



CROOKED LAKE

area association



What's going on???

Loads of Dead Fish, Algae Bloom, Weeds???

What Happened to Our 'Clean' Lake?

From Gary Nereson, President



As most of you know, we had some odd occurrences in our lake this summer. First, there was a severe filamentous algae bloom in late May/early June. Later, that was followed by lots of dead fish washing up on shore all over.

Well, believe it or not, both of those events were well beyond our control – climate and nature were responsible.

The algae (which looked like slimy green hair) was the result of our long, cool spring. The extended period of cool water delayed and slowed the rate of aquatic plant growth, allowing the algae to get a head start. Normally the rooted plants get cranking earlier and shade the algae, out-pacing its growth; things didn't happen that way this year. As the water warmed, the native plants did win out and the algae dissipated.

Of course, this algae issue contributed to another problem. As the hot, stagnant weather came in, and the above average amounts of algae began to decompose, our fish experienced a lake habitat with seriously low oxygen levels. A weekend storm likely stirred up the water enough so that any crappie hanging out in the shallows was exposed to a lethal dose of low oxygen. That was why so many of you had hundreds of dead crappie washing up on your shoreline.

As far as weeds go, most of what we currently have in our lake are native plants, not invasive plants. It is often difficult to tell them apart. We have been quite successful in controlling the AIS (Aquatic Invasive Species) that we do have. We are also keeping our fingers crossed that we don't get more, for example zebra mussels, although we do have zebra mussel monitoring plates in place to detect and allow for swift mitigation if they do show up.

We are the 'Poster Child' of successful AIS treatments in the eyes of the MN DNR and our journey continues to be shared at national conferences where other lake associations are eager to learn from us.

Please see related articles in this newsletter from Dawn Doering (CCWD), "Crooked Lake Test Treatment Proves Highly Effective", and from Justine Dauphinais (CCWD), "Invasive Hybrid Watermilfoil: Identification Tips & Impostors."

Our Lake Association owes special thanks to our partners in this never-ending challenge to have and maintain a high level of water quality and minimum invasive species in Crooked Lake:

- Coon Creek Watershed District
- Anoka County
- City of Andover
- Anoka Conservation District
- Minnesota DNR
- City of Coon Rapids

(The above explanations on algae and dead fish are paraphrased from information provided by James Johnson, Freshwater Scientific Services, and Justine Dauphinais, Coon Creek Watershed District.)



CLAA APPAREL



Inventory Clearance is happening now.

For more information and to order please call Brian Graves at 612-282-8803 or bgraves@tjassociates.net

INSIDE THIS ISSUE

- Lake Levels 2
- Lakeshore Stewardship 3
- Lake Friendly Lawn Care. 4
- Donations 2019. 4
- Crooked Lake Test Treatment 5
- Save Your Bait 6
- Epic Ice Carousel 6
- CLAA Christmas Lights 2019.. 7
- Watercraft Inspection. 8
- Culvert Action! 8
- Adopt a Drain Program. 9
- Thank you Sponsors 9
- Summer Picnic 2019. 10
- Polar Plunge 10
- Boat Parade 2019 11
- Treasurer's Desk 12
- Volunteer Appreciation 12



