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APPENDIX B

Saint Germain AIS Monitoring Protocol

Town of Saint Germain Volunteer Invasive Aquatic Plant Monitoring Protocol

PREMISE

Invasive aquatic plants are spreading across Wisconsin's counties at an alarming rate. Early detection of these invaders often leads to excellent control or even eradication of the species. The Town of Saint Germain realizes the negative impact these plants can have on the area's lakes, including decreased recreational value, degradation of valuable aquatic habitat, decreased property values, and dwindling tourism. To combat the spread of invasive aquatic plants, the Town of Saint Germain Lakes Committee was formed in 2003. In the spring of 2004, the committee successfully applied for a Wisconsin Department of Natural Resources Aquatic Invasive Species Grant to assess the plant communities of town lakes and formulate a plan to battle existing populations of invasive plants and prevent the spread to other lakes. A primary goal of the project is to train volunteers to monitor the town's lakes for invasive aquatic plants and to set a standard course of action should the plants be discovered.

Keep it simple. This protocol was created to monitor two invasive species, curly-leaf pondweed (*Potamogeton crispus*) and Eurasian water-milfoil (*Myriophyllum spicatum*); however, other invasives found in and around lakes, such as purple loosestrife (*Lythrum salicaria*) and reed canary grass (*Phalaris arundinacea*) could also be included in the monitoring program with slight modifications. The intent is to keep the protocol as simple as possible so people with minimal training in aquatic plant identification can effectively monitor their lakes on an annual basis and if necessary, recruit and train others to assist in their efforts. A standardized course of action is also outlined including persons that may be contacted to identify suspect plants or transport collected plants to experts in the Wisconsin Department of Natural Resources (WDNR) or Vilas County Land and Water Conservation Department.

SURVEY TIMING

Curly-leaf pondweed and Eurasian water-milfoil begin to grow earlier than any of our native plants. Correct timing of the surveys will lead to higher chances of locating the plants should they occur in the lake; therefore, two surveys will need to be completed annually to effectively monitor for their existence. Correct timing will also lead to a better assessment of the infestation's size which, in turn, will lead to a more effective treatment strategy.

Curly-leaf pondweed begins growing shortly after ice-out and continues to grow at a rapid rate until early to mid July. The survey for this species should be completed between the middle and end of June when the plant is at peak biomass.

Eurasian water-milfoil grows throughout the summer and will reach its peak biomass by mid July. The survey for this plant should occur sometime between mid July and the end of August.

EQUIPMENT

As described above, the intent of this protocol is to keep the surveys as simple as possible; therefore, little equipment is needed to complete the surveys.

Standard Equipment

Boat & motor – The surveys will be performed in water depths ranging from 4-10 feet around the entire shoreline, including islands.

Lake map – The map is used to identify assigned shoreline monitoring areas and lake depths that need to be monitored.

Buoy, line, and weight – In the event that suspect plants are found, the location will need to be marked for further investigation. Commercially produced buoys with line and weight are available at bait and tackle retailers; however, a gallon milk jug (with cap) will also work with fishing line and a weight. Large washers, scuba weights, or small, clean iron parts work well as anchors for homemade buoys. Two or more buoys should be kept in the boat during all surveys.

Plant identification materials – The WDNR has created the “Wisconsin Wildcard” series to help identify invasive species found in the state. These cards, along with other identification materials are available at WDNR services centers throughout the state or by contacting Ms. Laura Felda-Marquardt at 715-365-2659 or laura.felda@dnr.state.wi.us.

Collection bags and permanent marker – Gallon ziplock bags work well for the collection of aquatic plants. A permanent marker should be used to mark collection bags.

Notebook – A small notebook should be carried during the surveys to record notes and create maps concerning plant locations.

Polarized sunglasses – Using polarized sunglasses increases the surveyor’s ability to see into the water by filtering out refracted light from the water surface. These glasses are available at most fishing equipment retailers.

Optional Equipment

Rake – A common garden rake can be used to retrieve plant samples for identification and collection. Tying a rope to the end of the rake will allow it to be used to in deeper water.

GPS receiver – A handheld GPS receiver can be used to record coordinates of suspect plants, however, a buoy should still be used to mark the area just incase subsequent investigators do not have access to GPS receivers.

