Crystal Lake & Watershed Annual Meeting

July 24, 2021

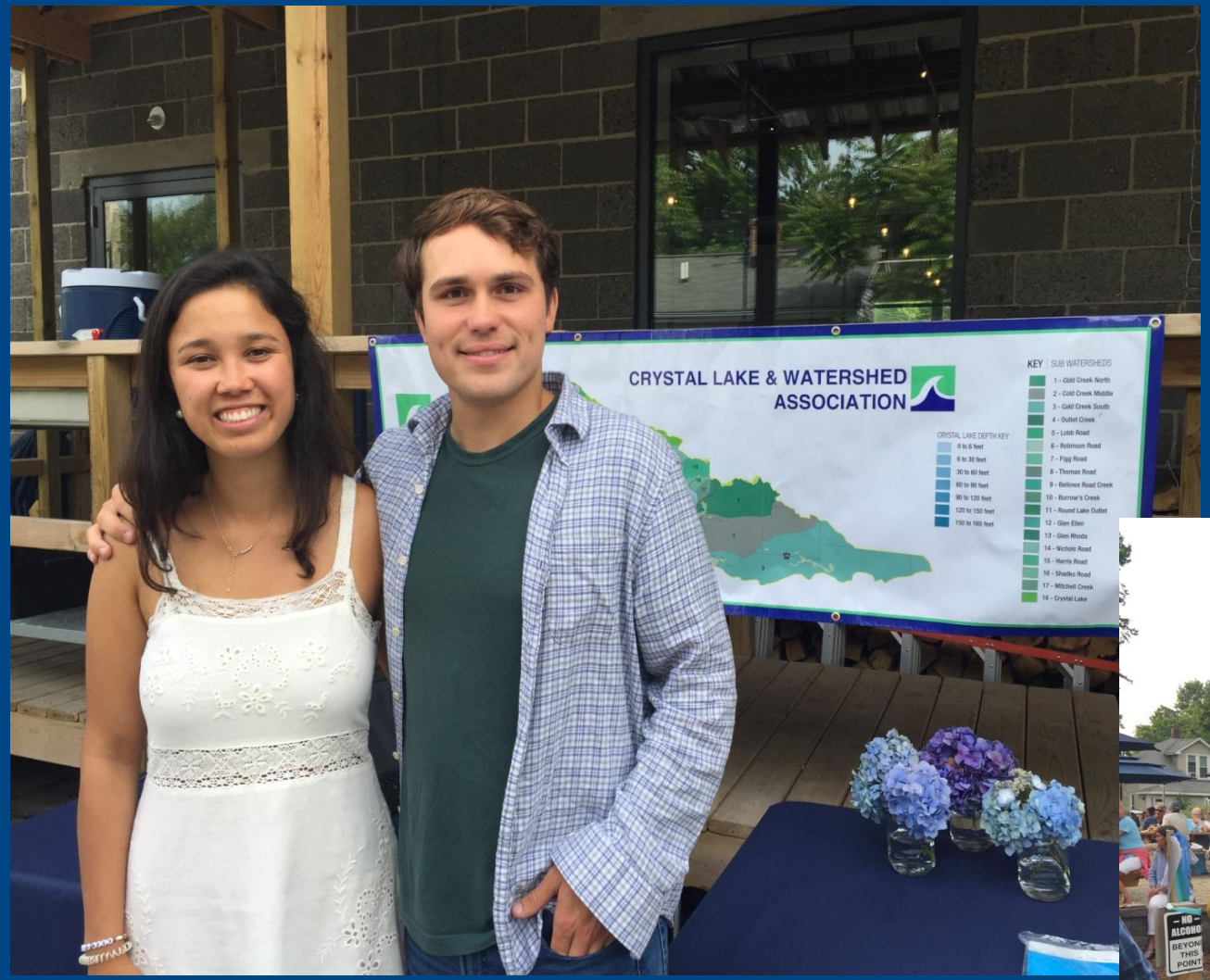
Mills Community House, Benzonia

Protecting Crystal Lake Now for Generations to Come

KEEP CRYSTAL CLEAR

JULY 16, 2021

Lindsay Saldebar
Tommy Heidt



Keep Crystal Clear Results

- 193 Tickets Sold
- Ticket sales and donations at the door

  $8883
- Additional mailed donations

  $1500
- Total amount raised to date

  $10,383

Special Thanks to:

Lindsay Saldebar

Tommy Heidt

CLWA Team: Sue Brown, Barbara Leonard and Ellen Herscher

Tracey and her team at

FIVE SHORES BREWING

Point Betsie Lighthouse
22
Platte Lake
22
Crystal Lake
31
Frankfort
115
Beulah
115
31
Map data ©2020 TerraMetrics

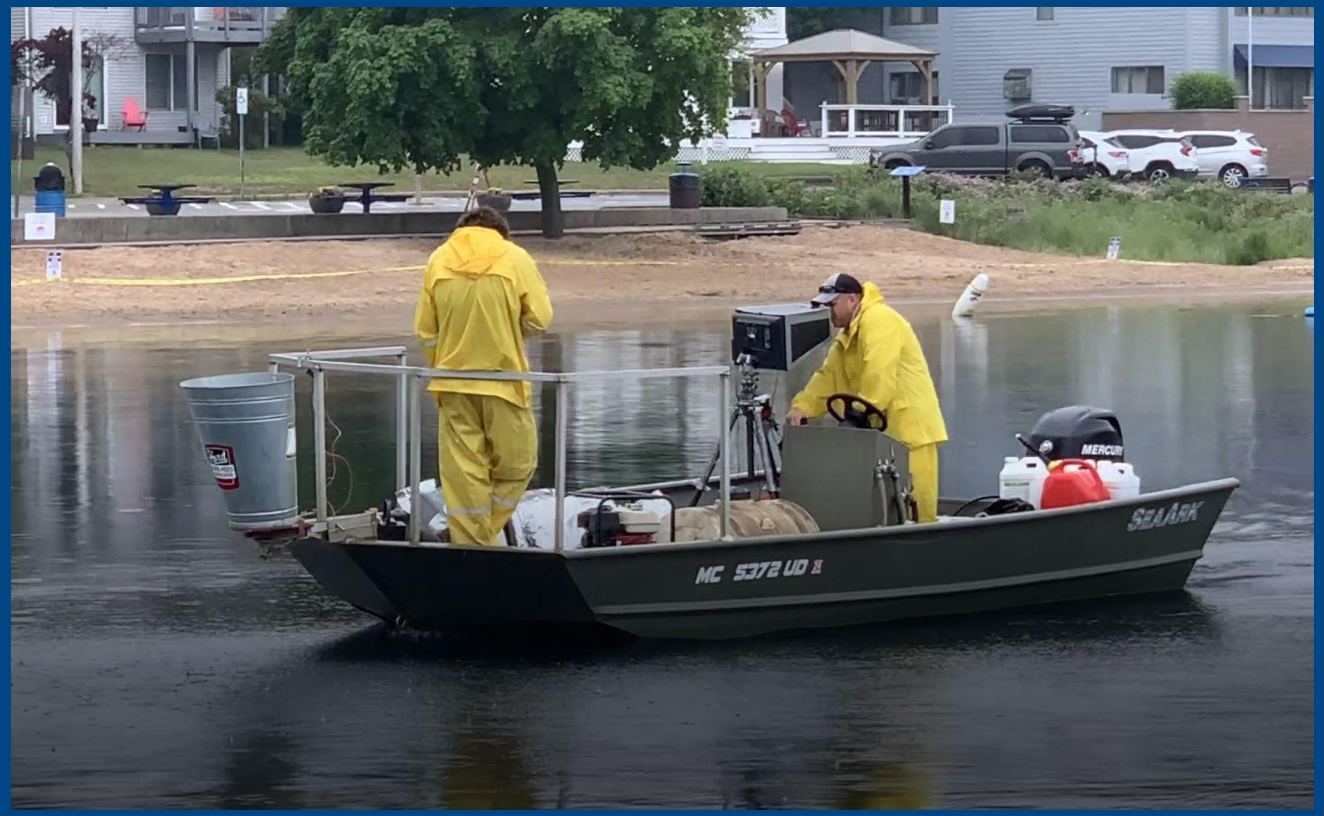
Invasive Species Control

Invasive Species Control

The CLWA:

- ✓ **Surveys for the presence of new invasive species**
- ✓ **Takes action to remediate invasive aquatics**
- ✓ **Educates the public on preventing introduction of invasives**

Invasive Species Control



The CLWA began treatment of the 7+ acres of Eurasian Watermilfoil in 2021.

Invasive Species Control

The CLWA operates the boat wash at the Mollineaux Road DNR boat launch facility to prevent the introduction of additional invasive species.

