

2018 Annual Meeting



2018 Annual Meeting

- Welcome and Introductions
- Call to order
- Quorum Determination

Your Glen Lake Association Officers and Board of Directors

Officers

Bill Witler

- President

David Hayes

- Vice President

Lori Lyman

- Secretary

David Herr

- Treasurer

Other Directors

Dennis Becker

Corrine Cochran

Dale DeJager

Tom Dutmers

Ranae Ihme

Cal Killen

Bill Meserve

Edward Lanphier

Vic Peirce

Introductions

- Staff Rob Karner, Sallyanne Morris
 & Trisha Denton
- Parliamentarian Chuck Barnell

- Proctors
 - Sue Dutmers Lead
 - Monica Dutmers

2016 Annual Meeting Minutes

Motion to accept the 2017 Annual Meeting Minutes

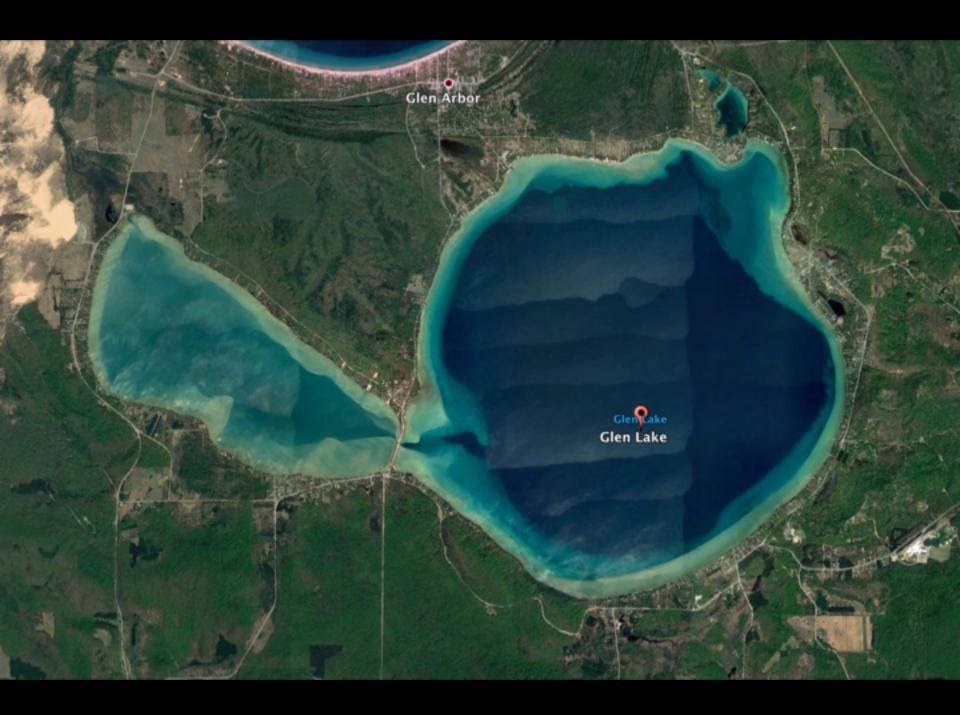
Meeting Agenda

- State of the Lake Presentation Rob Karner
- Guardian Program Tricia Denton
- Present financials David Herr
- Review Committee activities Bill Witler
- Special Recognitions Rob Karner
- Elect new Directors
- Questions and Answers
- Social Lunch



Inlet Study

- Once a year on June 21, a inlet study is done to monitor surface water coming into our lake from multiple sources
- Big Glen, Little Glen, and Big Fisher are the sites for this study
- 15 different sites are monitored using the hydrolab's conductivity probe as a screening for pollutants
- Results for 2018 indicate there is no immediate concern for any of the sites with data being consistent over the last five years



Plankton Studies



- Plankton analysis is monitored on the Glen's and the Fisher's
- Monitoring begins in April and ends in November
- Species diversity is good indicating healthy conditions except Little Glen where diversity is down due to abundant Zebra Mussels
- GLA is working with Oakland University on Microcystis

Microcystis Study



- GLA is working together with Oakland University on a "Harmful Algal Bloom" (HAB) study
- Little Glen is the focus of the study as it is the only lake that experiences Microcystis blooms
- Summer samples from Little Glen will be mailed for analysis this fall
- Microcystin (the toxin) will be measured and a report shared in a later report in the fall

Drone Survey

- A spring drone survey was completed on select shorelines to add to the complete survey completed in 2017 to observe potential erosion sites
- Fisher Lakes were also surveyed this summer
- Hatlem Creek sub-watershed will be documented via drone this fall
- Next drone survey will occur in 2019





Watershed Protection Project

- GLA has formed a leadership team comprised of current and former GLA board members and representatives from each of the three townships
- GLA has hired a consultant to assess and evaluate where we have existing watershed protection and to propose protection where it does not exist.
- GLA will share more results from the consultant once the preliminary report has been published and reviewed by the team

"ALONE WE ARE SMART. TOGETHER WE ARE BRILLIANT."

