

Final Report

Aquatic Invasive Species Grant # AEPP-190-09
Regional AIS Specialist II - Portage, Wood, Waushara Counties
Grant period 1 April 2009 - 31 December 2010



Submitted by:

Paul Skawinski, *Regional AIS Education Specialist*
Golden Sands Resource Conservation & Development

Listed below are the goals and objectives outlined in the AEPP-190-09 grant proposal.

ALL COUNTIES

CBCW, CLMN workshops. Regional AIS Education Specialist, Paul Skawinski, taught 15 workshops in 2009/10:

Secchi - McDill Pond (Portage), Spring Lake (Waushara), Huron Lake (Waushara)

CLMN-AIS – McDill Pond (Portage) (2), Huron Lake (Waushara), Pearl Lake (Waushara), Spring Lake (Waushara), Little Silver Lake (Waushara), Hidden Springs Lake (Waushara), Pleasant Lake (Waushara), Lime Lake (Portage)

CBCW – Long Lake (Waushara), Lake Helen (Portage), Hidden Springs Lake (Waushara)

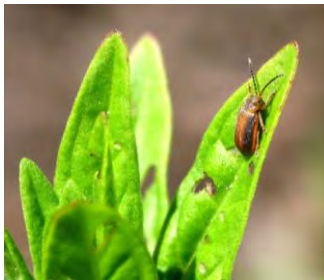


Kaycie Stushek

CLMN-AIS workshop at Pearl Lake

Biological control of purple loosestrife promotion.

In 2009, purple loosestrife roots were given to Boston School Forest in Plover, but their pool dried up over a period of several very hot days. In addition to the high evaporation taking place during those days, a pinhole leak in the bottom of the pool was also discovered. Consequently, all of their plants died, and the beetles died as well. One beetle was found alive, and was simply released on site.



Paul Skawinski

Galerucella beetle on young purple loosestrife plant

In 2010, three volunteer projects were started: one at Twin Lake, Waushara Co., one at Boston School Forest in Portage County, and one at McDill Pond, Portage County. 2,000 beetles were released in Stevens Point along the Wisconsin River, and the rest (13,000) were given to Wood County LCD to release along the Wisconsin River near Wisconsin Rapids. Twin Lake had originally wanted to release their beetles on-site, but the purple loosestrife population was found to be loaded with beetles already, and an herbicide application the previous fall knocked the loosestrife population way down. For these reasons, Twin Lake's beetles were added to those released along the Wisconsin River.

Map counties. Maps were updated in each county for priority AIS species distribution. In addition, new populations of EWM or CLP were mapped as they were discovered. Data points were created using a handheld GPS unit, and maps were created with the assistance of the county GIS departments. These maps were shared with DNR, County, and University staff, as well as the appropriate lake organizations. Maps created under this project are attached.

Milfoil weevil survey training. Amy and Paul held a weevil training event for DNR/county staff, and 11 people attended. The event began with a slideshow at the RC&D office, explaining identification of weevils, biology of weevils, and survey methodology. The group then headed to McDill Pond with kayaks and canoes, and conducted a mock weevil survey. Most participants found live *Euhrychiopsis* and *Phytobius* weevils in at least one life stage, and all of them became familiar with identifying each life stage.

Brenda Nordin, DNR-Green Bay, was unable to make the weevil training event, but she was scheduled to be in Stevens Point a few weeks later. Paul met Brenda at McDill Pond with two kayaks, and showed her the basics of weevil surveying in the same area that the other group went to. Both *Euhrychiopsis* and *Phytobius* weevils were found of multiple life stages.



Paul Skawinski

Searching for weevils at McDill Pond

Education/outreach program. An AIS photo contest announcement was sent to all middle and high schools in Portage, Wood, and Waushara Counties, but zero entries were received. The deadline was extended and the contest re-announced, but we still received no entries. This idea is tabled for the time being. Interest may increase after our AIS lessons are taken into schools starting in 2011, so this contest may be attempted again in the future.

Paul was asked to speak on aquatic invasive species at various conferences, including the Adams County Lake Alliance Conference, the Wisconsin Lakes Convention, Waushara County Conservation Field Day, DC Everest Outdoor Education Day, Port Edwards High School Earth Day Celebration, and the Big Silver Lake “Kid’s AIS Day”.

The River Alliance of Wisconsin asked for support with a Project Riverine Early Detectors (Project RED) workshop at Hartman Creek State Park, and Paul assisted with the presentation to add local knowledge and statistics to the workshop. About 12 people from Trout Unlimited attended this workshop. Attendees listened to presentations from Paul and Laura MacFarland for the first 90 minutes, and then walked down to the lake with Laura and Paul to find aquatic invasive species along the shoreline. They also got to practice marking locations with a GPS unit.

Wood County LCD requested an AIS stop during their annual Wood County Conservation Tour, during which every employee from the county courthouse rides around the county to see various conservation projects, and hear informational presentations. Participants represent agencies including Wood County Land Conservation Department, Wood County Parks and Forestry Department, UW-Extension, and USDA-NRCS. Paul brought live samples of several aquatic invasive species to discuss with the group, and provided a handout for the participants to take home and read over while on the bus.

The Wood County Parks and Forestry Department requested their own training workshop at Lake Wazeecha, which was more in-depth than the Conservation Tour. This workshop included a PowerPoint presentation and more live samples, including some native EWM look-alike species. The entire Parks Department staff was required to attend this workshop.



Kaycie Stushek

Showing a rusty crayfish during the Wood County Parks Department AIS training

Wood County Land Conservation Department (LCD) asked for two AIS articles for their quarterly “Conservation Corner” newsletter. In response to an article on rusty crayfish, a Wood County resident reported having large crayfish in her private pond, which were burrowing into the shorelines and causing other problems. Though this would not be typical rusty crayfish behavior, it was similar to the behavior of red swamp crayfish (*Procambarus clarkii*), a species which had recently been found near Milwaukee. Two crayfish traps from UW-Stevens Point were deployed at the pond, and two days later, two large crayfish were found in the traps. Dr. Stanley Szczytko at UW-Stevens Point confirmed them as *Cambarus diogenes*, a native burrowing crayfish species.

UW-Extension Lakes and DNR holds two “Train the Trainer” sessions, and Paul was asked to speak to the group on “Aquatic Invasive Plants of the Future”. The presentation was well received, and the organizing staff invited Paul to speak at the 2nd session as well.

UW-Madison’s Center for the Study of Upper Midwestern Cultures holds a teacher’s tour each year, and in 2010, the tour organizer contacted WDNR to see if anyone would be available between Stevens Point and Augusta at a specified date and time. They also requested that their stop be at a place where AIS management has taken place. Paul agreed to meet the group at North Wood County Park in Arpin to discuss AIS and some of the AIS issues present in the Yellow River and the impoundments within the park. The group asked a lot of questions, and later wrote a letter expressing their enthusiasm and gratitude for our assistance with their tour.

Scott Provost, WDNR-Wisconsin Rapids, asked for assistance with confirming Brazilian waterweed (*Egeria densa*) in a Portage County private pond in the Town of Almond. Scott and Paul visited the pond, located the suspected plants, and confirmed it as *Egeria densa*. This pond is currently under management to destroy the species, which is prohibited under NR40.