In its 8-year history, thousands of boats have taken advantage of the facility.

Invasive Species Control

The CLWA has installed signs at 21 lake entry points (soon to be 24) to educate watercraft owners on the role of boat washing in preventing the introduction of invasives into Crystal Lake.

Swimmer's Itch Prevention

Reducing the population of this critical vector for the parasite reduces the incidence of swimmer's itch

Swimmer's Itch Prevention

The CLWA has humanely relocated 89 merganser broods comprising 505 ducks since the beginning of the program in 2017

2021 Merganser Relocation Results

11 Broods
90 Ducklings

CRYSTAL LAKE &
WATERSHED ASSOCIATION
REPORT
SWIMMER'S ITCH
CASES
TO THE CLWA
HOME PAGE
CrystalLakeWatershed.org

Education & Community Events

CRYSTAL WHITECAPS

The Newsletter of the Crystal Lake & Watershed Association

Protecting Crystal Lake Now for Generations to Come.

Vol. 16, No. 1 Spring 2020

INVASIVE WATERMILFOIL TREATMENT 2020

This July the Crystal Lake & Watershed Association will begin its program to control the aquatic invasive plant, Eurasian Watermilfoil ("EWM," *Myriophyllum spicatum*) in Crystal Lake. CLWA's comprehensive aquatic plant survey (2016-2018) identified the presence of this invasive on 6.05 acres of the lake's 10,000 acres of bottomland.

EWM occurs in virtually every county of Michigan and efforts to control it have become the dominant lake treatment budgetary item for state and local riparian organizations. Currently over $24 million is spent annually in Michigan for chemical control of aquatic nuisance plants, most of it for EWM. Many Michigan lakes have a regular continuing program of herbicide control.

CLWA has been aware of limited EWM in Crystal since 1996, and fortunately the survey demonstrated that the local aquatic invasives are still relatively limited in comparison to those found in most other Michigan lakes. EWM was the only invasive found, with no evidence for other harmful plants such as European Frog-bit, Curly-Leaf Pondweed and Starry Stonewort, which thrive elsewhere in our state.

The survey also importantly documented the presence of the native beneficial aquatic plants that have long been in the lake and which are essential to its healthy ecosystem.

The EWM infestation is primarily at the entire east end of the lake, most dense around the Beulah beach and public boat launch, where itinerant fisherman or recreational boaters likely introduced it at least 25 years ago. Intermittent colonization continues along the southeast shore up to and past the DNR boat launch and around Railroad Point into Onkeonwe Bay. Colonies are established at the Lobb road-end launch but none found going west from the Crystal Conference Center on South Shore Road. The western and northern shores appear to be virtually EWM free.

Continued on pages 4 and 5

Eurasian watermilfoil presence in Michigan

Dense bed of E. watermilfoil

YOU CAN ASSIST THE CLWA'S SWIMMER'S ITCH RESEARCH AND CONTROL PROGRAM BY REPORTING SIGHTINGS OF MERGANSER BROODS OR NESTS, OR CASES OF SWIMMER'S ITCH. YOU WILL FIND THE LINK ON CLWA'S HOME PAGE, WWW.CRYSTALLAKEWATERSHED.ORG.

COMBATING SWIMMER'S itch on Crystal Lake

What you can do to help:

- **Report swimmer's itch cases and merganser broods to the CLWA website www.CrystalLakeWatershed.org.**
- Do not feed any waterfowl.
- Remove unused docks, diving platforms or other structures that may become waterfowl perches.
- Encourage swimmers to use waterproof sunscreens that may provide a barrier or include an insect repellent.
- Volunteer for research projects and allow access to your lake front property for use in merganser control programs.

