P.O. Box 93
Star Prairie, WI 54026
cedarlake-wi.org

STAR PRAIRIE FISH AND GAME

Our thanks go out to the Star Prairie Fish and Game club for their on-going support for Cedar Lake activities. The club donated $1,000 to support the Clean Boats, Clean Waters program in 2014 and plans to contribute again in 2015. Club members install, remove, and maintain the lake buoys and help with spring clean-up around the lake. Star Prairie Fish and Game is also providing herbicide and support to control invasive species such as Japanese and Giant knotweed around the lake.

THANK YOU SPF&G!

WEB/EMAIL NOTICES

To receive this newsletter and other lake notices electronically, subscribe to our email list!
Go to http://cedarlake-wi.org and join our list in the upper right corner of the home page.

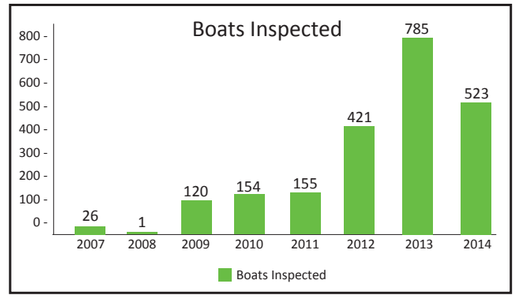
Cedar Lake Protection & Rehabilitation District

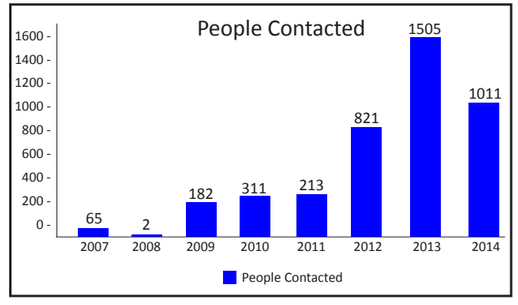
Volume 2 • First Edition A NEWSLETTER FOR OUR FRIENDS AND NEIGHBORS February 2015

CLEAN BOATS CLEAN WATERS PROGRAM

The Cedar Lake Protection and Rehabilitation District hires students to remind boaters to take steps to prevent aquatic invasive species from entering the lake at the boat landing. Plant fragments and animals attached to boats, trailers, and other gear, and water in live wells can readily transport aquatic invasive species. Staff also gather watercraft inspection data which helps understanding of boater behavior on Cedar Lake and statewide!

Statistics from recent work at the north boat landing are reported in the graphs to the right. Last summer the Clean Boats Clean Waters crew inspected 523 boats and talked with 1,011 people at the landing. Many of these boats came from lakes such as Bass Lake and Lake Mallileau, which have Eurasian water milfoil present.





For Suspected Aquatic Invasive Species
Contact Bob Goodlad
715-248-7672

ALUM TREATMENT UPDATE

The lake district board is planning for the alum treatment to occur in 2016 and is currently seeking grants to support the treatment. The board submitted an application to the Wisconsin Department of Natural Resources Lake Protection Grant Program in early February requesting $200,000. Grant awards will be announced by mid-April. Another application will be submitted by April 15th to the DNR's Targeted Runoff Management Grant Program.

As we anticipate the Cedar Lake alum treatment, questions frequently arise about its potential for success.

HOW DOES ALUM WORK?
Alum (aluminum sulfate) is a nontoxic material commonly used in water treatment plants to clarify drinking water. In lakes, alum is used to reduce the amount of phosphorus in the water and in the lake sediments. Limiting phosphorus reduces the potential for algae growth. Most of the phosphorus in Cedar Lake waters comes from lake bottom sediments when oxygen is depleted from the lower layer of lake water. When applied to the lake, alum combines with phosphates forming a permanent mineral, so phosphorus isn't available for algae growth.

