

# Geneva Waters

## Winter 2016 - Vol. 32, No. 1



In Search for the Deep Hole ~ By Theodore W. Peters

### Geneva Lake Environmental Agency

#### *Quarterly Publication*

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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.**

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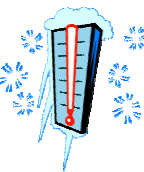
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## AND THEN WINTER CAME, OR DID IT?



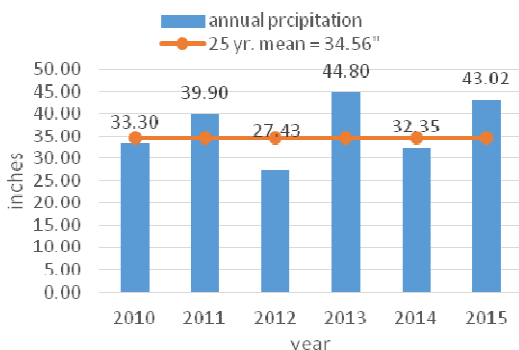
With a long and very comfortable fall, a November snowstorm brought us the first taste of winter with a heavy, wet, and cumulative snow of varying depths. The closer to the state line, the more snowfall was recorded, with 12 inches reported in northern Illinois. The precipitation amount recorded at the Geneva Lake Atmospheric Monitoring Station between Friday, November 20 and Saturday, November 21 was 0.88 inches. Most of the snow was gone within two weeks. As of the last week of February, that has been the heaviest single snowfall of this winter.

With El Nino hitting the West Coast and bringing it much-needed precipitation, the weather system impacted our weather, also. The system is responsible for warmer than normal temperatures this winter. The warmest temperature in December was 59.5 degrees on December 13, and the coldest December temperature, 22.1, was recorded five days later on December 18.

January turned cold, with the first five days never getting above freezing. A cold spell between Jan. 16 and 24 also drove temperatures down, with the temperature never getting above freezing during those nine days. The coldest recorded temperature of January 2016 was -7.7 recorded at 6 a.m. on the 18th. The warmest January temperature of 41.3 was recorded on the 31st at 1 p.m.

February 2016 looks to be warmer than normal, with the highest recorded temperature of 53.5 recorded on February 19 at 11 a.m. How can we forget that sunny, warm Saturday where the warmth of the earth could be smelled and thoughts of gardening crept into our minds? I am sure there are a few people who will never forget

Figure 1. Precipitation Amount, Geneva Lake, WI, Source: GLEA, NADP



the 42.8 warm temperature of Saturday, February 6. The lowest February temperature of -1.0 was recorded on February 13 at 6 a.m.

A total of 4.96 inches of precipitation fell during December, mostly as rain. The 25-year average precipitation for December is 1.77 inches. December 28 was the wettest day, with 1.52 inches of rain falling on that day alone. December had 12 days of precipitation (39 percent). January turned dry, with only 0.23 inch of precipitation falling, compared to the 25-year average of 1.72 inches. The wettest day was January 9 when 0.23 inches fell. January had eight days of precipitation (26 percent). As of the last week of February, it looks as if February will also be a dry month, with only 0.90 inches of rain compared to the 25-year average of 1.48 inches.

2015 was a very wet year, with slightly over 43 inches of precipitation falling (Figure 1). The 25-year average is 34.56 inches.

The wettest months of 2015 were June with 6.59 inches, November with 5.99 inches, and December with 4.96 inches. December 2015 was the wettest December in 30 years, and November 2015 was the second wettest going back to November 1985 when 7.54 inches of precipitation were recorded.

## THE WINTER OF 2015-16 ON GENEVA LAKE

This winter will likely be long remembered by many. Early in the season there was concern over whether the lake would freeze at all. Having not frozen as recently as 2012 and with the warm fall, it seemed as if no ice would be the case. Yet over 360 grade/middle school students did send in their guesses of ice-on date. (See story below.)

Ice did come in mid-January, but the ice really never got thick. Seams in the ice were always present and in some cases in areas that were not common. A few warm days in early February helped to degrade the ice's integrity, as 15 vehicle owners unfortunately found out at Winterfest in Lake Geneva. A snowmobiler lost his life to the open water of an unfamiliar seam. Sitting in my office looking out over the lake, a seam down the center of the west end of the lake quickly grew to be a large opening of water. Has the ice-off process already begun?

