

Washburn and Burnett Counties Zebra Mussel Accomplishments 2017-2020

The following lists are comprehensive of work completed from the start of the zebra mussel rapid response project (2017) to the current year (2020). The rapid response project will finish in 2020, however, work will continue between the county governments and their associated partners through other various means.

There were many partners involved in this process, and the amount of field-work conducted would not have been possible without a strong cooperation between all groups involved. Burnett County, Washburn County, St. Croix River Association, U.S. National Park Service, U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, and many local lake associations were all involved in the zebra mussel response efforts.

The response to zebra mussels in the McKenzie Lakes was in many ways the first of its kind. The challenges that were encountered throughout the process were used to make monitoring more effective as the years progressed. This project also offered the rest of the state some insight as to what should be expected from a rapid response framework. The journey was shared at the 2018 Wisconsin Lakes Partnership Convention, several AIS Partnership meetings, and through local media.

The methods for monitoring consisted of plate sampling, veliger tows, early detection surveys, and environmental DNA. These efforts are shown by year for each lake that received monitoring.

Decontamination stations are also placed at select boat launches throughout the two counties, and active lake associations are supplying the maintenance to keep them functional. Some of these stations were provided through a state AIS Grant, and others were purchased by lake associations. The decontamination stations consist of a 500 ppm bleach solution in a pressurized sprayer, safety goggles, boat brushes, and a boat hook. In both counties, if decontamination materials are present, they must be used by county ordinance.

A hot water pressure washer is also shared between Burnett and Washburn Counties, and it travels to various boat landings. A portion of the unit's time is at the McKenzie Lakes for zebra mussel containment.

If there are any questions about the response to zebra mussels in Big and Middle McKenzie Lakes, feel free to contact Lisa or Tom with the information provided below.

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Burnett County Zebra Mussel Monitoring Efforts

Decontamination Station Locations

Big Trade Lake (1)
Birch Island Lake (3)
Culbertson Lake (1)
Des Moines Lake (1)
Fish Lake (1)
Lake 26 (1)
Lipsett Lake (1)
Little Bear Lake (1)
Little Wood Lake (1)
Long Lake (1)
Loon-Cadotte Lakes (3)
Middle McKenzie Lake (1)
North Sand Lake (1)
Rooney Lake (1)
Round Lake (1)
Shoal Lake (2)
Yellow Lake (2)

Burnett County Total: 23

Zebra Mussel Plate Sampler Lakes

Bashaw Lake (2018, 2019, 2020)
Big Sand Lake (2017, 2018, 2019)
Birch Island Lake (2018, 2019, 2020)
Clam Lake (2017, 2018, 2019)
Deer Lake (2017, 2018, 2019, 2020)
Des Moines Lake (2018, 2019, 2020)
Green Lake (2019, 2020)
Lily Lake (2019, 2020)
Lindy Lake (2019, 2020)
Lipsett Lake (2017, 2018, 2019, 2020)
Long Lake (Siren) (2019, 2020)
Long Lake (Webb Lake) (2018, 2019, 2020)
Loon-Cadotte Lake (2018, 2019, 2020)
Mystery Lake (2018, 2019, 2020)
Nicaboyne Lake (2019, 2020)
Rice Lake (2018, 2019, 2020)
Spirit Lake (2018, 2019, 2020)
Yellow Lake (2017, 2018, 2019)

Zebra Mussel Veliger Testing Lakes

Bashaw Lake (2017)
Benoit Lake (2017, 2018)
Big McKenzie Lake (2017, 2018, 2019, 2020)
Big McGraw Lake (2020)
Big Trade Lake (2018, 2019, 2020)
Big Wood Lake (2020)
Clam River Flowage (2018, 2019, 2020)
DesMoines Lake (2020)
Devils Lake (2019)
Dunham Lake (2017, 2018)
Falk Lake (2018, 2019, 2020)
Holmes Lake (2020)
Lake 26 (2020)
Lipsett Lake (2018)
Little McGraw Lake (2020)
Little Wood Lake (2017)
Long Lake (Webb Lake) (2020)
Love Lake (2018)
Memory Lake (2018, 2020)
Middle McKenzie Lake (2018)
Nicaboyne Lake (2019)
North Sand Lake (2019)
Rice Lake (2017, 2019)
Spirit Lake (2017)
Webb Lake (2019)
Yellow Lake (2018, 2019, 2020)

Environmental – DNA Testing (EDNA)

Bashaw Lake (2018)
Benoit Lake (2018)
Big McKenzie Lake (2018, 2019, 2020)
Clam River Flowage (2019)
Dunham Lake (2018)
Lipsett Lake (2019)
Middle McKenzie Lake (2018, 2019, 2020)
Rice Lake (2018)
Webb Lake (2019)

Washburn County Zebra Mussel Monitoring Efforts

Decontamination Station Locations

Bass Lake (Casey) (1)
Bear Lake (2)
Big McKenzie Lake (1)
Cable Lake (1)
Island Lake (1)
Long Lake (4)
Lower McKenzie Lake (1)
Mathews Lake (1)
Nancy Lake (1)
Potato Lake (1)
Spooner Lake (1)
Stone Lake (1)
Washburn County Total: 16

Zebra Mussel Plate Sampler Lakes

Balsam Lake (2020)
Bass Lake (Casey) (2018, 2019, 2020)
Bear Lake (2019, 2020)
Big McKenzie Lake (2017, 2018, 2019, 2020)
Chicog Lake (2017, 2018, 2019)
Gull Lake (2018, 2019, 2020)
Hemlock Lake (2020)
Horseshoe Lake (2019, 2020)
Long Lake (2017, 2018, 2019, 2020)
Lower McKenzie (2017, 2018, 2019, 2020)
Mathews Lake (2017, 2018, 2019, 2020)
McLain Lake (2017, 2018, 2019)
Middle McKenzie (2017, 2018, 2019, 2020)
Minong Flowage (2019, 2020)
Nancy Lake (2018, 2019, 2020)
Pear Lake (2017, 2018, 2019, 2020)
Pokegama Lake (2019, 2020)
Red Cedar Lake (2017, 2018, 2019, 2020)
Slim Lake (2019, 2020)
Spooner Lake (2018, 2019, 2020)
Trego Lake (2017, 2018, 2019, 2020)
Twin Lakes (2017, 2018, 2019, 2020)

Zebra Mussel Veliger Testing Lakes

Bass Lake (Casey Town) (2018, 2019, 2020)
Bear Lake (2020)
Big McKenzie Lake (2017, 2018, 2019, 2020)
Birch Lake (2017)
Deep Lake (2017)
Gull Lake (2020)
Island Lake (2019)
Long Lake (2020)
Lower McKenzie Lake (2019, 2020)
Mathews Lake (2020)
Middle McKenzie Lake (2018)
Nancy Lake (2019)
Pokegama Lake (2017, 2018, 2019)
Rocky Ridge Lake (2017)
Spooner Lake (2018, 2019)
Tozer Lake (2017, 2018, 2019)
Trego Lake (2017)
Slim Lake (2019)
Stone Lake (2020)

Environmental – DNA Testing (EDNA)

Bass Lake (Casey Township) (2018)
Big McKenzie Lake (2018, 2019, 2020)
Gull Lake (2018, 2019)
Long Lake (2018)
Lower McKenzie Lake (2018, 2019)
Middle McKenzie Lake (2018, 2019, 2020)
Tozer Lake (2018)
Trego Lake (2018)

2018 Update & Strategy

March 1, 2018

Prevent the Spread of
Invasive Species
It's the law!

ALWAYS...

- **INSPECT** your boat, trailer, and equipment.
- **REMOVE** any attached aquatic plants or animals.
- **DRAIN** all water from boats, motors, and equipment.
- **NEVER MOVE** plants or live fish away from a waterbody.

Some counties may
require decontamination,
if available on site.

If you find a suspected zebra mussel (adult, to scale, below) or other aquatic invasive species, visit dnr.wi.gov and search "report AIS" for step-by-step directions.



Zebra Mussels Spread on the McKenzie Chain

In October 2016 a Big McKenzie Lake property owner found a zebra mussel on his dock and reported it to the DNR who confirmed the first inland zebra mussel population, consisting of 15 adult mussels, in the 12 northwestern Wisconsin counties.

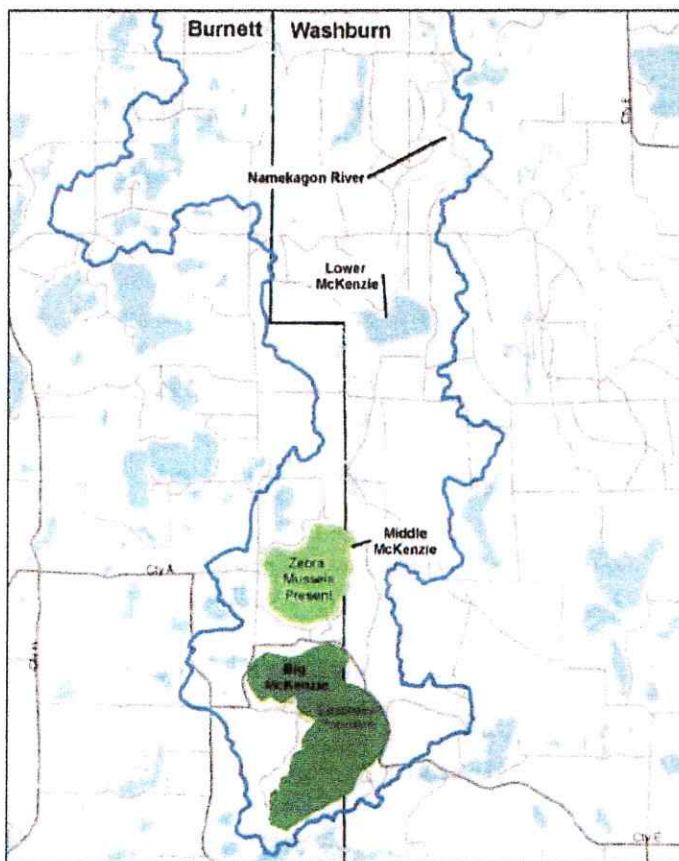
By fall 2017 zebra mussels increased on Big McKenzie to an estimated 20 individuals per square foot, and 2 adults were verified in downstream Middle McKenzie Lake.

Volunteers and professionals monitored 30 lakes in Burnett and Washburn Counties in 2017.

Fortunately, no lakes outside the McKenzie Creek watershed (below) had zebra mussels. Zebra mussels are in Lake Superior, St. Croix County, and the Twin Cities metro area.

Burnett and Washburn Counties have ordinance amendments requiring all watercraft to decontaminate before entering and after leaving a lake, if decontamination is available.

You can help prevent the spread of zebra mussels and other aquatic invasive species (AIS) by establishing self-service decontamination stations at your boat landing, volunteering to monitor AIS, inspecting watercraft, or advocating for protection efforts.



Zebra mussels are present in 2 lakes in the McKenzie Creek watershed (HUC 12).

STRATEGY

Identify Pathways to Contain AIS and Prevent Further Spread



A watercraft inspector stands beside the Fish Lake, Burnett County, decontamination station.

- landings. This effort accounts for 42% of statewide watercraft inspection funding.
- Many groups are partnering to provide watercraft inspection coverage on the McKenzie Chain with an emphasis at Big McKenzie. Partners include: other lake group volunteers, McKenzie Lakes Association, Burnett and Washburn Counties, DNR, and private businesses.
- Burnett and Washburn Counties have established an outreach network with local lake service providers to train and/or provide decontamination equipment. Some contractors have their own power washers, while others have equipment dedicated for Big McKenzie.
- These counties also have illegal-to-transport ordinances with 2018 amendments requiring decontamination, if available, when entering or leaving a lake.
- McKenzie Lakes Association installed decontamination stations at its 3 public boat landings, and some other area lakes have them.

- Pathways include stream connections and boats, trailers, and equipment moving between lakes. Landowners, tourists, businesses, agencies, and other stakeholders all have a role preventing the spread of AIS.
- The northwest 6 counties have at least 45 watercraft inspection projects covering 94 boat



Volunteers placed about 40 zebra mussel plate samplers in the McKenzie Chain in 2017.

- Many area lakes are at suitable (i.e. at risk) or borderline suitable for establishing zebra mussel populations. Suitability is based on measured or inferred calcium, which zebra mussels need to grow shells.
- Professional and volunteer early detection monitoring on at least 30 lakes, including the McKenzie Chain and nearby lakes determined

Assess Risk and Continue to Monitor

- to be suitable for establishing zebra mussels, occurred in 2017.
- Big and Middle McKenzie Lakes are the only current lakes with known zebra mussels.
- Volunteers are welcome to monitor AIS on their lakes as part of DNR's Citizen Lake Monitoring Network, or they can assist professionals when they monitor.

What about Control

- Zebra mussel chemical control remains experimental in most situations. The primary criteria for experimental control are an isolated population in a small area.
- Even upon initial discovery, the Big McKenzie Lake zebra mussels were present at opposite ends of an 1185 acre lake, precluding control. The futility of chemical control in Middle McKenzie is limited by the constant exposure of zebra mussels via McKenzie Creek.
- Some lakes have had positive results with SCUBA manual control. While labor-intensive, it can reduce nuisance conditions and overall population abundance.
- We are partnering with other states and technical experts to better understand control options, including developing a rapid response plan defining criteria where control may be viable.

We Need Your Help

- Washburn County and Burnett County Lakes & Rivers Associations are working with local communities to form lake groups and town committees, like the Town of Chicog who formed an AIS Committee in 2017.
- Annual lake group meetings are a great opportunity to get the word out on AIS and strategies to prevent the spread with existing educational materials.
- There are no additional management team public meetings currently planned for 2018, but you are encouraged to attend events like the Wisconsin Lake Partnership Convention April 18-20 in Stevens Point and the Northwest Lakes Conference on June 22 in Spooner.
- Volunteer to monitor for AIS, inspect watercraft, and advance lake protection strategies in your communities.

COMMUNICATION



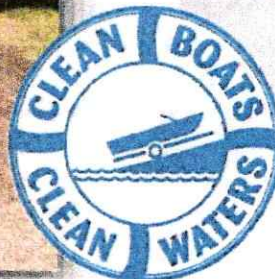
DNR hosted a December 1, 2016, public meeting about the recent zebra mussel discovery in Northwest Wisconsin.

Frequently Asked Questions

- **Can we close boat landings?** No, Wisconsin's lakes are held in trust for the public so existing public access cannot be removed or altered to prevent use.
- **Can we prevent people who have AIS on their boat or have not decontaminated from launching?** No, while there is a state law making it illegal to transport aquatic plants and animals, and Burnett and Washburn County ordinances requiring decontamination, if available, you cannot physically prevent someone from launching. Instead call 1-800-TIP-WDNR for state violations or the county sheriff's department for decontamination violations.
- **Are all lakes at risk?** Some lakes are more suitable for certain AIS than others, but people should always take the same precautions to prevent the spread of AIS: inspect, remove, drain, and never move plants or animals and even better if you can decontaminate your boat, trailer, and equipment.



Boaters decontaminate their equipment at Big McKenzie Lake in 2017.








What is the difference between professional and volunteer monitoring?

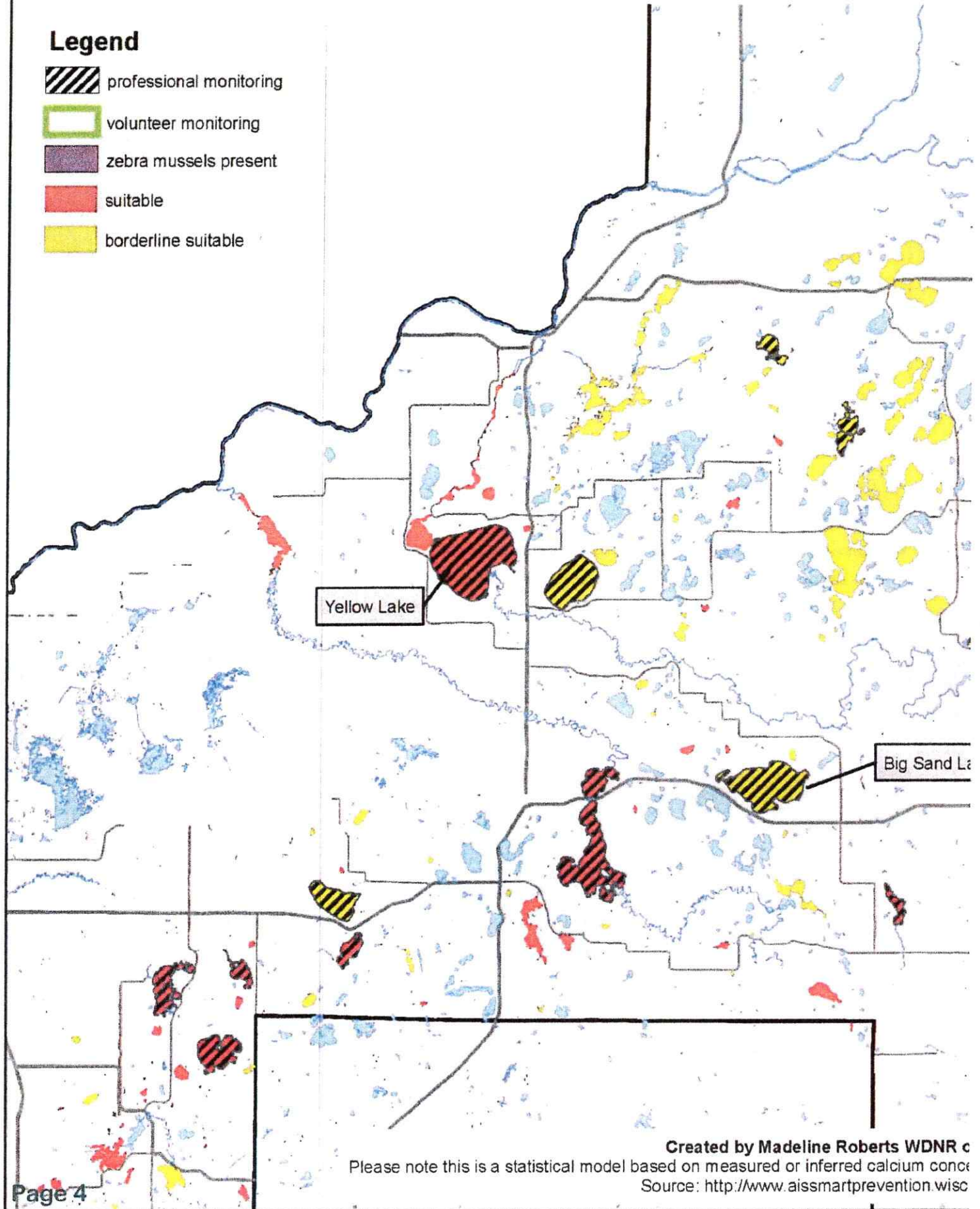
Volunteers often use simpler methods than professionals, but the main difference is volunteers are donating their time.

WE  VOLUNTEERS.

Lakes Monitored in Burnett and Washburn Counties for Zebra Mussels

Legend

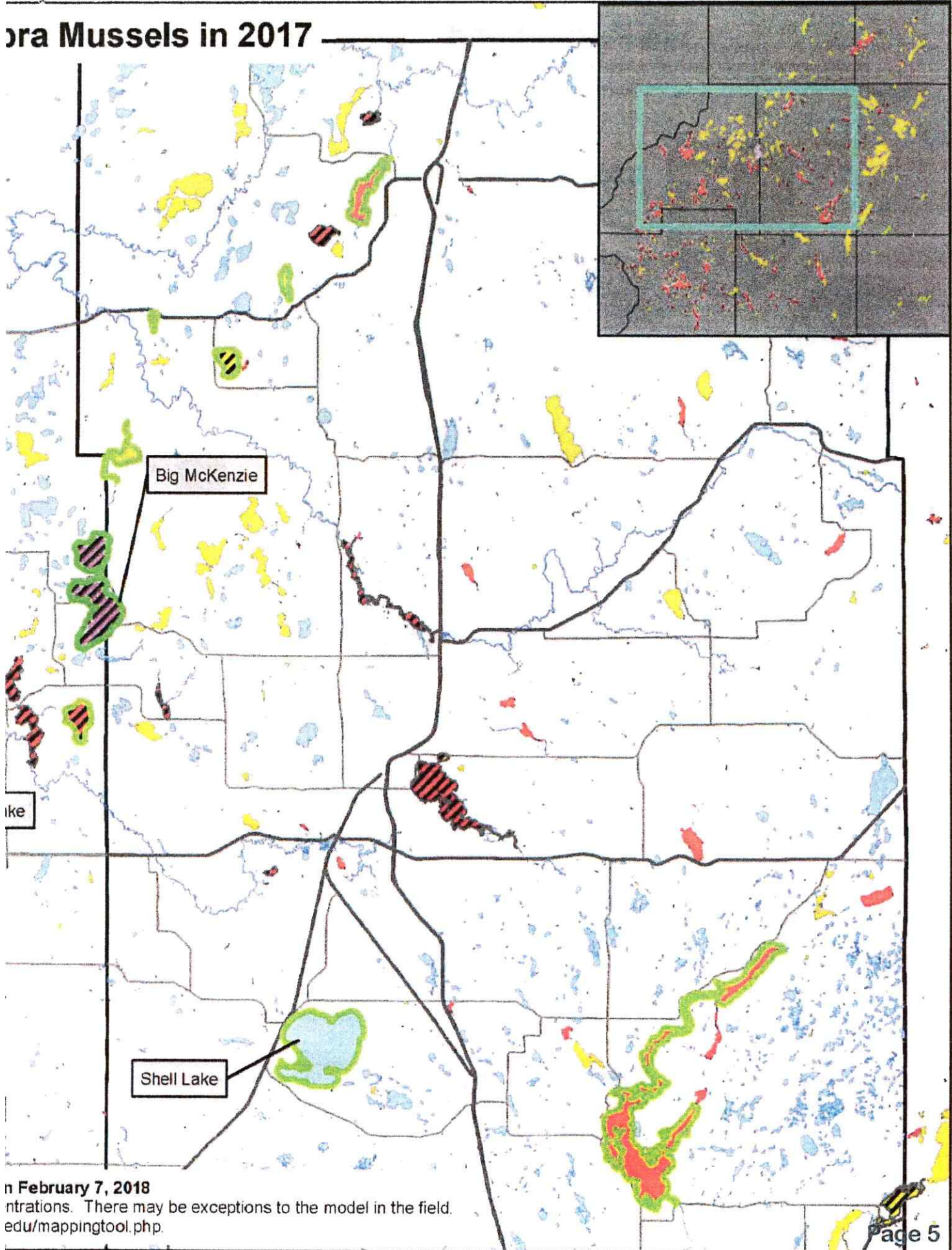
-  professional monitoring
-  volunteer monitoring
-  zebra mussels present
-  suitable
-  borderline suitable



Created by Madeline Roberts WDNR c

Please note this is a statistical model based on measured or inferred calcium conce
Source: <http://www.aissmartprevention.wisc>

ora Mussels in 2017



on February 7, 2018
concentrations. There may be exceptions to the model in the field.
www.mn.gov/education/mappingtool.php

The Northwest Wisconsin Zebra Mussel Management Team

includes community organization and government partners trying their best to cooperatively respond to a public concern.

The Team uses the tools at hand, including Wisconsin's Rapid Response Framework for Invasive Species, AIS grant funding, and existing laws.



Washburn County
LAKES AND RIVERS
ASSOCIATION



Burnett County
Lakes & Rivers
Association



Stay tuned to
www.wclra.org more info.



Contacts

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Jeremy Bates, DNR Early Detection and Rapid Response Specialist, (715) 392-0807 and Jeremy.bates@wisconsin.gov

CHALLENGES & OPPORTUNITIES

Decontamination is a realistic solution to preventing zebra mussel spread to area lakes, but it is not required by law in Wisconsin. Some boaters opted out of decontamination at Big McKenzie Lake.



**STOP AQUATIC
HITCHHIKERS!**

Businesses like dock and boat lift installers, marinas, and shoreline contractors often use the same equipment on multiple lakes, sometimes in a single day.

Zebra mussel control is difficult without effective options at this time. Control feasibility depends on zebra mussel distribution, time since discovery/establishment, lake size and type, and native plant and animal communities present.

