

Burnett County 2019 AIS Annual Report



Prepared by Thomas Boisvert, AIS Coordinator

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Introduction

Burnett County has participated in Aquatic Invasive Species (AIS) education, prevention, and control efforts for decades. AIS are aquatic plants, animals, algae, or viruses that are not native to the region they were transplanted to. AIS could have been intentionally introduced to a non-native environment or transported unintentionally through various ways. No matter how they arrived to an area, AIS have a significant impact on the natural environment, the economy, and culturally significant resources.

The most common transportation of AIS are through the aquaculture trade, recreational boater movements, hunters and anglers, and the pet trade. The Clean Boats, Clean Waters (CBCW) program in Wisconsin helps to target recreational boaters, anglers, and hunters. The other mechanisms of spread often have specialized programs developed by the Wisconsin Department of Natural Resources (WDNR).

Fortunately, Burnett County has relatively few forms of AIS when compared to other regions of Wisconsin and the United States. Burnett County is often referred to as “Wisconsin’s premier northwest,” and to keep this slogan relevant, AIS must be slowed or prevented from invading the County’s natural resources. The many pristine waterbodies in Burnett County drive the economy during the summer months, and are what keep people returning each season. If these water resources were to be impaired not only would the natural ecosystems suffer, but the region’s pocketbook as well.

To view the most common forms of AIS, or ones of considerable threat, please use the following link to view [AIS Fact Sheets](#) developed by Golden Sands RC&D and the Citizen Lakes Monitoring Network.

This summary document highlights the programs and work that Burnett County’s Land Services Department (BCLSD) completed during the 2019 field season, and what will continue for the year 2020. If additional information is desired about these programs, feel free to contact Burnett County’s AIS Coordinator, Thomas Boisvert, using the contact information below.

Thomas Boisvert

Burnett County Aquatic Invasive Species Coordinator
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Burnett County's Current AIS Goals

Burnett County's main AIS goal is simple – stop the spread. However, there are some main objectives that keep this idea possible. These objectives and activities were written directly into the [Burnett County Land and Water Resource Management Plan](#).

Aquatic Invasive Species Objectives:

- A. Monitor and control Eurasian Water Milfoil, Purple Loosestrife, Asian Carp, Zebra Mussels, and other Aquatic Invasive Species.
- B. Protect native aquatic plants (especially wild rice) and aquatic habitat.
- C. Monitor and control terrestrial invasive species such as spotted knapweed, buckthorn, leafy spurge, and giant and Japanese knotweed.

Aquatic Invasive Species Activities:

- 1. Inspect watercraft and equipment at public access points to help prevent accidental spread of invasive species into additional lakes and rivers. Implement the Clean Boats, Clean Waters program and support ILIDS cameras.
- 2. Assist lake organizations with aquatic plant inventories and plans.
- 3. Support Burnett County Sheriff and lake association efforts to enforce the AIS Ordinance.
- 4. Develop rapid response plans for eradication of manageable infestations.
- 5. Monitor native and invasive aquatic plants at boat landings and other areas where invasive introductions are likely to occur.
- 6. Track purple loosestrife, zebra mussel, Eurasian water milfoil and other aquatic and terrestrial invasive species infestations.
- 7. Promote establishment of decontamination stations at surface water access points.
- 8. Monitor lakes for zebra mussels using veliger tows, eDNA, plate samplers, and other available methods in cooperation with Washburn County.

“Staff also educate residents and visitors regarding the identification, threats, and control of aquatic invasive species. Inspections of water craft at public access points help prevent accidental spread of invasive species into additional lakes and rivers. A comprehensive purple loosestrife identification and eradication program has been established and is currently underway in the county.”

Burnett County AIS Ordinance

The Burnett County AIS Ordinance was amended in 2018 from the original “Do Not Transport” ordinance. In the amendment, it is now specified that if decontamination materials are present at a waterbody access, they must be utilized by law.

This amendment was the result of intense public pressure for Burnett and Washburn Counties to be proactive against the spread of zebra mussels and other AIS. This pressure came after zebra mussels were first identified in Big McKenzie Lake in 2016, and shortly after in Middle McKenzie Lake as well.

When brought to county boards for approval, the amendment was passed unanimously.

While the ordinances were being amended, Burnett and Washburn Counties applied for an AIS Rapid Response grant. This grant focused on preventing the spread of zebra mussels any further. A main goal of the grant was to purchase decontamination stations for local lake associations to install at water access points. Once the county ordinances were adopted the public was required to use these stations by law.

The general public accepted the decontamination stations, and were grateful to see that there are proactive measures in place to prevent the spread of AIS. However, there were some people that were not fond of this change. Since the ordinance is in place, the people that objected to these stations were reported and subsequently given warnings. In 2019, ordinance enforcement has become much stronger, and there is a strong system in place for the 2020 season.

Since Burnett and Washburn Counties are the only two counties that have an AIS ordinance of this nature, this whole process has been a learning curve.

For the 2020 season there will be a revision on the current ordinance to increase the fines substantially.

What’s Been Done In 2019?

Many violations were submitted by area lake associations that have hired CBCW employees.

These violations are reviewed by the AIS Coordinator and County Conservationist before being forwarded on to either county or WDNR personnel for enforcement.

In 2019, there have been over 30 violation warning letters mailed.

Many violations came from fishing tournaments, and concerns of the bleach solution damaging personal watercraft were brought forward.

Because of this, boat manufacturers were contacted to provide statements that the bleach solution is safe for use.

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

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

Reporting a Burnett County AIS Violation

What you should be submitting:

AIS Violation Report Form

- A. [Violation 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.

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:

- A. Burnett County AIS Coordinator
Thomas Boisvert
tboisvert@burnettcounty.org
(715)-349-2109 Ext. 1382

What you should expect:

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.

Time

- c. 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:

[Never put yourself in a dangerous situation.](#) If an individual is hostile, safely gather as much information as you can and call law enforcement.

[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.

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 (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)

N

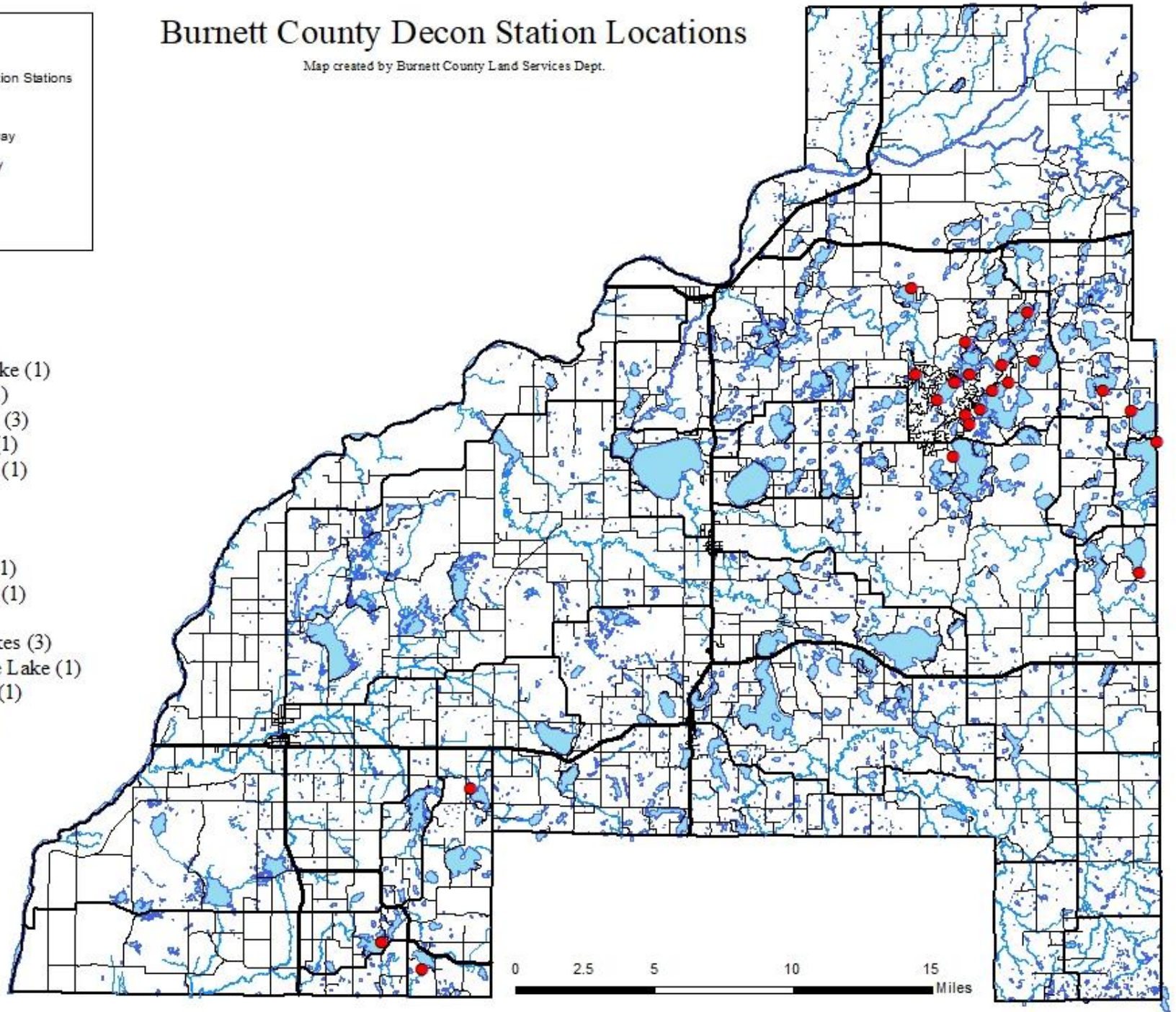


Figure 1: Decontamination Station Locations

Zebra Mussel Response

In the fall of 2016, zebra mussels were discovered in Big McKenzie Lake. Two years later in the fall of 2018, they were also discovered in neighboring Middle McKenzie Lake. These unfortunate discoveries propelled the public and natural resource agencies/organizations into an intense monitoring response.

Immediately after the discovery in 2016, Burnett and Washburn Counties applied for a rapid response grant. This rapid response grant was awarded by the WDNR, and it started to be administered in 2017. The funds from this rapid response grant were/are used to purchase decontamination stations, monitoring equipment and supplies, and outreach materials. Decontamination stations are placed at water accesses throughout Burnett and Washburn Counties, and a map of decontamination stations throughout Burnett County can be viewed in Figure 1 on the previous page.

Decontamination stations were purchased as a result of Burnett and Washburn Counties both passing a similar “decontamination ordinance.” This ordinance states that if decontamination materials are present, by law, they must be used. Burnett and Washburn Counties are currently the only two counties in Wisconsin that have a decontamination ordinance. Because of this, there has been a learning curve throughout the implementation of the ordinance

Zebra mussel plate samplers were placed on the McKenzie Lakes to monitor the growth of the population yearly. In 2019, the population has exploded in Big McKenzie, and Middle McKenzie is showing significant growth as well. It will be interesting to see the progression of the population in 2020.

Zebra mussel plate samplers are also placed throughout many lakes in Burnett and Washburn Counties for monitoring purposes. To reach lake residents on lakes that do not have an association, a letter was developed to ask for participation in this monitoring project. This idea was successful, and there are a handful of new lakes involved in this monitoring effort. Lakes that have participated in the past generally continue annually. This was a new idea for 2019, and due to its success will be continued in subsequent years. This letter can be viewed in [Appendix A: Letters](#).

The following page highlights the monitoring efforts and procedures from various organizations that were/are a part of this zebra mussel response effort. Together, these organizations created the McKenzie Lakes Area Zebra Mussel Management Team.



Washburn and Burnett Counties Zebra Mussel Accomplishments 2017-2019

The following lists are comprehensive of work completed from the start of the zebra mussel rapid response project (2017) to the current year (2019). 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 (pages 11-12).

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. The decontamination stations consist of a 4'x8' (or smaller) informational sign, 500ppm bleach solution in a pressurized sprayer, safety goggles, and a long handled brush and hook to remove debris and weeds. In both counties, if decontamination materials are present, county ordinance dictates that they must be used.

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)

Burnett County Total: 21

Zebra Mussel Plate Sampler Lakes

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

Zebra Mussel Veliger Testing Lakes

Bashaw Lake (2017)
Benoit Lake (2017, 2018)
Big McKenzie Lake (2017, 2018, 2019)
Big Trade Lake (2018, 2019)
Clam River Flowage (2018, 2019)
Devils Lake (2019)
Dunham Lake (2017, 2018)
Falk Lake (2018, 2019)
Lipsett Lake (2018)
Little Wood Lake (2017)
Love Lake (2018)
Memory Lake
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)

Environmental – DNA Testing (eDNA)

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

Washburn County Zebra Mussel Monitoring Efforts

Decontamination Station Locations

Bass Lake (Casey Township) (1)
Bear Lake (2)
Big McKenzie Lake (1)
Cable Lake (1)
Long Lake (4)
Lower McKenzie Lake (1)
Mathews Lake (1)
Nancy Lake (1)
Potato Lake (1)
Spooners Lake (1)
Stone Lake (1)

Washburn County Total: 15

Zebra Mussel Plate Sampler Lakes

Bass Lake (Casey Township) (2018, 2019)
Bear Lake (2019)
Big McKenzie Lake (2017, 2018, 2019)
Chicog Lake (2017, 2018, 2019)
Gull Lake (2018, 2019)
Horseshoe Lake (2019)
Long Lake (2017, 2018, 2019)
Lower McKenzie Lake (2017, 2018, 2019)
Mathews Lake (2017, 2018, 2019)
McLain Lake (2017, 2018, 2019)
Middle McKenzie Lake (2017, 2018, 2019)
Nancy Lake (2018, 2019)
Pear Lake (2017, 2018, 2019)
Red Cedar Lake (2017, 2018, 2019)
Slim Lake (2019)
Spooners Lake (2018, 2019)
Trego Lake (2017, 2018, 2019)
Twin Lakes (2017, 2018, 2019)