Ice fishing was limited, as the ice quality was marginal. However, some brave-hearted individuals did get out on the ice. GLEA's long-ago intern, Karl Gustavson, did get to do some fishing at one of his favorite Geneva Lake fishing spots on a cold windy Saturday. Despite the 25-m.p.h. winds, his perseverance was rewarded with some nice catches. (Figure 2).

Figure 2. Karl Gustavson and his nice lake trout. Geneva Lake, Wis., Feb. 2016.



The lake level remained high for the season as it has for a good part of 2015. As of the end of February, the level is approximately 1.2 inches above the normal lake level for this time of the year and about 1.8 inches above the spillway. The level has remained above the spillway for most of the year.

## ICE-ON

Early this winter it looked questionable whether Geneva Lake was going to freeze over. That didn't deter over 360 Geneva Lake area grade and middle school students from entering the Geneva Lake Environmental Agency and Clear Water Outdoors annual Ice-On contest. The official 2016 Geneva Lake Ice-On was declared to be January 20. Ice-on is when the whole lakes freezes over from Lake Geneva to Fontana.

Eleven (11) students picked January 20 as the official date (Figure 3). All 11 were awarded prizes for picking the correct date. The first-place winner who had the earliest postmarked date and chose the correct date was Jacob Lain from Fontana Elementary School. He received a \$50 gift certificate from Clear Water Outdoor. There was a five-way tie for second place, with Luis Montoya, Tiffany Sanches Merino, Riley Freyermuth, Ja'lea Madding, and Cheyane Schneike, all from Lake Geneva Middle School, winning a \$25 gift certificate from Clear Water Outdoor. There was also five-way tie for thirds place. Madelyn Busche and Daniel



Daniel Martinez from Brookwood Middle School and Kyra Fredrick, Isabella Hayes, and Ashton Myers from Traver School received \$10 gift certificates from Clear Water Outdoor. All winners also received copies of UW-Extension's "My Lakeshore Field Journal," an interactive journal loaded with fun facts about plants, insects, and wildlife in and around Wisconsin's lakes.

Excluding a few holes of open water, kept open by localized currents or waterfowl, the last area to freeze was the Fontana end of the lake. This is typical of every year, as this is the deepest part of the lake. Geneva Lake's Ice-On in 2013 was January 1, and in 2014 it was January 13.

Figure 3. 2016 Ice-On winners.



## 20TH CENTURY SEA LEVEL ROSE AT FASTEST RATE SINCE FOUNDING OF ROME

In a report soon to be published in the *Proceedings of the National Academy of Sciences*, researchers have estimated sea levels have risen faster in the last century than any time since Rome was founded around 2,800 years ago. Measuring and analyzing sea levels at 24 locations around the world, the researchers' findings were interesting. They found that sea levels rose by about 0.1 millimeter per year from the first through the eighth centuries and fell around 0.2 millimeter per year during the 11th through 14th centuries. Sea levels rose abruptly around the start of the Industrial Revolution, with about 1.4 millimeters of sea level rise per year in the 20th century.

When the researchers ran the model without present century air temperature increases, the rise in sea level was about half. Increased global atmospheric temperatures are melting the continental and alpine glaciers that eventually run into the oceans. Increased sea levels threaten coastal communities and environments.

## THE SWEET SMELL OF LAMPREY

Fishermen who fished the Great Lakes back in the 1950s and '60s remember the devastation ocean lamprey had on the Great



Photo: J. Rugowski, GLFC

Lakes fisheries. These ugly snakelike creatures attach themselves to the side of fish, and the lamprey use their raspy tongues and rows of teeth to burrow holes in the sides of the lamprey's hosts and end up sucking the life out of the fish. The Great Lakes Fishery Commission, which was founded in the 1950s largely to deal with the lampreys, spends \$20 million a year to control them.

<http://www.glfc.org>

In a recent article in *Stormwater Magazine*, author Janice Kasperen explains how a new management method for lamprey is being tried and looks successful. "They've been experimenting with synthesized pheromones to lure the lampreys to a concentrated area where they can be trapped or killed en masse." Lamprey can smell already existing larvae buried in the mud and return to these areas to spawn. The use of pheromones can also be used to get lamprey back into native areas where their numbers have been reduced due to water quality and habitat changes.