Plant identification books – Many books are available to aid in the identification of aquatic plants. An excellent example of a identification book for laypeople is [Through the Looking Glass...A Field Guide to Aquatic Plants \(ISBN 0-932310-32-X\)](#)

Aqua Scope II – An Aqua Scope allows the user to more easily view aquatic plants and wildlife beneath the water surface. Available from Forestry Suppliers (www.forestry-suppliers.com) and other wildlife supply companies for approximately \$65.

METHOD

Eurasian water-milfoil can occur in a variety of bottom types (muck, sand, gravel, rock), while curly-leaf pondweed prefers softer sediments. Both can occur in depths over 12-15 feet, but are usually found in shallower depths. To maximize survey effectiveness and efficiency, depths between 4 and 10 feet should be concentrated upon. The surveys are completed by meandering over these depths in a boat while looking for suspect plants. Increased effectiveness can be achieved by having one or more people acting as observers while another person operates the boat and by laying out the survey's path on a map prior to its start. Meandering can be completed by following a path perpendicular to or along the shoreline. Keeping the meanders tight and evenly spaced will increase the survey's effectiveness. However, striking a balance between the effectiveness of the survey and the time spent completing it is important in keeping survey crews motivated. Each crew should experiment with different meander distances and find the one that will allow them to finish the survey in an acceptable amount of time while covering a large portion of their area. Remember, the point is not to cover the entire lake, but to cover a large portion of it. Areas around boat landings and inlets should be investigated thoroughly because these are often entry points for invasive species.

Boat speed is dependant upon the survey crew's ability to recognize suspect plants. A good starting point is approximately 3.0 mph. Many lake properties are approximately 100 ft wide; therefore, it should take approximately 23 seconds to travel that distance at 3.0 mph

What to Look For

Curly-leaf pondweed and Eurasian water-milfoil tend to "mat" on the water surface when they are at peak biomass. In other words, the plants continue to grow along the water surface and form dense canopies. Native plants do not exhibit this characteristic, so keeping an eye out for matted colonies is very useful in locating both species. If at all possible, the survey crews should visit lakes known to have these plants so they can develop a "search image" to use during their surveys.



Course of Action if Suspected Invasives are Located

Mark the location – First, drop a buoy in the center of the colony; if a GPS receive is available, record the colony's position. Also create notes and maps describing the location, size, and depth of the colony along with an indication of the suspected invasive species. Be sure to accurately describe the colony's location using two or more points along the shore so others can locate it even if the buoy has been removed.



Collect a sample – First, label the bag with the lake name, a brief description of the location in the lake, and the name of the suspected species. Collect two or more plants by hand or with a rake. Try to include as much of the plant as possible, including roots, stems, leaves, and fruits. Place the plants in the ziplock bag with an inch or two of water and a bit of air. Plant samples should be kept cool by placing them in an ice-filled cooler or refrigerator upon return to the shore. Fresh plants can remain in the boat without being cooled for two hours or so while the survey is being completed.

Notify your contact – Your first call should be to your Town of Saint Germain Lakes Committee representative. Your representative's name and contact information can be obtained from your lake group's president and should be recorded in the field notebook. Upon notification, your representative will collect the sample and arrange for positive identification and further investigation by professionals. Time is of the essence, so if you are unable to speak to your representative within 24 hours, please contact one of the professionals listed below and make arrangements to meet with them at their office or at the lake. In either case, please make sure to have the sample and a copy of your notebook page ready for pick up. Also, be prepared to assist the professional with locating the colony if necessary.

Alternative Contacts

Vilas County (Eagle River)

Mr. Patrick Goggin, Vilas County Conservationist
(715) 479-3648
pagogg@co.vilas.wi.us

Ms. Carolyn Scholl, Lake Conservation Specialist
(715) 479-3648
cascho@co.vilas.wi.us

Mr. Ted Ritter, Aquatic Invasive Species Project Coordinator
(715) 479-3738
teritt@co.vilas.wi.us

Wisconsin Department of Natural Resources (Rhinelander)

Ms. Laura Herman, Water Resources Management Specialist
(715) 365-8984
hermal@dnr.state.wi.us

Form a treatment strategy – First, the WDNR should be contacted for assistance by the lake representative. Treatment strategies may include hand removal by divers if the colony is small (< ¼-acre) or chemical application if it is large (> ¼-acre). In either case, continued monitoring of the area is essential to assess treatment success. Furthermore, partial funding may be available through the WDNR Aquatic Invasive Species Grant Program to help with the costs of treatment.