



**The U of M Comes to Lake Washington
(See details and meet Meg Duhr on pages 5/6)**

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FALL NEWSLETTER, 2020

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General Issues:
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The Lake Washington Newsletter is published three times a year (Spring, Summer and Fall) by the Lake Washington Improvement Association. It is distributed free to lake property owners and friends around Lake Washington.



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End Of The Dock

By Steve Grotbo, President

This summer at the lake will definitely be one to remember. Like many people, I have been told to work from home until the end of this year. So with that, I shifted to working from the lake and just going back to the Minneapolis home one night a week – too many people and riots to feel comfortable. Lake Washington missed out on the rain this year compared to Minneapolis, which I believe is the reason for so few bugs. This in turn caused lower water levels, which allowed many of the weeds to make it to the surface. Guess we have to take the bad with the good when it comes to the balance with nature.

The U of M Minnesota Aquatic Invasive Species Research Center (MAISRC) has all of their events online this year. With that, it has allowed for a much more diverse and larger audience to participate in their events. As an added bonus, the events are either free or low cost. I encourage you to attend as we do have some Aquatic Invasive Species(AIS) in Lake Washington. Hopefully you also did the U of M survey so that they focus on items that matter to our lake. Additionally you should have received info from your shoreline captain on the AIS.

The census takers were out and about the lake this September. Many seasonal residents forget to fill out the census for their lake place to indicate nobody living there. Thus we get the takers approaching us people doing the walks to help update the status. In the end, no extra people are getting counted, it just saves that in person visit from the census taker.

The lwiaonline.com website keeps getting better all the time. I really found it interesting that we have 20 different inlets coming to the lake. For myself, I always just think of the flow being from Manuella to Stella to Washington and on to Washington Creek at the dam along highway 12. This is obviously the largest water inlet, but the flow rate on the others does have impact, especially in the spring.



Please remember to vote. Stay safe. Hope for a normal season next year.

Walleye Forage Study and Analysis

By Meg Duhr, Research Outreach Specialist

Minnesota Aquatic Invasive Species Research Center

University of Minnesota



In early July, I had the chance to spend time on beautiful Lake Washington with a crew of MAISRC researchers from Dr. Gretchen Hansen's lab studying AIS impacts to walleye populations. As the new Research Outreach Specialist for the Minnesota Aquatic Invasive Species Research Center (MAISRC), my job is to be the bridge between our researchers and the people who depend on our findings to more effectively manage AIS, including lake associations. This was a great opportunity for me to support our scientists in a hands-on way and now I have the chance to describe the study and what we were up to out on Lake Washington!

The current project builds off Dr. Hansen's previous research on zebra mussel and spiny water flea impacts to walleye and perch in Minnesota's large lakes. The study examined differences in walleye and yellow perch size and growth across lakes with zebra mussels, spiny water fleas, or both. Uninvaded lakes were included in the study as well. Hansen and her team found that walleye in their first year of life grew more slowly in the presence of zebra mussels and were 12-14% smaller at the end of their first summer. This matters because slower growth during the first year is associated with higher mortality—due to increased predation, lower energy reserves to help them survive through the winter, and

delayed access to a wider range of prey. These factors support other studies showing that size at the end of their first growing season is a reliable predictor of long-term survival for freshwater fishes. Perch results were not as clear, but initial results suggested that young perch are able to shift their foraging strategy enough to adapt to the food web changes wrought by the invaders.

This study has major implications for how we think about the future of walleye fishing in Minnesota. However, we also know that the large lakes included in the initial study, like Red Lake, Lake of the Woods, or Rainy Lake are not necessarily representative of the majority of walleye fishing lakes in Minnesota. Most of our walleye lakes are significantly smaller, so a second phase of the study using similar methods was proposed, funded, and is now being carried out on 14 small and medium lakes throughout Minnesota. 2020 was the second year of field work for this study and the team was on Lake Washington for a week this July.

