



Boulder Lake Health Report

Bill Niemuth
President
Boulder Lake Advancement Association
August 2019

BOULDER LAKE

Introduction

During Summer 2018, the Wisconsin DNR conducted a study of Boulder Lake as part of its Directed Lakes program. Boulder Lake was one of seven lakes that benefitted from this program in 2018.

The study reviewed a number of areas contributing to the health of Boulder Lake including: Aquatic plants, woody habitat, and shoreland survey. The study does not assign a grade, but provides a snapshot about the lake's health. The collected information provides a baseline with the goal of repeating the study in five to seven years to identify trends.

This summary will not delve into every detail of the study. It is intended to provide lake and watershed property owners with some educational information, and most importantly, items each of us can do to protect and improve Boulder Lake's health.

What is the Prognosis?

- **Overall, no major problems/emergencies were found.**
- Areas of concern include:
 - A couple of areas of active erosion. These are repair priorities because soil, and everything in it, is running freely into the lake.
 - There is not enough coarse woody habitat in the lake, especially in the developed areas on the east side.
 - Shrub cover along the shoreline is poor to fair, especially in the developed east side, but around the entire lake.
 - Piers, boatlifts, and boathouses are prevalent.
- Each of the concerns above negatively impact the health of any lake.
- Some areas we can improve and some, like piers and boathouses, are elements of development we likely cannot do much about.
- Some areas that are not healthy for the lake may be dear to us and not negotiable for improvement, but please mitigate them by taking another action.

What Can We Do?

- Before we get into the details of the study, it is important we understand there are things each of us can do to positively impact the health of Boulder Lake.
- The next slide is the Top 10 list.
- **Let's each commit to doing at least one thing to improve the health of Boulder Lake!**

Top 10 Healthy Lake Actions

Do not use	Do not use fertilizers or chemicals on your property.
Check and maintain	Regularly check and maintain your septic system.
Maintain/add	Maintain/add a 35-foot natural vegetation area along your shoreline (do not mow within 35-feet of the shoreline).
Leave	Leave natural woody items in the lake (trees, branches, logs, leaves).
Ensure	Ensure you and your visitors only launch clean boats into Boulder Lake to guard against aquatic invasive species.
Do not pull or rake	Do not pull or rake natural vegetation out of the water along the lakeshore.
Create	Create rain gardens or diversions for water so it does not flow off impervious surfaces and into the lake.
Limit	Limit the number of piers, boat lifts and boathouses.
Do not rake	Do not rake or blow yard debris into the lake.
Become	Become trained in the Clean Boats Clean Waters program and volunteer a few hours a year at Boulder Lake's landing.

