

SILVER LAKE IMPROVEMENT ASSOCIATION

2017 Annual Membership Meeting

Welcome & Introductions

2016 Board Members

- President: Mark Kotz
- Vice Pres: Paul Anderson
- Secretary: Kristen Rieser
- Treasurer: Joyce
Germscheid
- Member: Rick Gelbmann
Member: John Muller
- Member: Jason Ziemer

2016 Liaisons

- North St. Paul: Paul Anderson
- Maplewood:
- VBWD: John Muller
- MN DNR: Jason Ziemer
- Ramsey Co: Mark Kotz
- Treatment: Jason Ziemer
- Newsletter: Joyce Germscheid
- Cleanup/Splash: Sharyn Long

Agenda

- Welcome and Introductions
- Approve Agenda
- Election of Board Members
- Financial Report
- 2016 Recap
- Shoreline Property Damage Survey
- 2016 Treatment Plans
- Open Forum & Questions
- Adjourn

Election of Board Members

- How do elections work? - Bylaws
- **President: Mark Kotz (ends 2017)**
- **Vice Pres: Paul Anderson (ends 2017)**
- Secretary: Kristen Rieser (ends 2019)
- Treasurer: Joyce Germscheid (ends 2016)
- Member: Rick Gelbmann (ends 2019)
- Member: John Muller (ends 2018)
- Member: Jason Ziemer (ends 2018)

Ballot

- _____ Paul Anderson
- _____ Mark Kotz
- _____
- _____
- _____
- _____

2016 Financial Statement

Description	2016 Amount	2015 Amount
Starting Balance	\$4,676.20	\$7,292.57
Member Contributions	\$650.00	\$575.00
DNR Treatment Grants	\$565.00	\$1,050.00
Treatment Contractor Fee	-\$1,625.00	-\$4,092.50
Expenses (web site)	-\$172.39	-\$148.87
Ending Balance	\$4,093.81	\$4,676.20

2016 Membership

□ Membership

- 26 paid members
- 21 live on the lake, 5 do not
- 36 Total residents on the lake
- Dues will remain \$25/year
- Newsletter email next week



2016 Recap

2016 Recap

□ Winter

- Continue voluntary no wake when water above 989.35 ft.
- Goal: Increase native plants, reduce invasives

□ Spring

- Milfoil visible near boat launch
- Board agrees to treat bays and coordinate shoreline treatments for members