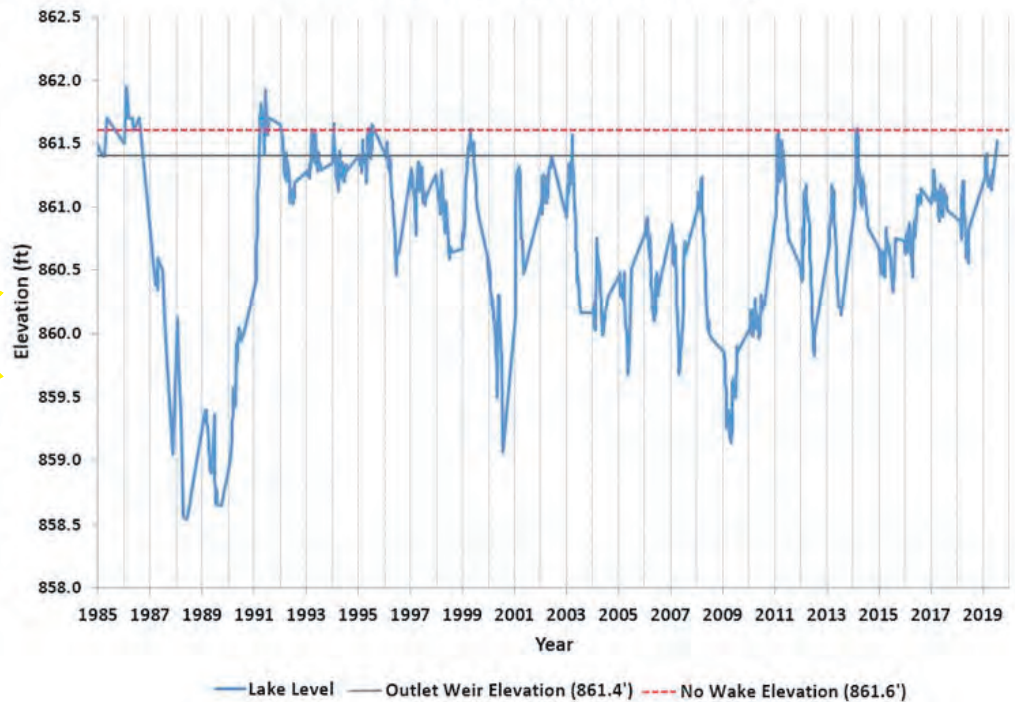
Lake Levels

By Justine Dauphinais, Coon Creek Watershed District

Crooked Lake’s water level is controlled by inputs of groundwater, precipitation, and a concrete weir at the outlet set at an elevation of 861.4’ above sea level (circled in red). In most years, the lake stays below 861.4’ and no water exits the lake. In wet years like 2019, the water elevation overtops the concrete weir and water slowly drains through the culvert to Coon Creek as shown in the pictures to the right. On rare occasions, the lake cannot drain quickly enough to keep up with rainfall and the lake reaches the no wake threshold of 861.6’—this has only happened twice in the last 10 years. On 10/20/19, the lake was 1” away from this threshold, but started dropping again before triggering a no-wake designation. A big thank you to lakeshore resident, Carol Buzzelli, for volunteering to monitor and report lake level data every year! The gauge at her property is surveyed by the MN DNR every year after ice out — this year a reading of 8.02’ on the gauge corresponds to the no wake elevation.



Crooked Lake Water Levels (1985-Present)



Hope to see you at our **Winter General Meeting** on **Thursday, February 20, 2020 6:30 pm** Legacy Academy School 3037 Bunker Lake Blvd. Andover (entry door #6)

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Lakeshore Stewardship Vital to Keeping Lakes Healthy

By Emily Johnson (Anoka Conservation District) & Britta Dornfeld (Coon Creek Watershed District)

Crooked Lake Area Association has done a lot of great work for Crooked Lake; however, there's more that could be done, especially around reducing the loss of native aquatic and near shore lake vegetation. Both shoreline and aquatic plants are critical in maintaining a clean and healthy lake. Their loss results in severe negative consequences.

When aquatic vegetation is removed from a lake, it causes a chain reaction, resulting in murky water and loss of critical habitat for waterfowl and native fishes. Zooplankton rely on aquatic plants for food and safety. Without the refuge provided by these plants, they become easy prey for fish and their numbers dwindle. As a result, the algae normally eaten by zooplankton flourish. Algae get an extra boost from nutrients in loose sediment stirred up from the bottom of the lake. Since there's no more roots to stabilize this sediment, it can easily be stirred up by waves and wind, creating cloudy water conditions.

Native plant removal from land at your shoreline can have an equally negative impact. Native shoreline vegetation acts as a buffer, filtering polluted runoff and trapping excess nutrients before they enter the lake. Their roots hold the soil in place and prevent erosion and property loss. In addition to these water quality benefits, native plant buffers provide critical habitat for pollinators and other native wildlife, deter nuisance wildlife such as geese, and create an attractive privacy screen while leaving plenty of room for water access from a dock or beach.