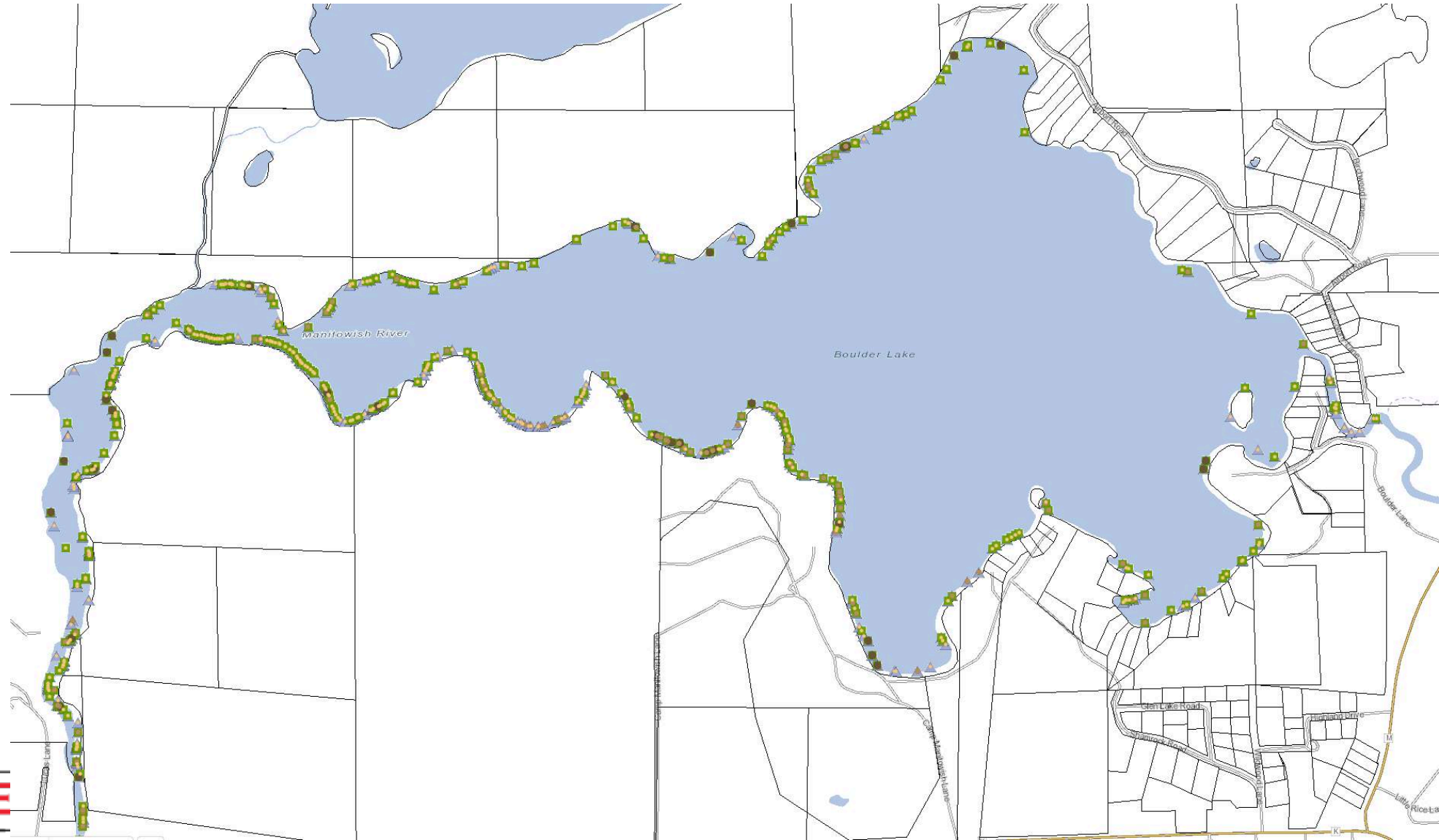
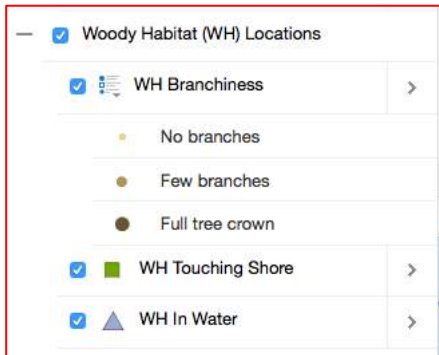
What Will Taking Actions Mean?

- Each of the actions on the preceding page will have positive effects.
- Preventing fertilizers, chemicals or septic effluent from entering the lake will ensure we have safe and quality water that will not accelerate the growth of weeds (native or invasive) and cause blue/green algae blooms.
- Returning the shoreline to a natural/native state and allowing wood to be present will improve the fishery and wildlife improving the water quality.
- Ensuring only clean boats are put into the lake will guard against aquatic invasive species.
- You get the idea - let's put good stuff into the lake and lakeshore and keep the bad stuff out.

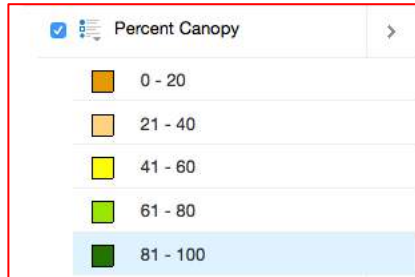
Looking at the Details and Your Property

- The study data is visually included in an interactive map on the DNR's website.
- Once you get to it, it is not difficult to navigate, but it takes a bit of time, depending upon your internet connection speed.
- In the following slides, you will find screenshots of a few of the more impactful maps.
- Hopefully, you will be able to quickly identify your property and determine if you are OK in that particular area or could use some improvement.