Paul Skawinski

Brazilian waterweed from Portage Co.



Paul Skawinski

Brittle naiad from Mason Lake

Another prohibited species was found during a plant survey on Mason Lake, Adams County. Scott Provost was scheduled to assist Sara Schmidt and Reesa Evans with an aquatic plant survey on Mason Lake, but was unable to help due to an injury. Since Adams County is not part of this AIS grant’s project scope, Paul volunteered two days of his free time to assist with the survey in Scott’s place. During the survey, brittle naiad (*Najas minor*) was identified in multiple areas of the lake, often mixed in with Eurasian watermilfoil and other *Najas* species. *Najas minor* is an NR40 prohibited species, and appropriate contacts were immediately notified of the infestation. Currently, the *N. minor* population is not being managed, but DNR Science Services staff have conducted follow-up visits to assess the population distribution.

Fleet Farm stores around Wisconsin have kindly invited county and state AIS staff to have informational booths at their annual Fleet Farm Kid’s Fishing Day. We staffed a booth at the Marshfield store, and had over 100 kids come through. The live samples were very well

received by the kids, and the zebra mussel tattoos were a big hit.

The Society for Ecological Restoration (SER) at UW-Stevens Point requested a presentation on aquatic invasive species. Paul spoke to the group for about 45 minutes, and a couple of weeks later, over 20 of the SER members volunteered to help with a Japanese knotweed removal project near the Wisconsin River in Stevens Point.

Tavern posters with the AIS prevention message (see Appendix B) were distributed to local lake groups, who then distributed them to taverns and restaurants in their respective areas.

Give training on EWM identification and hand-pulling as requested. Regional AIS Education Specialist trained lake residents at Sunset Lake, Lake Helen, and McDill Pond on proper EWM identification and removal techniques.

Sunset Lake, Portage County – Lake residents and members of the local community were concerned when they heard that the Regional AIS Education Specialist had found EWM in Sunset Lake. Paul met with a large group of volunteers at the lake and trained them on identification of EWM and native look-alike species that were common in Sunset Lake. The group then began removing the small patch of EWM that was found in the lake, using kayaks, paddleboats, and snorkeling equipment. Several children caught fragments in the shallow areas using a 25ft minnow seine provided by Paul.



Paul Skawinski

EWM removal event at Sunset Lake

Lake Helen, Portage County – Rob Hvisdak and other Lake Helen volunteers were trained on EWM removal in 2008, and were given a quick refresher training in 2009. Education Specialist and RC&D AIS LTEs assisted with the hand-pulling of EWM. As in 2008, all noticeable EWM was removed. Rob Hvisdak continued to monitor the EWM patch through the rest of the year, and snorkeled to remove it whenever EWM was found.

McDill Pond, Portage County – McDill Pond was drawn down 12 feet from October 2008 – May 2009, so the majority of the EWM was frozen and killed. However, we knew from the beginning that some EWM would remain somewhere, and the lake residents needed to be vigilant. Education Specialist attended several McDill Lake District meetings to answer questions about AIS, as well as train attendees on identification and hand-pulling of EWM. Two AIS monitoring workshops were also held for McDill, to familiarize the residents with identifying EWM and native look-alike plants in McDill Pond. Residents were excited to learn identification techniques, and realized the importance of being able to identify EWM. Shortly after these workshops, several residents began reporting EWM sightings around McDill Pond. The first two reports turned out to be negative, but the third was confirmed and resulted in some quick hand-pulling. Unfortunately, many other beds began appearing around the lake shortly thereafter, and an herbicide application



Paul Skawinski

Volunteers in the shallows of drawn-down McDill Pond, removing EWM.

was performed.

Assist lake residents as needed. Lake residents in all counties requested assistance from Golden Sands RC&D regarding aquatic invasive species information. Paul spoke at 36 lake group meetings across the region. In addition, Paul was asked to speak at the Adams County Lake Alliance conference, with a presentation entitled “Aquatic Invasive Plants of the Future”. This presentation discussed aquatic plants that are regulated by NR40, yet are widely available through the water garden and aquarium trades. Several of these species were purchased under a DNR permit, and allowed conference attendees to touch and see the plants up close.



Paul Skawinski

Aerial photo of McDill Pond, showing areas that remained wet through the drawdown

In Spring 2009, while the McDill Pond drawdown was nearing its end, a colleague of Krista Olson (McDill Lake District) offered to take Paul and Scott Provost (WDNR) up in a 4-seater plane to take aerial photos of McDill Pond. The purpose of the flight was to spot springs in the lake bed, and also see where the mudflats were being colonized by plants. These photos allowed us to predict where the soil might be wet enough to have supported EWM roots through the winter. Indeed, many of these same areas ended up containing EWM later that year. CDs containing all of the aerial photos and video clips were sent to Buzz Sorge (DNR), Scott Provost (DNR), and Krista Olson (McDill Lake District).

Big Silver Lake in Waushara County holds a “Kid’s AIS Day” event, which actually spans two days. About 110 4th and 5th grade students from the Wautoma School District come to Big Silver Lake to learn about the lake and AIS that occur in Big Silver Lake. After a short AIS presentation on the shore, students get to ride around the lake on pontoon boats, driven by volunteers from the lake district. During the boat rides, the students see patches of EWM, rocky areas colonized by zebra mussels, and a diverse native plant community in the south bay of the lake.

Spring Lake in Waushara County requested a presentation regarding the native aquatic plants in their lake. They have EWM and CLP, and have been chemically treating these species, but the group was interested in what kinds of beneficial native plants they have in their lake. The President of the lake association took Paul on a short pontoon boat ride around the 40-acre lake to look at the native vegetation community, and Paul gave a presentation later that morning on the plants that were seen during the boat ride. The group was very interested to learn about the EWM look-alike species that occur in Spring Lake, and they were also excited to learn that they have two native watermilfoils, northern watermilfoil (*Myriophyllum sibiricum*) and whorled watermilfoil (*Myriophyllum verticillatum*).

Lime and Sunset Lakes in Portage County contacted the County Land Conservation Department to ask them to sponsor a grant application to treat the EWM in both lakes with herbicide. Assistance was provided to the County to create the grant proposal, which was funded by WDNR. At Lime Lake, volunteers assisted with cutting down the exotic narrow-leaf cattails (*Typha angustifolia*) near the boat landing, to make it easier for the herbicide

application to take place. EWM treatment did take place at Sunset in spring 2010, but did not take place at Lime Lake. The residents at Lime Lake agreed that the small amount of EWM could be hand-removed. Although this was attempted over multiple days, it was not entirely successful. An herbicide treatment is planned for spring 2011.

Provide LTE Support. Two summer LTEs were hired from UW-Stevens Point to assist with the regional AIS program. Each of the LTEs performed watercraft inspections (totaling 425.25 hours, 444 boats, and 711 people contacted – all entered into SWIMS), assisted with EWM hand-pulling events, AIS surveys, AIS mapping, and hosting training workshops. Both LTEs did a fantastic job and were sad to see their summer positions end. A final LTE Report is attached with this document.

