

How to Protect Your Lake from Invasive Species

The aliens are coming—in fact, they're already here. Aquatic Invasive Species (AIS) include animals like the zebra mussel, which has caused problems in Lake Superior, and the spiny water flea, which was recently discovered in Burntside Lake near Ely. But plants can also be invasive species. The most direct threat to Minnesota lakes the last few seasons has been Eurasian water milfoil, a submersed aquatic plant native to Europe and Asia, which reproduces by fragmentation of runners that creep along the lake bed. The plant is easily dispersed by boats, motors, trailers, bilges, live wells, or bait buckets, and can stay alive for weeks if kept moist.

Eurasian water milfoil was first discovered in Minnesota in Lake Minnetonka in 1987. By the end of 2004, the plant had been found in 160 lakes, rivers, and streams in the state. We've all seen the warning signs at landings, and hopefully we inspect our props and keels before boat launching. But infestation of new lakes is only one minnow bucket or leech locker away. And once invasives are in a watershed, rooting them out is a colossal task. The general rule on invasives is: Easier to prevent than to correct. DNR Commissioner Tom Landwehr said: "If we don't do a great deal now, in 20 years the problem will be of such a magnitude that nothing will be successful."

But are boat inspections really the only effective way of halting the invasion? The Minnesota DNR's approach has centered on public awareness of the need to remove weed fragments at boat landings. As for herbicides, the DNR says such efforts are "...rarely, if ever, likely to succeed" at preventing dispersion throughout an infected lake. Ted Johnson, president of the Lake Washburn Association, saw the problem differently. Back in 2008, his lake association spent \$3000 for a DNR inspector at boat landings on weekends. "It is like a cancer," Washburn said. "If you catch it at stage one it is a lot easier to deal with than stage two or three. In July of 2009, the DNR found a fragment, and then did a full lake survey and found nothing more."

Johnson, however, wasn't satisfied, and a month later went fishing and landed a northern pike with some weeds on it. Johnson knew milfoil when he saw it. "We used scuba, kayak and snorkel to find 3 scattered patches," Johnson said. "I was told by the DNR that scuba was not that helpful, but it was very useful to figure out where the milfoil was growing. You can wait until it is mature and on the surface or you can go down and find it young under the water, and then treat it." So convinced was Johnson that he had already become scuba certified.

At that point, the Lake Washburn Association took a controversial step. In September of 2009, the group applied 2-4-D, a strong herbicide, to selected portions of the lake. "But we could apply it very carefully because we had used GPS to mark the milfoil beds accurately," Johnson explained. On an 1,800 acre lake, we were treating just 6 acres."

In 2010, "We continued to hand pick and survey using scuba and GPS," said Johnson, "and we found only one established patch from the previous summer. Two yards by two yards and it never reached the surface. The DNR was very discouraging about hand picking, and said it wouldn't do any good. We picked the milfoil carefully so as not to break it up. We also found isolated plants, took GPS coordinates of them and hand picked them. In the fall we went three yards by three yards around each GPS coordinate with 2-4-D. We treated about a quarter of an acre."

By this time, Johnson had heard about a program on New Hampshire's 1,200 acre Lake Mascoma. "They hand pick about 2000 plants a year, so we were hopeful that this would work especially well for a small contained area like ours. We also thought we could use less chemical if we also hand picked. What I later found out is that the combination of chemicals and hand picking has eliminated milfoil in 25 plus lakes in Washington State."

Johnson credits scuba diving with keeping them ahead of the invasion: "If we had not done scuba we would have missed it because these small patches never reached the surface. Anywhere you see it you can treat it and that is why scuba is so important."

The Washburn Lake Association has set itself an ambitious goal: "We want to be the first Minnesota lake to eliminate EWM. I believe it can be done...it has in Washington. Besides, the more aggressively we deal with it, the less money we actually spend, because we deal with the plants before they have really established themselves and start spreading." This year, Johnson said, they had three scuba divers on the lake over Memorial Day—and found nothing.

It can't be stressed enough: Early detection is the key. Once a lake is fully infected, eradication, if it can be accomplished at all, is extremely expensive.

Senate File 115, the Aquatic Invasive Species policy bill signed recently by Governor Dayton, is an important first step in greater recognition of the invasive species threat. The bill empowers police or conservation officers to set up "check stations," and will require water-related service providers to complete a training course in invasive species in order to receive a permit. MSRPO's lobbying team worked with key legislators to make this a real grassroots achievement. But there is more work ahead of us. Funding for the bill remains precarious.

Timing is crucial. By the time you see milfoil on the surface of your lake, it may be too late for full-scale eradication. Don't wait until the aliens are here. Fight them now!