Woody Habitat

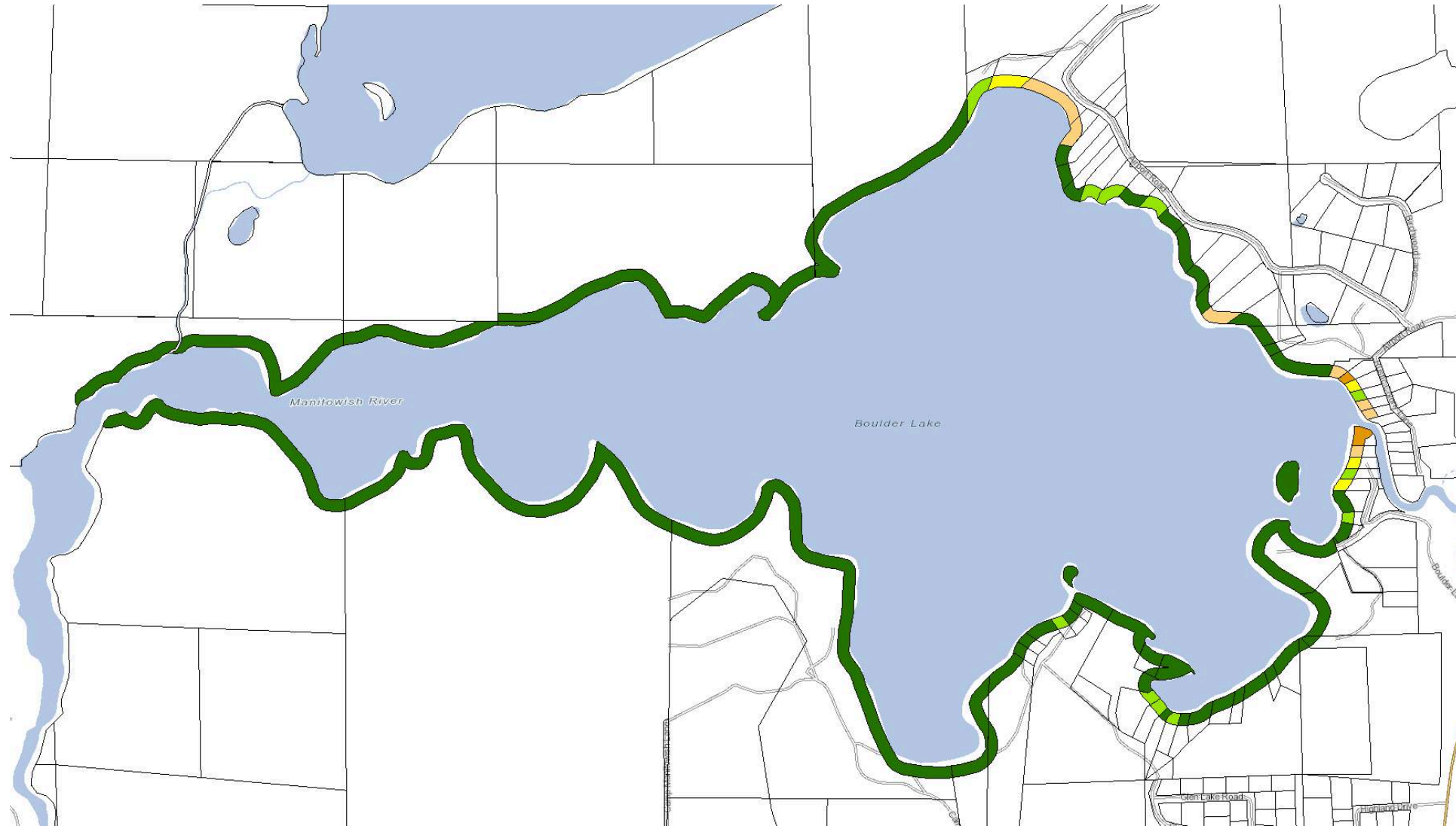


Riparian Coverage – Tree Canopy on the Lakeshore

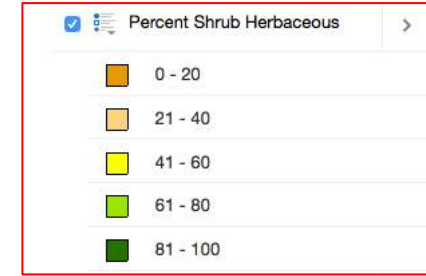