- STEVEN ANDERSON, EDUCATOR

Discovery Boat

- The mission of the Discovery Boat Program is to educate participants on the marvels of Glen Lake along with tips on how to protect and preserve our watershed
- A total of 11 programs were offered with full capacity for each program totaling approx. 90 individual participants
- Multi ages were represented and many families as a common grouping
- GLA is planning on continuing the program again in 2019





Hatlem Creek

- GLA is collaborating with the owner of the pond and dam to reduce risk of dam failure
- GLA is collaborating with Spicer Engineering to monitor the pond sedimentation rate
- GLA is developing a new monitoring protocol for sedimentation levels on the shoals of the southeast shore
- GLA is facilitating discussions with regard to a possible fish ladder installation adjacent to the dam

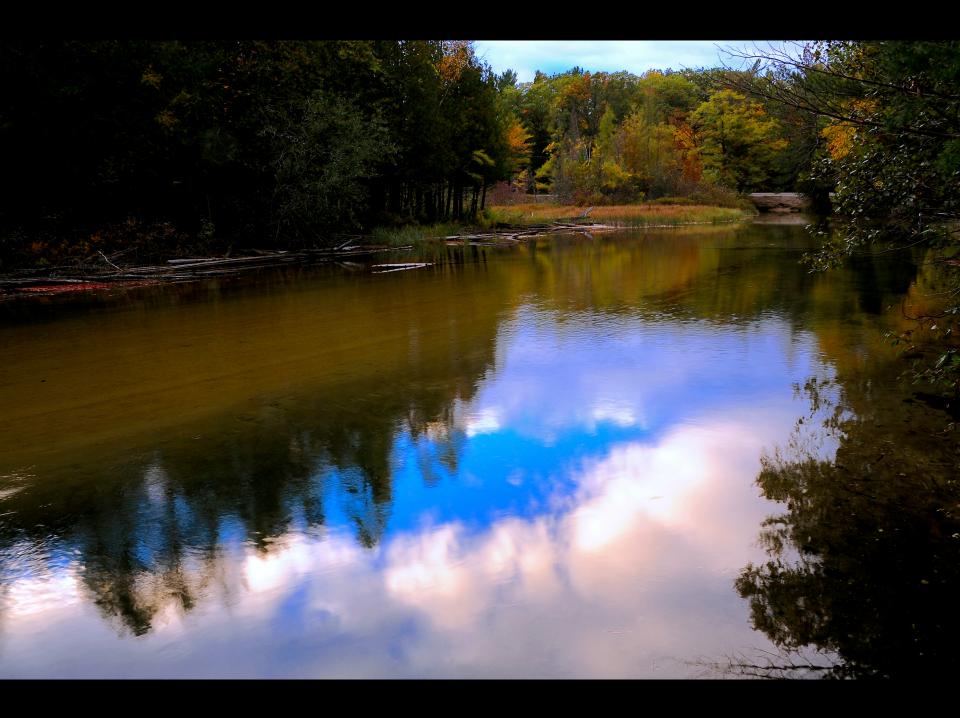
Hatlem Pond



National Park



- High level meeting between the GLA and SBDNL occurred early this summer
- Collaborative studies on the Crystal River will occur in the Crystal River by the GLA and the park to determine the health index of the river
- Preliminary discussions are underway to plan for possible changes to the Glen Lake Picnic Area on the west shore of Little Glen
- Collaborative studies will occur with GLA and park relating to our Enteric Bacteria study



Outreach

- GLA has offered presentations on water quality and GLA programming to a variety of local organizations and governments
- Periodic reports of GLA activity are presented to the National Park, MDNR, Leelanau County Government, Townships - Kasson, Glen Arbor, Empire
- Presentations have been given to the Glen Arbor Arts Association and Leelanau Clean Water

Fish Stocking

- Fish stocking happens every spring at the Narrows Bridge by the Michigan Department of Natural Resources Fisheries Division
- Lake Trout, Rainbow Trout are the primary species that are stocked
- Cormorants take a toll on the stocking each year factoring in an estimated 30% reduction
- Japanese Koi have been released by an unknown source and there are observances of these fish in Big and Little Glen



Aquatic Plant Studies

- Aquatic plants are monitored in the Glen's, the Fisher's, and Brooks Lake
- A small colony of Curly Leaf Pondweed (invasive) was detected in Brooks Lake
- All other locations showed no invasive
- Aquatic plant gardens are checked by snorkeling and CLMP methods

Aquatic Plant Studies



Cooperative Lakes Monitoring Program

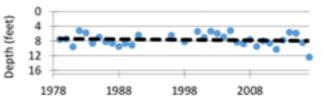
- Monitoring Phosphorus, Transparency,
 Chlorophyll a, Aquatic Plants
- Value of comparing our lakes to others in the state
- Long Term Studies
- Great asset to our Water Quality Programs

Little Glen Lake, Leelanau County 2017 CLMP Results



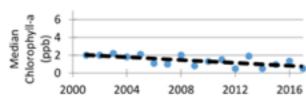
Secchi Disk Transparency (feet)