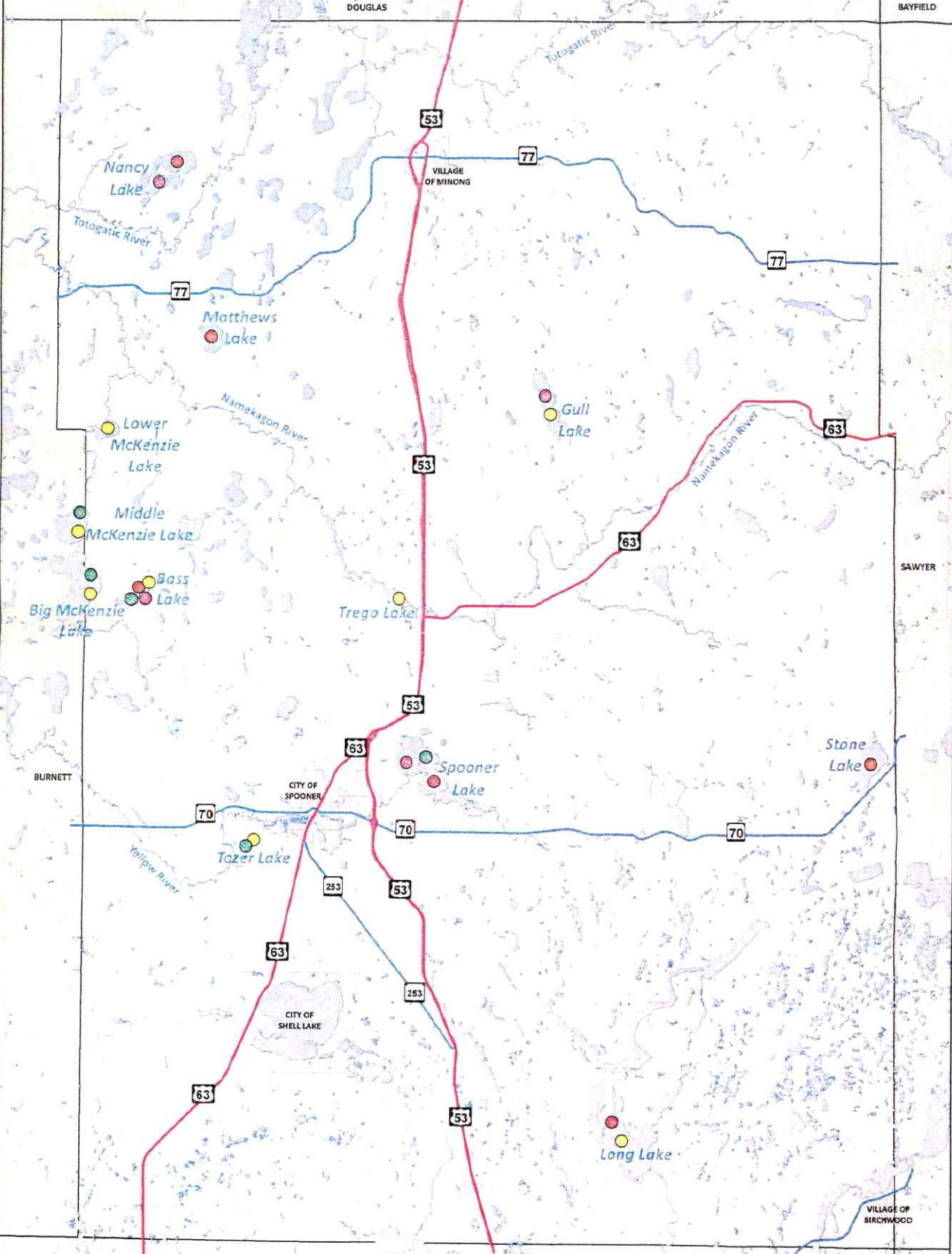
Local towns and counties and some legislators may support laws requiring decontamination. Volunteers worked with Burnett and Washburn Counties to pass ordinance amendments requiring boaters to decontaminate, when available, and are communicating with state legislators about introducing a drain plug removal law similar to surrounding states.

The team may partner on social science research to better understand what messaging, prompts, and/or incentives increase boater decontamination practices.

Burnett and Washburn Counties began a lake service provider outreach effort notifying these businesses of area AIS threats and providing decontamination equipment and training. Several businesses have positively responded with dedicated trailers, hot water power washers, and other decontamination tools.

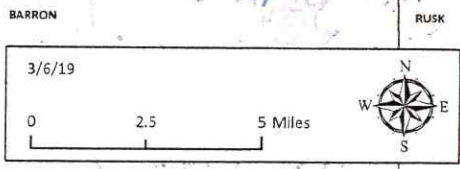
The team is working with zebra mussel researchers to better understand control, develop a zebra mussel rapid response plan, and identify under which, if any, circumstances experimental control would be feasible.

2018 Zebra Mussel Rapid Response Grant Accomplishments (Washburn Co.)



Map Features

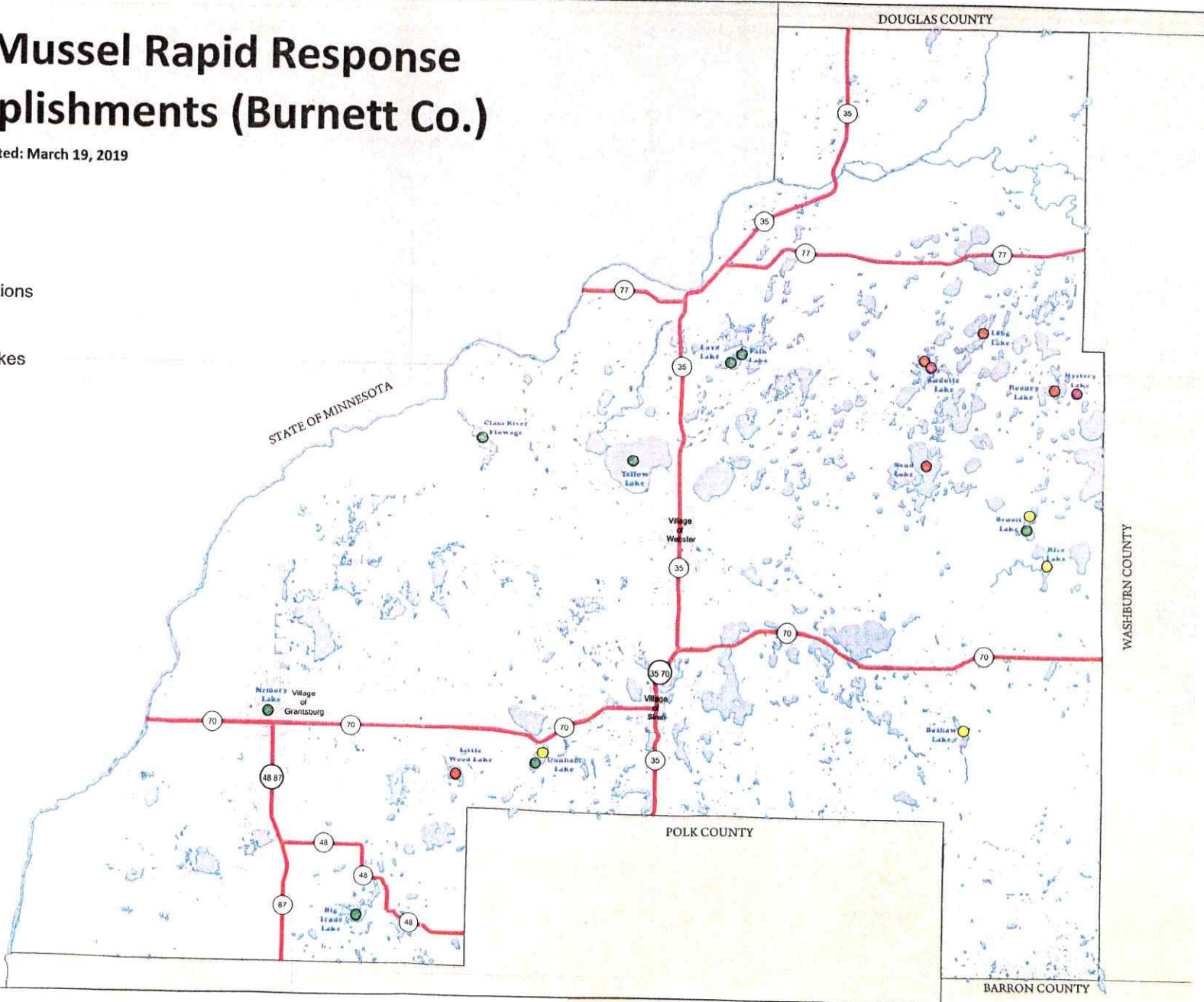
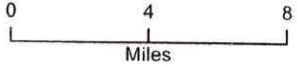
- Decontamination Stations
- Zebra Mussel Veliger Testing
- Zebra Mussel Plate Sampler Lakes
- Environmental-DNA Testing



2018 Zebra Mussel Rapid Response Grant Accomplishments (Burnett Co.)

Printed: March 19, 2019

- Decontamination Stations Locations
- Enviromental -DNA Testing
- Zebra Mussel Plate Sampler Lakes
- Zebra Mussel Veliger Testing



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2017 Planning & Progress Summary

May 24, 2017

Prevent the Spread of
Invasive Species
It's the law!

ALWAYS...

- **INSPECT** your boat, trailer, and equipment.
- **REMOVE** any attached aquatic plants or animals.
- **DRAIN** all water from boats, motors, and equipment.
- **NEVER MOVE** plants or live fish away from a waterbody.

Although not required by law, decontamination using bleach or hot water pressure washing is even better at preventing AIS spread.

If you find a suspected zebra mussel (adult, to scale, below) or other aquatic invasive species, visit dnr.wi.gov and search "report AIS" for step-by-step directions.



Zebra Mussels Confirmed in Big McKenzie in October 2016

A local citizen found zebra mussels on his pier, and DNR staff verified them in Big McKenzie Lake, Burnett and Washburn Counties, in October 2016.

This is the first confirmed inland zebra mussel population in the 12 northwestern counties of Wisconsin. Zebra mussels are in Lake

Superior, St. Croix County, and the Twin Cities metro area.

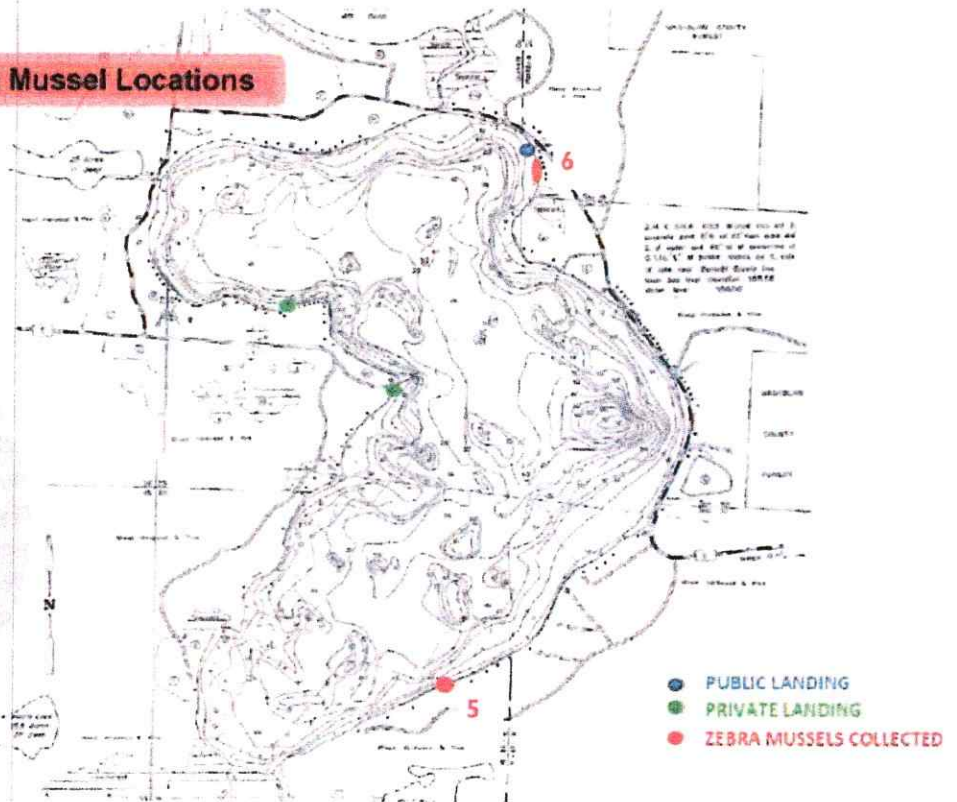
A total of 11 zebra mussels, a year or less old, have been identified on Big McKenzie Lake (map below).

The management team plans substantial profes-

sional monitoring and watercraft inspection efforts in 2017.

You can help by volunteering to monitor, inspect watercraft, educate your lake group or local government, and/or contribute funding to community-based AIS prevention efforts.

Zebra Mussel Locations



PLANNING



Contain AIS and Prevent Further Spread

- McKenzie Lakes Association, Burnett and Washburn Counties, DNR, and private businesses are partnering to provide watercraft inspection and decontamination coverage on the McKenzie Chain with an emphasis at Big McKenzie.
- McKenzie Lakes Association will have decontamination signs at all its public landings.
- 17 lakes in the 2 counties have existing Clean Boats Clean Waters programs.
- Burnett County and DNR decontamination units will be at McKenzie Chain throughout the summer, although 24/7 coverage is not possible.
- DNR will have a credentialed Water Guard, a warden with enforcement authority focusing on AIS laws.
- DNR has an electronic DOT-style signboard reminding boaters of AIS laws it will place throughout the area this summer.
- Burnett and Washburn Counties have their own illegal-to-transport ordinances adding another layer of enforcement capacity.

Monitor to Understand the Extent and Distribution

- Professional early detection monitoring on at least 18 lakes, including the McKenzie Chain and nearby lakes determined to be suitable for establishing zebra mussels based on calcium levels (map on opposite page).
- Professional and volunteer monitoring with zebra mussel plate samplers on at least 7 lakes.
- Volunteers are welcome to do AIS monitoring on their lakes as part of the Citizen Lake Monitoring Network.
- Early detection monitoring begins June 15th, and plate sampler deployment can occur anytime.
- Monitoring samples and results are shared in batches with results available in weeks, at best, and possibly months (i.e. August—October).



A zebra mussel plate sampler ~40 will be placed in the McKenzie Chain.




June 16th is the next opportunity to learn about zebra mussels. Google "Northwest Lakes Conference 2017" to learn more.

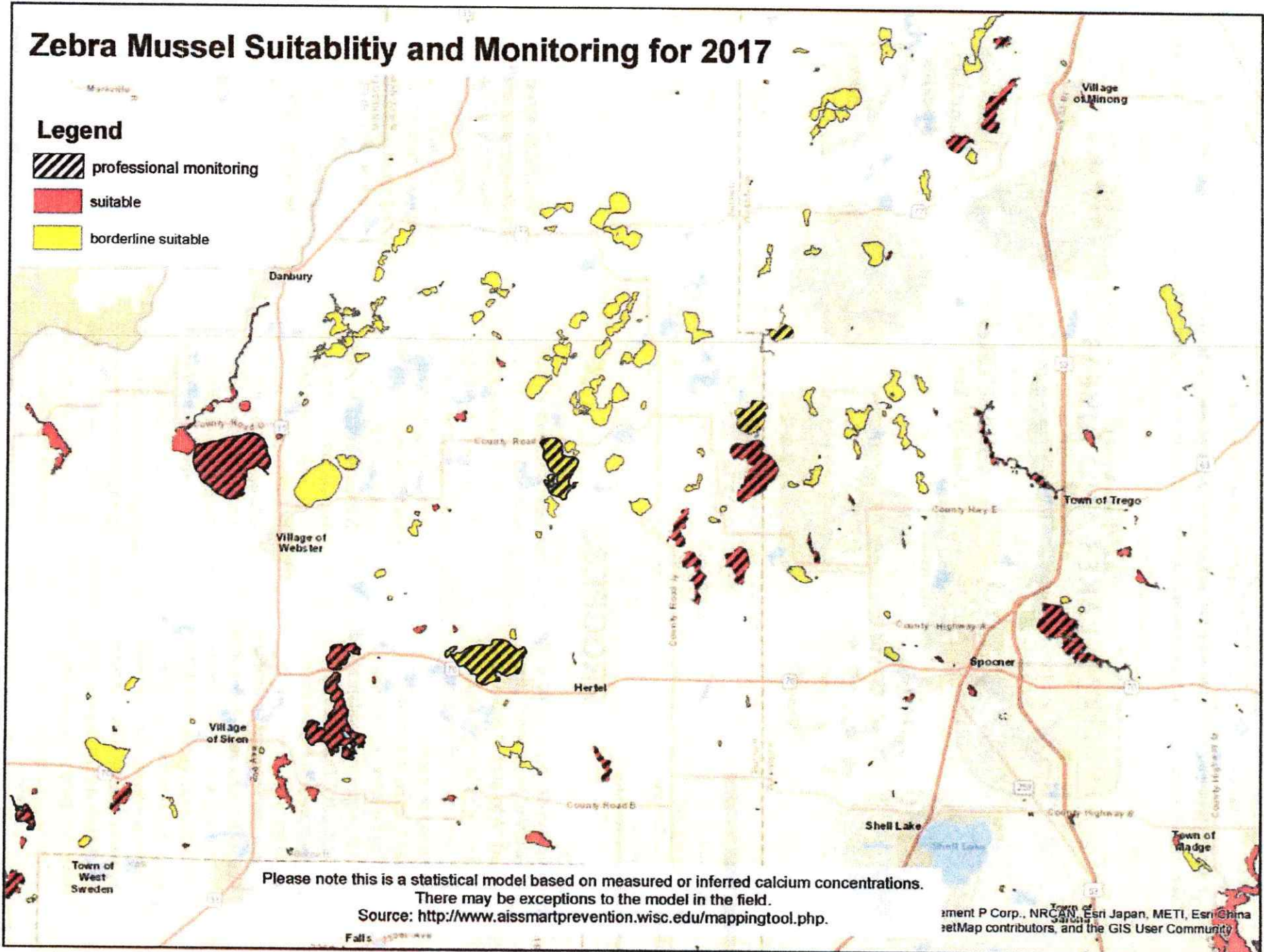
Keep the Public Informed

- WCLRA and BCLRA are working with local communities to form lake groups and town committees. The Town of Chicog recently formed an AIS Committee.
- Annual lake group meetings, including McKenzie Lakes Association, will emphasize zebra mussels and other AIS.
- There are no additional management team public meetings currently planned for summer 2017, but you are encouraged to attend events like the Northwest Lakes Conference on June 16 in Hayward.
- Burnett County will coordinate future public information meetings on behalf of the team.
- We will continue to grow our email distribution list and use it to update folks when new information, including monitoring results, is available.
- WCLRA and BCLRA will keep their websites updated.

Zebra Mussel Suitability and Monitoring for 2017

Legend

-  professional monitoring
-  suitable
-  borderline suitable



Please note this is a statistical model based on measured or inferred calcium concentrations.
There may be exceptions to the model in the field.

Source: <http://www.aissmartprevention.wisc.edu/mappingtool.php>.

ment P Corp., NRCAN, Esri Japan, METI, Esri China
etMap contributors, and the GIS User Community

The McKenzie Lakes Area Zebra Mussel Management Team, covering Burnett and Washburn Counties, includes community organization and government partners trying their best to cooperatively respond to a public concern. The Team uses the tools at hand, including Wisconsin's Rapid Response Framework for Invasive Species, AIS grant funding, and existing laws.



Stay tuned to
www.wclra.org and
www.tinyurl.com/Burnett-County-ZMs

PROGRESS

Follow-up monitoring occurred within a week of the original citizen report. A total of 11 zebra mussels, a year or less old, identified in 2 separate locations on the lake (map on page 1).

December 1, 2016, Public Information Meeting with estimated 80-100 people in attendance and May 18, 2017, Open House.

Three grants awarded: McKenzie Lakes Association AIS Early Detection and Response; Washburn County AIS Education, Prevention & Planning; and Burnett County AIS Education, Prevention & Planning. Zebra mussel response activities are one part of the County grants. National Park Service, U.S. Fish & Wildlife Service, and lake/river groups are also contributing funding and/or staff/volunteer time.

Management Team formed with priorities to 1) contain AIS and prevent further spread (i.e. watercraft inspection & decontamination); 2) understand the extent and distribution of the Big McKenzie zebra mussel population (i.e. monitoring); and 3) keep the public informed (i.e. written and oral communications). Management Team has met 3 times with multiple additional sub-team meetings.

Management Team sub-groups are working on specific issues like a voluntary decontamination program for local lake service providers; better understanding

standing public access and coordinating watercraft inspection/decon at them; and communications. Evaluating control options, which will depend on monitoring results. Control elsewhere (e.g. Minnesota) has had limited success and would likely be an experimental design if feasible. 2017 monitoring, watercraft inspection and decontamination, and communication plans developed.



**STOP AQUATIC
HITCHHIKERS!**

Calcium Testing 2020

Burnett County

<u>Lake Name</u>	<u>WBIC</u>	<u>Lake Station ID</u>	<u>Deep Hole Station</u>	<u>Predicted Suitability</u>
Big Sand Lake	2676800	10001650	073061	Borderline Suitable
Big Trade Lake	2638700	10001865	073056	Suitable
Big Wood Lake	2649800	10001891	073044	Suitable
Birch Island Lake	2453500	10001672	073099	Borderline Suitable
Deer Lake	2460700	10001654	073086	Borderline Suitable
DesMoines Lake	2674200	10001040	073118	Borderline Suitable
Devils Lake	2461100	10001693	073111	Borderline Suitable
Fish Lake	2464500	10001704	073077	Borderline Suitable
Lake 26	2672500	10001042	073060	Borderline Suitable
Lipsett Lake	2678100	10001655	073094	Suitable
Long Lake	2674100	10001937	073050	Borderline Suitable
Loon Lake	2673500	10007555	073125	Borderline Suitable
Mudhen Lake	2649500	10001888	073046	Borderline Suitable
North Sand Lake	2495100	10001652	073080	Borderline Suitable
Spirit Lake	2650300	10001894	073040	Suitable

Washburn County

<u>Lake Name</u>	<u>WBIC</u>	<u>Lake Station ID</u>	<u>Deep Hole Station</u>	<u>Predicted Suitability</u>
Big McKenzie Lake	2706800	10001039	663129	Suitable (Infested with ZM)
Middle McKenzie Lake	2706500	10007092	663115	Borderline Suitable (Infested)
Lower McKenzie Lake	2706300	10007091	663101	Borderline Suitable
Long Lake	2106800	10006708	663090	Suitable
Shell Lake	2496300	10006702	663010	Unsuitable
Bass Lake	2451300	10006707	663107	Borderline suitable
Spooner Lake	2685200	10006704	663153	Suitable
Birch Lake	2113000	10006892	583094	Borderline suitable
Bear Lake	2105100	10000644	033139	Borderline Suitable
Matthews Lake	2710800	10006717	663054	Borderline Suitable
Nancy Lake	2691500	10006700	663155	Borderline Suitable
Minong Flowage	2692900	10006699	663099	Unsuitable
Balsam Lake	2112800	10006715	663045	Borderline Suitable
Spider Lake	1882500	10006710	663148	Unsuitable
Gilmore Lake	2695800	10006714	663116	Borderline Suitable

9/14/2020 1:00-2:00pm (Webex)

Minutes –Zebra Mussel Management Team

Present: Lisa Burns, Katie Sickmann, Cathie Erickson, Bob Baker, Tom Boisvert, Dave Ferris, Sandy Swanson, Maureen Ferry, Kris Larsen, Tyler Mesalk

Meeting Purpose: 2020 field season recap

There are many partners involved in monitoring efforts and the amount of field-work conducted would not have been possible without a strong cooperation between all groups involved. Burnett County, Washburn County, St. Croix River Association, U.S. National Park Service, U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, and many local lake associations were all involved in the zebra mussel response efforts. Thank you everyone!

1. Staff Updates:

- Jeremy Bates is no longer with WI DNR.
- Byron Karns will be retiring from National Park Service (NPS) Sept 25.
- Marian Shaffer will oversee the Aquatic Resource Program for the St. Croix National Scenic Riverway which includes all things aquatic - animals, plants, water quality and AIS monitoring.

2. 2020 Monitoring/Results (see attached summary report)

- To date, no new populations of zebra mussels have been found in Burnett/Washburn waterbodies.
- Veliger test results still being analyzed for Washburn Co. Lakes and hopefully early October will have results.
- ZM plate sampling: Many lakeshore owners in Washburn and Burnett still monitor using the plate samplers. Thank you!
- There are 23 plates out on Big McKenzie, 10 on Middle, and 5 on Lower. Sandy Swanson has been working with landowners and Tom Boisvert to get a more accurate count of zebra mussels (zm's) on monitoring sampler plates. Landowners have been very cooperative in providing ongoing data. Data is being entered into SWIMS.
Big McKenzie average # zm's found on plates = 3,000-4,000
Middle McKenzie average # zm's found on plates= 300-400
Lower McKenzie= no population to date
- eDNA testing Jeremy Bates was going to coordinate eDNA sampling, but since he left, Lisa and Tom agreed to collect the samples (pictures attached). State lab results will hopefully be available early 2021.
DNR realized they were getting some false negatives so took a break in 2020 to not use eDNA for additional surveillance, but focused on improving eDNA field collection methods and lab analysis methods.
Last year, water was collected from the surface because DNA binds to water surface interface. Since zebra mussels are benthic and live on the lake bottom, samples were collected on both the surface and from near the bottom.

Water is collected from multiple locations and composited. Extracting DNA from the composites using two different methods will determine which is best: 1) on-site filtration and 2) preserved water samples.

Oversampling (collecting more than we did before) in the field will help determine how many replicates are needed for a confident positive detection.

3. Rapid Response Update

- The grant will be wrapping up end of 2020
- 10 decontamination stations were ordered
- 30 lakes will be tested for calcium. Lakes within Burnett and Washburn Counties will be sampled to obtain true calcium measurements. These samples will be analyzed by a state accredited laboratory, and results will be shared within Burnett and Washburn Counties, the WDNR, local lake organizations, and the general public. Lakes selected for sampling will be chosen based on their proximity to the McKenzie Lakes, boater traffic, lake association/district involvement and public boat landing access. Results will allow agencies and organizations to assess the true susceptibility of area lakes to infestation of zebra mussels, and adjust containment measures as needed. This sampling effort may draw comparisons between the predicted susceptibility provided by the *AIS Smart Prevention Tool* and the actual calcium measurements in the waterbody."