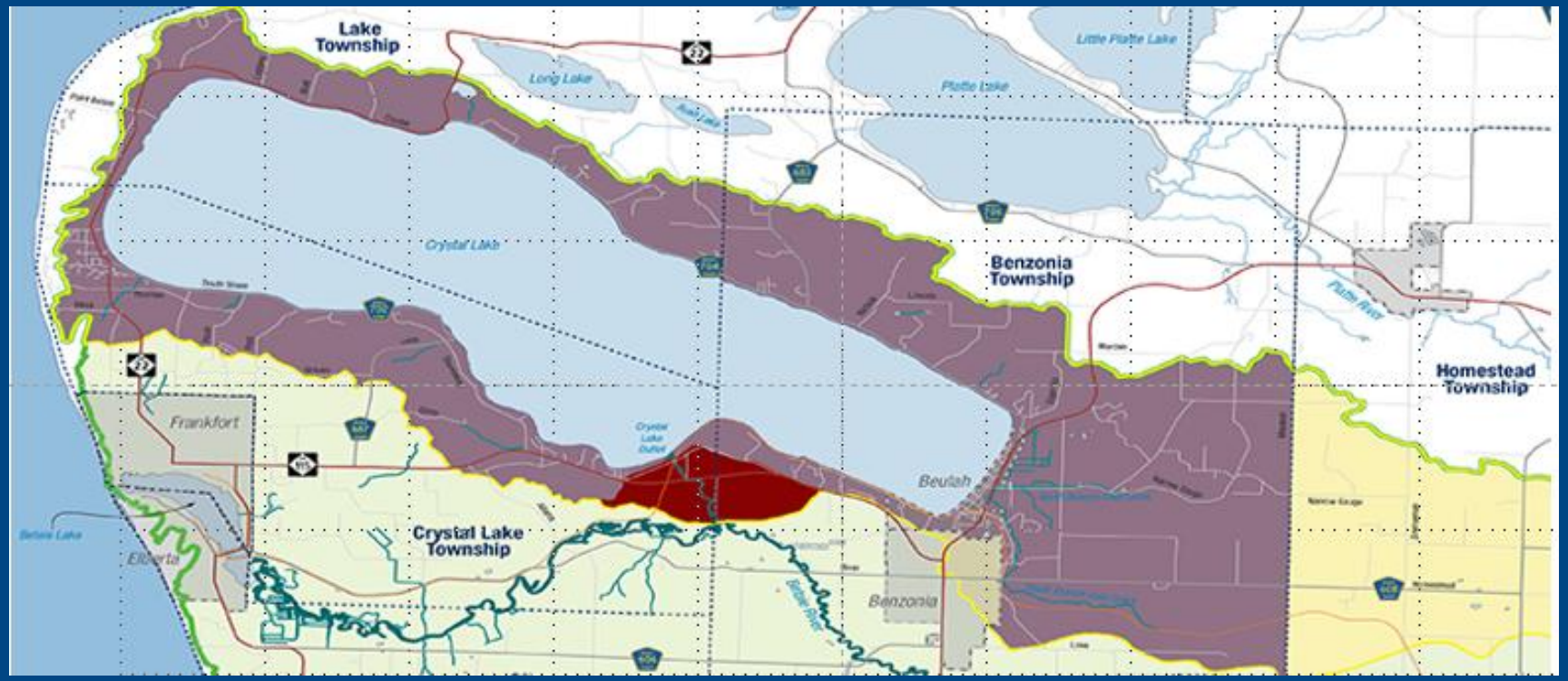
Crystal Lake & Watershed Association

The CLWA provides education for the watershed communities on the health of Crystal Lake and how to protect the lake's quality and beauty.

Education: Middle School Walkabout

Annually for 25 years the CLWA has conducted a Crystal Lake ecology exploration day for the 6th and 7th graders of Benzie County

Watershed Health Determines Lake Water Quality



The Crystal Lake Watershed is 44 square miles (land+water) and encompasses Lake Township, Crystal Lake Township, Benzonia Township and the Village of Beulah.

Water Quality Monitoring

The CLWA and its predecessor organizations have been underwriting comprehensive water quality monitoring for almost 50 years.

Regular testing is done for temperature, pH, specific conductivity, dissolved oxygen, redox potential, turbidity, phosphorus, nitrogen, chlorophyll-a, and a Secchi Disk reading of visual clarity.

Water Quality: Nonpoint Source Grant

- Beulah, working with Benzie Conservation District, Benzie County Drain Commissioner, CLWA and others, received a 3-year grant for $519,000 from EGLE.
- $186,000 in matching commitments including $50,000 from CLWA
- Goal is to remediate pollution caused by stormwater runoff in Beulah
- Implementation planning has begun

Water Quality: Concurrent Action

- Current grant covers Beulah only
- Cold Creek *outside* Beulah is the largest source of E. coli and excess nutrients creating problems at the east end of Crystal Lake
- CLWA has undertaken a concurrent testing regimen to identify nature and potential sources of enteric bacteria flowing out of Cold Creek
- Samples collected in 12 locations around Crystal Lake and Cold Creek by Benzie Conservation District to provide data in support of a future grant
- Goal is remediation of excess nutrients and elimination of any human E. coli

Watershed Management

The CLWA consults with government entities in the watershed on best zoning practices for watershed management.

