






8

MONITORING PROTOCOL



	Background/Overview.....	177
	Life Cycle.....	177
	Identification.....	178
	Monitoring.....	179
	When to Monitor.....	179
	Where Do I Sample for Waterfleas?.....	179
	How to Monitor.....	180
	Equipment Needed.....	182
	Setting Up a Monitoring Team.....	182
	Mapping.....	183
	Reporting.....	183
	What to do with Suspect Specimens.....	185
	Additional Materials and Supporting Documentation.....	185
	Additional Sources of Information.....	186
	References.....	186
	Data Reporting Forms.....	187



BACKGROUND/OVERVIEW

Spiny and fishhook waterfleas are often first noticed by anglers and recreational lake users. These invasive waterfleas have a tendency to become entangled on fish lines, anchors, downrigger cables, and other types of gear used in boating activities. Masses of waterfleas can clog the first eyelet of rods, damaging a reel's drag system.

In addition to causing problems for anglers and recreational users, the invasive waterfleas have the potential to disrupt food webs. Spiny and fishhook waterfleas are large (up to $\frac{3}{4}$ inch) predatory crustacean zooplankton (planktonic animals). They eat smaller zooplankton including *Daphnia* (native waterfleas). This puts them in direct competition with juvenile fish that also eat native zooplankton. Like juvenile fish, spiny and fishhook waterfleas will “stalk” their prey. And, like most invasive species, they lack predators that can keep their population in check. Young fish have trouble eating the spiny and fishhook waterfleas due to their long, spiny tails.

Spiny and fishhook waterfleas are native to parts of Europe and Asia. Both species of waterfleas entered the Great Lakes in ship ballast water from Europe. The spiny waterflea arrived in the 1980's, followed in the 1990's by the fishhook waterflea. One or both species are now found in all of the Great Lakes. The list of waterbodies in Wisconsin where waterfleas has been verified can be found at <http://dnr.wi.gov/lakes/invasives/>. Both the spiny and fishhook waterfleas can be transported from an infested waterbody to another lake if they are attached to fishing gear and boating equipment. Extreme care should be exercised to avoid transporting these organisms between lakes.



LIFE CYCLE

(From <http://www.seagrant.umn.edu/exotics/spiny.html>)

The spiny and fishhook waterfleas reproduce sexually and asexually. Asexual reproduction means that no males are required and a single female can start a new population. Fishing, boating and other water recreational equipment can transport waterfleas and their eggs to new water bodies. Their resting eggs can survive long after the adults are dead, so care must be taken not to transport water between an infested lake and a non-infested lake.

Reproductive females carry their offspring on their backs in a balloon-like brood pouch, which can be filled with either developing embryos or resting eggs. Most of the time, female spiny and fishhook waterfleas exhibit rapid asexual reproduction where females produce from one to ten eggs that are able to develop into new females without mating or fertilization. The new females are genetic replicas, or clones, of the mother. The generation time of this life cycle (embryo to adult female) varies with water temperature because rates of metabolism rise and fall with temperature. During the summer, when the surface water of the lake is warm, waterfleas can produce a new generation in less than two weeks. Since males are not needed for reproduction, they are rarely found when food is plentiful or when environmental conditions favor rapid population growth.





In spiny and fishhook waterfleas, sex of offspring is not determined genetically, but rather by environmental factors. When food becomes limited or when the lake cools in the fall, males begin to appear. Declining environmental quality can be sensed by adult females, who respond by producing male rather than female offspring. These males are able to mate with surviving females, producing resting eggs. The resting eggs are first carried as orange-brown spheres in the female brood pouch. They are later released and fall to the lake bottom where they can survive the cold winter. In spring or early summer, these eggs hatch into juvenile females that begin the asexual reproduction again.

