



## Lakes, Forestry & Conservation

The City of Muskego Lakes, Conservation & Forestry Department envisions an ecologically healthy and biologically diverse community where our citizens have a rich understanding and strong appreciation for their natural environment. We strive to preserve and enhance the quality of Muskego's lakes, natural areas, and urban forest. This green infrastructure provides scenic beauty, recreation opportunities, and an enriched quality of living. The following is a summation of our lakes, forestry, and conservation management efforts completed throughout 2013.

## Conservation

### Badertscher Preserve Development

Work has continued to restore lands and develop support facilities at this new conservation site. Trail development and installation of signage began in 2013. A significant amount of brush and trees were cleared to establish a trail that leads to the northern part of the property. This trail follows higher ground along the western edge of the wetlands and tracks along the south edge of the gravel pit.

Restoration work has continued in the oak savanna area. Before European settlement oak savannas were common in southern Wisconsin and throughout the Midwest but are now one of the most imperiled vegetation cover types. Work was completed this summer to remove woody plants that are incompatible with this biome. Adjacent former pasture areas of nonnative grasses were sprayed with herbicide in preparation of seeding. A seed mix of over 70 native prairie and savanna plant species has been amassed to replant the area.

Prairie vegetation will be planted on approximately 28 acres of former agricultural fields. Muskego has been quite successful in reestablishing prairie in several other conservation lands and this planting has the potential to be the best yet with over 75 species of native grasses and wildflowers. The seed cost was defrayed with a grant, income from leasing the agriculture fields, and utilizing seed hand collected with the help of volunteers; the seed mix has a wholesale value of over \$15,000 but was assembled with a net expenditure of less than \$2,000.

Little Muskego Lake Association donated \$10,000 towards acquisition and development of Badertscher Preserve. This volunteer community organization has now generously donated \$15,000 of their \$50,000 commitment toward this conservation site!

### Big Muskego Lake Wildlife Area Land Acquisition

The DNR established the Big Muskego Lake State Wildlife project area in 1999 to protect lands that create wildlife habitat as well as provide hunting, fishing, recreational and educational opportunities to the public. The DNR has been actively seeking to acquire land within this project area and we are excited to announce that in October 2013, the DNR purchased nearly 100 acres on Big Muskego Lake. The City of Muskego and the Big Muskego Lake Protection and Rehabilitation District each offered to contribute \$25,000, for a total of \$50,000, toward the purchase

### Acquisition considered

A proposed public purchase of nearly 100 acres on the southwest shore of Big Muskego Lake would establish an unbroken conservation corridor extending 600 acres. The state Department of Natural Resources has offered to buy the Rieger family property for \$700,000 to provide additional public hunting and wildlife viewing opportunities.

#### Big Muskego Lake Wildlife area expansion

- RIEGER PARCEL
- DNR LANDS
- PARTNER CONSERVATION LANDS
- PROJECT BOUNDARY



Source: Wisconsin Department of Natural Resources

Journal Sentinel

price. This land connects existing parcels of the Wildlife area to create a conservation corridor stretching 600 acres. With the completion of a wetland restoration project this purchase will protect marsh habitat for fish, wetland birds, mink and muskrats.

### ***Prescribed Burn Season***

Prescribed burning is one of the most effective tools we have in restoring the health and vigor of native vegetation, reducing weeds, enhancing wildlife habitat, increasing plant diversity and releasing vital nutrients into the soil. This past year we prepared burn plans encompassing 23 sites totaling over 140 acres. Unfortunately, we only had a few days with favorable weather conditions and our burn season

was very short. Despite a small number of burnable days, we managed to burn 7 sites totaling 58 acres in late April and early May. These included sites at Engel Conservation Area, Luther Parker Cemetery, Bluhm Park, Guernsey Meadows/Quietwood Woods, Blattner Preserve, and Badertscher Preserve.



### ***Invasive Shrub Removal***

Nonnative invasive shrubs have a negative effect on ecological health of the land. Invasive plant species were manually removed from areas within Moorland Park, Engel Conservation Area, and Badertscher Preserve.

### ***Public Outreach, Volunteers and Scout Projects***

Volunteerism has again aided conservation management efforts in 2013. Howard Schneider helped in some of the prescribed burn projects. John Winze volunteered to lead the Birdathon /Bird Day event. Eagle Scout candidate Chris Fields constructed decking for a bridge that will facilitate pedestrian access to Engel Conservation Area from the north. Bill Miller helped remove a hazardous tree at

Quietwood woods. US Bankcorp donated the volunteer services of Muskego resident Linda Jacobson who helped collect seed to be used for Badertscher Preserve. About thirty members of the Muskego High School Science Club also volunteered to collect prairie seed for restoration efforts at Badertscher Preserve. Two college students volunteered at Badertscher Preserve.

### ***Bird City Recognition***

Muskego is working to stay at the forefront of efforts to forge coalitions of citizens and public officials that recognize birds as a significant asset to the community. By promoting strategies for bird-centered conservation activities Muskego has been recognized as a High Flyer Bird City for the 3<sup>rd</sup> straight year. Only 60 Wisconsin communities have been awarded this recognition and Muskego was one of the first 15 to receive this distinction.

### ***International Migratory Bird Day***

We encourage our citizens to participate in our annual International Migratory Bird Day celebration. On May 11<sup>th</sup> avian enthusiasts were taken on a hike through Engel Conservation area. Birding expert John Winze aided hikers in observing and identifying birds. He informed hikers of threats to birds and empowered them to become involved in maintaining healthy bird populations. This annual celebration the spectacular event of bird migration cultivates a level of public awareness and concern for bird conservation within the community.