ARE THERE EXAMPLES OF SUCCESSFUL ALUM TREATMENT PROJECTS?
There are an increasing number of lakes being treated each year in the U.S. The total number of documented lakes exceeds 185, and 80% of these have been deemed "successful," meaning there were multiple years of significant water quality improvements. Success rates have also been improving based on updated dosing methods and longer periods of follow-up observation.

A number of case studies have been conducted on lakes that were treated with alum. One overview study found that alum treatments were effective in six of nine shallow lakes controlling phosphorus for at least eight years on average. Alum treatments were reviewed in the Cedar Lake water quality study with particular attention to the doses received. Where dosages were in a range similar to what is proposed for Cedar Lake, treatment effectiveness ranged from 5 to 18 years. Shorter reported time of effectiveness may be related more to the number of years monitored after treatment rather than failure after a particular amount of time.

Alum application on a Wisconsin lake

Four lakes of the Minneapolis Chain of Lakes treated with alum (Harriet and Calhoun in 2001 and Cedar Lake and Lake of the Isles in 1996) all showed water clarity improvements. Harriet, Calhoun, and Cedar were at or below historical total phosphorus levels through at least 2005. Lake of the Isles received the lowest treatment dose, and the lake returned to pretreatment conditions after six years.

WHAT IS THE LIKELIHOOD OF SUCCESS OF ALUM APPLICATION ON CEDAR LAKE?
Good candidate lakes for alum treatment include those with low external and high internal phosphorus loads. Cedar Lake's sediments contribute about 85% of the lakes' summer phosphorus load, making control of sediment phosphorus critical for water quality improvements. The external or watershed load from Horse Creek is already very low. Indeed, water quality objectives for Cedar Lake will not be met without the alum treatment.

Limnologists are also learning that one large, single treatment may not be as effective as multiple, lower dose applications spread out over several years. The strategy for Cedar Lake is two alum applications spread out over a couple of years in order to increase phosphorus binding efficiency.

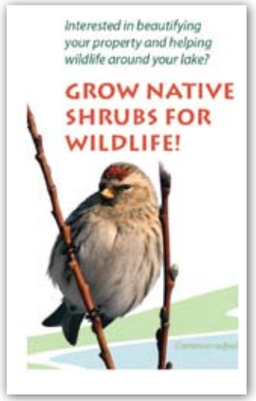
Although sediment phosphorus concentrations are moderate in Cedar Lake sediment, they are highest in the upper 3-4 inches. The alum dosage is targeted toward completely binding this phosphorus by settling through this upper 4 inch layer. Since alum is "heavy" and sediment in Cedar Lake is very fluid, alum should settle into the sediment and bind this phosphorus.

NATIVE PLANTS SALE

Native trees, shrubs, and prairie plants are available in annual sales from Polk and St. Croix Counties.
For more information and to obtain an order form:

St. Croix County Resource Management Division
(715-531-1904) lori.stansbury@co.saint-croix.wi.us

Polk County Land and Water Resource Department
(715-485-8699) patijoa@co.polk.wi.us



NATIVE SHRUBS for WILDLIFE

WANT TO ATTRACT BIRDS AND BUTTERFLIES TO YOUR CEDAR LAKE LANDSCAPE?
Native shrubs are important components of a waterfront landscape. They provide food and cover for wildlife and help to reduce erosion and runoff from lakeshores.

RED OSIER DOGWOOD *(Cornus stolonifera)*

Red osier dogwood has bright red stems in the winter and showy white flowers in the spring. It grows well in full to partial sun on wet to medium soils. It will grow from 4 to 10 feet tall.

A great lakeshore plant!

CHOKECHERRY *(Prunus virgina)*

Chokecherry is a small tree/ large shrub that will grow from 12 to 25 feet tall. It has beautiful clusters of white flowers which turn to tart berries that birds love or can be made into wines, syrups and jams.

Chokecherry grows in full to part sun in a wide range of moisture conditions.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES TIP LINE

To confidentially report suspected wildlife, recreational and environmental violations 24 hours/day
Call or text: 1-800-TIP-DNR 1-800-847-9367