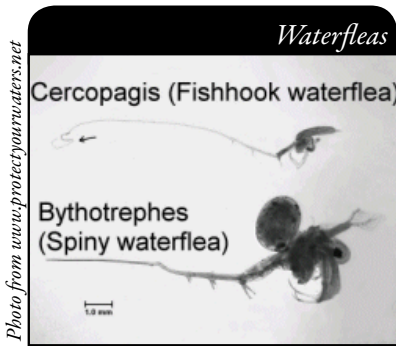
Resting eggs can remain dormant for long periods of time, and they offer an explanation for the arrival of spiny and fishhook waterfleas in North America.

IDENTIFICATION

In your packet is a Spiny and Fishhook Waterflea watch card. This, along with the description below, should be used in identification.

Outside of Mysis shrimp, spiny and fishhook waterfleas are considerably larger than any naturally occurring Wisconsin inland lake zooplankton. They are large enough (up to 3/4 inch) to be seen by the naked eye.

Spiny waterfleas (*Bythotrephes longimanus*, pronounced bith-o-TREH-fee-z long-gi-MAN-us) are readily distinguished by their long tail spines, which generally support between one and three barbs. Fishhook waterfleas (*Cercopagis* sp., pronounced sir-CO-pa-jis) have smaller barbs on their tails and the end of tail has a “fishhook” shape.



SPINY WATERFLEA CHARACTERISTICS

(from <http://www.seagrant.umn.edu/exotics/spiny.html>)

The spiny waterflea is easily recognized by its unique body shape. The head consists primarily of a single, large eye filled with black pigment. The tail spine is its distinguishing feature and separates it from all other free-swimming lake invertebrate animals, or zooplankton. The spine is proportionately long; it often comprises over 70 percent of the animal's total length. The spine contains from one to four pairs of thorn-like barbs. Juveniles are born with just one pair of barbs. As the waterflea

grows and molts, additional barbs are added, so these barbs can be used to determine the age of the animal. Under ideal conditions, spiny waterfleas can live for several months.

FISHHOOK WATERFLEA CHARACTERISTICS

The most pronounced parts of the fishhook waterflea's body are: the head, the second pair of antenna, four pairs of thoracic legs, abdomen, tail (spine with small barbs and a fishhook shape at the end), and a brood pouch in females. The head is essentially composed of a large single eye, where the amount of black pigment makes up less than one half of the diameter of the eye. Abdomen length is equal to length of the rest of body, and spines are large, equal to 2-3 diameters of tail.



WATERFLEA MONITORING

Some lake groups are already monitoring algae and zooplankton on their lakes. These folks can monitor for spiny and fishhook waterfleas by looking for the waterfleas in their plankton nets when they do their regular sampling.

If your lake group is not already monitoring for algae and zooplankton, but you would like to monitor for waterfleas, you will need to obtain a zooplankton tow net. For groups that have monies for monitoring equipment, you may be able to purchase a net or obtain a grant to help cover the cost – this option may be most appropriate in areas near spiny waterflea infested waters. Other groups may wish to construct their own net. Information on plankton nets can be found in the “Equipment Needed” section on page 178.



ADDITIONAL MONITORING OPPORTUNITIES

The CLMN is unable to provide zooplankton tow nets to individual lake volunteers because the equipment is very expensive. However, DNR Aquatic Invasive Species monitoring staff annually select water bodies to sample for waterfleas, and a CLMN volunteer can often help by providing a boat and assistance to DNR staff. Having a volunteer provide a boat that is already on the lake can eliminate the need for DNR staff to trailer a boat and disinfect the boat before and after collection. Since the volunteer would be assisting in the monitoring, only one DNR staff person would be needed to do the sampling safely and efficiently. If you have an interest in assisting with DNR waterflea monitoring, contact your local DNR Aquatic Invasive Species staff.

WHEN TO MONITOR

Ideally, monitoring should take place on three dates between June and September. Samples should be collected at monthly intervals after the water temperature reaches 54 degrees. The first collection date will vary from early to late June.

When time and other constraints exist, sampling can be downsized to one sample period during mid-summer.

WHERE DO I SAMPLE FOR WATERFLEAS?

