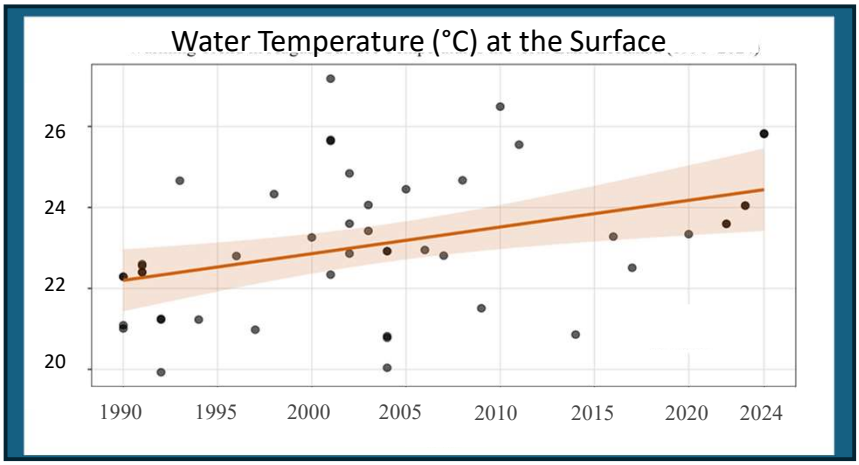
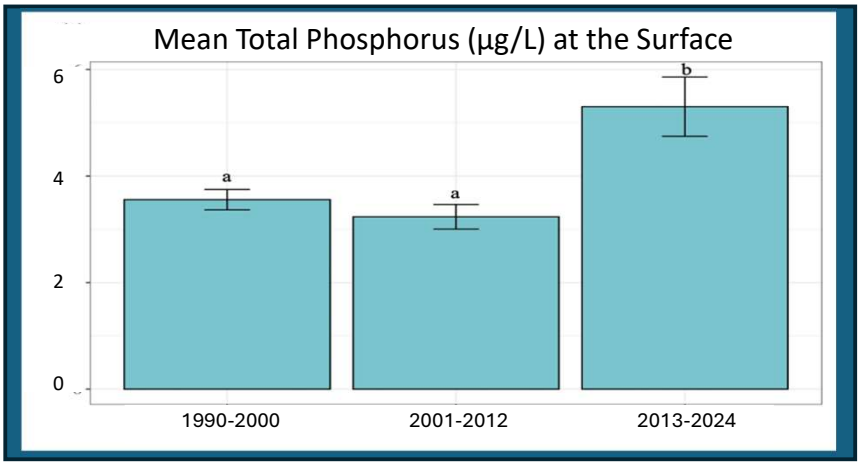
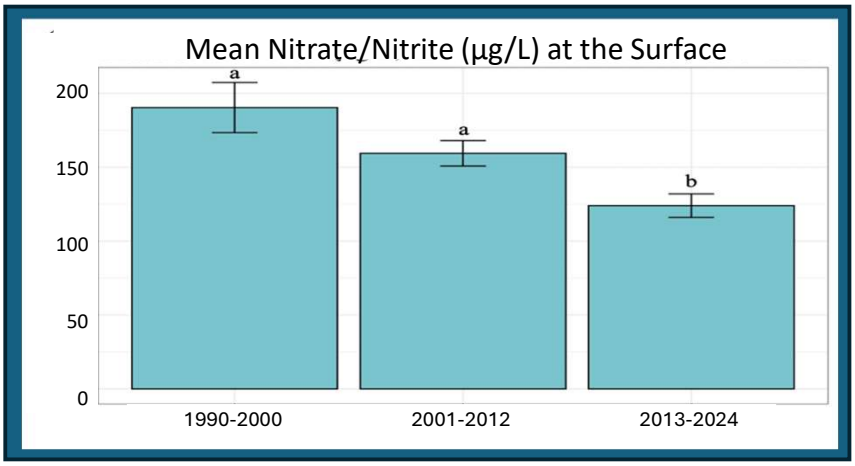
North Lake Leelanau (1993 – 2024)

- **Summary**
  - North Lake is a clean lake based on temperature and nutrients!
  - The lake is changing, both getting warmer and with greater phosphorus at the surface.
- **Recommendations**
  - Minimize fertilizer use and fertilizer runoff using landscaping
  - Continue Lake Association sampling and support of Leelanau Conservancy monitoring







- **Temperature**
  - Increasing at the surface, especially later in the summer
  - Slight cooling at the bottom depths
- **Nutrients**
  - Significant increase in total phosphorus at the *surface* in the last decade
  - Significant decrease in total phosphorus at the *bottom* in the last decade
  - Significant decrease in nitrate/nitrite at the *surface –and- at the bottom* in the last decade
- **Watershed Information**
  - Very little change in land cover in the Lake Leelanau Watershed from 1993-2023.
  - Slight decrease in Agriculture (18.1%-16.0%)
  - Slight increase in Developed land (7.1%-8.7%)
- **Climate Change**
  - The lake will continue to warm, especially at the surface
  - The lake will stratify earlier and remain so, later into fall
  - Higher temperatures favor blue-green algae blooms, hence the recommendation to minimize fertilizer usage
- Note that only figures for surface water are included in this handout. For additional information and details, see the full report