4. Early Detection Monitoring

-This is a separate type of monitoring looking for numerous aquatic invasive species. Veliger testing is part of the Early Detection Monitoring Protocol. Washburn and Burnett do this monitoring upon request as part of an association's grant and/or it's written within the County grant scope.

5. CBCW Inspections

- Overall, inspections and decontamination compliance was well received this year. One issue noted, is that boaters need to decontaminate, regardless if it's the only lake they use or live/occupy. Reporting action to the Sherriff's Department will be increased with those boaters in 2021.
- A Covid pre-caution sign was developed by Burnett and Washburn County Health Departments and was placed at landings that had a decontamination station. The sign re-assured it's everyone's responsibility to use Covid-19 safety protocol after using equipment.
- Hand sanitizer was provided at some landings by lake associations.
- Inspectors wore masks and kept 6 feet away during inspections. No handouts were given.
- The frequently asked question (FAQ) document was converted to a laminated 11"x17" poster and placed at decontamination stations for the public to view for concerns/questions.
- McKenzie Chain Boat inspectors were on each of the 3 public landings each Saturday and Sunday and holiday starting Memorial Day weekend and ending September 13th, 4 paid inspectors, 7 volunteers. Each lake met their 200 hours for grant, and each also had a lot of extra volunteer hours accounted for. This is a great accomplishment to help with prevention!
- McKenzie Chain Decontamination- The sprayers were getting used a lot this year. Volunteers replaced the bleach/water as needed at each boat landing. A weekly schedule was set-up starting May 1st and will continue through Oct 15.

- The University of MN AIS Research Center got a grant to study genetic testing of zebra mussels.
- The Shoreowners of Stone Lake Association bought a battery operated sprayer for their decontamination station and keep it in a big locked box. Hose is long enough to go around the boat. It has shown very positive results (pictures attached).
- The pressure washer was used a lot this summer, especially during fishing tournaments. Overall, was very well received by the boaters. They were happy to see someone helping with prevention efforts.

6. Decontamination Videos

- Three training videos have been developed by Washburn County staff to help with training and education for inspectors and the general public to view. It's anticipated they'll be available in the winter. They will be tied to a u-tube link.

7. Outreach

- Service provider letters have been sent out, as they have been in the past.
- Newsletters, newspaper articles, etc. is encouraged to continue by all partners.
- More training videos will be considered in 2021.

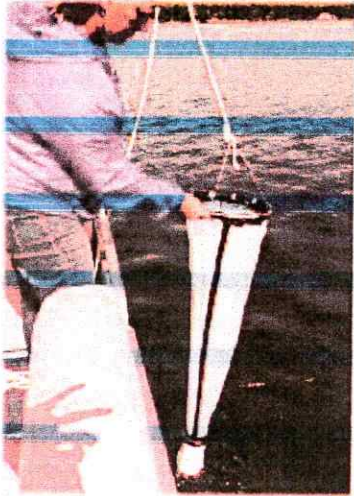
8. 2021 Monitoring- With the Rapid Response Grant ending in 2020, it is anticipated to continue partnering on our monitoring efforts, when feasible, through our current AIS grants. More details will be developed this winter.

9. Other County Decontamination Ordinances

- Bayfield County now has a Decontamination Ordinance, very similar to Washburn/Burnett.
- Sawyer County Lake associations are starting the process to try and get one passed.

Thank you everyone for all of your continued hard work with AIS prevention!

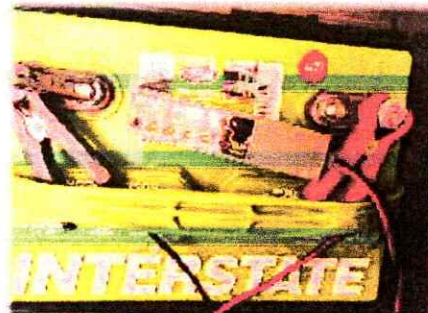
2020 Zebra Mussel Veliger Testing



2020 eDNA Sampling- Big and Middle McKenzie Lake



Stone Lake-Decontamination Battery Operated Sprayer and Box



1/14/2020 12:00 pm – 3:30 pm

Minutes –Zebra Mussel Management Team

Present: Lisa Burns, Jeremy Bates, Katie Sickmann, Byron Karns, Cathie Erickson, Bob Baker, Tom Boisvert, Dave Ferris, Jeremy Bloomquist, Dave Wedan, Jake Didier, Claudia Duffy, Tyler Mesalk, Mike Schollmeyer, Kris Larsen (Kyle Mosel left DNR, will be working at USGS LaCrosse)

Meeting Purpose: 2019 field season recap – accomplishments, lessons learned, and future planning and communication.

***Team Goals-** We have a great partnership and have done a lot of work to meet the goals.

What other things can we be doing?

- Keep up the educational outreach and find ways to incorporate new ways to promote other AIS species, besides just Zebra Mussels. (Newsletters, newspaper, phone calls, letters).
- Continue to get lake associations engaged in monitoring and encourage attending workshops, the NW Lakes conference, WI Lakes Convention

***Updates**

McKenzie Lakes Association: Mike Schollmeyer (power point attached) Rapid Response grant is complete and 2019 CBCW grant received for all 3 lakes.

Overall, the 2019 zebra mussel population exploded in Big McKenzie Lake from plate sampler data. Some plates got to be “too numerous to count.” All plates in Middle McKenzie had zm’s on them. Lower McKenzie still free of zm’s.

- Encouraged to keep sampler plates out for long-term trend study.
- Work closer with DNR to get the data into SWIMS
- How to we keep volunteers interested in helping with plate samplers and making sure we get accurate counts, in order for the data to be used.

ZM Control Research(in same powerpoint)- Cooperative Effort between MN AIS Institute U of MN, USGS, La Crosse, U of Wi, River Falls (Scott Ballantyne, PhD). The goal of this work is to develop a method for specifically eliminating ZM gene products (RNA) using a well-studied procedure known as RNA interference (RNAi). Create a bacterial strain that is toxic to ZM but is harmless to all other creatures. A presentation will be at the 2020 NW Lakes Conference June 19 at Spooner High School.

County Rapid Response Grant- Tom Boisvert

- About \$7,500 left to spend in Rapid Response grant. Likely end before 2021.
- Money will be spent on Decontamination signs, and possibly outreach (scaper for zm’s and laminated decon FAQ sheets. If money sill left do some calcium testing.
- No-Transport Ordinance fine has increased to \$125 for first offense + court costs. Costs are also based on the Sherriff’s discretion.
- Applied for another AIS Edu. Prevention & Planning (AEPP) Grant through WI DNR. Should know in mid-February. Washburn County starting new AEPP grant. Both of the grants have ZM focus.

***2019 Monitoring Results** (2017-2019 Monitoring Handout and DNR monitoring attached)

- eDNA: 2/16 lakes positively detected- Big McKenzie and Bass (St. Croix Co).

- Scuba transect lines. ZM's were 0-4 yrs old in Big McKenzie, increased in population since 2018.
Middle McKenzie found 10 along the transect lines, none found in 2018..
- Veliger Testing, Sampler Plates- Good coverage of monitoring occurring. Still waiting on a couple of veliger results, otherwise no new lakes reported to have ZM's.
- SWIMS Data Management- Mike, Lisa, Tom and Jeremy working together if needed.

***Decontamination Updates**

- Feedback-Tournament fisherman toughest crowd to deal with. County CBCW staff found compliance relatively high and if given a choice between the pressure washer or spray, it varied, depending on the boater and type of equipment. Washburn and Burnett Co will continue to do their best to have staff at McKenzie chain with pressure washer. It's anticipated the new violation form both Counties have and FAQ sheet will help curb non-compliance.
- Spring Training- Lisa looking to have a trainings specific to decontamination stations- how to set one up, materials needed, what to do, how to complete an inspection, dealing with the public, etc.
- FAQ sheet at station landings- Looking to have laminated sheets at boat landings that have a decontamination station, for the public to see. It is encouraged to print off handouts for the inspectors to have available and for them to understand the concept better. Also, talking with the inspector about the violation form and having some available to him/her is encouraged.
- Barron County- passed an order stating "if a decontamination station is present at a landing, boater must use it." It is not an ordinance or enforceable, but a way of potentially getting closer to an ordinance in the future. Bear and Silver Lakes have bought and set up their own decontamination station. More are also interested.

***Work Plan**

- All monitoring efforts with partners and landowners will continue for 2020, and some new lakes will likely be involved. If we do a field day, may be a good idea to get the public involved to see what all the monitoring is about.
- Update the Planning and Progress Report (Lisa)
- Work with Fisheries Biologist on any trends with fisheries impacts, creel survey results, or see if there are any changes found in water quality data with CLMN volunteers/DNR as a result of the ZM's.
- NPS will have funding for veliger testing, and will be able to cover lab costs to analyze.
- eDNA will be continued with DNR, with the help of lakeshore owners. Scuba won't be occurring in 2020.
- Burnett and Washburn County will work with non-lake association members by sending letters to see if they want to get involved in some type of monitoring.
- Email Lisa or Tom if you know anyone interested in a decontamination station or learning more about getting involved in monitoring.
- Other Outreach Suggestions: Decontamination Video, County Fair, Project Red, Fresh Water Fair.

***Next Meeting Date: To Be Determined**

07/10/2019 Minutes – McKenzie Lakes Area ZM Management Team

9:30am-3:00pm Lower McKenzie Lake

Present: Lisa Burns, Dave Ferris, Mike Schollmeyer, Sandy Swanson, Jeremy Bates, Kyle Mosel, Tyler Mesalk, Hunter Denison, Tom Boisvert, Scott Ballentyne, Cathie Erickson

Meeting Purpose: Use DNR Early Detection monitoring techniques to sample for zebra mussels and other aquatic invasive species in Lower McKenzie Lake.

1. Meet at landing and discuss monitoring strategy and break into groups
2. Conduct monitoring
 - a. Veliger tows, E-DNA collection, snorkel, rake throws, check docks, etc.
 - b. Come back to landing and decontaminate all equipment

3. What was found?

*No Zebra Mussels were detected during snorkel, rake throws and observation

*The McKenzie Creek outlet to Namekagon was partially kayaked and no zebra mussels were observed.

*Lots of Chinese and Banded Mystery Snails were found.

*Three Zebra Mussel veliger tows were collected by county staff and water samples were collected by the WI DNR for eDNA analysis. Results of those samples will likely be out late fall or early winter.

*eDNA sampling will occur on Big and Middle McKenzie in August and other lakes are also anticipated.

Early Detection and Response Grant Update-Tom Boisvert and Lisa Burns

*Grant will expire December 31, 2019. May need an extension to use up the funds. More decontamination station signs and equipment may be bought if get more interest from lake associations. Spread the word so we can continue to get them on the landscape!

*Decontamination Stations-As of July 10, 2019 there are 24 decontamination stations installed in Washburn and Burnett Co. Some lakes have numerous stations to coincide with number of boat landings. Overall, decontamination stations have been a positive tool and as expected some won't cooperate.

*ZM Sampler Plates- Tom sent a letter to property owners on six lakes to ask for assistance with monitoring. None of those lakes have a lake association and since the meeting, four lakes contacted Tom to monitor. Lisa gave out plates to 3 additional interested lakeshore owners. Shore land owners from previous years continue to check their plates as well. This has proven to be an effective (and easy) monitoring tool.

*ZM Veliger Tows- Burnett County, SCRA and NPS staff will be conducting tows and Washburn County has some landowners doing their own tows, with training. If available, Washburn County and WI DNR staff assists lake associations with early detection monitoring (if it's part of a grant) which includes collecting ZM veliger tows. At this point, it is not anticipated to buy anymore

tow nets to distribute out to lake associations. The lakes that are being sampled are near the McKenzie chain, are suitable/borderline suitable or are hydrologically connected.

Frequently Asked Question Document- Please review it and send edits to Lisa by July 17. This document is intended to address frequent questions asked by boaters and the general public regarding decontamination stations. Responses are anticipated to be short, to the point and no more than 2 pages. Once complete, Lisa will be distributing in a mass email to lake associations to distribute as they see fit and will be available on the WCLRA website.

Updates& Discussion-Roundtable

*Mike and Sandy- West Point Resort is a popular landing has a decontamination station, but doesn't seem to be have someone educating to use show interest to have someone manning it. It was suggested they could apply for a grant to hire someone to do inspections.

* Mike- BCLRA is looking to raise the first offense fine to \$150 for the Burnett County AIS no-transport and decontamination ordinance.

* Dave- Looking to get the HWY shop sign out again to make public aware of Zebra Mussels

* Tom- working with bait shops and distributing AIS education, doing invasive plant surveys, cutting and spraying purple loosestrife and Yellow Flag Iris. Interns are also doing CBCW and staff follows up with the Sherriff Department on violations.

* Lisa- Worked with WCLRA and UW-Extension to develop/distribute AIS packets to resorts and bait shops. It has been very well received. Raising/releasing purple loosestrife beetles and will be starting to map and help landowners control Japanese knotweed in August. Hunter (LTE) has also been doing a lot of CBCW and working with Burnett Co to share the pressure washer. A violation form has been created, and the Sherriff Department's Recreation Officer is making phone calls to violators. Incidents are being recorded.

* Cathie and Jeremy- Lake Owen, in Bayfield County, has bought and is manning a hot water pressure washer station in Drummond for boaters to stop by and use. There is no County- wide ordinance at this time. Great effort taken on by the lake association!

4. Future communication/meetings

* Some service provider staff are refusing to use the decontamination station, even though they are aware of the ordinance. Educational letters have went to those businesses but compliance is still being ignored. Also, how can the independent contractor be reached?

This winter, Lisa and Tom will find solutions to try and reach the businesses better and discuss the seriousness, especially since they are moving to numerous lakes. To be feasible, formal group trainings may be a possibility but other ideas are welcome.

* An article of the "July 10 field day" and zm update will be written by Lisa and Cathie and distributed to the local newspaper. Lisa will send to the ZM team, to distribute.

* Next meeting date will be determined at a later date, with a Google Poll.

4/5/2018 MINUTES– McKenzie Lakes Area ZM Management Team

9:30am-12:00 pm

Present: Lisa Burns, Pamela Toshner, Jeremy Bates, Bob Baker, Dave Wedan, Rich Reeve, Byron Karns, Angelique Dahlberg, Mike Schollmeyer, Milly Thissen, Joe Thrasher, Dave Ferris, Kris Larsen, Skype: Cathie Erickson, Tim Campbell and Maureen Ferry

Purpose: Strategize 2018 Summer Work Plan

1. Updates

Burnett County AIS Coordinator (Dave Ferris)

*Full Time AIS Coordinator Hired, will start soon

*4 Interns also hired

*New number: 715-349-2109 ext.1361

WCLRA Website Info (Cathie Erickson)

*Cathie is contact to add ZM info to the WCLRA website (www.wcra.org)

*Mike Schollmeyer asked articles also be coordinated with BCLRA website.

*Decontamination article will be submitted to Spooner Advocate, the week before Memorial Day weekend.

*Updated Good, Better, Best Cards being printed

Other?

*Lisa has hired a summer AIS intern. Will start May 21

*Pamela- Bayfield County has a Decontamination Ordinance in the works.

2. County Decontamination Signs (Lisa)

*Price estimate for signs being worked on. Using sign similar to Fish Lake.

*Developing a FAQ sheet, LOTS of questions coming in.

*Discussion of applying for a Rapid Response Grant and using funds to buy a complete "decontamination station" (sign, weed remover tools, bleach, sprayer, goggles, box for handouts) and provide to lake associations. Both Washburn & Burnett Co LWCDs and Lakes and Rivers groups working together on a joint grant.

*Working on a priority checklist. Can't just give everyone a sign that wants one.

3. Community Based Social Marketing (Tim Campbell, UW-Extension & WI DNR) via skype

*Power point-Tim will email it to you upon request

Theory of planned behavior- Move beyond raising awareness and make behavior change. If you act on a person to do something they don't always do it. Need to create a situation to create behavior change.

*Signs 101

- Branding-keep the message consistent.

- AIS needs fast thinking, to the point. Less text is better.

- Less species specific.

- Get a proof and a second. Things easily get overlooked.

4. Lake Veliger Sampling (Byron Karns)

Large Conference Room, DNR Service Center, Spooner, and skype

- *National Park Service wants to collect 50 veliger samples per year (3 collections per lake for 1 composite) within the St. Croix Basin and could include a few outside basin.
- * Most 2018 lakes are already selected so most of this applies to 2019.
- *Need help collecting samples from Lake Associations and/or lake property owners (basically need to get staff on the lake to sample or lake association do it).
- *Target collection date would be around July 4th (temp dependent)
- *NPS would provide equipment, lab analysis and shipping costs.
- * Priority list and checklist will be developed (suitable, high-risk lakes)
- * Additional equipment funding that NPS can't provide, would be included in the DNR Rapid Response grant with decon stations. Match could be donated labor/equipment from lake association.
- *NPS will develop an equipment list and cost
- *E-DNA may also be done with NPS funding

5. Round Table Summer Work Plans

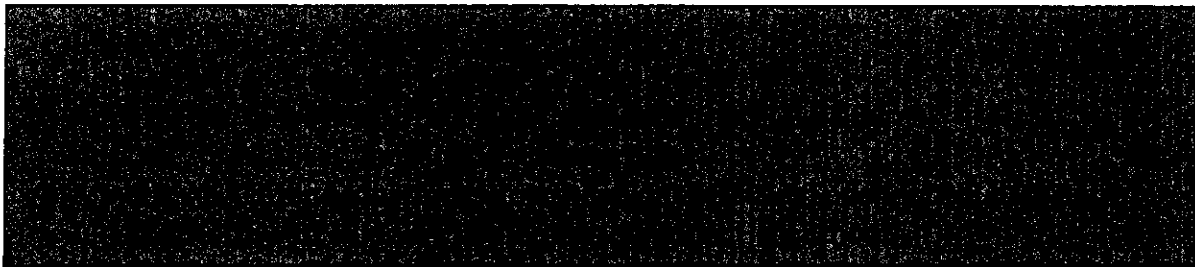
- *Work with NPS and determine lakes to sample (veliger tows). Volunteers will need training of proper protocol.
- *ZM plate samplers will continue on McKenzie Chain and other lakes in each county.
- *Handout DNR Lake Monitoring for 2018-veliger tows not included
- *Dave Wedan can continue help with ZM plates at landings.
- *Continue CBCW inspections with Burnett/Washburn staff and contracted monitors. Schedule being developed.
- *Burnett Co Hot Water Decon Unit will be used this summer in McKenzie area, initially.
- *DNR (Kris Larsen) Hot Water Decon unit will be used at high recreation lakes.
- *Part-time DNR LTE Warden (watercraft inspector) hopefully hired after Memorial Day. This position encompasses other duties, beyond AIS work.
- * Service Provider Outreach- Lisa working on another letter, will send to team and providers. Feel free to stop in and talk to your local providers, if you have a few minutes.

6. Future Meeting and Agenda Items

TENTATIVE July 16, 2018 Field Day on Middle McKenzie

Potential Fall meeting and include Polk County to hear about Deer Lake ZM monitoring and prevention efforts.

Large Conference Room, DNR Service Center, Spooner, and skype



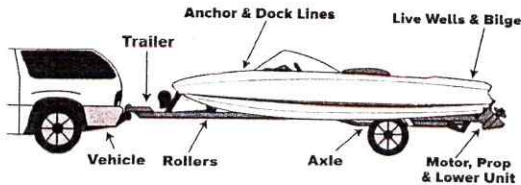
BOAT CLEANING & DECONTAMINATION STATION

BEFORE ENTERING (AND LEAVING) THE BOAT LAUNCH...

HELP...

Prevent the spread of invasive species.
CLEAN BOATS...CLEAN WATER!

CHECK THESE LOCATIONS FOR INVASIVE SPECIES:



- ▶ **INSPECT:** Boats, trailers and equipment.
- ▶ **REMOVE:** All attached aquatic plants, animals and mud.
- ▶ **DRAIN:** All water from boats, vehicles, equipment and live wells.
- ▶ **NEVER MOVE:** Plants or live fish from a body of water.

Limited exceptions apply. Visit www.DNR.WI.gov and search for "Bait Laws."

MOTORS

After removing from the water, tip the motor down and turn the motor over several times to dispel lake water from the cooling system.

Be sure and drain water from your boat, live well and bilge system away from the lake.

CLEANING

- ▶ Use these tools to remove vegetation from your boat, PWC & trailer.
- ▶ Run PWC for 10-15 seconds while on trailer.
- ▶ Please return tools to this station; we have confidence in the honor system

Cleaning
Brush

Weed
Remover

Eye
Protection

DECONTAMINATION REQUIRED

By County Ordinance (if available)

DECONTAMINATION

Decontamination measures with a solution of Chlorine (bleach) should be taken prior to moving boats and equipment from one waterbody to another to help kill mussels and invasive aquatic organisms.

Every effort should be made to keep the bleach solution and rinse water out of surface waters. Pull the boat and trailer off the ramp and onto a fairly level area and away from the sloped area.

- ▶ Please spray your boat and trailer with this hand sprayer with a dilution of 2 tablespoons of bleach in a gallon of water.
- ▶ The outside of the boat, trailer, live wells, bilges and motor, should be sprayed with the bleach solution and left wet for 10 minutes.
- ▶ The live well should be flushed with water before the next use.
- ▶ Wear the eye protection while spraying and stay upwind of the spray.



**STOP AQUATIC
HITCHHIKERS!**

DECONTAMINATION SIGN CHECKLIST

Preparation:

1. Need approval from landing owner – could be state, county or township. Burnett and Washburn counties can help if needed.
2. Where to put the sign – easy access, but away from the lake. It's best not to put it right at the launch area but further away for runoff protection and it keeps the ramp open for other users. Think about the space needed to decontaminate. We would be willing to assist you with the sign location.
3. Staffing – The Lake Association MUST commit to maintaining the bleach sprayer. The bleach solution must be changed at least once per day, the bleach loses its potency after 24 hours. On busy boat traffic days the solution may need to be replenished throughout the day.
4. Other things to consider:
 - Talk to the neighbors of the landing about the sign ahead of time so there's no surprises.
 - Do you need liability insurance?
 - A system to keep track of labor (time) and all expenses in relation to the decontamination sign. If you commit to a sign more details will follow.

Station Needs:

Grant Provides:

- Decontamination Sign
- Cleaning Tools (brushes, weed remover, safety glasses, hand sprayer and starter bleach)

Association Provides:

- Two 4" x 4" posts = estimate \$50
- One 4' x 8' marine grade board (to mount the sign) at least 5/8" thickness = estimate \$75
- Associated Hardware (Screws, etc. for mounting) = estimate \$10
- Sign Installation (labor)
- Total Estimated Cost = \$135

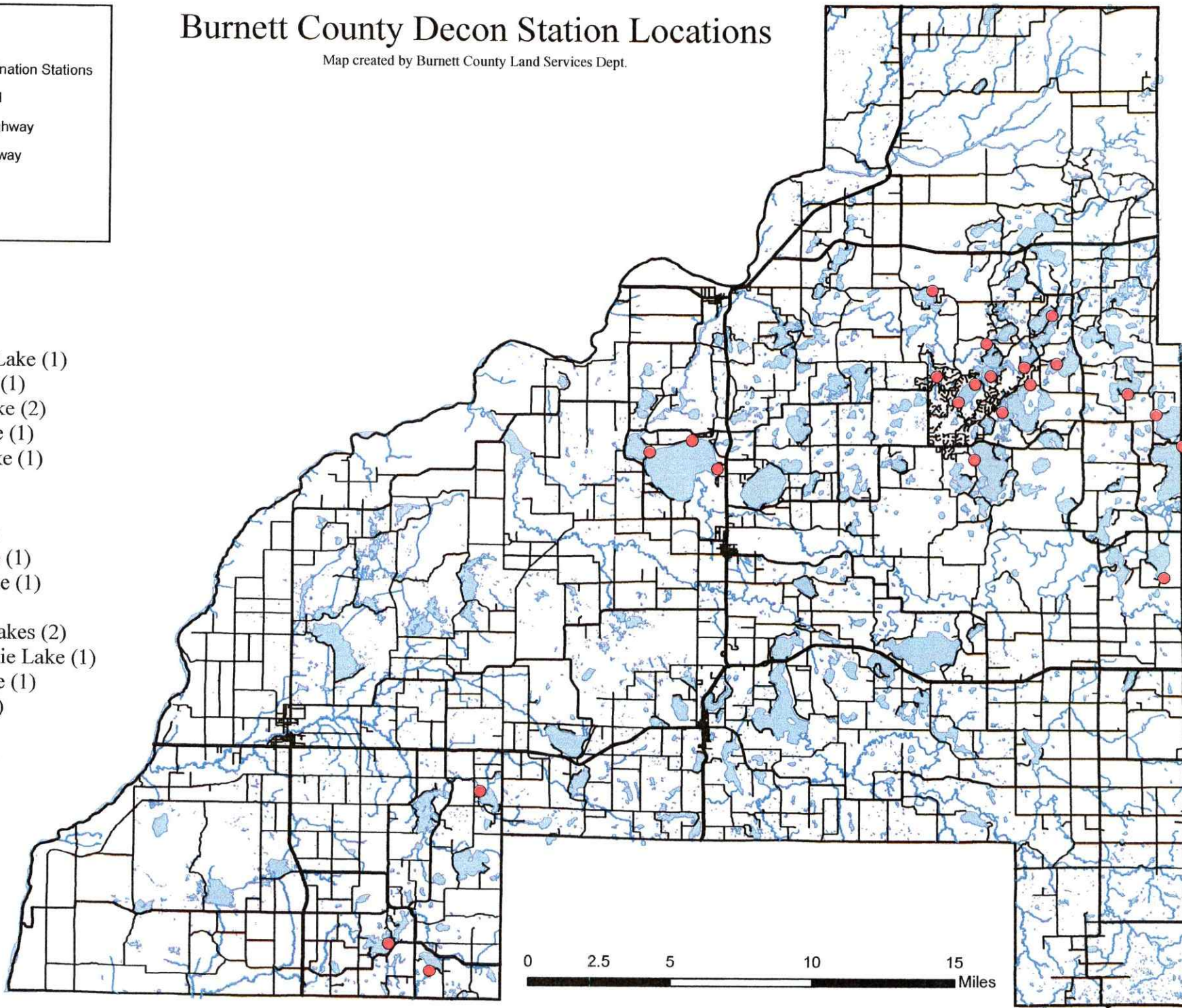
Burnett County Decon Station Locations

Map created by Burnett County Land Services Dept.