# Readings	Min	Мах	Average	Std. Dev	Carlson TSI
11	10.0	13.0	12.4	0.9	41
72	4.0	12.0	12.4	1.3	48
469	3.0	14.0	7.5	1.4	48
2949	1.0	52.0	12.3	2.7	43
	11 72 469	11 10.0 72 4.0 469 3.0	11 10.0 13.0 72 4.0 12.0 469 3.0 14.0	11 10.0 13.0 12.4 72 4.0 12.0 12.4 469 3.0 14.0 7.5	#Readings Min Max Average Dev 11 10.0 13.0 12.4 0.9 72 4.0 12.0 12.4 1.3 469 3.0 14.0 7.5 1.4



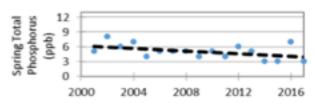
Chlorophyll-a (parts per billion)

Year	# Samples	Min	Max	Median	Std. Dev	Carlson TSI
2017	5	<1.0	1.7	<1.0	0.5	<31
2012-2016	23	<1.0	3.3	1.0	8.0	<31
2001-2011 2017 All CLMP	55	<1.0	3.1	1.0	0.5	36
Lakes	628	< 1.0	28.0	1.8	4.3	36



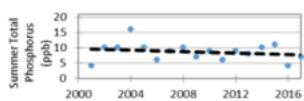
Spring Phosphorus (parts per billion)

Year	# Samples	Min	Мах	Average	Std. Dev
2017	1	<=3 W	<=3 W	<=3 W	NA
2012-2016	5	<=3 V	7.0	4.8	1.8
2001-2011	11	<5 T	8.0	5.3	1.3
2017 All CLMP Lakes	188	<= 3	120	11.6	12.7



Summer Phosphorus (parts per billion)

Year	# Samples	Min	Max	Average	Std. Dev	Carlson TSI
2017	1	7.0	7.0	7.0	NA	32
2012-2016	5	<5 T	11.0	8.4	2.7	34
2001-2011 2017 All CLMP	11	<5 T	16.0	8.8	3.2	35
Lakes	208	<= 3	52.0	11.1	8.4	39



Dissolved Oxygen and Temperature Profile

This lake does not have recent (within 5 years) dissolved oxygen/water temperature data available. Consider enrolling in this parameter next year. Fish, insects, mollusks, and crustaceans need dissolved oxygen to live in water. By late summer, many lakes stratify, with cold anoxic water on the bottom and warm, oxygen rich water on the surface. Anoxic (oxygen-depleted) water

Summary

ounning,			
Average TSI	2017	2012-2016	1979-2011
Little Glen Lake	35	38	40
All CLMP Lakes	40	40	43

Hydrolab Studies

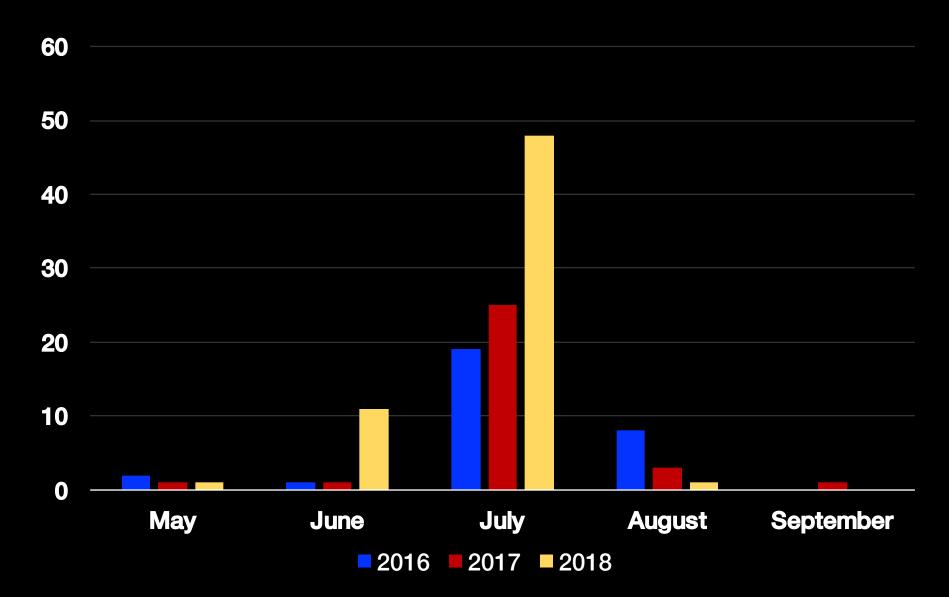
- Monitor Big Glen, Little Glen, Big Fisher, Little Fisher, Hatlem Creek, Brooks Lake, Inlets, and the Crystal River
- Monitoring occurs every two weeks year round
- Data gathered shows consistent results
- A generous donor has provided GLA with a \$15K gift to replace our aging hydrolab along with the purchase of underwater drone equipment