Recognizing that some boat landings are busy while others are slow, a Boat Landing AIS Monitoring Protocol was developed for use by the LTEs. This protocol was used while no boaters were present, and entailed a quick survey of the shoreline and near-shore habitat along the public property. This was a quick and effective way to gather extensive survey information on each boat landing in the tri-county area that was visited by the LTEs. DNR and UW-Extension subsequently adopted the Boat Landing AIS Monitoring Protocol for use throughout the statewide Citizen Lake Monitoring Network program. The protocol and datasheet are attached to this report.

Investigate new reports. New reports of AIS were quickly responded to. A total of 61 new AIS populations were discovered between Portage, Wood, and Waushara Counties in 2009 (6 rusty crayfish, 4 Eurasian watermilfoil, 8 curly-leaf pondweed, 24 banded mystery snails, 2 Chinese mystery snails, 13 Japanese knotweed, 3 purple loosestrife, and 1 zebra mussel). All of these except the zebra mussel were found and vouchered (if confirmed) by RC&D staff. These populations were either discovered during AIS surveys or when residents reported suspicious flora/fauna to RC&D. All new reports were documented in SWIMS.

PORTAGE COUNTY

Collaborate with Lake Management Plan Project. Portage County received a grant to write lake management plans for 29 lakes in the county in the next 2 years. Each lake group has been given a presentation on aquatic invasive species. Many lake residents have expressed interest during these presentations, and requested additional training workshops for their groups. These workshops are often well attended, and result in residents becoming active monitors of AIS in their lakes.

WAUSHARA COUNTY

Annual review and update of Waushara County AIS Plan. The Waushara County AIS plan has been discussed and updated with the Waushara County Land Conservation staff. Upon acceptance by the LCD staff, the revised plan was presented to the Land Conservation Committee to discuss updates.

WOOD COUNTY

Implement new County AIS Plan. The Wood County AIS Plan has been developed, and implementation of the plan got started quickly in 2009 with AIS surveys on each lake in the county. Survey teams searched for Eurasian watermilfoil, curly-leaf pondweed, rusty crayfish, zebra mussels, mystery snails, Japanese knotweed, and purple loosestrife. All five of the lakes were found to contain AIS, listed below:

Lake Dexter – Curly-leaf pondweed, Chinese mystery snail, purple loosestrife

Lake Kaunewinne – Rusty crayfish

Lake Manakiki – Rusty crayfish, purple loosestrife

Lake Nepco - Eurasian watermilfoil, curly-leaf pondweed, Chinese mystery snail, rusty crayfish, zebra mussel, purple loosestrife

Lake Wazeecha – Banded mystery snail, curly-leaf pondweed, Eurasian watermilfoil, rusty crayfish, zebra mussels.

Rusty crayfish trapping study in the Yellow River. Another component of the Wood County AIS Plan was to trap rusty crayfish in the Yellow River to assess the population. A trapezoidal trap design was tested on the Yellow River in Pittsville. Nearly 15,000 rusty crayfish were removed from the river during this project. Not a single native crayfish species was caught. Abundance of rusty crayfish was severely reduced during this project, and fish abundance increased as the rusty crayfish were removed. The final rusty crayfish trapping project report is attached.


AIS billboards at boat landings. 4-foot by 8-foot billboards were installed at the three heavily used lakes in Wood County—Dexter, Nepco, and Wazeecha. The other two lakes are within North Wood County Park and have no public boat landings. These billboards are identical to the AIS billboards in Portage County. Wood County Parks Department staff assisted with the installation of these signs.



As a result of all of these AIS activities in the tri-county area, AIS records are up-to-date and accurate. Several early populations of AIS were discovered, and control activities have already been initiated on many of them. RC&D staff participated in hand-pulling EWM from Pickerel, Wolf, Helen, Sunset, and Collins Lakes. In the case of Pickerel, Wolf, and Collins, there are no established lake groups. Despite the occasional lack of volunteers, RC&D staff took the initiative to work on these pioneer populations, which resulted in a drastic reduction in EWM in Wolf Lake, and possible eradication in Collins Lake. Thank you to the Wisconsin Department of Natural Resources for their continued support of the Golden Sands RC&D AIS Program.