Legend

- Decontamination Stations
- Town Road
- County Highway
- State Highway
- Rivers
- Lakes

- Big McKenzie Lake (1)
- Big Trade Lake (1)
- Birch Island Lake (2)
- Culbertson Lake (1)
- Des Moines Lake (1)
- Fish Lake (1)
- Lake 26 (1)
- Lipsett Lake (1)
- Little Bear Lake (1)
- Little Wood Lake (1)
- Long Lake (1)
- Loon-Cadotte Lakes (2)
- Middle McKenzie Lake (1)
- North Sand Lake (1)
- Rooney Lake (1)
- Shoal Lake (2)
- Yellow Lake (3)

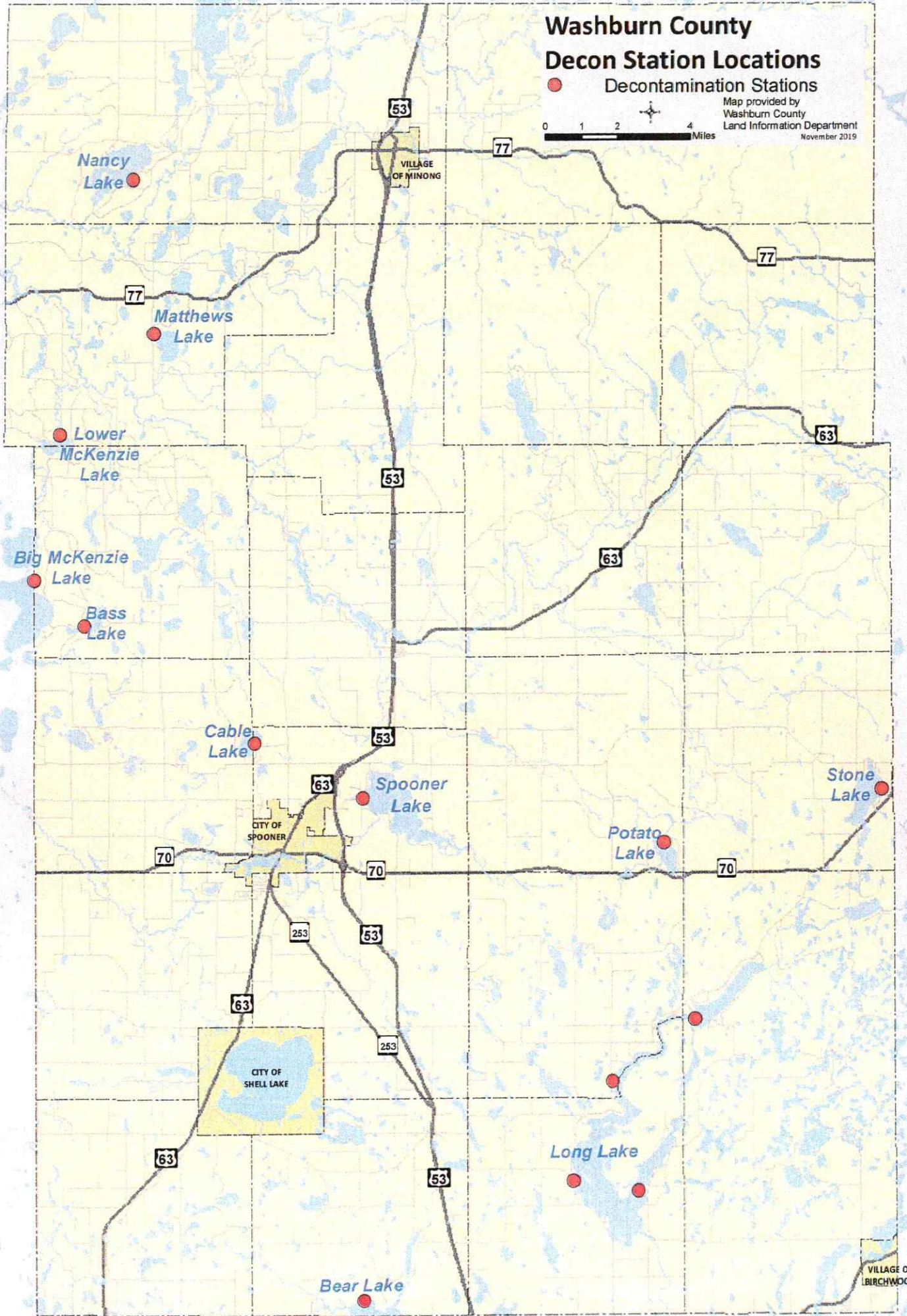


0 2.5 5 10 15 Miles

Washburn County Decon Station Locations

● Decontamination Stations

Map provided by
Washburn County
Land Information Department
November 2019



PREVENT THE SPREAD OF COVID-19

Please be aware this station may be used by multiple people and it is recommended that you use COVID-19 safety protocol after inspecting your boat.



While using this station please wear disposable gloves



Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitizer.



Avoid touching your eyes, nose, and mouth with unwashed hands.

PREVENT THE SPREAD OF COVID-19

Please be aware this station may be used by multiple people and it is recommended that you use COVID-19 safety protocol after inspecting your boat.



While using this station please wear disposable gloves



Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitizer.



Avoid touching your eyes, nose, and mouth with unwashed hands.

Decontamination Station Frequently Asked Questions

1. **What is decontamination?**
 - a. It is the process of removing all aquatic plants and animals, including materials that may contain or transmit aquatic invasive species (AIS) beyond physical removal or other methods.
2. **What is a decontamination station?**
 - a. The station may consist of high temperature water (140 degrees or more) applied with a pressure washer by trained personnel or a recommended chemical solution applied with a low pressure sprayer, or other techniques or devices.
3. **Why have a decontamination station?**
 - a. Hand removal is effective at removing plants from watercraft equipment and removes small animals. Decontamination is another tool to help kill invasive species that are not visible or very difficult to see (zebra mussels and spiny water fleas).
4. **Who owns a boat landing?**
 - a. Boat landings can be owned by various entities, including a private citizen, township, state or federal government. Permission to install a decontamination station must be approved by the landing owner.
5. **Who maintains the decontamination station?**
 - a. Citizen members of a lake association or district change the solution to the recommended mix of 2 tablespoons bleach per gallon of water. They are trained to properly apply the solution to equipment.
6. **What is the concentration of bleach?**
 - a. Standard bleach is 52,500 ppm chlorine, while the bleach concentration being used here is ~500 ppm. Reported in percentage, regular strength household bleach is 5.25% sodium hypochlorite while this solution is 0.05% sodium hypochlorite.
7. **Where should the decontamination station be installed?**
 - a. It is recommended to be installed away from the launch area and where vehicles use an area for turn-around/back up. If there is a sloped launch, it is installed away from the slope, upward on land.
8. **Are there runoff issues?**
 - a. A fine mist of the bleach/water solution is applied using a hand-pump sprayer. The solution covers the boat and trailer and is thoroughly applied around its perimeter. It evaporates quickly and no runoff into the lake occurs. There is no harm to the lake once the boat/trailer goes into the water.
9. **Will it kill grass?**
 - a. The concentration of the bleach solution being used is low enough that it should not kill grass. A much stronger solution (1 cup bleach/gallon vs 2 tablespoons/gallon) is often used to clean vinyl siding on houses with no effect on nearby grass and landscaping.
10. **I'm worried that this decontamination method will harm my boat/equipment.**
 - a. There are no known cases of damage from properly using any decontamination method. As stated in #9 an even higher solution is recommended to clean vinyl siding on a house. The WI DNR uses this solution on all of their boating equipment every day and tournament fishing boats have been sprayed down and have shown no harmful effects.
 - b. **Ranger Boats:** *"At any rate—household bleach at full concentration is not going to harm the gel coat when used during washing and rinsed off."*
 - c. **Tuffy Boats:** *"The described bleach solution is 100% safe on all gelcoat applications."*

- 11. I'm worried that the bleach/water solution in my live well will harm fish I keep in there.**
- Between the low initial concentration of the applied solution, the off-gassing of the chlorine while sitting, and then the dilution of any residual chlorine, the likelihood that fish would be impacted by the bleach is very low.
 - An alternative would be to use ice to keep fish fresh until you get home.
- 12. I don't think that this will make a difference.**
- The vast majority of invasions are human mediated and theoretically preventable. Each prevention action we take, reduces the probability of a new invasion by a boat moving aquatic invasive species.
 - Recreational boating is a way AIS move around and once they are here, we all share a responsibility to be doing everything we can to prevent their spread.
- 13. What are people doing about other pathways? That's a big reason AIS moves around.**
- Ballast water – Recently approved regulations will facilitate the placement of ballast water treatment technology on ocean going shipping vessels.
 - Ducks and turtles – If ducks and turtles were moving AIS, we'd expect a much more random distribution. More small ponds and lakes without access would contain AIS. As it stands, lakes that have boat ramps have AIS, indicating they are much more likely to be moved by people with boats than ducks and turtles.
 - People letting pets go-The national Habitattitude campaign promotes responsible pet ownership and outlines alternatives to pet release. Wisconsin uses this program to develop pet rehoming networks so that people have alternatives to pet release.

As of February 2018, Washburn and Burnett Counties have passed an ordinance that states "if a decontamination station is available at a boat landing, the boater is required to use it".



For more information contact:

Burnett County AIS Coordinator, Tom Boisvert at (715)-349-2109 Ext. 2613
 Washburn County AIS Coordinator, Lisa Burns at (715)-468-4654

Decontamination Frequently Asked Questions

Created by Burnett and Washburn County Land and Water Conservation Departments

What is decontamination?

It is the process of removing all aquatic plants and animals, including materials that may contain or transmit aquatic invasive species (AIS) beyond physical removal or other methods.

Why have a decontamination station?

Hand removal is effective at removing plants and small animals from watercraft equipment. Decontamination is another tool to help kill invasive species that are not visible or very difficult to see (zebra mussels and spiny water fleas).

Who maintains the decontamination station?

Citizen members of a lake association or lake district change the solution to the recommended mix of 2 tablespoons bleach per gallon of water. They are trained to properly mix the solution.

What is the concentration of bleach?

Standard bleach is 52,500 ppm chlorine, while the bleach concentration being used here is ~500 ppm. Reported in percentage, regular strength household bleach is 5.25% sodium hypochlorite while this solution is 0.05% sodium hypochlorite.

Are there runoff issues?

A fine mist of the bleach/water solution is applied using a hand-pump sprayer. The solution covers the boat and trailer and is thoroughly applied around its perimeter. It evaporates quickly and no runoff into the lake occurs. There is no harm to the lake once the boat/trailer goes into the water.



Will the bleach solution in my live-well harm the fish I keep in there?

Between the low initial concentration of the applied solution, the off-gassing of the chlorine while sitting, and then the dilution of any residual chlorine, the likelihood that fish would be impacted by the bleach is very low. An alternative would be to use ice to keep fish fresh until you get home.

Will decontamination make a difference?

The vast majority of invasions are human mediated and theoretically preventable. Each prevention action we take, reduces the probability of a new invasion by a boat moving aquatic invasive species.

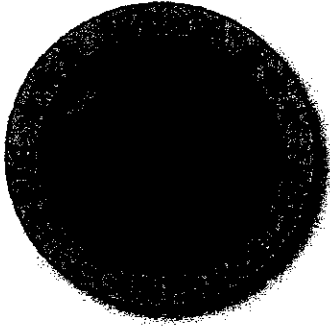
Recreational boating is a way AIS move around and once they are here, we all share a responsibility to be doing everything we can to prevent their spread.

Will this harm my boat or equipment?

There are no known cases of damage from properly using any decontamination method. An even higher solution than the one provided is recommended to clean vinyl siding on a house. The WI DNR uses this solution on all of their boating equipment every day, and tournament fishing boats have been sprayed down and have shown no harmful effects (see below).

Ranger Boats: *"At any rate – household bleach at full concentration is not going to harm the gel coat when used during washing and rinsed off."*

Tuffy Boats: *"The described bleach solution is 100% safe on all gelcoat applications."*



BURNETT COUNTY
LAND SERVICES DEPARTMENT
7410 County Road K, #120
Siren, WI 54872
Telephone: (715) 349-2109

Dear (Lake Name) resident,

As many already know, zebra mussels have become established in Big and Middle McKenzie Lakes here in Burnett County. During the past few years Burnett County and other organizations have responded rapidly to keep this threat from progressing elsewhere. Controlling and preventing the spread of zebra mussels has been of utmost importance, and several monitoring procedures are being utilized throughout Burnett County.

The three most prevalent procedures for zebra mussel monitoring are veliger tows, eDNA analysis, and zebra mussel plate samplers. Different waterbodies have different monitoring protocols based on levels of funding, previous monitoring efforts, and a waterbodies zebra mussel viability rating. Burnett County aims to have even monitoring coverage across all waterbodies, and changes monitoring patterns yearly.

The reason I am contacting you is (Lake Name) was selected for zebra mussel plate sampling this season. This lake currently **does NOT** have zebra mussels, and this monitoring effort is to confirm their absence. To make this sampling as informational as possible, several locations across the lake should have samplers placed.

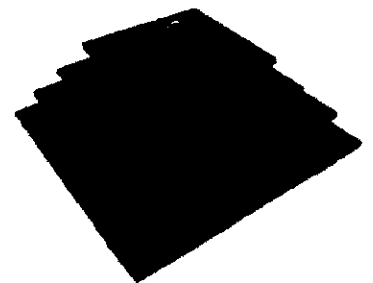
Samplers are suspended in the water untouched for 4 week periods. After a 4 week period has elapsed, the plates should be checked for any suspected zebra mussels. The findings should be reported to me using the contact information provided. If volunteers would need help looking at the plates, or would like to know more about the monitoring program I am more than willing to help with this process.

If you or any other people residing on (Lake Name) would be willing to be involved in this monitoring process, please contact me directly to reserve a plate sampler. Plate sampler distribution will be held on July 12th, 2019 between 8:30 a.m. and 4:30 p.m. at the Burnett County Government center in the Land Services Department. The address is listed above.

I hope (Lake Name) will be a part of this monitoring effort,

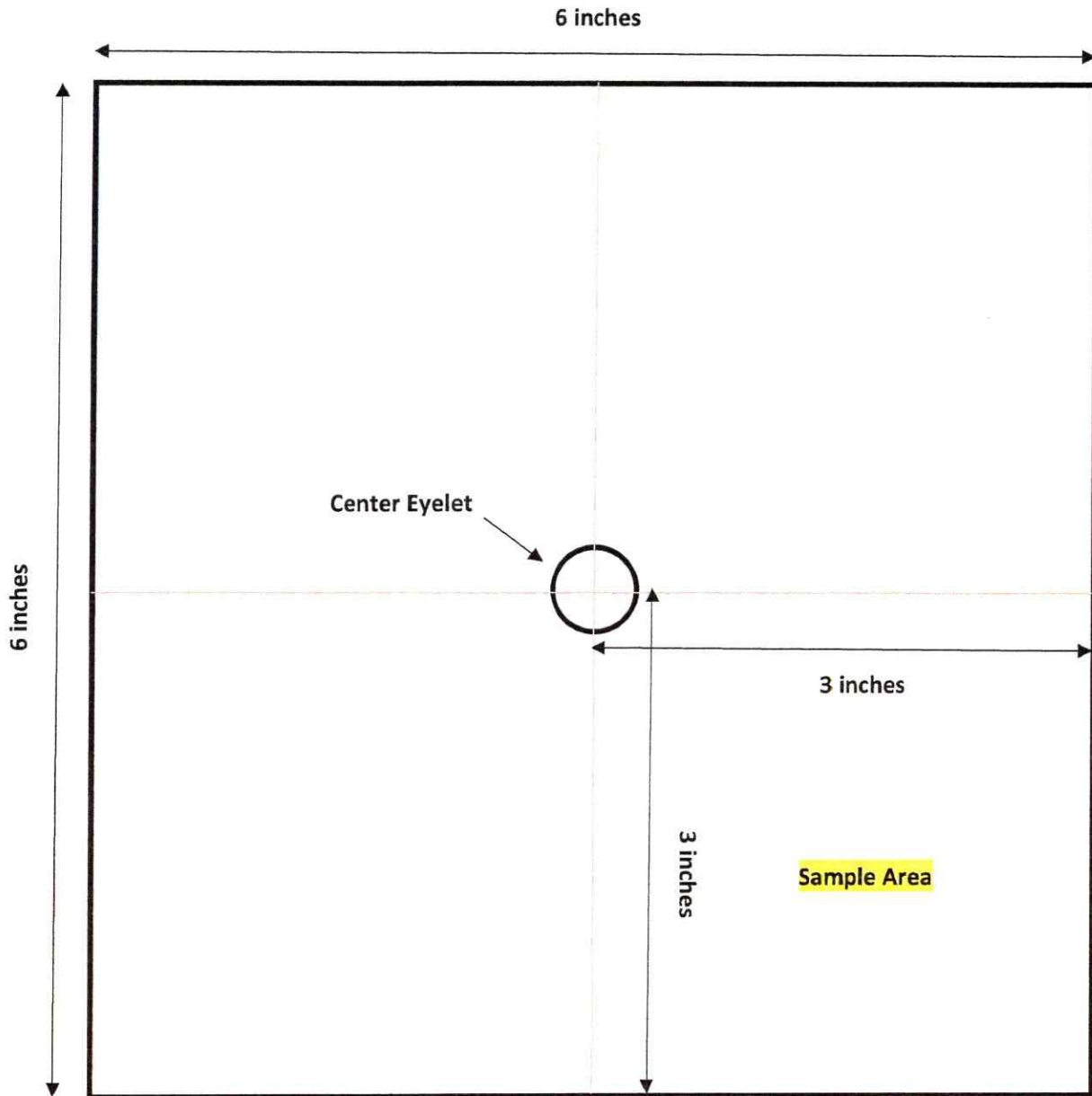
Thomas Boisvert

Burnett County Aquatic Invasive Species Coordinator
tboisvert@burnettcounty.org
(715)-349-2109 Ext. 1382



Zebra Mussel Plate Sampler

To scale representation of the top plate on a zebra mussel plate sampler.



Area = length x width

3 inches x 3 inches = 9 inches squared (sample area)

Take total ZM found in the sample area and divide by 9. This will give the number of ZM per square inch.

Extrapolate this to the entire surface area of the sampler to get an estimated ZM count (remember to consider both sides of the plates in your calculation).

Examples on the next page.

Surface Area of a “Pyramid” Sampler:

To find the total surface area, we must calculate the surface area for each individual plate. In a pyramid sampler each plate needs to be calculated separately since they are different sizes.

Bottom Plate is 12 inches

$12 \times 12 = 144$ square inches. $144 \times 2 = \mathbf{288}$ square inches to account for both sides.

Third Plate is 10 inches

$10 \times 10 = 100$ square inches. $100 \times 2 = \mathbf{200}$ square inches to account for both sides.

Second Plate is 8 inches

$8 \times 8 = 64$ square inches. $64 \times 2 = \mathbf{128}$ square inches to account for both sides.

Top Plate is 6 inches

$6 \times 6 = 36$ square inches. $36 \times 2 = \mathbf{72}$ square inches to account for both sides.

Total surface area for a pyramid plate sampler = $288 + 200 + 128 + 72 = \mathbf{688}$ square inches.

Surface Area of a “Cube” Sampler:

There are four plates of the same size, so calculating the total surface area is relatively easy compared to the pyramid sampler.

$6 \times 6 = 36$ square inches. $36 \times 2 = \mathbf{72}$ square inches to account for both sides.

There are four 6 x 6 plates so therefore $4 \times 72 = \mathbf{288}$ square inches.

Example:

For this example we will theoretically be using a cube plate sampler. When counting the number of zebra mussels in the 3 inch x 3 inch area (9 square inches), 10 zebra mussels were found.

Therefore, we take 10 zebra mussels and divide that by 9 square inches. This gives us approximately 1.11 zebra mussels/square inch.

The total surface area of a cube sampler is 288 square inches.

To find the total estimated amount of zebra mussels on the sampler, we take 1.11×288 . This gives us a final estimate of approximately 320 zebra mussels on the sampler.

This method should only be used when there are too many zebra mussels to count on the entire plate sampler.



BURNETT COUNTY
LAND SERVICES DEPARTMENT
7410 County Road K, #120
Siren, WI 54872
Telephone: (715) 349-2109

April, 2020

Dear Lake Service Provider,

The open water season has arrived! Boats, docks, boat lifts, rafts, and other water structures are being installed at a fast pace. Although this is an extremely busy time, I would like to remind you to take special care whenever possible to help prevent the spread of Aquatic Invasive Species (AIS).

The Burnett County Land Services Department encourages a thorough inspection of the equipment being installed/removed. It is important to note that some equipment, docks, boats, etc. are bought second hand. Therefore, these items may have been in a different waterbody recently and should be checked thoroughly.

As always, please remember to properly clean and disinfect your equipment before moving to another waterbody. Inspect equipment for aquatic vegetation, mud, sand, mussels and snails. Remove anything that you may have found, and discard on the shore. Drain all excess water from equipment before transport, and dry the equipment if applicable.

As a reminder, some landings in Burnett County have decontamination stations, and the Burnett County decontamination ordinance states that equipment must be decontaminated using the provided materials before entering and exiting the waterbody. Washburn County has a similar ordinance requiring the same procedures.

Also, some local lake associations and businesses have purchased lake-specific trailers. In particular, some service providers have trailers designated for Big and Middle McKenzie Lakes **ONLY** due to the presence of zebra mussels. If your business would like to help prevent the spread of AIS, utilization of these trailer programs would be a great way to do so. **If your customer is a part of a local lake association, it may be worthwhile to see if their association has purchased a trailer designated for their lake ONLY.**

We are living in a crazy world during the COVID-19 global pandemic. In a way, COVID-19 can be related to AIS. Just like AIS, COVID-19 spreads fast, needs decontamination procedures, and impacts our local economies. Just like a disease, AIS should be prevented from spreading to reduce the impact on the environment and local economies.

I hope your business will be proactive in taking steps to prevent the spread of AIS. If any questions arise please feel free to contact me with the information below. Additional information is enclosed.

A handwritten signature in black ink that reads "Thomas J. Boisvert".

Thomas Boisvert

Burnett County Aquatic Invasive Species Coordinator

tboisvert@burnettcounty.org

(715)-349-2109 Ext. 2613



BURNETT COUNTY
LAND SERVICES DEPARTMENT
7410 County Road K, #120
Siren, WI 54872
Telephone: (715) 349-2109

Dear Lake Service Provider,

As the open water season winds down the time is ticking before watercrafts, docks, boat lifts, rafts, and other water structures are needed to be removed before ice season arrives. During removal, the Burnett County Land Services Department encourages a thorough inspection of the equipment being removed. The inspection being referred to is a careful scan looking for aquatic invasive species (AIS). In particular, equipment should be examined for signs of zebra and quagga mussels. Early detection of AIS is crucial for preventing their spread, and can help with their control.

Zebra and quagga mussels adhere themselves to hard surfaces which makes most water structures the perfect habitat. When removing these structures please look for any suspected mussels. Smaller zebra mussels may not be as obvious as the adults. However, they make a surface look rough, and the surface will feel like a coarse sandpaper. If any suspected mussels are found, please take a specimen and inform me using the contact information below.

Overall, these mussels are something that Burnett County does not need. Unfortunately, Big and Middle McKenzie Lakes already have established populations of zebra mussels. Because there are already zebra mussels present in Burnett County, monitoring is of high priority. By monitoring equipment when it is being removed, any new infestations could be addressed as quickly as possible.

As always, please remember to properly clean and disinfect your equipment before moving to another waterbody. Inspect equipment for aquatic vegetation, mud, sand, mussels and snails. Remove anything that you may have found, and discard on the shore. Drain all excess water from equipment before transport, and dry the equipment if applicable.

As a reminder, some landings in Burnett County have decontamination stations, and the Burnett County decontamination ordinance states that equipment must be decontaminated using the provided materials before entering and exiting the waterbody. Washburn County has a similar ordinance requiring the same procedures.

I hope your business will be a part of this monitoring effort, and if any questions arise feel free to contact me with the information below. Additional information is enclosed.

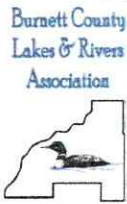
A handwritten signature in cursive script that reads "Thomas J. Boisvert".