2016 Recap

□ Summer

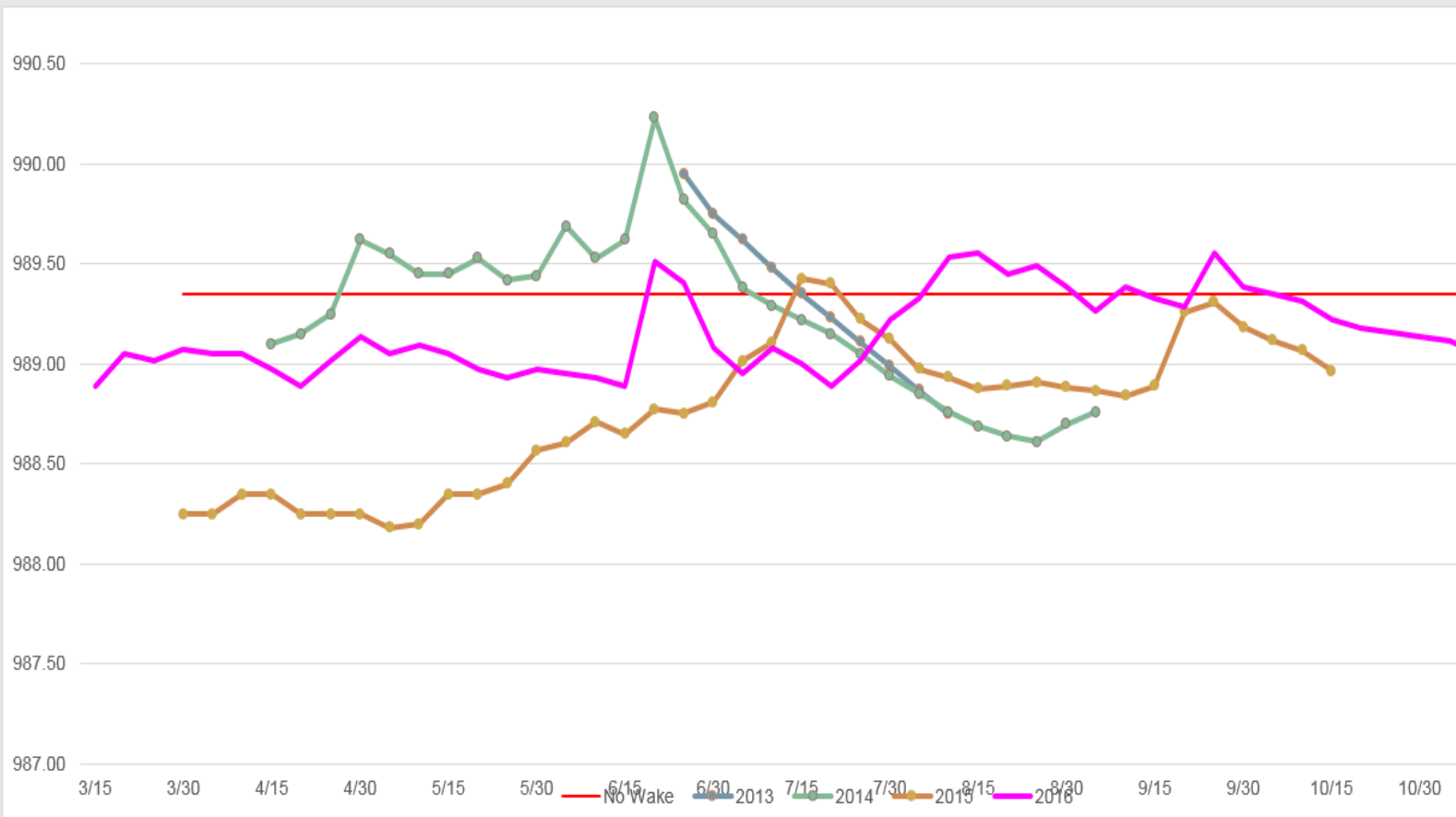
- Bays and shorelines treated
- Received DNR grant for \$565
- Treatment appeared to be effective
- High water no wake in June and August
- DNR plant survey
- Water Clarity Sampling

2016 Recap

- Summer/Fall
 - DNR Grant funds reduce to 30% of previous years
 - High water and weir issue
 - Weir was kept clear of leaves
 - Bank balance getting lower

