

Geneva Waters

Summer 2023
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Geneva Lake Environmental Agency

Our Mission:

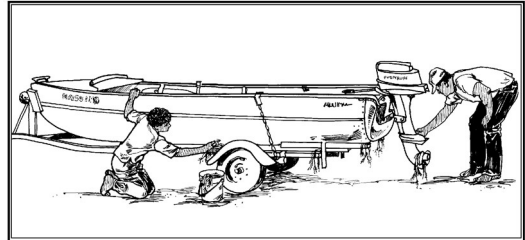
The Geneva Lake Environmental Agency is determined to maintain Geneva Lake's resources by protecting, preserving and enhancing a desirable lake and watershed quality.



Chapter 30 Ordinance

The Chapter 30 ordinance protects our waters from aquatic invasive species by enforcing the removal and drainage of all aquatic plants, animals, and water from watercraft or trailer. This applies to all vehicles entering and exiting the water and driving on the road. This is enforceable by fines of up to \$250 and denied launch depending on offense. Previously this ordinance was able to be enforced by local municipalities, but the ticket revenue was collected by state DNR. GLEA has worked to pass a draft stating that local municipalities will receive the

revenue from tickets issued under Chapter 30, giving an incentive for local enforcement of protection on Geneva Lake against aquatic invasive species.



CLEAN. DRAIN. DRY. DISPOSE. CD3 Systems use behavioral science to empower the public to increase compliance with invasive species rules and regulations.



Check out new boat cleaning stations at Williams Bay, Lake Geneva, and Fontana launches!

CD3 Roadside
Waterless Cleaning System



We encourage you to clean your boat when entering and exiting Geneva Lake to help us stop the spread of aquatic invasive species.

Brought to you by the Geneva Lake Environmental Agency, Villages of Williams Bay and Fontana, the City of Lake Geneva, and WI DNR grant.

General Water Quality Data
For Geneva Lake,
1997 and 2022.

glea/twp

The table list specific water quality data from 1997 and 2022. These samples were collected during the spring when the lake was mixing. Generally, this testing is done as an annual check-up to see how the lake is doing. It is done during the spring, when the lake is mixing, and things are distributed relatively evenly through-out the water column.

Water clarity based upon secchi disc readings show a significant improvement. Chlorophyll “a” is a pigment found in plants. Its measurement is an indirect measurement of the number of free-floating algae. The data shows a significant decrease between 1997 and 2022.

Nitrogen and phosphorus are two nutrients that lake managers like to monitor. Nitrogen values between the two dates show the 2022 values are less than the 1997 values. This doesn’t necessarily mean the lake-wide and season long values would show the same. The 2022 data shows that most of the nitrogen is found as organic nitrogen, tied up in free floating plants. plants.

Perhaps, the most significant change is the increase in total phosphorus. Although still meeting the state criteria for total phosphorus in Geneva Lake on an annual basis, trends over the last several years show an increase. The 2022 spring data shows that most of the phosphorus is tied up in plants as organic phosphorus.

Another interesting change is the increase in chloride and sodium. Both of these ions are associated with salt used for winter de-icing. Water softeners can add these ions to the groundwater, a source of water to Geneva Lake.

In general, the lake is holding its own. Some things have shown an increase and some things show a change in the negative direction. It is important to not make too many decision basses upon only one or two sets of data.

| Selected Water Quality Values, Geneva Lake, WI | | |
|--|-------|------------------|
| parameter | 1997 | 2022 |
| Temperature © | 5.0 | 5.8 |
| Dissolved Oxygen (mg/l) | 13.2 | 12.4 |
| Secchi (m) | 3 | 5.6 |
| Conductivity (uS/cm) | 510 | 554 |
| Chlorophyll "a" (mg/l) | 5.9 | 2.4 |
| Carbon Dioxide (mg/l) | 1.5 | 0.9 |
| Turbidity (NTU) | 0.7 | 0.8jh |
| Total Dissolved Solids (mg/l) | 268 | 314 |
| Total Nitrogen (mg/l) unfiltered | 0.65 | <0.34 |
| Total inorganic Nitrogen (mg/l) | 0.07 | 0.07 |
| Total Organic Nitrogen (mg/l) | 0.58 | 0.265 |
| Total Kjeldahl Nitrogen (mg/l) | 0.597 | 0.28 |
| Nitrate+Nitrite Nitrogen (mg/l) | 0.017 | <0.015 |
| NH3+NH4 nitrogen (mg/l) | 0.053 | <0.055 |
| Total Phosphorus (mg/l) | 0.016 | 0.028 |
| Ortho-Dissolved Phosphorus (mg/l) | 0.003 | <0.004 |
| Hardness (mg/l) | 221 | 234 |
| Calcium (mg/l) | 34 | 37.5 |
| Magnesium (mg/l) | 33 | 33.9 |
| Sodium (mg/l) | 16 | 24.3 |
| Potassium (mg/l) | 1.7 | 1.81 |
| Chloride (mg/l) | 33.2 | 52.4 |
| Silica (mg/l) | 0.483 | <0.097 |
| Copper (mg/l) | <3 | NR |
| Iron (mg/l) | <10 | <0.0500 |
| Manganese (mg/l) | <4 | <0.500 |
| Source: USGS, WI State Lab of Hygiene, GLEA | | NR=not recorded. |

Lake Manager Intern 2023

Hi! My name is Alyson Wisnionski and this is my second summer interning for GLEA as a Lake Manager Intern. At GLEA, I am involved in the Clean Boats Clean Waters Program, weekly beach testing, zebra mussel surveys, and various other projects we have going on in the summer. I just recently graduated with honors from the University of South Carolina with a Bachelor of Science in Environmental Science and Minor in Marine Science. I recently completed my senior honors thesis covering an assessment of population characteristics on juvenile sharks from data I collected while abroad in the Galapagos Islands, which led into my passion for research and plans for grad school in the future. Growing up on Delavan Lake, I have always been passionate about conservation, especially in the aquatic field. Now, I get to work to help protect the lakes I grew up around! In my free time, I love to read, cook, spend time on the lake, scuba dive, and travel. I look forward to the fun plans we have this summer and working towards conserving and protecting the beautiful Geneva Lake that we get to call home!

Best,

Alyson Wisnionski

Lake Manager Intern

Geneva Lake Environmental Agency



BOAT WANTED!

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Call 262-245-4532 or email info@gleawi.org with the information.



Geneva Lake Environmental Agency Contribution Form

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Enclosed is my tax deductible contribution for 2023.

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