On each sampling date, waterflea samples should be collected from three different locations in the lake. The sites should be in different bays or basins or at several of the more heavily used lake sites. The three sampling sites should be deep enough to sample - 15 to 20 feet of water is a good rule of thumb. The deepest point of the lake and areas near boat landings (sites of boat traffic) or the lake's outlet are the best locations to sample. Mark on the lake map where samples were collected. These same sites should be used for each of the sample periods – if not, then submit a revised map with subsequent samples.



HOW TO MONITOR

COLLECTING SAMPLES

Monitoring for waterfleas entails towing a zooplankton net horizontally through the water. Ideally you would collect the sample using a 0.5-1 meter (1.6-3.3 foot) diameter opening zooplankton net with a mesh size of 250 microns (0.01 inch). Smaller mesh nets can easily clog with small forms of phytoplankton and zooplankton and can allow spiny waterfleas to elude capture. A 100 meter (330 foot) horizontal tow is best suited for capturing waterfleas.



1. Tow the net behind a boat for 100 meters (330 feet) or for 120 seconds at a low boat speed – about 3 km/hour (2 mi/hr). You can use a GPS unit to measure distance and/or rate of travel. To prevent the net from surfacing, you can add weight to the rope. Tie a loop in the rope approximately 0.5-1 meter (1.6-3.3 feet) in front of the net and attach a weight [e.g., a brick with a hole in it] using an additional piece of rope or cable tie.

Ideally, the tow should be for 100 meters (330 feet) at an oblique angle, sampling from the top of the thermocline to just below the water's surface. The thermocline is the transition layer between the warmer surface water and the cooler deep water. You can distinguish these layers based on temperature. The surface water layer is relatively uniform in temperature and the deep water layer is relatively uniform in temperature. In the thermocline, the temperature decreases rapidly from the surface layer temperature to the much colder deep water temperature. You can find the location of the thermocline using a temperature meter. If your lake does not have a thermocline, care must be given that the net does not hit the lake bottom. When the net hits the lake bottom, the sample is of muddy water, which is very difficult or impossible to analyze. If you hit the lake bottom, rinse out the sampling equipment and go to a different area of the lake that will provide enough depth for a good tow.

2. Rinse the net into the plankton collection cup or the bottom of your net. You can use either lake water or tap water. Be sure to rinse the net from the outside of the net so that all of the material washes into the plankton collection cup. Since waterfleas are large, you will likely, but not always, see them in the collection cup/bottom of the net if they are present.
3. Condense the size of the sample by filtering out as much water as possible in the field. You should “swirl” the sample, so that the excess water drains out the sides of the net screen. If you plan to look through the sample yourself, please skip to #8 or you can take the sample to your local CLMN contact to examine the sample. Swirling the sample helps reduce the amount of alcohol that needs to be added and aids in the analyses as well.
4. Preserve the sample using 95% alcohol. Rubbing alcohol can be used if you have it. Larger size bottles of alcohol can be purchased at hardware stores in the paint / refinishing sections of the stores. The ratio should be 4 parts alcohol to 1 part sample. Note: if the prescribed alcohol to sample ratio (4:1) cannot be achieved after repeated condensing and decanting, then the sample should be split between two sample bottles. Label each with the same information (as specified under “Labeling Samples” in the next section), and label one as “Split 1 of 2” and the other as “Split 2 of 2”.

5. Repeat the process at the other two pre-selected sites. Composite the samples from the three sites into one 250-ml or larger (1-liter) bottle.
6. Record sampling information on the Waterflea Tow Monitoring Report, Form 3200-128. Reporting forms can be found at the end of this section and at <http://dnr.wi.gov/lakes/monitoring/forms.aspx>
7. Transport the sample bottle(s) on ice in a cooler.
8. Identification of waterfleas can be conducted by the regional DNR water quality biologist or you can look through the sample yourself. Place sample in a white cake pan style dish. Make sure there is enough water so the sample floats. Then look for the waterfleas. Spiny and Fishhook Waterflea Watch and Wild cards are excellent resources for identification. If you find anything that you think are spiny or fishhook waterfleas, the samples should be preserved in alcohol and driven to your local CLMN contact. **It is illegal to mail samples that contain alcohol.** Make sure you fill out the Waterflea Tow Monitoring Report, Form 3200-128 and bring it with the sample. If no spiny or fishhook waterfleas are found, please report your results on the CLMN website (see “Reporting” section on page 180), indicating that you sampled and no waterfleas were found.