Zebra Mussel Veliger Testing Lakes

Bass Lake (Casey Township) (2018, 2019)
Big McKenzie Lake (2017, 2018, 2019)
Birch Lake (2017)
Deep Lake (2017)
Island Lake (2019)
Lower McKenzie Lake (2019)
Middle McKenzie Lake (2018)
Pokegama Lake (2017, 2018, 2019)
Rocky Ridge Lake (2017)
Spooners Lake (2018, 2019)
Tozer Lake (2017, 2018, 2019)
Trego Lake (2017)
Slim Lake (2019)

Environmental – DNA Testing (EDNA)

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

Burnett County Zebra Mussel Towing Summary

Location:

Day One: Nicaboyne Lake (2486100), Webb Lake (2705400), Sand Lake (2495100)

Day Two: Devils Lake (2461100), Rice Lake (2677900)

Field Crew:

Day One: Thomas Boisvert, Shayna Vendela, and Brad Morris

Day Two: Sunny Cone and Brad Morris

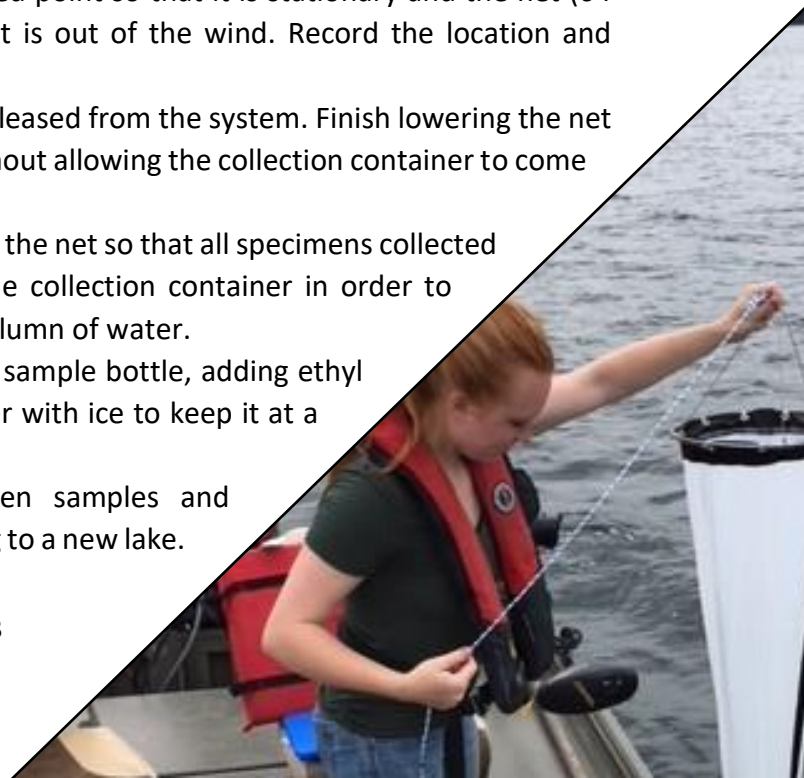
Summary: On July 15th and 17th, 2019 the field crews completed a total of 16 zebra mussel tows. Three tows were done on every lake listed above except for Webb Lake which had four tows conducted. The tow locations were kept consistent with each lake; one tow was taken by the landing, the second was taken at the deepest part of the lake, and the third was a randomly selected spot chosen away from the first two sampling sites. Water that was collected with the tow net at each of the three sites was deposited in sample bottles labeled with the respective lake name and WBIC. Ethanol was added to the samples, which were then placed in a cooler until we were able to store them in the refrigerator.

Samples were sent to the National Park Service, where they were then forwarded on to RMB Environmental Laboratories, Inc. Although samples were sent to the National Park Service, all sampling data was entered into SWIMS using the WDNR form as well. The RMB sampling protocol does not require secchi measurements, and therefore they were not entered on the WDNR form.

All data was entered into SWIMS.

Zebra Mussel Towing Field Procedure:

1. Position the boat at the previously decided point so that it is stationary and the net (64 micron) can be lowered on the side that is out of the wind. Record the location and weather details.
2. Slowly lower the net, allowing air to be released from the system. Finish lowering the net and record the total depth it reaches, without allowing the collection container to come in contact with the bottom of the lake.
3. Pull the net up slowly and vertically. Rinse the net so that all specimens collected will be contained and analyzed. Swirl the collection container in order to condense your findings in the sampled column of water.
4. Pour container contents into the labeled sample bottle, adding ethyl alcohol and storing the sample in a cooler with ice to keep it at a low temperature.
5. Rinse the sampling equipment between samples and thoroughly decontaminate before moving to a new lake.



Purple Loosestrife Control

Control efforts for purple loosestrife have been occurring in Burnett County for over 20 years. However, this aggressive plant still continues to invade new areas every season. For many years, the Burnett County AIS Program has raised and released *Galerucella* beetles at scattered purple loosestrife sites throughout the County. These efforts have been very successful in the past, however, beetles were not able to be raised for the 2019 season.

Since beetles were not able to be raised for the 2019 season, purple loosestrife efforts focused on mapping, cutting, and spraying loosestrife infestations throughout the County. Herbicide use was only warranted at sites where manual removal was not feasible, and where no beetle damage was present. Approved aquatic herbicides were used.

To map the purple loosestrife infestations throughout Burnett County, an iPad was used. Downloaded on the iPad is *Fulcrum*, an app that allows field staff to GPS a location and enter associated data into a real-time map. This data then gets entered into Burnett County's *MapFeeder* software where it can be exported to make detailed maps (Figure 2).

These maps are useful for tracking the spread of purple loosestrife, and clearly seeing how dispersal of the plant is possible. For example, the plant utilizes rivers and roads to further spread throughout the county (Figure 2).

Although Burnett County has its own AIS mapping system, field data will also be entered into SWIMS using the state forms. However, problems have occurred in the past where data has not be uploaded, or has simply been lost when reported to the WDNR. This can be clearly visible when looking at the states AIS mapping system. The two representations of Burnett County's purple loosestrife infestations are drastic.

Why Weren't *Galerucella* Beetles Raised?

Burnett County's AIS Coordinator started full-time mid-May, 2019. Due to this later start the purple loosestrife beetle rearing would have already been a challenge.

Root stock for raising beetles was also unavailable in the spring of 2019 due to abnormally high water levels. Areas where digging historically has occurred were flooded.

Temperatures were also below average for much of the spring months. This lead to a slow start to the growing season.

When beetles were starting to mate and feed on purple loosestrife, many plants were less than 12" tall. Due to this, raising beetles would not have been feasible with plants that could not support enough beetles for reproduction.

2019 purple loosestrife efforts focused on mapping, cutting, and spraying.

In 2019, all visible points on the map (Figure 5) were visited. Not all of these sites received treatment, however, they are now mapped infestations that can be prioritized for future efforts. For 2020, beetles are planned to be raised to supplement the mapping, spraying, and cutting efforts in the County.

Purple Loosestrife was controlled on North Sand Lake, Long Lake, and DesMoines Lake with the help of their associated lake associations during the 2019 field season. At all three lakes, many volunteers and County staff were involved in this process.



AIS Interns Shayna Vendela (L) and Sunny Cone (R) conducting purple loosestrife removal on DesMoines Lake.



North Sand Lake purple loosestrife removal team.

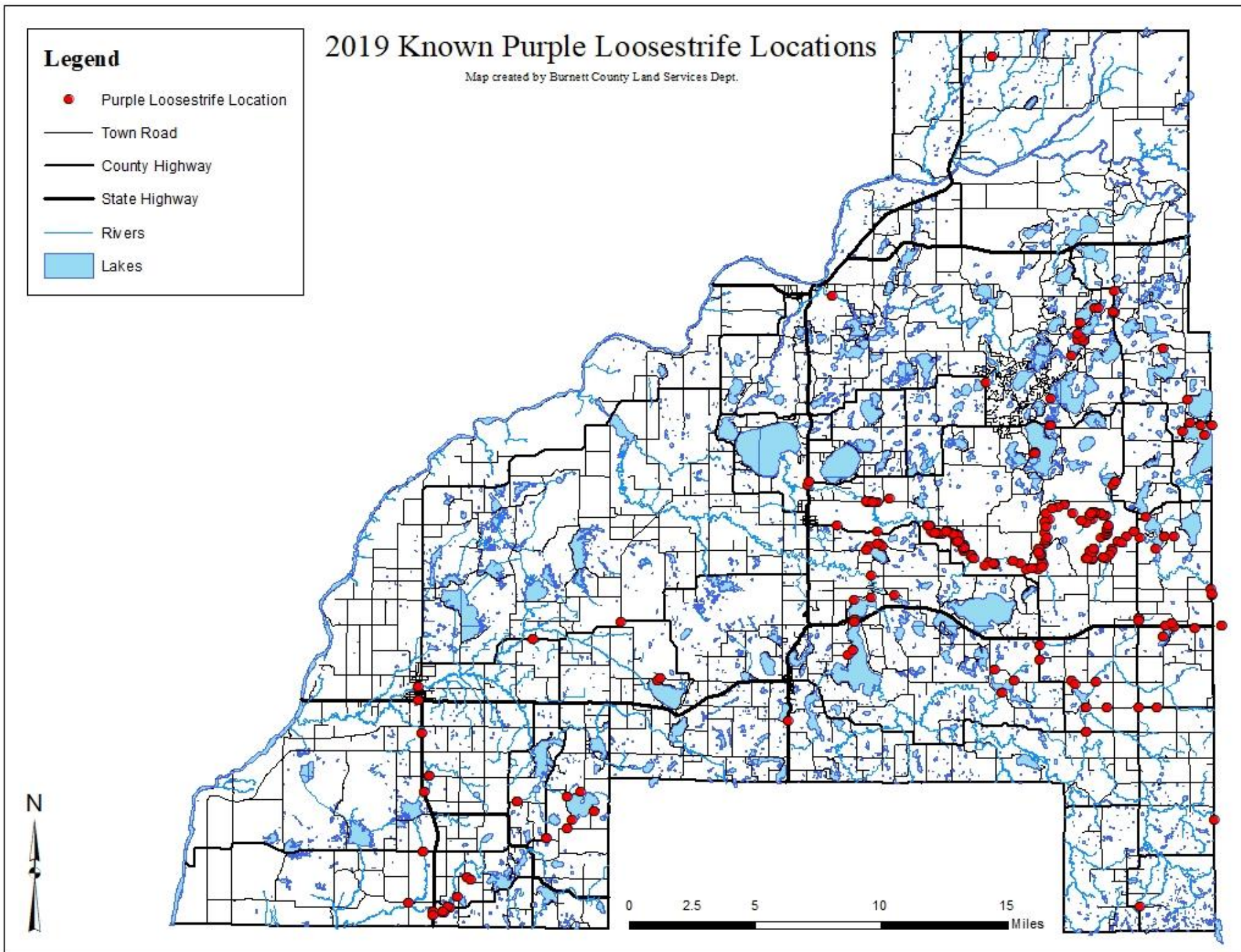


Figure 2: Purple Loosestrife Locations

Phragmites Monitoring

After monitoring suspected sites during the 2019 field season, it has been determined that there are no known non-native Phragmites populations in Burnett County. These suspected sites came from various sources and can be viewed in Figure 4. These sites were traveled to and inspected thoroughly for any sign of the invasive strain. Sites visited were in wetlands, roadside ditches, and lacustrine environments.

In 2015, there was a map made by a previous AIS Intern, Evan Lunda, which shows “Known Phragmites Locations” (Figure 3). This map was assumed to be all native Phragmites at the time, and to confirm this the majority of the locations were visited by the Burnett County AIS Coordinator during the 2019 field season. It appears that all of these locations are the native Phragmites strain. Monitoring for Phragmites at all sites will continue for the 2020 field season.

To help aid in monitoring lakes and rivers a high powered spotting scope was used during the fall months to spot Phragmites a large distance away. When Phragmites was spotted, a boat was used to get a closer look at the plant colony. Lakes that were monitored in this way were Big McGraw Lake, Little McGraw Lake, Mudhen Lake, Shoal Lake, and Dunham Lake. All of these lakes had suspected non-native Phragmites GPS points from various organizations.

Mudhen Lake is shown to have a “verified and vouchered” population of non-native Phragmites according to WDNR SWIMS records. However, upon a thorough and intensive shoreline scan around the perimeter of Mudhen Lake, the only strain of Phragmites found was native.

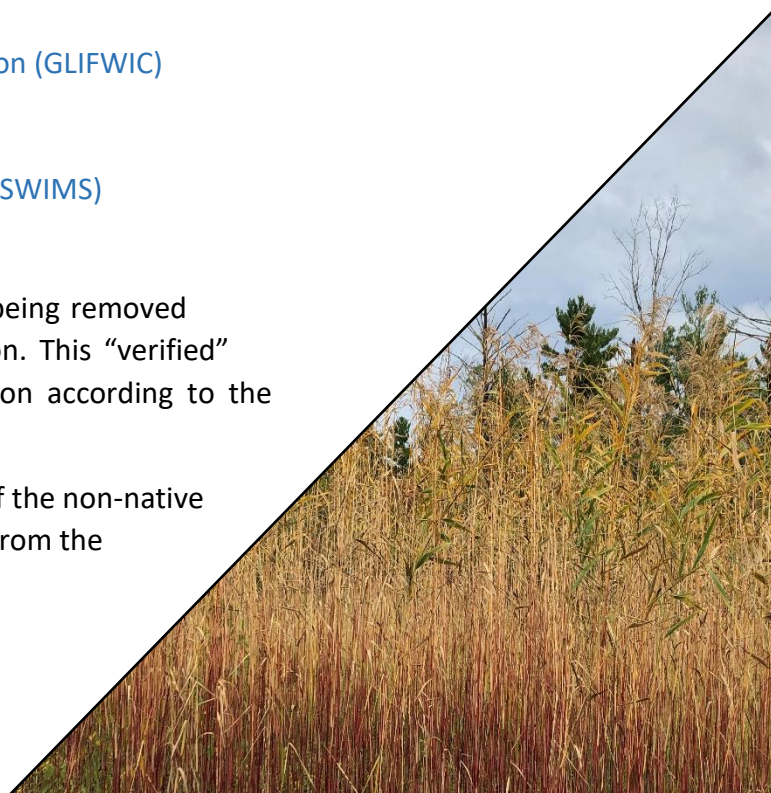
The unverified non-native Phragmites GPS points came from several sources. Many of the GPS coordinate points corresponded to native Phragmites, and the others had no evidence of either the native or non-native strain.

