

# **ZEBRA MUSSEL PANEL DISCUSSION**

September 12, 2015

Scandia Valley Township Hall

Panelists:

Don Hickman, Initiative Foundation from Little Falls.

Phil Hunsicker, DNR officer who works with counties to develop plans to prevent the spread of Aquatic Invasive Species (AIS).

Joe Shneider, Secretary of MN Coalition of Lake Association and volunteering at Christmas Lake to combat zebra mussels.

Don reported that MN has funding available for all counties to prevent the spread of AIS. How much money each county receives depends on the number of boat accesses in the county and the number of parking spaces that are available at the accesses. In 2015, Crow Wing County received approximately \$450,000 and Morrison County received about \$130,000. Crow Wing County has hired 8 inspectors to monitor their lakes accesses. At this time Morrison County's focus is on education to prevent the spread of AIS although funds remaining from the 2015 grant can be used in 2016. The counties are looking for input from the lake associations, LID and the watershed districts for new ideas on how to prevent the spread of AIS. One idea suggested by the panel was for Morrison County to participate with Crow Wing County and utilize Crow Wing's current infrastructure but increase the number of inspectors and include Morrison County lakes in the inspection program. Morrison County would benefit from being able to use an existing program and Crow Wing would benefit through further efforts to prevent the spread of AIS to lakes in close proximity to Crow Wing County. Don stated that there is also a new grant available to counties which are willing to develop new innovative ideas to stop the spread of AIS.

Phil reported that zebra mussels were found on Fish Trap Lake (FTL) on 6/30/15 by a citizen on the north section of the lake. The DNR investigated and confirmed that this was a widespread infestation of zebra mussels as they found approximately 75 zebra mussels around the perimeter of the lake. Because the DNR found adult zebra mussels they believe that the zebra mussels have been in the lake for approximately 2 years. As of the date of the panel discussion, there have been no zebra mussels found on Shamineau, Crookneck, Lake Alex or Platt Lake. At this time there are limited treatment plans for zebra mussels available for

lakes. For FTL there is no treatment plan because the zebra mussels are widespread. No agencies will let FTL treat the entire lake because there are no chemical resources available at this time to treat an entire lake. There are no documented cases where zebra mussels have ever been eliminated from an entire lake. He suggested that FTLPOA focus should be to prevent the spread of other AIS such as Eurasian Milfoil (EM), Starry Stonewort and Spiny Water Fleas (SWF). The more types of AIS in a lake, the greater detrimental impact to the lake.

The Panelist's believed that AIS plants are considered a nuisance but animal species such as zebra mussels and SWF are a "game changer" because they cause changes in the lake's ecosystem. They felt that:

EM and Curly Leaf Pond Weed are considered a nuisance because they cause dense masses of growth that are difficult to navigate.

Hydrilla is a new AIS plant from the south that is worse than EM because of its dense growth making it impossible to navigate through it. It was described as EM on steroids.

Zebra mussels affect the lake by impacting the lowest level of the food chain. Baby zebra mussels float in the water column. Juvenile zebra mussels will drop down to the bottom of the lake to find a place to feed. Adult zebra mussels attach themselves to hard objects and native mussels. Adult zebra mussels can't move. Native mussels do move so when the adult zebra mussels attaches to the native mussels it is piggybacked around the lake. When a zebra mussel dies, it leaves a sharp shell that cut human's and pet's feet. Adult zebra mussels and most likely the juvenile zebra mussels can live between 5 days (according to the DNR) to 30 days (according to Joe Shneider) out of the water depending on the temperature and humidity. Baby zebra mussels are very delicate but can live a long time in suspended water. All zebra mussels will die in the winter if they are out of the water. Because zebra mussels filter the water it makes the water cleaner. The panel noted that both sunfish and ducks eat zebra mussels.

SWF are extremely detrimental because they eat zoo plankton taking away nutrients from game fish. A combination of zebra mussels and spiny water fleas could have a considerable impact on the lower level of the food chain. SWF can attach to fishing lines. They also filter the water so it becomes cleaner. A cleaner lake means that aquatic plants grow at deeper levels resulting in a greater number of aquatic plants in the lake. Joe shared information about the zebra mussels on Christmas Lake. Christmas Lake is 264 acres and 1 mile from Lake Minnetonka

and as a result, is often infested with the same AIS that are found in Lake Minnetonka. Property owners of Christmas Lake discovered EM five years after EM was discovered in Lake Minnetonka. Zebra mussels were first found in Lake Minnetonka and then in Christmas Lake on 8/18/14. Because the DNR found no adult zebra mussels and the infestation was localized to only the public access, they decided to treat the lake. Treatment for zebra mussels is very limited. There are only 3 chemicals available, Copper Sulfate, Zequanox and Potash.

