

Sweeney Lake Updates

June 7, 2023



Sweeney Lake – the winding path



The Funding

- \$1,075,700 Total Investments
 - \$460,000 Schaper Pond Diversion Project from Bassett CIP fund (levy)
 - \$47,700 Aeration Study from Bassett general fund (city dues)
 - \$330,000 Federal 319 grant from MPCA for alum + carp
 - \$568,000 Grant match from Bassett CIP fund (levy)



Carp Removal: 2020

- Used baited box nets to capture and remove carp
 - Removed 452 carp from Sweeney Lake, dropping density to 68 kg/ha
 - Removed 152 carp from Schaper Pond, dropped density to 75 kg/ha
- Confirmed significant carp movement between Schaper and Sweeney



Alum Treatments: 2020 & 2022

- Completed liquid alum treatment in Fall 2020 and Fall 2022
 - 62,000 gallons alum
 - 30,000 gallons sodium aluminate
- Post-treatment monitoring in 2021 & 2022



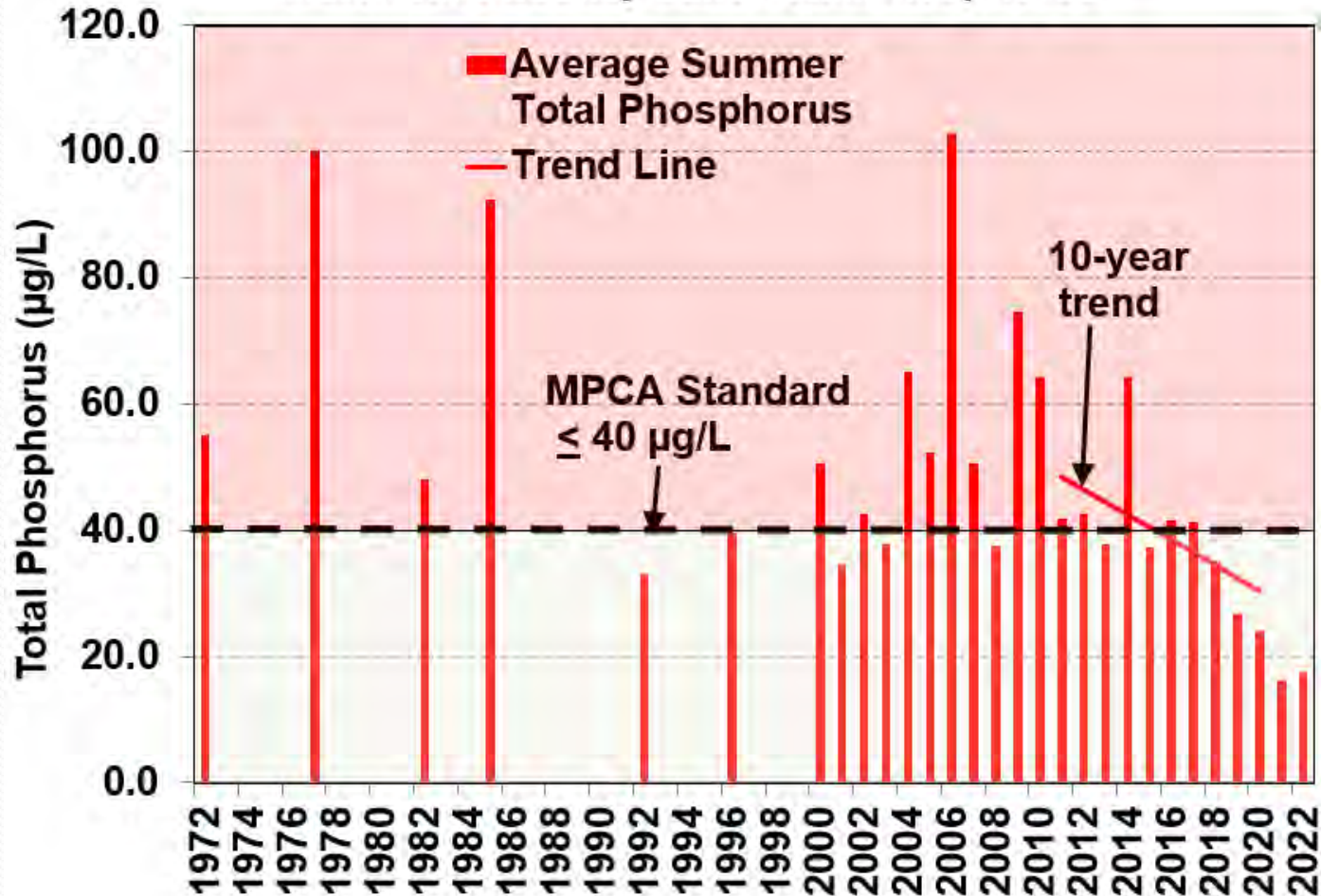
Panfish Stocking and Carp Reassessment—2022