Why was Lake Washington chosen to be a study lake? The researchers needed a mix of invaded and uninvaded walleye lakes to sample from and Lake Washington is a known zebra mussel infested water body. Additionally, because this project relies on DNR collaboration to share samples from summer gill netting surveys, lakes such as Washington that are scheduled for concurrent agency sampling efforts are prioritized.

Plankton Net



To understand the impacts of zebra mussels on walleye food webs in Minnesota's small and medium-sized lakes, the team uses stable isotope analysis of samples collected from throughout the entire lake food web to assess where young walleye fit into it. You may have seen people in waders and face masks with funny looking nets rooting around the shoreline vegetation and scraping bugs off logs and rocks. This is part of the protocol to collect insects and other invertebrates from the shallow, littoral zone. If you noticed a large, silver boat idling and circling around a seemingly random spot in the middle of the lake, that was us doing plankton tows or deep-water sediment grabs. And the people trolling around the shallows at 12:30 a.m. on a weeknight? That was us, attempting to catch young-of-the-year walleye and perch using a specialized gill net for sampling tiny fish.

Now that summer is over, the team is finished with their field sampling for the year, but much work remains in the lab sorting, counting, weighing, drying, and shipping samples to an isotope lab in California. Once isotope results are back, the process of interpreting, analyzing, and writing up the results will begin. Especially with the uncertainties of the COVID-era, it could be as long as a year from now until we have shareable results, but rest assured, the Lake Washington Association will be among the first to know what we find.

Walleye Forage Study and Analysis (continued)

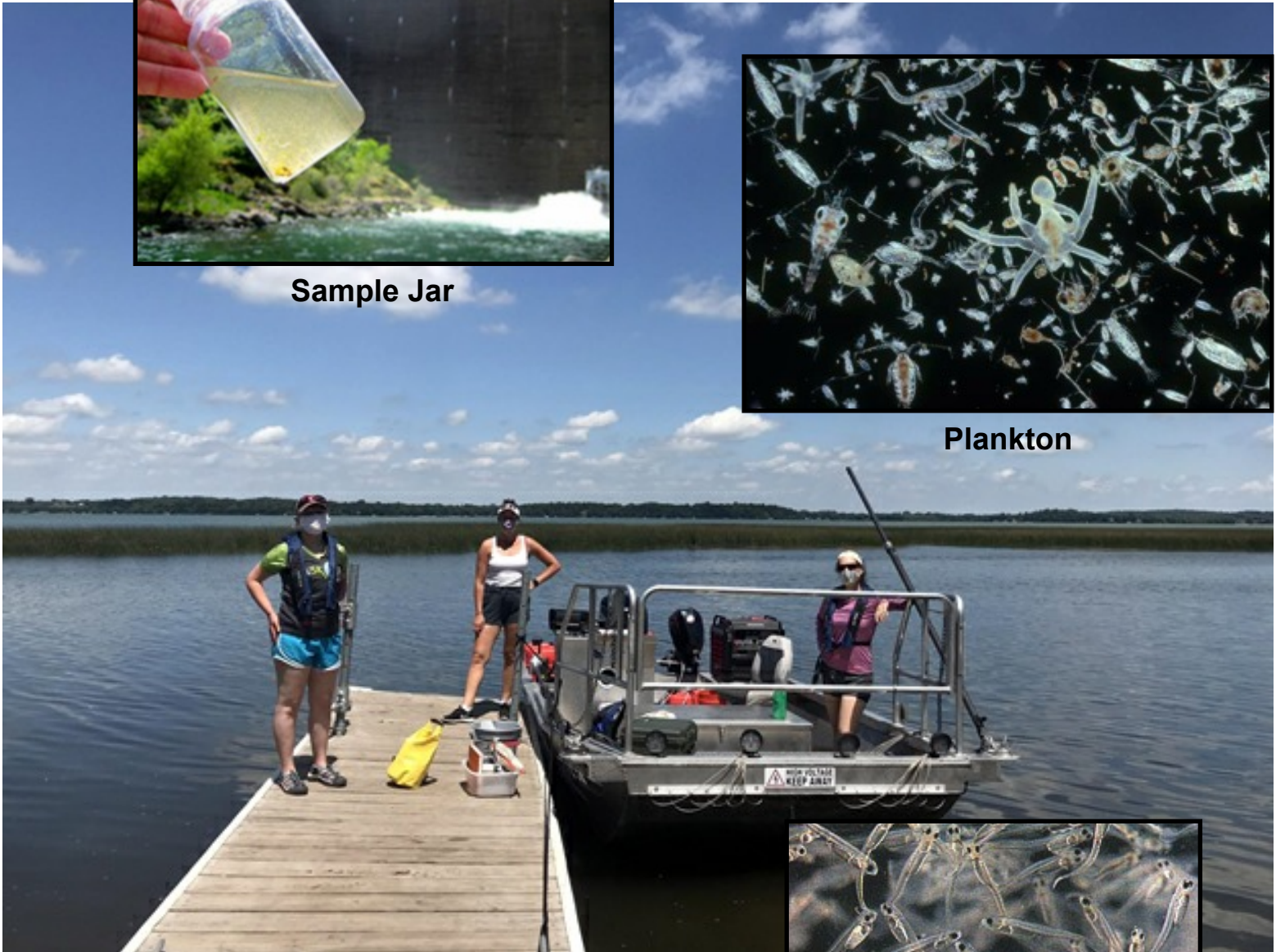
Although this study is somewhat unique among typical MAISRC projects in that it describes and characterizes the problem, rather than advancing an AIS control solution, we hope that these results will be a significant contribution to walleye management in zebra mussel-invaded lakes. Every lake responds differently to zebra mussels and specific information about walleye food webs will help inform the type and amount of future stocking. More effective stocking efforts can help sustain walleye populations while research continues to progress on long-term zebra mussel control through genetics and copper sulfate treatment. At MAISRC, we know that tackling difficult issues like zebra mussels requires addressing the problem at all angles and all time scales. Local fisheries managers need to know how to best manage the walleye populations we have now *and* we must work towards long-term solutions to the zebra mussel problem.



