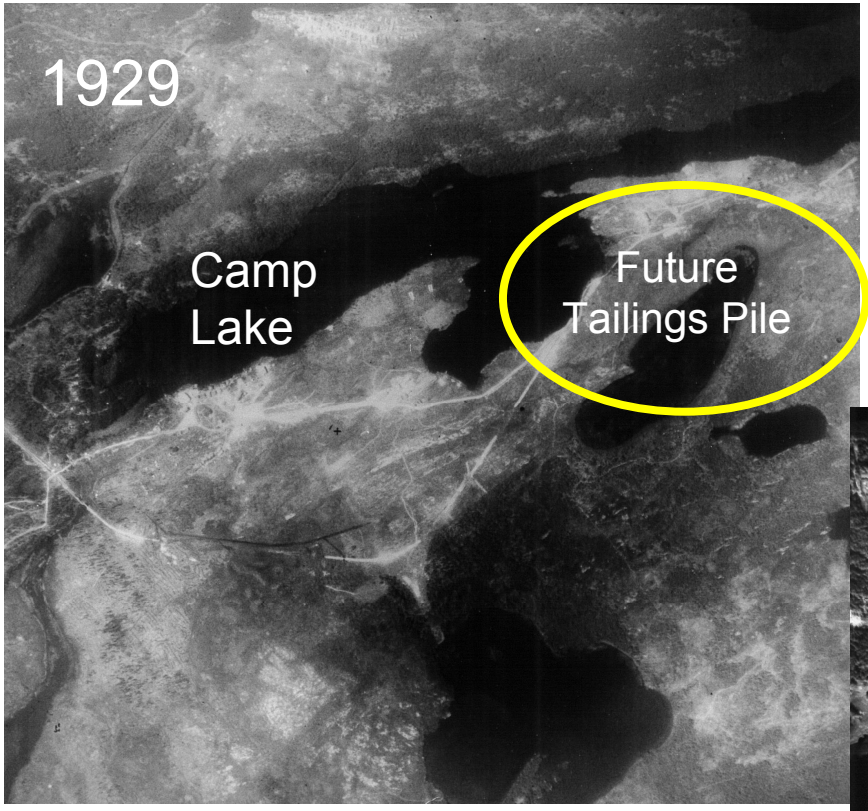


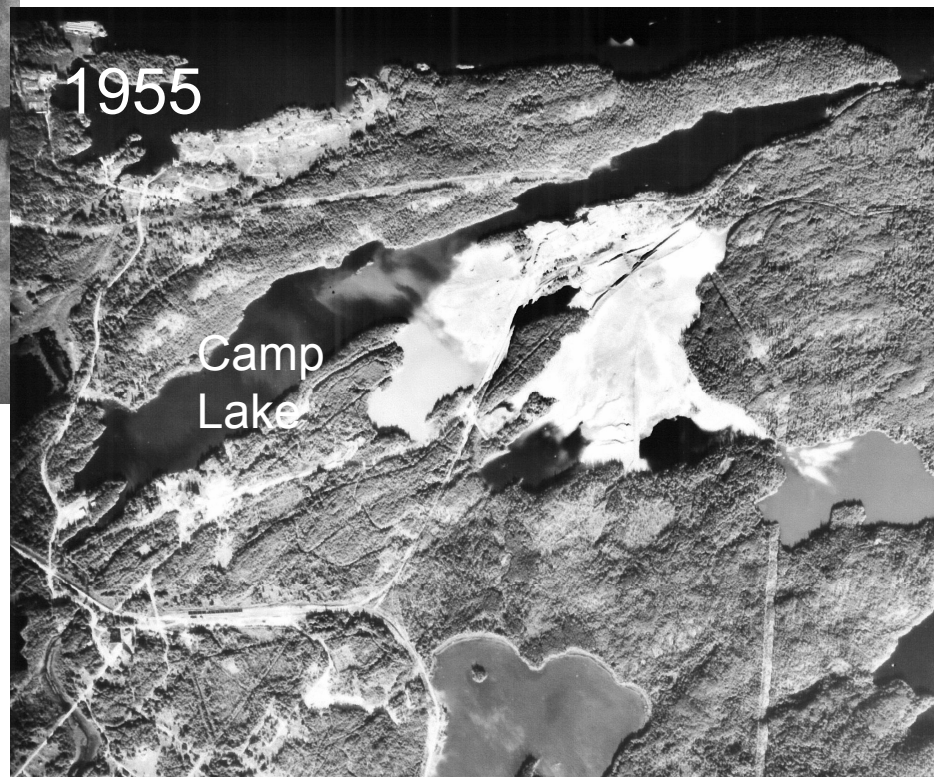



Project Background

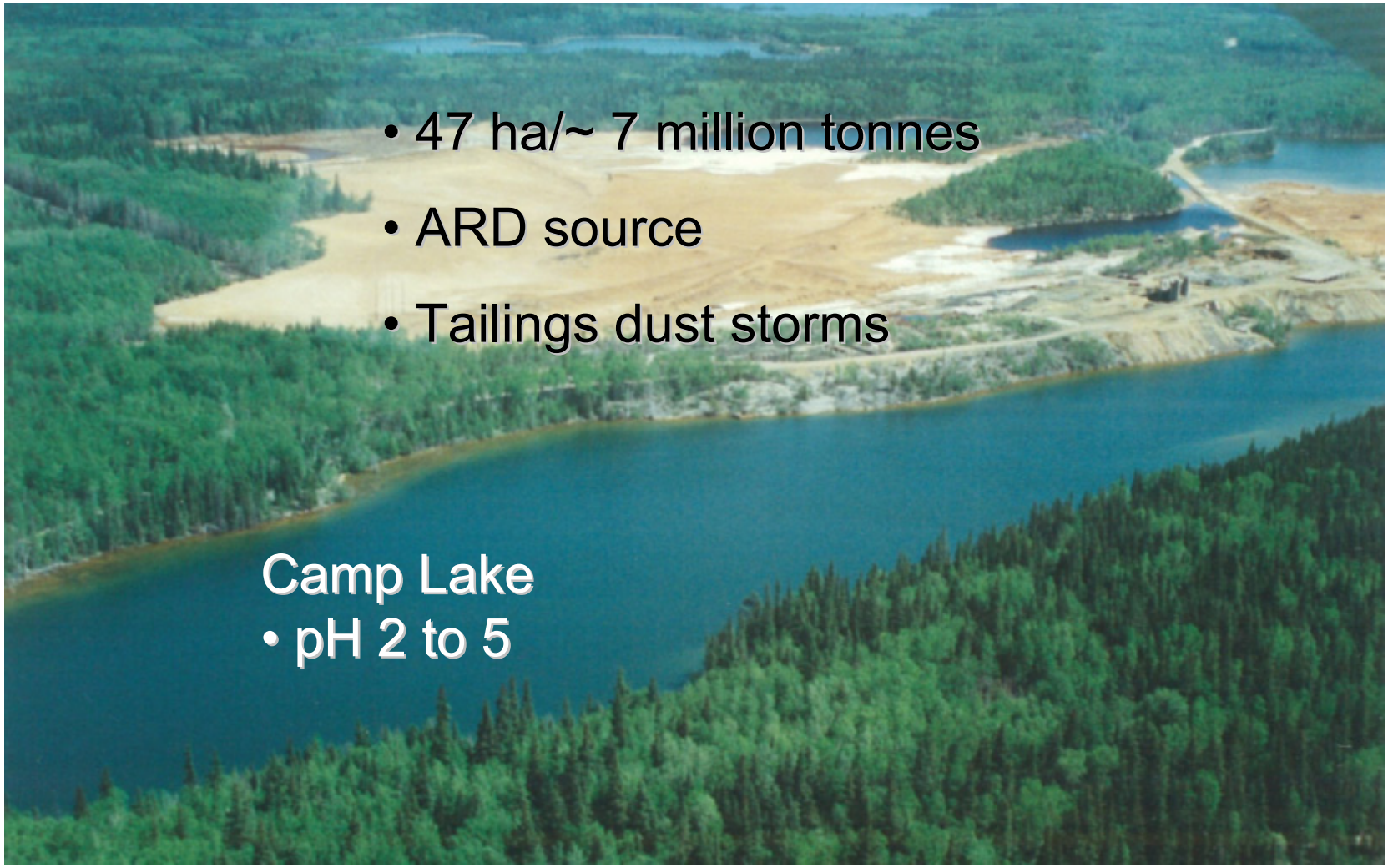
- 1929-1952 - VMS Copper-Zinc deposit mined
- ~ 7 million tonnes of tailings produced
- Primarily sub-aerial deposition, covering 47 ha
- ARD has acidified Camp Lake and is progressing into Kississing Lake
- Site is the responsibility of the Province of Manitoba

Site Conditions Before and After Mining





Current Conditions






Reclamation Plan Objectives

- Control wind-blown tailings
- Reduce loading of ARD and metals to Kississing Lake
- Make site safe
- Minimise future operating, maintenance, management costs
- A final walk-away solution preferred




