

## AQUATIC PLANT STUDY GROUP SUMMARY

### Scope of Study

The Aquatic Plant Study Group (APSG) made up of Daryl George, LaVerne Molitor, Dennis Krubsack, Kery & Russ Kafka, Bob Tomashek, consultant Matt Harp and facilitated by Fran West started meeting on February 21, 2005. After a thorough review of the 1992 lake studies, the 2003 Aquatic Plant Management Plan (APM) and the WDNR Sensitive Area Study for the Cloverleaf Lakes and extensive discussion the group focused on the control of the aquatic invasive species plants that were presently in the lake. Discussion about the other plants in the lake, referred to as native aquatic plants did not reveal many problems. Native plants in our lakes grow abundantly even after chemical treatment for invasive species. Every property owner has the right by State statutes to clear a 30 foot section in front of their property for their individual purposes like swimming, fishing and boating.

### Findings

The aquatic invasive species plants the lake is presently fighting are Eurasian Water Milfoil (EWM) and Curly Leaf Pond Weed (CLPW). The treatment for EWM started about three seasons ago. The treatment of CLPW will start this coming season (2006). EWM is an aggressive plant that forms in colonies that grow up to the surface of the water. If this plant is left unchecked it interferes with the recreational activities of the lake and makes the shallower parts of the lake, those areas ten feet deep or less, a virtual swamp. This plant is impossible to kill off completely and continuous annual treatment is required to keep it under control. CLPW is not as aggressive as EWM but it also will take over portions of the lake and grows in very dense clumps.

The key thought of the group was that the management of the effort to control these invasive species was not a one season effort but an effort that is required season after season. The management of these plants requires funding and interaction with the Town of Belle Plaine, the Wisconsin Department of Natural Resources (WDNR) and the private company that will do the surveying and treatment. Funding currently is provided by the Lake Association, the Town and through State grants. This management activity is a function that requires knowledge of and ongoing interaction with the organizations that will fund and perform the treatment.

### Recommendation

Recognizing that perpetuating the interaction of key organizations is of paramount importance to the successful management of the aquatic invasive species plants in our lakes, a recommendation to form an ongoing three person action committee was developed. This action committee will function with staggered terms giving the newest person time to become educated on what has to be done before being put in the responsible position of actually doing the tasks.

#### The responsibilities of the action committee are to:

1. oversee the acquisition of the funds, through grant writing and grant submission to the WDNR and other agencies that provide grants, presenting the financial needs of the program to the Town and the CLPA;
2. interacting with entities that perform survey and treatment services;
3. keeping the APM updated by keeping abreast of best practices in the control of invasive aquatic plants;
4. developing and implementing recommendations for protection of sensitive areas; and
5. educating the public through perpetuation of the Clean Boat Clean Waters (CBCW) program, writing news articles, and training presentations to schools and other lake user groups.

This recommendation was adopted by the CLPA Board of Directors. The first members of the APSG Action Committee are as follows:

Bob Tomashek - 1 year term; Daryl George - 2 year term; Kery Kafka - 3 year term

## INVASIVE AND NUISANCE SPECIES STUDY GROUP SUMMARY

### Scope of Study

The Invasive and Nuisance Species Study Group made up of Jan Kleiss, Stan Kleiss, Joy Krubsack, Scott Monroe, Justinn Heraly, consultant Dick Sachs and facilitated by Dennis Thornton started meeting on February 21, 2005 and concluded on January 12, 2006. The group spent time learning how to address the invasive and nuisance species threatening native populations. The invasive species studied included: zebra mussels, rusty crayfish, purple loosestrife, and gypsy moths. The nuisance species studied were: deer, mosquitoes, muskrats, and Canada geese.

### Findings

Cloverleaf Lakes, like much of Wisconsin, have several species of animals and plants that are unwanted and are threatening native populations. Here are the areas this group studied during 2005-06 and a brief summary of its recommendations to the Cloverleaf Lakes Protective Association Board:

- **Zebra mussels:** These invaders have not yet been found in the lakes, but are common in the Great Lakes and nearby Shawano Lake. Recommendation: Continue the boat inspection program to educate boaters and expand it by hiring a part-time employee during the summer to supervise, coordinate volunteers, schedule, record data and serve during busy boating times.
- **Rusty crayfish:** This invasive was discovered in the lakes in 2005. The CLPA participated in a statewide survey of crayfish and also started a trapping program. Recommendation: Continue monitoring, trap crayfish as needed and encourage catch-and-release fishing so the larger fish can eat crayfish.
- **Purple loosestrife:** This invasive plant is found in marshland. It is not a major threat to the lakes at this point. Recommendation: If it spreads, pulling out plants or bringing in loosestrife-eating beetles can be effective.
- **Gypsy moths:** These moths can quickly eat all the leaves off trees and they have been found in small numbers here. Recommendation: Continue the Town of Belle Plaine's program of education and monitoring. Effective treatments include chemicals, wrapping trees to trap caterpillars and destroying egg masses.
- **Deer:** These animals are enjoyed in small numbers, but can destroy ornamental shrubs and flowers. Recommendation: Fencing and planting species the deer dislike are methods of control.
- **Mosquitoes:** The lake association has a sprayer that can be used to control these pests, but some residents object to the chemicals used. Recommendation: Continue the CLPA's policy of spraying if and when Shawano County declares the presence of West Nile Virus.
- **Muskrats:** This native species burrows into waterfront banks and can cause damage. Recommendation: Continue CLPA's policy of encouraging trapping to hold down numbers, paying a \$5 per muskrat bounty. Effective deterrents include riprapping shorelines as well as trapping.
- **Canada geese:** Like deer, residents enjoy geese in moderation, but an excessive number of "resident" geese leaves messes on lawns and pollution in the lakes. Recommendation: Residents can create lawn buffer zones or natural shorelines. There are also chemicals that geese dislike to be used on lawns.

One other area that the study group pursued is a frog study that group member Justinn Heraly conducted in the spring of 2005. He found a healthy and abundant population of frogs, which is an indicator species for environmental concerns. This study can be replicated in the future to determine whether the frog population remains healthy.

## RECREATIONAL USE STUDY GROUP SUMMARY

### Scope of Study

The Recreational Use Study Group made up of Jim Aumann, Jim Green, Nancy Green, Marv Letven, Carol Wegner, Mary Wetzel, consultant Bob Korth and facilitated by Esther Letven started meeting on February 21, 2005 and concluded on November 22, 2005. After becoming familiar with the concepts of biological and social carrying capacities, the group worked on determining the impact of recreational use on our lakes. A watercraft census was taken, a resident survey of lake usage was conducted, and the boat launch data was examined.

### Findings

There is little evidence that using our lakes for recreational purposes is having a detrimental effect on the biology of the lakes. Until biological indicators are identified and measured over time, it is difficult to assess the impact of boating, etc. on the health of the lake system.

To assess lake residents' perception of the recreational use of our lakes (social carrying capacity), a survey was sent to 414 lake area residents. A 59% return rate was an exceptional response and lends credibility to the survey. The majority of respondents (53%) reported that "enjoying the view, peace, tranquility, and wildlife" was the most important to them. The combined recreational uses of the lakes accounted for 27%. The survey found the balance between tranquility and recreational use was not a problem during the weekdays. Summer weekends were identified as more heavily used for recreational purposes. However, only 20% felt the lakes were overused (or worse) on weekends. The survey confirmed the group's expectation that Cloverleaf Lakes is not viewed as overused. This survey will serve as a baseline should the CLPA choose to repeat it in future years.

A watercraft census (counting number and types of boats on the lakes at specific and varied time periods) matched well with the survey data. Three different time periods for data collections confirmed that few boats are on the lakes during the week, while weekends are busier, but not overly crowded.

### Recommendations

In the end, the Recreational Use Study Team recommended strategies that would monitor the relationship between the biological health of the lakes and the use of recreational vehicles. Unless the indicators point to deterioration in the wellness of the lakes, no additional ordinances should be passed to regulate the recreational use of the lakes. In addition, the Study Team recommended strategies to educate boaters about their responsibility in maintaining a healthy lake system. The specific recommendations are:

6. Develop a measurable set of biological indicators. Establish a baseline and a schedule of regular measurements.
7. Develop an educational marketing campaign so those who use the lakes understand the rules, ordinances, and courtesies of using a lake.
8. Check signage around the lakes for ambiguity and make necessary adjustments.
9. Develop a database system that includes all boat monitoring data, including the past two years.
10. Promote boating safety courses in the area, and determine the feasibility of offering a boating course for children on our lakes.
11. Develop a "seek and find" water trail brochure.
12. Post signage at the boat launch reminding ice fishermen to remove their trash. Post reminders on shanties.
13. Appoint a person to represent CLPA at legislative hearings and other meetings.

Members of the Study Team agreed to transition into the Recreational Use Action Team.

## WATER QUALITY AND HABITAT STUDY GROUP SUMMARY

### Scope of Study

The Water Quality and Habitat Study Group is composed of six members: DNR Specialist Mary Gansberg (consultant), John Koss, Howard Unrath, Donna Loesl, Arlene Schabo and Bob Tomczyk. Originally our facilitator was Leeann Little. However, Leeann was forced to resign for personal reasons and was replaced by Esther Letven and Fran West-Tomashek. Initially our progress in prioritizing problems and developing recommendations was slow due to changing committee members and meeting time conflicts. However, once these problems resolved, progress was made.