Watershed Management

- Periwinkle Garden Club “Gardening for Water Quality”
- Update to Crystal Lake Watershed Overlay Ordinance

  2nd public hearing for Crystal Lake Township: July 28, 7:00 PM at Grow Benzie

To explain the highlights of the proposal: Tassie Bosher

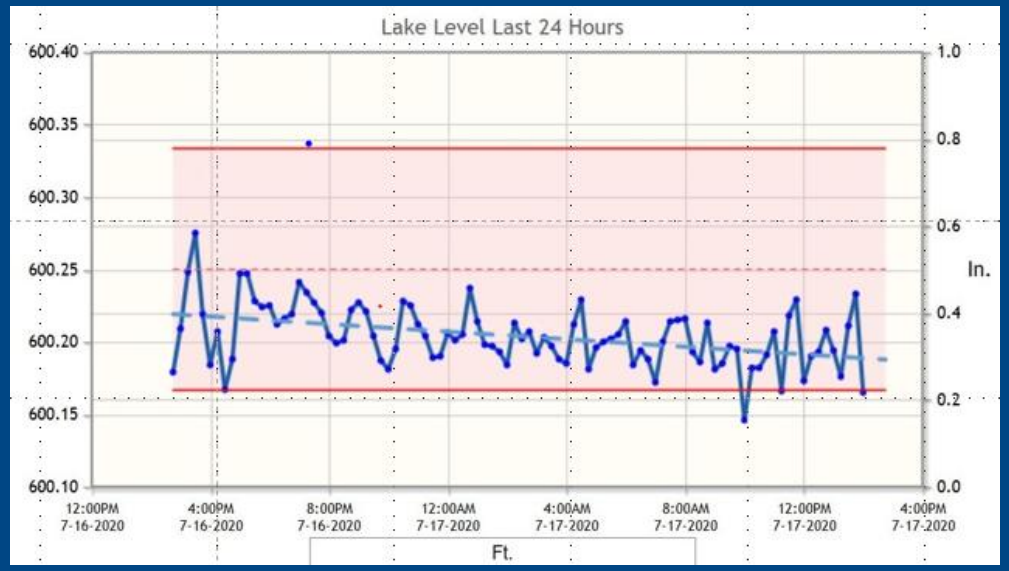
Shoreline Stewardship

In 2019 the CLWA commissioned a drone-based shoreline survey as a baseline for identifying problem areas that impact lake quality.

Lake Level Management

The CLWA:

Monitors the lake level in real time to minimize shoreline erosion



CLWA Membership Trends 2016-2021

Thanks for your support and thanks for your membership!

