

The Deer Lake Conservancy Report

Spring 2000

Conservancy Completes Fifth Major Project

The Deer Lake Conservancy has completed the excavation of a sediment filled wetland in watershed #1, just east of Camp Lawton. The wetland restoration project was financed by a grant from the Department of Natural Resources Lake Management Protection Program. Engineering and technical assistance were provided by the Polk County Land and Water Resources Office.

The purpose of the project is the restoration of open water habitat in this wetland. The result will be an elimination of potential nutrient loading from the existing sediments, creation of a habitat for ducks and other aquatic birds and adequate area for storm water detention.

Engineering work began with core sampling in the frozen wetland last winter to determine the original pre-development profile of the pond. The restoration required the removal of 4,000 cubic yards of nutrient rich material, which was draining directly into the lake. The material was removed to a safe area where it could not drain into the watershed.

"Data from the Barr Engineering studies showed this to be a significant source of nutrient loading in Deer Lake," said Dave Peterson of the Polk County Land and Water Resources Office. To follow up on earlier study data, the Conservancy worked with Amery High School's water biology class to do additional sampling and study. The findings not only confirm the problems with high concentrations of phosphorus and ammonium nitrate in this watershed, but also were expanded to study levels of fecal coliform bacteria not examined in earlier studies. As a part of the grant, continued monitoring will take place in this watershed so that improvements in water quality can be accurately tracked. The Conservancy is very grateful to Mr. Todd

Stunteback of U.S. Geological Survey's Water Resource Division for the loan of the latest computer monitoring equipment. This information is available at the USGS web site at [HTTP://W1.WATER.USGS.GOV](http://W1.WATER.USGS.GOV) then click on REAL TIME STREAM FLOW then choose a basin: St. Croix.

The Conservancy would like to acknowledge property owners Rudy Blakemand and Don Hill for their cooperation and support of this project. It should also be noted that through their interest in this project, Camp Lawton has begun working with the Land and Water Resources Office on a short and long term conservation management plan for their property.