- Summer 2022—stocked 800 panfish in Schaper Pond
- Results of re-survey
 - Sweeney Lake, density increased from 68 to 83 kg/ha over 2 years
 - Schaper Pond, density dropped from 75 to 44 kg/ha over 2 years



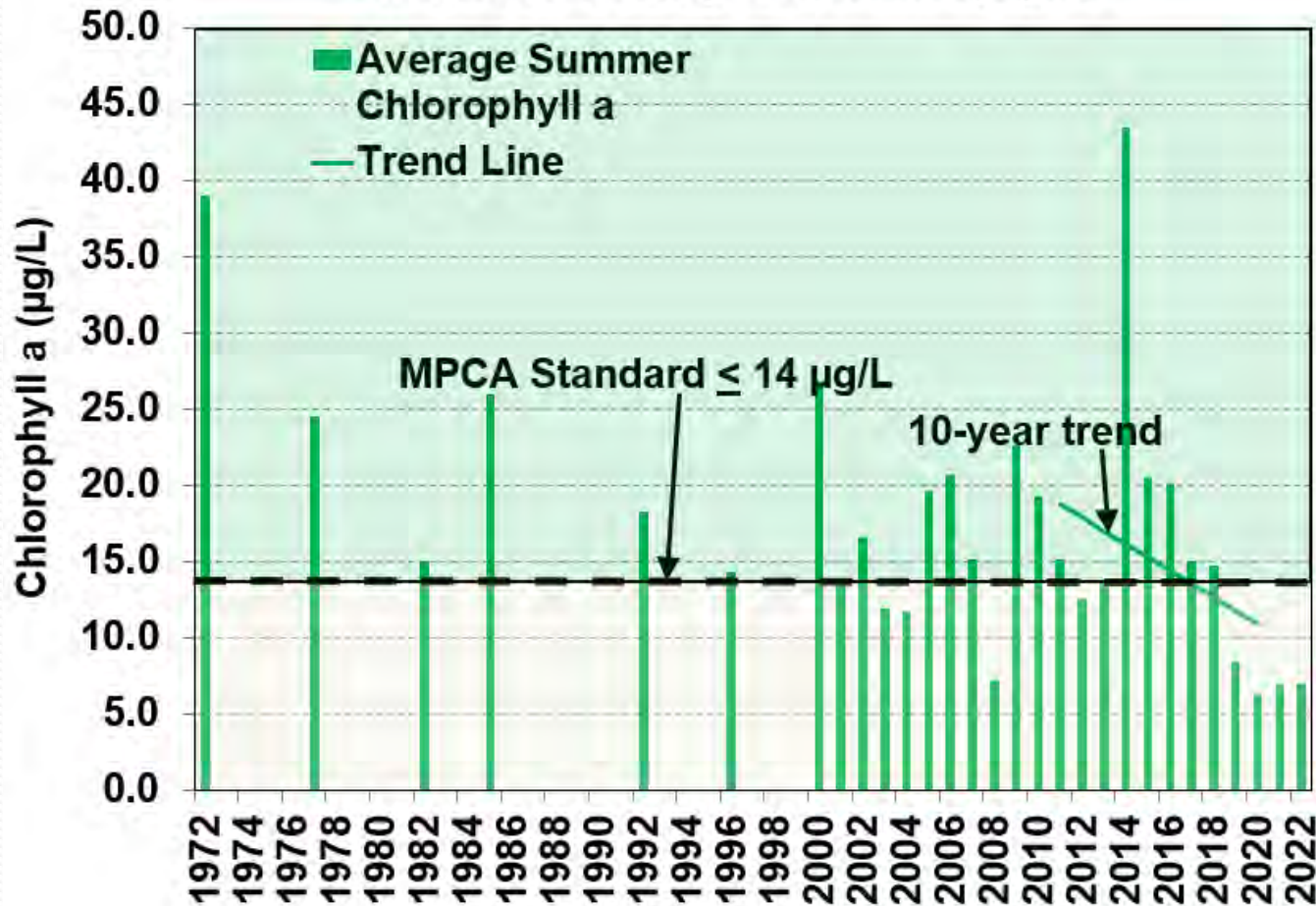
Total Phosphorus

Historical Sweeney Lake Total Phosphorus