LABELING SAMPLES THAT ARE DELIVERED TO THE DNR OFFICE

Label sample bottles with the following information:

- Sampler’s name
- Sampler’s phone number – DNR staff may need to contact you regarding the sample
- Lake name
- County
- Site number
- Sample date

Be sure to write legibly and with indelible ink (e.g. Sharpie) – do not use a ball point pen, as the ink is soluble in alcohol. Remember to deliver the Waterflea Tow Monitoring Report Form & your map with the sites marked.

DISINFECTION PROCEDURES

If sampling multiple lakes on the same day, the net, boat and all other sampling equipment must be disinfected between lakes. Disinfection will eliminate cross-contamination and reduce the risk of transporting invasive species from lake to lake. You do not have to disinfect equipment between sample sites on the same lake. If multiple lakes are sampled in one day, it is recommended that you sample any lakes that are not on the watch or infestation lists before sampling lakes on those lists. This will minimize the potential for transport of the AIS species to a “clean” lake. The net, other sampling equipment and boat can be disinfected using diluted bleach solution (1 Tablespoon per gallon of water - do not use color safe bleach or ultra bleach for this mixture). Leave this solution on the net for 10 minutes. If waterfleas are observed, extreme care should be taken to avoid transporting individuals to a “clean” lake. Every time you take your boat out of a lake, place the net in bleach solution. It is a good idea to rinse your equipment in hot water and let the net dry thoroughly for at least 24-48 hours after a day of sampling. This is done to preserve the integrity of the net and to reduce the risk of any resting eggs remaining viable. Find disinfection protocols at http://dnr.wi.gov/fish/documents/disinfection_protocols.pdf.



EQUIPMENT NEEDED



- Zooplankton net with a 250-micron (0.01 inch) mesh. (Smaller mesh nets can easily clog with small forms of phytoplankton and zooplankton and can allow waterfleas to elude capture.) Try to use a net with a 0.5-1 meter (1.6-3.3 foot) opening (diameter). If you use a smaller net size, you will not be sampling as much water volume so you may need to take additional samples to increase the amount of water sampled. You will be asked on the reporting form what size net you used in the collection. For those without a net, you can Google search on “make your own plankton net” to find directions to making a plankton net.
- Rope tied to the zooplankton net with meter increments marked. An 8 meter rope (about 25-feet) is plenty long.
- Boat/anchor
- Plastic bottles to put the sample in
- Alcohol, 95% alcohol (190 proof ethyl alcohol). This will be used if you take samples to the DNR, but is not necessary if you process your own samples.
- Lake map.
- Waterflea Tow Monitoring Report, Form 3200-128 (found at the end of this section and at <http://dnr.wi.gov/lakes/monitoring/forms.aspx>)
- Cooler with ice if you plan to take samples to the DNR
- GPS unit (optional)
- Bleach/large container to hold plankton net for bleach bath if you are sampling multiple lakes. See disinfection procedures on page 177 for more information.

SETTING UP A MONITORING TEAM

Often it is easier to “divide” up the work than to rely on one volunteer to monitor an entire lake for invasives. Designate a team leader (and maybe an assistant) who is willing to keep track of what areas are being monitored and who is doing monitoring. The team leader can also be the person who enters the monitoring results on the CLMN website <http://dnr.wi.gov/lakes/CLMN> and the person to whom other volunteers can bring suspect species. If assistance in identification is needed, the team leader can take the species to DNR, UW-Extension, or the County Land and Water Conservation staff for vouchering. Be creative and most importantly, do not burn out your team leaders!