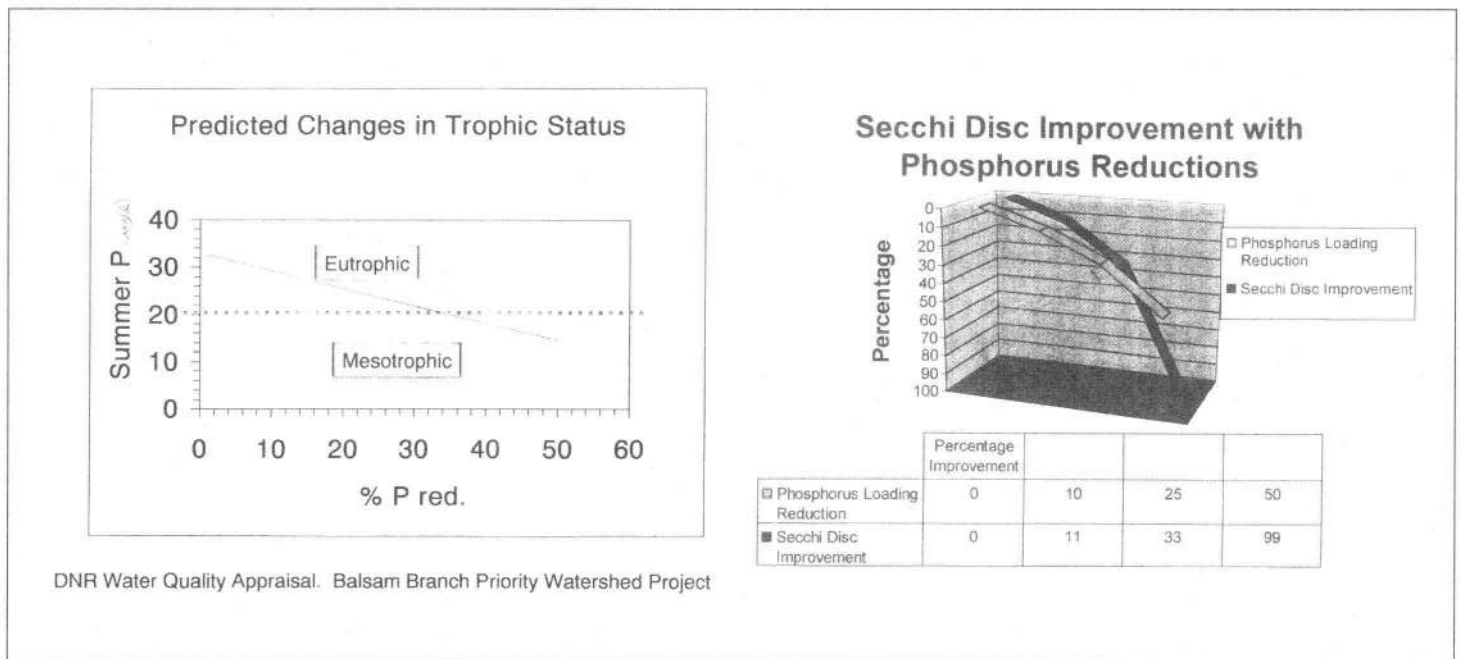
Watershed #1
Pond Restoration

Native Prairie Planting Completed

The Deer Lake Conservancy, working with Prairie Restoration specialist Mike Johnson of the Department of Natural Resources, has completed the successful restoration of 28 acres of native prairie on sites in watersheds 3 and 4. The restoration features more than 50 species of native prairie grasses and prairie wild flowers. Many of these species had disappeared from the Wisconsin landscape in the early 1900s.

The conservancy has worked with a biologist from the Department of Natural Resources Endangered Species

Program to match these rare plants with appropriate soil types and has hand planted these seeds into the prairies of both watersheds. The border areas of both prairies have been planted with more than 1200 trees and shrubs, including pine, oak, wild American plum, crabapple, highbush cranberry, hazelnut and other plants with an emphasis on wild life benefits. The Conservancy would like to gratefully acknowledge the National Park Service, which sent a tree planting crew to help Conservancy members with this project.



Water Clarity Improvement

In looking through DNR research data, Deer Lake Conservancy consultant, Cheryl Bursick, a water biology specialist, found a study from the mid 1990's looking at several of northern Wisconsin's best lakes. The purpose of the study was to determine the effect of significant phosphorus reductions on water quality, and to see whether it would be possible to accomplish a change in trophic status through such reductions. All lakes are divided into three classes: oligotrophic (a pristine predevelopment lake), mesotrophic (a lake in transition, very good water quality, probably Deer Lake from the 1920s-1950s), and eutrophic (nutrient rich, profuse and unsightly algae blooms and aquatic weeds). Deer Lake, as are most developed lakes, is a eutrophic lake.

The study looked at what kind of reduction in phosphorus loading would be necessary to change a eutrophic lake back to mesotrophic status. It is significant that this has never been accomplished before in Wisconsin, according to the DNR. An examination of the trophic status graph shows that this would require a 38% reduction in phosphorus for Deer Lake. With the recent completion of the wetland restoration in watershed #1, the total phosphorus reduction from Conservancy projects should approach 45%, making this the first lake in Wisconsin to return to mesotrophic status.

What this means in terms of water clarity is shown in

the secchi disc chart provided. While a 10% reduction in phosphorus loading yields only an 11% improvement in secchi disc readings, a 50% reduction in phosphorus, which is within reach, doubles the secchi disc reading. In other words, if you could see the bottom of the lake in ten feet of water, you would then be able to see bottom in twenty feet of water.

How long will this process take, we don't know. It has never been done before. We are blessed with a spring fed lake, both internally and externally (from Rock Creek). As we reduce phosphorus loading, the lake will gradually purge itself. We only need to give it that chance.

What You Can Do

With the completion of the pond restoration in watershed #1, the Conservancy will have achieved its initial goal of getting a structural practice in place in each of the five watersheds identified in the Barr Engineering study as critical to the management of nutrient loading to the lake. The Conservancy plans to continue to monitor these projects and to implement additional practices where they can be found to be effective. Approximately half of the phosphorus loading to the lake comes from agricultural sources; an additional 42% comes from essentially uncontrollable sources, atmospheric deposition groundwater, and internal loading. The other manageable source of phosphorous, accounting for the remaining 8%, is the direct drainage area, that is, the lake front community. While some years ago, this seemed like a relatively small amount, as we have installed practices with operational efficiencies exceeding 90% reductions from agricultural sources, this now becomes our largest manageable source of phosphorus. We need to do our part to protect this beautiful lake.