Sample Jar



Plankton



Walleye Fry

Shoreline Captains

By Laurie Johnson



What is a Shoreline Captain?

As a way to keep homeowners informed about the lake and their neighborhood, Lake Washington Improvement Association (LWIA) has created an information network called Shoreline Captains. It is the responsibility of each volunteer Shoreline Captain to convey information to approximately 25 of their neighbors-residents that live on the lake, near the lake, or anyone interested in the longevity and recreational use of Lake Washington.

Summary of responsibilities:

1. Welcome new owners to the lake and inform them of the Lake Washington Improvement Association (LWIA).
2. Visit homeowners in the assigned area to encourage annual participation in becoming a LWIA member and to keep addresses and phone numbers updated.
3. Help inform neighbors about events and issues that impact the lake and be available to answer questions. Refer them to a board member if needed.
4. Monitor the shoreline area in your neighborhood and report any concerns to a board member.
5. Be the eyes and ears for your area. Provide feedback to the board on concerns of property owners in the assigned area.

Interested in becoming a Shoreline Captain?

There are areas of the lake that do not have an assigned Shoreline Captain and areas where additional help is needed. If you are interested in becoming more involved, contact Laurie Johnson at lauriegailjohnson@gmail.com. Also, if you are not sure who your Shoreline Captain is, or would like to find out more, contact Laurie Johnson.

Meeker County Association of Lakes

By Pat Hanson

Our Meeker County Association of Lakes meets twice this year because of the pandemic. The last meeting we had to meet on the steps of the Bernie Aaker/Social Services building! Many lakes in our county have similar concerns as we do. We have such an active Lake Washington Association and our board is so knowledgeable about our Lake environment, grant writing, GPS navigation system on the boat, manning the video camera on the boat landing, membership leaders, newsletter editing, and caring about our Lake and members. So I wrote a little Acrostic poem, enjoy!