## EXAMINING SCIENCE IN LAKE MANAGEMENT

Dick Osgood, past North American Lake Management Society president, a certified lake manager and cofounder of Lake Advocates, expresses his disappointment with what he sees as the country's lake management efforts moving away from good science. He feels that this has led to "poor performance, especially with respect to measurable outcomes in lakes." He points to the condition of our lakes and streams and says that despite all the money and effort spent on managing them, half the nation's lakes have serious water-quality problems. He goes on to say that "from 1972 through 2007, there has been no net change in lake trophic state" (that is, to water quality). He feels we need to get back to objective third-party assessments as reported in scientific literature and to let that guide our efforts. He feels public policy should be investing in sound scientific foundations for lake management and that it should be coming from federal and state agencies. Unfortunately, right now good science is under attack at the federal and state levels from so many directions that this may not be easy.

*(Dick Osgood is cofounder of Lake Advocates [www.LakeAdvocates.org]. See his blog at www.LakeManagersNotebook.com.)*

## AQUATIC PLANT SURVEY UPDATE

The GLEA aquatic plant survey last summer gave us some of the most comprehensive data on the health and condition of Geneva Lake aquatic plant community. Aquatic plants are a vital component of any healthy lake. They offer cover for organism, tie up nutrients, and stabilize shore and benthic communities, to mention a few of the services of the plants. The survey found the aquatic plant community to be in good shape.

Nicholas McCarney, a George Williams College student, is doing his senior capstone project on a unique aspect of the aquatic plant community. He is looking at where invasive species were found and relating that to species diversity, community richness, and past aquatic-plant management efforts. He is preparing his project for presentation as a poster at the Wisconsin Lakes Convention.

## CONCERNING LEGISLATION OUT OF MADISON

It seems as of late the State of Wisconsin Legislature constantly is taking aim at reducing or eliminating protective natural resources legislation. Perhaps the biggest but by far not the only of these was the recent biennium budget bill. Consider two recently passed laws that roll back wetland protections by reducing requirement for minimizing wetland impacts and granting new exemption for filling and dredging of wetlands. Shoreland protection legislation is being eroded away one law at a time, and groundwater protection from high-capacity wells is being washed away despite recent state supreme-court rulings. All of this is being done in the name of private landowner rights. Most troubling is the movement to ease privatization of public utilities. How can this be good when the private sector is driven by the bottom line and not the common good? Ask the residents of Flint, Michigan, how management at the lowest cost worked for them.

Yet there are two questions that need to be asked. Who is protecting the natural resources that the State government is charged

with protecting, and when does the short-term gain of an individual, who is but a spot in time, override the long-term health and stability of a natural resource?

## **MILWAUKEE'S GLOBAL WATER CENTER TO EXPAND**

In 2013, the Global Water Center in Milwaukee opened to promote water research and development in southeastern Wisconsin. The new center at 247 Freshwater Way offers seven stories and 98,000 square feet of space for businesses, university scientists, and students to study fresh water and develop new water technology. With over 40 tenants, it contains a mixture of entrepreneurs, water researchers, engineers, and water-technology companies. The University of Wisconsin-Milwaukee's School of Freshwater Sciences and UW-Whitewater's Institute for Water Business also operate out of the center.

Recently the ownership group, including The Water Council, which promotes itself as “A Cross-section of Leaders Representing All Aspects of the Water Cycle,” has purchased a second

building and is looking to develop it as a second Global Water Center (GWC II). The council anticipates using GWC II “for graduates of The Water Council’s business-acceleration programs and for expanding and new industry-cluster participants attracted to the world’s most active water technology district.”

## NESTING WILDLIFE WATCHING

For some authentic reality TV, visit the links below to view live bird activities on their nests.

Horicon Marsh great blue heron nest camera: [http://  
www.ustream.tv/channel/horicon-marsh-great-blue-heron-  
nest-camera](http://www.ustream.tv/channel/horicon-marsh-great-blue-heron-nest-camera)





Red tail hawk:

[http://cams.allaboutbirds.org/channel/16/Red-tailed\\_Hawks/](http://cams.allaboutbirds.org/channel/16/Red-tailed_Hawks/)



Osprey or bald eagle: <http://www.webcams.dnr.state.mn.us/eagle/>  
and [http://www.portal.state.pa.us/portal/server.pt?  
open=514&objID=1592549&mode=2](http://www.portal.state.pa.us/portal/server.pt?open=514&objID=1592549&mode=2)