Thomas Boisvert

Burnett County Aquatic Invasive Species Coordinator

tboisvert@burnettcounty.org

(715)-349-2109 Ext. 2613



September 11, 2018

Dear Lake Service Provider,

2018 was the first season of the newly passed **Burnett and Washburn County Decontamination Ordinance** which states, "If available, boaters are required to decontaminate boats, trailers and equipment before entering and leaving a waterbody". Decontaminating your equipment further minimizes the chances of spreading aquatic invasive species, especially small critters like zebra mussel larvae that the naked eye cannot see.

Through a DNR grant, decontamination stations were bought which consisted of a 4x8' sign, cleaning tools, bottle of bleach and a gallon sprayer. Lake associations were excited to take advantage of this "new tool" at their landing and installed them. To date, they are found at the following landings in Washburn and Burnett Counties:

- Mathews Lake**
- Nancy Lake**
- Spoooner Lake**
- Stone Lake**
- Fish Lake**
- Birch Island Lake**
- Loon-Cadotte Lake**
- North Sand Lake**
- Long Lake**
- Rooney Lake**
- Lipsett Lake**
- Little Wood Lake**
- Big, Middle, Lower McKenzie Lake**



With zebra mussels in Big and Middle McKenzie Lakes, this effort helps makes boat/trailer cleaning and even more important. Moving trailers, docks, boats and boats in and out all season, is always a concern in transporting invasive species. The Land and Water Conservation Departments continue to offer **free** disinfection equipment (bleach/1 gallon sprayer) and training on proper usage. We simply ask you to spray all your boating equipment down before moving lake to lake. The bleach solution is a substantially diluted chlorine solution from household bleach. Ratio is 2 tablespoons of household bleach per 1 gallon of water. Note: once mixed, the potency diminishes after 24 hours, so you'll need to mix a fresh batch every day.

THANK YOU to those who are already doing this and/or who have bought a trailer specifically for a lake you work on. With storage season upon us, please keep an extra eye out for zebra mussels on dock posts, underwater support bars, wheels, boats, pontoons and jet skis that have been sitting in water for a long period of time. Zebra mussels will feel like gritty sandpaper.



Adult and juvenile zebra mussels

Please feel free to contact us if you find something suspicious, are interested in receiving equipment, educational brochures, identification cards, or other aquatic invasive species information. We appreciate your partnership to keep our lakes clean!

Becca Klemme
AIS Coordinator
Burnett County
715.349.2109 ext. 1382
rklemme@burnettcounty.org

Lisa Burns
Conservation Coordinator
Washburn County
715.468.4654
Lburns@co.washburn.wi.us

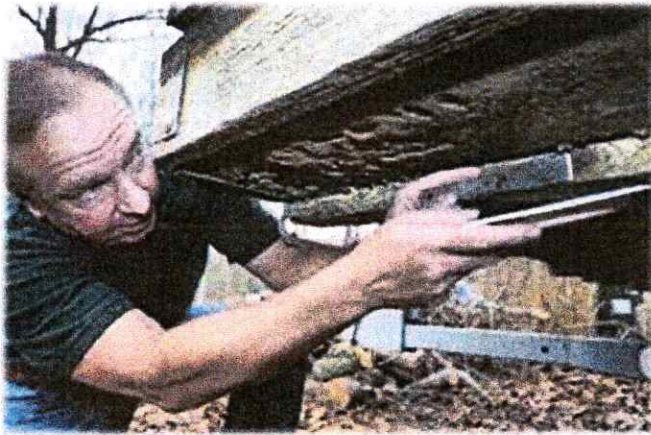
****Remember that transportation of aquatic plants, animals, and water is illegal both under state and county laws. Always Inspect, Remove plants and animals, Drain all water, and Never Move plants, animals, or water from any boat landing.***

Aquatic Invasive Species- Water Equipment Storage Tips

Summer is winding down and lakeshore owners are starting to their boats, docks, swimming rafts, etc. out of the water. Zebra mussels are now established in Big and Middle McKenzie Lakes. This initiates the continued importance of looking for aquatic invasive species. Lake Service Providers have also been provided information on what they can do to help.

The following steps should be made when taking equipment out of the water for winter storage:

1. Inspect and remove any plants, mud or other debris found on equipment. Check dock posts, underwater support bars, wheels, boats, pontoons and jet skis that have been sitting in water for a long period of time. Zebra mussels will feel like gritty sandpaper.
2. Drain all water from equipment.
3. Run water pumps and start motors out of water to flush out remaining water out of the cooling system.
4. Spray down your equipment with a bleach/water solution. One tablespoon of bleach per gallon of water and letting it air dry is recommended to help kill unseen hitchhikers.
5. If you find something suspicious, take a picture, bag it and contact Lisa Burns, Conservation Coordinator with Washburn County at 715-468-4654.



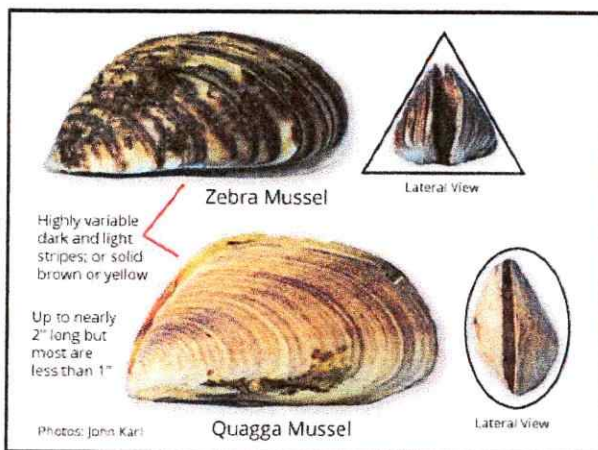
Check your dock for zebra mussels before winter storage.

Attention Shoreline Property Owners:

As the open water season winds down the time is ticking before docks, boat lifts, rafts, and other water structures are needed to be removed before ice season arrives. During removal, the Burnett County Land Services Department encourages a thorough inspection of the equipment being removed. The inspection being referred to is a careful scan looking for aquatic invasive species (AIS). In particular, shoreline owners that are removing structures should be examining their equipment for signs of zebra and quagga mussels.

Zebra and quagga mussels adhere themselves to hard surfaces which makes water structures the perfect habitat. When removing these structures please look for any suspected mussels. Early detection of AIS is crucial for preventing their spread, and can help with their control.

Zebra and quagga mussels are extremely invasive organisms that originate mainly from the Caspian Sea region. Through the shipping trade they moved into the Great Lakes via ballast waters, and from the Great Lakes they are then unintentionally transported through recreational watercraft movements.



Each zebra and quagga mussel filters approximately one liter of water per day. Often this clears the water in which they reside in, however, clear water does not always mean healthy water. Through this intense filtration, these mussels essentially “sterilize” the water of its nutrients and micro-organisms. This leads to a bottom-up effect on the food chain causing problems for much of the waterbodies’ organisms. There is also a strong correlation between zebra and quagga mussels and increased toxic blue-green algae blooms.

Besides the ecological effects of zebra and quagga mussels, they cost the U.S. Economy millions of dollars each year. They block water pipes and screens, cause watercraft engine problems, create large colonies on boat undersides, and can make beaches undesirable with their dead, sharp shells.

Overall, these mussels are something that Burnett County does not need. Unfortunately, Big and Middle McKenzie Lakes already have established populations of zebra mussels. Because there are already zebra mussels present in Burnett County, monitoring is of high priority. By monitoring equipment when it is being removed, any new infestations could be addressed as quickly as possible.

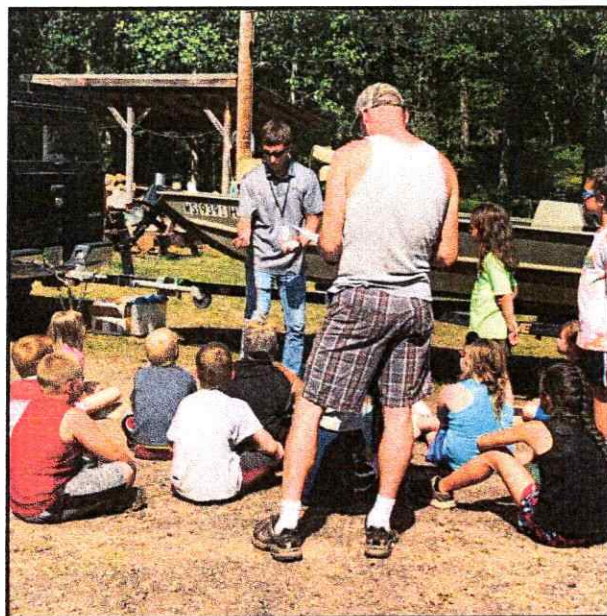
If you find something that is suspicious on your water structures when removing them this fall, feel free to contact Thomas Boisvert, the Burnett County AIS Coordinator at (715)-349-2109 Ext. 1382 or tboisvert@burnettcounty.org.

Community Involvement: Camp Burnett 4-H kids

On Thursday, July 18th Thomas Boisvert, the Burnett County AIS Coordinator visited Camp Burnett on Lake 26 to converse with 4-H kids about aquatic invasive species (AIS). A short presentation was given to the kids about different types of AIS, their ecological impacts, and what prevention methods help stop their spread. AIS specimens were passed around, and bags including wildcards, AIS pencils, AIS bobbers, and other materials were distributed.

After the presentation, an activity developed by the previous AIS Coordinator Becca Klemme was utilized. Zebra mussel shells (dead) were stuck to the boat trailer using glued on magnets, fake plants were hung around the trailer and boat, and snail shells were hidden as well. All the kids were challenged with finding all the “AIS” on the boat and trailer, and making sure it was clean before transport.

There were approximately 40 kids that attended this program, and two rotations were used to ensure adequate class sizes.



LakeLines Article

In May 2018, Burn Burnett County Land Services, Washburn County Land and Water Conservation, Burnett County Lakes and Rivers Association, and Washburn County Lakes and Rivers Association applied for a rapid response grant through the Wisconsin DNR to prevent the spread of zebra mussels. With this grant we are able to purchase decontamination stations and monitoring equipment.

We are currently looking for lake associations interested in decontamination stations and zebra mussel monitoring. If your lake association is interested in monitoring for zebra mussels or would like a decontamination station please contact Becca Klemme at rklemme@burnettcounty.org or (715)349-2109 ext. 1382 for more information.

LakeLines Article

Zebra mussels have become a headline in Burnett County in the past year, and you have the ability to help stop the spread of this invasive species into any other lakes. With this organism having been found in Big and Middle McKenzie Lake, it is paramount that everyone does their part from recreational boaters and anglers to anyone removing any type of equipment from these bodies of water. With the end of summer approaching and docks, boatlifts, and floating rafts being removed, it is the perfect time to be on the lookout for Zebra Mussels. When any of these structures are out of the water, it is much easier to inspect them for any mussels stuck to the bottom or sides. Along with inspecting with the naked eye, we ask that you feel the smooth surfaces of equipment to check for juvenile zebra mussels, as they may have a "sand-paper like" feel and are often invisible to the naked eye.

If zebra mussels or other new invasive species are found:

- Check that the invasive species has not been previously found on the waterbody by visiting <http://dnr.wi.gov/lakes/invasives/AISLists.aspx?species=ZM>
- Note the exact location where the animal was found.
- Take a digital photo of the animal in the setting where it was found (if possible). Then collect up to five specimens of varying sizes. Place in a jar with water; put on ice and transport to refrigerator.
- Contact Burnett County Land Services Department Conservation Division or Jeremy Bates, DNR AIS Coordinator at [715-392-0807] and deliver specimens.

There are also specific laws lake property owners and contractors must follow to prevent the spread of AIS. Prior to transporting any equipment Wisconsin law requires you to:

- **INSPECT boats, trailers, boatlifts, piers, rafts and equipment.**
- **REMOVE all attached aquatic plants and animals.**
- **DRAIN all water from boats, vehicles, and equipment.**

LakeLines Article

2018 McKenzie Lake Zebra Mussel Update

In 2018, the population and year classes of zebra mussels continue to grow in Big McKenzie Lake. Zebra mussels were also found in Middle McKenzie Lake at low population numbers. On a field day on July 16th with several groups including McKenzie Lake Association, BCLRA, WCLRA, WI DNR, Washburn County LWCD, and Burnett County Land Services, only two zebra mussels were found. Since then only a few other zebra mussels have been reported on Middle McKenzie Lake.

Any questions or think you've found Zebra Mussels (or any other invasive) please contact the Land Services Dept. at 715-349-2109 x1361 or dferris@burnettcounty.org

McKenzie Lakes Zebra Mussels 2019 Monitoring Results

Risk Assessment Monitoring

- Plate Samplers
 - 4 polyethylene plates of equal size
 - Separated by 1 inch
 - 2 sq ft of surface area
 - Placed in shady spot at end of docks

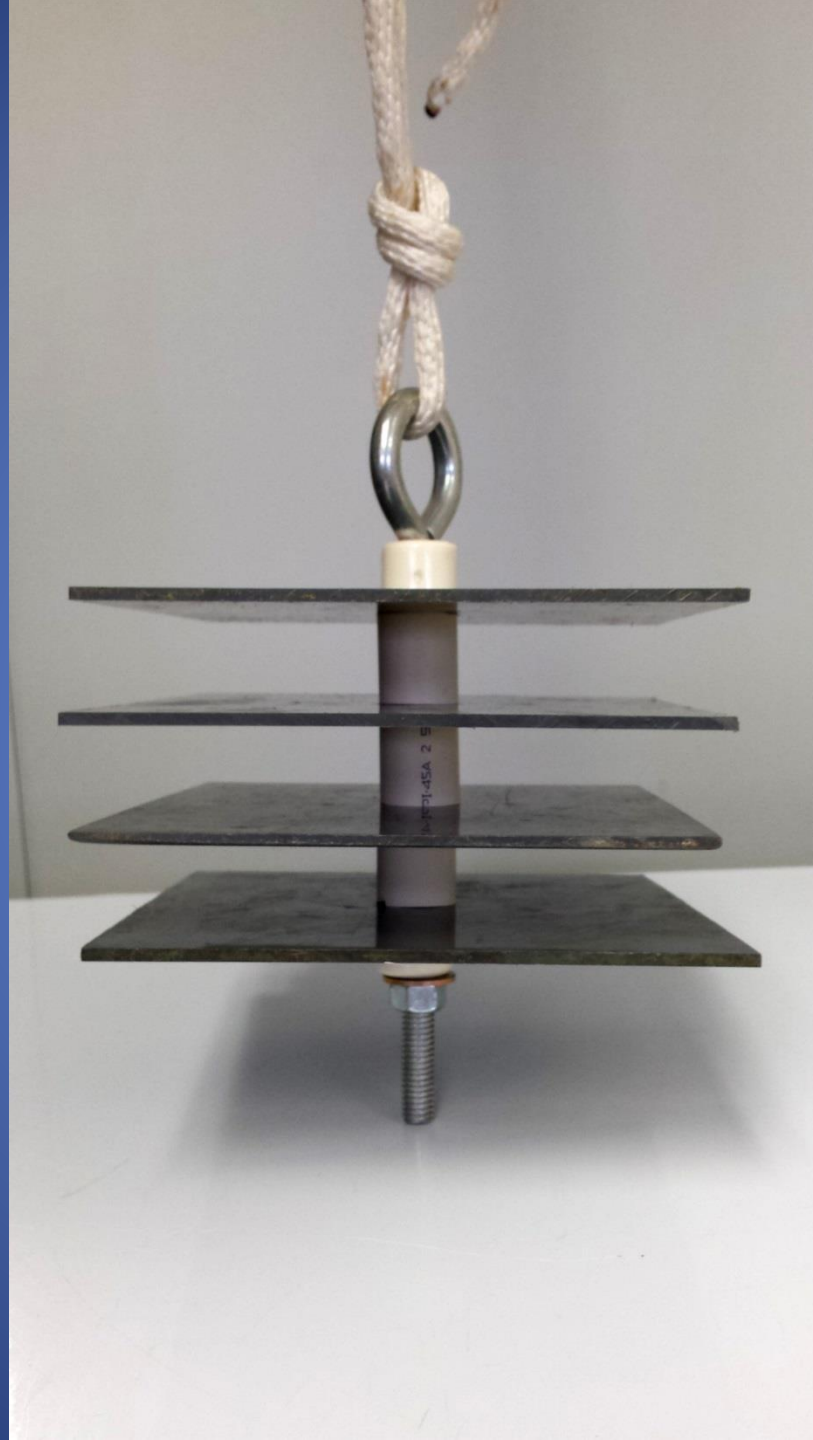


Plate Samplers Placement

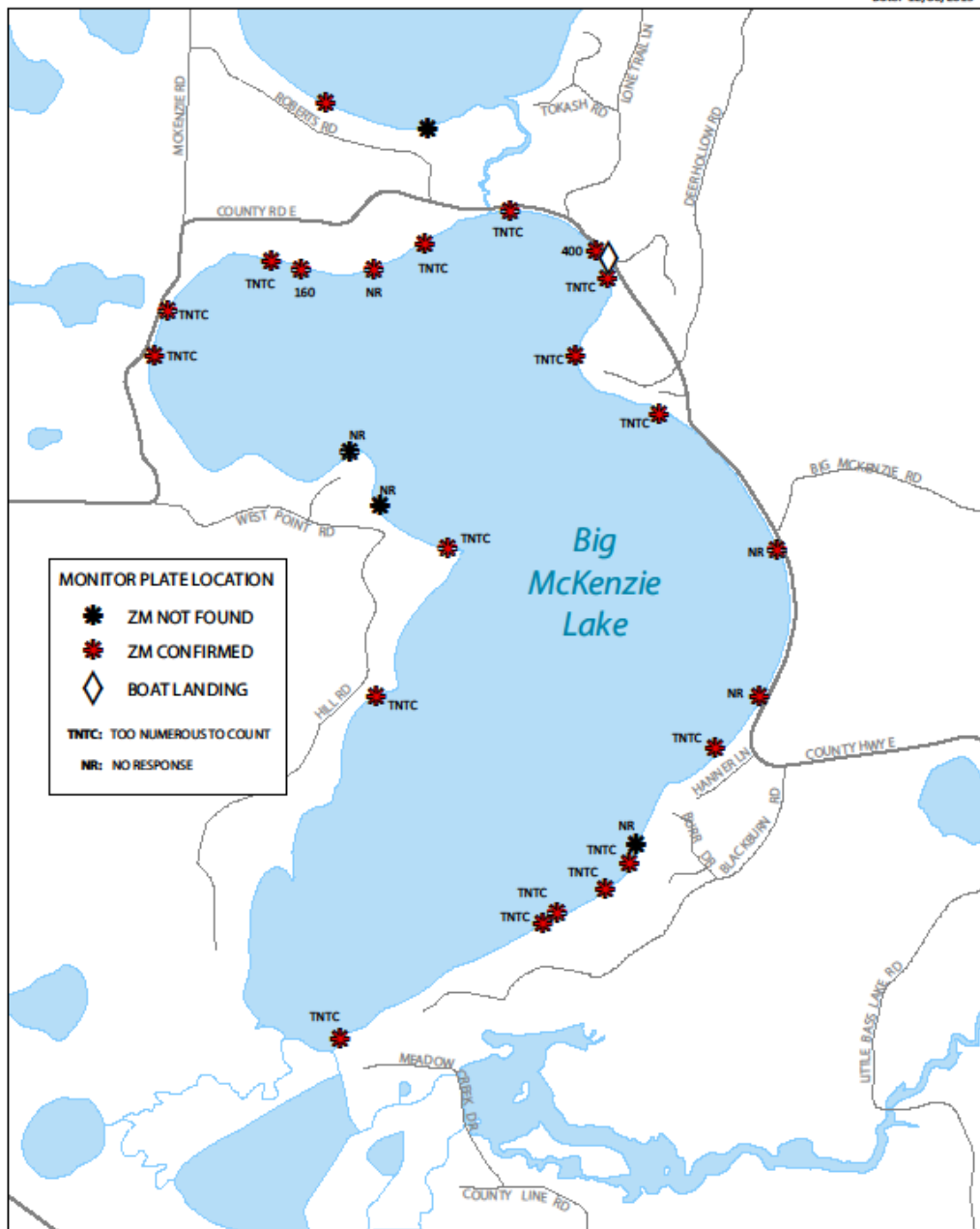
- Big McKenzie
 - 24 Plates
- Middle McKenzie
 - 11 Plates
- Lower McKenzie
 - 4 plates

Results-Plate Samplers

- Plates Pulled after Labor Day
- Big McKenzie
 - 6 non-reporting
 - 18 Plates = Too Numerous to count
- Middle McKenzie
 - !! Plates had ZM present
 - No. range 18-248
 - Total No. found 911
 - Average 91/plate or 45/sq. ft versus 0.22/sq. ft in 2018
- Lower McKenzie
 - None found

2019 Big McKenzie Lake
Total Zebra Mussel Plate Sampler Locations & Results

Date: 12/30/2019



Big McKenzie Plate 2019

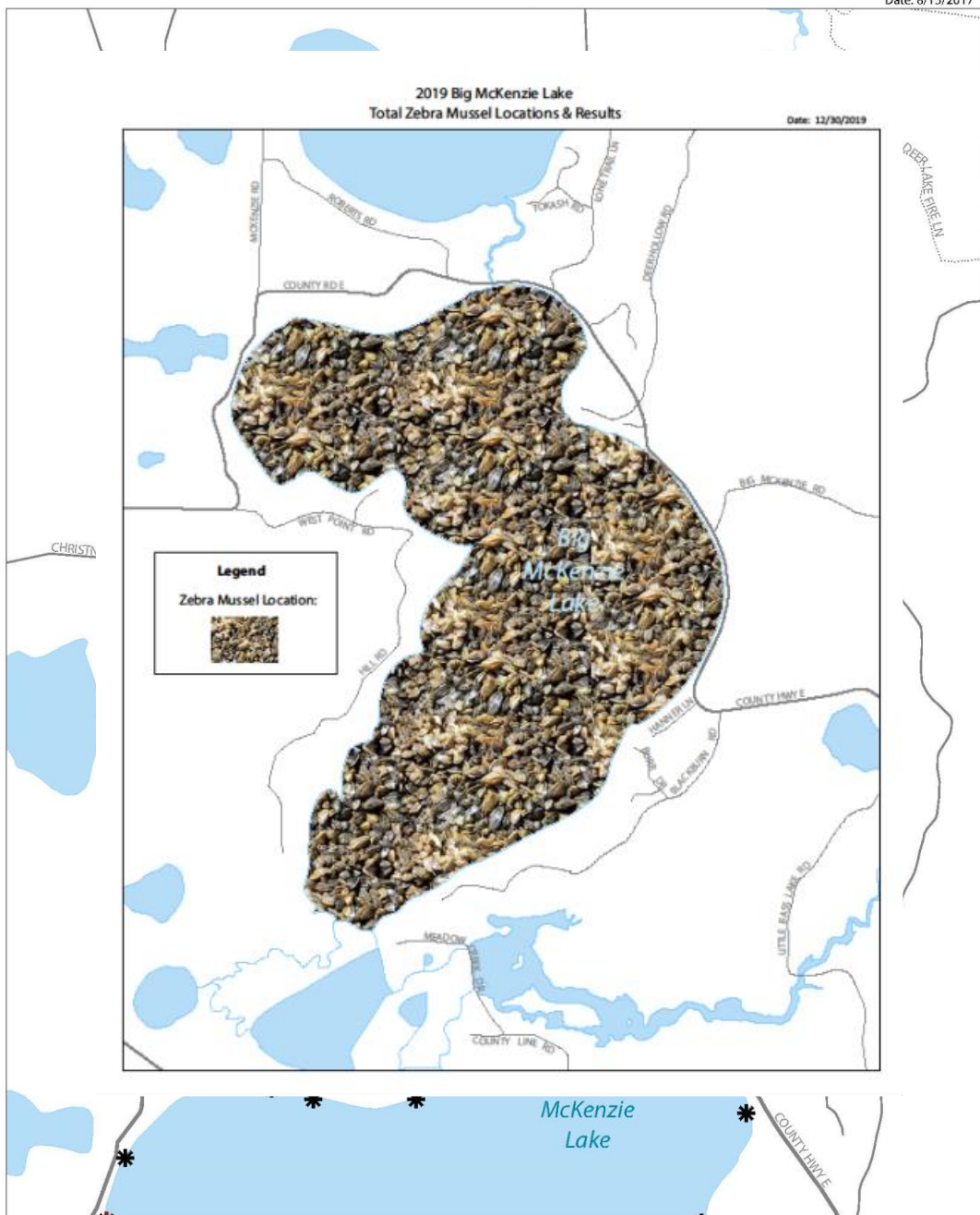






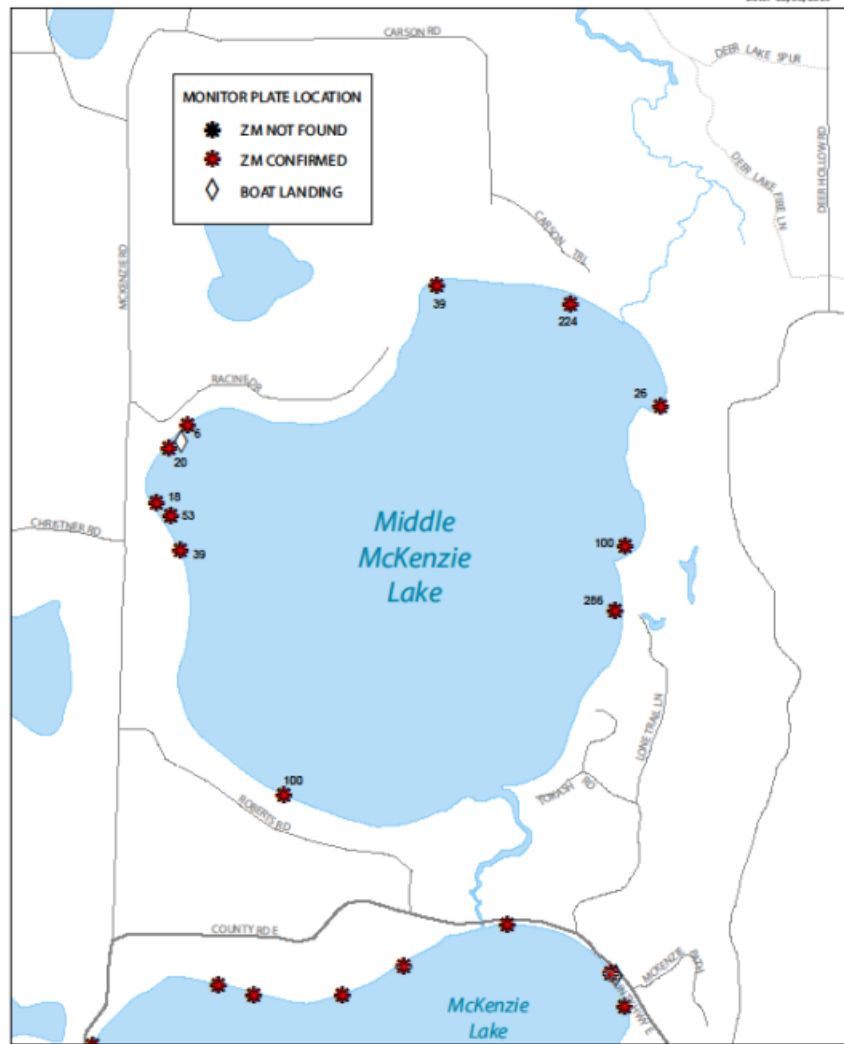
2017 Middle McKenzie Lake
Zebra Mussel Monitor Plate Sampler Locations & Results