Consider having a training session for your team. The CLMN coordinator for your area may be able to assist you with a training session. If not, contact your local CLMN contact to see if an Aquatic Invasive Species training session will be scheduled for your area. These sessions are often set up in conjunction with local lake fairs and conventions. AIS workshops / training sessions are also listed at <http://www.uwsp.edu/cnr/uwexlakes/CLMN/training.asp>.

MAPPING

Mark on a lake map where samples were collected. These same sites should be used for each of the sample periods – if not, then submit a revised map to your local CLMN contact (page viii) with subsequent samples.

You can get maps from your local DNR office, Fishing Hot Spots, fishing map books, etc. Basic lake maps can also be generated through the DNR web site:

<http://dnr.wi.gov/lakes/lakepages/search.aspx>. Type in the name of the lake and choose the county, then click “search.” Click on the lake name (if there are two or more lakes with the same name in the same county, select the lake you are after). This site will give you a plethora of information about your lake, but to find a map, scroll down to the map section and either click on “Contour (Bathymetric) Map” for a printable version, or click on “Interactive Map.” The interactive map (in the Surface Water Viewer) allows you to add in “layers” such as invasive species or monitoring sites.

Use a map source that is most convenient for you. Make sure the following information is on your lake map: lake name, county, sites monitored, date(s), volunteer(s), and any additional observations.

If you have a GPS unit, you may want to mark locations where waterfleas were collected and then load this data into a mapping program and print out the collection locations.

REPORTING

What would all the work that goes into gathering accurate information be worth if others could not read, review and act on it? Reporting is one of the most important parts of monitoring for invasive species. Knowing where species are not, as well as where they are, is extremely important in being able to track and understand their spread. Knowing how often monitors are looking for species and what they are finding is very important information.

The DNR, lake managers, researchers, and others use the data that is reported through the Citizen Lake Monitoring Network to study lakes and better understand aquatic invasive species. The information reported by volunteers is also provided to the state legislature, federal, tribal and local agencies/organizations who in turn may use this data to help determine funding for invasive species grants and programs.





You can enter your monitoring results on the CLMN website: <http://dnr.wi.gov/lakes/CLMN> (click “Enter Data” on the left side bar). If you don’t yet have a user id & password, click ‘Request a Wisconsin User ID and Password’. Then email Jennifer at jennifer.filbert@wisconsin.gov with your User ID and what monitoring you are involved in. Jennifer will set up your accounts and email you back. Once you receive an email back, you can log in. Once you’re logged in, go to the Submit Data tab and click “Add New” to start entering data. Choose the AIS monitoring project for your lake in the Project dropdown box.

- For prevention monitoring, report your results using the: Aquatic Invasives Surveillance Monitoring Report, Form 3200-133.
- If you find spiny or fishhook waterfleas for the first time on your lake, report your results using the: Aquatic Invasive Animal Incident Report, Form 3200-126.

You can report your results as often as you wish, but be sure to at least report results once a year, at the end of the monitoring season. If you have any questions about reporting, contact your local DNR CLMN contact (page viii). The waterflea monitoring site(s), along with the names and addresses of the monitors, are maintained and updated periodically.

NOTE Remember, for tracking the movement of waterflea infestations, a report of ‘no spiny or fishhook waterfleas’ in an area is just as important as finding waterfleas. One cannot confidently state that spiny or fishhook waterfleas are not present in an area if no one has looked.

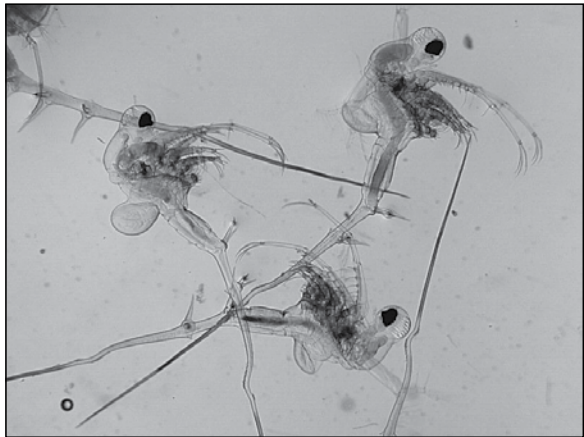


Photo by Peter Johnson

WHAT TO DO WITH SUSPECT SPECIMENS

If you find anything that you think are spiny or fishhook waterfleas, the samples should be preserved in alcohol and hand delivered to your local CLMN contact. Do not mail them; it is illegal to mail samples that contain alcohol. Make sure you fill out the Waterflea Tow Monitoring Report, Form 3200-128 and bring it with the sample.