There are a number of things that we can do – probably the most basic is to eliminate the use of lawn fertilizers containing phosphorus. Phosphorus free lawn fertilizers are now easy to find, and most lawn services will provide phosphorus free applications. Another basic is to eliminate laundry detergents containing phosphorus. In Wisconsin, all detergents must be marked to state that they are phosphorus free or contain phosphorus.

One of the most serious sources of pollution to the lake are non-conforming septic systems. While many of the old systems have been replaced, there are a number still in use. These systems leach directly to the lake. If you have such a system, please consider replacing it. Now is a good time to look at this option, as state ordinances will soon

mandate that this must be done. Replacing a system under future, more restrictive guidelines will be more expensive than the current replacement guidelines.

Waterfront Landscapes

A new focus of lake protection is the installation of buffer strips at the water's edge. These areas provide an attractive alternative to mowing right to the water's edge. Using a diversity of deep-rooted plants and shrubs, they serve as a filter strip for chemicals and pollutants coming from lawns and driveways, as a short mowed grass cannot. There is an additional aesthetic benefit as well. They help to preserve the historic character of one of northern Wisconsin's best lakes, giving it a more natural look. The next time you drive around the lake, ask yourself what shoreland qualities you would like to preserve. If we continue at our present rate of development in the shoreland buffer zone, a drive around the lake will look like a drive through a residential area of Minneapolis or St. Paul.

Recent DNR studies have shown that restoration of shoreland buffer areas have a significant benefit to wild life habitat. One study showed the species of birds more than doubling with buffer areas. Another benefit is additional free time by not having to mow as much yard.

Information on buffer strip restoration is available through the Polk County Land and Water Resources Department at P.O. Box 460, Balsam Lake, Wisconsin 54810 or (715) 485-8699. Please ask for restoration specialist Lisa Reas. She will be willing to look at your property and make recommendations, or to work with you to develop a plan. This is a cost sharable practice. The department will cover 70% of the cost of plantings.

We have seen the benefit of working together to control agricultural pollution. We all need to do our part with better management practices on our own properties. Our legacy will be to have left this lake a better place than we found it, and that should be our challenge to future generations.

2000 Deer Lake Conservancy Annual Meeting Notice

**Saturday, July 8, 9:00 a.m.
Dalles House**

Conservancy Membership Roster

Founding Members

Mr. & Mrs. Jean Adamson
Mr. & Mrs. Elmer Andersen
Mr. & Mrs. Mark Becker
Dr. & Mrs. Allen Bergh
Marie Blakeman
Mr. & Mrs. Rudy Blakeman
Mr. & Mrs. Gene Booker
Mr. & Mrs. Jerry Carroll
Mr. & Mrs. Pat Corcoran
Mary Coyte
Dr. & Mrs. Barclay Cram
Mr. & Mrs. Bun Dawson
Deer Lake Improvement
Association
Dr. & Mrs. John Dowdle
Dr. & Mrs. D. J. Dummer
Mr. & Mrs. James Earl
Mr. & Mrs. Roger Foussard
Mr. & Mrs. Paul Fritzsche
Jim Miller & Lynn Gaspardo
Mr. & Mrs. Alan Heartman
Mr. & Mrs. Ray Herzog
Mr. & Mrs. Donald Hill
Mr. & Mrs. Rob Ilstrup
Mr. & Mrs. Randall Johnson
Dr. & Mrs. Tom Johnson
Mr. & Mrs. Don Knutson
Dr. & Mrs. Arne Lagus
Don & Joan Leedy
Dr. & Mrs. Ted Lindbom
Mr. & Mrs. John Marinovich
Mr. & Mrs. Tom Mathias

