

# AIS (Aquatic Invasive Species) SCHOOL TOUR

Each September for the past number of years, SLMD has hosted this event for the 7<sup>th</sup> grade students from Parkside School in Wautoma. It is a day out of class for them as they also get to spend time that day at Camp Philip just outside town doing adventure games and challenges. The purpose of OUR event is to educate the kids on the importance of having a healthy lake ecosystem and how that affects so many things for so many people, especially in the area.

We utilize volunteer Lake pontoon boats to take groups of 8-10 students out on the Lake for an about an hour “Tour” of the lake. Each boat has a biologist from the DNR or Golden Sands RCD to explain Lake health issues and identify both native and invasive species of plants and animals. Each boat also has a school staff person as an escort. There are laminated sheets with pictures of plant species they try to identify from samples taken from the Lake. Recently, because of class size, we have been utilizing four boats for three Tours during the day.

Prior to the day, their science teachers go over some of the technical stuff and we also do an “on shore” briefing just before the boats go out.

## The information that they can review beforehand in their classroom is as follows:

1. How many lakes in Waushara County?
  - a. DNR lists 41 lakes larger than 10 acres which have public access. 98 lakes and ponds in total
  - b. Unlike Green Lake County which has 8 lakes, 2 of which are Big and Little Green lake.
2. Why is Waushara County called part of the Golden Sands counties?
  - a. Last Glacial Period ((LGP) Eemian to Younger Dryas period) 115K to 12K years ago,  
last glacial retreat on Ice Age Trail (which runs through whole state of Wisconsin)
  - b. What does a glacier do as it retreats or grows and moves through the Land?  
(Move  
earth like a bull dozer, carve hills, valleys, lakes, sedimentation areas)
  - c. Golden Sands area of central WI consists of 12 counties.
    - i. Taylor

- ii. Marathon
- iii. Wood
- iv. Portage
- v. Waupaca
- vi. Outagamie
- vii. Monroe
- viii. Juneau
- ix. Adams
- x. Waushara
- xi. Marquette
- xii. Green Lake

d. When the glaciers retreated, left a 40- to 60-foot-thick sand and gravel deposit in

the geology subsurface. Acts as a natural filter for ground water.

e. Central Sands Water Action Coalition, organization to protect groundwater

i. Instrumental for study on the effect of irrigation pumping on reduced water table and lakes/streams. Irrigation had an effect on

- 1. Little Plover River
- 2. Long Lake (Oasis Township)
- 3. Pleasant Lake

ii. WI DNR will form a water protection district.

- 1. Review High cap well permits
- 2. Limit drawdown in times of low groundwater, minimize impact on lakes and streams.
- 3. Western part of Waushara, heavy farming, corporate farms such as Heartland.

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3) Prevention is the most effective method of controlling invasive species. Keeping them from

getting here in the first place is best.

4) The Wisconsin DNR has information on invasive species and related laws here:

<https://dnr.wi.gov/topic/invasives/boat.html>

<https://dnr.wi.gov/topic/invasives/what.html>

5) Management of invasive species can be very expensive and may be damaging to other

nearby species or environmental quality.

6) Management can include

a) Mechanical controls like hand-pulling or cutting

b) Chemical controls like herbicides

c) Biological controls where a natural predator/parasite/disease of the invasive species is

released to control it.

i) The Wisconsin Department of Natural Resources' Purple Loosestrife Biocontrol Program is a great, successful example of

this. <https://dnr.wi.gov/topic/invasives/loosestrife.html>

7) Using native plants in landscaping, cleanings boats and recreational equipment after each

use, and never releasing plants or animals from home are excellent ways to reduce the

threat of invasive species in Wisconsin.

8) General information on aquatic and wetland invaders can be found in the fact sheets near

the bottom of this page:

<https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/clmn/AIS.aspx>

9) Mechanical Harvesting of Eurasian Milfoil (EWM) by DASH, Diver Assisted Suction

Harvesting.

10) Pontoon boat tour of Silver Lake. Each boat staffed with a biologist, sampling rake and

Plankton net

a) Sample Aquatic plants.

b) Tow plankton net.

c) Examine net upon completion.