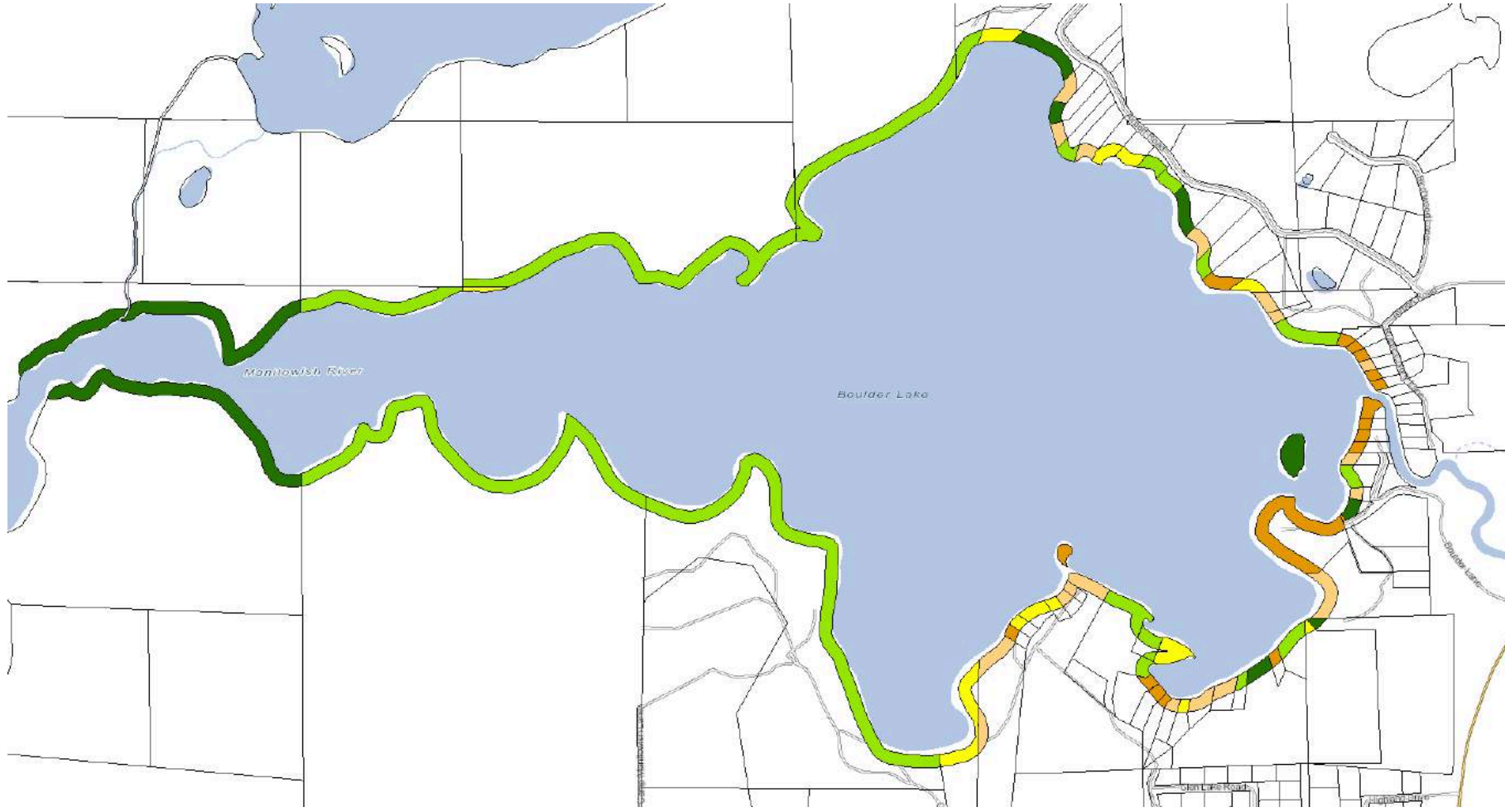


Dark green, or the higher percentage is best.

Dark orange and a lower percentage is worst.



