Geneva Lake Guardian



GENEVA LAKE ASSOCIATION

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Spring 2021

Our mission is to enhance the conservation, preservation, environmental integrity and general welfare of Geneva Lake with timely and issue-centered communications and education through a wide membership base of area residents and local businesses.

OFFICIAL NEWSLETTER OF THE GENEVA LAKE ASSOC., INC. • PROTECTING GENEVA LAKE SINCE 1935

GLA supports newest lake preservation group

Water Alliance reports on its first year

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by Water Alliance Co-chairs Tom Nickols and Charles Colman

The Water Alliance for Preserving Geneva Lake is a volunteer group that brings communities, agencies and volunteers together to help address increasing phosphorus runoff from our tributaries and new invasive species in the lake, as well as how to improve farming practices and septic system monitoring within our watershed. GLA has been one of many organizations who are actively volunteering to support the Water Alliance. The Water Alliance team learned and achieved a great deal in 2020—our first year of efforts to increase protection of our beautiful lake. This provides an outlook of our planning for this year.

Tributary/Phosphorus Management

Community support helped fund a tributary management plan by Southeast Wisconsin Regional Planning Commission (SEWRPC). An Executive Summary, received in December 2020, provided a clear assessment of critical streams, giving us great perspective on the streams' conditions and what can be done to improve their water quality. This helped our planning effort as follows:

- The Geneva Lake Water Testing Program for 2021 will monitor 16 streams with nine tests at each stream each month and will include perennial springs, selected intermittent streams and any storm events for phosphorus and nitrates.
- Professor Dale Splinter and his students from UW-Whitewater will do the testing between
 - May and October. The data and a final report will be posted on the WIS.CALM state site. This will provide a strong baseline going forward.
- For three tributaries shown to have the highest phosphorus runoff during 2020 testing and based on the SEWRPC information, we will develop action plans to begin addressing problems within each creek's watershed. Our goal is to pick one project for each tributary—funding will be needed.
- Efforts will continue to improve critical streams with problems:

- Southwick Creek gravel runoff in Williams Bay - rerouting and stream meandering required.
- Bailey Road Creek in Fontana high pressure runoff – a discussion with the village for a review and possible assistance.
- Many homeowners are having difficulty with stream washout into Geneva Lake. We hope to help with recommendations based on the SEWRPC study. Some of the more serious problems will require help from the communities and volunteer homeowners to make progress.

Invasive Species Management

The critical invasive species is Starry Stonewort. The DNR provided guidance to control the growth of this difficult plant. It will be a long-term effort. Hand-pulling in a small area outside Trinke Estate and half of a larger area to the east was completed last summer. Ted Peters and the GLEA will review the results of last year's effort and are developing a 2021 plan for hand pulling and possible dredging of Trinke Lagoon.

The GLEA hired SEWRPC to do a lake-wide "tight point" assessment/plant inventory of nine areas covering 345 acres. These areas include shallow and launch areas of Williams Bay, Fontana, Lake Geneva, Linn Pier, Hillside Pier, Chapin Road, and Gage Marine. This will help determine where Starry Stonewort might have spread.

Community funding has been raised for a CD3 Boat Cleaner. The unit being purchased will

see Water Alliance, page 5

Geneva Lake Association, Inc. **Annual Meeting**

Members and quests are invited

The Annual Meeting of the GLA is usually held on a Saturday morning in late July or early August. Scheduling is delayed this year because of the Covid 19 pandemic. The meeting, whether in-person or virtual, will be announced on the GLA web site and via email notice through *GLA Waves*.



The President's Desk...



Welcome to the Spring 2021 edition of the *Guardian*! The Geneva Lake Association has been busy since we last wrote, furthering our mission to educate and

inform about issues important to the environment and general well-being of the area. The GLA is extremely grateful for the steadfast support we have received from our membership – thank you! We weathered the last year in solid condition and look forward to continuing our work with your ongoing generosity.

The Water Alliance. In this issue, Tom Nickols and Charles Colman provide an update on how this group of dedicated volunteers is pursuing specific projects to address erosion control, phosphorus runoff, agricultural impacts and managing invasive species. All of these issues present continuing challenges for maintaining the water quality of Geneva Lake. The Water Alliance serves in an important coordinating role, as it brings together resources from Wisconsin DNR, Walworth County, local municipalities, Geneva Lake Conservancy, Geneva Lake Environmental Agency, UW-Whitewater, Southeastern Wisconsin Regional Planning Commission, GLA, and other interested parties.

Starry Stonewort. GLA Vice President Lynn Grayson writes about the DNR's latest plans for addressing this and other invasive species, together with a short summary of other topics recently discussed at Wisconsin Water Week 2021, sponsored by the Wisconsin Lakes Partnership. Starry stonewort remains a difficult and challenging problem for the DNR, and efforts to manage it in Wisconsin lakes (and throughout the country) have been only marginally successful. GLA continues to add relevant educational materials on SSW to our website and we encourage you to check in periodically for more information as it becomes available to us.