Figure Amherst Mill Pond
Curly Pondweed





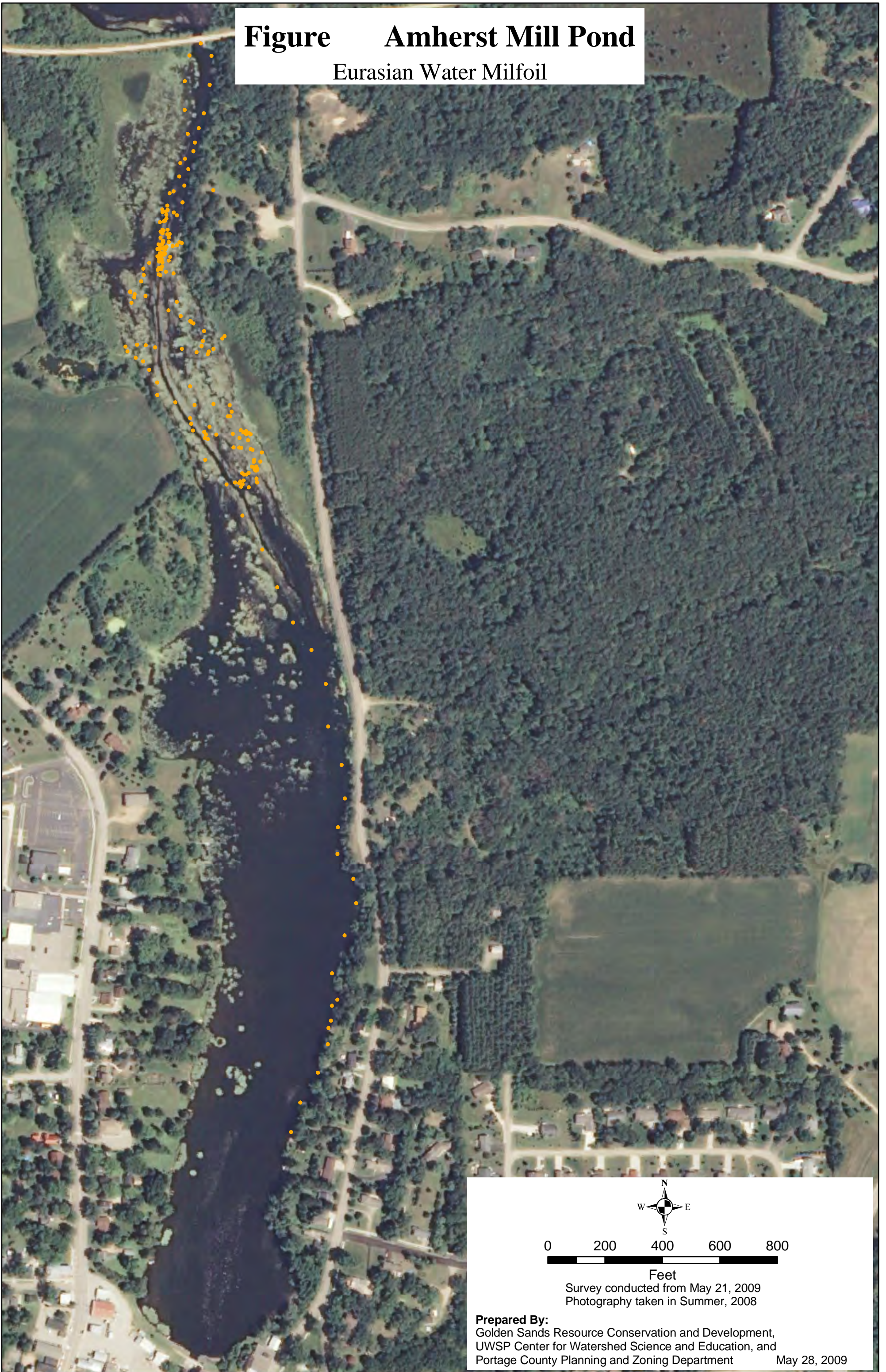
0 200 400 600 800

Feet

Survey conducted from May 21, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development,
UWSP Center for Watershed Science and Education, and
Portage County Planning and Zoning Department May 29, 2009

Figure Amherst Mill Pond
Eurasian Water Milfoil



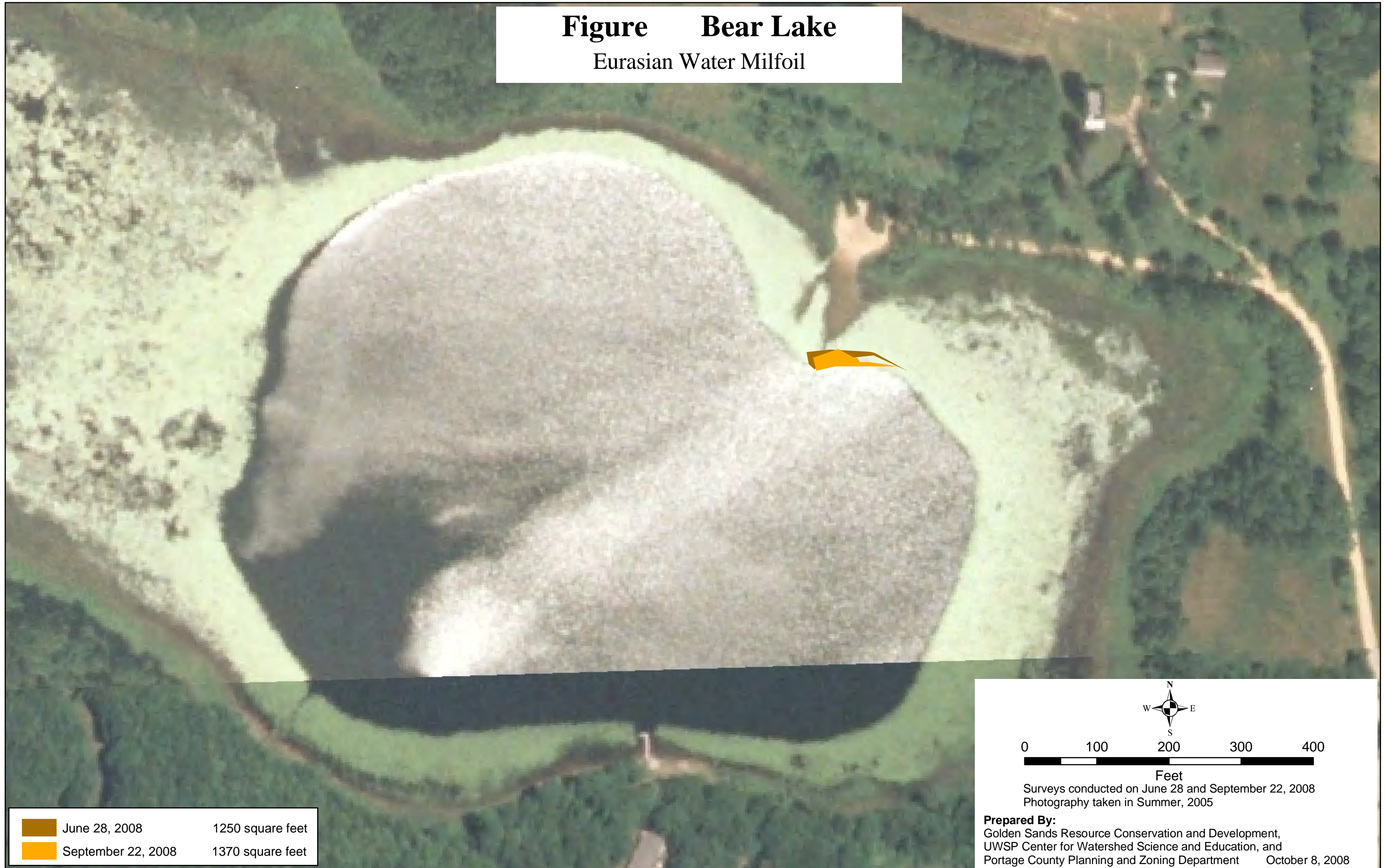
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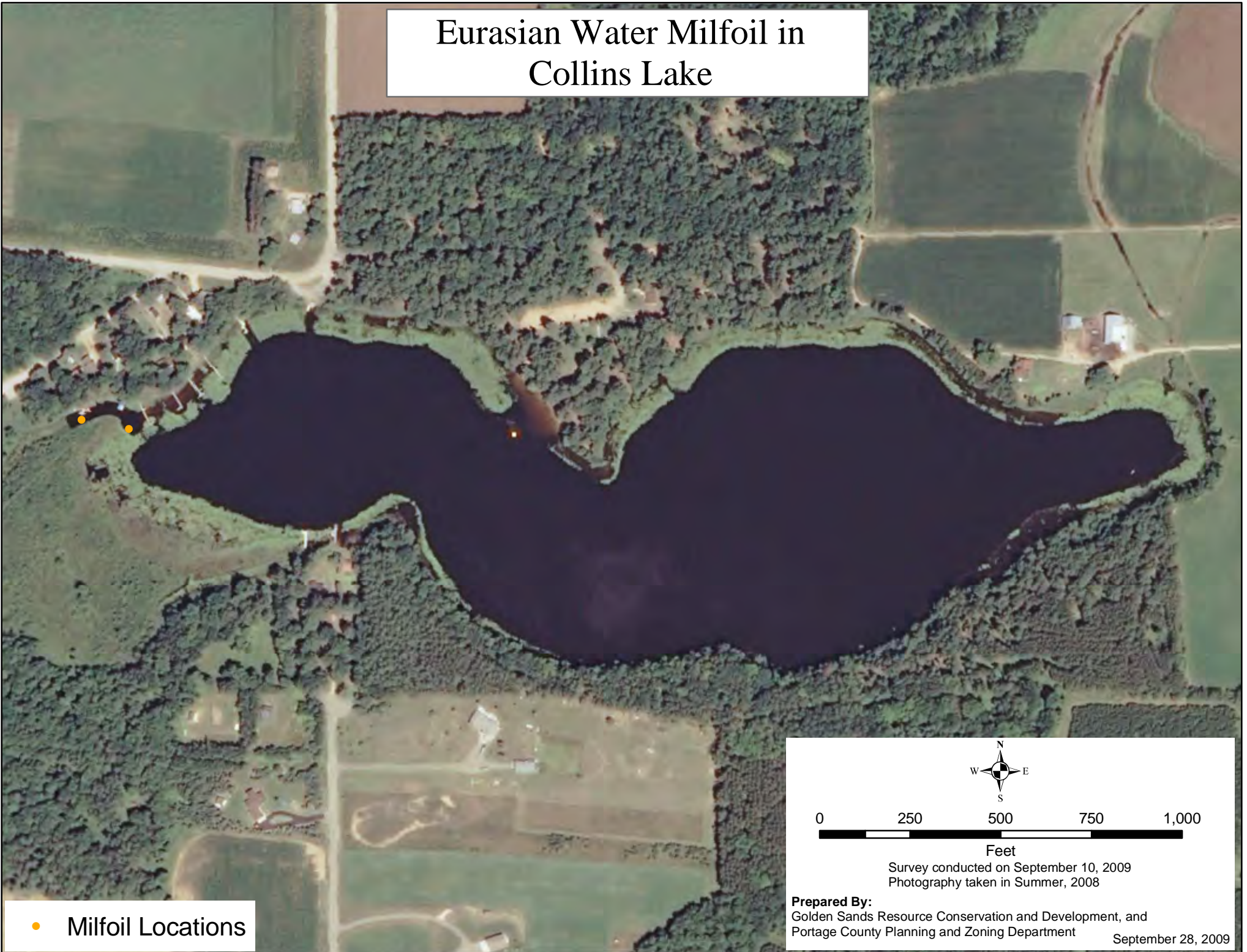
Survey conducted from May 21, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development,
UWSP Center for Watershed Science and Education, and
Portage County Planning and Zoning Department May 28, 2009