PANDEMIC

- P**arade of over twenty 'boats' on the 4th of July
A recipe to share(from our cookbook) with samples to nibble
Neighbors helping our neighbors (while social distancing)
Docks put back in the water by spring, yessss!
Everyone caring about our Lake and our neighbors
Memories of how we survived these six plus months and looking to the future
Ice breaking up in the spring so we can see our lakeshore
Children enjoying our Lake Washington water sports, eating s'mores, campfires, and fireworks.

(OK, all of us enjoying these activities!)



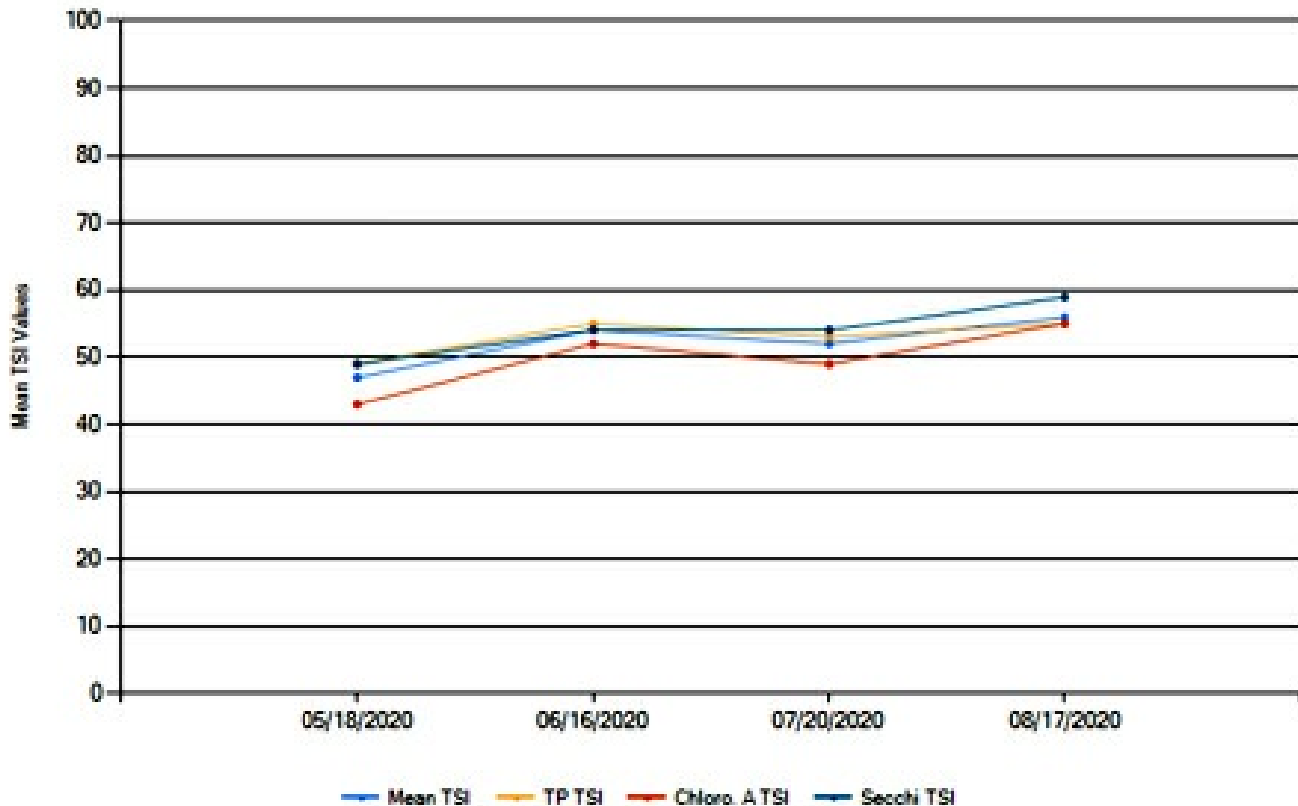
Water Quality Testing, Lake Water and Inlet Water

By Dave Rathe, Mike Wosmek, Cindy Hewitt, Laurie Johnson, and Ron Bubany

A significant amount of work has gone into upgrading the LWIA web site. A large part of this effort has been focused on the water quality section. We are trying to make it easy to navigate as well as easy to understand test result charts and graphs. With the amount of data both current and historical, this is taking time to complete and is not yet done, so please be patient and stay tuned, we'll get there.