Yerkes Future Foundation. Dianna Colman and YFF's new executive director Dennis Kois describe the substantial behind-the-scene efforts underway as Yerkes prepares for its next 125 years. Critical infrastructure improvements are moving apace inside

Yerkes Observatory Update

Yerkes Work Underway!

It's been a year of change for the Yerkes Future Foundation (YFF) and the Observatory as we prepare the landscape and building for an eventual public opening.

Construction fencing has been relocated as work to conserve and restore the facade of the historic observatory and dome buildings has been ongoing, led by one of the leading U.S. firms for architectural preservation, Marion Restoration. Terra cotta is being conserved, the roof is about to be rebuilt, a new electrical system has transparently replaced the more than 100-year old original system in partnership with local contractor Adams Electric, a village-approved new parking lot is breaking ground, and the interiors are undergoing restoration.

Work is spooling up outside, as well. Our historic 50-acre landscape, designed by the Olmsted Brothers firm, is being slowly restored to its original splendor with the help of dozens of volunteers and consultants, including the National Association for Olmsted Parks. 2022 marks the 200th anniversary of the birth of Frederick Law Olmsted, social reformer and founder of American landscape architecture, and we're excited to help celebrate at Yerkes.

And perhaps you've seen, heard or met our new Director, Dennis Kois, who was hired in March after a national search led by Chicago's Koya Partners. Dennis comes armed with experience designing



for historic buildings (he's led design work at the Metropolitan Museum of Art and at the Smithsonian), experience dealing with unique landscapes (he was Director of deCordova Sculpture Park and Museum outside Boston), experience leading major science institutions (he was CEO of the Milwaukee Public Museum and was elected Vice President of the Association of Science Museum Directors), and perhaps most importantly, experience leading successful fundraising campaigns. You'll see Dennis out and about...be sure to introduce yourself; he's eager to meet the community.

We need your support! While much is being done, there is much more work to do as we develop plans to ensure Yerkes Observatory's next 125 years is filled with even more science, discovery, excitement and answers to the big questions of the universe for our community, state and nation.

Consider making a gift to support our efforts, and follow our progress, at *yerkesobservatory.org*.

the Observatory, while on the outside, YFF plans an ambitious restoration of the Fredrick Olmstead landscape that will revert back to its original design.

GLA Grant Projects. GLA's Mission Committee Chairman Frank Voris outlines the various local projects we have been honored to help fund over the past year. GLA receives numerous requests every year for financial support for a wide range of worthy projects. Each request undergoes Mission Committee review, to ensure that we are aligning our scarce resources with endeavors that fit with GLA's mission. As Frank describes, GLA intends to sharpen its grant-making process going forward, and will be most receptive to local projects that address

efforts to preserve and improve Geneva Lake's water quality.

Remembering Joy Peterkin Rasin (1937-2021). Finally, we pause to reflect on the unexpected passing of Joy Rasin, who served as a GLA Director for many, many years, and was later recognized as an Honorary Director. Joy was involved in numerous Lake Geneva organizations, and was passionate about preserving and promoting the area she nurtured for over eight decades. We all benefitted from Joy's leadership and support, and she will be missed in ways large and small.

Respectfully submitted, Mark Lillie President, Geneva Lake Association

Important Water Quality Updates

Wisconsin Water Week 2021

by E. Lynn Grayson Vice President, Geneva Lake Association

The Geneva Lake Association (GLA) participated in Wisconsin Water Week 2021 sponsored by the Wisconsin Lakes Partnership. This year's theme, Navigating in Turbulent Times, featured programs, forums, panel discussions, and other community and lake association outreach activities focused on the continued well-being of the state's more than 15,000 lakes. Over 1,200 individuals participated in the five-day event that included presentations by elected officials, state regulators, environmental professionals, lake association leaders, and academia.

The Wisconsin Lakes Partnership is a collaborative organization dedicated to protecting Wisconsin's lakes through support of science, education, and citizens to empower people to work together to care for our lakes. The organization includes three key partners: 1) Wisconsin Department of Natural Resources (WDNR)—the State's lead environmental agency; 2) University of Wisconsin Stevens Point/Extension Lakes Program—a team of education professionals working to protect lakes through education, communication and collaboration; and 3) Wisconsin Lakes—a statewide not-for-profit working to protect and enhance the quality of Wisconsin's lakes.