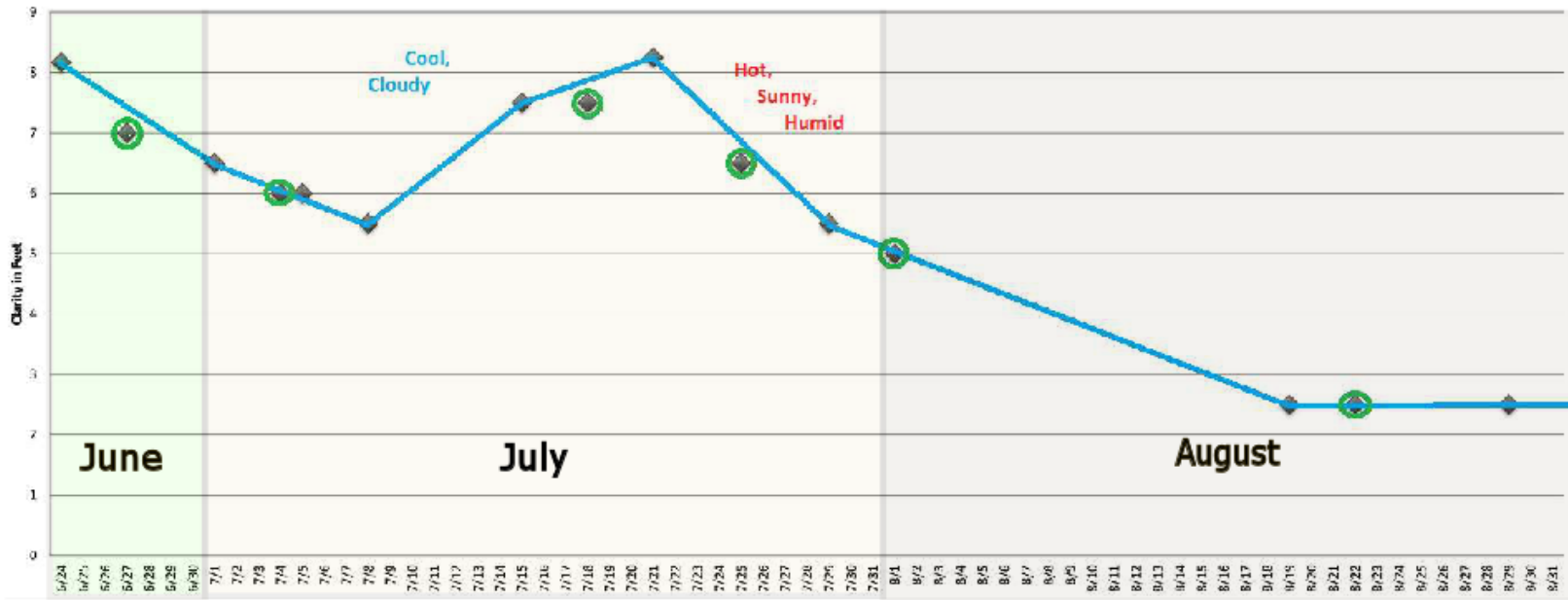
Water Level

Silver Lake Water Level



Water Clarity

Silver Lake Water Clarity 2016



Water Clarity

Table 1-Secchi Averages. Average Secchi disk observations in meters for Silver Lake (DOW #62000100). Data gathered from the Minnesota Pollution Control Agency.

YEAR	MAY	JUNE	JULY	AUG	SEPT	Secchi Depth Average [May-Sept]
2006	3.5	3.2	2.5	1.5	2.8	2.7
2007	3.4	2.3	1.1	0.7	1.3	1.8
2008	3.3	2.5	1.7	0.7	0.8	1.8
2009	1.6	1.6	1.4	0.8	0.8	1.2
2010	2.2	1.9	1.2	0.5	0.6	1.3
2011	2.3	1.9	1.2	0.6	0.6	1.3
2012	1.7	2.1	1.4	0.5	0.6	1.3
2013	1.4	2.1	0.9	0.5	0.6	1.1
2014	1.2	1.7	1.6	0.9	0.6	1.2

* Data obtained by MnDNR during PI Survey

Lake Health

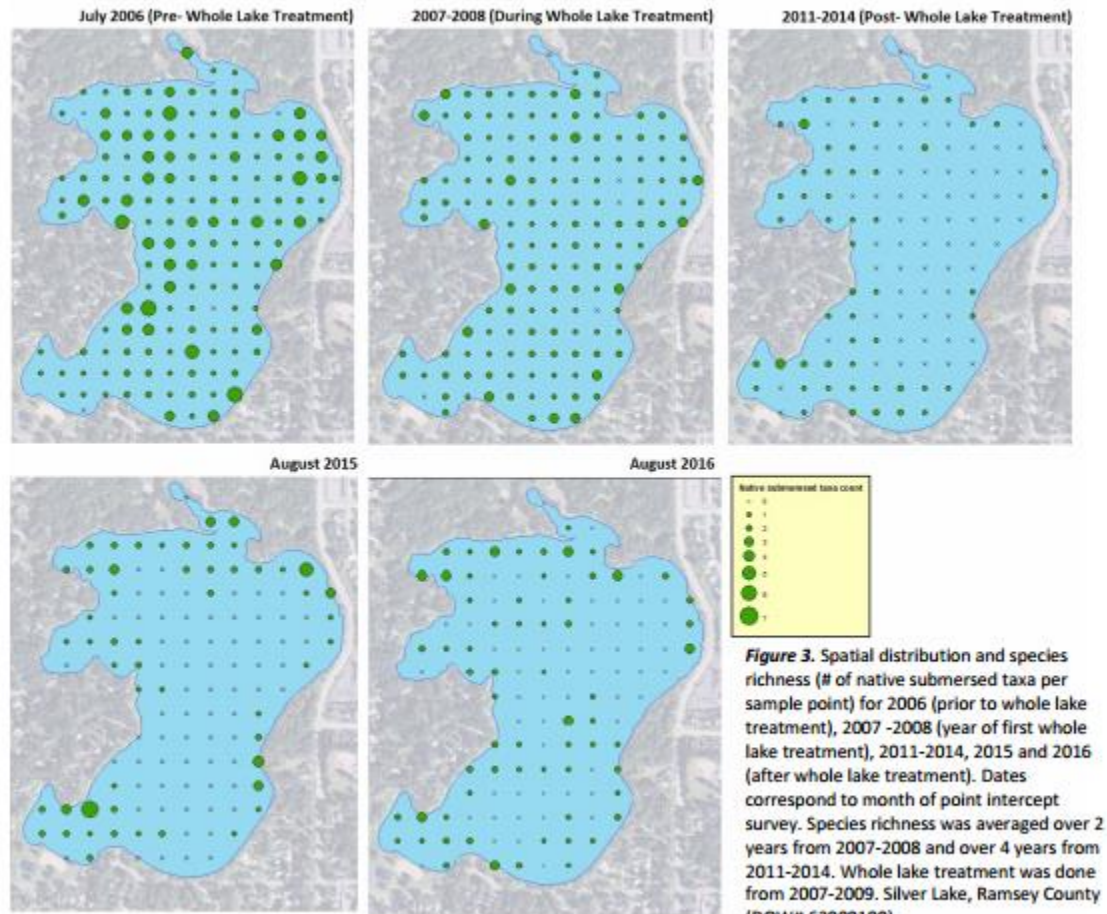
Table 2-Invasive Plant Management Summary. Characteristics and history of herbicide treatment for Silver Lake (DOW# 62000100, Total acres: 76, Littoral acres: 72, 15% Littoral acres: 10.8).