Bald eagle: [http://www.press-citizen.com/story/news/  
local/2014/04/27/decorah-eagle-cam-shows-iowas-  
celebs/8332795/](http://www.press-citizen.com/story/news/local/2014/04/27/decorah-eagle-cam-shows-iowas-celebs/8332795/)

Bald Eagle: [http://abc27.com/2015/03/25/2nd-bald-eagle-egg-  
hatches-at-codorus-state-park/](http://abc27.com/2015/03/25/2nd-bald-eagle-egg-hatches-at-codorus-state-park/)



DNR EagleCam Photo Gallery

Great Horned Owl-Georgia: <http://hdontap.com/index.php/video/stream/great-horned-owl-cam-2>



## LAKE NOTES

— There is discussion on enacting local legislation to prevent Geneva Lake being used as a parking lot during winter events. It is being suggested that if you stay on the ice with your vehicle it would OK to park but if you leave your vehicle to go on shore you could be charged with abandoning your vehicle.

— The replacement of the Abbey channel bridge in Fontana is moving forward. The project is ahead of schedule and looks as if the bridge will be open by Memorial Day.

— The Village of Williams Bay, Kishwaukee Nature Conservancy, DNR, and Trout Unlimited are looking to do trout habitat improvement in Southwick Creek. Some interesting options are being explored.

— The two major U.S. meteorological agencies — National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) — confirmed 2015 as the warmest year on record.

— The Wisconsin Lakes Convention is scheduled for March 30, 31, and April 1 in Stevens Point. This is the largest gathering of lake people in Wisconsin. Attending are professional lake managers, consultants, Wisconsin DNR and UW-Extension lakes people, and lake residents. For more information, see <http://www.uwsp.edu/cnr-ap/UWEXLakes>.

— The removal of the old Traver Hotel in Lake Geneva has begun. This building, located on Broad Street, has a long history of different uses, but the end of its usefulness has come. The Lake Geneva Economic Development Corp. purchased the building and anticipates it being a temporary green space the corporation then will market for commercial development.

— According to the 2015 sampling and assessment, zooplankton numbers in Geneva Lake continue to decrease. There appears to be a lack of recruitment for some species. Either the rotifers and nauplii aren't getting enough food or they're being preyed upon or poisoned by something in the lake. Investigation continues.

— The Geneva Lake Environmental Agency will be hiring a summer intern to not only help with its day-to-day lake-management efforts but work on a benthic macro-invertebrate study. This study has been done every four years since the infestation of

zebra mussels in 1996. The study looks at changes over time in this community caused by the zebra mussels. Application deadline is March 20.



WI DNR

— The Environmental Education Foundation is accepting applications for its scholarships and grants. This year over \$23,000 will be awarded to Geneva Lake area students and schools to promote environmental education. For more information, see [www.envedfnd.org](http://www.envedfnd.org).

— In past issues of Geneva Waters we talked about the problem of micro plastic and its increasing abundance in our oceans. A new concern with micro plastic is the microbes associated with these plastics and their ability to be spread around the world while on board these drifting micro environments.

## GLEA's Geneva Waters Newsletter 'Green Option'

If you would like to change your subscription to this newsletter from a printed paper copy to an Adobe file sent to your email (and enjoy some beautiful color photos too), let us know! Adobe is a free program for your computer if you don't have it already. Just send an email to [aimee@glea.us](mailto:aimee@glea.us) with your name and request to receive emailed newsletters. You can also give us a call at (262) 245-4532 with this information.

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## Save Geneva Lake

Phosphorus is the most problematic pollutant in the lake. Most lawns in our area don't need phosphorus. When lawn fertilizers run off into the Geneva Basin, they feed the **unsightly, smelly and potentially toxic** algal bloom and promote the growth of weeds in the lake.

**USE OF PHOSPHORUS FERTILIZERS IN THE GENEVA LAKE SHORELINE AREAS  
IS REGULATED.**



# Geneva Lake Environmental Agency

## Contribution Form

**YES**, I want to help Geneva Lake Environmental Agency in their efforts to protect and preserve Geneva Lake for generations to come. Enclosed is my tax deductible contribution for 2016.

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*If you are interested in receiving a copy of any of the following publications, circle the title below.*

- Sediments & Lake History
- Geneva Lake Book
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# Geneva Lake Environmental Agency

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