Swimmer's Itch

- 11 broods and 88 chicks were relocated this summer
- Our new trapping crew and equipment worked well
- Challenges were trying to trap a few of the broods that seemed to be extra wild (maybe harassed?)
- Broods came on the lake three weeks late
- Warmer water and weather added to the contact hours for swimming



Reported Swimmer's Itch Cases





Guardian Program

- GLA has hired a part time "Ambassador" to the Guardian Program to enlist as many guardians as possible
- Anyone can become a member
- Multiple pathways have been developed to allow for becoming a guardian
- A pledge form is the minimum requirement for all

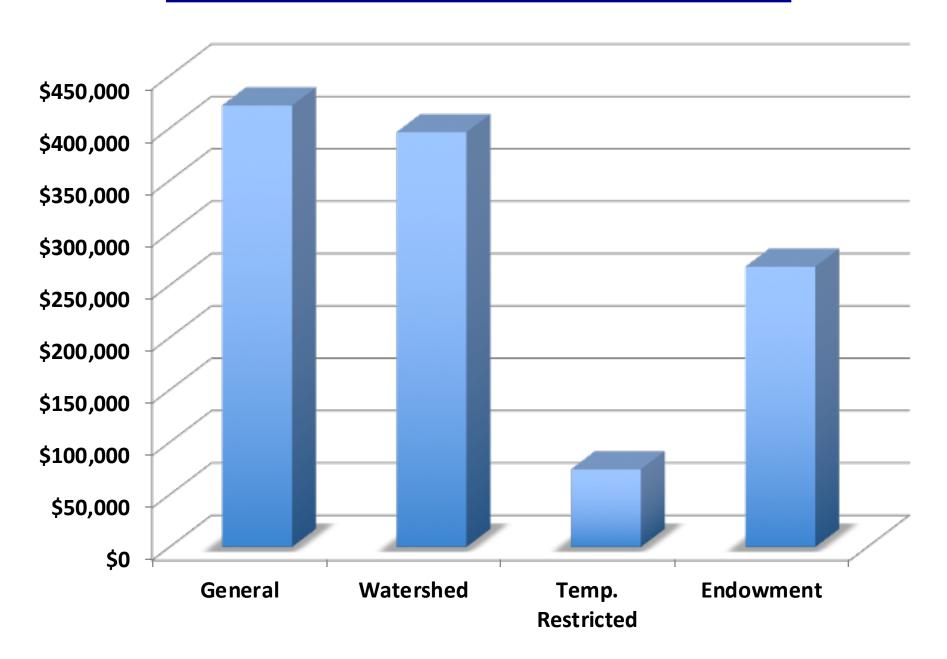
Finance and Investment Committee

David Herr- Chair

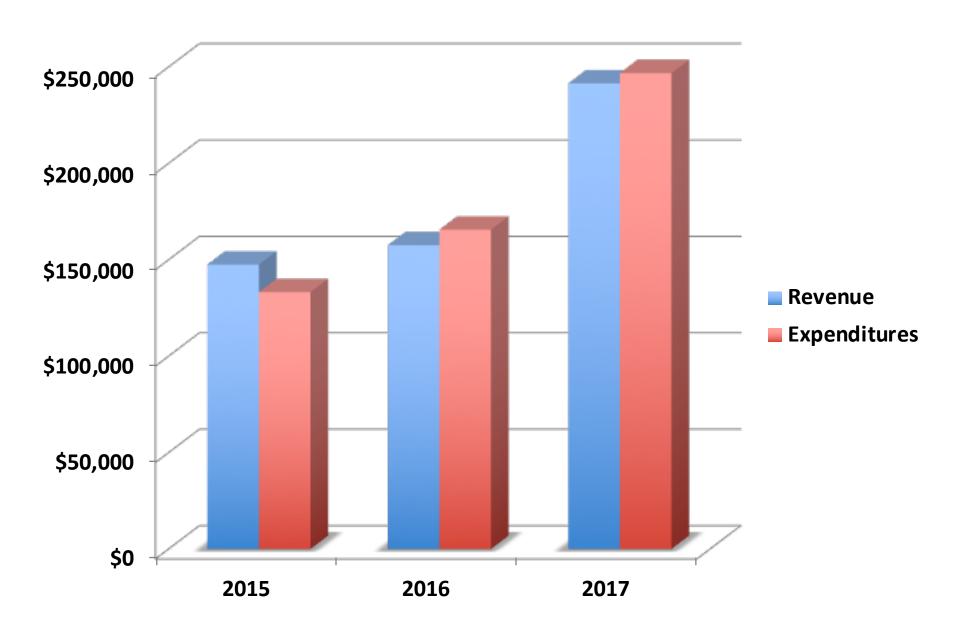
Andy DuPont
Jim Good
Charles Ofenloch

Roy Pentilla Kurt Rivard Bill Stege

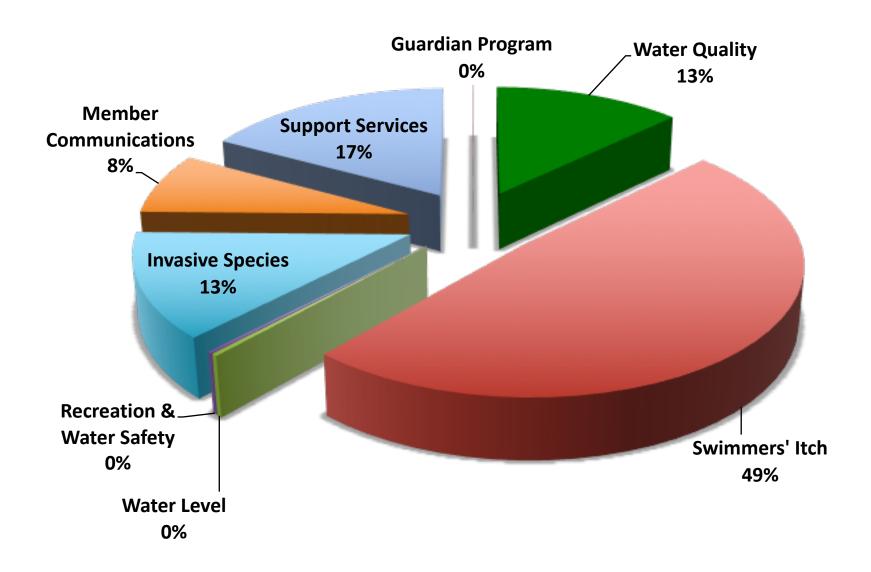
GLA Net Assets By Fund - 12/31/17



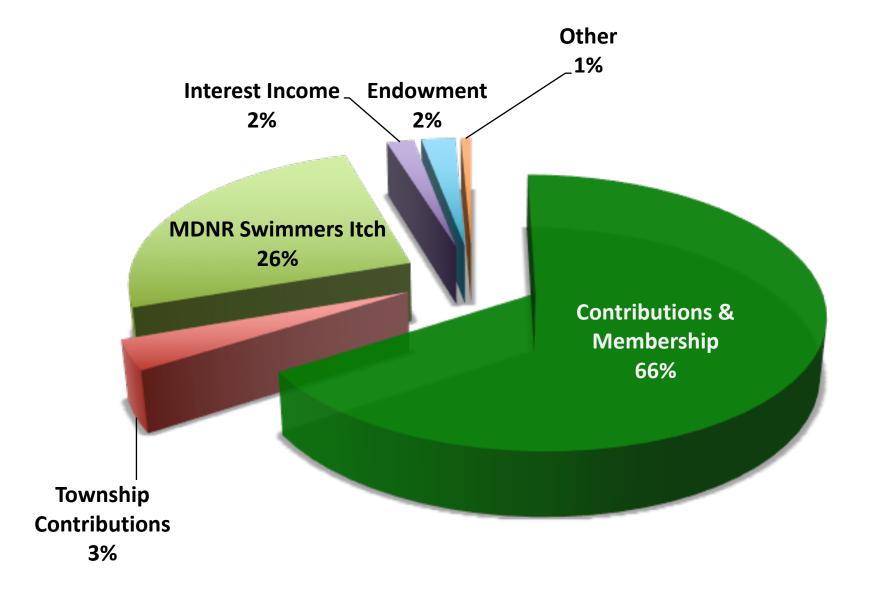
GLA Revenue & Expenditures - General Fund



GLA Expenditures By Category - General Fund - 2017



GLA Revenue By Category - General Fund - 2017



Financial Report