Retaining or replacing natural shoreline and aquatic vegetation is critical to a lake's health. Crooked Lake lakeshore owners have the power to make a difference on their shore through proper lakeshore restoration and stewardship. Doing this will improve lake water quality, which has a direct impact on property value, recreation opportunities, fisheries, and more.

To learn how to install your own lakeshore restoration project, visit: dnr.state.mn.us/lakescaping. There you will find a plethora of resources and guides for going from lawn to buffer and restoring your shore.

And thanks to the Crooked Lake Area Association for helping to fund a video on lakeshore restoration—stay tuned!



A note from Josephine

All -
I have lived on Crooked Lake 30 years. This is not the first time that nature killed off a large chunk of pan fish. Beautifully, in the past, nature also "cleaned up" the mess. That is why it is critical to maintain a diverse eco system.
Respectfully, JL 7/30/2019

Lake-friendly Lawn Care

Use nature's fertilizer first!

Don't bag short grass clippings
Mulch in fall leaves

Test your soil

You might not need fertilizer! Find out with a UMN soil test.

Aerate with a core aerator

You need to aerate if a pencil can't easily go into your lawn. Do it around Labor Day.

Fertilize after aeration

Use a fertilizer mix that includes 35-50% slow release fertilizers

These are natural products like biosolids or soy meal as well as synthetics like stabilized nitrogen or coated urea products

Avoid fertilizers with phosphorus

Keep turf 3 inches tall

Always mow with a sharp blade
Cut less than a third of grass height at a time

Water deeply-1.5"/once a week

Don't water if it rained over an inch

Coon Creek Watershed District

From graphic on lake friendly lawncare.png

If you have already donated in calendar year 2019, **THANK YOU!!** If you have not, the following is why we still need your 2019 donation.

by Grant Schmalzer, CLAA Treasurer

The membership suggested donation amount to the lake association is **\$35** per year or \$20 if you live off the lake. You can donate anytime from January 1 – December 31st. We are a 501(c)3 corporation which means that all money donated by you is tax deductible. If you have **not** sent in your donation for this year (since January 1, 2019), now is a great time to do so!

If you are not sure if you have made a donation for 2019, send Grant Schmalzer, CLAA Treasurer, an email at gs2175@gmail.com or call **612.965.4631**.

Listed are some of the things your \$35 donation is used for:

- Invasive aquatic species control, specifically Curlyleaf Pondweed (CLP) and Eurasian Watermilfoil (EWM), as well as Hybridized EWM.
- Aquatic plant surveys
- Long term Lake Vegetation Management Plan
- Lake Management Plan
- Meeting expense
- Newsletter publication and mailing and more...

There are no paid positions in our Lake Association - we are all volunteers.





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Crooked Lake Test Treatment Proves Highly Effective

by Dawn Doering, Information & Education Coordinator, Coon Creek Watershed District

After nearly 30 years of infestation and treatment of Eurasian watermilfoil (EWM), Crooked Lake in Anoka County was found to have just one EWM plant this month after an experimental treatment regime was approved by the Minnesota Department of Natural Resources (MDNR) and initiated in 2016. The treatment knocked the EWM back from 60% occurrence in 2016 to less than 1% in 2017. In 2018 only targeted spot-treatments were needed. In 2019 no herbicide treatment was needed since just a single EWM plant was found.

Eurasian watermilfoil is an aggressive non-native aquatic plant that grows into thick floating mats, thereby shading out native plants needed for a healthy lake ecosystem while also hindering recreation. It was brought to Minnesota around 1990. Crooked Lake was one of Minnesota's first infested lakes.

Recently, scientists have determined that Eurasian watermilfoil can breed with our native Northern watermilfoil producing a hybrid Eurasian watermilfoil that can resist traditional treatment methods, at a high cost to lake associations and local governments. This hybrid species is in Crooked Lake.

The path to this test-treatment took years, spearheaded by the non-profit Crooked Lake Area Association (CLAA). Back in 2011 they hired Freshwater Scientific Services LLC president, James Johnson, to assist with native plant test plots, as suggested by Coon Creek Watershed District in the Crooked Lake comprehensive lake management plan. Johnson then provided lake surveys and treatment planning, becoming the CLAA liaison with the MDNR and guiding the lake association through the permit variance process. The variance allowed for the 2016 large-scale, low-dose herbicide treatment that had shown success in Michigan.

