Green Water and Odor are signs that our lakes are not healthy. We need healthy lakes for our area's Economy, the Natural Environment, and Enjoyment!

The watershed for Lake Herman, Lake Madison, and Brant Lake covers over 80,000 acres. The Watershed Improvement Project is a partnership between town dwellers, farmers, and lakeshore residents that will benefit and protect the entire watershed and everyone who lives or visits here. We need to keep every part of our watershed healthy to have healthy lakes.

These organizations are already Clean Water Partners:

Lake County
City of Madison
Lake County Conservation District
Natural Resource Conservation Service
Lake Madison Association
Lake Herman Association
Brant Lake Association
S.D. Department of Environment and Natural Resources
Dakota State University
U.S. Environmental Protection Agency
Lake Madison Sanitary District
Lake Herman Sanitary District
Brant Lake Sanitary District
East Dakota Water Development District
South Dakota Extension Service
U.S. Fish and Wildlife Service
S.D. Department of Game, Fish and Parks

To Join Them or Get More Information, Contact:

Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, SD 57042
605-256-2571
lakeproj-coor@sd.nacdnet.org

The Lake County Watershed Improvement Project Wants YOU to

Be A Clean Water Partner

In Town

The Lake County Watershed Improvement Project was created to help us clean up our lakes and protect them for future use. Its goal is to improve water quality in Lake Herman, Lake Madison, Round Lake, and Brant Lake, and especially to reduce the amount of phosphorus that goes into the lakes. To do this, we need to look at all the water that flows into these lakes - our entire watershed.

Right now, our lakes are at a turning point. Will they continue to fill with sediment and become "greener" every year? Or will each of us look at what we do that causes these problems and make a few simple changes in our lives?

The Future of Our Lakes Depends on Everyone

On The Lakes

The Lake County Watershed Improvement Project helps citizens become better stewards of natural resources in their own backyards.

The health of our lakes is effected by the everyday activities of every citizen. To have healthy lakes in the future, each of us will need to be more aware of how we impact water quality. The Watershed Improvement Project will conduct studies and help citizens make the necessary changes by providing information and encouragement. In some cases, we can also provide funding to help install best management practices.

On the Farm

The Madison Daily Leader
9/22/00

Project coordinator hired for watershed project

By ELISA BENTLER

The watershed improvement project for Lake County has a newly appointed project coordinator. Lilith Jarding from the Colman area started Thursday.

The watershed project was developed by the Lake County Watershed Improvement Association, which is made up of representatives from Madison, Lake County and Lake Associations.

The LCWIA was formed after the results of an assessment project on Lakes Madison and Brant came back with the news that an abundance of phosphorus and other substances is present in the watershed.

The intentions of the three-year, $1.5 million Lake County project are to reduce the phosphorus level by 50 percent through controlling some sediment and erosion problems, creating a public awareness program, and conducting feasibility studies for future projects.

Local support for the project has been received by the Lake Madison Association, city of Madison, Lake County Conservation District and East Dakota Water Development District. A South Dakota Soil and Water Conservation grant has also been received, along with a major portion of the funding from the Environmental Protection Agency.

The Madison Daily Leader

9/29/00

Jarding looking forward to cleaning area lakes

By ELISA BENTLER

Lilias Jarding has a 20-year background in working with environmental projects.

Jarding has been hired as project coordinator for the Lake Madison, Herman and Brant watershed improvement project. She began last week.

She started her work in Rapid City and has also done work in Minnesota and Colorado. She has been in South Dakota for four years, and said she is fortunate to have a project to work on near her home.

Jarding

"I'm excited to be able to do this," Jarding said. "Not many projects fit my background."

The local project is a chance to work with something "down to Earth," she said, as well as a chance to work with all kinds of people to clean the lakes.

"I like moving around and talking to people in the community and finding out what we can do for them," she said.

"The watershed needs everyone to get it clean," Jarding said. "It's unique because we are working with three different populations — town dwellers, farmers and lake dwellers."

Jarding's first priority will be to start planning, and she said a key to that is public education.

Another part of the planning is locating people who want to participate in the project. "We hope everyone wants to participate," said Jarding. Although there is funding available to help share the cost of improvements, everyone is not necessarily willing to participate.

Jarding lives in northwest Moody County. Her son, Tom Reed, is attending college at Concordia; her daughter, Lilias Reed, is a sophomore at Brookings High School; and her husband Larry works in Sioux Falls.

The goal of the watershed project is to reduce phosphorus levels in the watershed by 50 percent. Jarding said most of the places the phosphorus has been coming from have been targeted through a prior assessment of the water. Key areas are from lawn or field fertilizers, city runoff, storm sewers and animal feedlots.

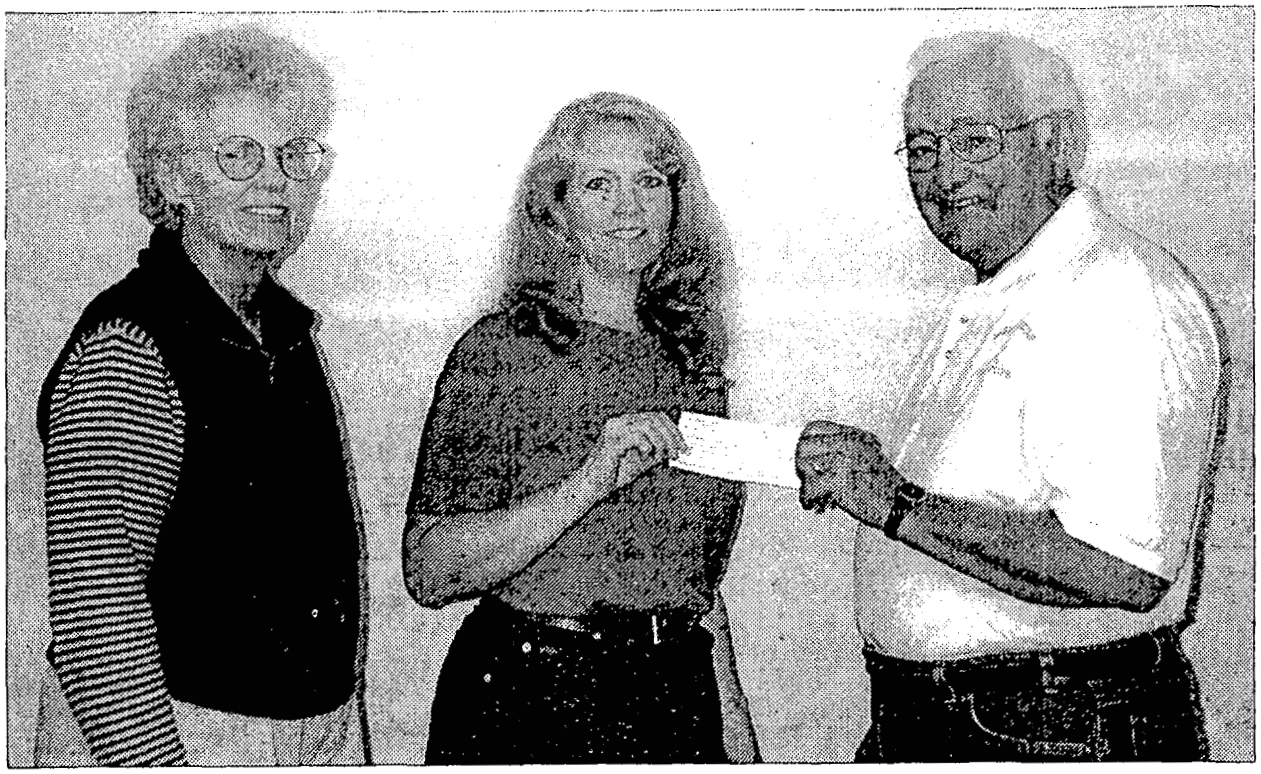
"Those are the places we're going to start with."