Mr. & Mrs. Edwin McBride
Mr. & Mrs. Mark Montgomery
Mrs. Elizabeth Murphy
Mr. & Mrs. Ken Nelson
Mr. & Mrs. James Ostenson
Mr. & Mrs. Bill Patton
Mr. & Mrs. Richard L. Pease
Mr. & Mrs. Mike Pohlen
Chuck Rabuse
Mr. & Mrs. Dennis Raedeke
Helen Ravig
Mr. & Mrs. Robert Rawlings
Merodie Riegel
Mr. & Mrs. Paul Ross
Renee C. Ryan
Dr. & Mrs. Steve Sackett
Bill & Linell Sathers
Mr. & Mrs. Steve Schletty
Mr. & Mrs. Rod Stensrud
Mr. & Mrs. Hugo Victor
Mr. & Mrs. Richard Weber

Annual Members

Mr. & Mrs. James Ainsle
Mr. & Mrs. Roger Anderson
Elizabeth Barry
Mr. & Mrs. Jay Becker
Mr. & Mrs. Stephen Bereska
Dr. & Mrs. Geoffrey Bodeau
Mr. & Mrs. Steve Boldt
Mr. & Mrs. Peter Boo
Dr. & Mrs. Mark Boyken
Mr. & Mrs. James Casterton
Mrs. Jan Chatterton
Mr. & Mrs. Dan Chausee
Terry Childers &
Colleen Fogarty
Mr. & Mrs. Cal Dinham
Mr. & Mrs. Frank Durocher
Mr. & Mrs. John Duxbury
Dr. Vince Eilers
Mr. & Mrs. Dennis Enright
Mr. & Mrs. Jere Ericson
Mr. & Mrs. Leo Fautsch
Mr. & Mrs. Calvin Forbes
William L. Foussard
Mr. & Mrs. Michael Frank
Mr. & Mrs. Craig Gagnon
Geraldine Given
Mr. & Mrs. Charles Gornick
Barnard Hall
Mr. & Mrs. Carl Hansen
Mr. & Mrs. Jack Howitz
Mr. & Mrs. Arne Johnson
Mr. & Mrs. Ken Johnson

Mr. & Mrs. Randall Johnson
Mr. & Mrs. Wes Johnson
Mr. & Mrs. Stan Kane
Mollie Keys
Chris & Merry Krueger
Camp Lawton
Mr. & Mrs. Ken R. Lear
Mrs. Patricia Lebens
Mr. & Mrs. James Meyer
Ms. Barbara Mork
Mr. Thomas Nolan
Mr. & Mrs. Dave Olson
Mr. & Mrs. Tim Pabst
Mr. & Mrs. Kirby Puckett
Mr. & Mrs. Dick Riebe
Dr. & Mrs. Fred Riegel
Curt Rieso
Mr. & Mrs. Peter Sammond
Mr. & Mrs. John Saylor
Mr. & Mrs. Richard
Schumacher
Mr. & Mrs. Wayne Shelton
Ms. Judith Sitarz
Mr. & Mrs. Lester Small
Alice T. Smith
Arlette Soderberg
Jodi Solum
Mr. & Mrs. Robert Spinner
Mr. R. C. Stanek
Mr. & Mrs. John Tester
Dr. & Mrs. Mark Thayer
Mr. & Mrs. John Wright

1999-2000 Conservancy Officers and Directors

Dennis Raedeke, Chairman
Jim Miller, President
Jean Adamson, Vice President

Don Hill, Treasurer
John Marinovich, Secretary

Roger Foussard
Paul Fritzsche
Rob Ilstrup

Dedicated to the preservation of Deer Lake

The Deer Lake conservancy is a tax exempt organization incorporated in the state of Wisconsin and also registered in Polk County. The purpose of the organization is the preservation of Deer Lake and the surrounding land that contributes to the natural, scenic, recreational and productive value of the lake. As a 501C (3) corporation, any contributions are fully deductible from Federal and State income tax. Contributions may be in the form of cash, securities, property and land easements.

Contributions should be sent to
The Deer Lake Conservancy
P.O. Box 1139
St. Croix Falls, Wisconsin 54024

Interested individuals may also contact Jim Miller by phone at 715-483-3338.