Three Wisconsin Water Week presentations had important insights and takeaways related to Geneva Lake water quality:

Monitoring and Management of Starry Stonewort in Wisconsin Lakes

(Michelle Nault, Heidi Bunk and Amy Kretlow, WDNR) This comprehensive presentation provided an overview of the aquatic invasive species (AIS) starry stonewort (SSW) in Wisconsin since its discovery in Little Muskego Lake in

Wisconsin, WDNR has concluded the following about SSW:

> Ouantitative data on SSW populations in Wisconsin has shown a wide range of invasion



Starry stonewort with reproductive white star-shaped bulbil

trajectories over

time and mixed effects on native plant communities; data will continue to be collected to increase our understanding of potential impacts of this AIS;

- Evaluation of pre- and post-treatment data from several lakes utilizing chemical control methods (primarily copper/hydrothol) has not resulted in control or eradication of SSW:
- WDNR will continue to monitor and collect data on other potential management techniques (i.e., hand pulling, DASH, dredging, etc.); and
- WDNR is working with other regional and national partners to evaluate management techniques for the control of SSW.

Impacts of Motorized Watercraft on Wisconsin Lakes (Part I); and

Wave Propagation Dynamics and Water Quality Impacts on Freshwater Lake in SE Wisconsin— North Lake in Waukesha County (Part II)

> (Tim Asplund, WDNR and Cap. Tim Tyre, Mike Mortensen, Terra Vigilis):

> > Green Bay &

Silver

Green Little Cedar

Little Muskego

Big Muskego

Okauchee

Pewaukee

Nemahbin

Lake Michigan

WDNR's Tim Asplund joined with representatives of the private consulting firm, Terra Vigilis, to discuss boating

Waukesha County in 2014. As of 2020, WDNR has identified SSW in 15 Wisconsin **Verified SSW Populations** lakes as well as Green Bay and Lake Michigan. The presentation provides the results of 2014 2018 WDNR's investigations Little Muskego Geneva of SSW throughout the 2015 Little Cedar state and a summary Big Muskego 2019 of remedial measures · Long Okauchee taken at various Pike Pewaukee lakes to mitigate the spread of SSW. As Silver Nemahbin a result of its work, **Emery** Emery 2016 Kilby collaborative efforts Green 2020 with other regional Lake Michigan/Green Bay Kilby and national partners. 2017 and data collected in Wind

impacts on water quality and shoreline protection. A significant portion of this two-part discussion focused on the assessment recently completed at North Lake in Waukesha County and preliminary results of this study. A summary of the North Lake Study is available at https://storymaps.arcgis.com/stories/3bb6845a097e42b8aad5f0fc0537567f. This assessment work completed by WDNR, as well as insights gained from the North Lake Study, support an improved understanding of boating impacts on water quality including:

- Shoreline erosion is exacerbated by boating in the absence of lake use controls such as no wake zones;
- Prop disturbance is greatest at shallow depths of less than 10' or in areas with aquatic vegetation;
- Maximum adverse impacts appear to occur at transition speeds near shorelines of 7-12 mph; and
- Boating is not a recreational activity appropriate for all lakes depending upon size, depth, and overall lake health and water quality.

<u>Responding Collaboratively to Nitrates</u> (John Exo, University of Wisconsin-Madison):

While significant attention has been focused on adverse impacts of phosphorus entering lakes, nitrate-contaminated runoff entering groundwater and surface water bodies should be of equal concern. This short presentation provides an overview of nitrate impacts in groundwater throughout Wisconsin, addresses the health and environmental effects related to nitrates, and advocates for local, regional, and statewide partnerships to reduce the use of nitrates. Excessive

Ecosystem Impacts



- Engine pollution
- Turbidity/sediments
- Shoreline erosion
- Aquatic plant effects
- Wildlife disturbance
- Shoreline development
- Dispersal of exotics

nitrates adversely impact water quality by causing algae growth greater than ecosystems can manage, sometimes resulting in large growths referred to as algae blooms. Such algae growth, in turn, adversely impacts ecosystems supporting plant and fish species in lakes.

Each of these presentations is available via GLA's Water Quality webpage at https://genevalakeassoc.org/water-quality under Wisconsin Lakes/Wisconsin Water Week 2021.

This is a very small sampling of the information shared during Wisconsin Water Week 2021. To learn more about the Wisconsin Lakes Partnership and efforts to protect water quality in Wisconsin's lakes, please mark your calendars and plan to participate in Wisconsin Water Week 2022 to be held April 6-8 at the University of Wisconsin—Stevens Point.





Nitrate Driving Eutrophication

Norton Slough - Lower Wisconsin Riverway

GLA, GLC fund cover crop experiment

Working with Brian Smetana at the Walworth County Conservation Office, the GLA and the Geneva Lake Conservancy (GLC) provided funding for three farmers in the Geneva Lake watershed to plant cover crops in the fall of 2020.