The project is to be implemented throughout the next three years.

"The key concept for this project is that to succeed, we have to be clean water partners," Jarding said. "Everyone likes the lakes, but for us to clean them, it has to be everybody."

Madison Daily Leader
Madison, South Dakota

10/2/00



WATERSHED CONTRIBUTION — Gene Moser (right), president of the Lake Madison Development Association, presents half of the $10,000 promise to the Lake Herman, Madison and Brant watershed project. The check was presented to Michelle Goodale (center) and Linda Hilde, both members of the Lake County Watershed Improvement Association. ***(Photo by Elisa Bentler)***

The Madison Daily Leader

10/12/00

Watershed promotion to begin

By ELISA BENTLER

Residents of Lake County should expect to hear quite a bit about the watershed program from now on.

Project Coordinator Lilias Jarding said that in some way, shape or form, she will soon be contacting just about everyone in the watershed.

The goal of the three-year watershed project is to reduce the level of phosphorus in the Lake Herman, Lake Madison and Brant Lake watershed by 50 percent.

The $1.5 million project is funded through grants and contributions from local entities.

Some of the projects to be implemented include sediment and erosion control, creating a public awareness program and conducting feasibility studies for future projects.

The project was developed by the Lake County Watershed Improvement Association, which is made up of representatives from the city, county and lake associations. The LCWIA was formed after the results of an assessment project on lakes Madison and Brant came back with the news that an abundance of phosphorus and other substances is present in the watershed.

Jarding said people will be contacted through letters, discussions with schools and ag producers, as well as project representatives attending various events.

Representatives plan to attend events like the Show 'n' Sell in November, Winterfest in January, Farm & Home Show in February, Lake Appreciation Day in June and Art in the Park in July.

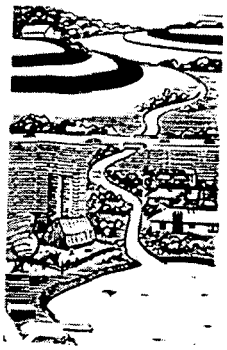
The theme of the project will be "clean water partners."

"We are emphasizing that everyone is necessary to make this project a success," she said.

Jarding said she will also be visiting with key businesses and working on getting zero phosphorus lawn fertilizer available for area residents.

The fertilizer is available by request for ag producers, Jarding said, but it isn't readily available for homeowners to apply to their lawns.

Jarding said the fertilizers will be comparable in cost and different brands are available.



Lake County Watershed Improvement Project
Lake County Conservation District

Cost-Share Programs for Landowners and Operators

The Lake County Watershed Improvement Project includes all land located within the watersheds of Lake Herman, Lake Madison, Round Lake, and Brant Lake. The Project's goals are to improve land use and water quality through the implementation of best management practices by farmers, lakeshore dwellers, and town residents. To do this, the Project is working to solve the problems that come from nonpoint source pollution – basically, pollution that doesn't come out of a pipe.

More specifically, the Project's goal is to reduce the amount of phosphorus going into our lakes by 50%. Sources of phosphorus include lawn and farm fertilizers, storm sewers, feedlots, and soaps. Phosphorus can be carried into the water directly or attached to sediment.

Special funds have been obtained for this project from the South Dakota Department of Environment and Natural Resources, local lake associations, the City of Madison, the East Dakota Water Development District, and the U.S. Environmental Protection Agency. Additional funds are being requested from the Natural Resources Conservation Service and from private foundations to further lower the cost to local people. This Project will benefit everyone who lives here or visits our area by providing clean, beautiful lakes for recreation, wildlife, and a healthier natural environment.

Who's Eligible?

Any farmer operating land located within the Lake Herman/Lake Madison/Round Lake/ Brant Lake watershed is eligible for participation in this Project. In fact, we encourage you to contact us about participation! A map of the watershed is provided on the back of this flyer.

Priority will be given to certain areas of the watershed, including:

- Animal feeding operations located adjacent to lakes, wetlands, or waterways.
- Cropland or pastures bordering lakes, wetlands, or waterways.
- Croplands or pastures in flood plains or wellhead protection areas.
- Land identified by water quality or soil assessment as contributing elevated phosphorus levels to the watershed.

What Practices Will Be Cost-Shared?

Funds have been obtained to cost-share the Operator's total cost to implement the following conservation practices:

- Animal Waste Management Systems
- Livestock Mitigation Structures/ Diversions
- Nutrient Management Planning
- Grassed Waterways
- Riparian Buffer Strips
- Multi-purpose Dams
- Terraces and/or Contour Buffer Strips
- Stream Bank Stabilization along Silver Creek
- Integrated Crop Management

Recipients of grant funds will be required to sign a maintenance agreement for the anticipated life span of the practice.

How Do I Sign Up?