Water clarity this year has been closer to what we've seen in the past, pre-zebra mussel era. Spring was clear and as the summer progresses the water got greener and less clear. We started out in May with being able to see the secchi disk down to 7.0 feet. Our last measurement as of this writing was 3.5 feet. The early summer measurement of 7.0 feet was a bit clearer than we saw pre-zebra mussel, but the late summer measurements are right in-line with historic depths.

Test results from lake water samples pulled this summer are shown in the graph below. TSI is a measurement of overall lake productivity (nutrient enrichment). The overall TSI of a lake is the average of the TSI for phosphorus (nutrient), chlorophyll-a (algae), and secchi depth (clarity). Higher numbers mean greener lake water with a higher level of nutrients.

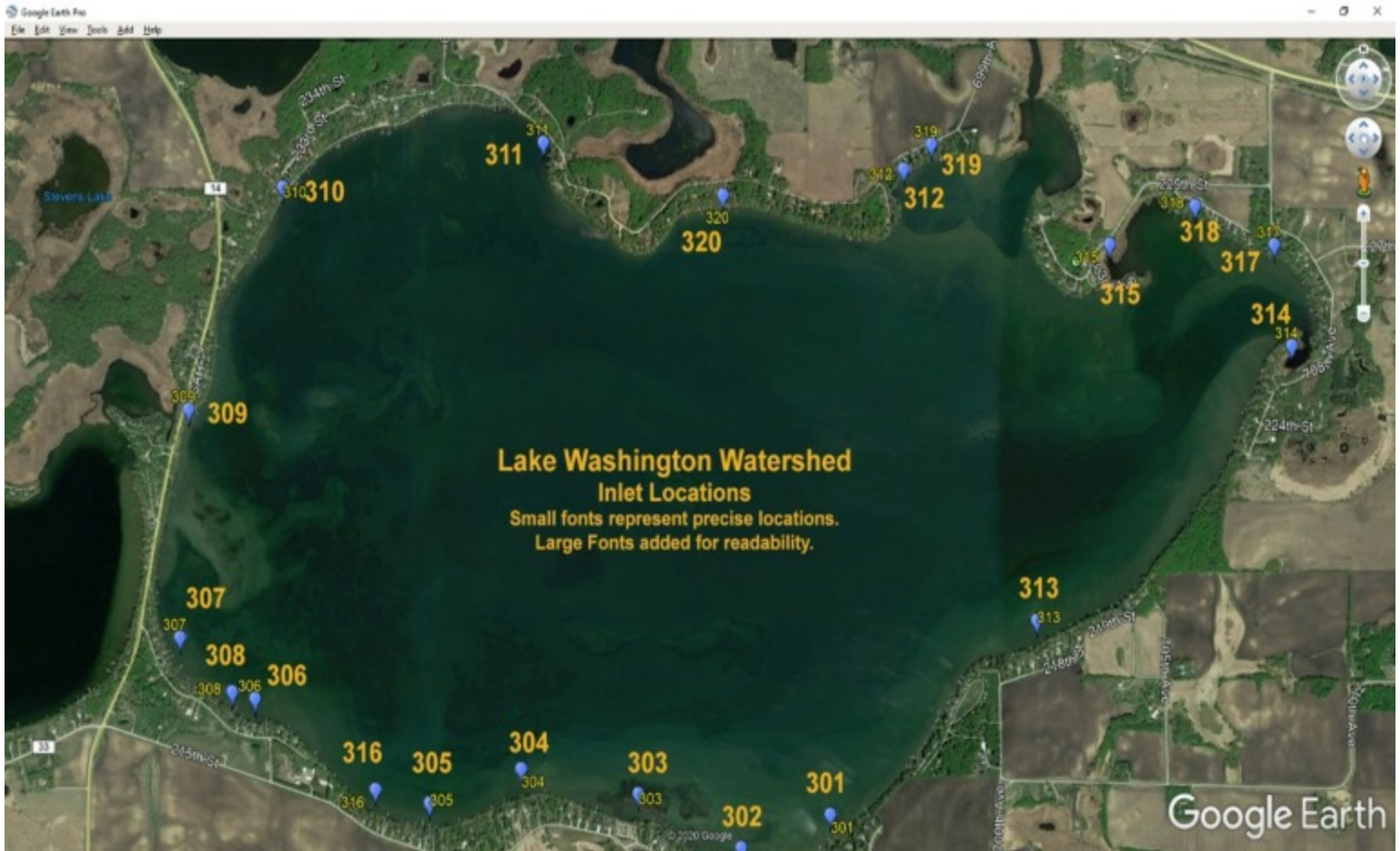


There will be one more water sample pulled for this year and sent to RMB labs for analysis. You can find specific test results on RMB Environmental Laboratory's web site <https://www.rmbel.info>.

Water Quality Testing (continued)

Inlet water flowing into Lake Washington: On June 30th following a 2 inch rain over 2 days, we pulled water samples for 6 sites (303, 308, 310, 311, 312, and 313). We saw lower flow rates than expected due to the ground being abnormally dry (per US drought monitor web site <https://www.droughtmonitor.unl.edu>). We sent the samples to RMB labs for Total Suspended Solids (TSS) and Total Phosphorus (TP) analysis.

Site Number	TSS (milligrams/liter)	TP (milligrams/liter)
303	2.6 mg/L	0.440 mg/L
308	1.6 mg/L	0.178 mg/L
310	10.4 mg/L	0.128 mg/L
311	8.4 mg/L	0.130 mg/L
312	8.1 mg/L	0.178 mg/L
313	< 1.0 mg/L	0.077 mg/L



We also increased the hole size by approximately 40% on the standpipe at Site 302 for increased flow rate. The hole size we selected initially had trapped quite a bit of debris. We will check flow rate again when we get enough moisture to actually get water building up around the standpipe. Might be awhile due to the dry conditions, (there is no water flowing at this time at Site 302).