### ***The Great Wisconsin Birdathon***

This year, Muskego also participated in The Great Wisconsin Birdathon. We gathered a team called 'Tern Around' named for the Endangered Forster's terns which inhabit Muskego. Donations were made based on the number of bird species observed on a single day. The team used observations from the International Migratory Bird Day hike as well as a kayak trip on Big Muskego Lake and a hike around Badertscher Preserve.

Tern Around made the top ten list for best team names, observed 80 species, and raised \$549! Half of this amount went toward Muskego bird conservation efforts while the remainder supported the Bird Protection Fund and state-wide bird projects.

### ***Osprey Nest***

Since 2009, a remote web camera has been aiding us in observing nesting habits of the local Osprey population around Big Muskego Lake. This year two adult Ospreys nested and fledged one young. Oconomowoc High School's biology teacher, Bill Stout, expertly captured the young osprey on July 22<sup>nd</sup>. She was banded, weighed and measured; coming in at over 1400g we are positive she is a she, as males rarely surpass 1200g. We

have been working on upgrading the camera system to provide live video feed and sound, we hope to have significant progress with this project and more updates on this in 2014!

## **Urban Forestry**

### ***Tree Plantings***

This year, Arbor Day was celebrated with a group of Boy Scouts from troop 141 planting 13 trees around Denoon Park soccer fields. During the week of May 13<sup>th</sup>, Samantha Hyde completed her Gold Award project by planting 15 trees at Moorland Park around the parking lot and playground equipment. Over 300 trees were planted along Janesville road in the first phase of the road reconstruction project. These trees added over \$10,000 to Muskego's urban forestry net worth. Our urban forestry management efforts have been recognized by the National Arbor Day Foundation and Muskego has been named a Tree City USA for the 14<sup>th</sup> straight year.



### ***Emerald Ash Borer and Ash Trees***

Over twenty counties in Wisconsin have confirmed Emerald Ash Borer (EAB) infestations, including Waukesha County. This invasive insect can attack and kill even a healthy ash tree. Although not yet confirmed in Muskego it has been found in surrounding communities. We have prepared by inventorying ash trees in public areas, treating trees when possible, and planting alternative species. This summer, seventy-six ash trees were treated with an insecticide mixture poured over the root zone of individual trees.



### ***Routine Tree Care***

Trees were pruned along the walking trails on Moorland Road between Janesville Road and College Avenue. Tree hazards were abated in rights-of-way and park lands through the efforts of Public Works and Parks departments.



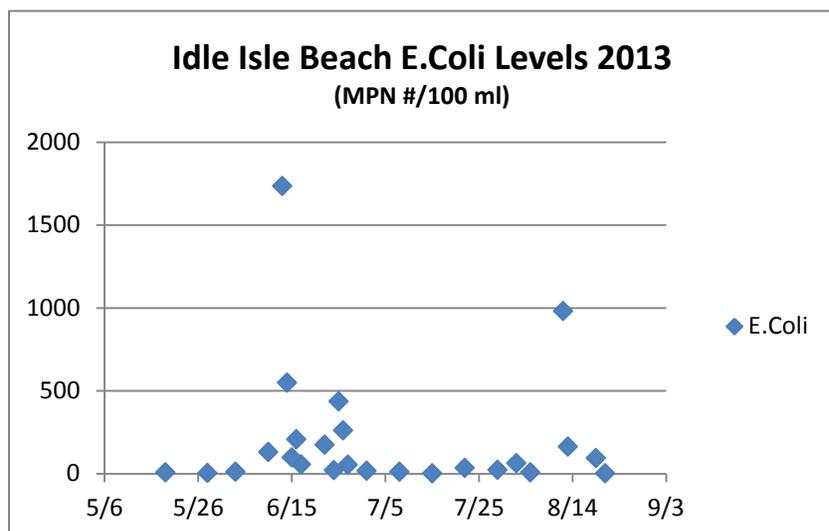
## **Lakes**

### ***Water Quality Monitoring***

Routine water quality monitoring was conducted on all 4 major water bodies through the spring and summer. In general, the water quality of Muskego's lakes has improved slightly over the past two decades and compares well with other lakes in the region.

### ***Beach Coliform Levels***

Idle Isle's beach water was tested for *E. coli* bacteria levels for human safety each week during the summer. We had one sample over the 1000 mpn limit, causing us to close the beach once between May and August of 2013. High *E. coli* levels typically correlated to large precipitation events. Improving the water quality of runoff into our lakes can help to reduce future beach closings.



### ***Aquatic Weed Control***

The growth of the aquatic plant Eurasian water milfoil was not as bad as the previous year when a mild winter allowed the plant to keep its vigor. A more typical winter in 2013 caused this plant to senesce (die back) over winter and this plant did not get another jump start on the season. Therefore nuisance aquatic plant growth was minimal and controllable in all of Muskego's lakes this year. Staff monitored chemical treatment of aquatic plants on Big Muskego Lake and Bass Bay.

### ***Other Lake-related Items***

- Staff from the Parks, Public Works, and Community Development (Conservation) departments cooperated in installing a cable tied concrete boat ramp and a new pier at Big Muskego Lake's Boxhorn launch. It was complete in time for the opening of duck season and boaters gave positive feedback on the new facility.
- Geese were monitored for nuisance levels on Little Muskego Lake but there were not enough to require a goose removal project.
- Staff assisted DNR personnel in markings the wildlife refuge on Big Muskego Lake. In particular we added reflective material to each sign so that they would not be hazards to boaters in the dark.