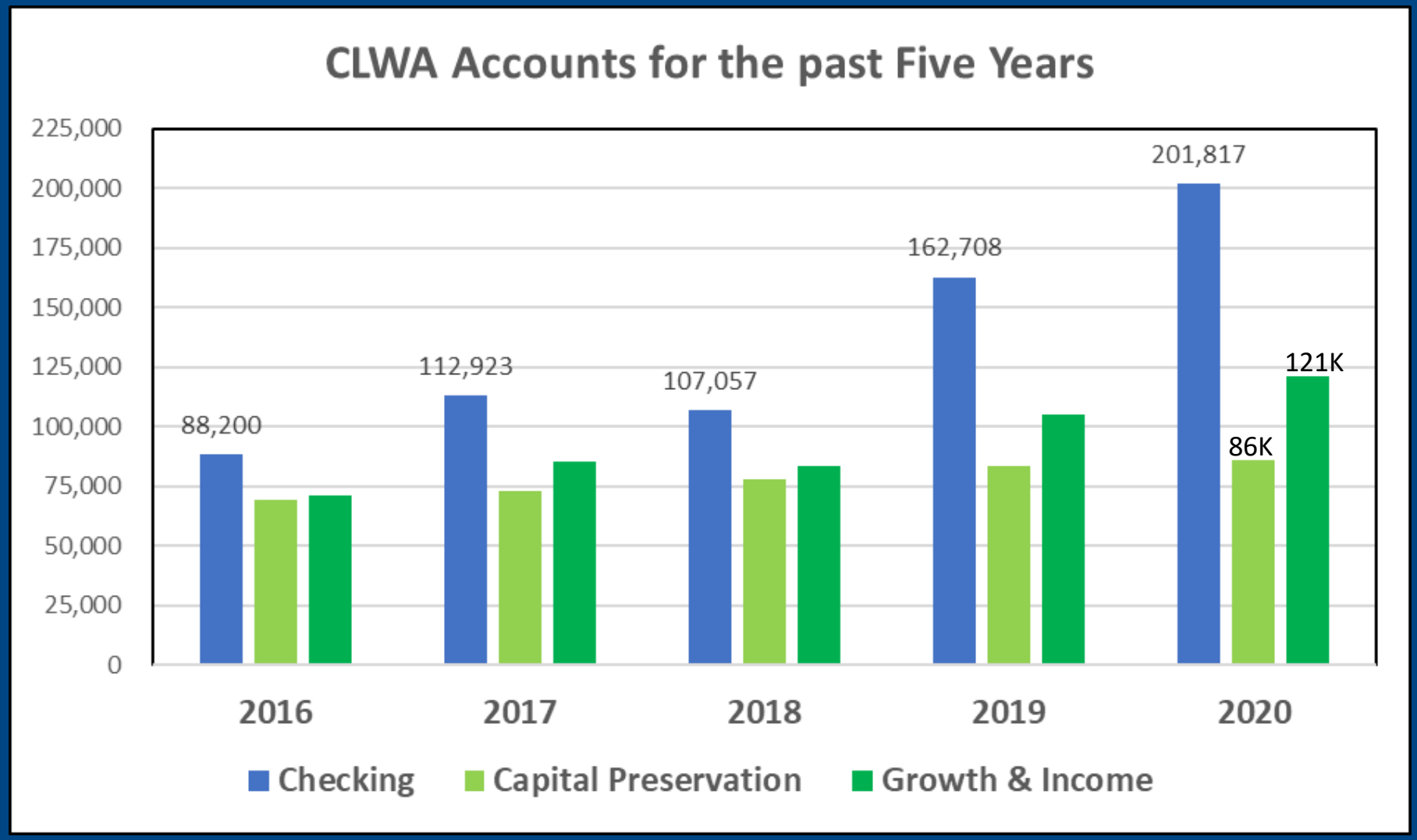
To learn more visit:

www.crystallakewatershed.org

Bruce Gerhart
Treasurer

2021 CLWA Treasurer's Report

- Examination of contributions over a five year period
- Report on investment funds
- Examination of expenses for 2020
- Highlights of 2021 new initiatives and expenditures



June 30 2021:
Checking $210K
Capital Preservation $88K
Growth and Income $140K

June 30 2021 Investment Positions

Capital Preservation Fund	$88K
0.02% gain in 2020	
money market and bank deposits	
Growth and income Fund	$141K
11.2% gain in 2020	
60% stocks, 40% bonds	

Generous stock contributions were made to the Investment Funds in 2020 and 2021

If you are considering cash or stock contributions to the investment funds:

Split 50/50 between the two funds or Designate a fund

2020 CLWA Expenditures

Lake Water Quality	$	38,505	38%
Boat Wash	$	20,348	20%
Finance and Administration	$	24,936	25%
Development	$	13,255	13%
Communication and Education	$	4,109	4%
TOTAL	$	101,153	

Water Quality Expenditures

Aquatic Weed Survey	$	3,629	6%
Aquatic Nuisance Management	$	1,157	2%
Monitoring and Testing	$	4,385	7%
Swimmers Itch Abatement Program	$	28,834	49%
Lake Level Management	$	500	1%
Boat Wash	$	20,348	35%
TOTAL	$	58,853	

Highlights of 2021 CLWA Budget Proposal

Aquatic Nuisance Management (Eurasian watermilfoil treatment)	$10,500
Monitoring and testing; enteric bacteria monitoring	$16,000
Membership management system	$7450
New signage around the lake (Boat wash budget)	$4300
Legal fees	$10,000

Wanda Shreiner

Chair,
Nominating Committee

Re-elected to a 2 year term as Vice President (2021-2023)

Sue Brown

Re-elected to a 2 year term as Treasurer (2021-2023)

Bruce Gerhart

Members at large elected to serve three-year terms on Board of Directors (2021-2024):

Catherine Bosher

Susan Kirkpatrick

Barbara Leonard

Mark Walton

Questions?