Riparian Coverage – Shrub Coverage within 35 Feet of the Lakeshore



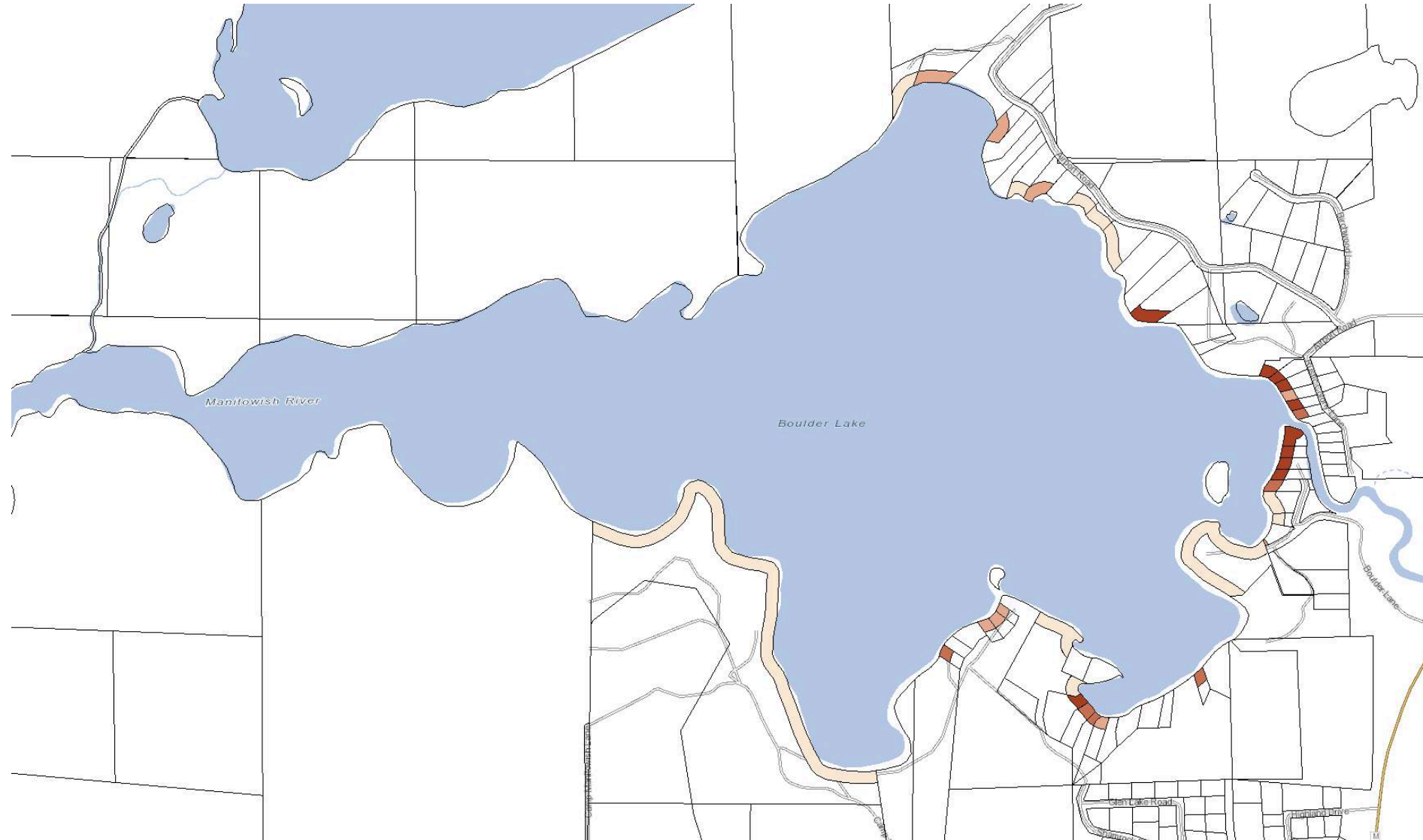
Dark green, or the higher percentage is best.

Dark orange and a lower percentage is worst.