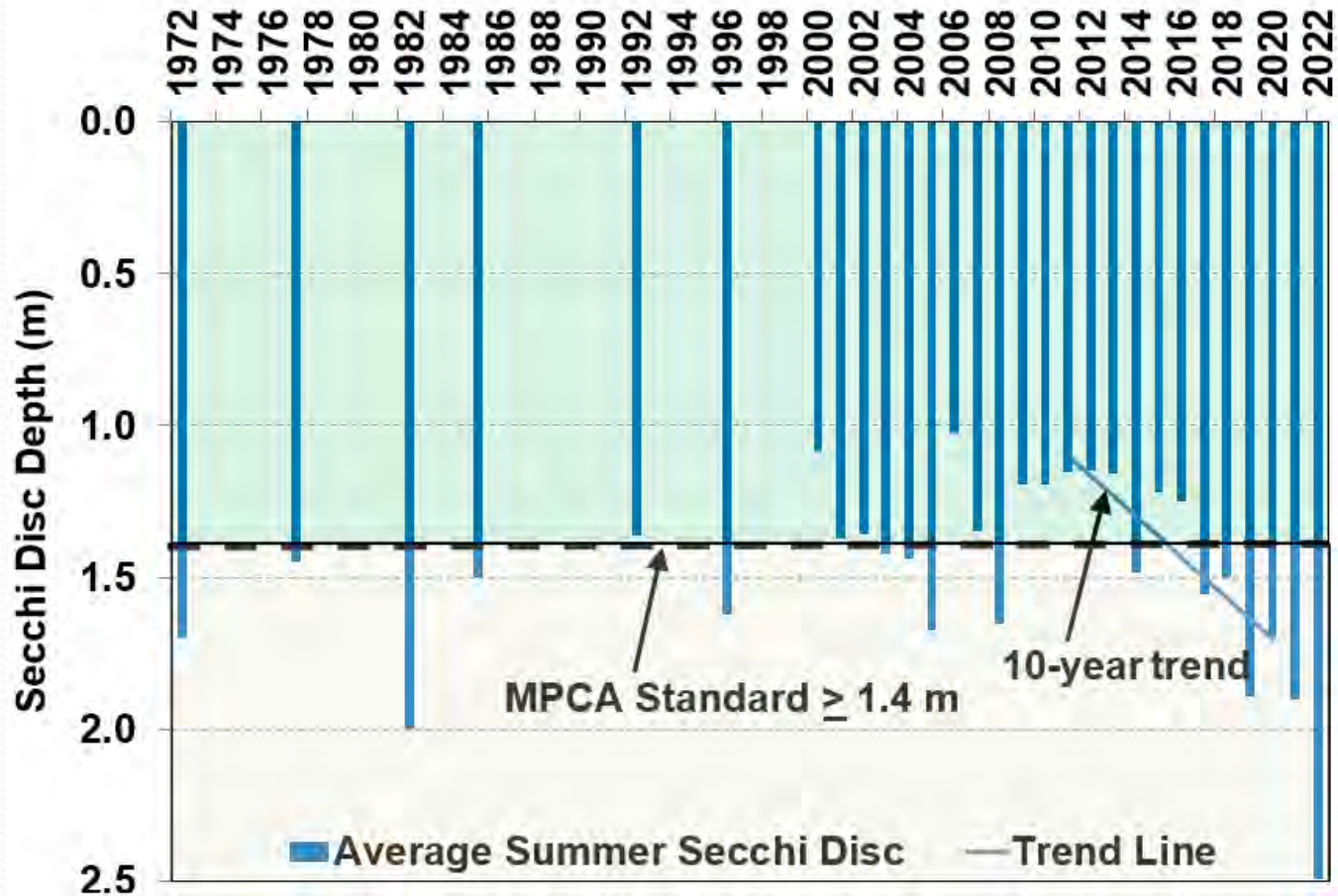
Chlorophyll-a

Historical Sweeney Lake Chlorophyll a



Water Clarity

Historical Sweeney Lake Water Clarity



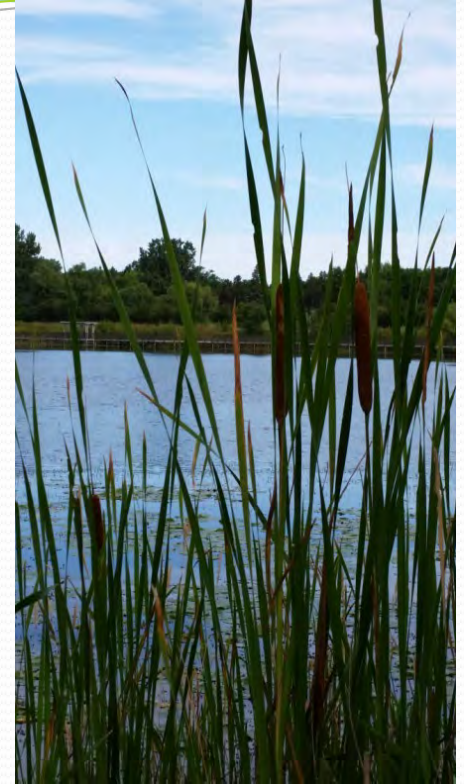
2023 Monitoring

- Early 2023 data indicate better water quality than early 2020 data
- Lower total phosphorus at the lake bottom in 2023 compared with 2020 indicate successful alum treatment
- Low phosphorus levels this spring and the recent dry weather = algal growth should be limited resulting in good water clarity/water quality this summer
- Next monitoring event = June 13th