The CLAA spearheaded funding as well as the project, supported by partners: Coon Creek Watershed District, the cities of Andover and Coon Rapids, and Anoka County through AIS Prevention grants.



This very successful control effort against invasive hybrid Eurasian watermilfoil is a first in Minnesota and highlights the impact of strong partnerships in working towards a common goal.

Invasive Hybrid Watermilfoil: Identification Tips & Imposters

In stark contrast to 2016 when invasive hybrid milfoil was found at 60% of all survey points lakewide, only a single plant was found this summer! With hybrid milfoil now under control, it is important to be on the look out for any new regrowth to ensure continued success.

Tips for identifying invasive Eurasian & hybrid watermilfoil:


- Feather-like leaves in whorls of 4 around the stem
- Leaves have 10-20 pairs of leaflets
- Produces pink & white flowers above the surface






Above: 4 leaves in a whorl with ~13 leaflet pairs

Left: leaf arrangement along stem

Right: flower spike



Native Imposters: Below are some native look-a-likes also found in Crooked Lake. These plants play an important role providing shelter and food for aquatic critters, dissipating wave energy, and stabilizing the lake bottom!

| | | |
|--|---|--|
| Northern watermilfoil | Coontail | Chara |
|  |  |  |

Leaves in whorls of 4 like invasive milfoil, but with <10 leaflets

Photo credit: Minnesota Aquatic Invasive Species Research Center

Save Your Bait, Save Our Lakes

By Jessica Abarca, Anoka County

As the weather gets colder, ice anglers are gearing up for the winter fishing action. While you are packing up all the equipment you will need for the fishing trip, don't forget your bait. While there are many types of bait on the market now, many anglers still prefer live bait over others. The question is, what do you do with your bait after your fishing trip is over? Do you dump it in the trash, dump it in the lake, or let it freeze on the ice? There are many ways to dispose of live bait after the fishing trip is over. Some humane, some help others, and some are illegal. Did you know it is illegal to release live bait into Minnesota waters? There is a hefty fine attached, so instead of releasing live bait into the fishing hole, consider some other options: take bait home to reuse for a future trip, give it to another angler to use, or throw them away in the trash. By releasing live bait into Minnesota waters, you could be spreading aquatic

invasive species into the environment. Invasive carp can often be confused for common fishing bait and can be spread by anglers when they release their minnows into the water. Crayfish is another fishing bait that can also be invasive and cause problems with our lakes. There are a couple species of Crayfish that are invasive and causing fish habitat problems here in Minnesota. Join many others by helping save our lakes from invasive species by not releasing your live bait into our valued Minnesota waters.



Epic Ice Carousel 2019 By Julie Jared, CLAA Secretary

On Dec 15, 2019, Dan Anderson treated us with a Crooked Lake Ice Carousel! Dan and friends cut a 100 foot diameter circle in the ice, powered it by trolling motor, topped it off with a decorated Christmas tree and snowman, and made room for ice skating, hot chocolate, goodies and lake neighbors!

We had one awesome carousel time!

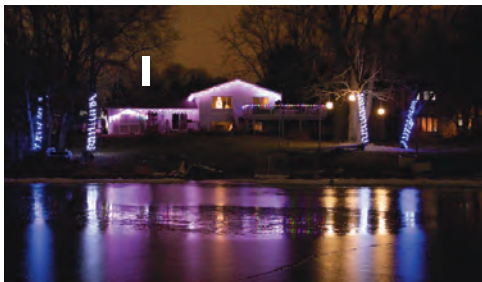
PS - We are so glad that Dan did not give up in 2018, when the first try at the carousel would not turn due to having too narrow of a channel cut.



The 2018 Second Annual Great CLAA Christmas Lighting Contest!

By Julie Jared, CLAA Secretary, Photos by Dan Anderson, Andover Watchdog

Winning Home: The Jared Family took possession of the hand-crafted CLAA Traveling Trophy this year at the 2nd Annual CLAA Christmas Lighting Contest! Thanks to Dean Keller of the NW Quadrant for his wonderful artistry. We look forward to another great competition this year!