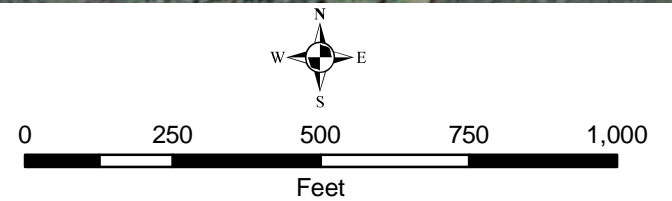
Figure Bear Lake
Eurasian Water Milfoil



Eurasian Water Milfoil in Collins Lake



• Milfoil Locations



Survey conducted on September 10, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department

September 28, 2009

Eurasian Water Milfoil Extent

Springville Pond, Portage Co., WI
Surveys 7/28/10



Prepared by: Amy Thorstenson, Golden Sands RC&D Council, Inc.
February 23, 2011

Eurasian Water Milfoil Map

Surveys 7/26/2010

Spring Slough, McDill Pond
Portage Co., WI



0 12.5 25 50 75 100 Meters

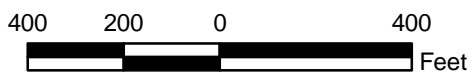
LEGEND

 Eurasian Water Milfoil
Total Acreage = 0.61

Prepared by: Amy Thorstenson, Golden Sands RC&D Council, Inc.
October 26, 2010



Fish Lake, Town of Hancock

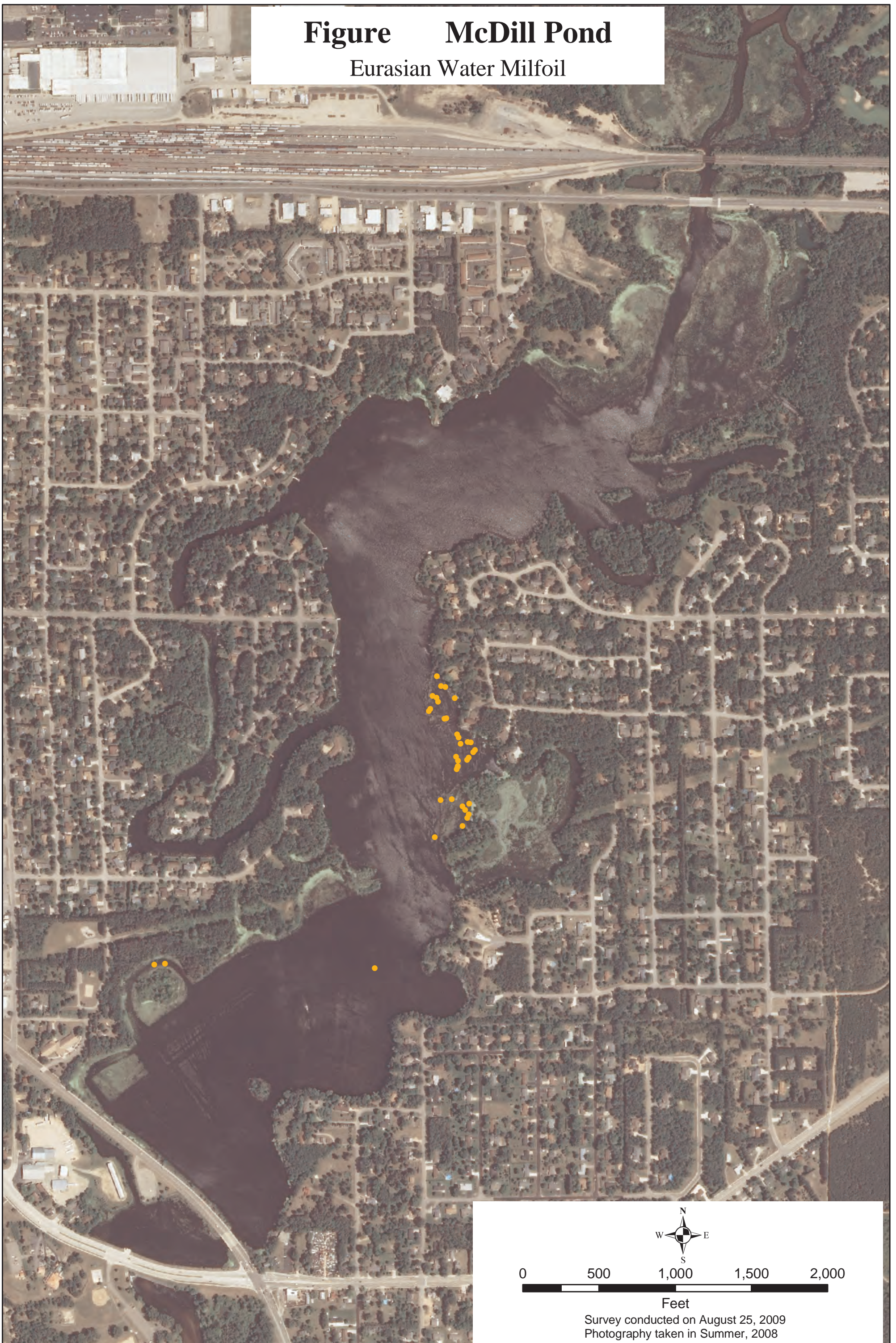


Lake Lucerne-Town of Marion

- ! Curly-leaf pondweed
- ! Eurasian watermilfoil

Figure McDill Pond

Eurasian Water Milfoil



● Milfoil Locations



0 500 1,000 1,500 2,000

Feet

Survey conducted on August 25, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department August 25, 2009