Date: 8/15/2017



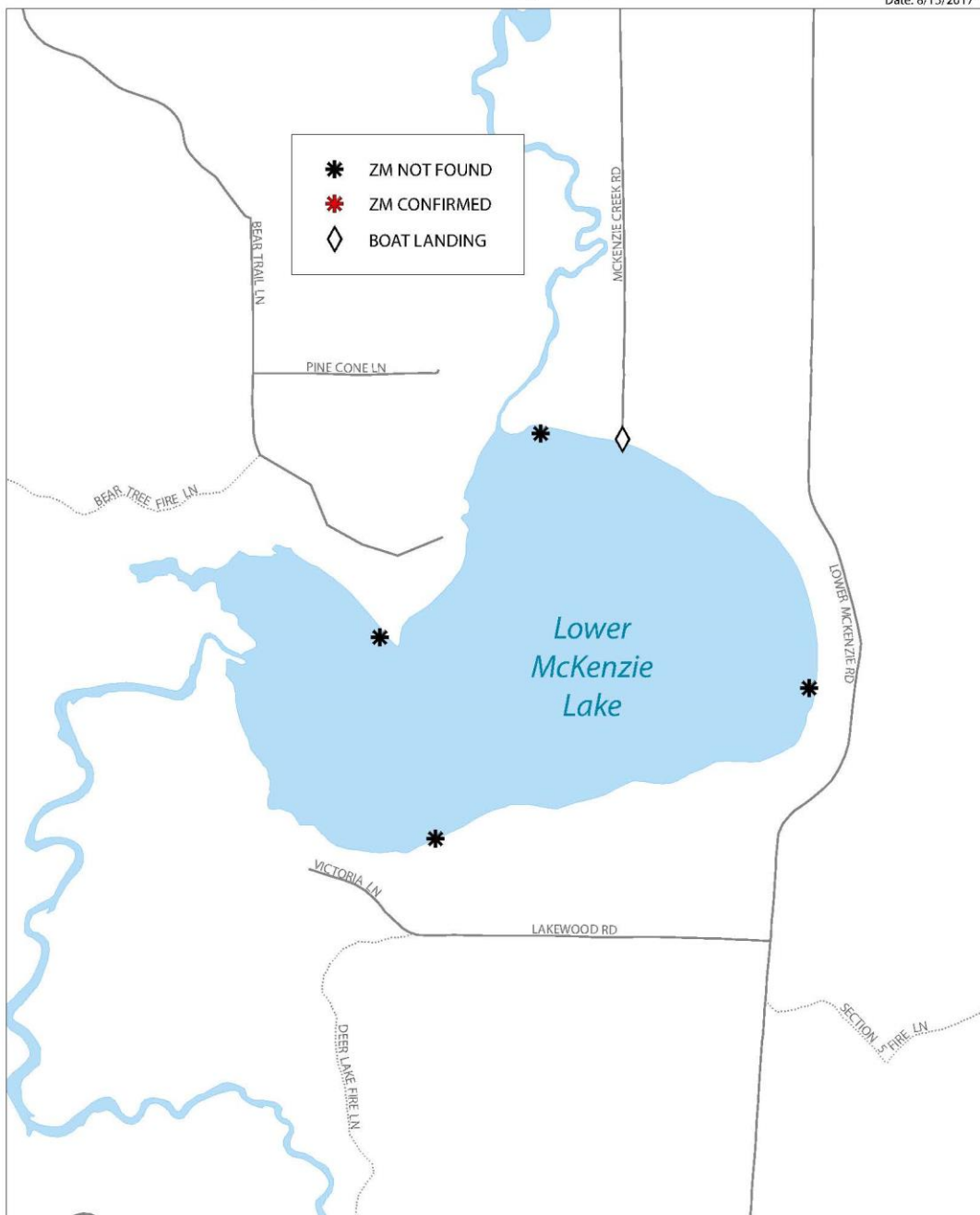
2019 Middle McKenzie Lake
Total Zebra Mussel Monitor Sampler Locations & Results

Date: 12/30/2019



2017 Lower McKenzie Lake
Zebra Mussel Monitor Plate Sampler Locations & Results

Date: 8/15/2017



2020 Monitoring Plan

- Plate Sampling McKenzie Lakes
 - Continue with Plate Sampling
 - Concentrate on Middle and/or Lower McKenzie
- Tow Sampling for Veligers
 - Continue?
- eDNA sampling
 - Lower McKenzie?

Research Update

ZM Control

- Cooperative Effort between MN AIS Institute U of MN, USGS, LaCrosse, U of Wi, River Falls (Scott Ballantyne, PhD)

Focus of Research

- The goal of this work is to develop a method for specifically eliminating ZM gene products (RNA) using a well-studied procedure known as RNA interference (RNAi).
- The recently sequenced ZM genome contains many unique genes with unknown functions and which are not found in other species including native mussels

ZM Control

- Create a bacterial strain that is toxic to ZM but is harmless to all other creatures.
- Bacterial strains will be engineered to elicit RNAi against ZM gene sequences that are not found in other creatures
- ZM will be exposed to the engineered bacteria and observed to determine whether or not they shut off the target genes that could exhibit defects in growth, viability, or fertility.

Research Update

- A dozen candidate genes / proteins have been identified to target from the newly sequenced ZM genome.
- Bacterial strains that target two ZM genes are partly done with two more identified
- Test tube test that can quickly reveal defects in viability, motility, and adhesion

Stay Tuned

- More in depth update will be presented at the NWLC
- Mike McCarthy, PhD will present most recent findings

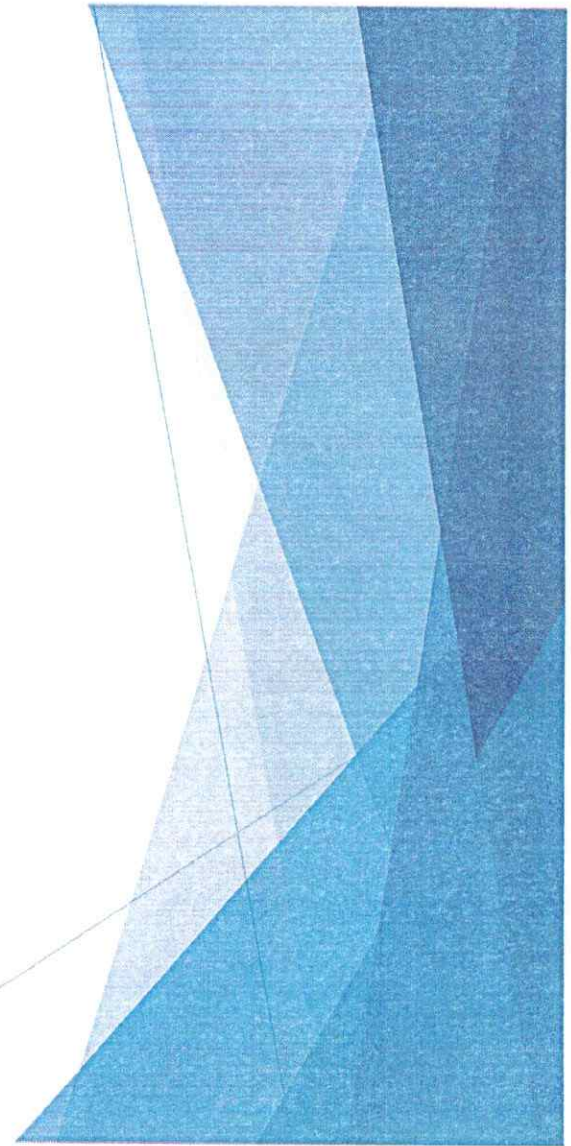
Understanding Decontamination

Created by Washburn and Burnett County LWCD Departments



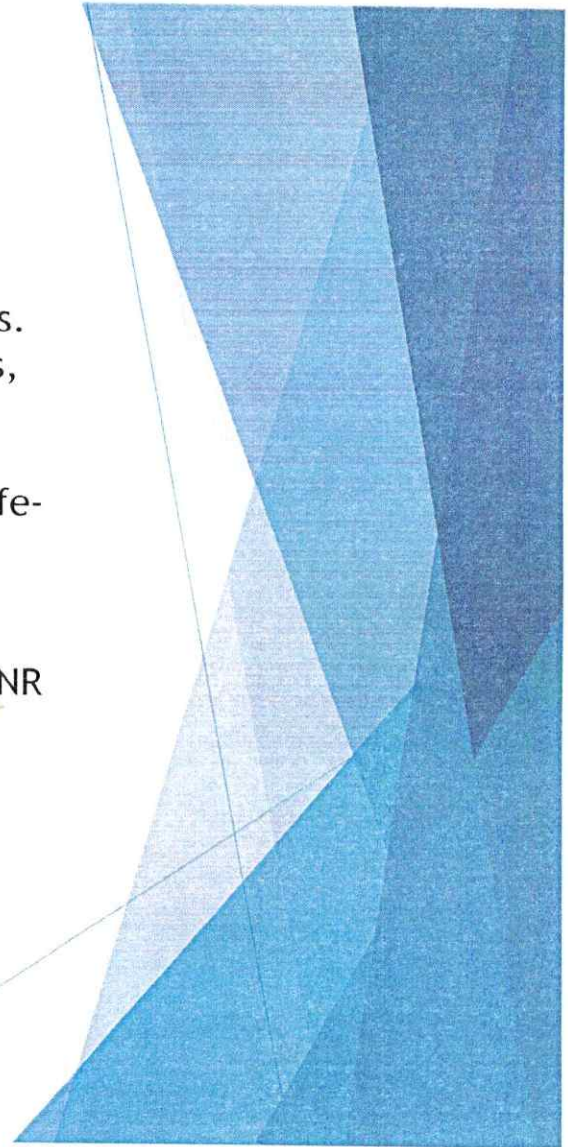
OUTLINE

- ▶ What is an invasive species?
- ▶ What is decontamination?
- ▶ Requirements/Ordinances
- ▶ Enforcement
- ▶ Setting a station up
- ▶ Staffing and Maintenance
- ▶ Frequently Asked Questions



What is an Invasive Species?

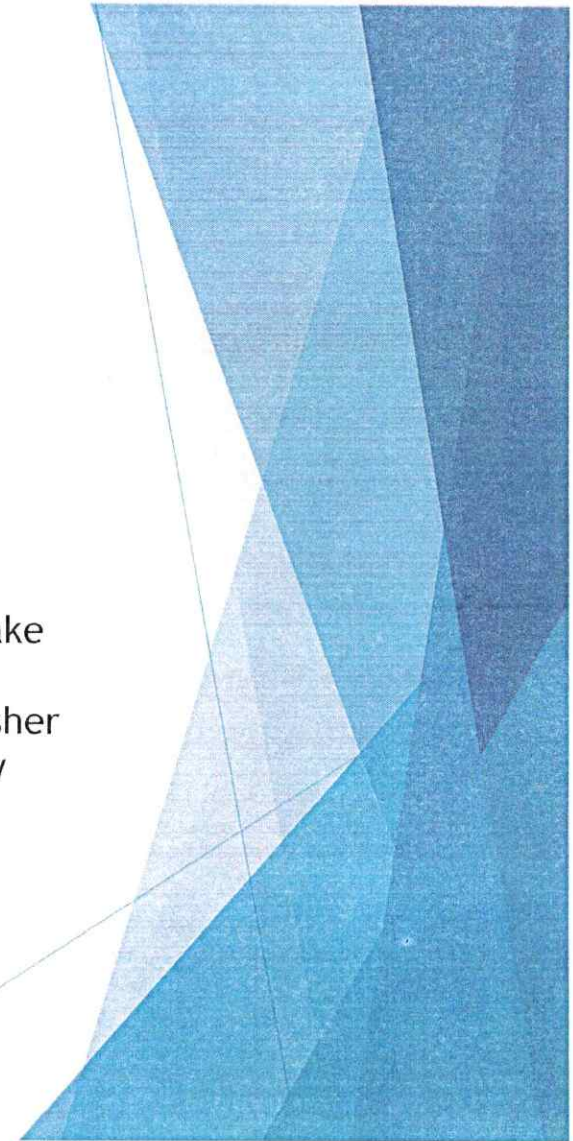
- ▶ **Invasive Species** has the meaning given in Wis. Stats. § 23.22(1)(c), and Wis. Admin. Code NR 40.02(24), as non-native species including hybrid, cultivars, sub taxa, and genetically modified variants whose introduction causes or is likely to cause economic or environmental harm or harm to human health, and includes individual species, eggs, larvae, seeds, and any other viable life-stages of such species.
- ▶ **Aquatic Invasive Species (AIS)** has the meaning given in Wis. Admin. Code NR 40.02(3m), any invasive species that dwells in water or wetlands.



What is decontamination?

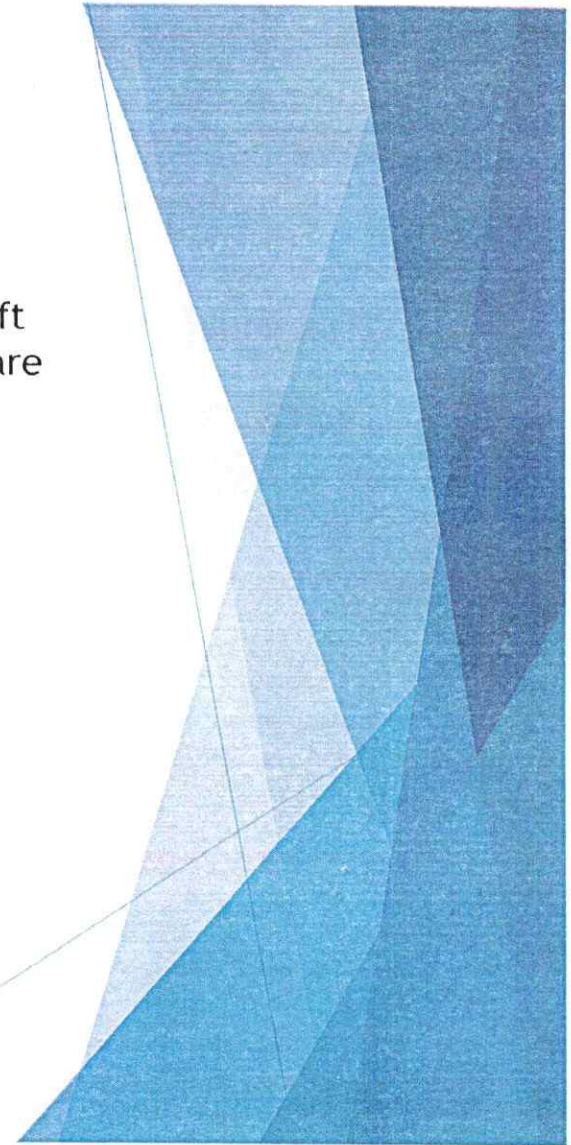
(In regards to invasive species prevention)

- ▶ **Decontamination** is the process of removing invasive species, including aquatic invasive species (AIS) or materials that may contain or transmit invasive species by disinfection or other methods.
- ▶ **Decontamination station** means a device provided at a public or private lake access to remove all potential invasive species. The station may consist of high temperature water (140 degrees or more) applied with a pressure washer by trained personnel, a recommended chemical solution applied with a low pressure sprayer, or other techniques or devices.



Decontamination Importance

Hand removal is effective at removing plants and small animals from watercraft equipment. Decontamination is another tool to help kill invasive species that are not visible or very difficult to see (zebra mussel or spiny water fleas.)



Is it Required?

Yes and No...Depends which what County you are in.

*Yes: In 2018 Washburn and Burnett Counties amended their AIS no-transport ordinance to include using a decontamination station at a boat landing (if one is available).

*No-Not a statewide law and not all counties have an ordinance.

To date, Washburn and Burnett are the only counties in the state with this ordinance.



How does a County get an ordinance passed?

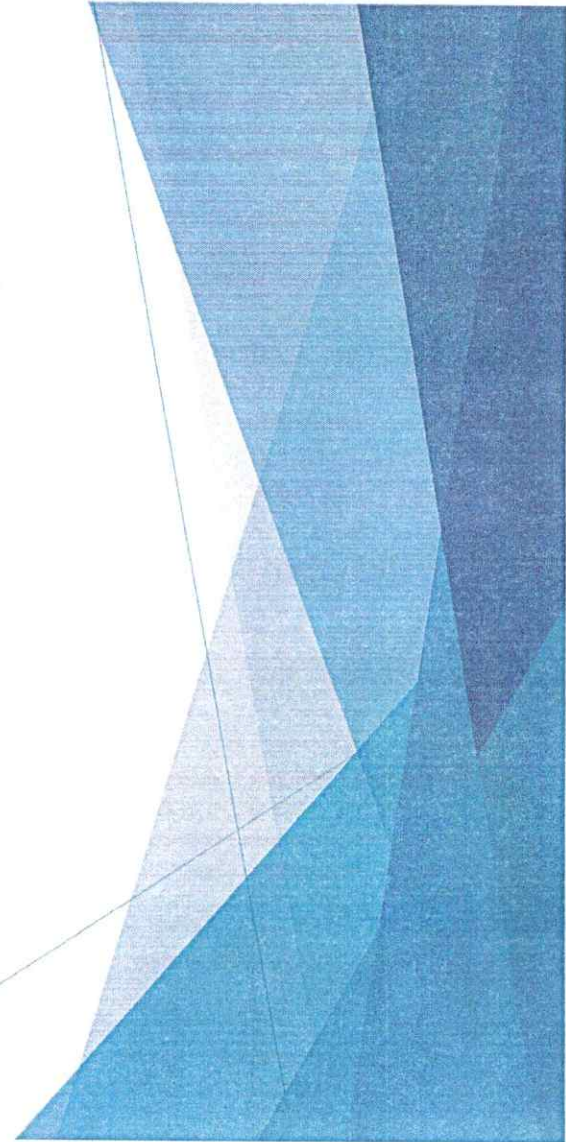
- ▶ Collect local support. *NOTE- The process shouldn't be rushed and thoroughly thought through.
 - ▶ Work with local lake associations, interested volunteers, local Lakes and rivers groups, etc. to get the discussion going. Get as many lake association members aware for support, since they will be the ones likely maintaining the station.
 - ▶ Contact your County Land and Water Conservation Department (LWCD) and their committee to discuss the interest. Work with the Sherriff or Recreation officer to discuss how enforcement actions would occur.
- ▶ Work with other counties for help developing ordinance language.
- ▶ Get LWCD committee approval and present at full County Board for final approval.

Enforcement

*If a County decontamination ordinance is in effect, then the County Sherriff's department is responsible for enforcement action.

- ▶ A violation form is filled out and followed up by Sheriff (form may vary by County)
- ▶ Sherriff will contact the violator
- ▶ Fines can vary by County and include court costs.

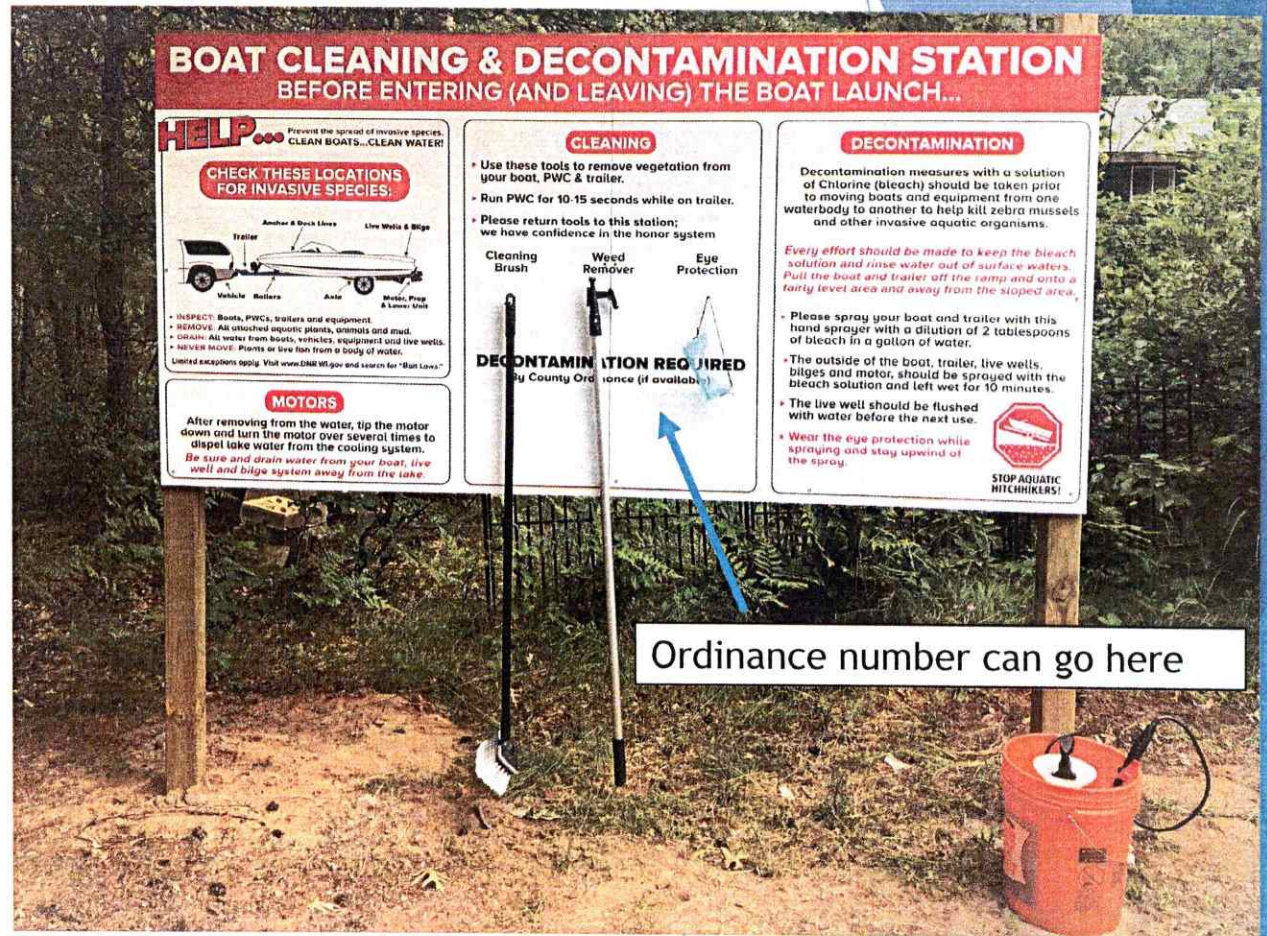
*If a County doesn't have an ordinance, then it is voluntary compliance.
State DNR Wardens have authority for statewide laws only.



Station Materials:

- 4'x8' aluminum composite sign
- Long handled soft brush
- Long handled weed grabber
- Goggles (eye protection)
- 1 gallon sprayer
- 5 gallon bucket (recommended)
- 2 treated 4x4 posts
- 4'x8' treated plywood
- Hardware screws
- Hooks for tools
- Weatherproof box for handouts
- 1 Gallon household bleach
- Fresh water source (not lake water)

Price breakdown on separate slide



What solution is used and who maintains it?