Options Considered

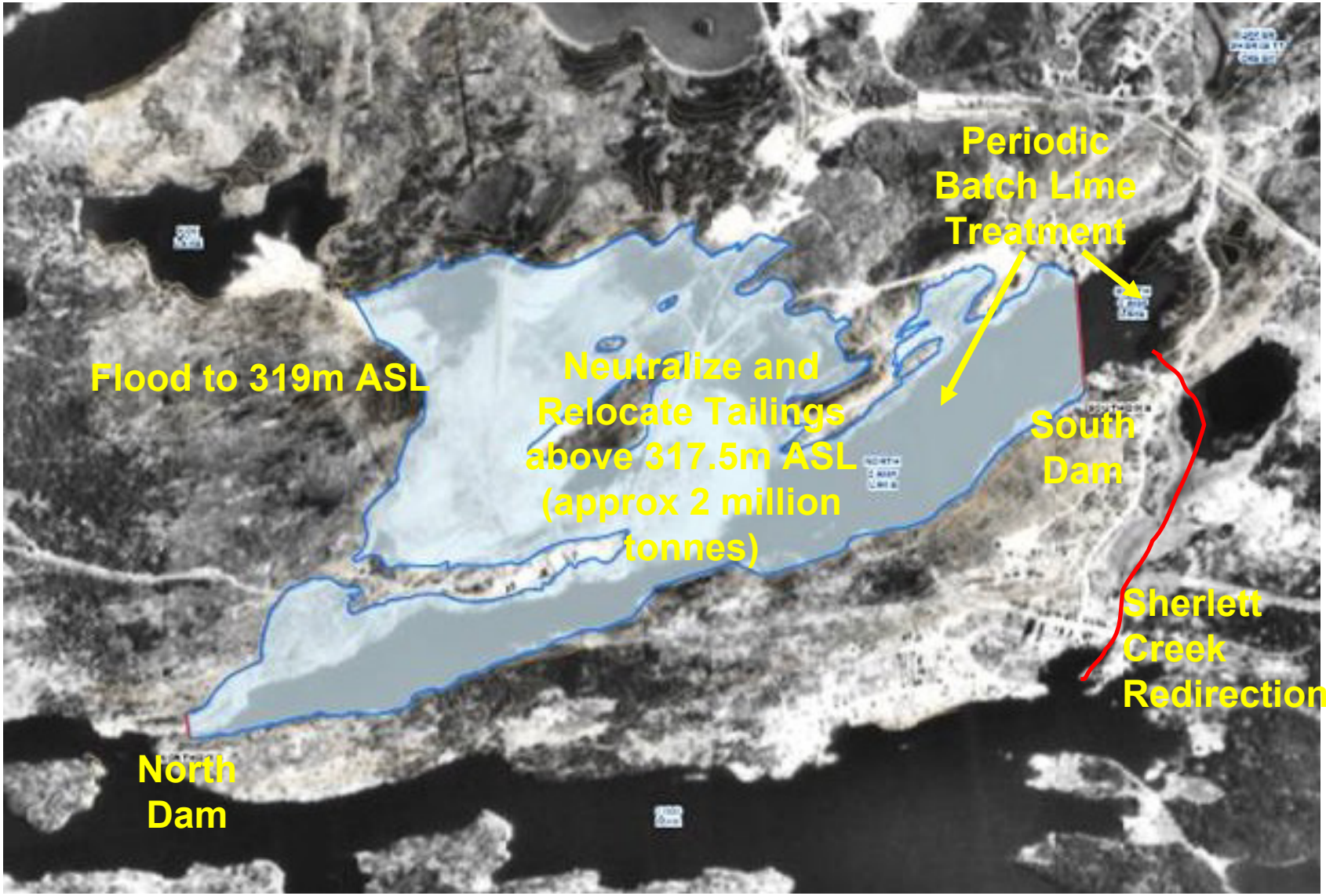
- Re-vegetate Tailings Surface and Treat Camp Lake in Perpetuity (Base Case)
- Relocate Tailings
- Engineered Cover and Treat Camp Lake
- Raise Camp Lake and Flood Tailings in Perpetuity
- Terrace the Tailings and Flood
- Tailings Relocation/Neutralization in Combination with Flooding




Options Examined in Detail

- Re-vegetate Tailings Surface and Treat Camp Lake in Perpetuity
  - Most expensive – treatment would continue for hundreds of years
  - Likely difficult to establish vegetation
- Engineered Cover and Treat Camp Lake
  - Also expensive – treatment would continue for decades
  - Uncertainty regarding durability of cover
- **Tailings Relocation/Neutralization in Combination with Flooding**
  - **Least expensive**
  - **Limited period of post-reclamation treatment**
  - **Experience at other sites indicates treatment can be ended within 5 years of flooding**
  - **A walk-away solution**

Plan Overview






Implementation

- 2008/09
  - Construct South Dam to Current Lake Level
- 2009/11
  - Tailings Relocation and Lake Treatment
  - Sherlett Creek Re-Direction
- 2010/12
  - Complete South Dam
  - Construct North Dam
  - Flood Tailings
  - Periodic Lake Treatment
- 2012/2017
  - Monitoring
  - Treatment as needed

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Questions?

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