Figure McDill Pond

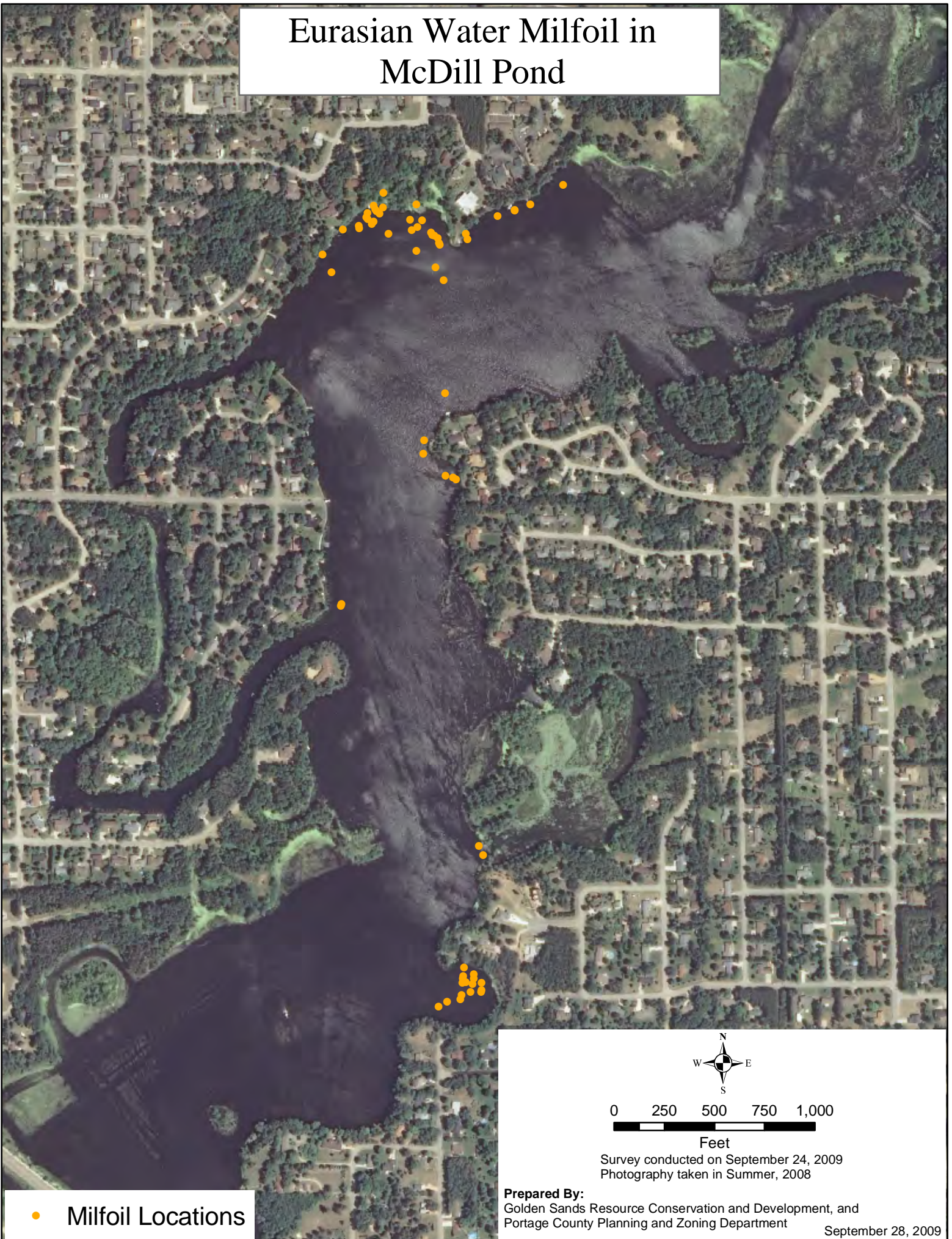
Eurasian Water Milfoil



● Milfoil Locations

0 500 1,000 1,500 2,000
Feet
Survey conducted on August 4, 2009
Photography taken in Summer, 2008
Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department August 10, 2009

Eurasian Water Milfoil in McDill Pond



● Milfoil Locations



0 250 500 750 1,000



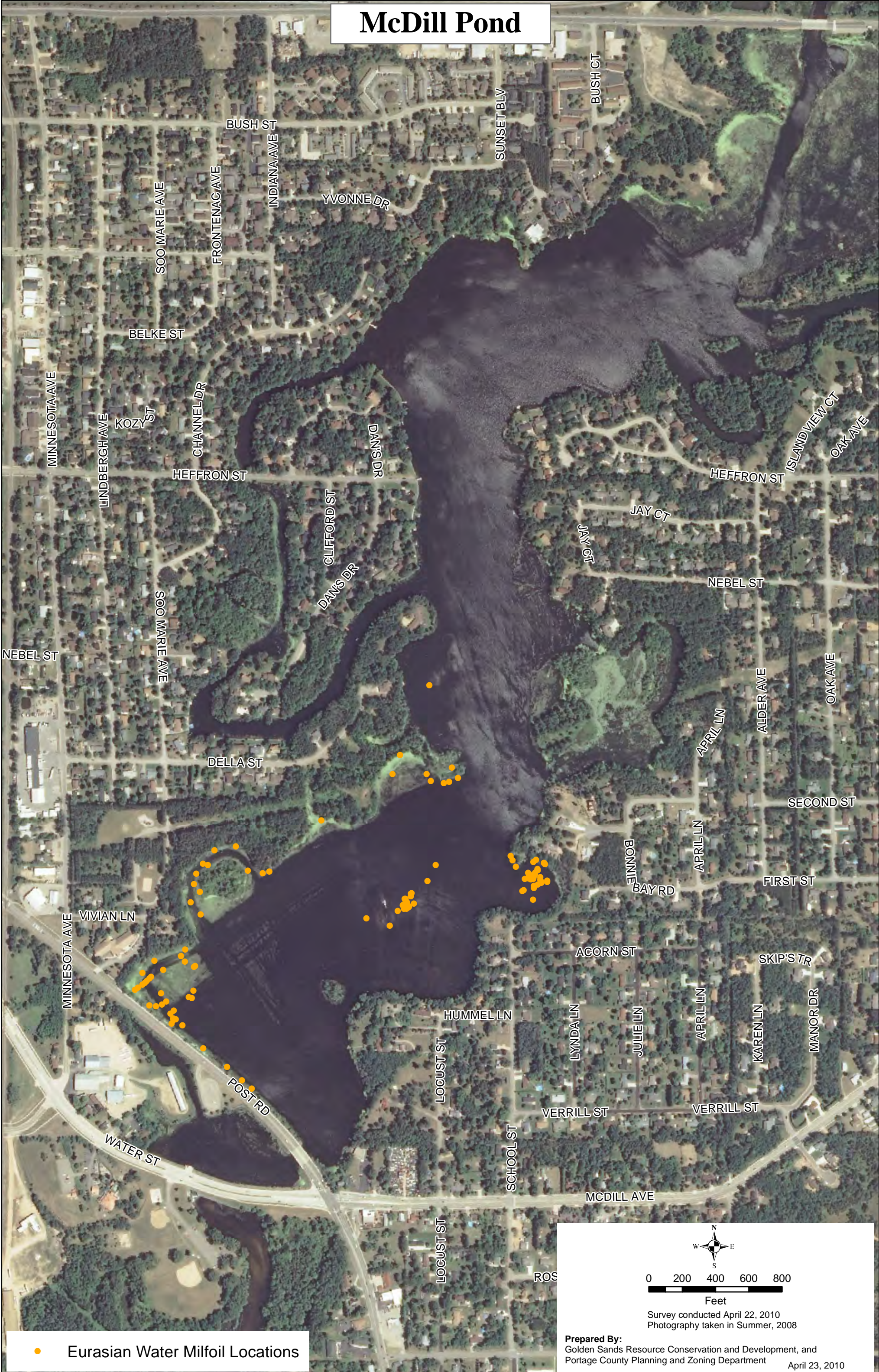
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Survey conducted on September 24, 2009
Photography taken in Summer, 2008