**The onshore briefing session is similar to this:**

**!!!! WELCOME PARKSIDERS !!!!**

It sounds like you are having quite a DAY today.

Probably better than being in the classroom???

Understand you also are doing or did Camp Phillip for some activities as well. That sounds like so much fun too.

I believe Ms Drew was going to try to review some information I sent her with you about today. I will bet she did or perhaps in the near future. At any rate-

So why are you here at Silver Lake today?? To get out of Class??- NO !! To learn about Lakes & Waterways and protecting them from Aquatic Invasive Species (aka AIS for short).

How did all these lakes get here? Waushara County has over 40 Lakes larger than 10 acres?

A LOT more than other surrounding counties.

I am quite sure you know that the lakes were carved out by a glacier over 15,000 years ago and it must have certainly been mad at the area to create so many lakes. As a glacier moves slowly over the surface of the earth, it acts like a big bull dozer carving hills, valleys and lakes. Keep that in mind when you are out on the lake and see if you can identify which direction the glacier that pushed through here was moving. Where are the flatter shores and where are the steep shores formed by the "bull dozer".

When the glacier finally melted due to earth's major "Climate Change", it left a 40-60 ft thick sand and gravel deposit. That's why the soil is so sandy around here. Not so good for farming but an excellent natural filter for ground water. It also left water in the lakes it created.

A healthy lake ecosystem is critical to your county for many reasons:

Tourism- which supplies direct dollar spending, jobs, business sales and tax dollars

Lake Owners- they provide close to 40% of Waushara County tax base

They provide 90% of the tax base for the 33 sq mi Town of Marion right here

What would happen if our lakes were not maintained and of great quality?

Tourism suffers- no one comes

Property values drop- no one cares about the area

Tax base erodes- who wants to live on a BAD lake

Results trickle down to you and your families:

HIGHER TAXES FOR SERVICES ON WHERE YOU LIVE

LESS FUNDING FOR THE SCHOOL DISTRICT WHICH AFFECTS YOUR SUPPLIES and EQUIPMENT

FEWER COMPUTERS, OLDER COMPUTERS, LESS RECREATIONAL EQUIPMENT

ALL AFFECTED

**So, the Silver Lake Management District cares as we all should.**

The District has spent over \$1 million dollars in the last 10 years fighting AIS.

This was primarily on the AIS plants (weeds) that have taken over the Lake.

AIS that we talk about are plants OR animals and can come from many sources. Nurseries, pet stores, aquarium trade. Things often are planted or released after a person is tired of them.

Don't flush the frog!!! It might be kinder to release it in the lake- but maybe it is invasive?? WRONG !! DON'T DO IT- Flush it with a memorial service.

Plants are spread on the local scale by wind, water from bilge in a boat, attachment to a boat (hitchhiking), or soil that contains seeds. Also, amazingly, even from bird droppings that have eaten seeds and pooped over the Lake.

So today you are going out on our volunteer pontoon boats from the Lake Owners who REALLY CARE for a bit of a TOUR of the Lake. Each boat will have a BIOLOGIST on board either from WI DNR or GOLDEN SANDS RESOURCE DEVELOPMENT. These folks are extremely knowledgeable on Lake and AIS issues. You will stop at a few spots and harvest some plants to identify. They will also point out other issues on the Lake and shore as you go.

If you have interest, talk to these biologists about their job. They get to work outside with nature and help the environment. Possibly a career choice to consider in your life??

There is water bottles if you need them to stay hydrated. We would ask that you do NOT add colored pods or packs to the water bottles as the pontoon boat captains are very protective of their nice crafts and do not want to risk any stains on their carpets or seats. Keep in mind you are on a BOAT and not in a stable car, bus or lunchroom.

For those of you who are really "STARVING", there is some individual popcorn bags. Feel free to take one for the tour or for an after snack. Be respectful and only take one. Keep in mind that this is not "fish food" but people food. So don't feed the fish. Bring back the debris please to be ecologically responsible.

When you return, before you jump in the bus, please pick up a Shoreline Workbook on the way out.