Contact the Lake County Watershed Improvement Project at 256-2571, or drop by our office at 123 S.W. Second Street in Madison (the Conservation District/NRCS office). You can also contact us by e-mail at: **lakeproj-coor@sd.nacdnet.org** We're happy to answer your questions about any part of the Watershed Improvement Project.

Applications for Project funding can be made beginning in November 2000. The sign-up deadline for the first project year is January 26, 2001. This includes animal waste management systems, multi-purpose dams, stream bank stabilization, terraces, contour strips, grassed waterways, integrated crop management, and livestock mitigation structures. Applications will continue be taken through 2001, but farmers are urged to apply early so there's plenty of time for planning activities. Applicants will be ranked according to priority areas, water quality, and environmental benefits.

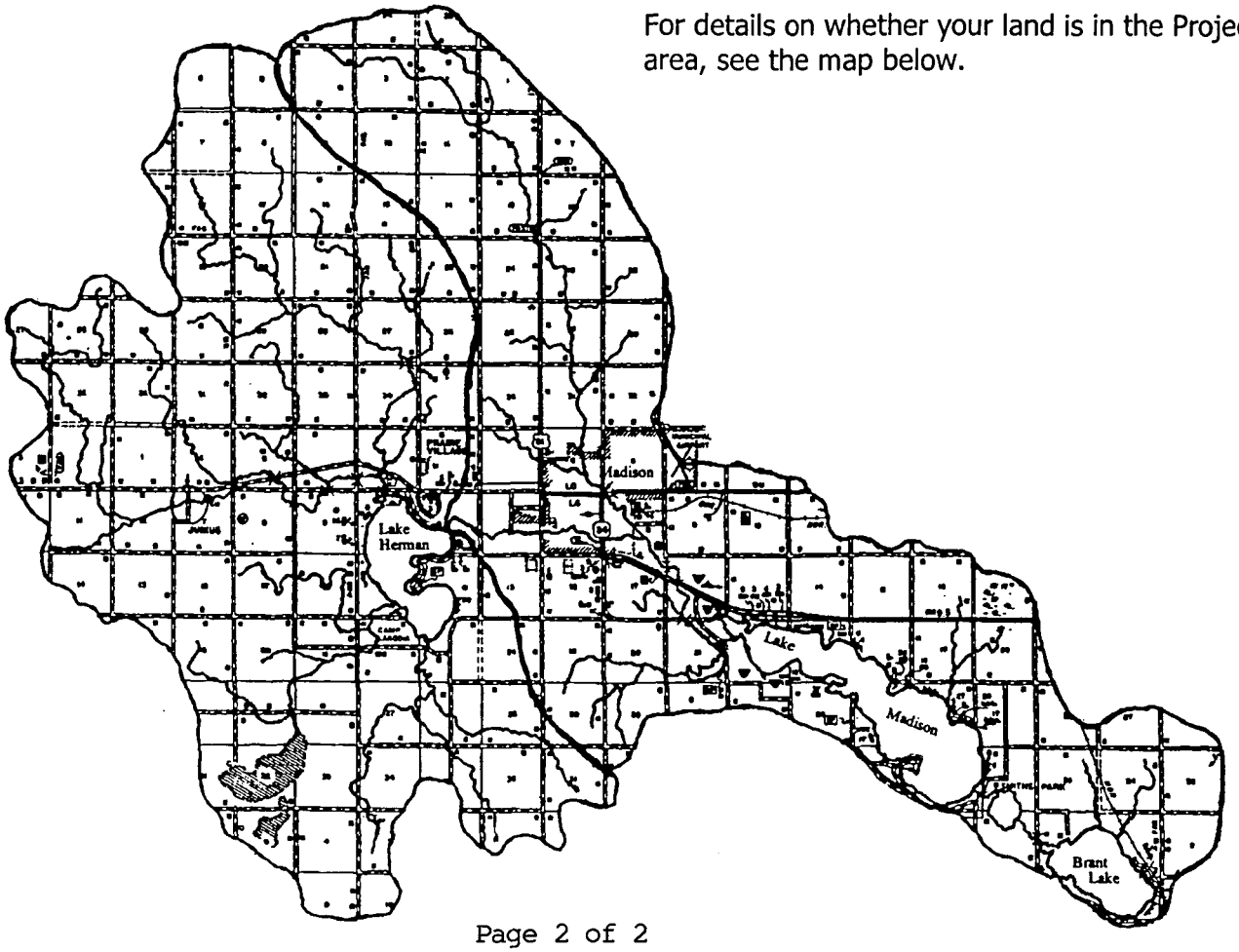
You can also help the Project by talking to your friends and neighbors about what we are trying to accomplish, attending Project information sessions, and stopping and talking to us at booths during local events. We are asking everyone in the watershed to be a "Clean Water Partner," because the future of our lakes depends on everyone.

What Area Is Included?

The following townships include part of the Lake Herman/Lake Madison/Brant Lake watershed:

- Badus
- Chester
- Concord
- Farmington
- Franklin
- Herman
- Lake View
- Leroy
- Orland
- Wentworth
- Winfred

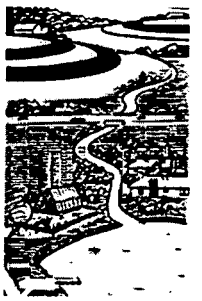
For details on whether your land is in the Project area, see the map below.



The Madison Daily Leader

10/26/00

LILIAS JARDING, project coordinator for the Lake Area Watershed Improvement Association, spoke to seventh-grade students in Madison Wednesday. The students learned about the watershed project which Jarding is in charge of and the purpose behind it: to reduce the phosphorus level in the wat Students also learned about Nonpoint Sou pollution (pollution that comes from ma sources) and ways they can help reduce t phosphorus. ***(Photo by Elisa Bentler)***



Clean Water Partners

Lake County Watershed Improvement Project

123 SW 2nd St.
Madison, SD 57042
605-256-2571
lakeproj-coor@sd.nacdnet.org

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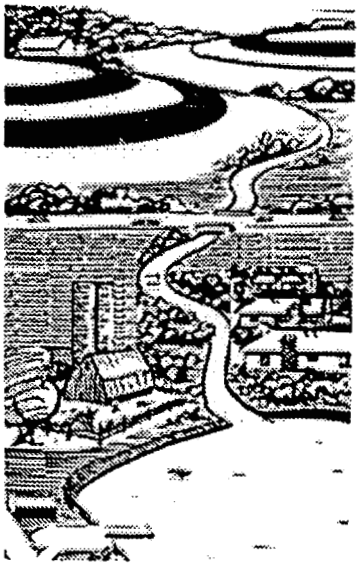