Date	Treatment [W,P,N]	Target Species	Total Acres Treated	Herbicide	Licensed Commercial Applicator
2006	N	-	-	-	-
MAY 2007	W	CLP & EWM	50	Endothall, Triclopyr	Aquatic Engineering
MAY 2008	W	CLP & EWM	60	Endothall, Triclopyr	Aquatic Engineering
APR 2009	W	CLP	60	Endothall	Aquatic Engineering
2010	N	-	-	-	-
2011	N	-	-	-	-
AUG 2012	P	EWM	4	2,4-D	Lake Improvement
JUN 2013	P	CLP & EWM	11	Endothall, 2,4-D	Lake Improvement
JUL 2014	P	EWM	4	2,4-D	Lake Improvement
MAY 2015	P	EWM	8	2,4-D	Lake Improvement
MAY 2016	P	EWM	2.6	Endothall	Lake Improvement

Treatment: W (whole lake), P (partial lake), N (no treatment)

CLP is an abbreviation for curly-leaf pondweed. EWM is an abbreviation for Eurasian watermilfoil

Lake Health



Shoreline Damage Survey

Impact on Homes

Wet Basement/ Crawlspace	Cost of Cleanup/ Repair	Cost of Prevention
2 of 9 Surveys	\$32,000	\$40,000
5 of 9 Estimates	\$8,000	\$50,000
7 of 18 Total	\$40,000	\$90,000

Shoreline Damage Survey

Impact on Shoreline

Number of Surveys	Damage to Shoreline	Projected Future Damage
9 Surveys	\$167,000	\$122,000
9 Estimates	\$275,000	\$128,000
18 Total	\$442,000	\$250,000

More than 100 trees have been washed out and about 500,000 cubic feet of shoreline has been lost to erosion