PREVENTION STARTS WITH US

Whether you are out monitoring, or just boating for fun, be sure to drain all water from your boat, motor, live wells, bilge, bait buckets and other containers before launching and after leaving the water. If you will be using your boat in another lake, rinse your boat and equipment with hot or high pressure water to make sure all waterfleas and eggs are removed or dry the boat and equipment for at least five days. By cleaning your boating equipment and encouraging others to do the same, you can help protect Wisconsin lakes from spiny and fishhook waterfleas.



ADDITIONAL MATERIALS AND SUPPORTING DOCUMENTATION

ADDITIONAL SOURCES OF INFORMATION

REFERENCES

REPORTING FORMS

AQUATIC INVASIVES SURVEILLANCE MONITORING REPORT

- **SINGLE LOCATION, MULTIPLE DATES**

- **MULTIPLE LOCATIONS, ONE DATE**

WATERFLEA TOW MONITORING REPORT





ADDITIONAL SOURCES OF INFORMATION

<http://dnr.wi.gov/invasives/fact/spiny.htm>

http://www.in.gov/dnr/files/spiny_and_fishhook_water_flea.pdf

REFERENCES

Life history and effects on the Great Lakes of the spiny tailed Bythotrephes. Carla E. Caceres and John T. Lehman. Department of Biology, Natural Science Building. The University of Michigan Ann Arbor, MI 48109-1048

<http://www.seagrant.umn.edu/exotics/spiny.html>

This monitoring is designed to help detect new invasive species on your lake, so DNR can be alerted and lake residents and/or professionals can respond appropriately. The purpose of the DNR collecting this data is to let us know what methods trained citizens and professionals use when actively looking for aquatic invasive species. You are often the ones to alert us of new invasives in our waters. Remember for surveillance monitoring, a report of "no invasive" at a location is just as important as finding an invasive. One cannot confidently state that the invasive is not present in an area if no one has looked and reported their findings. Knowing where invasives are not, as well as where they are, is extremely important in being able to track and understand their spread. Knowing how often monitors are looking for species and what they are finding is very important information.

Notice: Information on this voluntary form is collected under ss. 33.02 and 281.11, Wis. Stats. Personally identifiable information collected on this form will be incorporated into the DNR Surface Water Integrated Monitoring System (SWIMS) Database. It is not intended to be used for any other purposes, but may be available to requesters under Wisconsin's Open Records laws, ss. 19.32 - 19.39, Wis. Stats.

Data Collectors

Primary Data Collector Name	Phone Number	Email
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Additional Data Collector Names

Total Paid Hours Spent (# people x # hours each)	Total Volunteer Hours Spent (# people x # hours each)
--	---

Monitoring Location

Waterbody Name	Township Name	County	Boat Landing (if you only monitor at a boat landing)
----------------	---------------	--------	--

Dates Monitored

Start Date (when you first monitored this season)	End Date (when you last monitored this season)
---	--

Did at least some data collectors monitor in... May? June? July? August? (circle all that apply)

Did you monitor...

All Beaches and Boat Landings?
 Frequently Some of the Time Not Often/Never

Perimeter of whole lake?
 Frequently Some of the Time Not Often/Never

Docks or piers?
 Frequently Some of the Time Not Often/Never

Did you...

