

Rice Lake Wetland Restoration Progress

Many hours were spent in the spring of 2019 working with Detroit Township on their decision to partially abandon a 1 mile road area on Anchor Road starting at Becker County HWY 21 and to the west through the wetland area. Detroit Township was concerned with the future long term maintenance costs on Anchor Road after the project was completed. The Township and the majority of the nearby residents concluded a partial road vacation was in the best interest of the affected parties and the Township officially vacated a part of Anchor Road on June 11, 2019. The ditch culverts and road terminus cul-de-sac will be constructed on the west end of Anchor Road.

The District advertised for bids on the project in July. Three bids were received, but unfortunately, all were considerably higher than the engineer's project construction estimate. The PRWD Board of Managers voted to reject all bids. Options to move forward included; 1) proceeding with only the upper structure or 2) wait until early 2020 to rebid the entire project in hopes that the time of year would yield more competitive pricing. If option 2 was agreed upon, additional financing would be needed. The District made a request to the MN Board of Water and Soil Resources to extend the grant for a one-year period to June 30, 2021.

Detroit and Curfman 2019 Chemical Treatments	Acres	Costs
Curly Leaf Pondweed 6/5/19	62.9	\$47,735
1st Flowering Rush Treatment 6/26/19	90.9	\$13,513
2nd Flowering Rush Treatment (7/30/19)	60.4	\$ 9,436
Aquatic Vegetation Roadside Pickup Program		12,172
Administration Management and Becker County tax collection fees		\$4,790

Long Term MN DNR Zooplankton Study– District continues to assist the MN DNR by collecting samples to study the potential effects of Zebra mussels on the lake food chain by studying the populations of zooplankton over a 5-7 year collection period.

District lakes included in the MN DNR study are Detroit, Sallie, Melissa. The study began in 2016 and serves as the baseline year when Zebra mussels were in the early stage of infestation and densities were very low. By 2022, enough data will be collected over time to determine if there is an inverse relationship between Zebra mussel and zooplankton populations.



Above: Summer Intern, Connor Haugrud, demonstrates how zooplankton samples

Cost Share Opportunities

The District continues to encourage the use of Best Management Practices (BMPs) when considering ways to enhance your property. Shoreline buffers consisting of native vegetation can benefit the fish in the lake and the pollinators on the shore. For those living off the lake, consider a raingarden or vegetated swale to help manage stormwater on your property.

The District pays 75% of eligible expenses, up to \$500 for single family homes, \$1,000 for condo and apartment complexes, and \$1,500 for not-for-profit religious organizations, public and private schools, local government agencies and private businesses.