Sources:

1. Great Lakes Indian Fish and Wildlife Commission (GLIFWIC)
2. WDNR Forestry Division
3. Natural Heritage Inventory (NHI)
4. Surface Water Integrated Monitoring System (SWIMS)
5. UWSP Herbarium Records

This record on Mudhen Lake is in the process of being removed from the SWIMS database as a verified population. This “verified” population on Mudhen Lake is the only population according to the WDNR.

The other points of interest that showed no signs of the non-native strain will also be in the process of being removed from the SWIMS database if possible.





Native Phragmites often has bright red stems with few leaf sheaths attached. Non-native Phragmites is often dull-green and has leaf sheaths strongly attached.



Fungal spots will occur on the native Phragmites strain, but not on the non-native. Mildew spots can occur on both but they are not as distinct as this.

The following pictures illustrate characteristics of the native Phragmites strain. All pictures are from specimens viewed during 2019 Phragmites monitoring. For more information on Phragmites identification, the Minnesota Aquatic Invasive Species Research Center published a useful field guide: <https://www.maisrc.umn.edu/identifying-phragmites>



The ligule on the native Phragmites strain is a thick (1-1.7 mm) dark line. Non-native Phragmites is a more wispy (<1 mm) lighter colored line.



Native Phragmites stands such as this one often aren't nearly as dense as the non-native strain.



Phragmites australis

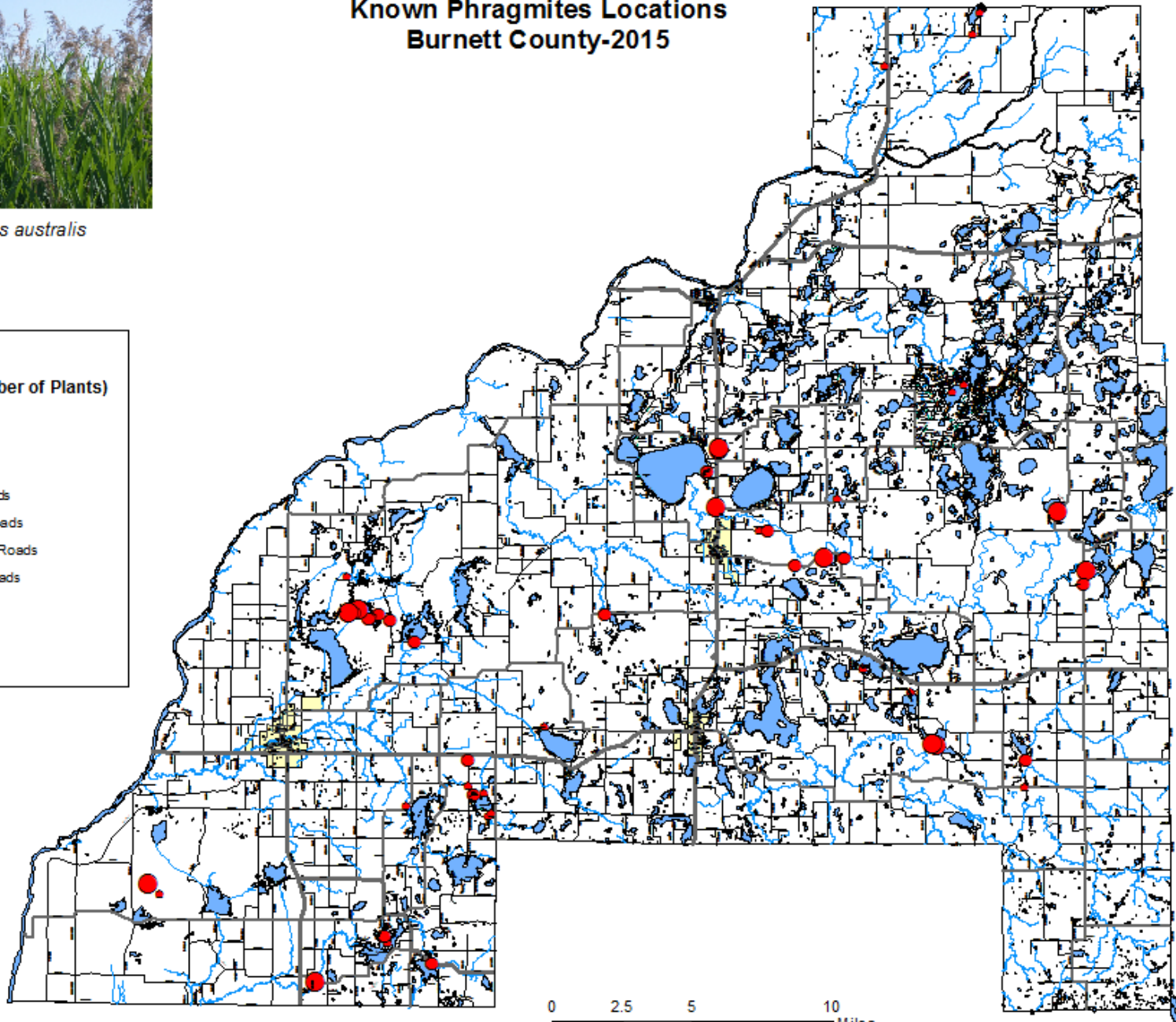
Known Phragmites Locations Burnett County-2015



Phragmites
Density (Number of Plants)

- 1 (1-50)
- 2 (51-100)
- 3 (100+)

— State Roads
— County Roads
— Township Roads
— Village Roads
— Rivers
■ Lakes
■ Villages



Data Obtained with Trimble Geoexplorer 6000

Created by Evan Lunda
Burnett County LWCD

Figure 3: 2015 Known Native Phragmites Locations

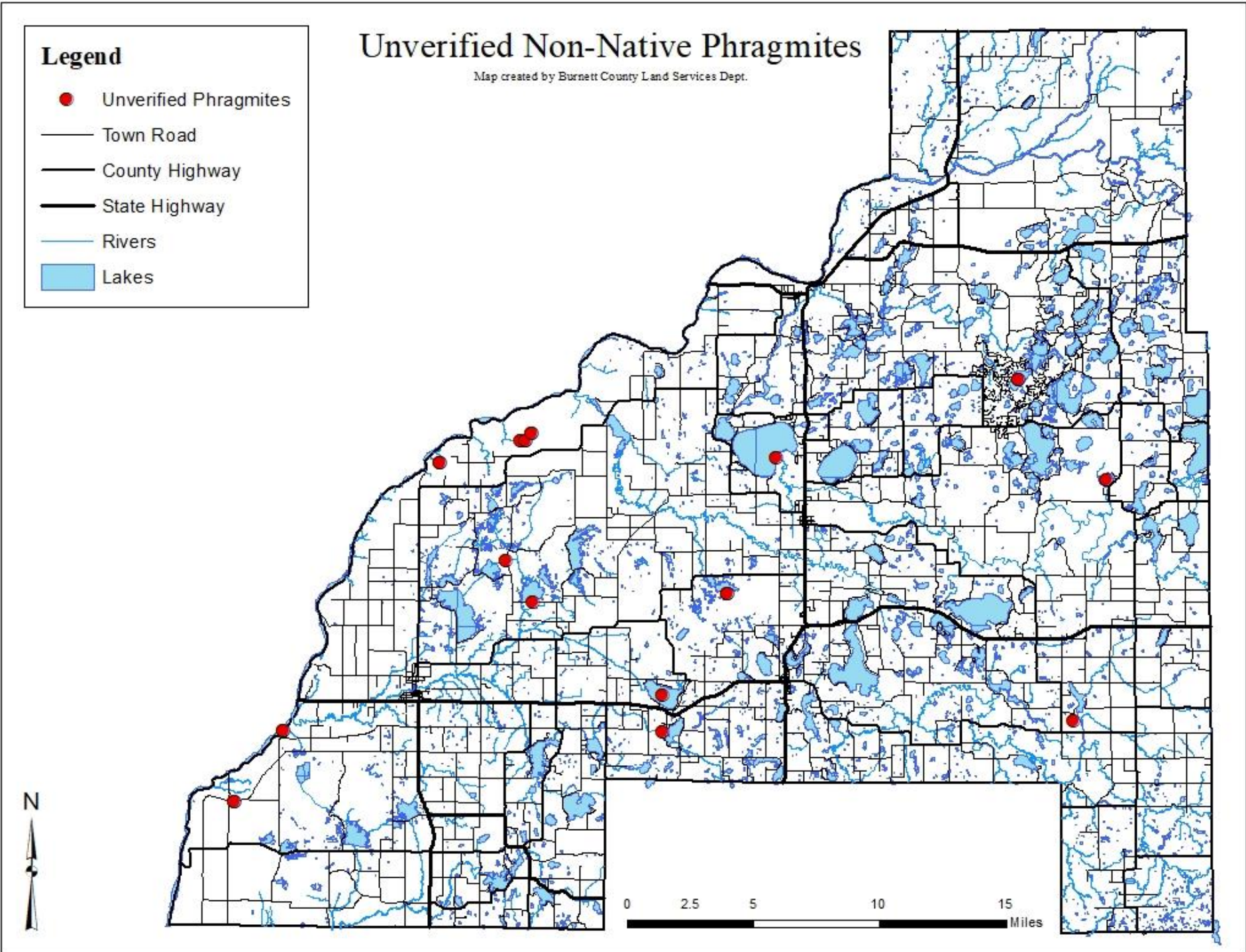


Figure 4: Unverified Non-Native Phragmites.

Japanese and Giant Knotweed

Japanese and Giant Knotweed have both been found in Burnett County, and in some neighboring counties as well. This infestation has been known about for some time, and several years ago there was a joint effort between Burnett and Polk Counties to map, treat, and hopefully eradicate populations of Knotweed. Education and outreach was also a part of this program, and this gave the public a better understanding of why Knotweed is extremely invasive.

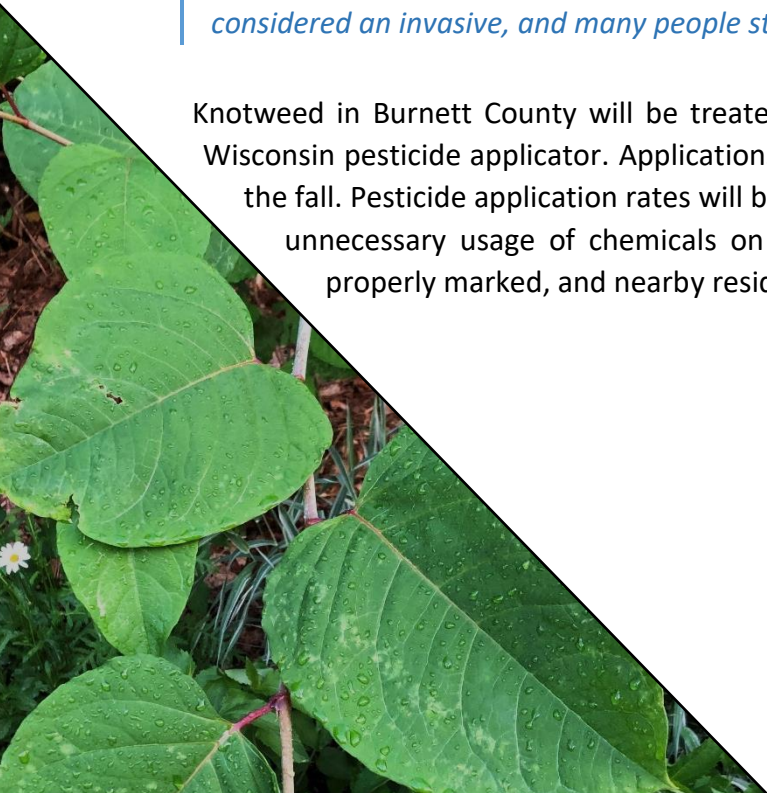
Unfortunately, this program only lasted several years until grant funding diminished. Since 2015, there has been minimal Knotweed treatment in Burnett County. In 2019, the Burnett County AIS Coordinator re-established contacts with the landowners previously involved with the Knotweed treatment program, and will plan on treating Knotweed infestations during the 2020 field season.

The Knotweed infestations that were treated during the last Knotweed treatment project were all cataloged. These sites were then re-visited in 2019, and a wide range of infestations were found. Thankfully, some sites previously treated have since been eradicated. However, there are many sites that have several plants left, rebounded to a larger extent, or even progressed further than previously known.

An informational letter about Knotweed as well as a “permission” letter were both sent in unison to landowners where Knotweed was found to be present on their properties. These letters can be viewed in [Appendix A: Letters](#). As of now, approximately 15 landowners have agreed for BCLSD to treat this invasive. At many properties, there are multiple sites of Knotweed. Fortunately, nearly all of these sites are in residential areas away from wetlands, streams, and lakes.

Interestingly, at most recorded sites Giant Knotweed is abundant in comparison to Japanese Knotweed. Many infestations were planted as an ornamental many years before this plant was considered an invasive, and many people still value the plants aesthetic qualities today.

Knotweed in Burnett County will be treated using foliar herbicide applications by a certified Wisconsin pesticide applicator. Applications will begin in early summer, and will continue into the fall. Pesticide application rates will be carefully considered to avoid over application and unnecessary usage of chemicals on the landscape. All areas that are treated will be properly marked, and nearby residents will be informed if necessary.



General AIS Monitoring

The Burnett County Land Services Department (BCLSD) uses different AIS monitoring methods for different situations. There are four main monitoring methods that are used, and for each monitoring method a report is written for that waterbody.

1. *AIS Point Intercept Surveys*
2. *Early Detection Monitoring*
3. *Waterbody Access Monitoring*
4. *River/Stream Road Crossing Monitoring*

Reports are written after each monitoring effort to establish a history for that waterbody as this can be useful in determining when certain problems may have occurred (EX: AIS introduction).

Table 1 (pages 25-26) references the waterbodies that received one or more of these monitoring activities during the 2019 field season. Reports for each waterbody can be produced upon request, and examples for each type of report are in Appendix C: Example Reports.

AIS Point Intercept Surveys

Using point intercept surveys to monitor for AIS may be the most effective and thorough way possible. Other methods may miss entire areas of a waterbody that might harbor AIS, whereas a point intercept approach achieves a representative sample of the entire waterbody. Beyond the point intercept survey grid, BCLSD also does a complete perimeter scan around the waterbody.