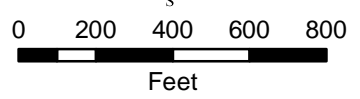
Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department

September 28, 2009

McDill Pond



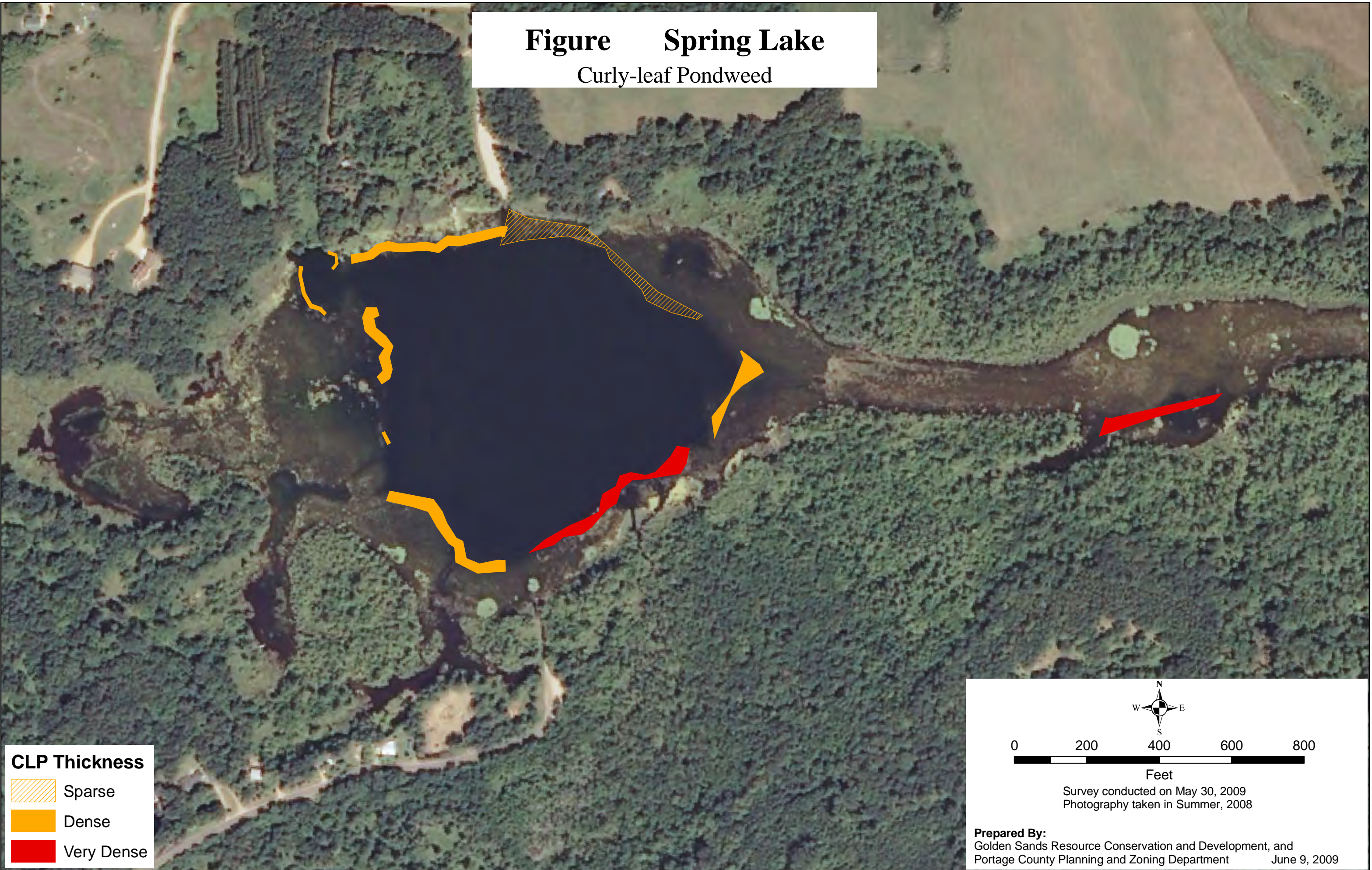
● Eurasian Water Milfoil Locations



Survey conducted April 22, 2010
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department
April 23, 2010