2 Tablespoons of Bleach per gallon of water (.05% mixed solution)

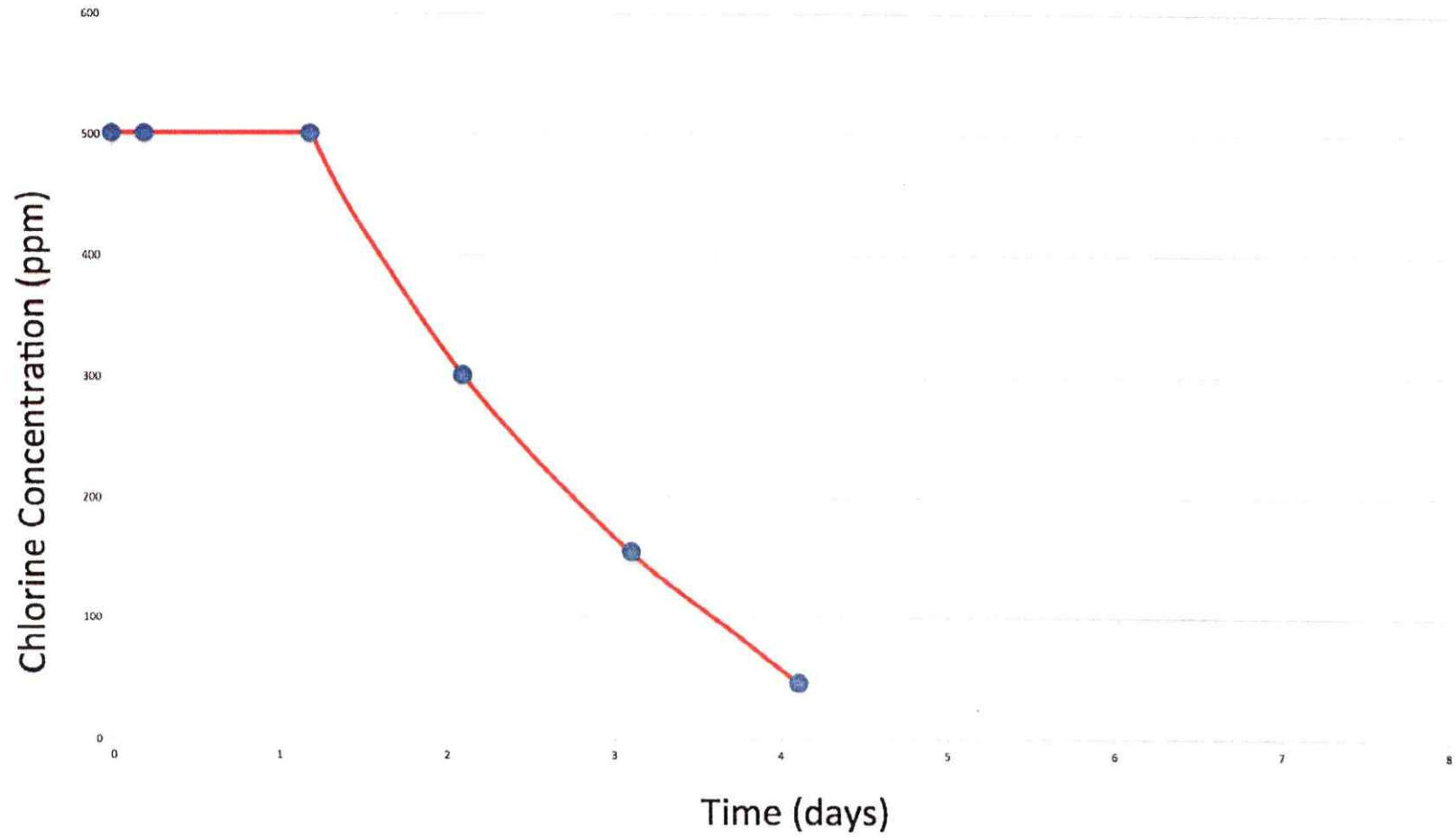
*Must be changed every 4-5 days to keep it's effectiveness

A lake association member, CBCW inspector or other volunteer maintains and changes the solution as needed.

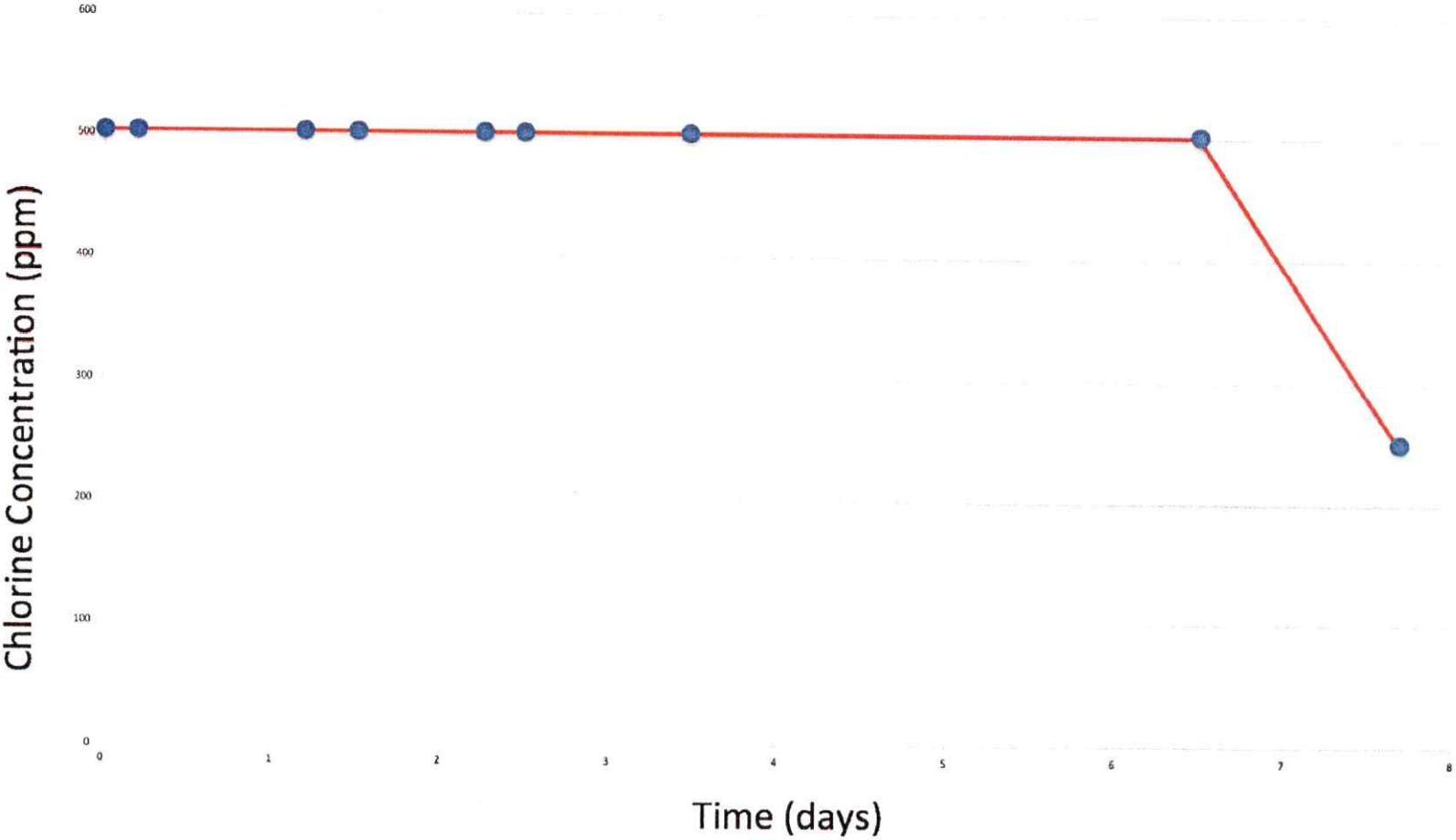
Keeping the sprayer in a 5 gallon bucket provides longer solution viability.



Unprotected Sprayer



Sprayer placed in 2 gallon Plastic Bucket



Will the solution harm my boat/equipment?

No known cases of damage from properly using the equipment has been reported. A higher solution is recommended to clean vinyl siding on a house.

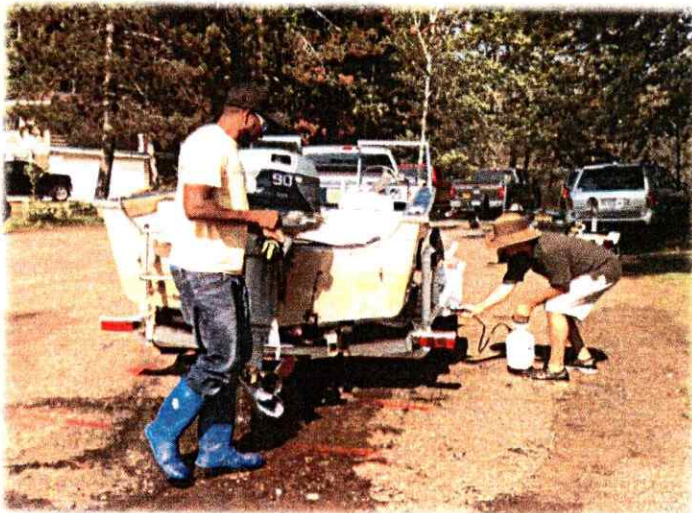
Ranger Boats - *“At any rate-household bleach at full concentration is not going to harm the gel coat.”*

Tuffey Boats - *“The described bleach solution is 100% safe on all gelcoat applications.”*



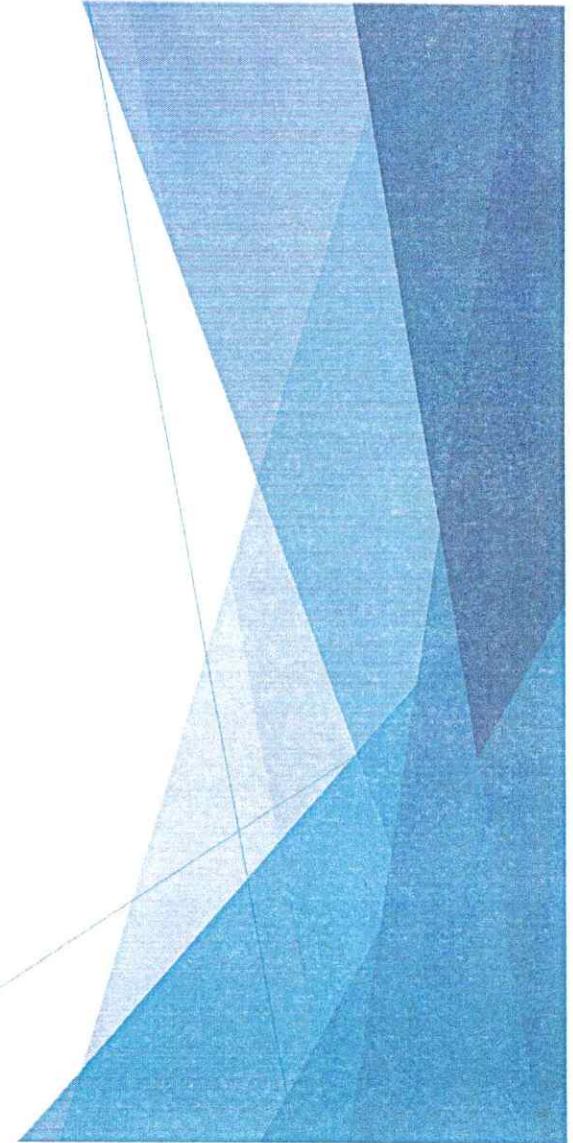
How is a decontamination done?

- ▶ Before entering and leaving a waterbody, spray the solution around the perimeter of a watercraft and trailer making sure to cover the entire surface. The fine mist evaporates quickly and doesn't run off into the lake.
- ▶ Use the soft brush to scrub off any plants or debris and remove the weeds with the long handled hook.



Where to set up a Decontamination Station

- ▶ Away from the launch area
- ▶ Away from where vehicles will be turning around/backing up
- ▶ Away from a slope into lake and upward further on land.
- ▶ Be knowledgeable of property lines



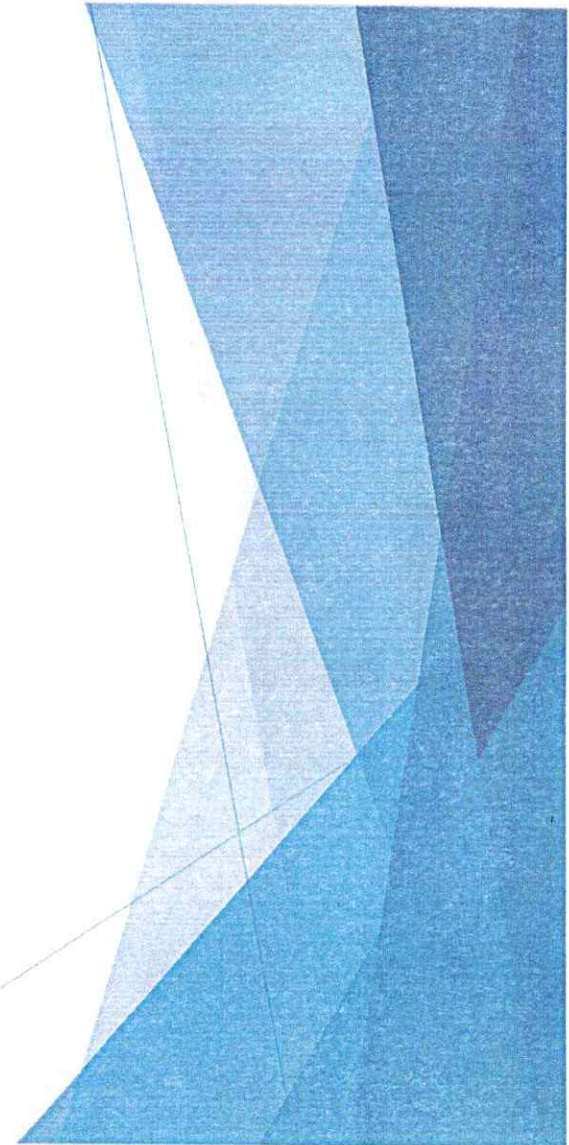
Who is eligible to have a decontamination station and how can I get one for my lake?

- ▶ Step 1: Find out who owns the boat landing (township, county, DNR, private)
- ▶ Step 2: Work with your local lake association/district to get the discussion going on your lake
- ▶ Step 3: Obtain approval
 - ▶ Get in touch with the landing owner and discuss what a decontamination station is and why you think it's important to have one. Will need to get on a board agenda for approval.
 - ▶ Local DNR or County Land and Water Department can help you get contact information.
- ▶ Step 3: If approved and you are in Washburn/Burnett Co you can receive a station through the Land and Water Dept.
 - ▶ Not in those counties? You can still put one up on your own with approval from the landing owner.

Estimated Material Price Breakdown

- 4'x8' aluminum composite sign \$568.00
- Long handled soft brush \$17.00
- Long handled weed grabber \$16.00
- Goggles (eye protection) \$3.00
- 1 gallon sprayer \$20.00
- 5 gallon bucket (recommended) \$5.00
- ▶ 1 Gallon household bleach \$1.50
- 2 treated 4x4 posts \$23.00 each
- 4'x8' treated plywood \$60.00
- Hardware screws \$10.00
- Hooks for tools \$7.00
- Weatherproof box for handouts \$10.00

\$763.00



Contacts

A Frequently Asked Question (FAQ) document provides more information for other questions you may have regarding decontamination stations.

To get a copy of the document or for other general questions contact:

Lisa Burns (Washburn County)

715-468-4654

lburns@co.washburn.wi.us

Tom Boisvert (Burnett County)

715-349-2109 ext. 2613

tboisvert@burnettcounty.org

Burnett County Decontamination Ordinance

Burnett County Land Services Department – Conservation Division

History

- **Original “Do not transport” ordinance was adopted in (2008)**
 - Essentially mimics the state AIS law.
- *“...no person may operate a vehicle or transport any boat, boat trailer, personal watercraft and its associated trailer, canoe, kayak, or boating equipment, fishing equipment, hunting and/or trapping equipment... (other equipment)... from navigable waters onto a public highway if aquatic plants, terrestrial plants, or aquatic animals are attached. All plants and aquatic animals shall be removed prior to entry onto a public highway or launching a boat or placing equipment or trailers into navigable water.”*

History

Zebra Mussels were identified in Big McKenzie Lake in (2016), and Middle McKenzie Lake in (2017)

- This caused intense public concern that the spread needs to be halted.
- This discovery of zebra mussels in the only occurrence in the Northwest portion of Wisconsin, and so far is isolated.
- These lakes are shared between Burnett and Washburn Counties causing a unique situation.
- **A push to amend the original “do not transport” ordinance to include decontamination procedures began.**

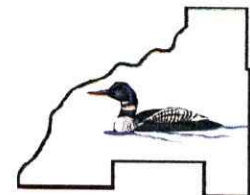


Organizations

- **BCLRA – Burnett County Lakes and Rivers Association**
 - Recommended an amendment to the Burnett County Natural Resources Committee concerning the “do not transport” ordinance.
 - From here, the ordinance amendments went to County Board where they were approved unanimously.
- **WCLRA – Washburn County Lakes and Rivers Association**
 - Similar actions to BCLRA, but in Washburn County.



Burnett County
Lakes & Rivers
Association



What was amended the first time?

- **Changes to the original “do not transport” were made in January, 2018 including:**
 - *“If a decontamination station is available for use at a public or private access, the boater shall decontaminate per posted directions using the decontamination station provided.”*
- **Any person who violates a provision of this article shall be subject to a forfeiture plus court costs as follows:**
 - *“For the first offense, a forfeiture not to exceed \$25.00, plus costs.”*
 - *“For the second offense, a forfeiture of not less than \$25.00 nor more than \$100.00, plus costs.”*
 - *“For the third and subsequent offenses, a forfeiture of not less than \$100.00 nor more than \$250.00, plus costs.”*

Where can you read the ordinance?

- **Burnett County Website**
 - Municode
 - Chapter 18 (Environment), Article 5 (Aquatic Plant and Invasive Animals)
- **Link:** https://library.municode.com/wi/burnett_county/codes/code_of_ordinances?nodeId=CD_ORD_CH18EN_ARTVAOPLINAN

Rapid Response Grant

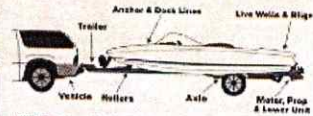
- **Burnett and Washburn Counties worked together to obtain a WDNR Rapid Response Grant**
 - Centered around the discoveries of Zebra Mussels in the McKenzie Lakes
 - Burnett County was the administrator of the grant
- **What was the grant used for?**
 - Purchasing decontamination stations and their associated materials
 - Purchasing zebra mussel tow nets
 - Purchasing zebra mussel plate samplers
 - Purchasing outreach materials
- **Current funds will end in 2020 (summer/fall)**

BOAT CLEANING & DECONTAMINATION STATION

BEFORE ENTERING (AND LEAVING) THE BOAT LAUNCH...

HELP Prevent the spread of invasive species.
CLEAN BOATS... CLEAN WATER!

CHECK THESE LOCATIONS FOR INVASIVE SPECIES:



- INSPECT Boats, PWCs, trailers and equipment.
- REMOVE All attached aquatic plants, animals and mud.
- DRAIN All water from boats, trailers, equipment and live wells.
- NEVER MOVE Plants or live fish from a body of water.

Useful resources apply. Visit www.DNR.NJ.gov and search for "Bait Laws."

MOTORS

After removing from the water, tip the motor down and turn the motor over several times to disperse lake water from the cooling system.
Be sure and drain water from your boat, live well and bilge system away from the lake.

CLEANING

- Use these tools to remove vegetation from your boat, PWC & trailer.
- Run PWC for 10-15 seconds while on trailer.
- Please return tools to this station; we have confidence in the honor system.

Cleaning Brush

Weed Remover

Eye Protection

DECONTAMINATION REQUIRED
By County Ordinance (if available)

DECONTAMINATION

Decontamination measures with a solution of Chlorine (bleach) should be taken prior to moving boats and equipment from one waterbody to another to help kill zebra mussels and other invasive aquatic organisms.

Every effort should be made to keep the bleach solution and rinse water out of surface waters. Pull the boat and trailer off the ramp and onto a fairly level area and away from the sloped area.

- Please spray your boat and trailer with this hand sprayer with a dilution of 2 tablespoons of bleach in a gallon of water.

• The outside of the boat, trailer, live wells, bilges and motor, should be sprayed with the bleach solution and left wet for 10 minutes.

- The live well should be flushed with water before the next use.

• Wear the eye protection while spraying and stay upwind of the spray.

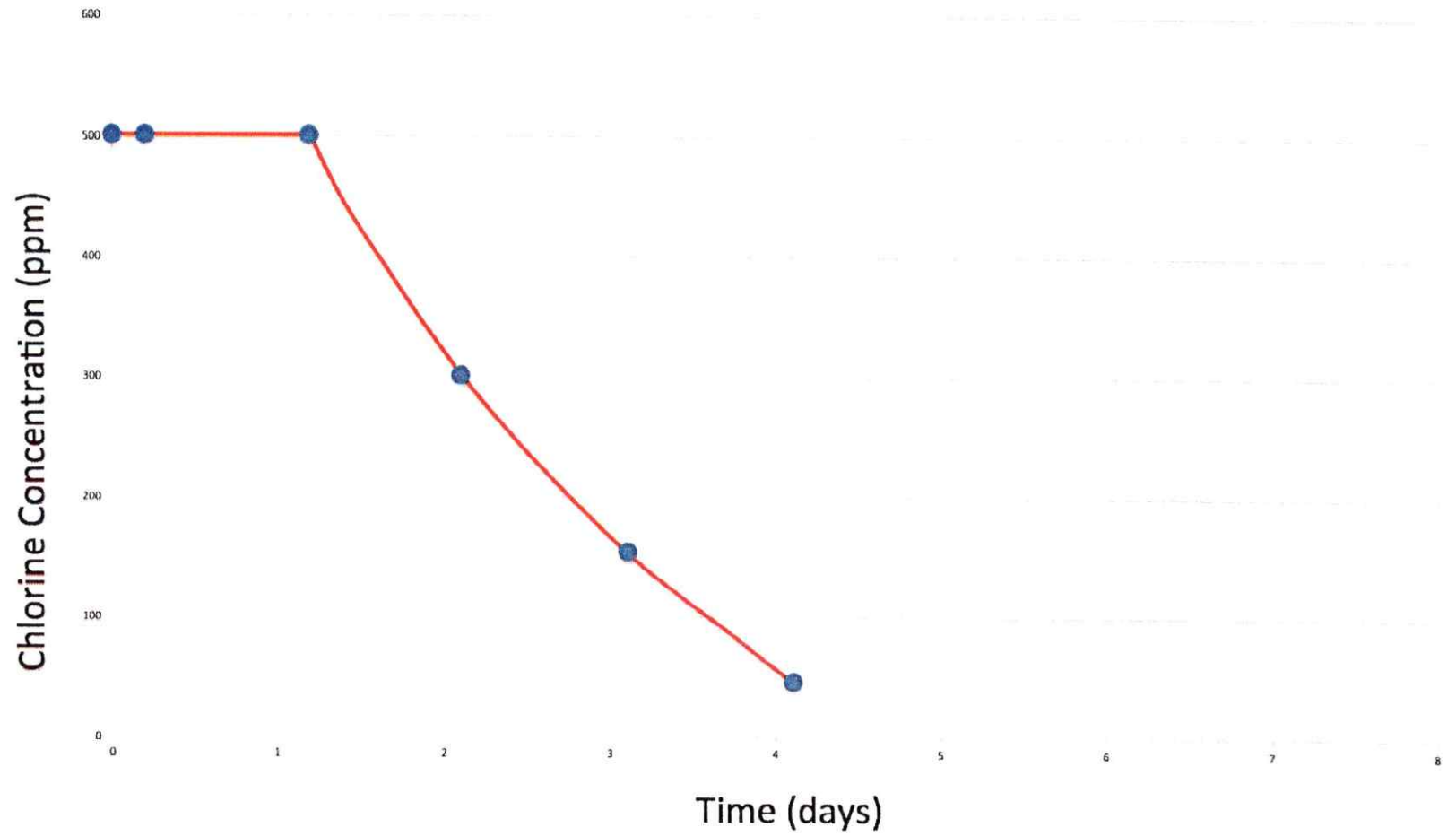


STOP AQUATIC HITCHHIKERS!