Walk along the shoreline?
 Frequently Some of the Time Not Often/Never

Observe entire shallow water area (up to 3 feet deep)?
 Frequently Some of the Time Not Often/Never

Use rake to extract plant samples?
 Frequently Some of the Time Not Often/Never

Check underwater solid surfaces (boat hulls, dock legs, rocks)?
 Frequently Some of the Time Not Often/Never

Other: _____

Other: _____

Did you find...(even if not a new finding for the lake or stream)

Banded Mystery Snail?	Yes	No	Did not look for	Hydrilla?	Yes	No	Did not look for
Chinese Mystery Snail?	Yes	No	Did not look for	Purple Loosestrife?	Yes	No	Did not look for
Curly-Leaf Pondweed?	Yes	No	Did not look for	Rusty Crayfish?	Yes	No	Did not look for
Eurasian Water Milfoil?	Yes	No	Did not look for	Spiny Waterfleas?	Yes	No	Did not look for
Fishhook Waterfleas?	Yes	No	Did not look for	Zebra Mussels?	Yes	No	Did not look for
Freshwater Jellyfish?	Yes	No	Did not look for	Other?: _____			

If you find an aquatic invasive

If you find an aquatic invasive and it is not listed at <http://dnr.wi.gov/lakes/AIS> fill out an incident report for the species. Then bring the form, a voucher specimen if possible, and a map showing where you found it to your regional DNR Citizen Lake Monitoring Coordinator as soon as possible (to facilitate control if control is an option).

If you don't find an aquatic invasive

If you submit your data online, that is all you need to do. Otherwise, please mail a copy to your regional DNR Citizen Lake Monitoring Coordinator. <http://dnr.wi.gov/lakes/contacts>

Aquatic Invasives Surveillance Monitoring Multiple Locations, One Date

Form 3200-130 (R 2/10)

This monitoring is designed to help you detect new invasive species on your lake, so you can then alert the DNR and so lake residents and/or professionals can respond appropriately. The purpose of the DNR collecting this data is to let us know what methods trained citizens and professionals use when actively looking for aquatic invasive species. You are often the ones to alert us of new invasives in our waters. Remember for prevention monitoring, a report of "no invasive" at a location is just as important as finding an invasive. One cannot confidently state that the invasive is not present in an area if no one has looked and reported their findings. Knowing where invasives are not, as well as where they are, is extremely important in being able to track and understand their spread. Knowing how often monitors are looking for species and what they are finding is very important information.

Notice: Information on this voluntary form is collected under ss. 33.02 and 281.11, Wis. Stats. Personally identifiable information collected on this form will be incorporated into the DNR Surface Water Integrated Monitoring System (SWIMS) Database. Personally identifiable information collected on this form will be incorporated into the DNR aquatic invasive species database. It is not intended to be used for any other purposes, but may be made available to requesters under Wisconsin's Open Records laws, ss. 19.32 - 19.39, Wis. Stats.

Data Collectors

Primary Data Collector Name	Email
Additional Data Collectors	Phone Number

Date and Time

Date	Start Time	End Time
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Waterbody	County	Township	Record one of the following: Y=Yes N=No N/A = Didn't Look For																					
			Did you monitor?					Did you find?																
			Boat Landing (if you only monitor at boat landings)?	All Beaches and Boat Landings?	Perimeter of Whole lake?	Docks or piers?	Walk along the shoreline?	Observe entire shallow water area (up to 3 feet deep)?	Use rake to extract plant samples?	Check underwater solid surfaces (boat hulls, dock legs, rocks)?	Banded Mystery Snail?	Chinese Mystery Snail?	Curly-Leaf Pondweed?	Eurasian Water Milfoil?	Fishhook Waterleas?	Freshwater Jellyfish?	Hydrilla?	Purple Loosestrife?	Rusty Crayfish?	Spiny Waterleas?	Zebra Mussels?	Other? _____		

If you find an aquatic invasive

If you find an aquatic invasive and it is not listed at <http://dnr.wi.gov/lakes/AIS> fill out an incident report for the species. Then bring the form, a voucher specimen if possible, and a map showing where you found it to your regional DNR Citizen Lake Monitoring Coordinator as soon as possible (to facilitate control if control is an option).