Many lake associations know the value of this monitoring technique and contract with BCLSD for the monitoring of their lake. Besides monitoring for pioneer populations of AIS, these surveys are commonly used in Burnett County to track the progress of a Eurasian Water Milfoil or Curly Leaf Pondweed infestation. Because of this, many AIS point intercept surveys are done early in the open water season before Curly Leaf Pondweed begins to die off. BCLSD suggests these surveys are completed approximately every 2-3 years to detect early AIS infestations.

In 2019, there were 11 waterbodies that received an AIS point intercept survey from BCLSD. All of these lakes were surveyed using a point intercept grid developed by the WDNR, and followed the WDNR protocols for point intercept surveys.

For 2020, a comparable number of AIS point intercept surveys will be completed.

Early Detection Monitoring

BCLSD also completes WDNR approved early detection monitoring using the protocols provided. However, these early detection surveys are usually conducted on smaller waterbodies where a canoe or small boat will be used. The larger waterbodies are reserved for the previously discussed AIS point intercept surveys.

In 2019, there were a total of 15 waterbodies monitored using the WDNR early detection protocols (14 lakes, and 2 stretches of a river). Each waterbody monitored had a completed WDNR early detection form that was then entered into the state surface water integrated monitoring system (SWIMS).

In 2020, a comparable amount of early detection surveys will be completed.

Waterbody Access Monitoring

BCLSD staff visit as many landings as possible throughout the open water season. Landings are generally visited at least once. BCLSD makes an effort to visit landings early in the season as well as at the end. This ensures that the proper signage is present, the landing is in a proper condition, and that no pioneer populations of AIS have established at the access points.

AIS Interns are tasked with monitoring landings and waterbody access points throughout the open water period. In 2019, the AIS Interns reached a total of 75 landings. Of these 75 only 3 landings needed sign replacement. The appropriate WDNR sign replacement forms were completed and entered into SWIMS. The landings that were not reached in 2019 will be the first priority in 2020.

In Burnett County there are approximately 175 waterbody access points, and this makes for an extremely large monitoring effort. Many of the accesses are remote which causes a challenge in itself. However, these remote accesses are still susceptible to AIS, and must be monitored the same as any other waterbody.

River/Stream Road Crossing Monitoring

There are many areas throughout Burnett County where small streams and rivers cross beneath a road. These areas are easy to travel to, and provide a glimpse of what these streams and rivers could be harboring in terms of AIS. Many of these river/stream crossings are access points for fishermen or waterfowl hunters that could be bringing AIS on equipment such as waders, light watercrafts, hunting equipment, bird dogs, and other various water equipment.

In 2019, this idea was new to Burnett County. To start this project, a section in the township of Roosevelt was targeted for monitoring. The Clam River has many forks and different sections in

this township that cross beneath a road. Culverts are used for water flow, and often times the edges of these culverts collect aquatic plants and animals as the water flow is not perfect. This collection of aquatic plants and animals is what is examined during these surveys, and additional rake tosses and visual scans are made as well.

During the monitoring season, 13 sites were monitored on sections of the Clam River. Out of the 13 sites, 5 contained AIS that were not documented in these stretches of river. The most common AIS observed at these sites was Curly Leaf Pondweed. Although some of these species were identified in the Clam River before, the WDNR divides rivers into different sections meaning the entire river is not listed as one waterbody.

These findings were submitted to the WDNR and entered into the SWIMS database. The sections of the Clam River that had new AIS findings should be updated in the near future.

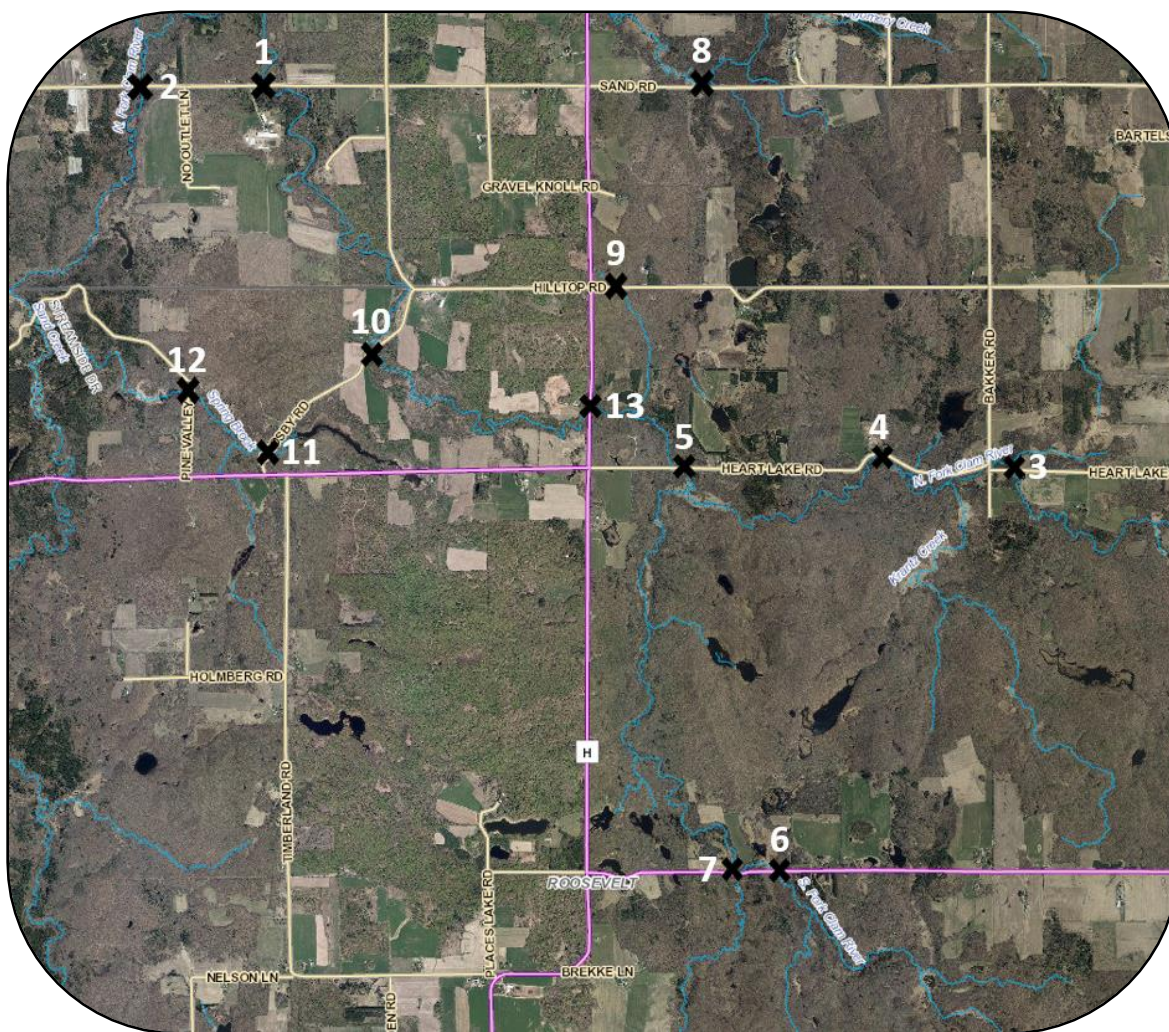


Figure 5: Roosevelt Stream Crossings

Table 1: Burnett County 2019 AIS Monitoring Efforts

<i>Lake Name</i>	WBIC	AIS Point Intercept	Early Detection Monitoring	Access Monitoring
<i>Banach Lake</i>	2450100		✓	✓
<i>Bashaw Lake</i>	2662400			✓
<i>Bass Lake (Meenon)</i>	2451200			✓
<i>Bass Lake (Union)</i>	2675000			✓
<i>Benoit Lake</i>	2678300			✓
<i>Big Doctor Lake</i>	2453400	✓		✓
<i>Big Sand Lake</i>	2676800	✓		✓
<i>Big Trade Lake</i>	2638700			✓
<i>Birch Island Lake</i>	2453500	✓		✓
<i>Bonner Lake</i>	2454500			✓
<i>Briggs Lake</i>	2671900		✓	✓
<i>Burlingame Lake</i>	2671400			✓
<i>Clam Lake</i>	2656200			✓
<i>Clam River</i>	<i>Multiple</i>		✓	✓
<i>Clam River Flowage</i>	2654500			✓
<i>Clear Lake</i>	2457600			✓
<i>Connors Lake</i>	2458300			✓
<i>Crooked Lake (Jackson)</i>	2459200			✓
<i>Crooked Lake (Siren)</i>	2459100			✓
<i>Culbertson Springs</i>	2673300		✓	✓
<i>Deer Lake</i>	2460700		✓	✓
<i>DesMoines Lake</i>	2674200			✓
<i>Devils Lake</i>	2461100			✓
<i>Dubois Lake</i>	2461700		✓	✓
<i>Dunham Lake</i>	2651800			✓
<i>Eagle Lake</i>	2672100		✓	✓
<i>Elbow Lake</i>	2463100			✓
<i>Falk Lake</i>	2670900			✓
<i>Fish Lake</i>	2464500	✓		✓
<i>Frog Lake</i>	2465300		✓	✓
<i>Gaslyn Lake</i>	2677700			✓
<i>Godfrey Lake</i>	2466300		✓	✓
<i>Goose Lake</i>	2466500		✓	✓
<i>Green Lake</i>	2467200			✓
<i>Holmes Lake</i>	2638400			✓
<i>Johnson Lake</i>	3471600			✓

<i>Lake 26</i>	2672500			✓
<i>Lily Lake</i>	2475300			✓
<i>Lipsett Lake</i>	2678100			✓
<i>Little McGraw Lake</i>	2477000	✓		✓
<i>Little Round Lake</i>	2477600		✓	✓
<i>Little Wood Lake</i>	2650900	✓		✓
<i>Long Lake (Siren)</i>	2656400			✓
<i>Long Lake (Webb)</i>	2674100			✓
<i>Loon Lake</i>	2673500			✓
<i>Lower Clam Lake</i>	2655300			✓
<i>Mallard Lake</i>	2480800			✓
<i>McGraw Lake</i>	2688800	✓		✓
<i>McKenzie Lake</i>	2706800			✓
<i>Middle McKenzie Lake</i>	2706500			✓
<i>Mudhen Lake</i>	2649500			✓
<i>Namekagon (McDowell)</i>	<i>Multiple</i>			✓
<i>Nicaboyne Lake</i>	2486100	✓		✓
<i>North Lake</i>	2676100		✓	✓
<i>North Sand Lake</i>	2495100	✓		✓
<i>Peterson Lake</i>	2676000			✓
<i>Point Lake</i>	2490900			✓
<i>Pokegama Lake</i>	2657200			✓
<i>Poquettes Lake</i>	2491100			✓
<i>Prinel Lake</i>	2491500		✓	✓
<i>Rice Lake</i>	2677900			✓
<i>Robie Lake</i>	2671500			✓
<i>Rooney Lake</i>	2493100	✓		✓
<i>Round Lake</i>	2640100			✓
<i>Spirit Lake</i>	2650300	✓		✓
<i>Spring Lake</i>	2664100			✓
<i>Staples Lake</i>	2499200			✓
<i>Taylor Lake</i>	2655900		✓	✓
<i>Viola Lake</i>	2598600			✓
<i>Warner Lake</i>	2677200			✓
<i>Webb Lake</i>	2705400			✓
<i>Wood Lake</i>	2649800			✓
<i>Yellow Lake (IkeWalton)</i>	2675200			✓
<i>Yellow Lake (Jeffries)</i>	2675200			✓
<i>Yellow River (H to Gaslyn)</i>	2670300		✓	✓

Aquatic Plant Management Plans (APMs)

Burnett County has been helping area lake associations develop and implement APMs for many years, and the 2019 season was no exception. For 2019, the Burnett County Land Services Department (BCLSD) finished APM plans for the Loon Lake Property Owners Association and the Webb Lake Association. These plans along with others that were completed in previous years were sent to the WDNR for formal approval. Upon review, the WDNR approved the APM plans for Devils Lake, Long Lake, Webb Lake, Loon-Cadotte Lakes, and Lipsett Lake.

There are also three APM plans that are currently in development. Birch Island Lake, North Sand Lake, and Lake 26 are all tentatively planned to be completed between 2020 and 2021. The field work has been completed for both Birch Island and North Sand Lakes, and the plan writing and process for approval should be wrapping up next spring. Lake 26 will have the necessary field work completed during the 2020 field season.

Lipsett Lake completed an APM plan update in 2019, and the McKenzie Lakes are scheduled to update their APM plan for all three lakes in either 2020 or 2021. These updates are reviewed by the WDNR in the same manner as an original document.

In a general view, APM plans help give an understanding of the aquatic ecosystem, possible threats to the waterbody, management implications, plans for maintaining or advancing the health of the waterbody, and developing rapid response plans for the possible introduction of AIS. The BCLSD finds APM plans to be extremely beneficial not only to the lake associations funding their creation, but to the public users as well. APM plans are proactive instead of reactive, and this ultimately helps control large problems before they arise.

More information regarding the processes of developing an APM, what is included in an APM, how the information is gathered, and why they can be valuable, can be found in a document written by WDNR, UW-Extension, and others titled *Aquatic Plant Management in Wisconsin*.

The completed APMs are posted for the public to view on the Burnett County Webpage by navigating to Departments – Land Services Department – Conservation Division - Past Projects. All documents are in PDF format, and can be viewed on any platform.

Clean Boats, Clean Waters (CBCW)

CBCW efforts across Burnett County were strong for the 2019 season despite getting a later start than normal. Two AIS interns and two contracted employees were able to bounce around Burnett County to a variety of landings. Most of the CBCW efforts were centered at busier accesses, however, some smaller waterbodies were visited to make a presence known in these areas as well. The AIS interns often utilized a hot-water pressure washer when traveling to a larger access. This additional decontamination procedure was well received by the public.

Burnett County also coordinated with the McKenzie Lakes Association to provide CBCW contracted employees at Middle and Big McKenzie Lakes. This service the county provided was reimbursed by the McKenzie Lakes Association at the end of the open water season. The hot-water pressure washer was used at the McKenzie Lakes when possible by either Burnett or Washburn County AIS interns.