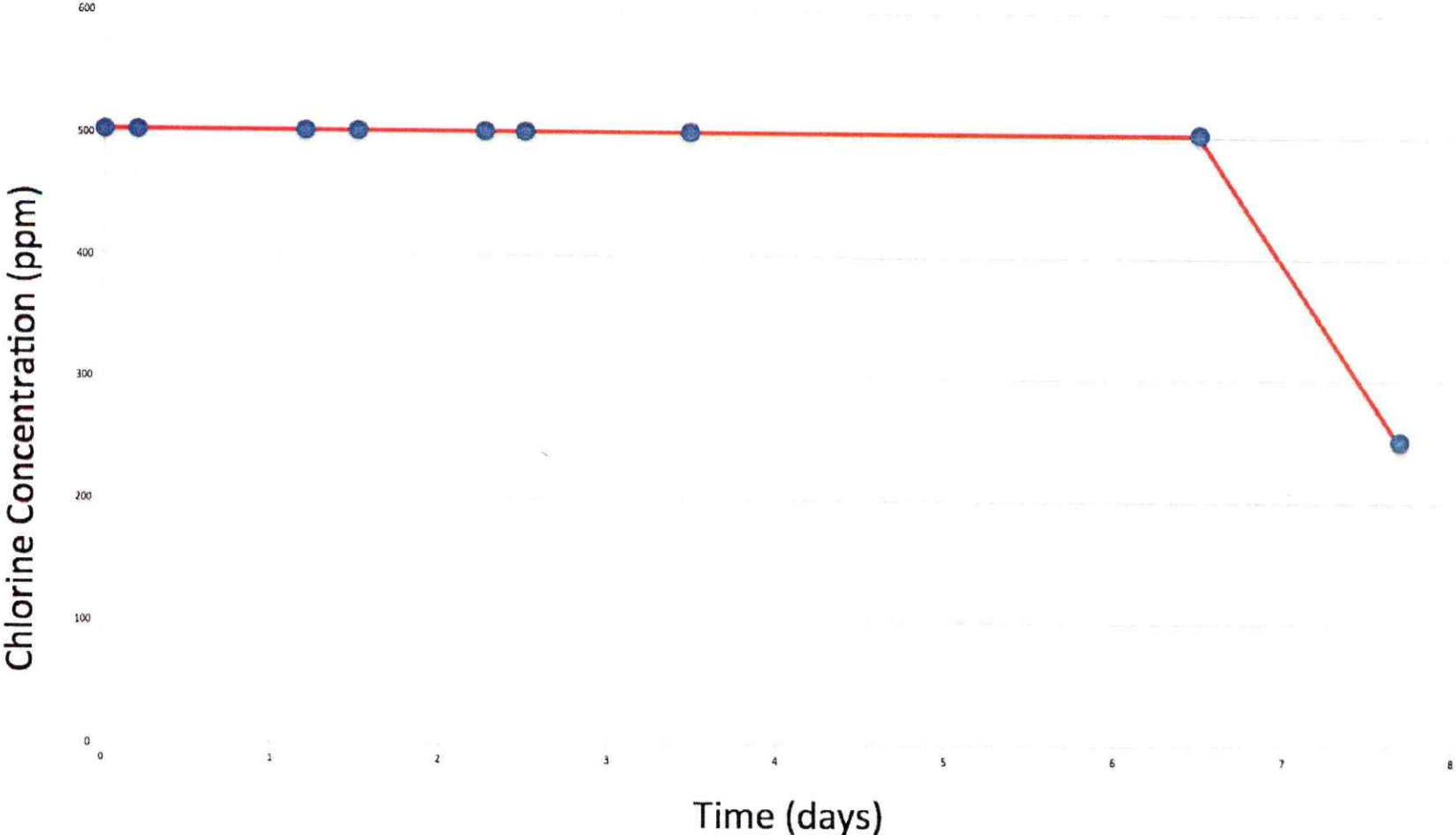
Notice the bucket!



Unprotected Sprayer



Sprayer placed in 5 gallon Plastic Bucket



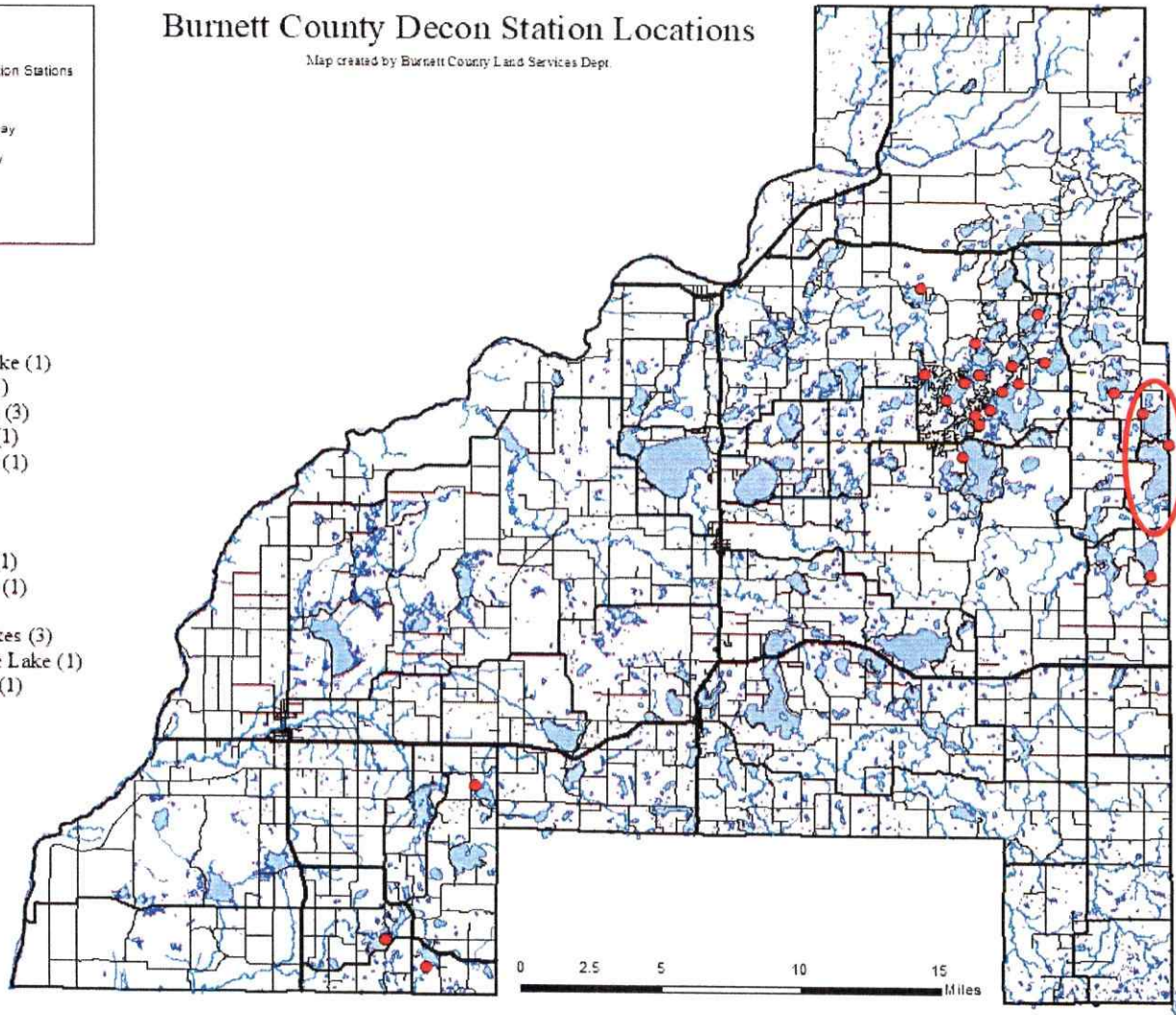
Legend

- Decontamination Stations
- Town Road
- County Highway
- State Highway
- Rivers
- Lakes

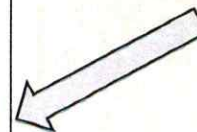
Burnett County Decon Station Locations

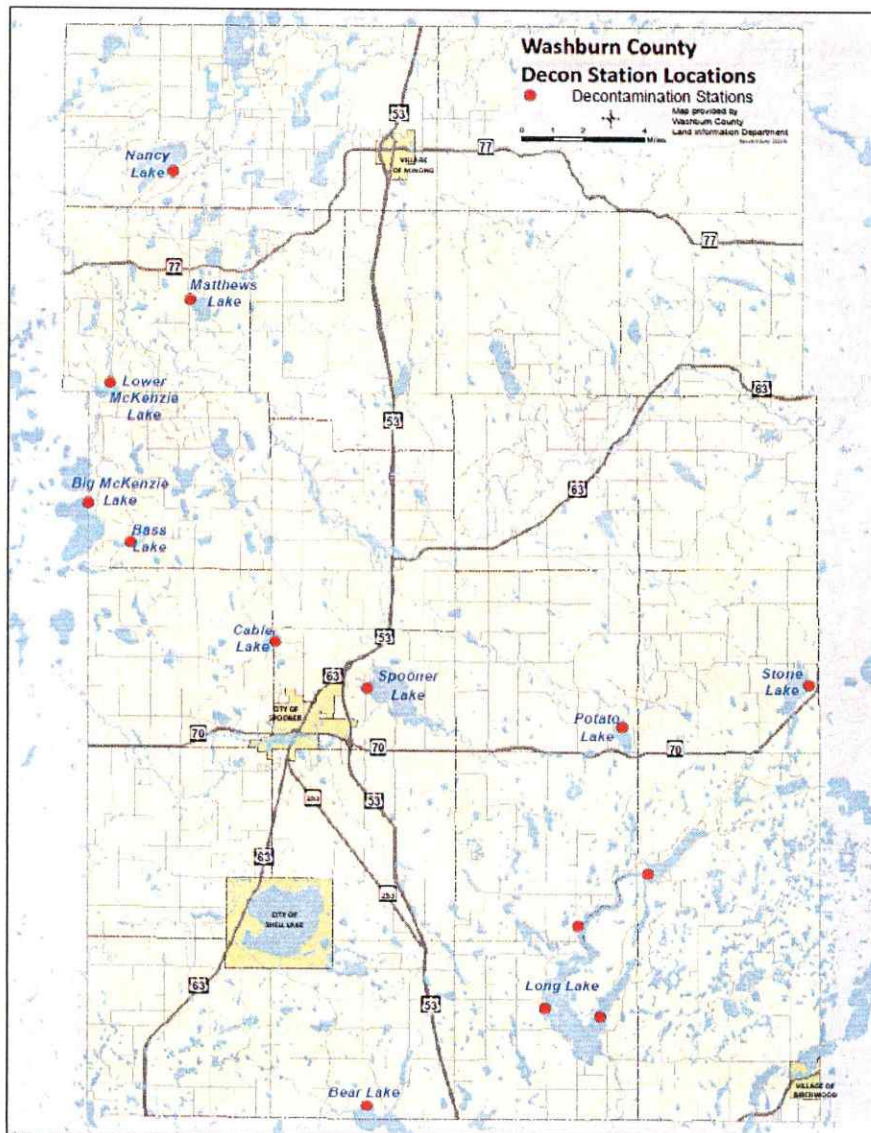
Map created by Burnett County Land Services Dept.

- Big McKenzie Lake (1)
- Big Trade Lake (1)
- Birch Island Lake (3)
- Culbertson Lake (1)
- Des Moines Lake (1)
- Fish Lake (1)
- Lake 26 (1)
- Lipsett Lake (1)
- Little Bear Lake (1)
- Little Wood Lake (1)
- Long Lake (1)
- Loon-Cadotte Lakes (3)
- Middle McKenzie Lake (1)
- North Sand Lake (1)
- Rooney Lake (1)
- Shoal Lake (2)



Most of the decontamination stations are centered around the McKenzie Lakes





How is non-compliance reported?

- **UW-Extension AIS Violation Report Form is used**
 - Form has been used by many CBCW inspectors before (familiar)
 - Accessible online from CBCW page
 - Has all the information necessary when filled completely
- **Violations are forwarded to Burnett County's Conservation Division**
 - If the violation is strictly a decontamination violation, it is forwarded to the Sheriff's Department
 - If the violation is a "do not transport" – Burnett County can enforce but usually forwards these on to WDNR Wardens



Reporting a Burnett County AIS Violation:

What you should be submitting:

1. AIS Violation Report Form
 - a. Form can be found on the UW-Extension Clean Boats, Clean Waters website and should be filled out with as much information as possible.
 - b. Please remember to check the box stating law enforcement may contact you for more details regarding the incident. This will help law enforcement follow-up with the reported incident.
2. Pictures/Videos
 - a. Pictures and videos can be the most effective way for showing an AIS violation. Photographic evidence of suspects leaving or entering a waterbody with plants, mud, or water can help issue a citation if one is warranted.
 - b. Videos are also great tools to clearly show a violation, however, they may be more difficult to obtain.
 - c. If you are in a public area, photos and videos are legal to obtain.

Where you should send the violation:

1. Burnett County AIS Coordinator
 - a. Cannot enforce violations, but can forward on to correct agency/personnel.
 - b. Thomas Boisvert
 - i. tboisvert@burnettcounty.org
 - ii. (715)-349-2109 Ext. 2613

What you should expect:

1. Law Enforcement Contact
 - a. Law enforcement may wish to contact you for gathering more information, obtaining a personal statement, or to stand as a witness.
 - b. By making your information as clear as possible when it was first submitted, law enforcement shouldn't need to contact you unless necessary.
2. Time
 - a. Law enforcement is always busy, and they do their best to stay current on violations. However, be prepared to expect some time before follow-up.

Please remember:

1. Never put yourself in a dangerous situation. If an individual is hostile, safely gather as much information as you can and call law enforcement.
2. Education is a powerful tool. Some people truly may be unaware as to why they should be concerned about AIS, and you should do your best to calmly inform them why AIS laws are in place.

How is non-compliance reported?

- **Forms of Violations**
 - UW-Extension Violation Forms
 - ILIDS camera submissions
 - Personal photos
- **Law enforcement may need an incident report from the inspector.**
- **Whatever is submitted needs to be credible enough to uphold in court if the violation were to be challenged.**

Enforcement

- **The Burnett County Sheriffs Department is directly responsible for enforcing the Decontamination Ordinance.**
 - Recreation Officer is the primary contact.
 - No fines have been issued at this time.
 - “First offenses” are given a verbal and written warning (letter), and the violators information is kept on file.
 - Discretion for fines is reserved for law enforcement.

BURNETT COUNTY SHERIFF'S DEPARTMENT

7410 County Road. K. Room #122
Siren, WI 54872
(715)-349-2121



To:
From:
Date:

(NAME),

This letter is to inform you that on **DAY** of **DATE** at approximately **TIME** you were observed failing to use the provided decontamination materials to clean your watercraft at **LAKE**. When present, decontamination materials and their associated procedures must be used to comply with Burnett County ordinance number 2008-01. Information regarding this ordinance can be found in Burnett County's Code of Ordinances, Chapter 18, Article 5.

Aquatic invasive species (AIS) include plants, animals, or organisms that are not native to a body of water and cost the state of Wisconsin millions of dollars each year. The spread of such species affect not only the individuals who live on the lake but also public recreationalists. Aquatic invasive species have been known to damage personal property, impact local fish populations, and ultimately hurt the economy surrounding the lake. Many infested lakes around Wisconsin are very close to bodies of water that are free of invasive species. A local example of this would be Big and Middle McKenzie Lakes which have zebra mussels while the surrounding waterbodies do not. This makes preventing the spread of invasives crucial, and this is why there are laws and ordinances prohibiting the transport of aquatic plants and animals.

The state of Wisconsin requires waterbody users to remove all aquatic plants, animals, debris, and water before entering and leaving a waterbody. Burnett County requires this as well, but also goes one step further to require decontamination procedures to be used when materials are present. The state of Wisconsin and Burnett County are able to issue fines regarding issues that may spread AIS, and State Wardens and County Sheriff Departments enforce the regulations to full effect.

A citation will NOT be issued in this case, however, a second offense WILL carry a citation. Burnett County encourages you to spread this information on to your friends and family about aquatic invasive species and the laws and ordinances in place to help slow the spread. If you have questions about how AIS impacts Wisconsin's water resources, you may email Thomas Boisvert, Burnett County AIS Coordinator at tboisvert@burnettcounty.org.

Respectfully,

AIS Violation Report Form

Boat Landing/Location: Birch Island Lake

Date: 7/3/19 Time: 12:17 AM or PM

County: Burnett Town/Village/City: Scott

Vehicle License Number: [REDACTED] State Registered: [REDACTED]

Boat Registration: [REDACTED] State Registered: _____

Car/Boat/Personal Watercraft Information -

Year: _____ Make: Ranger Model: _____ Color: Purple

Violator Information: Male or Female

Name of Boat Operator: _____

Hair: Red Eyes: _____ Approx. Height/Weight: _____

Other Description (clothing, etc.): _____

Photo Taken of Violation: Yes or No

Description of Violation/Comments: Refused to Bleach. Said Ruins gel Bleach.

Did wipe down Boat with cloth however.

CBCW Inspector's Contact Information -

Name: [REDACTED] Phone Number: [REDACTED]

Address: _____

Please check box if law enforcement may contact you for more information about the violation. You will remain confidential in this case.

Please check box if you do not want law enforcement to contact you for more information about the violation.

Regional Water Guard Contact Info:

To report the violation,
contact your area Water
Guard or DNR Warden
OR call 1-800-TIP-WDNR

Local DNR Warden Contact Info:

Summer 2019

- This was the first summer where decontamination violations became prevalent.
- There was yet to be a defined system for handling these violations.
- The new AIS Coordinator had to take input from Sheriffs Department, WDNR, and Citizens on how to make a reporting process simpler and more effective.
 - Violation Reporting through UW-Extension Form
 - Violation Warning and Fine Letters
 - Record keeping to track violations – repeat offenders
 - FAQ sheets in cooperation with Washburn County

Summer 2019

- **Bass Tournaments**
 - There were several bass tournaments where participants refused to decontaminate
 - The tournaments were all under the 20 boat requirement – where permitting is needed through the WDNR
 - There were concerns that the provided bleach solution would harm the participants finish on their boat
 - Boat manufacturers were contacted to provide statements that the provided solution is safe (See FAQ sheet)
- **All violators were contacted by the Burnett County Sheriff's Department**
 - Bass club organizer was contacted as well
 - Sheriff's Department has had a presence at boat landings, and talked to boaters regarding the ordinance

Decontamination FAQ

- **Landing poster – created by Lisa Burns and Tom Boisvert, Burnett County AIS Coordinator**
 - To be posted on decontamination stations
 - More of the common questions
 - Allows the public to read some information while decontaminating
- **In Depth Document – created by Lisa Burns, Washburn County AIS Coordinator**
 - Can be handed out at meetings
 - Have on-hand in offices
 - Inspectors have them on hand
- **You may request these documents using the contact information on the last slide.**

Decontamination Frequently Asked Questions

Created by Burnett and Washburn County Land and Water Conservation Departments

What is decontamination?

It is the process of removing all aquatic plants and animals, including materials that may contain or transmit aquatic invasive species (AIS) beyond physical removal or other methods.

Why have a decontamination station?

Hand removal is effective at removing plants and small animals from watercraft equipment. Decontamination is another tool to help kill invasive species that are not visible or very difficult to see (zebra mussels and spiny water fleas).

Who maintains the decontamination station?

Citizen members of a lake association or lake district change the solution to the recommended mix of 2 tablespoons bleach per gallon of water. They are trained to properly mix the solution.

What is the concentration of bleach?

Standard bleach is 52,500 ppm chlorine, while the bleach concentration being used here is ~500 ppm. Reported in percentage, regular strength household bleach is 5.25% sodium hypochlorite while this solution is 0.05% sodium hypochlorite.

Are there runoff issues?

A fine mist of the bleach/water solution is applied using a hand-pump sprayer. The solution covers the boat and trailer and is thoroughly applied around its perimeter. It evaporates quickly and no runoff into the lake occurs. There is no harm to the lake once the boat/trailer goes into the water.



Will the bleach solution in my live-well harm the fish I keep in there?

Between the low initial concentration of the applied solution, the off-gassing of the chlorine while sitting, and then the dilution of any residual chlorine, the likelihood that fish would be impacted by the bleach is very low. An alternative would be to use ice to keep fish fresh until you get home.

Will decontamination make a difference?

The vast majority of invasions are human mediated and theoretically preventable. Each prevention action we take, reduces the probability of a new invasion by a boat moving aquatic invasive species.

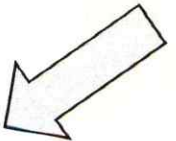
Recreational boating is a way AIS move around and once they are here, we all share a responsibility to be doing everything we can to prevent their spread.

Will this harm my boat or equipment?

There are no known cases of damage from properly using any decontamination method. An even higher solution than the one provided is recommended to clean vinyl siding on a house. The WI DNR uses this solution on all of their boating equipment every day, and tournament fishing boats have been sprayed down and have shown no harmful effects (see below).

Ranger Boats: "At any rate – household bleach at full concentration is not going to harm the gel coat when used during washing and rinsed off."

Tuffy Boats: "The described bleach solution is 100% safe on all gelcoat applications."



Decontamination Station Frequently Asked Questions

1. What is decontamination?
 - a. It is the process of removing all aquatic plants and animals, including materials that may contain or transmit aquatic invasive species (AIS) beyond physical removal or other methods.
2. What is a decontamination station?
 - a. The station may consist of high temperature water (140 degrees or more) applied with a pressure washer by trained personnel or a recommended chemical solution applied with a low pressure sprayer, or other techniques or devices.
3. Why have a decontamination station?
 - a. Hand removal is effective at removing plants from watercraft equipment and removes small animals. Decontamination is another tool to help kill invasive species that are not visible or very difficult to see (zebra mussels and spiny water fleas).
4. Who owns a boat landing?
 - a. Boat landings can be owned by various entities, including a private citizen, township, state or federal government. Permission to install a decontamination station must be approved by the landing owner.
5. Who maintains the decontamination station?
 - a. Citizen members of a lake association or district change the solution to the recommended mix of 2 tablespoons bleach per gallon of water. They are trained to properly apply the solution to equipment.
6. What is the concentration of bleach?
 - a. Standard bleach is 52,500 ppm chlorine, while the bleach concentration being used here is ~500 ppm. Reported in percentage, regular strength household bleach is 5.25% sodium hypochlorite while this solution is 0.05% sodium hypochlorite.
7. Where should the decontamination station be installed?
 - a. It is recommended to be installed away from the launch area and where vehicles use an area for turn-around back up. If there is a sloped launch, it is installed away from the slope, upward on land.
8. Are there runoff issues?
 - a. A fine mist of the bleach/water solution is applied using a hand-pump sprayer. The solution covers the boat and trailer and is thoroughly applied around its perimeter. It evaporates quickly and no runoff into the lake occurs. There is no harm to the lake once the boat/trailer goes into the water.
9. Will it kill grass?
 - a. The concentration of the bleach solution being used is low enough that it should not kill grass. A much stronger solution (1 cup bleach/gallon vs 2 tablespoons/gallon) is often used to clean vinyl siding on houses with no effect on nearby grass and landscaping.
10. I'm worried that this decontamination method will harm my boat/equipment.
 - a. There are no known cases of damage from properly using any decontamination method. As stated in #9 an even higher solution is recommended to clean vinyl siding on a house. The WI DNR uses this solution on all of their boating equipment every day and tournament fishing boats have been sprayed down and have shown no harmful effects.
 - b. **Ranger Boats:** "At any rate—household bleach at full concentration is not going to harm the gel coat when used during washing and rinsed off."
 - c. **Tuffy Boats:** "The described bleach solution is 100% safe on all gelcoat applications."

11. I'm worried that the bleach/water solution in my live well will harm fish I keep in there.
 - a. Between the low initial concentration of the applied solution, the off-gassing of the chlorine while sitting, and then the dilution of any residual chlorine, the likelihood that fish would be impacted by the bleach is very low.
 - b. An alternative would be to use ice to keep fish fresh until you get home.
12. I don't think that this will make a difference.
 - a. The vast majority of invasions are human mediated and theoretically preventable. Each prevention action we take, reduces the probability of a new invasion by a boat moving aquatic invasive species.
 - b. Recreational boating is a way AIS move around and once they are here, we all share a responsibility to be doing everything we can to prevent their spread.
13. What are people doing about other pathways? That's a big reason AIS moves around.
 - a. Ballast water – Recently approved regulations will facilitate the placement of ballast water treatment technology on ocean going shipping vessels.
 - b. Ducks and turtles – If ducks and turtles were moving AIS, we'd expect a much more random distribution. More small ponds and lakes without access would contain AIS. As it stands, lakes that have boat ramps have AIS, indicating they are much more likely to be moved by people with boats than ducks and turtles.
 - c. People letting pets go – The national Habitattitude campaign promotes responsible pet ownership and outlines alternatives to pet release. Wisconsin uses this program to develop pet rehoming networks so that people have alternatives to pet release.

As of February 2018, Washburn and Burnett Counties have passed an ordinance that states "if a decontamination station is available at a boat landing, the boater is required to use it".



For more information contact:

Burnett County AIS Coordinator, Tom Boisvert at (715)-349-2109 Ext. 2613
Washburn County AIS Coordinator, Lisa Burns at (715)-468-4654

Another Ordinance Revision (Jan. 2020)

- **Increased forfeiture amounts**
- **Any person who violates a provision of this article shall be subject to a forfeiture plus court costs as follows:**
 - *“For the first offense, a forfeiture of not less than \$125.00, nor more than \$225, plus costs.”*
 - *“For the second offense, a forfeiture of not less than \$250.00 nor more than \$350.00, plus costs.”*
 - *“For the third and subsequent offenses, a forfeiture of not less than \$350.00 nor more than \$450.00, plus costs.”*
- **Ordinance language (minor)**
- **Once again passed unanimously by County Board**

Summer 2020

- **Stronger Enforcement**

- Now that a protocol has been established with the Sheriff's Department, enforcement will go much smoother.
- All inspectors at the landings will have the same reporting forms, and FAQ sheets.
- FAQ posters will be posted on the decontamination stations.

- **New Stations**

- 3 new stations for Yellow Lake
- 1 new stations for Nicaboyne Lake
- This brings the total to 25 stations in Burnett County alone.

2020 CBCW Workshops

- **These workshops will include:**
 - What is expected of water users where there are decontamination materials available
 - How to correctly introduce decontamination procedures to water users
 - Review of all the forms previously discussed
 - Regular CBCW material
- **These workshops have been postponed due to the COVID-19 Pandemic**

Questions? Comments?

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