If you don't find an aquatic invasive

If you submit your data online, that is all you need to do. Otherwise, please mail a copy to your regional DNR Citizen Lake Monitoring Coordinator.
<http://dnr.wi.gov/lakes/contacts>

The purpose of this form is to track the presence/absence of spiny or fishhook water fleas collected using a plankton net during AIS monitoring.

Notice: Information on this voluntary form is collected under ss. 33.02 and 281.11, Wis. Stats. Personally identifiable information collected on this form will be incorporated into the DNR Surface Water Integrated Monitoring System (SWIMS) Database. It is not intended to be used for any other purposes, but may be made available to requesters under Wisconsin's Open Records laws, ss. 19.32 - 19.39, Wis. Stats.

Primary Data Collector			
Name	Phone Number	Email	
Monitoring Location			
Waterbody Name	WBIC	County	Township Name
Date and Time of Monitoring			
Start Date	Start Time	End Date (= Start Date)	End Time
Monitoring Results			
Method used: <input type="checkbox"/> horizontal tows (near surface) <input type="checkbox"/> oblique tows (thermocline to surface) <input type="checkbox"/> vertical tows (bottom to surface)			
Diameter of plankton net opening 30cm 50cm other _____ (circle one)			
Site 1: Latitude (optional): _____		Longitude (optional): _____ <input type="checkbox"/> Preservative Added	
Secchi depth (m) _____ (optional)		Depth sampled (if vertical or oblique tow) _____ ft/m circle one	
Site 2: Latitude (optional): _____		Longitude (optional): _____ <input type="checkbox"/> Preservative Added	
Secchi depth (m) _____ (optional)		Depth sampled (if vertical or oblique tow) _____ ft/m circle one	
Site 3: Latitude (optional): _____		Longitude (optional): _____ <input type="checkbox"/> Preservative Added	
Secchi depth (m) _____ (optional)		Depth sampled (if vertical or oblique tow) _____ ft/m circle one	
<input type="checkbox"/> Have you consolidated all of your samples into one composite bottle?			
<input type="checkbox"/> Have you sent your samples to the DNR Plymouth Service Center?			
During this monitoring trip, did you find what you suspect are Spiny or Fishhook Waterfleas in this waterbody? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Voucher Sample			
If you found Spiny or Fishhook Water fleas, did you collect a voucher specimen and bring it to your local DNR office? If so, which office?			
<input type="checkbox"/> Rhinelander	<input type="checkbox"/> Spooner	<input type="checkbox"/> Green Bay	<input type="checkbox"/> Oshkosh <input type="checkbox"/> Did not take sample to a DNR office
<input type="checkbox"/> Fitchburg	<input type="checkbox"/> Waukesha	<input type="checkbox"/> Eau Claire	<input type="checkbox"/> Superior <input type="checkbox"/> Other Office: _____

If you find Spiny or Fishhook Water Fleas

Please bring a copy of this form, along with a voucher specimen and if possible, a map showing where you found the suspect waterfleas to your regional Citizen Lake Monitoring Coordinator at the DNR. All initial discoveries should be placed in rubbing alcohol until verification by an expert is obtained.

If you don't Find Spiny or Fishhook Water Fleas

If you submit your data online, that is all you need to do. Otherwise, please mail a copy to your regional DNR Citizen Lake Monitoring coordinator. <http://dnr.wi.gov/lakes/contacts>

For DNR staff to fill out	
Volume of sample that was analyzed (ml)	Date analyzed
Name of plankton sample analyst:	
Name of person or museum who identified the voucher specimen	
Was the specimen confirmed as...?	
Spiny Waterflea? <input type="checkbox"/> Yes <input type="checkbox"/> No	Fishhook Waterflea? <input type="checkbox"/> Yes <input type="checkbox"/> No
Have you entered the results of the voucher in SWIMS? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>DNR staff: Please enter voucher information for new AIS findings into SWIMS under the Incident Report Project for your county (Choose Incident Report Form in SWIMS). Enter date of sampling for "Start Date", Person who identified specimen as "Data</i>	