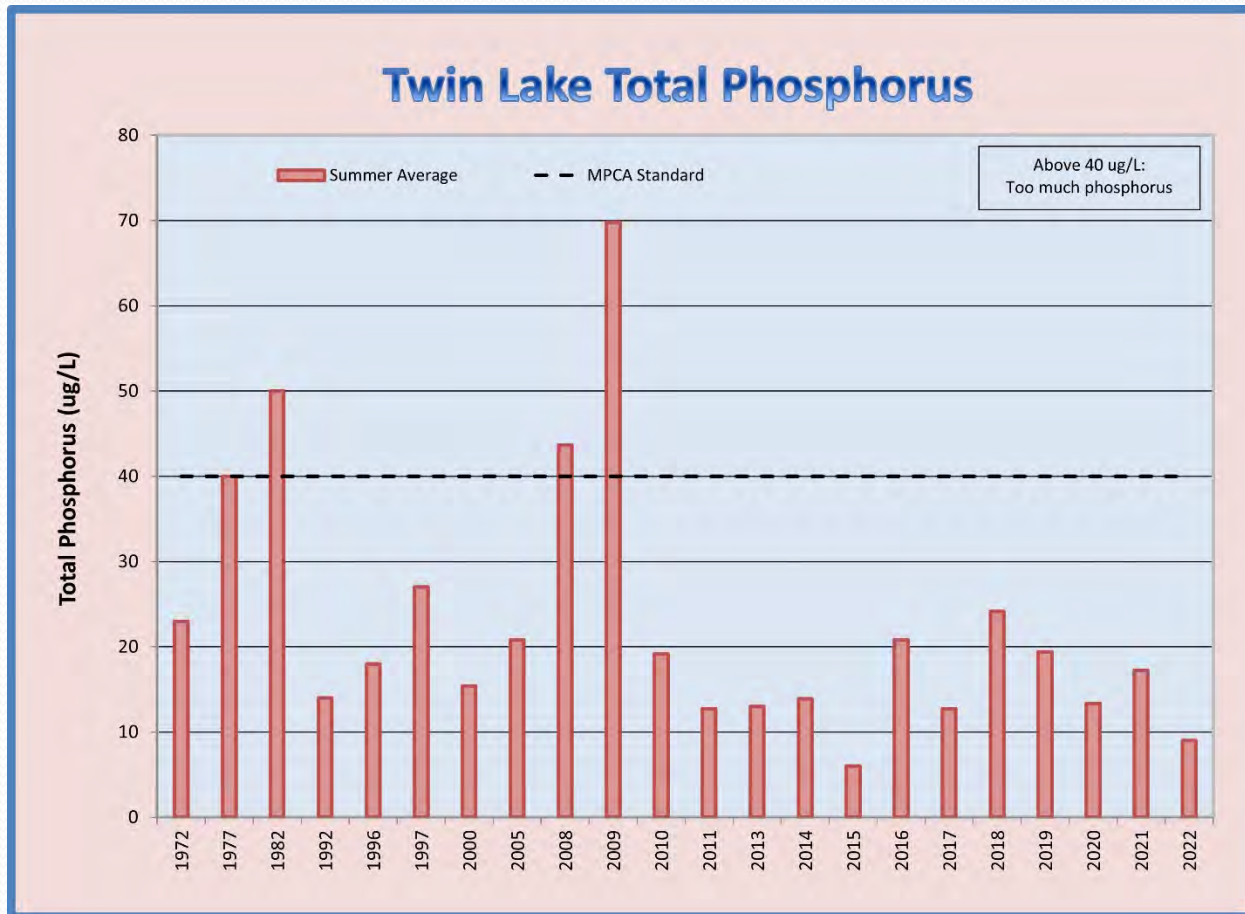
The future

- Continue to monitor
 - BCWMC routine monitoring
 - Citizen Assisted Monitoring Program
- 2023 Schaper Pond Water Quality Monitoring
- 2024 Carp Re-assessment (+ netting if needed)
- Consider long term carp management
- Next up: addressing high chlorides!