Invasive Plant Treatment Review

The Permitting Process

What happened in 2016

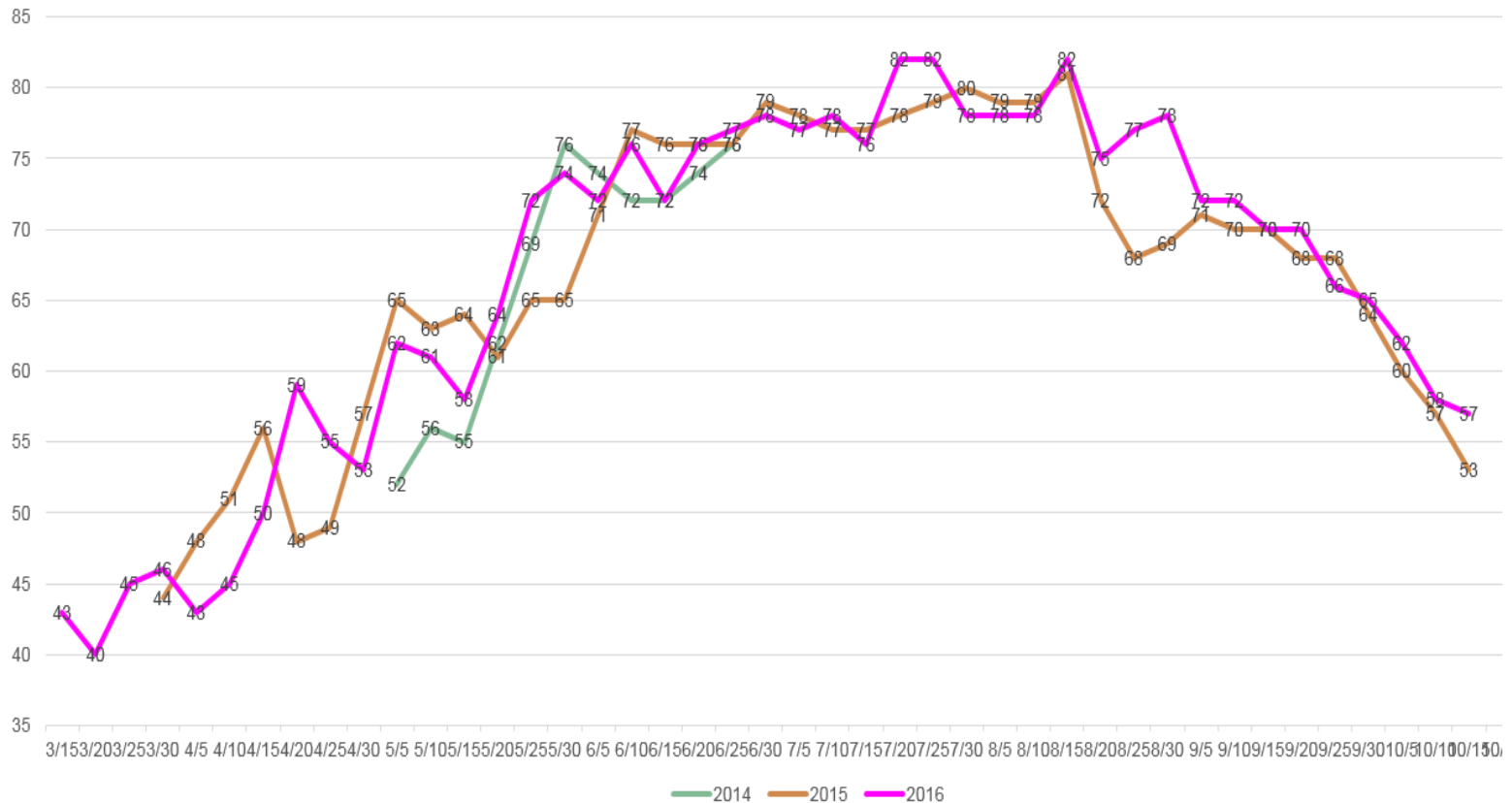
Plans for 2017

The Permitting Process

- Paperwork submittal in winter
- Map the invasives after ice-out
- Submit a proposal with maps to DNR
- Limited to 2.6 acres total
- DNR confirms via onsite inspection
- DNR grants approval
- Contractor treats lake
- Timing (water temp) is critical for effectiveness

Water Temperature

Silver Lake Temperatures



2016 Treatment Review



Treatment Preparation

- Inspected lake after ice out
- Found Curly-Leaf Pondweed
- Submitted proposal
- DNR inspected & approved
- Treated while the water was cool

2016 Treated Area



2016 Treatment Review

Treatment Results

- Treatment approved by DNR
- No treatment of Eurasian Milfoil
 - ▣ Water temp too high when Milfoil was detected
- Treatment completed by Lake Improvement Consulting
- Individual shoreline treatments too
- Treatment was effective

2017 and Beyond

- Goal: Improve the health of the lake
 - ▣ Increase native plants
 - ▣ Decrease invasive plants
 - ▣ Improve water quality (clarity and nutrients)
- Targeted treatment
 - ▣ Perennial problem areas
 - ▣ Dependent on funding
- Seek funding through city partners
- Encourage lake level stabilization



- Open Forum, Questions?

- Adjourn