### Findings

At the initial meeting the group discussed and identified a number of possible problems thought to negatively affect the water quality and habitat of the lakes. Subsequent in-depth discussions led to a consensus agreement in the group that the three areas of greatest concern were: Management of Carp, Sediment, and Phosphorous. Progress was made on generating action reports and developing recommendations in each of these areas by the following group members: Donna Loesl investigated the Carp issue, Howard Unrath, John Koss and Arlene Schabo focused on the issue of Phosphorous, and Bob Tomczyk focused on the issue of Sediments.

The study group realizes that there are a number of other concerns that could and should be addressed. Members of the Water Quality and Habitat Group will step forward to volunteer for a Long Term Working Committee to follow up on the recommendations coming forth from the study group and continue research on other concerns that were identified which might need to be addressed in the future.

### Recommendations

1. The growing number of Carp in the lakes. Carp have no predators. They multiply wildly, completely displacing native species in some lakes, destroying native vegetation, increasing water turbidity, lowering oxygen levels and starving out young largemouth bass. (Supporting notes and data available)

#### Recommendation:

- a. Continue to observe carp situation in early spring when they start to spawn.
- b. Encourage bow hunters to shoot carp in Cloverleaf Lakes.
- c. Contact DNR to obtain Carp census.

2. Declining water clarity in the Cloverleaf Lakes. The shallow nature of Pine Lake, (39% five foot or less, Grass lake, 50% five foot or less), in consort with increasing recreational use, results in reduced water clarity because bottom sediments are being churned up. (Supporting notes and data available.)

#### Recommendation:

- a. Develop a lake use plan for recreational boating on the Cloverleaf Lakes. For the purposes of maintaining the level of recreational boating and also improving/ maintaining water clarity we need to develop a recreational water use plan. The plan will need to include recreational practices that reduce turbidity.

3. Phosphorous/Nutrients in Cloverleaf Lakes. Too much phosphorous in lakes may lead to excessive plant growth, algal blooms, and poor water clarity. (Supporting notes and data available).

#### Recommendation:

- a. Develop phosphorous/nutrient management program for the Cloverleaf Lakes.

## WATERSHED ISSUES STUDY GROUP SUMMARY

### Scope of Study

The Watershed Issues Group included: UW Extension Educator Chad Cook (consultant), Craig Johannesen, Larry Malnor, Ed Stuebe, Roger Wilson and facilitator Harriet McCauley. The study looked at those pollutants making their way into the lakes that are detrimental to the health of Cloverleaf Lakes. These substances include nutrients (primarily phosphorus), sediment, and potentially petroleum products, household hazardous chemicals, and non-household hazardous chemicals.

### Findings

The pollutants listed above either enter our lakes primarily through human activities. The Watershed Issues group believes most of these pollutants originate relatively close to our lakes rather than coming from areas of the watershed further from the lakes.

Both the amount of development and its proximity to the lakes are factors that increase the likelihood of pollutants entering the lakes. Development creates impervious surfaces. Rooftops and paved roads, driveways, and parking lots prevent infiltration of rain and snowmelt. Additionally, as development occurs, it often means the vegetation of a particular area is also changed. Natural vegetation patterns (trees, shrubs, and smaller plants) have changed into maintained lawns in many cases. This change promotes runoff rather than infiltration. So, combining the change in vegetation around the lakes with the large areas of impervious surfaces dramatically increases the amount of water running off the land and into the lakes.

Improper (and even proper) use, storage, and disposal of pollutants around our lakes make them available for transport into the water. When the increased amount of runoff comes in contact with pollutants, it has the potential to carry the pollutants along with it. Since the pollutants are predominantly used near the lakes, they are more likely to enter the lakes with the runoff.

### Recommendations

#### General

1. Develop a directory for all property owners with permitting information.
2. Implement a program to test wells to see if water flowing into the lakes is contaminated.
3. Implement a program to test soil samples.
4. Enforce existing regulations.
5. Provide a comprehensive packet of information to new residents.
6. Periodically test the inflows to Cloverleaf Lakes for basic water quality parameters.
7. Develop partnership with evaluation specialists so programs implemented are effective.
8. Set up a "lake fair" to educate residents.

#### Specific

1. Nutrients: Several recommendations were made to eliminate the use of phosphorus-containing fertilizers, encourage the use of vegetated buffers, rain barrel, and rain gardens (to decrease runoff into lakes), and the proper disposal of yard waste.
2. Sediment: These recommendations educated residents on the impact of sediments to the lakes, and encouraged the use of other devices (in addition to #1 above) such as ponds or porous pavement to reduce runoff. These recommendations also promoted the use of proper types and amounts of vegetation as well as best management practices during earth disturbing activities.
3. Petroleum Products: Identify and distribute information on proper disposal locations and techniques while encouraging compliance with storage tank regulations.
4. Hazardous Chemicals: Promote the county's Clean Sweep program and alternatives to road salt in the winter.