The 3rd Annual Great CLAA Christmas Lighting Contest!



Contest Area: Homes on Crooked Lake, and those of members of CLAA!

Lakeside of home will be judged, unless you are a CLAA member not on the lake, in which case you pick the side!*

There will be two (2) contests *plus* a participation drawing!

- **Committee Choice:** Judging will occur 12/19/19 by committee.
- **Facebook Choice:** Get the most Facebook 'Likes' by 1/2/20 and you win! Photos will be taken by committee on 12/19/19 and posted on Facebook.

Winnings: Traveling Trophy, Bragging rights, CLAA T-shirt, and gift card!!

PARTICIPATION DRAWING: Put up any lights and your house will be entered a drawing for a gift!

All winners will be announced at the CLAA Winter Meeting

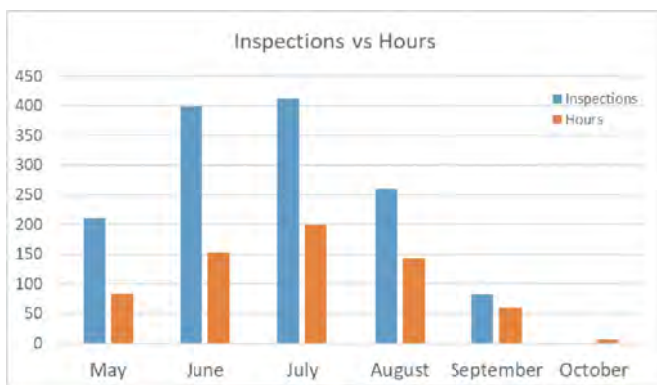
*CLAA member contestants not on the lake, please email Paul at paulemartin@comcast.net to enter.

Crooked Lake End Season Watercraft Inspection Data 2019

By Jessica Abarca, Anoka County

There were four county watercraft inspectors working at Crooked Lake boat launch in 2019. They worked from May to beginning of October. The boat launch was very busy in the beginning of the year and slower as the season went on. The boat plug violations are a little higher than we want to see. Next year we are looking into different ways to educate more boaters about the laws and hopefully decrease the violation rate. We will be having inspectors at Crooked lake in 2020. Make sure to stop by and say Hi!

| | Inspections | Hours | Inspections per Hour |
|--------------|-------------|------------|----------------------|
| May | 210 | 84 | 2.50 |
| June | 400 | 153 | 2.61 |
| July | 412 | 199 | 2.07 |
| August | 260 | 142 | 1.83 |
| September | 82 | 60 | 1.37 |
| October | 0 | 6 | 0 |
| Total | 1364 | 644 | 2.11 |



| Boat Plug Violations | | |
|----------------------|----------------------------|-------------|
| Month | Violations/ Entering Boats | % |
| May | 3/120 | 2.50 |
| June | 14/251 | 5.58 |
| July | 13/249 | 5.22 |
| August | 7/142 | 4.93 |
| September | 5/45 | 11.11 |
| October | 0/0 | 0 |
| Total | 42/807 | 5.2% |

| Plant Violations | | |
|------------------|----------------------------|--------------|
| Month | Violations/ Entering Boats | % |
| May | 4/120 | 3.33 |
| June | 7/251 | 2.79 |
| July | 8/249 | 3.21 |
| August | 3/142 | 2.11 |
| September | 1/45 | 2.22 |
| October | 0/0 | 0 |
| Total | 23/807 | 2.85% |

Yearly Crooked Lake Watercraft Inspection Data

| Year | 2015 | 2016 | 2017 | 2018 | 2019 |
|----------------------|--------------|-------------|--------------|-------------|--------------|
| Hours | 288 | 519 | 702 | 410 | 644 |
| Inspections | 533 | 956 | 1500 | 998 | 1364 |
| Inspections/Hour | 1.85 | 1.84 | 2.14 | 2.43 | 2.11 |
| Boat Plug Violations | 35/302 11.6% | 38/526 7.2% | 4/837 .48% | 28/564 4.9% | 42/807 5.2% |
| Plant Violations | 20/302 6.6% | 39/526 7.4% | 25/837 2.99% | 36/564 6.4% | 23/807 2.85% |

Culvert Action! Stormwater Runoff Quality Improvements

The City replaced an existing deteriorated 36" corrugated metal culvert flowing from a wetland complex into Crooked Lake with a 36" concrete culvert. In addition, they added a manhole into the culvert system that will provide sedimentation cleaning and debris skimming, reducing the amount of sediment and floatables that get into the lake from stormwater runoff.