Lake County Watershed Improvement Project
Lake County Conservation District
123 SW 2nd St.
Madison, SD 57042-1999
Phone # 605-256-2571
Fax # 605-256-2007
lakeproj-coor@sd.nacdnet.org

WATERSHED WEBSITES

Whatever you want to know about watersheds, it can probably be found on one of these sites:

Watershed Weekly
Videos, News, and Projects
www.greenworks.tv/watershed_weekly/index.html (there is an underline between "watershed" and "weekly")

Gateway Area Storm Sewer Stenciling Project
How to do Storm Sewer Stenciling
www.siue.edu/OSME/river/stencil.html

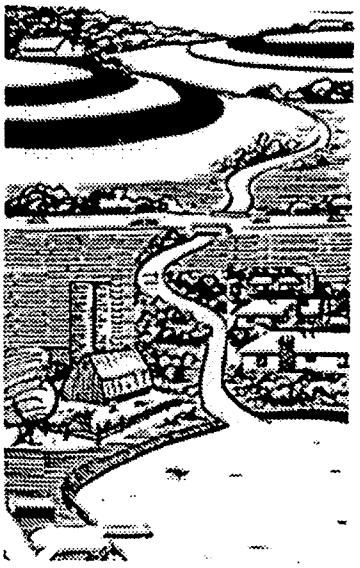
Know Your Watershed
www.ctic.purdue.edu/KYW/glossary/whatisaws.html

GREEN: Global Rivers Environmental Education Network
Environmental Education Links of Every Kind!
www.igc.apc.org:80/green/resources/html

Watershed Links
www.earthwater-stencils.com/links.html

Watersheds, Phosphorus and Water Quality
Good article on this Topic
www.extension.umn.edu/yardandgarden/YGLNews/YGLN-July 0100.html#sheds

To find out more about your own watershed, contact us at the Lake County Watershed Improvement Project.



Lake County Watershed Improvement Project
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INTEGRATED CROP MANAGEMENT
CROP CONSULTANTS

The Watershed Project focuses on reducing the amount of phosphorus entering area lakes, so we are most interested in working with farmers on fertilizer, manure, and sediment runoff issues. Cost-share funds are prioritized for use on lands where there are known issues. The Project may cost-share a variety of activities, including soil tests.

Crop consultants may be able to perform some or all Integrated Crop Management (ICM) activities. Here are some area businesses that can help with ICM:

Cenex in Flandreau (997-3638)

Jason Fiddelke is a certified crop adviser.

Centrol in Brookings (692-1766)

Several certified crop advisers are available.

Chester Farm Service (489-2171)

Mike Roberts and Tom Reiff are certified crop advisers.

Domestic Seed & Supply in Madison (256-6525 or 256-6529)

John Wheeting is a certified crop adviser. Brian Leighton at the Fertilizer Plant (256-3973) can do soil tests.

F & M Agronomy Center in Madison (256-6565)

Todd Kringen is a certified crop adviser.

Lake County Watershed Improvement Project
Lake County Conservation District

How Your Yard Can Save the Lakes

Did you know that the City of Madison is in the watershed that feeds into Lake Madison and Brant Lake? That means that **what we do in town changes the water quality in the lakes.** The Lake County Watershed Improvement Project needs your help to improve water quality by stopping phosphorus from flowing into the lakes.

Phosphorus is a naturally-occurring element, but when too much gets into the water, the lakes turn green and smell bad. Common household practices can add phosphorus to the lakes. This flyer will help you get started on doing your part to keep phosphorus out of the lakes and keep them healthy.

Phosphorus that gets into the lakes comes from two major sources: fertilizers and animal wastes. Most soaps also contain phosphorus. Phosphorus attaches itself to soil, so soil runoff is a major concern. Studies of our area show that the City of Madison is a source of the phosphorus that goes into Lake Madison.

Everyone has a stake in what happens to our lakes. Almost everyone in Madison enjoys the lakes in some way. And healthy lakes are critical to our local economy. Foul-smelling lakes do not attract visitors. But studies show that when a lake is cleaned up, it gets more visitors.

The Watershed Improvement Project is working with farmers, lakeshore residents, and townspeople to clean up the lakes. We want you to be a "Clean Water Partner." Here's how.

Understanding Storm Sewers

People who live along the creek have to be especially careful about what they do that could hurt water quality. But everyone is important, because when water runs off our yards, over sidewalks, and down driveways, it can take phosphorus with it -- and that water runs into the storm sewers along the streets. **Storm sewers do not go to the sewer plant. They go directly into the creek and, from there, into the lakes.**

Lawn Care

Many people work hard to have the greenest, most weed-free lawn on the block. But lawns like that are actually quite unnatural and require a lot of work to keep them from reverting to the natural habitat for our area. Homeowners in pursuit of the perfect lawn use up to ten times more synthetic chemicals per acre than farmers.

Healthy, natural lawns have grass with deeper roots and less thatch – they need less mowing and hold moisture better than treated lawns. So the first thing to think about is how to minimize lawn care. The second thing to think about is what plants are native to our area. Using native grasses would require starting over for most of us, but this is an option if you're just planting your lawn. Meanwhile, there are plenty of tips in the "Yard Design" section for the average family.

Fertilizer Use

Overfertilized lawns are more prone to disease, thatch buildup, and drought damage. If you think your lawn needs fertilizer, have it tested first. Phosphorus is naturally high in this area, and you may not need it. Retest every three to five years.

* Fertilize once a year. For cool season grasses, like Kentucky bluegrass, this should be in the fall.

* Use zero-phosphorus fertilizer. Most businesses in our area offer zero-phosphorus fertilizer as part of the Watershed Improvement Project. You can also get zero-phosphorus fertilizer in bulk from farm service stores. Zero-phosphorus fertilizer is as cheap as -- or cheaper than -- fertilizer that includes phosphorus, and it works just as well.

* Use "slow-release" fertilizer. It will work over time and is more likely to stay on your lawn.

* Set your fertilizer spreader to spread no more than 1 pound of fertilizer per 1,000 square feet of lawn.

* Don't spread fertilizer on sidewalks, driveways, or streets. If it lands on these surfaces, sweep it onto the lawn or scoop it up for future use.