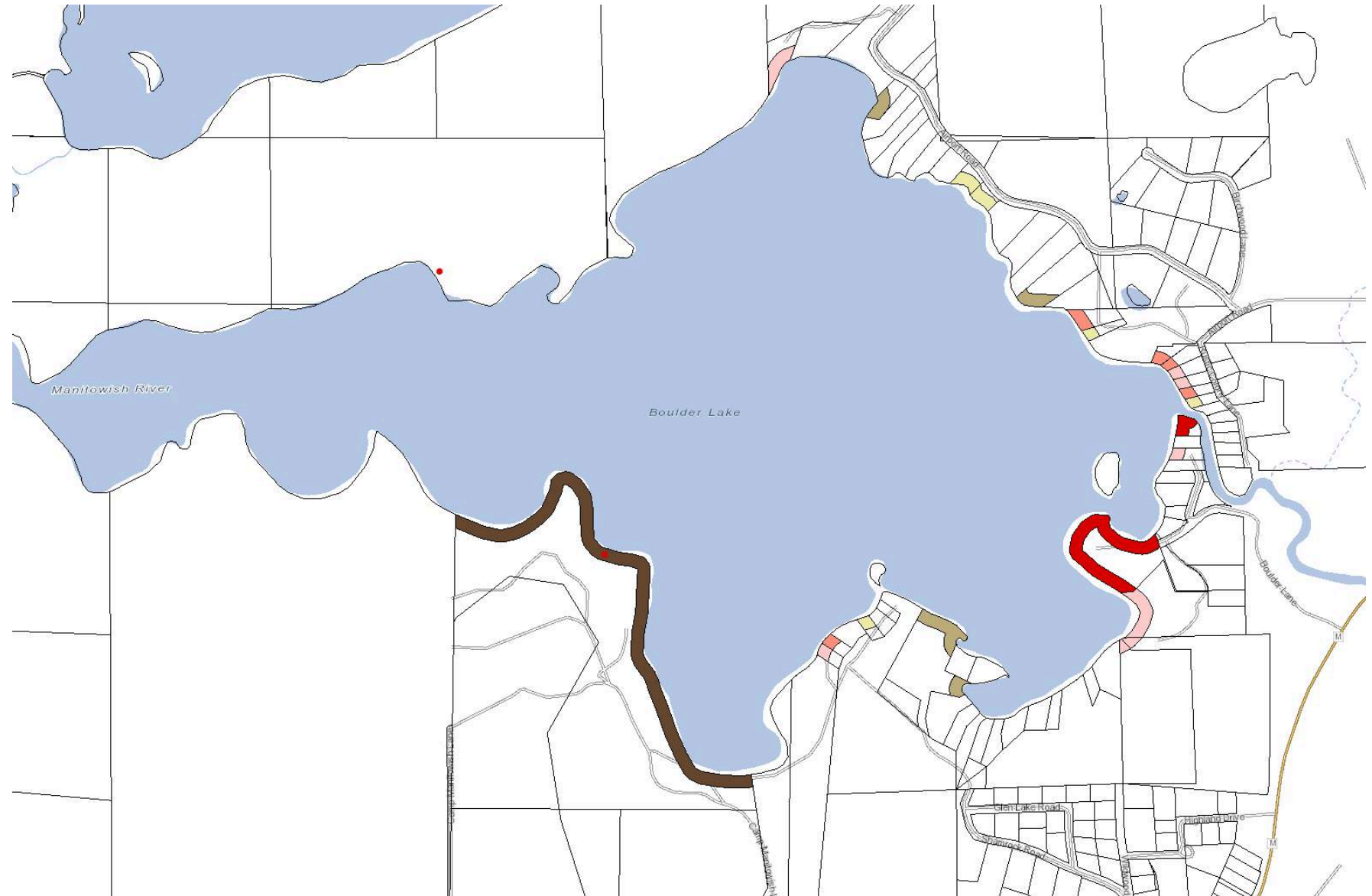
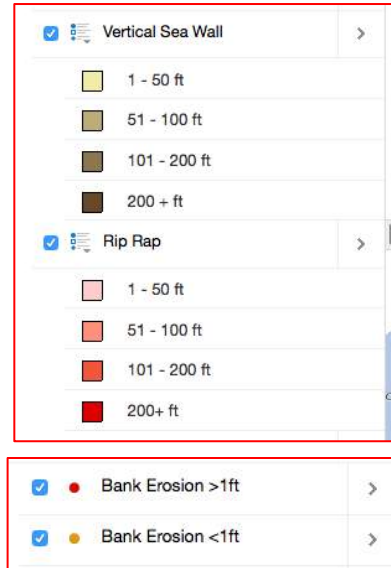
Riparian Coverage – Percent of Manicured Lawns



Light brown represents the least percent or best
Dark brown represents the highest percentage or worst



Bank Erosion and Modifications (Seawall)



Want More Information? Here is What You Do.