On 135th Lane, the city also installed a storm sewer system that discharges into the lake. Prior to the project, runoff would flow down a steep hill and erosion was taking place, which brought sediment into the lake. The city installed a similar structure as above on this system, plus smaller rain events will be filtered through a small rain garden / infiltration basin prior to discharge into the lake. **Jason Law 5/22/2019**

New Adopt a Drain Program is Taking the Metro by Storm!

By Emily Johnson (Anoka Conservation District) and Britta Dornfeld (Coon Creek Watershed District)

There's a new program in the seven-county metro area that's taking the streets by storm. Since its official launch in May of 2019, over 4,000 residents have joined the movement to adopt a storm drain, making it the largest community engagement program of its type in the entire United States!



Storm drains are common on urban and suburban streets but are often overlooked. We pay little attention to where all that water goes when it rains and instead rely on storm drains to do their job. Quietly and efficiently, they carry water runoff from streets and other hard surfaces through pipes underground, sometimes flowing directly to local streams, lakes, and wetlands. Anything picked up by that storm water is carried with it, dumping pollution into our water! Even organic debris, like fallen leaves and grass clippings, can be pollutants because they add artificially large amounts of nutrients that can cause increased algae growth.



So, what can we do about it?

The Adopt-a-Drain program is one local answer to preventing pollution from getting into our waters, and is so easy you can get involved right away! The commitment is completely voluntary and only takes a few minutes every month. To learn more, see the program's collective impact, and sign up, visit www.Adopt-a-Drain.org. Are you ready to adopt your drain and join the movement?

Well and Septic Maintenance Training

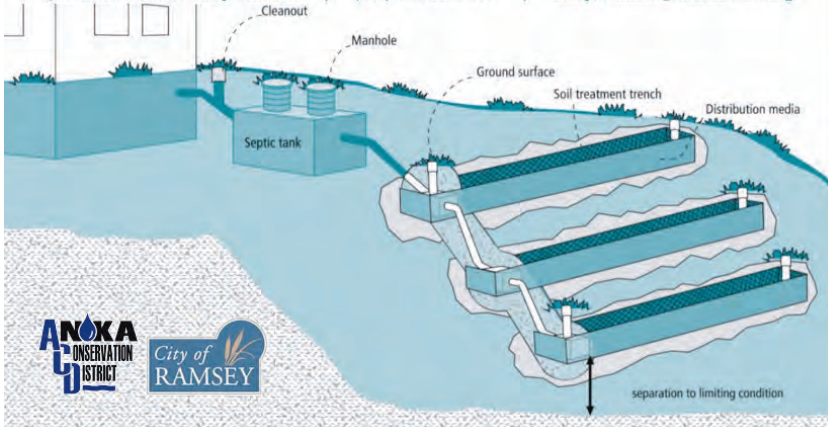
Thursday, March 12th, 2020 | 5:00pm - 7:00pm

Ramsey City Hall - Alexander Ramsey Room | 7550 Sunwood Drive NW, Ramsey, 55303

Join us for a **free** septic system and private well education class hosted by the City of Ramsey and the Anoka Conservation District with training provided by the UMN Onsite Sewage Treatment Program.

Register Here: well-and-septic-maintenance.eventbrite.com

Questions? Contact Emily Johnson | (763) 434-2030 x17 | Emily.Johnson@AnokaSWCD.org



Thank you CLAA Sponsors!



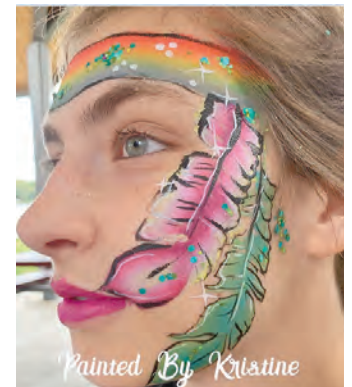
CLAA Summer Picnic - at the renovated Crooked Lake Park and Beach

by Julie Jared, CLAA Secretary, Photos by Josephine Larson, NW Quadrant



Paul Martin was presented with a gift for serving on the board longer than anyone can remember!