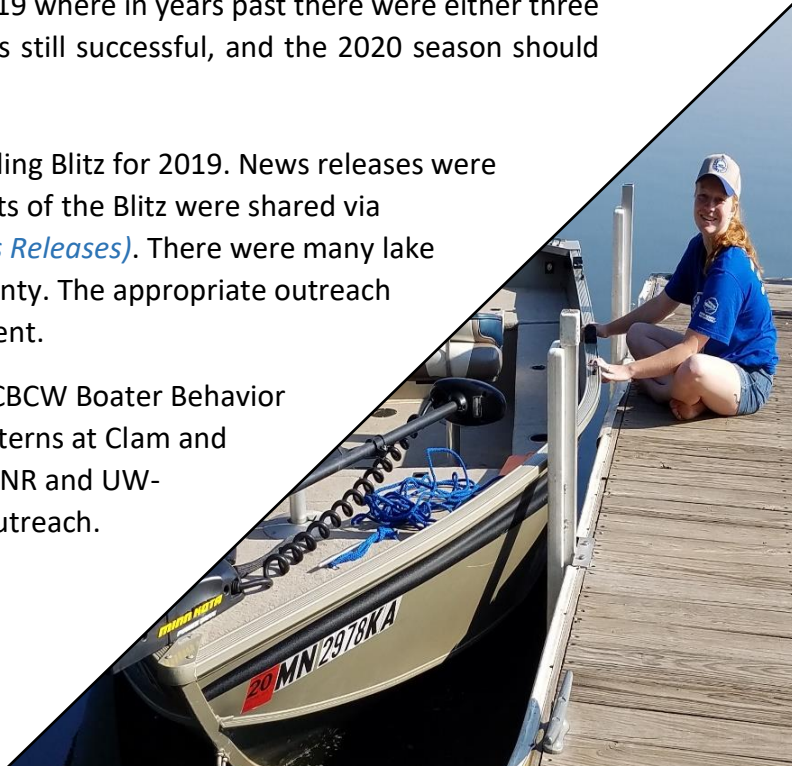
As of November 2019, the CBCW statistics for Burnett County are listed below:

- 2,859 Boats Inspected
 - BCLSD contributed 565
- 6,051 People Contacted
 - BCLSD contributed 1,335
- 2,222 Hours Spent
 - BCLSD contributed 283
 - 1,667 paid, 555 volunteer

These numbers are slightly less than the average in years past. Since there was not a full-time AIS Coordinator or AIS interns until late May, there was already lost time with CBCW for the 2019 season. Beyond this, there were two interns in 2019 where in years past there were either three or four. Nonetheless, the 2019 CBCW season was still successful, and the 2020 season should build upon the previous year.

Burnett County participated in the statewide Landing Blitz for 2019. News releases were distributed before the Landing Blitz, and the results of the Blitz were shared via newspapers afterwards as well ([Appendix B: News Releases](#)). There were many lake associations that participated throughout the County. The appropriate outreach materials (towels) were distributed during this event.

This year Burnett County also participated in the CBCW Boater Behavior Study. The study was conducted by the two AIS interns at Clam and Yellow Lakes. These results are utilized by the WDNR and UW-Extension to determine the effectiveness of AIS outreach.



Burnett County Clean Boats, Clean Waters (CBCW) Training

Location: Long (WBIC 2674100) and Des Moines (WBIC 2674200) Lakes Landing.

Number of Participants: 7 (4 participants from Long Lake, 3 from Des Moines Lake)

Instructor: Thomas Boisvert, Burnett County AIS Coordinator

Materials Distributed: 5 small three ring binders containing AIS and CBCW brochures, CBCW stickers, portions of the CBCW manual, CBCW inspection sheets, information on how to enter SWIMS data, WDNR wildcards, boat inspection checklist, and Golden Sands RC&D/CLMN AIS fact sheets.

Summary: On June 8th, 2019 Thomas Boisvert had scheduled a CBCW training for Long and Des Moines Lake residents that were interested in volunteering for CBCW. Ultimately, the two associations are aiming to install ILID cameras, however, WDNR grants require a minimum of 200 CBCW hours to be completed before eligibility. The class had 7 participants and the individuals present were very eager to learn and they will be great assets to Long and Des Moines Lakes.

During the training, many recreational boaters were entering the lakes, and this provided perfect demonstration purposes for the class. On the first couple boats Tom showed the participants the correct way to approach individuals, ask questions, and inspect the watercraft at all areas that may harbor AIS. The [watercraft inspection checklist](#) that was used for teaching purposes can be found on the UW-Extension CBCW website.

Beyond the general CBCW portion of this class, a large amount of time was used for going through the proper decontamination procedures required by Burnett County ordinance if materials are present. Long and Des Moines Lakes both share a decontamination station that has a decontamination sign with information, a bleach sprayer with 500 ppm solution, a boat brush, boat hook, and safety wear. The new CBCW inspectors are able to now conduct the normal CBCW methods while also going a step further by helping boaters utilize the decontamination methods present.

Preserved specimens of plant and animal AIS were present for this training, and the participants found this to be very useful. Pictures were taken for their own reference.

Citizen Lake Monitoring Network (CLMN)

Burnett County hosted one CLMN training in 2019. In 2020 there will be multiple CLMN workshops planned in the hopes of acquiring more network participants.

On June 27th, 2019 Thomas Boisvert had scheduled a CLMN training for Webb Lake residents that were interested in joining the CLMN. The class had only two participants as others interested were unable to attend the date specified. Because of this, future training opportunities were offered for those unable to attend this first class. The two individuals present were very eager to learn and they will be great assets not only to Webb Lake, but also the CLMN program.

Materials distributed included: one clipboard, rake, AIS early detector handbook, SAH! Towel, hand lens, data sheets, plastic bags, ruler, pencil, AIS brochures, and release of claims form. Release of claims form was scanned and submitted to Paul Skawinski, statewide CLMN coordinator.

A pontoon was available for the training, and participants were walked through the CLMN monitoring procedures for AIS, secchi disk readings, and preserving and transporting specimens for identification purposes.

The CLMN standard AIS monitoring procedures discussed are the following:

1. Scan the area for suspicious plants and animals, both in the water and along the shoreline. Scan for at least 30 seconds each side.
2. Toss the sampling rake into the water, at least once from each side of the boat. Aim for concentrations of plants or anything suspicious that you noticed during your scan.
3. Retrieve the rake and examine the attached vegetation and animals. Snails, mussels, and other creatures will often be attached to the vegetation or the rake itself. Continue tossing the rake until the area is adequately sampled.
4. Report what was found whether the results are good or bad. All data should be entered into the SWIMS Database.

Beyond the CLMN portion of this class, a large amount of time was used for going through common lake plants in Webb Lake to help these individuals learn their aquatic plant community. By learning the general aquatic plant community these individuals will be better able to spot a variety of AIS if it enters their waterbody. Learning native plants helps “highlight” invasive species as they simply look out of place in the environment.

Preserved specimens of plant and animal AIS were present for this training, and the participants found this to be very useful. Pictures were taken for their own reference.

Both participants will be sharing the equipment given as only one set of CLMN materials can be distributed per lake. Because of this, only one participant signed the release form although the other will also be participating.

AIS Snapshot Day

2019 was the first year that Burnett County had participated in AIS Snapshot Day, and it was a successful one! In 2020, Burnett County plans to grow this program, and hopefully acquire more volunteers for this event.

Here are some quick facts:

1. 8 different waterbodies were monitored
2. 2 new populations of AIS were found
3. 5 AIS populations were verified
4. AIS found included: Curly leaf pondweed, narrow leaf cattails, hybrid cattails, purple loosestrife, Chinese mystery snails, and banded mystery snails
5. 6 participants (below)

Coordinated by River Alliance of Wisconsin, in partnership with UW Extension's Citizen Lake Monitoring Network, and the Wisconsin Department of Natural Resources, Snapshot Day entered its' 6th successful year. Information collected was provided to the WI DNR to inform and guide monitoring and response efforts. Volunteers are key to the success of the event.

Burnett County joined a larger network of over 20 conservation organizations helping to prevent the spread of invasive species across Wisconsin. Throughout the state nearly 200 volunteers joined the search for AIS.

Following a brief AIS identification training, participants dispersed to collect samples at critical monitoring sites, and then reconvened to report what they found. Participants were encouraged to bring any aquatic plant or animal back to the rendezvous site. All specimens collected were identified as either native or non-native, and this provided a learning opportunity for all participants. Wisconsin's aquatic communities are large, and this program is one way for the public to learn them.

If you have any questions about AIS Snapshot Day or would like to get involved in this free event, feel free to contact Thomas Boisvert, the Burnett County AIS Coordinator at (715)-349-2109 Ext. 1382 or tboisvert@burnettcounty.org



Burnett County Baitshop Initiative

Invasive species are plants or animals that are not native or indigenous to an area, and have a negative impact on the ecosystem and economy. A large amount of time, effort, and money is being used to prevent the spread of the already introduced AIS to lakes and rivers.

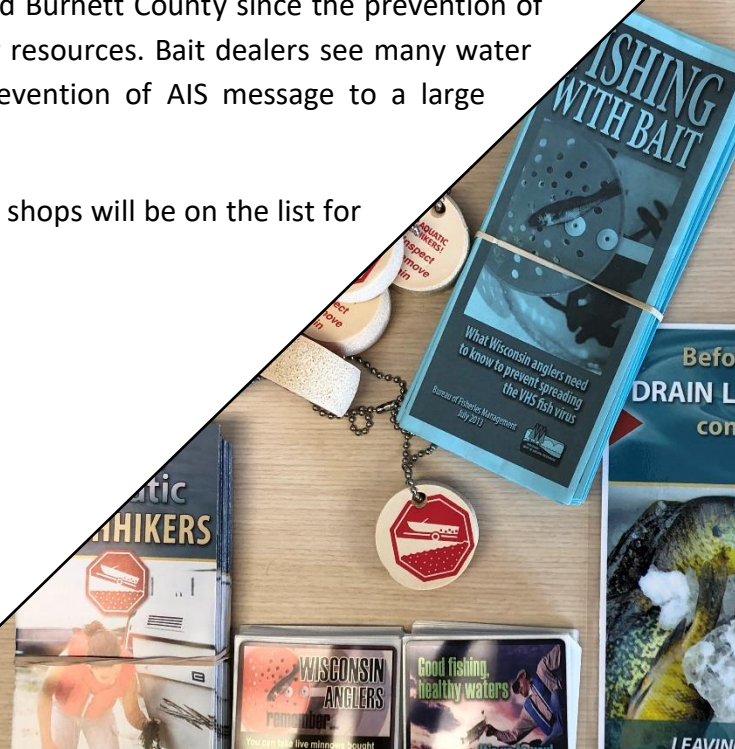
Due to this ongoing issue the Wisconsin Department of Natural Resources (WDNR) established an outreach program with bait dealers. Bait dealers, on a regular basis, are in contact with people who fish and/or use the lakes recreationally. These groups of people have the highest probability of spreading AIS. The reason for creating an outreach program with bait dealers is to increase the awareness and encourage the prevention methods needed to stop the spread of AIS.

Most boaters are aware of the AIS laws in place requiring them to clean, drain, dry, and never move. However, many people are unsure as to why these laws are in place. For this reason the WDNR has reached out to County AIS Coordinators and Land and Water Conservation Departments to create (if not started before) a relationship with bait dealers in their area.

On June 27, 2019 Shayna Vendela (AIS Intern) made contact with 9 bait shops in Burnett County to distribute AIS outreach material. All bait shops on the list were willing to take the information (AIS brochures, stickers, floating key chains, etc.) provided and were more than willing to chat about AIS. Places where selling bait and working with boaters is their main source of income (Trade Lake Store, Backwoods Bait Shop, etc.) were more than willing to take the materials and one even asked for more as the spread of invasive species could be particularly detrimental to their livelihoods. Bait shops were selected by their proximity to major highways, perceived business, and live bait that was sold in store. The 5 most popular shops were given laminated “drain your live well” posters to hang in their store.

Continuing this initiative is a priority of the WDNR and Burnett County since the prevention of AIS is a major concern for the states abundant water resources. Bait dealers see many water users each day, and they can communicate the prevention of AIS message to a large audience that sometimes is hard to reach.

This program will be continued in 2020, and the same shops will be on the list for outreach materials distribution.



Baitshop	Distributor	Date Contacted	Response	Materials Distributed
<i>Fur Fins & Feathers</i>	Shayna Vendela	6/27/19	Positive: Very willing to spread AIS message and materials.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), and "Help Stop Aquatic hitchhikers" brochure (55).
<i>Backwoods Bait & Beer</i>	Shayna Vendela	6/27/19	Positive: Willing to pass out materials, and spread AIS message.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), "Help Stop Aquatic hitchhikers" brochure (55), and 1 laminated "Drain your Livewell" poster.
<i>Trade Lake Store</i>	Shayna Vendela	6/27/19	Positive: Wants bobbers next time.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), "Help Stop Aquatic hitchhikers" brochure (55), and 1 laminated "Drain your Livewell" poster.
<i>Williams Cedar Point Resort</i>	Shayna Vendela	6/27/19	Positive: Says AIS prevention efforts are a good cause.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), "Help Stop Aquatic hitchhikers" brochure (55), and 1 laminated "Drain your Livewell" poster.
<i>Log Cabin Store</i>	Shayna Vendela	6/27/19	Positive: Willing to pass out materials, and spread AIS message.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), "Help Stop Aquatic hitchhikers" brochure (55), and 1 laminated "Drain your Livewell" poster.
<i>Burnett Co. Dairy</i>	Shayna Vendela	6/27/19	Positive: Willing to pass out materials, and spread AIS message.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), and "Help Stop Aquatic hitchhikers" brochure (55).
<i>Wild Bills</i>	Shayna Vendela	6/27/19	Positive: Willing to pass out materials, and spread AIS message.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), and "Help Stop Aquatic hitchhikers" brochure (55).
<i>Darla & Cliff's Country Store</i>	Shayna Vendela	6/27/19	Positive: Willing to pass out materials, and spread AIS message.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), "Help Stop Aquatic hitchhikers" brochure (55), and 1 laminated "Drain your Livewell" poster.
<i>Oakland Store</i>	Shayna Vendela	6/27/19	Positive: Happy to distribute materials, and inform visitors of the AIS laws in place.	STAH floating keychain (22), "Wisconsin Anglers Remember" sticker (55), "Catch on to Healthy Fish" sticker (55), "Fishing with Bait" brochure (33), and "Help Stop Aquatic hitchhikers" brochure (55).