* Never apply fertilizer to dormant lawns or frozen ground. Don't use it to melt ice – it doesn't work well, anyway.

* Avoid fertilizing when it is raining or likely to rain.

* Keep fertilizer off drainage areas, low spots, and creek banks.

Yard Design

Unless you are starting your yard now, creating a lakes-friendly yard can take some time. But a well-landscaped yard can also pay for itself by increasing the value of your home.

The key principles in creating a yard that helps to save the lakes are to try to slow down water as it moves across your yard and to encourage water to soak in. This means looking at what is growing where. Along a creek bank, a buffer strip of shrubs, native plants, or tall grasses can be an important asset and slow runoff. Having a buffer strip that requires little maintenance also helps minimize fertilizer use.

If your lot is sloped, terraces can add value to your home while stopping runoff. Contact the Watershed Improvement Project for information on building terraces.

If terraces sound like too much work, provide soil erosion protection on hard-to-mow places by planting things like juniper, cotoneaster, wintercreeper, or potentilla. Or consider planting strips of perennial plants across the slope and alternating them with strips of grass. See your local nursery for other ideas.

To slow runoff from any yard, preserve existing trees, and plant more trees and shrubs. Limit paved areas, as they prevent water from percolating down into the ground and increase runoff. Wooden decks, gravel or brick paths, and rock gardens allow rainwater to slowly seep into the ground.

At the very least, keep dirt from running off your property and into creeks and storm sewers. When you are piling or moving dirt, keep it contained, covered, and away from runoff areas.

Other Keys to Cleaner Lakes

A few other practices are important to keeping phosphorus out of our lakes:

* Keep lawn clippings, leaves, and ashes out of creeks and off the streets. Leave lawn clippings on your lawn or compost them.

* Wash your car at a car wash – car washes have traps to catch most of the dirt before it gets into the storm sewers. If you use a spray wand to wash your car, don't spray the soap onto driveways or away from the traps.

* If you wash your car at home, avoid using soap – use a little more elbow grease instead. If you must use soap at home, park your car on the lawn, so your grass can filter out some of the phosphorus before it gets into the storm sewers.

* Use a broom, not water, to clean driveways and sidewalks.

* Don't throw **any** type of waste in the creek area. This includes animal wastes.

* Restore bare patches in your lawn as soon as possible to avoid erosion. Spread mulch on bare ground to help prevent soil erosion and runoff.

That's how your yard can save the lakes.
Thanks for being a Clean Water Partner!

Contact us for more information at 123 SW Second St. or at 605-256-2571. Our e-mail address is lakeproj-coor@sd.nacdnet.org

Lake County Watershed Improvement Project
Lake County Conservation District

How Your Business Can Be A Clean Water Partner

The Lake County Watershed Improvement Project wants to make sure that Lake Herman, Lake Madison, and Brant Lake remain important assets in our area. But we need your help.

We're working to preserve and enhance our lakes by keeping phosphorus from getting into our area's water – and thus into the lakes. This primarily means focusing on fertilizers, animal wastes, and soaps. It also means containing soil, because phosphorus attaches itself to dirt and travels into the lakes with rain and other runoff.

Phosphorus is a naturally-occurring element, but when too much gets into the water, the lakes turn green and smell bad. Common business practices can add phosphorus to the lakes. This flyer will help you get started on doing your part to keep phosphorus out of the lakes and keep them healthy.

Understanding Storm Sewers

People who work and live along the lakes and creeks have to be especially careful about what they do that could hurt water quality. But everyone is important. In the City of Madison, when water runs off parking lots, lawns, sidewalks, and driveways, it can take phosphorus with it -- and that water runs into the storm sewers along the streets. **Storm sewers do not go to the sewer plant. They go directly into the creek and, from there, into the lakes.**

"Cleaning Up" Business Practices

When it comes to decreasing phosphorus, clean business practices mean avoiding or containing soap:

* Wash vehicles at a car wash – car washes have traps to catch most of the dirt before it gets into the storm sewers. If you use a spray wand to wash vehicles, don't spray the soap onto driveways or away from the traps.

* If you must wash vehicles, equipment, or buildings at your place of business, avoid using soap. Use a little more elbow grease, forced water, or a citrus-based product. As a last resort, use a non-phosphate soap.

* Don't let soap suds wash down driveways or off curbs and into the street. This sends them into the storm sewers and into the lakes.

Fertilizer Use

Over-fertilized lawns are more prone to disease, thatch buildup, and drought damage. If you think grassy areas need fertilizer, have them tested first. Phosphorus is naturally high in this area, and you may not need it. If you do need it:

* Fertilize no more than once a year, and use a "slow-release" fertilizer.

* Use zero-phosphorus fertilizer. Businesses in our area offer zero-phosphorus fertilizer as part of

the Watershed Improvement Project. You can get zero-phosphorus fertilizer in bulk from farm service stores. Zero-phosphorus fertilizer is as cheap as -- or cheaper than -- fertilizer that includes phosphorus, and it works just as well.

* Spread no more than 1 pound of fertilizer per 1,000 square feet of grass.

* Don't spread fertilizer on sidewalks, parking lots, driveways, or streets. If it lands on these surfaces, sweep it onto the lawn or scoop it up for future use. Never apply fertilizer to dormant grass or frozen ground.

* Avoid fertilizing when it is raining or likely to rain, and keep fertilizer off drainage areas, low spots, lake shores, and creek banks.

Landscaping

Unless you are starting from scratch, creating a lakes-friendly landscape can take some time. But a well-landscaped exterior can also attract customers and increase the value of your business.

The key principles in landscaping to protect the lakes are to slow down water as it moves across your land and to encourage water to soak in. This means looking at what is growing where. Along a lake or creek bank, a buffer strip of shrubs, native plants, or tall grasses can be an important asset and slow runoff. Having a buffer strip that requires little maintenance also helps save time and minimize fertilizer use.

If your land is sloped, terraces can add value while stopping runoff. Contact the Watershed Project for information on terraces.

If terraces aren't an option, provide soil erosion protection on hard-to-mow places by planting things like juniper, cotoneaster, wintercreeper, or potentilla. Or consider planting strips of perennial plants across the slope and alternating them with strips of grass.

Preserve existing trees, and plant more trees and shrubs. Limit paved areas, as they prevent water from percolating down into the ground and increase runoff. Wooden decks, gravel or brick paths, and rock gardens allow rainwater to slowly seep into the ground.