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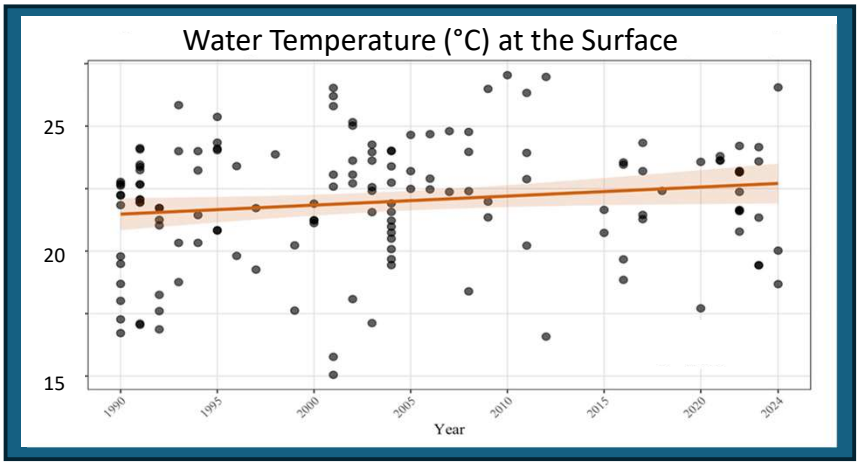
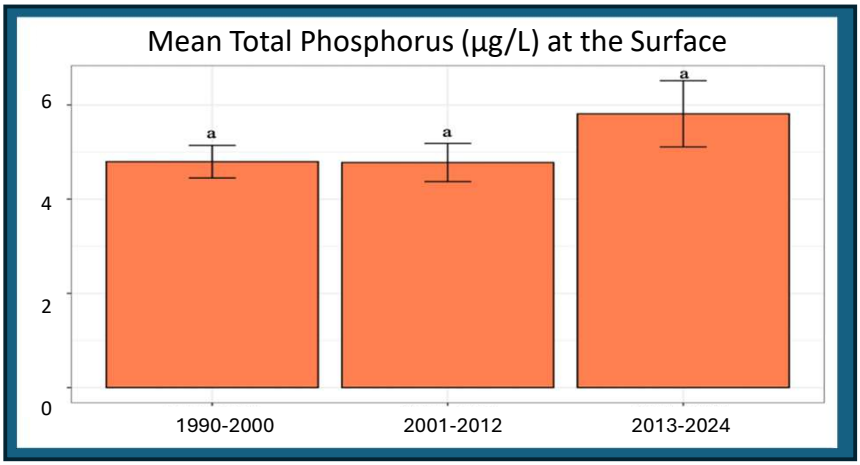
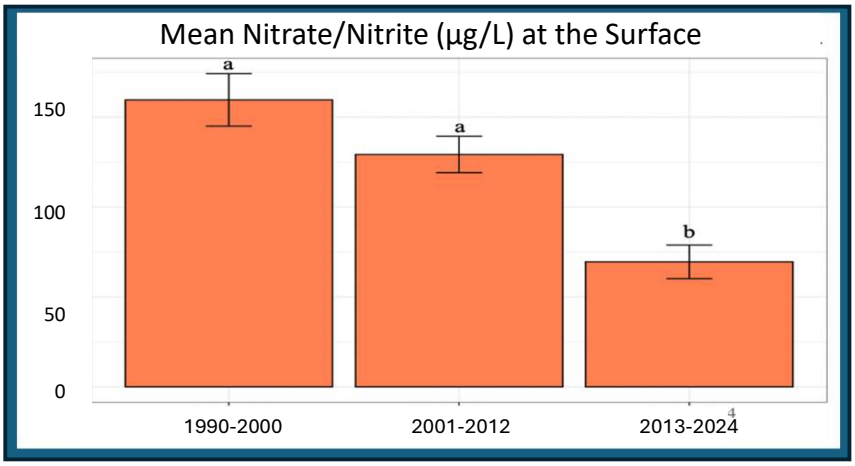
South Lake Leelanau (1993 – 2024)

- **Summary**
  - South Lake is a clean lake based on temperature and nutrients!
  - The lake is changing, both getting warmer and with slight increase in phosphorus at the surface.
- **Recommendations**
  - Minimize fertilizer use and fertilizer runoff using landscaping
  - Continue Lake Association sampling and support of Leelanau Conservancy monitoring







- **Temperature**
  - Increasing at the surface, especially later in the summer
  - Slight cooling at the bottom depths
- **Nutrients**
  - Slight non-significant increase in total phosphorus at the *surface* in the last decade
  - Significant decrease in total phosphorus at the *bottom* in the last decade
  - Significant decrease in nitrate/nitrite at the *surface* in the last decade
  - No change in the nitrate/nitrite at depth
- **Watershed Information**
  - Very little change in land cover in the Lake Leelanau Watershed from 1993-2023.
  - Slight decrease in Agriculture (18.1%-16.0%)
  - Slight increase in Developed land (7.1%-8.7%)
- **Climate Change**
  - The lake will continue to warm, especially at the surface
  - The lake will stratify earlier and remain so, later into fall
  - Higher temperatures favor blue-green algae blooms, hence the recommendation to minimize fertilizer usage
- Note that only figures for surface water are included in this handout. For additional information and details, see the full report

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