Waterfowl Hunter Outreach

2019 was the first year that Burnett County conducted waterfowl hunter outreach. To let the public know that this was occurring, several news releases were made leading up to the waterfowl opener on September 28th. These news releases can be viewed in [Appendix B: News Releases](#).

Crex Meadows Wildlife area was where all waterfowl hunter outreach occurred on opening weekend. A portion of outreach supplies were given to the Crex Meadows visitor center, and the rest were utilized by BCLSD when approaching hunters in the field. All outreach supplies provided by the WDNR were utilized on opening weekend, and many hunters graciously took the items.

Distributed items included: camouflaged SAH! Towels, boot brushes, brochures, and a handout developed by BCLSD. Overall, there were approximately 125 individual hunters contacted.

Comments were made that these hunters had never seen any agency/organization conducting hunter outreach even though they had been returning to Crex Meadows for decades. Since these hunters had never been approached by anyone to talk about AIS in relation to waterfowl hunting, there were many questions asked. The Burnett County AIS Coordinator answered questions about AIS Management, the Burnett County AIS Program, and how other counties and organizations could become involved in this effort.

In Crex Meadows there is a campground that hunters are able to use during the fall months. This campground is where much of the outreach happened as hunters were arriving back at camp after a morning hunt. A “protect the places you hunt” WDNR waterfowl sign was hung by BCLSD in this campground. In 2020, a multitude of these signs will be placed by BCLSD throughout Crex Meadows and Fish Lake Wildlife Areas.

Crex Meadows will once again be targeted for outreach efforts in 2020. More outreach materials will be obtained to extend outreach efforts further into the waterfowl hunting season, and other areas such as Fish Lake Wildlife Area will be explored as well.



Community Involvement

The BCLSD conducts AIS outreach to all members of the public community, however, children and young adults are a focus priority. In 2019, BCLSD participated in AIS outreach at Camp Burnett where young campers learned about conservation and environmental topics throughout their stay. The Burnett County AIS Coordinator taught approximately 50 campers about AIS, and had several activities that used the County boat as an instructional tool. Paul Cook, Burnett County Conservation Specialist, also taught the campers about water quality issues through an interactive Jeopardy style game.



AIS Outreach at Camp Burnett



AIS Outreach at Conservation Day

Besides the outreach at Camp Burnett, BCLSD and other partner organizations taught Siren, Grantsburg, and Webster middle schools a variety of conservation topics at “Conservation Day.” 2019 was BCLSD’s 33rd year hosting this program. The Burnett County AIS Coordinator taught a section of Conservation Day – identifying AIS along with preventing their spread was the primary focus. An array of preserved and live specimens were available for kids to have a hands on experience.

The Grantsburg and Webster Fair grounds also had a fair booth about AIS. Informational materials and AIS outreach handouts were available for the public. Fair booths were available during the entirety of each event, and materials were replenished as needed.

Lake Association Meetings

BCLSD attends as many lake association meetings as possible, and always welcomes associations to ask for special presentations, topics, or simply for a County representative to be present for questions.

The most common AIS topics discussed at lake association meetings concern AIS identification, monitoring, susceptibility/suitability of certain AIS, and what residents can do to help. From this, CBCW and CLMN workshops often arise as a result.

BCLSD also attends every Burnett County Lakes and Rivers Association (BCLRA) meetings. This organization is an umbrella organization comprised of nearly all individual waterfront associations in Burnett County. BCLRA is extremely influential in starting large AIS projects that are entirely citizen driven. Burnett County is fortunate to have such a strong organization that is compassionate for water resources.

Lake associations that had appearances from BCLSD:

1. Bass Lake Association
2. Big Bear Lake Association
3. Big Sand Lake Association (Multiple)
4. Big Wood Lake Association
5. Birch Island Lake Association (Multiple)
6. Green Lake Association
7. Ham Lake Association
8. Long Lake Association (Multiple)
9. Loon Lake Association
10. Minerva/Cranberry Lake Association
11. North Crooked Lake Association
12. North Sand Lake Association (Multiple)
13. Webb Lake Association (Multiple)
14. Yellow Lake Association

“I want to thank you on behalf of the North Crooked Lake Association for coming to talk to our group. Your presentation and knowledge was highly appreciated. Everyone was so impressed with your expertise, and thanks for taking time out of your busy schedule!”

– President, North Crooked Lake Association

If your lake association would like BCLSD to attend a meeting for any reason, please contact Thomas Boisvert, the Burnett County AIS Coordinator at (715)-349-2109 Ext. 1382 or tboisvert@burnettcounty.org

Appendix A: Letters

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,

Deputy Greg Chafer
Burnett County Sheriff's Department

Figure 6: AIS Ordinance Violation Letter



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



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.

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



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

Dear (name),

The reason I am contacting you is Japanese Knotweed was found to be present on the property:
(site address)

Japanese Knotweed is a highly invasive plant, and it is restricted in the state of Wisconsin. This means the sale and transport of this plant is prohibited by law. Additional information about the plant and its invasive tendencies can be found in the included brochure.

This population of Japanese Knotweed was found either through a previous Japanese Knotweed control project (which ended around the year 2015), or by an incidental observation made by myself.

During a period from 2011-2015 Polk and Burnett Counties received an early detection and rapid response grant from the Wisconsin Department of Natural Resources for the control of Japanese Knotweed and its associates. During this time, many properties throughout Polk and Burnett Counties received treatment for this invasive. Your property may have been involved in this project.

Until now, funds and staff have not been available for re-treatment of the original infestations. Some infestations were eradicated during the previous control project, however, many have rebounded to their original extent. Japanese Knotweed has an extensive root structure, and this causes multiple years of herbicide treatment before eradication is possible.

My goal is to begin re-treatment of Japanese Knotweed sites throughout Burnett County, and begin the long process towards eradication. To do this, I will need your permission to apply a foliar herbicide to the Japanese Knotweed population on your property. Enclosed is another letter describing the process, and a statement where you can sign giving Burnett County permission to treat your property. **This treatment is voluntary, and is at no cost to you.**

I hope you plan to take part in the fight against Japanese Knotweed, and if you have any questions please feel free to contact me.

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. 1382



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

Dear (name),

Japanese Knotweed is a restricted plant and all sale or transport of this species is prohibited by law. I have enclosed some additional information on this particular invasive. Due to the environmental impacts of this species we hope to eradicate all known infestations.

This plant was originally introduced as an ornamental and planted in landscaping for many years. We are finding this plant to be escaping lawn areas and establishing wild populations, resulting in detrimental impacts to our natural resources and property values. State rule, Chapter NR 40, makes this plant illegal to transport, gift, trade, or cultivate for sale. Never attempt to dig this plant out and please be cautious when trimming back this plant. This plant can root from cut stems, and it has an extremely robust root structure underground. This stand should be controlled to prevent the risk of escape, and herbicide treatment is the most practical way to administer control.

The Burnett County Land Services Department recommends eradication of this stand and is willing to assist you in the eradication at no cost to you. Eradication is not easy and can take many years as this plant has an extensive root system that is very hard to kill. The most common form of eradication is through foliar application of an herbicide called Milestone. This herbicide is trans-located to the root system of the Japanese Knotweed.

Any trees or plants with root systems that are intertwined with Knotweed roots have the possibility of being affected, or killed by the herbicide application.

The Burnett County Land Services Department needs landowner permission to be able to treat your property. If you have any questions or concerns, please feel free to contact myself with the information below. All applications are done under direct supervision of a Wisconsin licensed herbicide applicator.

I _____ (Print Name) Do not hold the Burnett County Land Services Department Responsible for any un-intended affects the Herbicide has on my Property.

Signature _____ Date _____

Phone # _____

If you are willing to participate in managing your Japanese Knotweed with the above treatment, please sign and return this permission form in the pre-postage envelope provided.

Respectfully,

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

Appendix B: News Releases

Attention Shoreline Property Owners (Newspaper Release)

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.

2019 Landing Blitz, July 3rd-7th! (Newspaper Release)

Wisconsin visitors and residents alike know that the Fourth-of-July is Wisconsin's busiest and best boating holiday. It's also a great time to remember that whether you're paddling, fishing, jet skiing or boating, you can help protect lakes and rivers from aquatic invasive species. During the annual Clean Boats, Clean Waters Landing Blitz, July 3rd – July 7th, the Wisconsin Department of Natural Resources, volunteers, and regional Aquatic Invasive Species (AIS) partners will be stationed at boat launches statewide. This immense statewide effort is to remind you that the power to protect our water resources is shared by all of us who love Wisconsin's waters.

Aquatic invasive species, such as zebra mussels, pose great risks to the health of our waters and fisheries. Often there are not any known control options to get rid of AIS once they become established in a lake or river. Prevention is an utmost priority, and it's in the hands of visitors as well as full time Wisconsin residents. More organizations than ever are participating in 2019 with their inspectors giving away *Stop Aquatic Hitchhikers* boat towels.

"This campaign has become a mainstay of our prevention efforts, since the holiday draws both frequent and infrequent boaters to the water, allowing us to empower a lot of people," says Bob Wakeman, Statewide Aquatic Invasive Species Coordinator for the Wisconsin Department of Natural Resources.

Volunteers, AIS partners such as Burnett County, and the WDNR will be stationed at landings around the state to demonstrate the necessary prevention steps and answer questions about invasive species. Their efforts will build on the success of last year's campaign, when volunteers inspected over 9,000 boats and spoke with over 18,000 people.

"One of the most exciting things about this campaign is the strong volunteer effort. Every year hundreds of concerned citizens participate as volunteers to help us raise awareness and empower boaters," says Wakeman.

For those who use social media, you can help spread the word about the importance of aquatic invasive species prevention by posting photos and messages using #CleanBoatsCleanWaters.

Invasive plants and animals, like Eurasian watermilfoil, spiny water fleas and zebra mussels, can spread easily by hitching a ride on boats and other equipment, including trailers. They can also hide in water within livewells, bait and fish buckets, and motors. Because of this, it is important to drain everything that may contain water on your watercraft. Because many invasive species can also be hidden in mud, it's vital to clean off anchors and ropes.

Always take the following simple steps before leaving a boat landing:

- **Inspect** boats, trailers and equipment for attached aquatic plants or animals.
- **Remove** all attached plants or animals
- **Drain** all water from boats, motors, livewells and other equipment
- **Never move** live fish away from a waterbody
- **Dispose** of unwanted bait in the trash
- **Buy** minnows from a Wisconsin bait dealer
 - Only use leftover minnows when either 1) fishing with them on the same body of water or 2) on other waters if no lake/river water or other fish have been added to the container.

Following these steps also helps boaters comply with Wisconsin state law, which prohibits the transport of aquatic invasive species.

To learn more about invasive species and their impacts to Wisconsin's waters and economy, contact the Burnett County Aquatic Invasive Species Coordinator, Tom Boisvert at tboisvert@burnettcounty.org.

2019 Burnett County Landing Blitz Results (Newspaper Release)

Wisconsin visitors and residents alike know that the Fourth-of-July is always Wisconsin's busiest and best boating holiday. It's also a great time to remember that whether you're paddling, fishing, jet skiing or boating, you can help protect lakes and rivers from aquatic invasive species. During the annual Clean Boats, Clean Waters Landing Blitz, July 3rd – July 7th, the Wisconsin Department of Natural Resources (WDNR), volunteers, and regional Aquatic Invasive Species (AIS) partners were stationed at boat launches statewide. This immense statewide effort is to remind you that the power to protect our water resources is shared by all of us who love Wisconsin's waters.

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"This campaign has become a mainstay of our prevention efforts, since the holiday draws both frequent and infrequent boaters to the water, allowing us to empower a lot of people," says Bob Wakeman, Statewide Aquatic Invasive Species Coordinator for the Wisconsin Department of Natural Resources.

Volunteers, the WDNR, and Burnett County's Land Services Department were all involved in the 2019 Landing Blitz efforts monitoring Burnett County waterbodies. In 2019 alone, Burnett County Clean Boats, Clean Waters participants inspected approximately 300 boats, contacted 700 people about AIS, and spent a total of 170 hours at waterbody accesses. Statewide there were approximately 8,200 boats inspected, 18,200 people contacted, and 3,000 hours spent at waterbody access points. These numbers are expected to grow as data is entered.

To learn more about what AIS control and educational efforts Burnett County is partaking in, contact the Burnett County Aquatic Invasive Species Coordinator, Tom Boisvert at tboisvert@burnettcounty.org.

As always, take the following simple steps before leaving a boat landing:

- **Inspect** boats, trailers and equipment for attached aquatic plants or animals.
- **Remove** all attached plants or animals.
- **Drain** all water from boats, motors, livewells and other equipment.
- **Never move** live fish away from a waterbody.

Attention Burnett County Waterfowl Hunters (Newspaper/Handout)

Once again, Clean Boats, Clean Waters boat inspectors will be at many of Wisconsin's launches for the waterfowl season opening weekend, September 28-29. This year, they'll also hand out camo boat towels to make clean up a little easier. If you are a hunter, it's not too soon to consider ways to slow the spread of invasive species into your favorite hunting spots.

Decoys with cracks or unnoticed holes can let water seep in that could carry tiny organisms, such as the larvae of invasive snails, clams, and mussels. By drilling a small hole in the tip of the tail and one at the tip of the bill, you can easily drain a decoy when removing it from the water. After hunting, also make sure to remove any mud and vegetation on decoy posts, keels, or anchors before you leave the area.

A hunting dog's fur and vests can hide mud, seeds and even small snails. A jug or two of clean water, brushes and lint rollers are good tools to have in your cleaning arsenal. Of course, thoroughly cleaning your dog before you leave the hunting area can be extremely difficult. Wisconsin's invasive species law, NR40, asks that you put forth your best effort, understanding that perfection is not always possible or practical.