At the very least, keep dirt from running off your property and into creeks, streets, storm sewers, and lakes. When piling or moving dirt, keep it contained, covered, and away from runoff areas. Restore bare patches as soon as possible, and spread mulch on bare ground.

More Clean Business Practices

Here are some more things your business may be able to do to help clean up the lakes:

* Use a broom or a brush, not water, to clean driveways, parking lots, and sidewalks.

* If your business involves animals, be sure that animal wastes are properly contained and cleaned up so that they do not run off your property – either over the land or into storm sewers. This includes both large and small animals.

* Avoid placing grass clippings, leaves, or ashes on the streets. Compost them, or ask your waste hauler about local collection of yard wastes.

* If someone cleans your business or does your lawn care or landscaping, talk to them about the Watershed Project and show them this flyer.

* If you hire a contractor to do construction work at your business, be sure they know about the practices outlined in this flyer.

* If your company has a community giving program, consider helping to fund the Watershed Project. If you are part of a larger corporation, tell the community involvement office about our work. Because of restrictions on how our current funding can be spent, it does not cover all the local needs we have identified.

* Spread the word about cleaning up our lakes! It makes good business sense!

If you have any questions, please contact us at 605-256-2571 or via e-mail at lakeproj-coor@sd.nacdnet.org

We're here to help everyone become a Clean Water Partner.

Clean Water Pledge

Lake County Watershed Improvement Project
Helping Citizens Become Better Stewards of our Water Resources

Name of Recipient

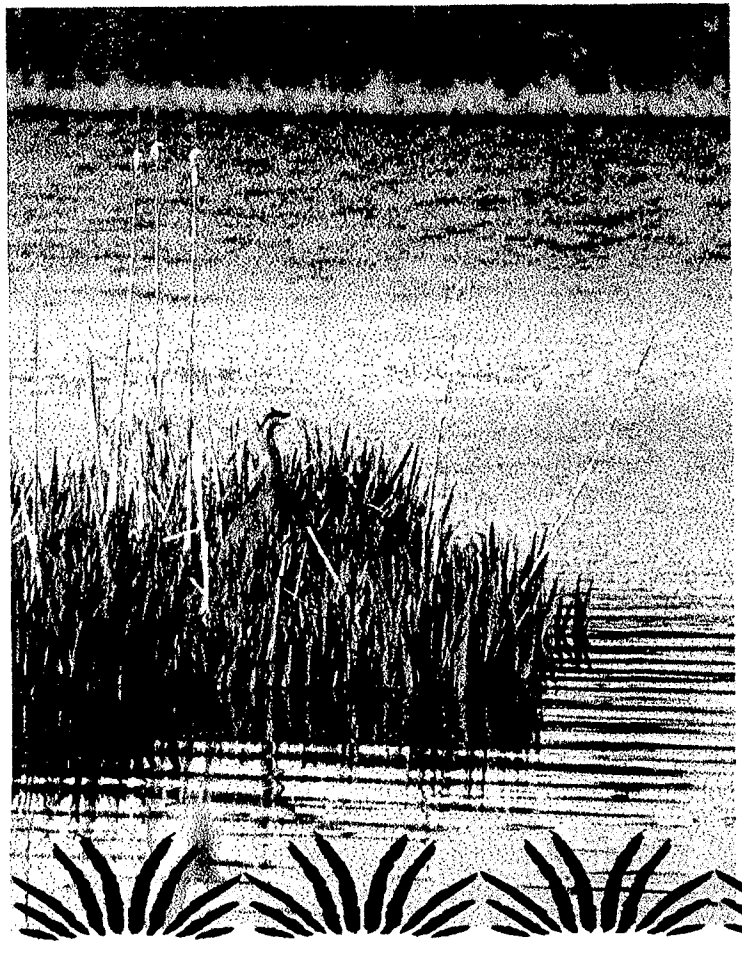
My Business Pledges to be a Clean Water Partner by:

- Distributing Information to my Employees, and
- Avoiding Practices that could Hurt our Lakes.

Signature _____ Date

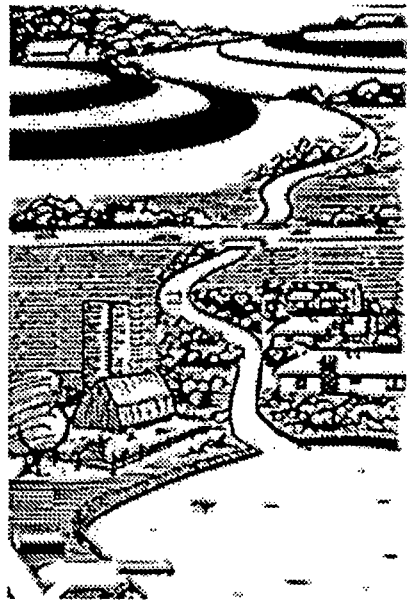
IN APPRECIATION

Thank You --- Lake Madison Development Association for being a Clean Water Partner



Your donation to the
Lake County Watershed Improvement Project
helps provide a better future
for our lakes, our communities, our farms,
our wildlife, and our natural environment.