Thanks to Mike Wosmek, Cindy Hewitt, Brett Rasmussen, Laurie Johnson, Ron Bubany, and Mark Olsen for all their help this year.

Watercraft Inspection/I-LIDS (Internet –Landing Installed Device Sensor)

By Dave Rathe

Watercraft inspection at Ellsworth Landing this summer on most Fridays, Saturdays, Sundays, and Holidays has been provided by Meeker County and the Minnesota DNR.

The Meeker County inspectors helped boaters entering and leaving Lake Washington by checking for AIS (aquatic invasive species) ensuring watercraft were clean & dry. The inspectors focused on manual decontamination to remove plants, organisms, and water from boats. And the most important inspection at least for me, was making sure my plug was in before launching my boat. Yikes, will I ever learn.

The Minnesota DNR provide a watercraft decontamination unit at Ellsworth landing some of the weekends. This equipment is shared with other area lakes, so Lake Washington doesn't always have this unit at the landing for boat decontamination. The unit uses high pressure and hot water to remove or destroy any AIS attached to your boat or watercraft. Hot water of 140°F kills adult zebra mussels and the high pressure water wash removes them. Only water is used for this wash, no other chemicals are used.

DECONTAMINATION UNIT



The decontamination system will be at area lakes through mid October.

Watercraft Inspection/I-LIDS (continued)

Our I-LIDS system at Ellsworth Landing helps to remind boaters to clean, drain, and dry prior to entering or leaving the lake. I-LIDS provides inspection coverage during the times Meeker County Inspectors or DNR Inspectors are not present. I-LIDS captures a 20 second video of boat launches and plays several audio messages to assist boaters with the decontamination process.



The upgrades completed last winter have improved the video resolution significantly. As of the date of this writing, we have captured over 6,500 videos. Environmental Sentry Protection, LLC is hired to review 4,200 videos per year and Cindy Hewitt (LWIA board member) also reviews videos. I-LIDS will be removed from the landing for winter storage in the October/November time frame.