June 2020

PARK HOTEL, DETROIT LAKES, MINN.—57



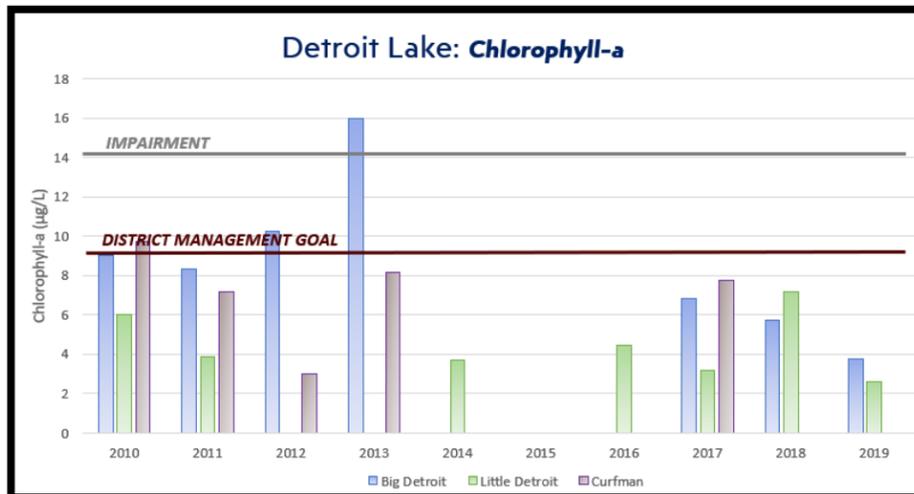
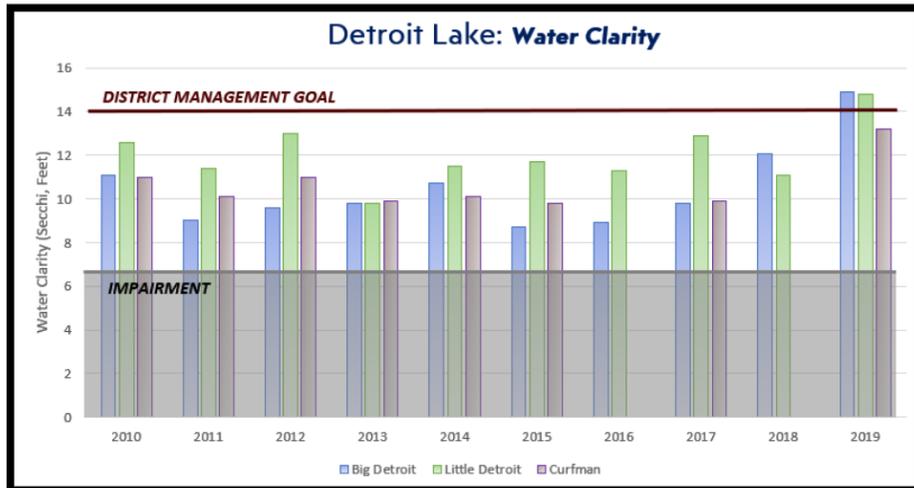
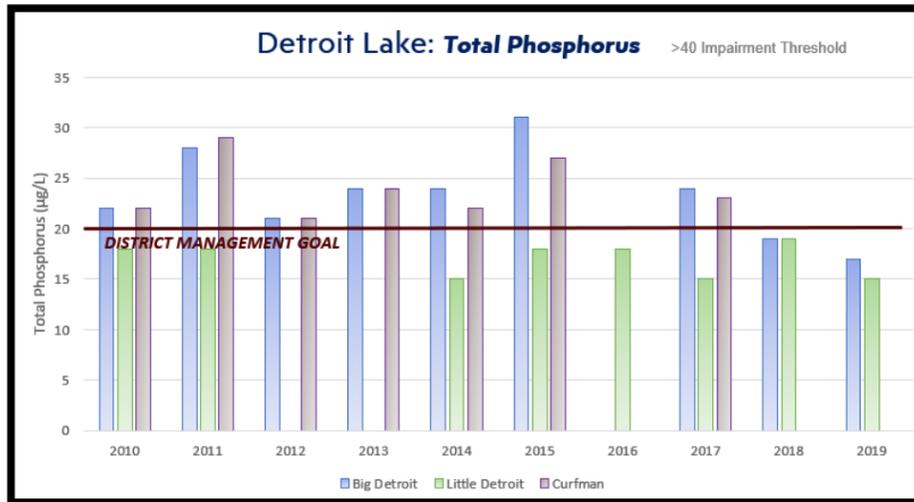
Concordia College Volunteer Project—

PRWD Summer Intern, Connor Haugrud, initiated a community project with members of the men and women's Concordia College at Moorhead's cross country teams. As part of their pre-season camping trip, the teams historically donate a day of their time and energy to assist a community with various projects.

In 2019, both the City of Detroit Lakes and the Watershed District were the recipients of their efforts. Some team members pulled invasive plants from the Highway 10 outlook site and the raingarden located in the City Park, while a second group used a stencil to spray paint "no dumping" verbiage near storm drains from the Kent Freeman Arena area to the Western edge of Holiday Inn.