#### Copper Sulfate

- It is expensive.
- It has an EPA label.
- Need permission from the DNR to use.
- It has some impact on native plants but it will kill zebra mussels.
- It is also used to treat lakes with swimmer's itch.

#### Zequanox

- It is expensive
- Was approved last year.
- It is a bacteria, which is used to clean the filtration pipes in lakes and rivers.

#### Potash

- It is cheap.
- It is not approved but Christmas Lake received special permission to use it.
- It works best but kills all mussels.

Christmas Lake treated 11 acres at the cost of \$100,000. The 130 property owners paid for half of the cost and a grant paid the rest. The Lake Association annual dues are now \$400/year.

Christmas Lake appears to be free of zebra mussels but the true test will be whether it can remain zebra mussel free for two years which will serve to show that the treatment was likely successful. Joe stated that Christmas Lake is ground zero for zebra mussel treatment. Joe noted that Christmas Lake's public access was closed during the treatment process, that there is only one access to Christmas Lake and that all private accesses have been closed. The city owns and controls the access. Because the city wanted to protect Christmas Lake from getting additional AIS they are working together with the DNR in a pilot study, which consists of inspections and decontamination stations. The access is open only from April through October with inspectors present from 6 am to 10 pm and gates preventing access during other hours. Christmas Lake property owners wanted more protection so they are providing inspection coverage at the cost of over

\$60,000 per year, half of which is paid by the property owners and half by the Minnetonka Watershed District.

What can FTLPO do? Joe strongly suggested that we need to control all accesses to FTL to protect our lake from other AIS. FTL has one public access which is controlled by the DNR, 2 resort accesses, one campground access and numerous private accesses. One person in attendance stated that, that would be impossible. Joe stated that it was not and cited an example of Lake Tahoe which is located both in Nevada and California. They were able to control all their accesses so it is possible to do. He also suggested inspectors and decontamination stations at the public access. These stations have high pressure water which removes AIS and high temperatures which kills AIS. He also thought FTLPOA should try to find answers to the following questions through a lake wide study:

1. How bad is the zebra mussel infestation?
2. Does FTL ecosystem have favorable conditions for the growth of zebra mussels? They like calcium and rocks.
3. What makes FTL more susceptible?

He suggested hiring a good company to analyze our lake to answer these questions. He stated that Blue Water Science is a good company. He also stated there is some good research available such as 100th Meridian, the US Ecology Service, RMB Labs in Detroit Lakes and the University of MN. Someone informed Joe that the FTLPOA had already hired Blue Water Science to conduct a lake wide study and had recently also requested Blue Water Science to evaluate the potential impact of zebra mussels in FTL.

FTLPO can also do the following to deal with the zebra mussels:

- Use a boat lift to get the boat out of the water.
- If mooring a boat run the motor 2 times a week to get the baby zebra mussels out of the engine.
- Lift the boat's motor out of the water.
- Paint a lacquer on the boat lifts because zebra mussels don't like lacquer.
- Consider the fact that zebra mussels like aluminum over galvanized docking.
- Consider the fact that zebra mussels prefer the underside, quiet areas to attach to.
- Purchase a good pair of water shoes.
- Do not transport dead or alive zebra mussels although owners can remove them from a beach and dispose of them.

The panelists discussed specific problem with jet skis and boat trailers which can lodge AIS in hard to reach areas. They advised extra care and noted that the boat and trailer manufacturing companies are looking at new designs that will help prevent the transport of AIS. A question was asked to the panelists “What will be the impact to FTL? The panelists did not have a uniform response. Some of the panelists felt that there would be no major impact on fishing and most believed that there would be no impact on property values. One panelist pointed out that fishing and property values on Lake Minnetonka and Gull Lake are still strong despite a zebra mussel infestation. There was disagreement how FTL would fair 20 years from now but panelists noted that the most likely FTL will see a sudden increase in zebra mussels followed by a stark decrease after a few years and eventually a steady plateau of zebra mussel numbers at some point in the future. They all agreed that the lake would have a shift in its food chain, the water will become clearer and aquatic plants will become more abundant as zebra mussels proliferate. Phil believed that zebra mussels are not the end of the world and that fishing will still remain good.

Respectfully submitted,  
Mary B Thibert

Additional Resources:

- Blue Water Science report (available on FTLPOA website)
- Initiative Foundation website:

<https://www.ifound.org/search?query=Invasive+species&submit=Search>