Motion to accept the Financial Report

Committee Summary Reports

Water Quality Committee

Andy DuPont- Chair

Ron Becker Denny Becker Rob Karner Cal Killen **Edward Lanphier** Bruce Lichliter Mike Litch

Barb Lund John Lund Bill Meserve Flaine Pentilla Roy Pentilla Tim Westbay

Water Quality Approach

"Prevention, Early Detection, and Rapid Response"

Boat Wash Highlights

Goal: Prevent aquatic invasive species in Glen Lake waters

PREVENTION - LESS EXPENSIVE THAN ERADICATION

- Washed and Interviewed
 - -3,424 watercraft total 2017
 - -2,411 July 31 2018 YTD
- 2018 M22 Challenge
 - -600 Kayaks/SUPs



GLA Boat Wash



M22 Challenge

Boat Wash Staff

- Board Liason Ron Becker
- Manager—Sallyanne Morris

Paid Employees

- Abbi Laurentius
- Cliff Osterling
- Dakota Famiano
- Christian First

Volunteers

- Bruce Lichliter
- Mike Litch
- Bill Meserve

Invasive Species Initiatives

 Water Quality members conduct annual invasive aquatic plant surveys by raking up plants from many locations in Big and Little Glen, Big Fisher and Brooks lakes. We identify every plant we find. Many rakings from Big Glen contained zebra mussels.