PRWD Office—Although 2020 has been full of challenges, the Watershed District staff has adapted and our work continues. We can't say "business as usual", but we can say we are here if you need us. The office is open and appointments for permit site visits and other issues can be scheduled. As always, we are only a phone call away (218) 846-0436. We hope you are all well and enjoying lake life.



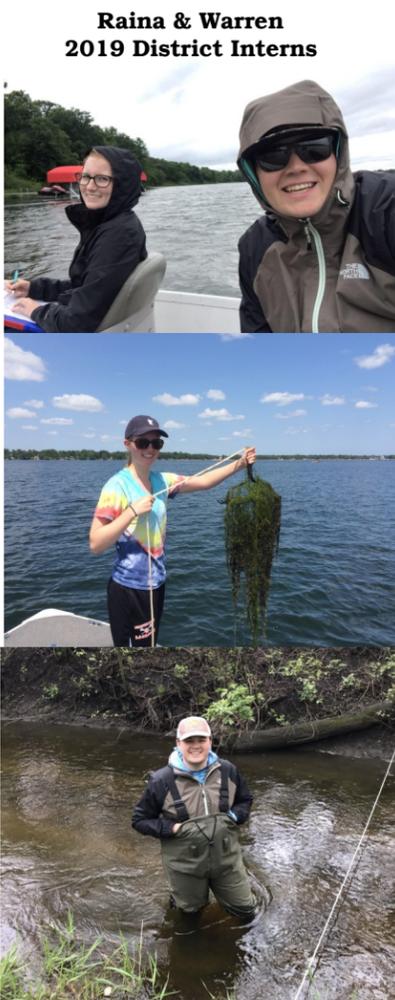
2019 Weather

The first three months of 2019 experienced above normal snowfall with colder than average temperatures. The warmer temperatures in April were very welcome, however, April 12th dumped ten inches of fresh snow in the area, which delayed the April 25th ice-off event.

The previous wet fall of 2018, along with the heavy snowfalls in early 2019, caused high water in the lakes and streams when things opened up in the spring. Heavy summer rains kept the lakes and streams at high levels. In July, 4.72" of rain fell, followed by August with 5.71" and September saw 4.88". Area streams were up to their banks and area lakes stayed as much as 10" above 2018 averages.

10 Year Monitoring Plan

- Water Quality Sampling Big & Little Detroit—2020-2029 Curfman—2020, 2025
- Vegetation Survey-2024, 2029 Big, Little Detroit, Curfman
- Shoreline Alteration /Water Equipment Survey—2023, 2028
- Detroit Zooplankton Study—2016- 2022