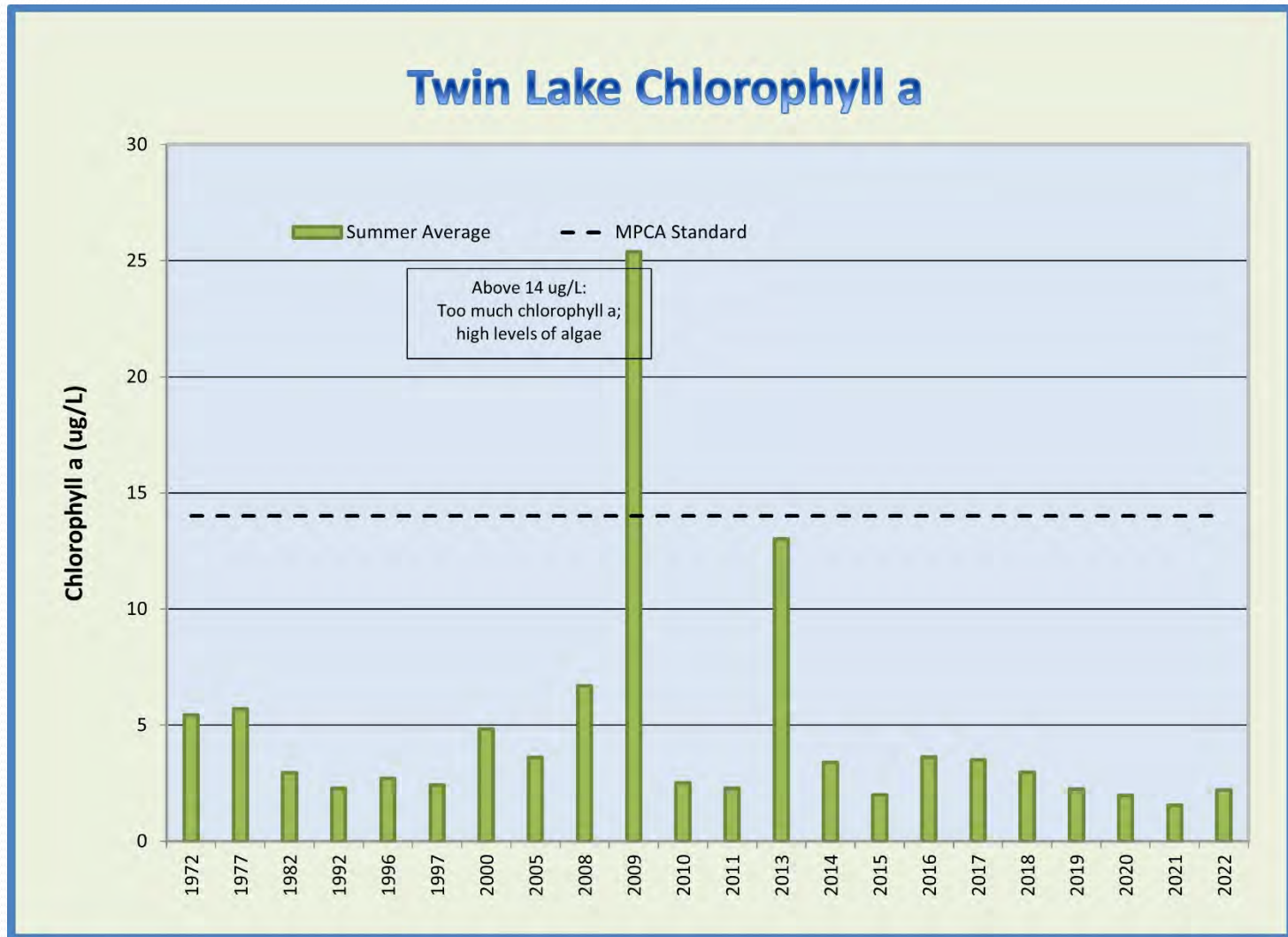


Twin Lake

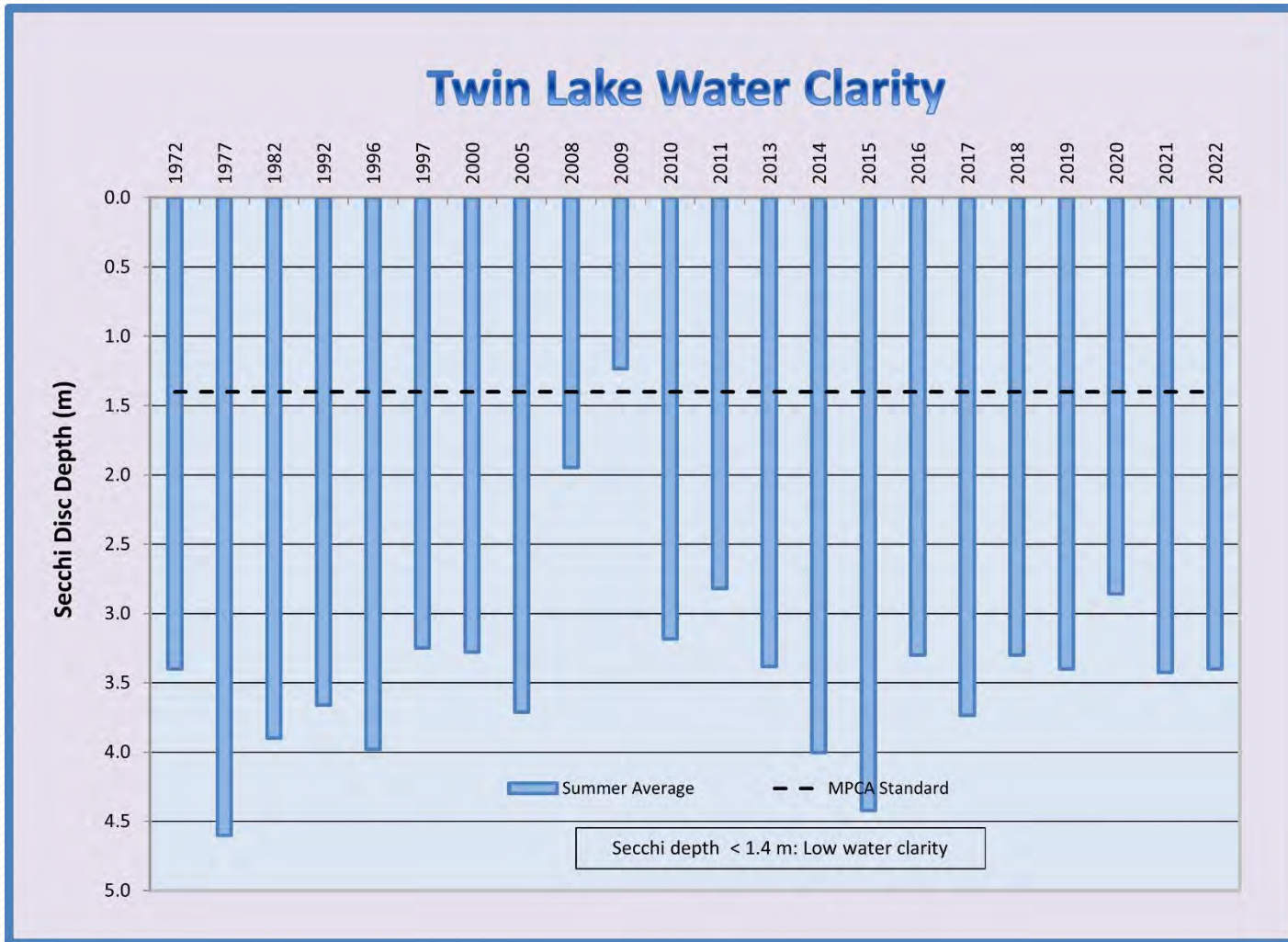
- Alum Treatment in 2015 – still have funding for future treatment, if needed



Twin Lake



Twin Lake



Lake Shore Opportunities

- Score Your Shore
 - Tool to assess habitat conditions of developed lake lots (MDNR)



We All Impact Water Quality – We All Have Shoreline Property

- Leaves
- Grass clippings
- Fertilizers
- Pesticides
- Salt/Deicers
- Pet Waste
- Trash
- Oils/Spills
- Soap



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