Aquatic Plant Survey

- We have not found invasive aquatic plants in 10 years until this year. In Brooks lake, we found a small amount of curly leaf pondweed, an invasive plant which can spread. We will keep an eye on it.
- Coltsfoot eradication on the beach continues;
 please be patient and cooperative.
- Yellow Iris (Yellow Flag) has spread and is being elevated to a level of concern



On-going Water Quality Monitoring

Volunteers/biologist record 100's of measurements

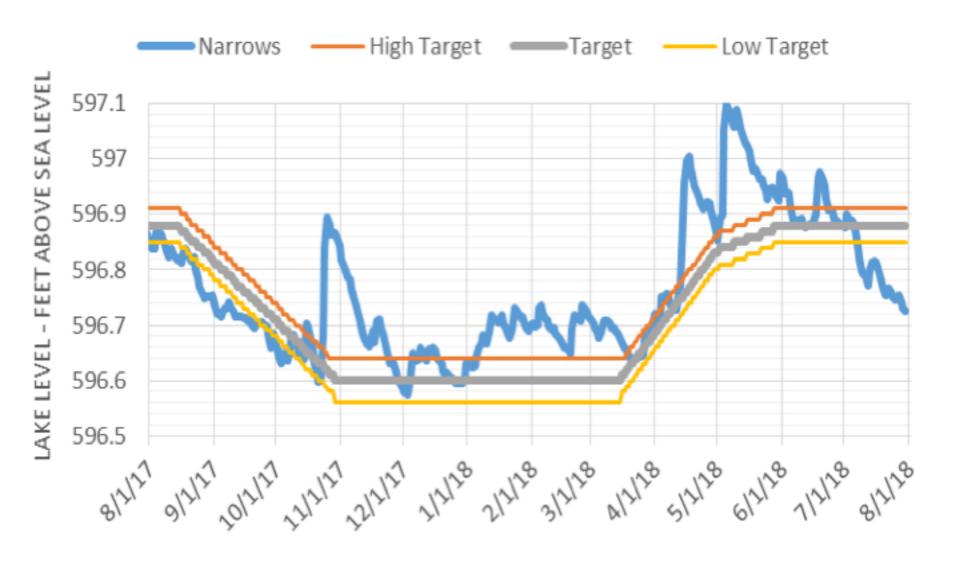
Measure	Туре	Frequency	#Sites	Per Year
Secchi	Feet	1x/week	3	54
Chlorophyll	Ug/L	1x/month	4	20
Phosphorous	Ug/L	2x/year	4	8
Oxygen	Mg/L	3x/year	4	40
Temperature	°C	3x/year	4	40
Conductivity	μS	3x/year	4	40
Turbidity	NTU	3x/year	4	40
рН	рН	3x/year	4	40

Good news—Trends suggest no new areas of concern

Water Level Committee Members

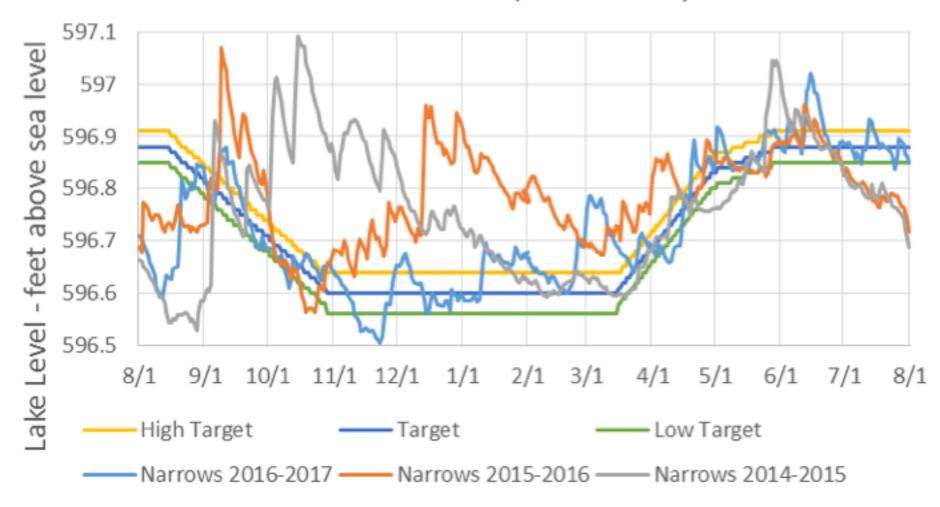
Chuck Andrews **Dave Bohmer** Rick Fink **Graig Halik** Alan Kasper John Kassarjian Calvin Killen John Lund Dale DeJager

Mike McDonald
Bill Meserve (Chair)
Victor Peirce
Dave Pejsa
John Peppler
Vic Theiss
Tim Westbay
Matt Wiesen



GLEN LAKE LEVEL - LAST 12 MONTHS

Glen Lake Level - previous 3 years



Auxiliary Committee

Joan Kramps - Chair Meg DeJager

Felicia Bloom Shirley Hoagland

Gay Budinger Barb LeJeune

Ann Davey Pat Smith

Jeanine Dean Rita Witler

32 volunteers worked 100+ hours on 3500 Mailings:

- Newsletters and remittance envelopes
- Year End Development Letters
- Personalized dues reminder letters
- Proxy Cards

Communications Committee

Vic Peirce - Chairman

Sue Meserve - Newsletter

Ranae Ihme - Facebook

Joan Kramps - Auxillary

Lori Lyman Dale DeJager Rob Karner

Ann Davey Andy DuPont Bob Boles



Communications Highlights

Developing Increased Awareness of the GLA Among Community & Non-members

- GLA Website viewed by hundreds of non-members looking for information on Glen Lake
- Facebook posts reaching more than 1000 viewers/month

Keeping Our Members Informed

- Initiated semi-monthly emails to membership
- Produced and distributed 3 Newsletters
- Increased video & text content on GLA website

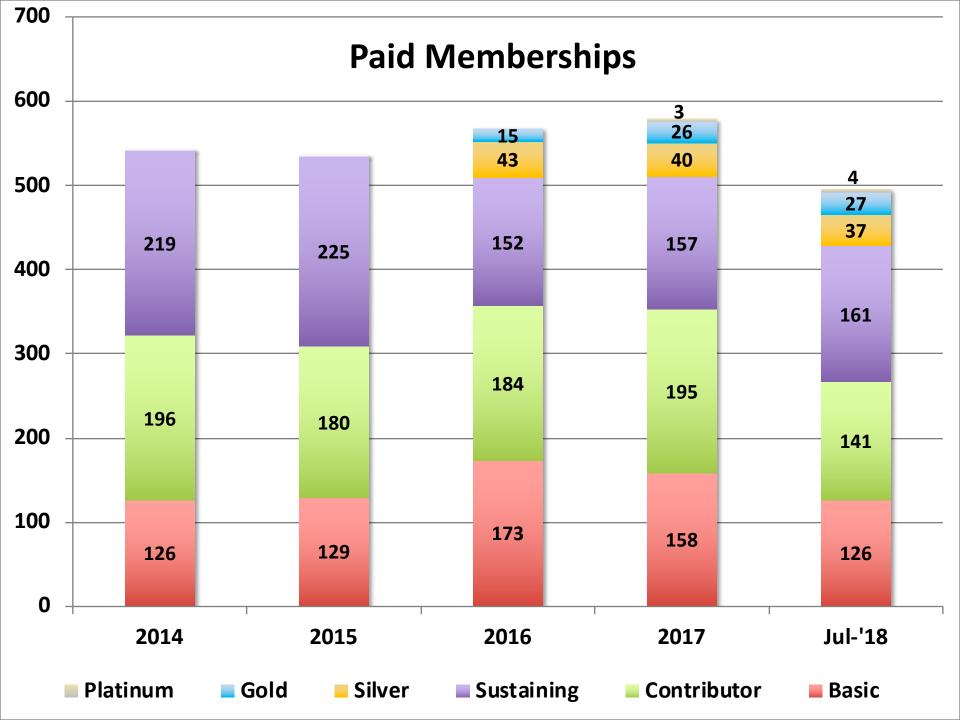
Help us spread the word. If you have a Facebook account be sure to "like" the GLA page, leave comments and share our posts.

Membership & Records

<u>Membership</u> - Corinne Cochran, Dale DeJager & Tom Dutmers Co-Chairs, Ranae Ihme

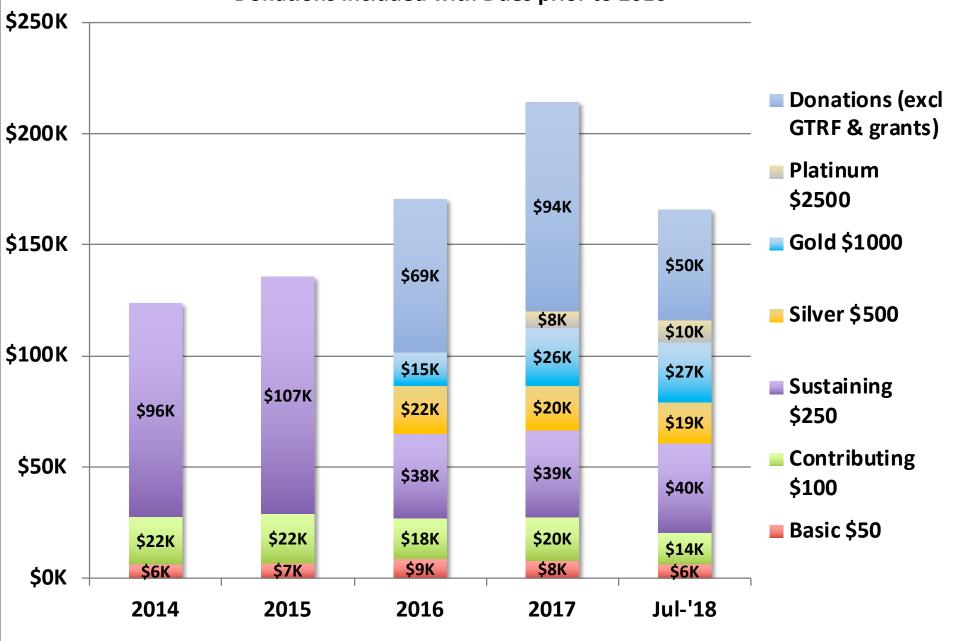
<u>Records</u> - Dale DeJager, Andy DuPont, Ann Davey, Sallyanne Morris

- Membership dues received as of August 1st (\$116,000) is ahead of prior years - Thank You!
- Membership drive continues in 19 neighborhoods, seeking captains for 3 more
- 46% of our members support the GLA the sustaining level or above.



