Mt Lakes Committee
Minutes: 12/6/2022 7:30p-9:40p

Voting Committee Members in Attendance: Alpesh Amin, Andy Hilton, Debra Dewing, Derek Jackson, Mike Russo
Non-Voting Committee Members in Attendance: Bob Schindler (Solitude), Chris Richter (Borough Council), Billy Barrett (Student Representative)
Public in Attendance: Alan Hunter, Carol Jee, Sandor Barcza, Andrew Coward, Katelyn Ferris, Lucien Foster, Nicki Riley, Siddron Family, Ilona

Welcome

Solitude Lake Management's Report
2020 Year-End Report: Individual lake descriptions & Additional Lake Management Projects
2022 Weather and precipitation report:

- 3rd warmest December
- 9th warmest July
- Warmest August on record
- 4th warmest summer
- 6th driest November
- 6th driest December
- 4th driest summer
- 10th wettest October

Birchwood Lake

- 2 Algaecide treatment, 3 herbicide treatments (pondweed/milfoil & dam vegetation spray
- Water quality notes: dissolved oxygen, pH consistent, TPO4 favorable & Phytoplankton green algae bloom in July/August with trace B-G algae on 4 dates
- Dissolved oxygen tested almost weekly between approx 3ft-12ft
  Note: decomposing of organic material on lake bottom leads to dramatic drop of dissolved oxygen, treatment with hydroraking project & aerators.

Crystal Lake

- 1 algaecide treatment, 1 less due to good clarity all season, maintain water quality,
- TPO4 suitable all season, good clarity all season & Phytoplankton green algae bloom in August, B-G algae present, typical green algae growth

Sunset Lake

- 1 algaecide treatment to target Filamentous algae, limited acreage (~6.5ac), 2 herbicide treatments to target bassweed 1x, water lily control 1x
  Note: hydro raking at Birchwood could have loosened debris and drifted down to crystal ending up in sunset
- Water quality notes TPO4 elevated in July/Aug, Phytoplankton B-G algae present July/August, higher than typical season, increased TPO4
  Note: dry year end and water level dropped, shift in water quality
- Dam project: lake will be lowered for project, hand removal of material will not need a permit, aggressive removal will need permit, sediment exposure to sun and freezing temperatures will improve overall lake quality.

Mountain Lake

- 4 Herbicide treatments for bassweed, curly-leaf pondweed/coontail and shoreline primrose, 4 algeacide treatments for filamentous algea(~25ac) & alum treatment in

November
Note: primrose started in the canal and has expanded to the lake shoreline surrounding the lake. Primrose spread most aggressive in July, August & September. Removal should be started earlier and more aggressive. Options to manually remove or treat but not both. Treatment takes time to reach root of the plant to take effect, manual removal will inhibit treatment reaching roots and possible contact risk but low.

- Water quality most favorable, TPO4 low all season, oxygen level stable and Phytoplankton counts were low in June/July with moderate B-G algae present in July/August.
- Water clarity trending less clear as season progresses

Wildwood Lake

- 2 herbicide treatments for curly-leaf pondweed, eurasian watermilfoil and water primrose
- 2 algaecide treatments for filamentous algae (average 4/year)
- 1 Alum treatment (reduced from 2) in November
- Water Quality notes: TPO4 reduced all season
- Phytoplankton light and favorable, trace B-G algae in August and no unicellular treatments

Small Basin Dissolved Oxygen: Olive Pond, Shadow Pond, Cove Pond, & Grunders Pond

- Measured weekly
- Overall basins reduced dissolved oxygen compared to recent seasons, 2nd year in a row
- *Note: low water level with elevated temperatures show dramatic drop in dissolved oxygen*

Olive Pond

- oxygen depressed on many dates, high TPO4 on all dates (Need to actively manage) and Phytoplankton moderate B-G algae in July. Water clarity poor

Shadow Pond

- 3 algaecide treatments for filamentous algae and B-G algae and no herbicide treatment due to no watermeal/duckweed present