Cover crops are agricultural crops like rye, radishes, or wheat that farmers can plant after they have harvested their summer crops. These cover crops can hold the soil in place during the winter months, prevent runoff, and improve soil health.

The cost of the seed for these cover crops, however, is often prohibitive, so the GLA and GLC agreed to fund the seeds for area farmers willing to plant them.

The winter crops were planted on 215 acres of the approximate 2000 acres of agricultural land in the Geneva Lake watershed. The plan is to expand them to additional fields in 2021.

The GLA and GLC are now working with these farmers to determine if the cover crops can be funded through a state or federal government program in future



Three farmers in the Geneva Lake watershed last fall planted cover crops, like the rye crop shown here, to reduce runoff and improve soil health. Funds for the seeds were provided by the GLA and Geneva Lake Conservancy.

years or if more permanent funding can be established for farmers to cover the cost of seeds.

GLA supports area service organizations

In past years, The Geneva Lake Association (GLA) has been a financial supporter of many of the Not-for-Profit organizations serving the greater Geneva Lake Region. During our current 2020-2021 fiscal year, we are pleased that we have been able to support the mission of the following ten organizations with grants that, in part, have allowed them to fulfill their mission of service to the residents of the Geneva Lake Region.

AGENCY

PROJECT BEING FUNDED

• The Environmental Education Foundation	Environmental Study Scholarchir
• The Environmental Education Foundation	Environmental study scholarship
Geneva Lake Conservancy	Cover Crop Program
Geneva Lake Museum	An Exhibit
Geneva Lake Water Safety Patrol	Boat Fuel and Maintenance
GLAS Education, Inc.	Night Sky Sensor Project
Kiswauketoe Nature Conservancy	Restoration Efforts
• Lake Geneva Fresh Air Association	Lake Path/Shoreline Restoration
Geneva Lake Environmental Agency	Clean Boats-Clean Water Project
Black Point Estate	Summer Intern
Yerkes Future Foundation	Landscape and Drainage

In fulfilling the GLA's mission of informing and educating its members on issues of conservation, preservation and environmental integrity, our Board has determined that the GLA will focus its efforts in coming years on Geneva Lake Water Quality. In support of this directive, we are pleased that we will again be able to fund grant requests from Geneva Lake Not-for-Profit Agencies; however, priority will be given to grant requests for projects that will improve Geneva Lake Water Quality in ways that are consistent with the requesting agency's mission.

Water Alliance ____

(Continued from page 1)

be tested this summer at community launch areas (all supportive) for cleaning invasive plants off boats that are launching and/or pulling out of the lake. These cleaners have been used successfully in lakes in Wisconsin and Minnesota including Lake Minnetonka.

<u>Agricultural Improvements and Septic</u> <u>Systems</u>

We have made progress on a few farms using cover crops to help reduce manure runoff from fields, but more needs to be done. Cover crops, like barley, radishes and oats, are planted in the fall prior to harvest and their roots limit phosphorous runoff and soil erosion. Plans are to continue these efforts into 2021 as follows:

- Organize a "Field Day" for farmers in the Geneva Lake and other county watersheds to demonstrate best management practices at a local farm site.
- Provide assistance for farmers using cover crops in 2020 to get funds from a state or federal agricultural program to pay for future seeding.
- Investigate runoff from two farms in the south watershed of Geneva Lake that may be spreading manure or grazing cattle near our tributaries.
- Conduct training of Water Action Volunteers (WAV) for many of the 50 tributaries of Geneva Lake to provide long term monitoring.
- Continue efforts to monitor older/ possibly failing septic systems to replace them with holding tanks or new systems and provide financial assistance if eligible.

We and the entire Water Alliance team are excited about the progress last year and expect even greater results in 2021.

[Please note: Copies of the Executive Summary of the SEWRPC Tributary Study are available. Contact the Geneva Lake Conservancy.

Special thanks go to Karen Yancey of the Geneva Lake Conservancy, Ted Peters of the GLEA, Dale Buser (SEWRPC), Dale Splinter and his students (UW-Whitewater), Brian Smetana (Walworth County Farm Specialist), Heidi Bunk (DNR) and Shannon Haydin (DNR) and Amy Kretlow (DNR) for their enormous help as well as the rest of our terrific volunteers.]

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All persons interested in enhancing the conservation, preservation, environmental integrity and general welfare of Geneva Lake and its surrounding area are welcome as members. The tax deductible contributions requested of members are as follows:

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\$	Sustaining Membership
	Annual Contribution \$75
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	Annual Contribution \$150
\$	Benefactor Membership
	Annual Contribution \$250 or more
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	Annual Contribution \$100 or more

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All Contributions are Tax Deductible

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Online membership application/payment is also found on the GLA website: www.genevalakeassoc.org