Many access points now have wader/boot cleaning stations with large roller brushers thanks to the Wisconsin Waterfowl Association, the River Alliance of Wisconsin, and other partners. It also pays to carry along a large stiff brush for trailers and boats, and to have a smaller brush on hand for the tread of your boots and waders. A grabbing tool for reaching under a boat on a trailer can make removing plants much easier. The tiny plants watermeal and duckweed, that seem to stick to everything, do not need to be thoroughly removed.

Waterfowl hunters should take special care when selecting vegetation for natural hunting blinds. There are many invasive species that grow in wetland environments, and waterfowl hunters should make a conscientious decision when selecting which plant species they use for coverage. Non-native Phragmites (common reed) has been known to be spread by waterfowl hunters, and is a prohibited plant in many areas of the state, including Burnett County. It's simply best to avoid Phragmites, regardless of it being the native or non-native species since they can be difficult to differentiate. If you do opt for using natural materials, the law states that you can only use dead stems, with no seed heads or roots attached. It may be easier to go with artificial blinds in some areas.

If you are a Burnett County waterfowl hunter that has additional questions about AIS, please contact Thomas Boisvert, Burnett County AIS Coordinator. Thomas can be reached through phone (715)-349-2109 Ext. 1382, email tboisvert@burnettcounty.org, and scheduled in-person meetings.

Hunters, please remember that every time you leave the water it is your duty to help protect Burnett County's resources for future hunting experiences. Please remember to complete the following steps:

Inspect boat, trailer, motor and hunting equipment. Don't forget your boots, blinds, and dogs, too!

Remove all plants, animals and mud.

Drain all water from decoys, boat, motor, and other hunting equipment.

Never move plants or live fish away from a water body.

Burnett County residents invited to help search Wisconsin's waters for invasive species on August 17th (Newspaper Release)

Water lovers of all ages are invited to join the Burnett County Land Services Department on a search for aquatic invasive species (AIS) on August 17th, 2019 at Crooked Lake Park in Siren, WI. This fun, hands-on effort, known as AIS Snapshot Day, relies on participants to monitor streams and lakes at designated sites across the state, for signs of non-native plants and animals that pose risks to Wisconsin waterways and wildlife.

Coordinated by River Alliance of Wisconsin, in partnership with UW Extension's Citizen Lake Monitoring Network, the Wisconsin Department of Natural Resources, Snapshot Day is entering its' 6th successful year. Information collected will be provided to the WI DNR to inform and guide monitoring and response efforts. Volunteers are key to the success of the event.

"More and more people want to know how they can help protect the local lakes, rivers and streams they love. Snapshot Day makes taking action a fun, efficient and community-building event," explained Natalie Dutack, AIS Watershed Groups Manager at River Alliance of Wisconsin. "We've seen nature lovers, paddlers and anglers take part. We've also had families, troops of Scouts, and retirees come out. Everyone enjoys the hands-on opportunity to learn more about the waters near them, and by providing a venue and some training we can help them become stewards of their waters," Dutack continued.

This will be the Burnett County Land Services Department's first time hosting Snapshot Day. They join a larger network of over 20 conservation organizations helping to prevent the spread of invasive species across Wisconsin. Throughout the state nearly 200 volunteers are expected to join the search for invasive species, which will include escaped or intentionally released water garden and aquarium species that can choke out rivers and streams and impair vital habitat for native wildlife.

Coordination of this event is made possible with generous support from the Wisconsin Department of Natural Resources through an Aquatic Invasive Species Education, Planning and Prevention grant.

Following a brief identification training, volunteers will disperse to collect samples at critical monitoring sites, then reconvene to report what they found and celebrate a great time outdoors!

No experience is necessary and training is provided. This is a free event. Recommended for ages 8 and up, minors must be accompanied by an adult.

Registration:

Register and see all event details at: <https://www.wisconsinrivers.org/get-involved/events-home/>

Advance registration is requested by August 2nd to help Site Leaders build monitoring plans, but will remain open until August 15th.

Event Details:

Saturday, August 17th

8:30am-1pm

Crooked Lake Park

24258 State Rd. 35-70

Siren, WI 54872

Aquatic Invasive Species Snapshot Day – What Was Found?

(Newspaper Release)

Water lovers of all ages were invited to join the Burnett County Land Services Department on a search for aquatic invasive species (AIS) on August 17th, 2019 at the Crooked Lake Park in Siren, WI. This fun, hands-on effort, known as AIS Snapshot Day, relies on participants to monitor streams and lakes at designated sites, for signs of non-native plants and animals that pose risks to Wisconsin waterways and wildlife.

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"More and more people want to know how they can help protect the local lakes, rivers and streams they love. Snapshot Day makes taking action a fun, efficient and community-building event," explained Natalie Dutack, AIS Watershed Groups Manager at River Alliance of Wisconsin. "We've seen nature lovers, paddlers and anglers take part. We've also had families, troops of Scouts, and retirees come out. Everyone enjoys the hands-on opportunity to learn more about the waters near them, and by providing a venue and some training we can help them become stewards of their waters," Dutack continued.

This year was the Burnett County Land Services Department's first time hosting Snapshot Day. They joined a larger network of over 20 conservation organizations helping to prevent the spread of invasive species across Wisconsin. Throughout the state nearly 200 volunteers joined the search for AIS. In Burnett County, there were 6 participants for the 2019 event. The Burnett County Land Services Department is hoping this event will grow each subsequent year.

Following a brief identification training, participants dispersed to collect samples at critical monitoring sites, and then reconvened to report what they found. Overall, there were 8 different waterbodies monitored, 2 new populations of AIS that were found, and 5 AIS populations that were able to be verified. Several of the AIS found were: narrow leaf cattails, curly leaf pondweed, purple loosestrife, Chinese mystery snails, and banded mystery snails.

Besides searching for AIS, participants were encouraged to bring back a specimen of any plant or animal that they could not identify. This allowed participants to learn native species, and gain knowledge on aquatic plant and animal identification. All participants left with new knowledge on aquatic life.

If you have any questions about AIS Snapshot Day or any other AIS questions, feel free to contact Thomas Boisvert, the Burnett County AIS Coordinator at (715)-349-2109 Ext. 1382 or tboisvert@burnettcounty.org.



SNAPSHOT DAY



Saturday August 17, 2019

A statewide search for aquatic invasive species

From 8:30 am - 1:00 pm

Join us at:

**Crooked Lake Park
24258 State Rd. 35 70
Siren, WI 54872**

**FREE: tote bag, boot
brush, & more!**



All ages welcome - no prior experience required.

If you want to wade in or stay dry, there is a site for you.

For more information contact: tboisvert@burnettcounty.org

To register visit: wisconsinrivers.org/events

**Hosted by River Alliance of
Wisconsin in partnership
with:**

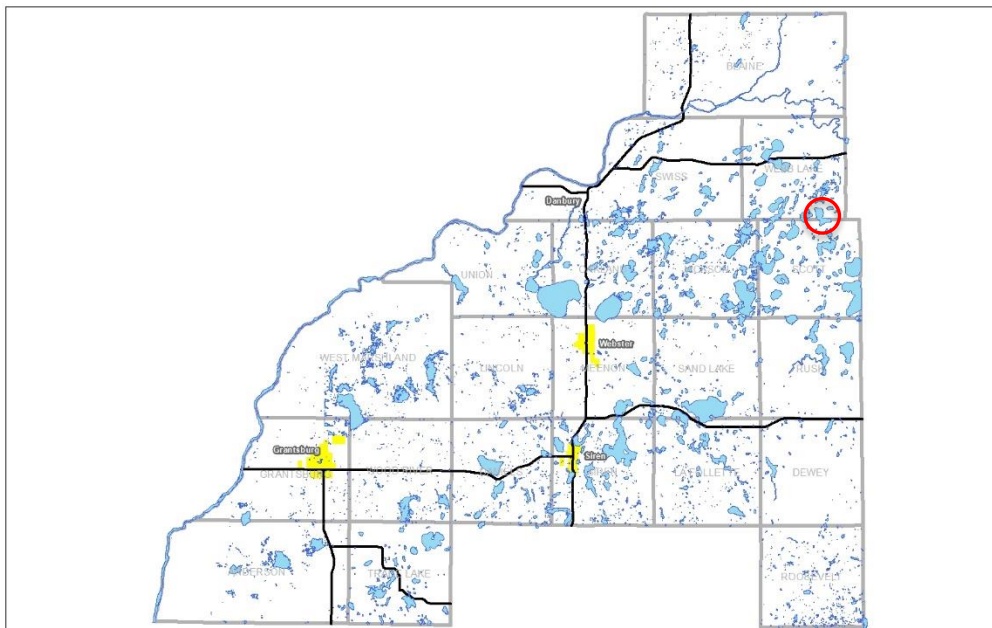


Appendix C: Example AIS Reports



Nicaboyne Lake AIS Point Intercept Survey

June 18th, 2019



Map 1 – Map of Burnett County with Nicaboyne Lake circled

NICABOYNE LAKE AIS POINT INTERCEPT REPORT

Water Body Identification Code (WBIC): 2486100

Previous AIS Findings: None

New AIS Findings: None

Field Crew: Thomas Boisvert, AIS Coordinator, and Brad Morris, AIS Consultant

Field Date: June 18th, 2019

Report By: Thomas Boisvert

Nicaboyne Lake is located in Burnett County, WI and has one public boat landing found on South Nicaboyne Lake Road, in Webb Lake, WI. Nicaboyne Lake is 289 acres with an average depth of 12 feet, and the Wisconsin Department of Natural Resources (WDNR) classifies this waterbody as mesotrophic. Mesotrophic lakes generally have a moderate level of fertility usually giving way to abundant plant growth, however, growth does not become excessive or limited. The substrate of Nicaboyne Lake is composed of 60% sand, 10% gravel, and 30% muck. Nicaboyne Lake also supports a healthy fishery comprised of panfish, largemouth bass, and northern pike.

The aquatic invasive species (AIS) point intercept survey was conducted by utilizing a sampling grid developed by Michelle Nault with the WDNR. This type of sampling grid is generally utilized for aquatic plant management plans, however, these grids can provide a thorough and systematic approach when used for AIS monitoring. Each point is sampled with a pole or throw rake, and the contents are examined upon retrieval. Examples of invasive plants that could be found during a sampling grid are: Starry stonewort (*Nitellopsis obtusa*), Eurasian water-milfoil (*Myriophyllum spicatum*), and curly leaf pondweed (*Potamogeton crispus*). The sampling grid utilized on Nicaboyne Lake can be viewed below (Map 2).

Beyond using the aforementioned sampling grid Burnett County also scans the shoreline areas when possible. This is done visually by looking for shoreline invasives such as purple loosestrife (*Lythrum salicaria*), yellow iris (*Iris pseudacorus*), and non-native Phragmites (*Phragmites australis subsp. australis*). Submergent plants and invasive animals along shoreline areas are also visually scanned for with the aid of polarized sunglasses. Examples of animal species would be zebra mussels (*Dreissena polymorpha*), Chinese mystery snails (*Cipangopaludina chinensis*), banded mystery snails (*Viviparus georgianus*), and rusty crawfish (*Orconectes rusticus*).

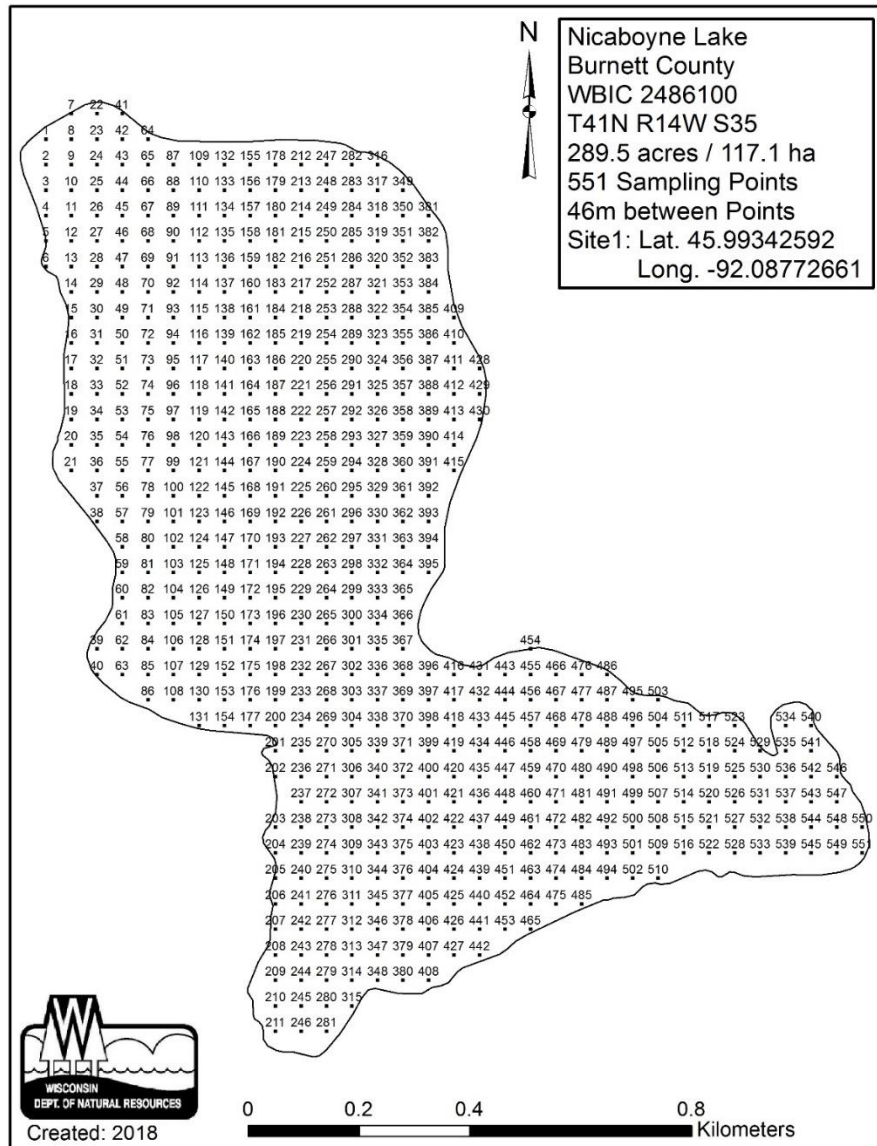
While on Nicaboyne Lake very few areas were non-navigable by boat, and a thorough survey was completed. The weather was fair with a light rain and wind present at times. There was no adverse weather to impede our survey. Overall, Nicaboyne Lake appeared to be healthy, and no invasives were found on the waterbody at this time.