Figure Spring Lake
Curly-leaf Pondweed



CLP Thickness
Sparse
Dense
Very Dense

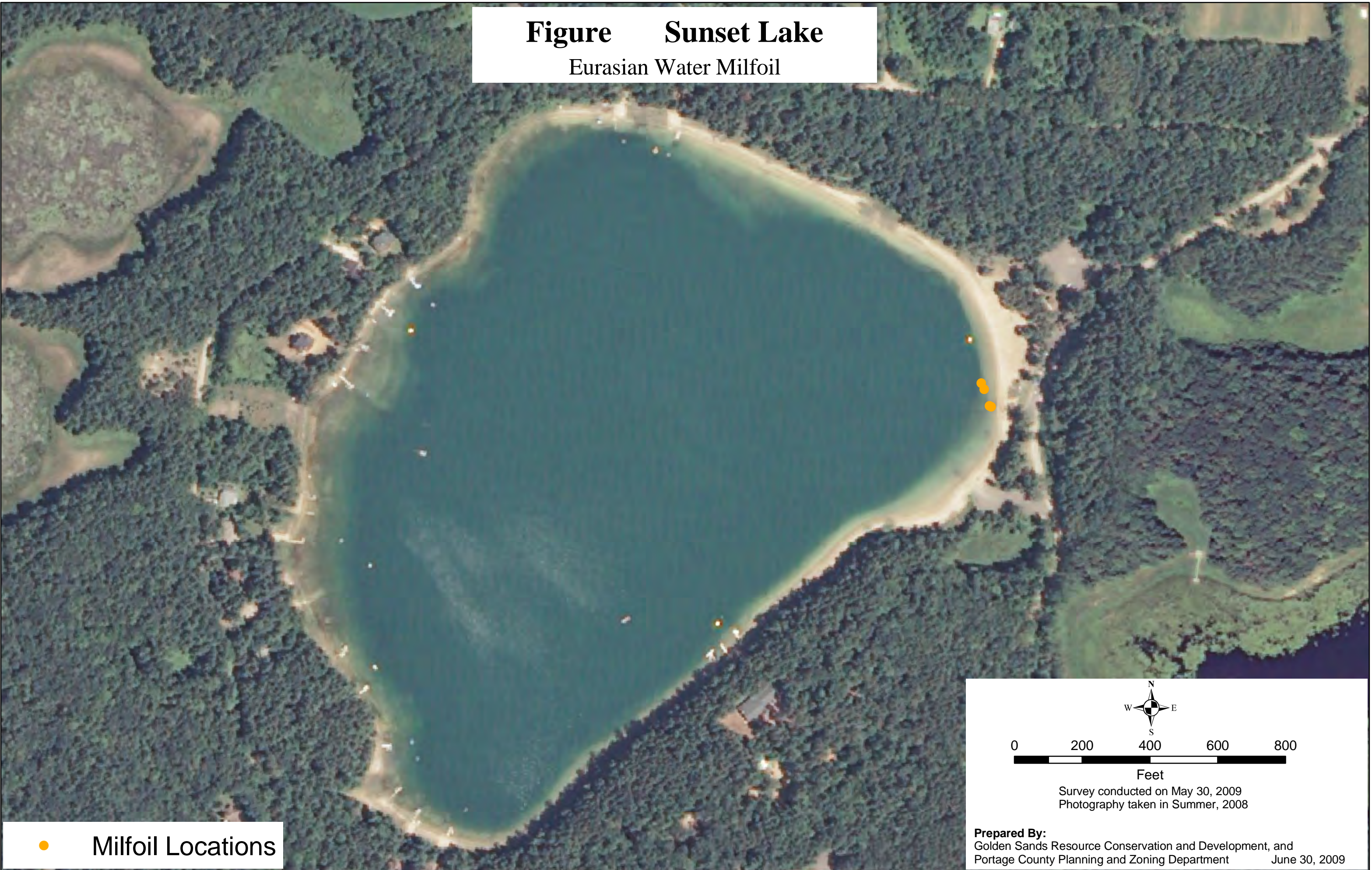
0 200 400 600 800
Feet

Survey conducted on May 30, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department June 9, 2009

Figure Sunset Lake

Eurasian Water Milfoil



● Milfoil Locations



0 200 400 600 800

Feet

Survey conducted on May 30, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department June 30, 2009

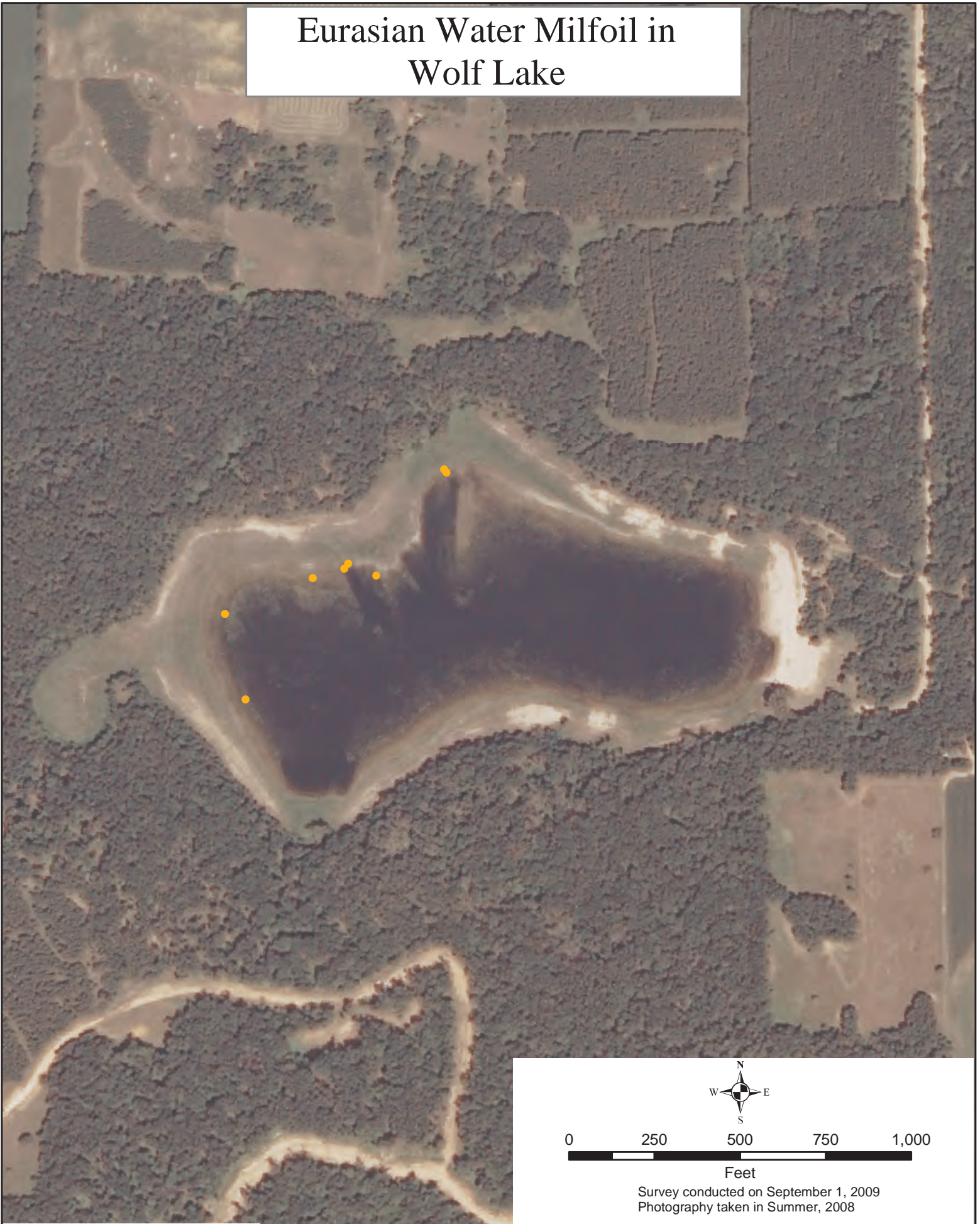


Wautoma Mill Pond



Wild Rose Mill Pond

Eurasian Water Milfoil in Wolf Lake



● Milfoil Locations

N
W ● E
S

0 250 500 750 1,000

Feet

Survey conducted on September 1, 2009
Photography taken in Summer, 2008

Prepared By:
Golden Sands Resource Conservation and Development, and
Portage County Planning and Zoning Department September 1, 2009