Dues and Donations

Donations included with Dues prior to 2016



Neighborhood Captains

<u>Zone</u>	Captain
Brooks Lake	Kay Riegel
Burdickville	Susan Haughn
Crystal River	Corinne Cochran
Dune Hwy 1	Ann Davey
Dune Hwy 2	
Dunns Farm 1	Charlie Wallace
Dunns Farm 2	Tom Dutmers
Dunns Farm 3	Lori Lyman
Dorsey Park	Chris Shugart
Day Forest 1	Jerry Morawski
Day Forest 2	Beth Stoner Wiegand

<u>Zone</u>	Captain
Fisher Lakes	Andy DuPont
Glen Lake W1	
Glen Lake W2	Ed Ricker
Glenmere	Ed Murphy
Little Glen S1	Jim Chormann
Little Glen S2	
Macfarlane 1	Judy Cheney
Macfarlane 2	
Northwood 1	Barb Haley
Northwood 2	Annabel Moore
Tamarack Cove	Irene Bagby

Technology Committee

Members Cal Killen (Chair)

Dale DeJager

Andy DuPont

Rick Fink

Bill Meserve

Mission:

Improve efficiency and effectiveness of the Glen Lake Association through the use of technology.



Technology Highlights

Presently developing new and better capabilities for:

- GLA member website (Wild Apricot)
- Underwater viewing / inspection by camera
- Water level & quality measurement technology
- Swimmer's itch statistics

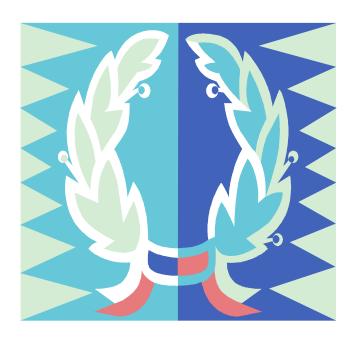
Long Range Planning Committee

Jim Dutmers- Chair

Peter Anderson
Denny Becker
Dick Chormann
Andy DuPont

David Hayes
Charles Ofenloch
John Rockwood
Bill Witler

- Orientation Program
- Organization Design



Glen Lake Association Stewardship Awards

Stewardship Awards

Recognize Riparians, Government Entities, Organizations and Individuals who have shown significant leadership in taking actions to preserve and protect the Glen Lake Watershed.

This year we recognize:

- Leelanau Conservancy
- Greg and Carol Halik
- Greg and Sue Besio



Leelanau Conservancy

For

Being Glen Lake Association's vital partner in protecting the land and water, serving our watershed with distinction and playing an integral role in helping us to further our mission of protecting and preserving water quality

Thank You



Presented to

Greg and Carol Halik

For

Their commitment to preserving and protecting the water of Little Glen by allowing their 800 plus feet of shoreline to exist in a natural state. They serve as a model for others to follow in reducing nutrient loading to protect our waters.

Thank You



Presented to

Greg and Sue Besio

For

Demonstrating their commitment to the water quality of Big Glen by restoring their property in a natural state after the big storm of 2015. They are a model for others to follow and provide a beacon of hope for the ongoing protection of our waters.

Thank You

GLA Development Committee

The goal of the Development Committee is to provide long term financial stability for the Association to preserve this fragile natural resource for future generations and support its award winning watershed protection programs

- Lori Lyman-Chair
- Bob Berlacher
- David Cassard
- Richard Chormann
- David Herr
- Charles Ofenloch
- Roy Pentilla
- Tim Unger
- Bill Witler



Gifting Opportunities

- Swimmers Itch
- Endangered & invasive species
- Guardian program
- Watershed protection project
- GLA biologist
- Hatlem sub-watershed management
- Invasive Species research & Education

Significant donors are recognized with a complimentary discovery boat tour for family and friends

GLA Legends

- Include the GLA in your Estate Planning
- Legends partake in an exclusive annual event
- Currently have 34 legends, goal to reach 40 by the end of 2018

Contact the Development Committee to learn more





Board Nominations

Nominating Committee

- Peter Anderson—Chair
- Joy Kryder
- Rick Fink
- Bill Witler (non-voting/board liaison)

Board Nominations

- Tom Dutmers (three-year term, filled Warburton partial term)
- Edward Lanphier (three-year term, filled DePuy partial term)
- Lori Lyman (three-year term, filled Sue Lake partial term)
- Ranae Ihme (second three-year term)

Results of Election

Questions and Answers

Motion to Adjourn