Common plants found on Nicaboyne Lake were white-stem pondweed (*Potamogeton praelongus*), coontail (*Ceratophyllum demersum*), Northern water-milfoil (*Myriophyllum sibiricum*), common waterweed (*Elodea canadensis*), bullhead pond lily (*Nuphar variegata*), common bladderwort (*Utricularia macrorhiza*), and white water lily (*Nymphaea odorata*). We found that aquatic plant growth stopped around 10 feet.

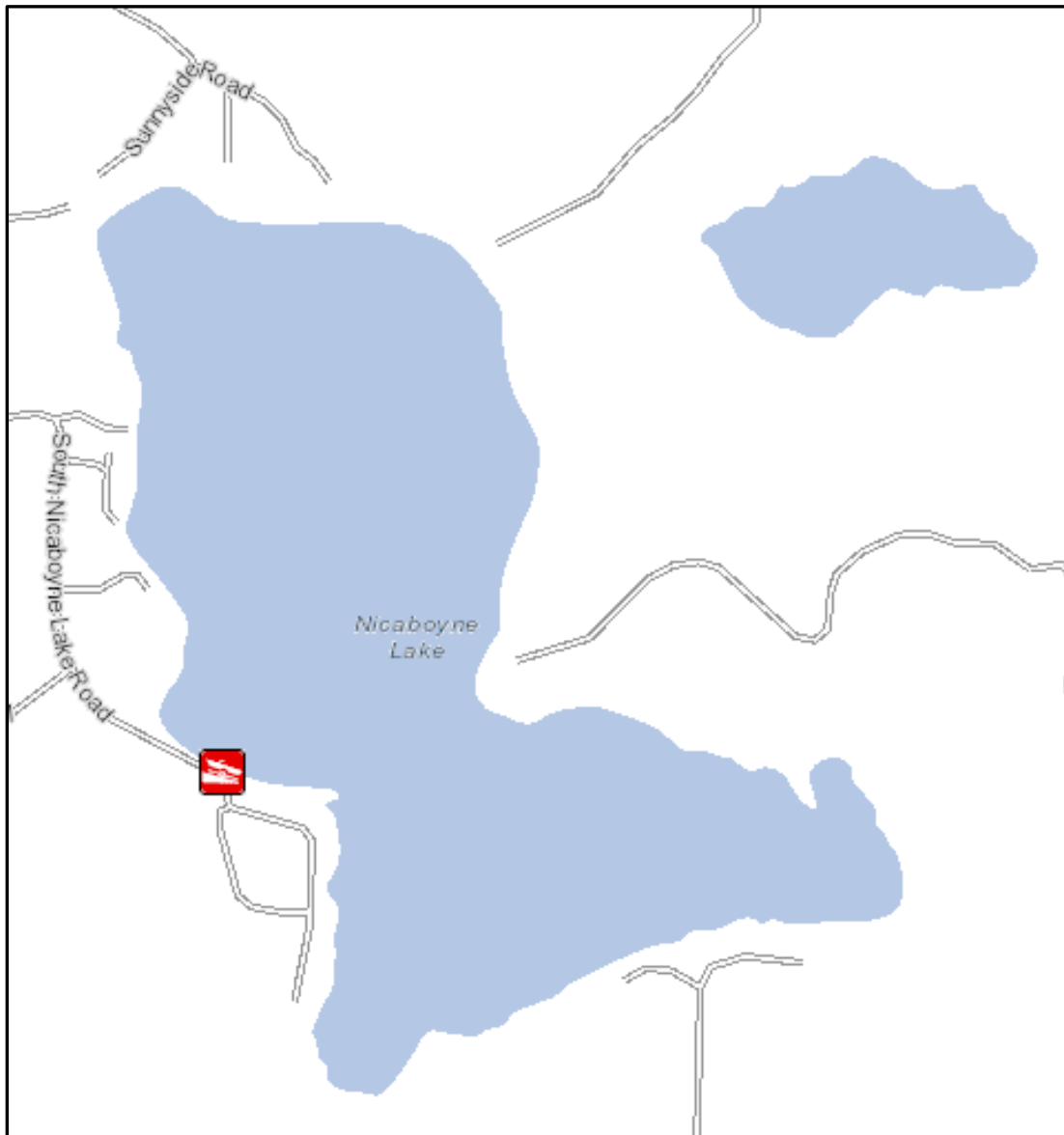
Findings:

Aquatic Invasive Species:

None



Map 2 – Nicaboyne Lake Sampling Grid

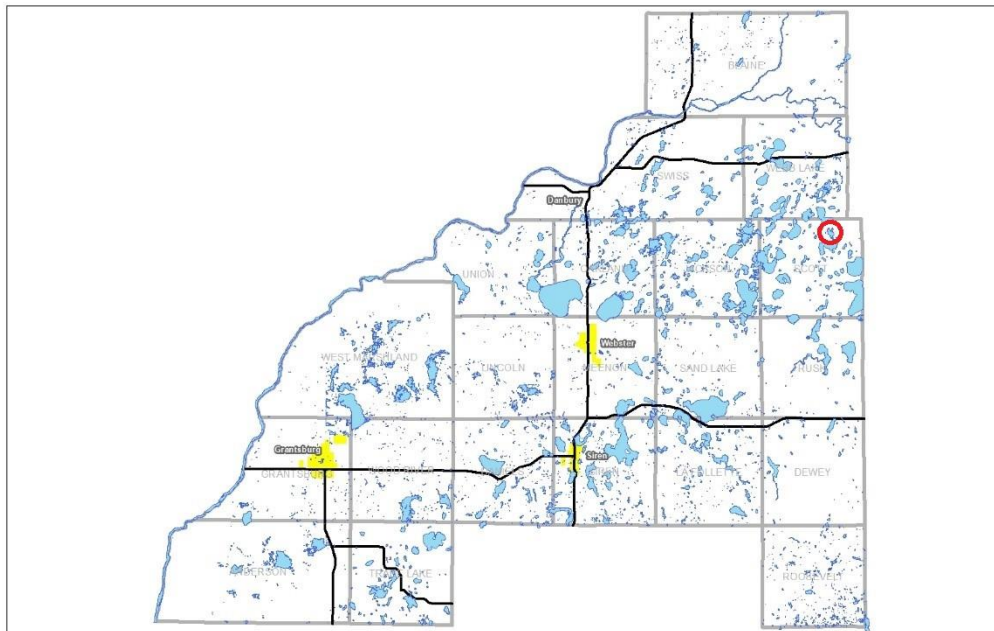


Map 3 – map of Nicaboyne Lake with landing marked.



Goose Lake AIS Early Detection Monitoring

August 28th, 2019



Map 1 – Map of Burnett County with Goose Lake circled.

GOOSE LAKE AIS EARLY DETECTION REPORT

Water Body Identification Code (WBIC): 2466500

Previous AIS Findings: None

New AIS Findings: Purple Loosestrife

Field Crew: Shayna Vendela, Sunny Cone AIS Interns

Field Date: August 21st, 2019

Report By: Sunny Cone

Goose Lake is located in Burnett County, WI and has one public boat landing/carry in site located off Kessler Road in Scott Township. Goose Lake is 63 acres with a maximum depth of 6 feet and an average depth of 3 feet. The Wisconsin Department of Natural Resources (WDNR) classifies the bottom substrate of Goose Lake to be composed of 80% sand and 20% muck. Goose Lake also supports a healthy fishery comprised of northern pike and panfish.

The AIS early detection monitoring protocol was provided by the WDNR, and all data is entered into the statewide Surface Water Integrated Monitoring System (SWIMS). Below are the different categories of field data that was collected, and each category is typically required by WDNR AIS Early Detection Monitoring protocol.

Boat Landing Search:

Goose Lake only has one public boat launch, and it was searched immediately when entering the lake. This area was shallow with dense aquatic vegetation, and therefore snorkeling was not warranted. The bottom substrate was clearly visible, and slightly deeper areas were searched thoroughly using a throw rake. Approximately 30 minutes elapsed for adequate sampling of the boat landing area.

Targeted Search Sites:

There were 5 targeted search sites selected on Goose Lake besides the initial survey at the landing. At each target site the throw rake was utilized extensively as snorkeling was not warranted due to shallow depths or extensive plant growth. Plants caught on the rake were scanned for any possible AIS. The target site locations were all recorded with GPS coordinates, and these can be viewed in table 1. Each targeted search site was sampled for approximately 15 minutes, or until the area was adequately sampled.

Meander Survey:

In between the targeted search sites a meander survey was conducted from shallow depths to the edge of the littoral zone (where plant growth ceases). Once again, the throw rake was utilized extensively, and plants were examined. Polarized sunglasses were also helpful in identifying plants within eye sight.

Water Quality:

A secchi disk was utilized at the deep hole on Goose Lake to measure water clarity. The reading was 6 feet out of a maximum 6. Conductivity readings were also taken at the deep hole, but only on the surface using a pen-style meter. The conductivity reading was 34 umhos/cm.

Waterflea and Zebra Mussel Veliger Tows:

Due to the Burnett County Land Services Department already conducting Zebra Mussel tows elsewhere in the county, costs were not able to cover additional Zebra Mussel or Spiny Water flea tows for Goose Lake. Also, it is important to note the “AIS Smart Prevention Tool” lists Goose Lake as “unsuitable” for Zebra Mussels.

While on Goose Lake very few areas were non-navigable by boat, and a thorough survey was able to be completed throughout the entire lake. The weather was fair with a light wind present at times. There was no adverse weather to impede our survey. Overall, Goose Lake appeared to be healthy, despite having a target site with purple loosestrife present.

The majority of vegetation identified consisted of pickerelweed (*Pontederia cordata*), floating leaf pondweed (*potamogeton natans*), water celery (*Vallisneria americana*), northern watermilfoil (*myriophyllum sibiricum*), coontail (*Ceratophyllum demersum*), watershield (*Brasenia schreberi*), white pond lily (*Nyphaea odorata*), and duckweed.

Table 1: GPS Coordinates of Sample Areas

Site	Latitude	Longitude
Boat Landing	45.9749 N	92.0719 W
Target Site 1	45.9735 N	92.0711 W
Target Site 2	45.9722 N	92.0678 W
Target Site 3	45.9706 N	92.0689 W
Target Site 4	45.9729 N	92.0733 W
Target Site 5	45.9744 N	92.0739 W

Aquatic Invasive Species:

Purple Loosestrife found at site 3, with a density of 1 (a few plants).

Additional Comments:

Purple Loosestrife found at site 3 was removed.

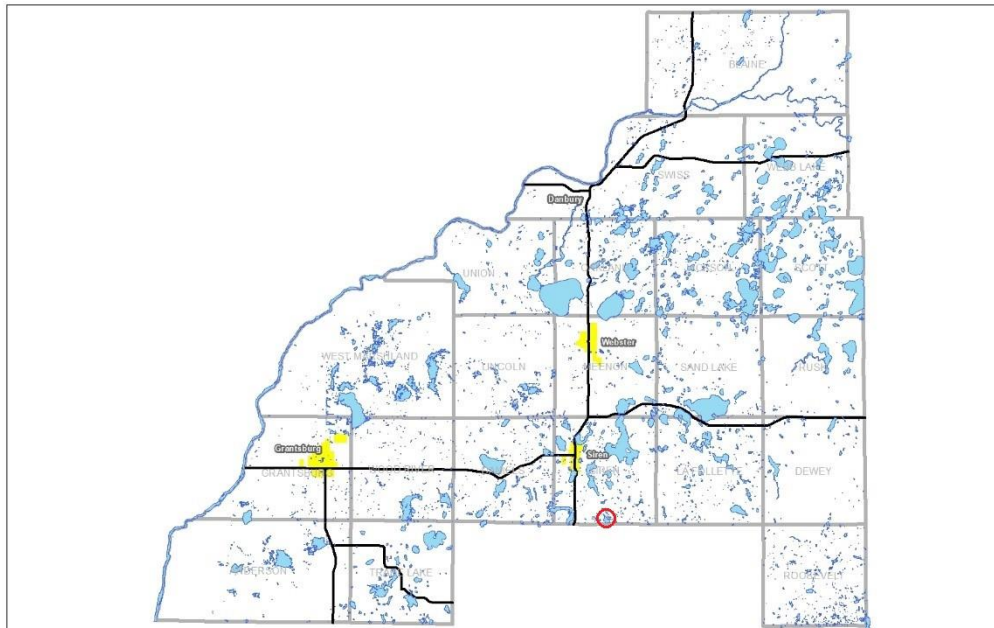


Map of Goose Lake, Burnett County, WI.



Godfrey Lake AIS Landing Survey

July 24th, 2019



Map of Burnett County with Godfrey Lake circled

GODFREY LAKE LANDING SURVEY REPORT

Water Body Identification Code (WBIC): 2466300

Previous AIS Findings: None

Landing Survey AIS Findings: None

New AIS Findings: None

Field Crew: Sunny Cone, AIS Program Intern

Field Date: July 22, 2019

Report By: Sunny Cone

The July 24th Godfrey Lake landing survey was performed to inspect shoreline vegetation, aquatic vegetation, and invasive animals. Shoreline and shallow vegetation was visually identifiable and left undisturbed. Deep aquatic vegetation was gathered via a rake and then identified on shore. The majority of vegetation identified consisted of pickerelweed (*Pontederia cordata*), watershield (*Brasenia schreberi*), common waterweed (*Elodea canadensis*), floating leaf pondweed (*Potamogeton natans*), coontail (*Ceratophyllum demersum*), common bladderwort (*Utricularia vulgaris*), bullhead pond lily (*Nuphar variegata*), and white water lily (*Nymphaea odorata*).

Godfrey Lake is located in Burnett County, WI and has one public boat landing on Little Deer Road, off Godfrey Lake Road, in Siren, WI. Godfrey Lake is 51 acres with an average depth of 8 feet and a maximum depth of 41 feet. The bottom is composed of 60% sand, 25% gravel, 10% muck, and 5% rock.

Findings:

Aquatic Invasive Species:

None