Remember, Minnesota law requires docks and boat lifts to be out of the water for at least 21 days before putting them in another body of water.

Zebra Mussels

By Steve Grotbo and Dave Rathe

Once again this year our zebra mussel hotels (settlement plates) showed mostly immature zebra mussels. While docks, lifts, rocks, sticks, native mussels, etc. are loaded with mature zebra mussels, most of these have been in the water a long time. We don't understand why recruitment on the hotels is poor, maybe the wet spring, hotels installed on Memorial day are too late, mostly dry summer, water temperature wrong during propagation, our hotels are low rent.

The U of M's Minnesota Aquatic Invasive Species Research Center (MAISRC) has the results of the copper treatment on Lake Minnetonka. They have a control site (Robinson Bay - ROB) and treatment site (St. Alban's Bay - SAB) for comparing the results. Summary is

- Treatments effectively reduced zebra mussel veliger density, juvenile zebra mussel recruitment, and live zebra mussel density.
- Relative zooplankton mean density was reduced immediately after treatment and showed some recovery at two weeks.
- Chlorophyll concentration increased after treatment.
- Survival and copper residue in fathead minnows suggest sensitivity in this species.

MAISRC will continue to monitor Lake Minnetonka for another couple years, but in the meanwhile they are looking for a second lake to do a study on. Lake Washington meets all of these needs, so please do encourage the U of M MAISRC to pick our lake. More info on zebra mussel research is available at

<https://www.maisrc.umn.edu/zebramussel-research>

along with specific copper treatment results at

<https://www.maisrc.umn.edu/copper-control>.

The hotels were installed May 25th, removed from the lake September 7th and photographed. The top plate is shown below. Additional hotel photos are available on our web site.