- Log onto the DNR website at <https://dnr.wi.gov/>
- On the main screen type AIS mapping tool into the search bar

Search or Keywords HELP

- Click on the first Link that comes up

AIS mapping tool

Web Image

About 344 results (0.28 seconds) Sort by: Relevance ▾

Lakes and Aquatic Invasive Species (AIS) Mapping Tool
<https://dnr.wi.gov/lakes/viewer/>
Welcome to the Lakes and AIS Mapping Tool, a Wisconsin DNR interactive web mapping tool for Lakes and Aquatic Invasive Species (AIS). This tool allows ...

Lakes and Aquatic Invasive Species (AIS) Mapping Tool - Metadata
<https://dnr.wi.gov/lakes/viewer/metadata.aspx>
Lakes and Aquatic Invasive Species (AIS) Mapping Tool - Metadata. Boat Access Locations. Monitoring. Volunteer Water Quality Monitoring · Project RED [exit ...]

Aquatic Invasive Species (AIS) Monitoring
<https://dnr.wi.gov/lakes/invasives/Monitoring.aspx>
Disclaimer: Aquatic invasive species (AIS) records are assigned statuses of ... species (AIS) records [PDF]; Lake and aquatic invasive species mapping tool · AIS ...

Interactive Web Mapping Applications - Wisconsin DNR
<https://dnr.wi.gov/maps/applist.html>
Apr 3, 2018 ... This page provides a listing of DNR web mapping services, which can be used to create maps interactively or to access other locational ...

- On the next page you will want to click on the proceed button towards the bottom of the page.

Click the "Proceed" button to go to the site.

- Next there will be an agreement prompt where you would click accept


Wisconsin DNR - Terms Of Use

Wisconsin Department of Natural Resources

The Wisconsin Department of Natural Resources seeks to provide access to the best statewide map information available to the DNR for use in Public services.