Lake neighbors enjoyed a beautiful day at the lake along with great picnic food, yard games and face-painting!




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9th Annual Polar Plunge for Special Olympics!

SATURDAY, FEBRUARY 22, 2020
 Plunge Begins at 1:00 pm
 Crooked Lake Park
 13180 Crooked Lake Blvd NW

**Jump in to help make 2020's
 goal of \$ 155,500!**

| | | | |
|-------------|--------------|-------|------------|
| 2019 | 537 Plungers | | \$ 156,034 |
| 2018 | 560 Plungers | | \$ 155,260 |
| 2017 | 639 Plungers | | \$ 191,283 |
| 2016 | 733 Plungers | | \$ 187,612 |



10th Annual 4th of July Boat Parade 2019

by Julie Jared, CLAA Secretary, Photos are by Paula Foley, NE Quadrant



Congratulations to the 2019 Crooked Lake Annual 4th of July Boat Parade Winner,
Dan Anderson!

The competition was FIERCE again this year!

Thank you to the 4th of July Boat Parade Committee: Lisa Beckermann, Paula Lohse and Jessica Waks for hosting this grand parade!



CROOKED LAKE
area association

Paul Martin
2926 129th Ave NW
Coon Rapids, MN 55448
Phone: 651-755-4656
E-mail: paulmartin@comcast.net



WINTER GENERAL MEETING
Hope to see you at our **Winter General Meeting** on
Thursday, February 20, 2020, 6:30PM
Legacy Academy School
3037 Bunker Lake Blvd. Andover (entry door #6)



The mission of the Crooked Lake Area Association is to act as an advocate of the lake and to establish and promote a strong sense of community among the residents on and around Crooked Lake.

★ **CLAA volunteer terms up for re-election** ★
★ **President & Vice President** ★
★ **Quadrant Leaders – NE and SW** ★
★ **Andover City Council Watchdog** ★
★ They will be elected at the Winter General ★
★ Meeting on 2/20/20. ★

From the Treasurer's Desk by Grant Schmalzer

The membership suggested donation amount to the lake association is **\$35** per year or \$20 if you live off the lake. You can donate anytime from January 1 – December 31st. We are a 501(c)3 corporation which means that all money donated by you is tax deductible. If you have **not** sent in your donation for this year (since January 1st, 2019), now is a great time to do so!



If you are not sure if you have made a donation for 2019 send me an email gs2175@gmail.com or call **612-965-4631** and I will look it up.

List of Officers and Phone Numbers:

- Gary Nereson 612-961-0358 President
- Dan Jared 612-280-7054 Vice-President
- Grant Schmalzer 612-965-4631 Treasurer
- Julie Jared 763-229-7457 Secretary
- Melissa Sandeen 763-670-6457 Quadrant Leader - SW
- Katie Grandell 612-702-5127 Quadrant Leader - NE
- Brian Graves 612-282-8803 Quadrant Leader - SE
- Joe Mantel 612-419-7857 Quadrant Leader - NW
- Joel Friday 612-868-6287 Coon Rapids Watchdog
- Dan Anderson 763-427-0964 Andover Watchdog
- Paul Martin 651-755-4656 Online Director at Large

Volunteer Appreciation Night Out

If you volunteered in 2019 to help out for an event/project on Crooked Lake you will be receiving an invite soon for our **Night Out at the Pizza Ranch in Andover on December 1st, at 4:00 PM**



ANNUAL MEMBERSHIP/DONATION FORM

2019 2020

Name: _____

Address _____

City/Zip: _____

Phone: _____

E-mail address: _____

I'm GREEN...please email me the newsletter next year.

Please include your
Lake Owner Annual donation of \$35.00 or
Lake Watershed Annual Membership donation of \$20.00

Make check payable to: **CLAA**
Send to: **Grant Schmalzer**
13021 Kerry Street
Coon Rapids, MN 55448