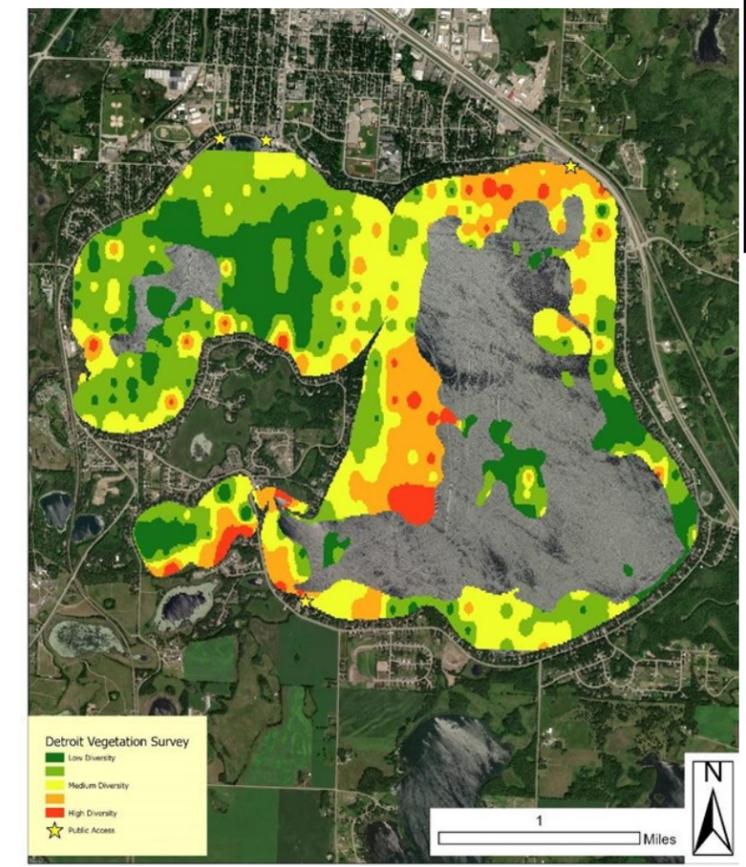
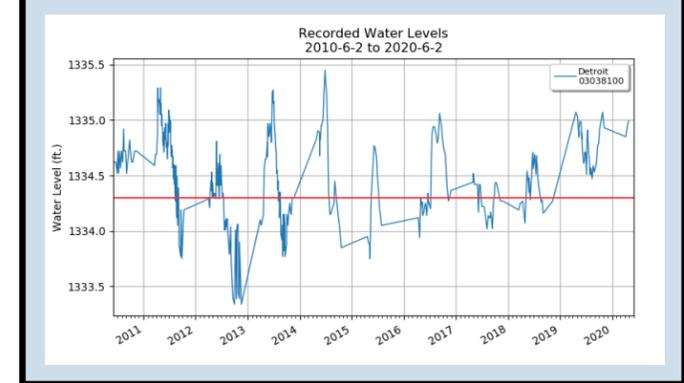
INTO THE DEPTHS...

Water Quality.

The summer water clarity (secchi) on Big Detroit was well above historical readings, averaging 14.5ft. The lowest reading recorded was 11.5 ft in mid-July with clarity readings increasing to 18 ft in August. Phosphorus (nutrients) and Chl-A (algae) readings were well below historical averages. For example the summer phosphorus average on Big Detroit was 16 mg/L and back in 2015 the same average was 31 mg/L. The Chl-A summer average reading was 4 mg/L and back in 2013 the average was 16 mg/L in the "impairment" range. Little Detroit and Curfman followed the same water quality patterns. **For sampling information see the website: www.prwd.org/data-monitoring.**

Water Levels.

2019 had high water levels, ranging 8"-10" above the 1334.99 ft. (NGVD 29) Ordinary High Water level throughout most of the year.



Aquatic Vegetation Roadside pick-up

This program runs from Memorial Day through the end of September and is for aquatic vegetation only. Bring your lake vegetation to the curb and Watershed District seasonal staff will pick it up once per week.

If there is yard debris or garbage in your pile, it may not be picked up. **Only vegetation removed from the lake will be picked up by the Watershed District.**

Diatom Bloom—May 2019

Little Detroit and Long Lakes experienced an algae bloom in late May to early June caused by a Diatoms. Diatoms live in clean, cool water and under certain springtime conditions, multiply very rapidly and when air temperatures rapidly rise and increase the water temperature, the Diatoms die off causing the water to turn brown as seen in the picture of Little Detroit below.

Detroit & Curfman Vegetation Survey—August 2019

Within the littoral lake area (< 15 ft depth), over 400 samples points were reviewed to map the lake aquatic vegetation species and abundance. Twenty species were found across the lake with Chara, Common Bladderwort, Northern Watermilfoil, Water Celery, and Water Moss the most common species. Highest plant diversity (red and orange) locations were along the North and West shores of Big Detroit, the areas between Curfman and Big Detroit, and along the south shore of Curfman.

Little Detroit and the west side of Curfman exhibit low plant species diversity (green) with most of these shallow basins having up to 5 plant species present.

Aquatic invasive species present in all basins include Curly-leaved pondweed and Flowering rush.