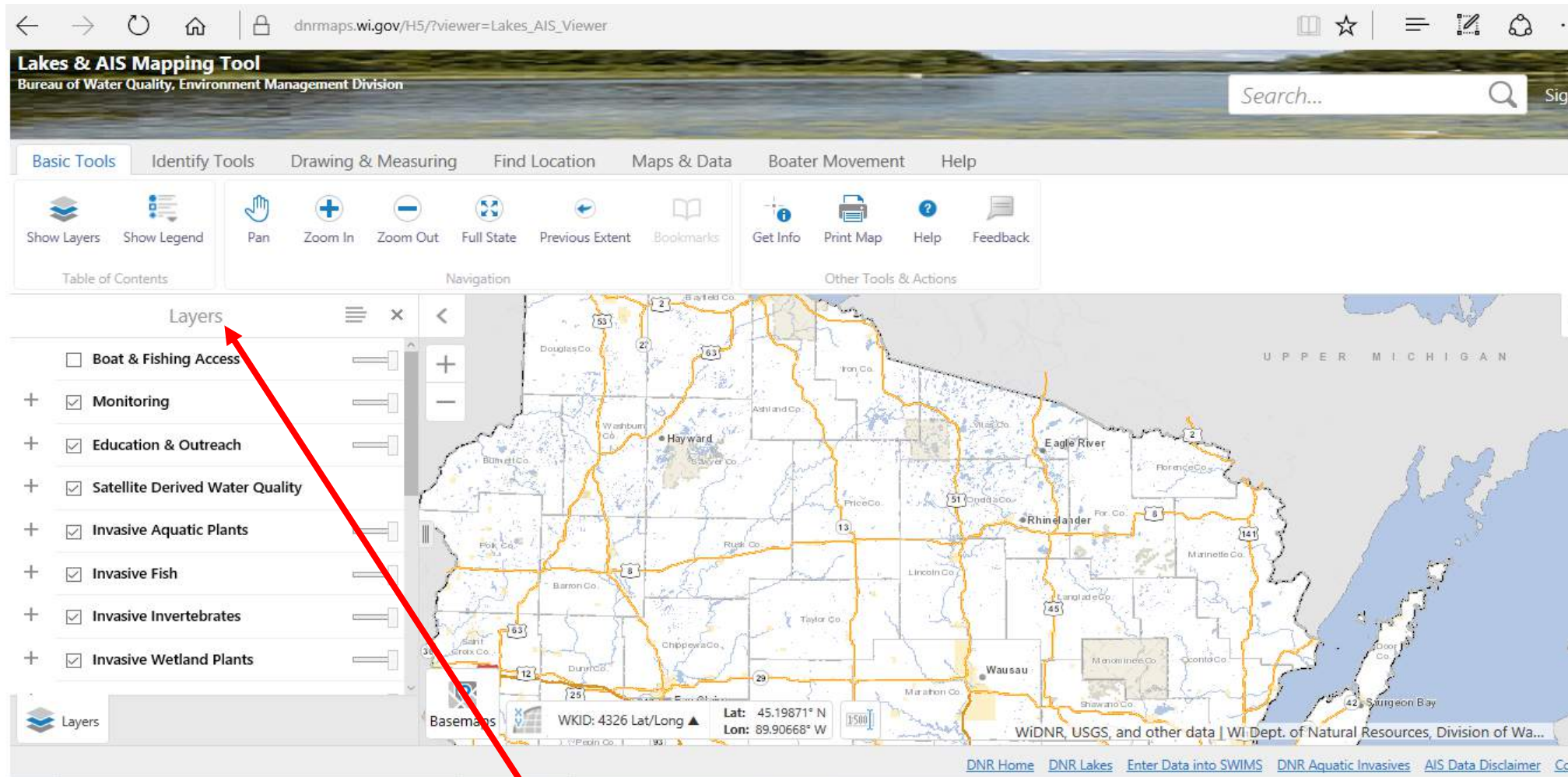
The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. **Users of these maps should confirm the ownership of land through other means in order to avoid trespassing.** No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

For additional information, see the [DNR Terms and Conditions](#)

 The Official Internet site for the Wisconsin Department of Natural Resources
101 S. Webster Street · PO Box 7921 · Madison, Wisconsin 53707-7921 · 608.266.2621
dnr.wi.gov

- The AIS Mapping Tool may take a few minutes to launch so be patient. When it opens you can navigate like Google maps to find Boulder Lake.

Here is What The Map Will Look Like



Navigate to Boulder Lake and start your research!

Select the layer(s) you are interested in viewing

Where From Here?

- The Directed Lake study is complete.
- We now know the areas of improvement opportunity.
- We have our Top 10 Action List.
- It is now up to us.
- Keep in mind there are grants available through the DNR and Vilas County to help pay for some of the work like shoreline restoration, rain gardens, water diversion areas, etc.
<http://vilascountywi.gov/index.php?page=lwcd-grants>
- Every action we take will lead to a healthier Boulder Lake.



Aquatic Invasive Species (AIS)

- Spiny water fleas have just been discovered in Plum Lake. They have been in Trout Lake for at least 10 years.
- The top three most impactful AIS seem to be
 - Eurasian Water Milfoil
 - Spiny Water Fleas
 - Curly Leaf Pondweed
- It is impossible to predict how they might impact Boulder Lake, but let's keep them OUT!
- Learn how you can help keep them out of Boulder Lake by visiting this web site and getting involved - <https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/cbcw/default.aspx>

Special Thanks to Those Who Made the Directed Lakes Study Possible

Boulder Lake Health Team – Anne Brouwer, Dick Schauss, Jim Naylor,
Jake Moelk, Dan King, Tim Sheehan, Dennis Reuss

DNR – Kevin Gauthier and Ty Krajewski

Vilas County – Carolyn Scholl

North Lakeland Discovery Center – Emily Heald

Boulder Lake Advancement Association Members



Want Further Information?

- Contact Bill Niemuth – billniemuth@gmail.com or Anne Brouwer - abrouwer@wi.rr.com