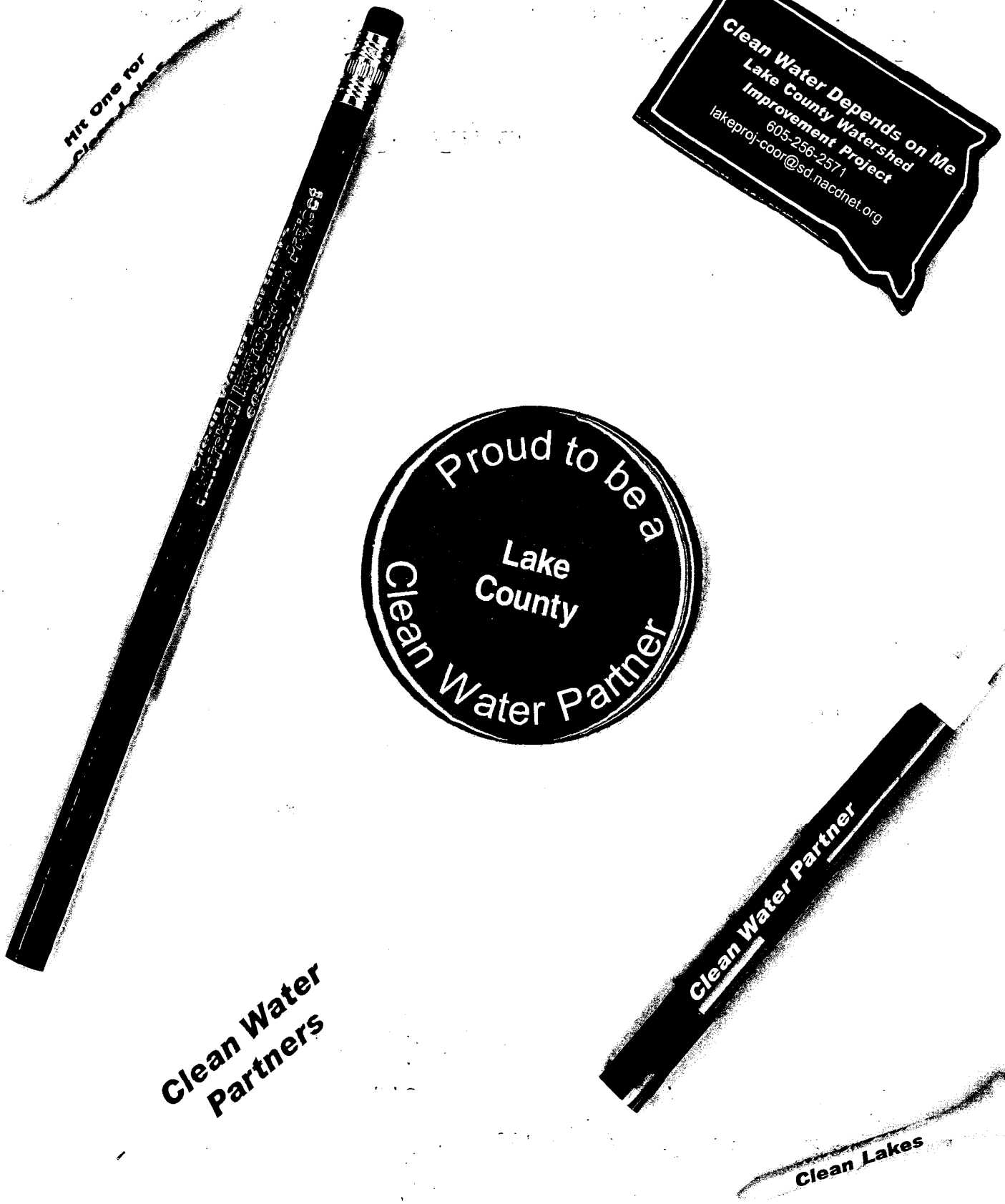
Lilias Jarding, Project Coordinator

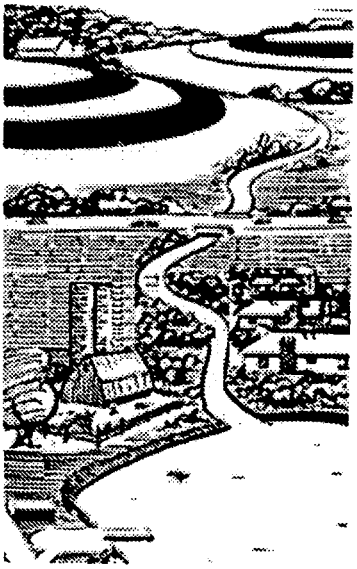


Clean Water Partner

Lake County Watershed Improvement Project

123 SW 2nd St.
Madison, SD 57042
605-256-2571
Fax 605-256-2007
lakeproj-coor@sd.nacdnet.org


Hit One for Clean Lakes
Clean Water Depends on Me
Lake County Watershed Improvement Project
605-256-2571
lakeproj-coor@sd.nacdnet.org
Proud to be a Lake County Clean Water Partner
Clean Water Partner
Clean Water Partners
Clean Lakes



Lake County Watershed Improvement Project

Lake County Conservation District
123 SW 2nd St.
Madison, SD 57042-1999
Phone # 605-256-2571
Fax # 605-256-2007
lakeproj-coor@sd.nacdnet.org

REQUEST FOR PROPOSAL

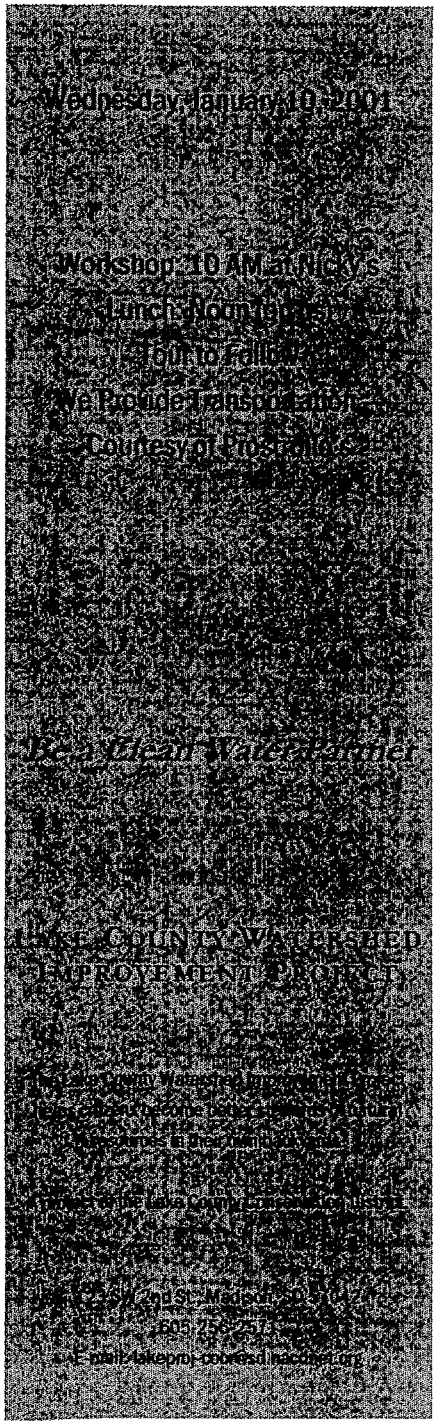
The Lake County Watershed Improvement Project, a project of the Lake County Conservation District, requests proposals for a study of water quality and sediment composition in the City of Madison's storm sewers, Bourne Slough, and Round Lake to be done in Lake County, South Dakota. Background work for this study will begin in February, 2001, and data collection will begin at the time of Spring snowmelt and continue through Fall, 2001. The final report for the study is due on December 1, 2001.