HAVE A GREAT TOUR

Count off for boat assignment

Plant Identification pictures are below:

Muskgrass, Stonewort



*Wild Celery*



*Common Waterweed*



*Coontail*





*Common Waterweed*



*Chara*



Slender Waterweed

Water Stargrass



Northern Water Milfoil

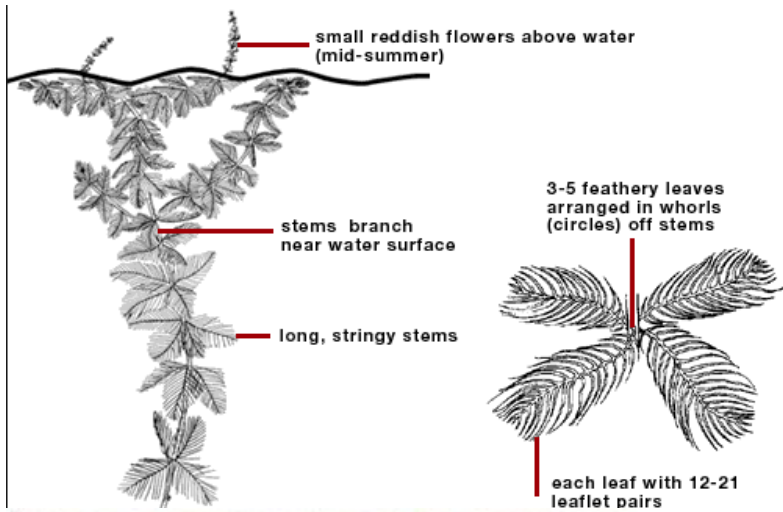


northern water-milfoil descripti...



northern water-milfoil description

Eurasian Water Milfoil (Plant can reproduce from a 1" fragment)



Eurasian water-milfoil - Wisconsin DNR  
dnr.wi.gov



slender naiad, *Najas flexilis* ...



Southern Naiad – ASAP Aquatics



1700 x 1133

Source: Roberts Hill VLMF © 2007

stoneworts description



1400 x 778

WHITE WATER LILY) SHARPENED SENSES ...



Dan Busemeyer, Illinois Natural History Survey

Large Leaf Pondweed *Potamogeton amplifolius* (Large-leaf ...



curly-leaf pondweed (*Potamogeton* ...



Fries Pondweed Facts and Images



Rare Plant Fact Sheet for *Potamogeton* ...



Fries Pondweed Facts and Images



640 x 480

Variable Pondweed (Potamogeton g...



Variable Pondweed (Potamogeton g...



Variable-Leaf Pondweed « ...



Illinois Pondweed, POTAMOGETON ILLIN...



Floating-Leaf Pondweed (Potam...





Wetland Plants of Wisconsi...



White-stemmed Pondweed, Potamogeton ...



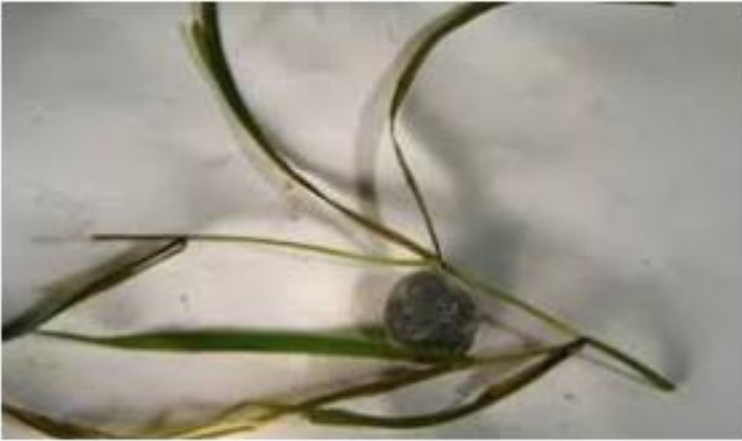
Small Pondweed (Potamogeton berchtoldii ...



Small Pondweed Facts and Images



Stiff pondweed | Brenton Bu...



Flatstem Pondweed-Aquatic Plant Identifier



*Stuckenia pectinata*, sago pondweed