Cove Pond

- No treatments, water clarity poor, TPO4 elevated and Phytoplankton preset, Ceratium. *Notes: hydro raking planned for spring 2022 & Phytoplanktop profile different from all other lakes in town.*

Grunden's Pond

- 1 algaecide treatment for filamentous algea with lower abundance than normal. Water level low throughout season
- 1 herbicide treatment early for curly-leaf pondweed and trace amounts of water meal
- Water quality notes: TPO4 elevated and requires active management. Phytoplankton had moderate density in July with Green/B-G algae trace density in June/July. Water clarity below average

Overall notes:

- ML tested for E.coli almost weekly. Saw extreme spike once but retested and almost untraceable. Not sure of cause.
- Hydroraking 2022

    - Spring: 6 days Cove Pond, 3 days Wildwood Lake; both, rake only
    - Fall: 1 week, 2 barges Birchwood Lake which completes 5-year commitment
    - Per Bob Schindler, close to meeting original goal of restoring unobstructed water flow
    - Key: Focus has been on central area north of neck. Solitude has not hydroraked north or north eastern ends of the lake; these now are impassible and urgently need attention. Per Bob, “North end was substantially ignored for a long time”; “Lilies allowed to flourish there for so long.” Rhizomes of water lilies 6-8” diameter; Heavily forested surrounds lead to abundance of leaves in the lake.
- 2023 Recommendations
    - Continue water quality program with weekly surveys
    - Birchwood Lake limited herbicide use, add lili control lake wide, maintain suitable recreational areas
    - Crystal Lake herbicide use as needed, reactive management to lilies and bassweed
    - Sunset Lake whole basin water lily control, aggressive bassweed management and loosestrife management
    - Olive, Shadow, Cove and Grunden’s pond chelated copper algaecide called earthtec, bacterial enhancement and early season sodium illuminate treatments
    - Mountain Lake late season, low dose alum. Reactive plant management. Water primrose management.
    - Wildwood Lake had milfoil present across southern part of lake use procellacor to treat in 2023, 1 Alum treatment and water primrose management
    - Canal should have monthly surveys and treatment as needed. Plan to manage primrose
    - Start sediment depth probing survey
    - Mountain Lakes Plant Guide

- Long-term, poignant message
    - “Need to be thinking about quality and depth 50 years from now.”
    - “These lakes will not maintain current depth on their own!” “Many lakes facing such decreasing water depth.”
    - ”Our typical management treatments are no longer effective” for maintaining water depth which, as it declines, affects ability to manage and maintain water quality

- Open questions to the public
    - Rash post swimming not related to treatments, might be bacteria growth
    - TPO4 and fertilizer correlation unable to narrow down. NJ has a commercial ban on TPO4 use for lawn treatments, but still sold in stores. Community education and possible Landscape ordinance in town. Overall hard to enforce

ML Committee Minutes for October & November (Motion to approve, seconded and approved)

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Solitude Bathymetry and Sediment proposal

- Map will show water level, sediment (soft bottom) level and hard bottom level)
- Map will be topographical and have 3-D image
- Mapping will take approx 1 to 1.5 months with hundreds of data points per acreage. *Vote of present voting committee members, and passed.
- Richter will present to town council for approval
- Once information is collected there will be plans to prioritize lakes and bid out for companies and overall cost.

Landscape Ordinance Proposal

- Currently under discussion

Council Liaison Chris Richter: Closing remarks

- Until Borough Council reorganization in January, Chris will not know whether he will continue as Liaison to Lakes Management Advisory Committee
- He has and will continue to spearhead long-term lakes stewardship plan and encourages the Committee to focus on this!
- Will be happy if we can accomplish in 2023:
    - Lakes mapping as per recommended Solitude proposal with assessment of volume of material to be removed from each body of water to restore hard bottom water depth
    - Going out to bid for such removal
- Committee and Chris poised to research technology options for dredging projects.

Meeting adjourned at 9:40pm