Aquatic Invasive Species

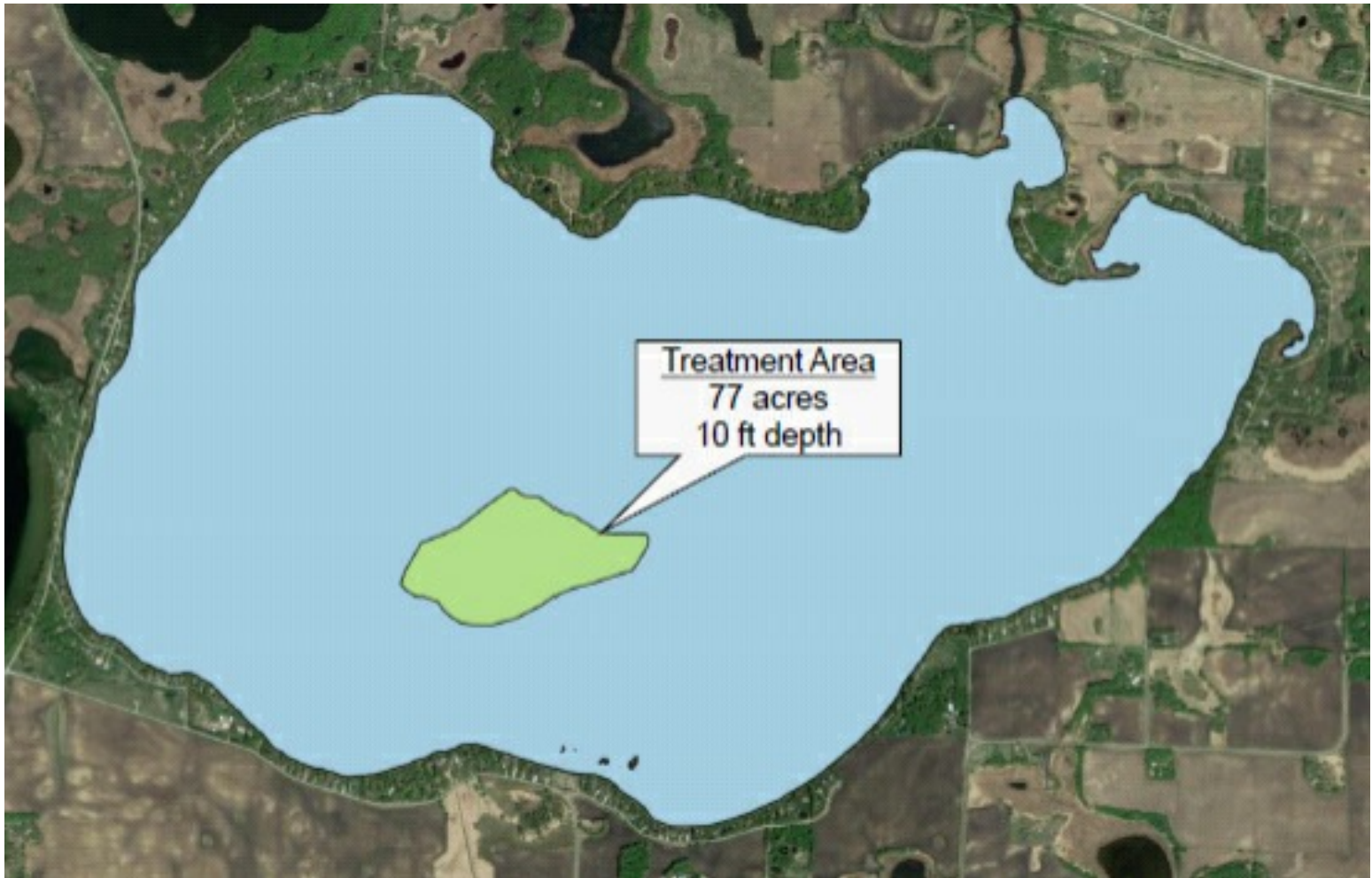
By Mark Johnson

This past August, we treated 77 acres for Eurasian Water milfoil (see map below). Small clumps were first discovered in this area back in 2018 and within 2 years it had grown into the larger dense patches that covered these 77 acres.

The lake has remained relatively clean since 2013 – the year that Eurasian Water milfoil was last treated. Eurasian Water milfoil is becoming more common on the lake and will most likely require additional treatments over the next few years. Next year Ron Bubany and I will focus our vegetation surveys near the shorelines along with waypoints that we have identified traces of milfoil.

Treatment of invasive species is costly and is paid thru your donations and grants from the State of Minnesota.

LAKE WASHINGTON



Thank you for your support!



Committee Reports

Social Committee

By Sandy Wosmek



LEAVES FALLING ----- AUTUMN CALLING

You can feel Fall in the air. Summer of 2020 is nearly over.

It has been an unusual summer -- no annual meeting in May and no pot luck in August. Hopefully 2021 will be better. No dates have been set, but usually we have the annual meeting the first Saturday of May and the pot luck the first Saturday in August. Watch the Spring 2021 newsletter for dates and details.

For now enjoy the last of the summer days and nights.

Have a great fall and winter and bring in the new year of 2021 !!!!!

Cormorant And Pelican Committee

By Steve Grotbo

No news yet on the "Migratory Bird Permits: Management of Conflicts Associated with Double-Crested Cormorants (*Phalacrocorax auritus*) Throughout the United States". A total of 1,053 comments were received for the second round, with a rough look seems about an even split for those wanting to take no action and those for controlling the population. It stated that a decision was to be made within 60 days, so that being around beginning of September. So far, no update has been posted to <http://www.regulations.gov/>. To see updates, search for "FWS-HQ-MB-2019-0103-1411" at this website.

Finance Committee

By Lyle Walker

Lake Association activity this season has been significantly reduced and as a result memberships, while still strong at 197, are down from 242 at this point last year. The 197 memberships generated \$9,750 for the association. Sixty-nine members have contributed \$1,927 to the Dassel Fire Department. Those funds will be forwarded to the fire department in October.

We did incur a major expenditure of \$38,300 for milfoil treatment in July. A portion of this expenditure will be recouped from approved grant requests.

The cash position as of this writing remains strong at \$103,000.



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