The Lake County Watershed Improvement Project is a partnership of 17 organizations, including federal, state, and local governments and local groups. The goal of the Project is to reduce the amount of phosphorus entering the Lake Herman/Lake Madison/Brant Lake watershed by 50%. This study is one aspect of the Project.

For a full copy of the Request for Proposal, contact Lilias Jarding, Project Coordinator, at 605-256-2571 or lakeproj-coor@sd.nacdnet.org Proposals will be accepted at the offices of the Watershed Improvement Project, 123 S.W. Second Street, Madison, South Dakota 57042 no later than 3:30 PM on Friday, January 5, 2001. Proposals will be opened on Monday, January 8, 2001, and the successful firm announced as soon as possible thereafter. The Lake County Watershed Improvement Project reserves the right to reject any proposal. Minority- and woman-owned businesses are encouraged to submit proposals.

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

LIVESTOCK WASTE MANAGEMENT SYSTEM WORKSHOP AND ROGER SLETTEN FARM TOUR



The Lake County Watershed Improvement Project will be sponsoring a workshop and tour for all livestock producers in the Lake Herman/ Lake Madison/Brant Lake watershed on January 10, 2001. The event will provide producers with information on the Project's cost-share programs, animal waste management systems, current and expected regulations, and services provided by the NRCS and the Cattle Feeder's Council to livestock enterprises in our watershed. The tour will show a working animal waste management system at a beef cattle operation. We hope you'll join us! If you have any questions, call the Watershed Project at 256-2571.

Resource People will include:

- Merle Kost, Resource Conservationist, Ag Nutrient Management Team, NRCS
- Ken Reed, Agricultural Engineer, Ag Nutrient Management Team, NRCS
- Wayne Houtcooper, Environmental Senior Scientist, Department of Environment and Natural Resources, Pierre
- Michelle Goodale, District Manager, Lake County Conservation District
- Chuck Lebeda, District Conservationist, Lake County NRCS
- Lilias Jarding, Coordinator, Lake County Watershed Improvement Project
- John Rubendall, Environmental Liaison, Cattle Feeder's Council
- Tracey Renelt and Jim Krantz, County Extension Educators—Livestock

Dear Lilias,

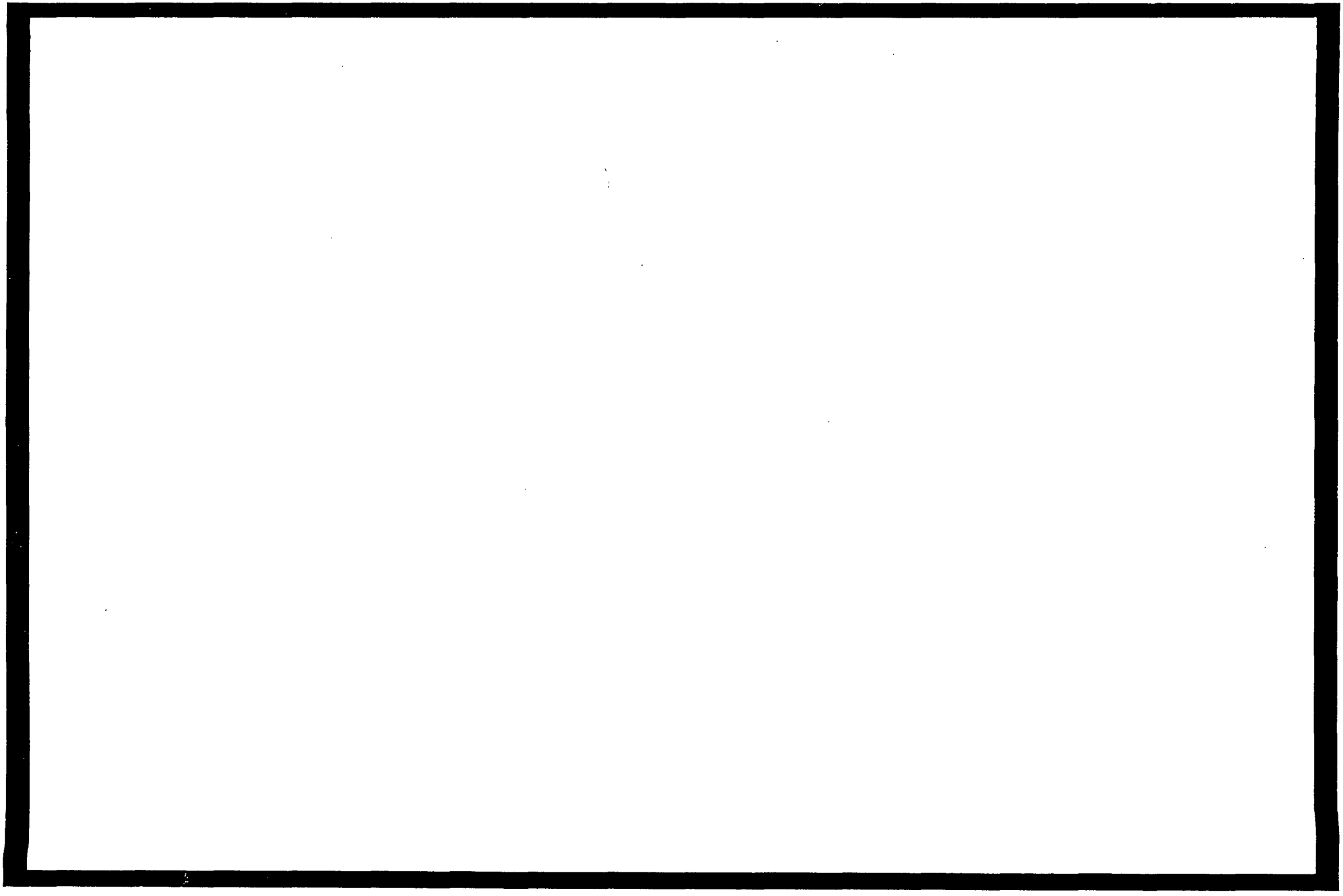
Thank you for the interesting and informative presentation. The students took your message very seriously. I could tell by their behavior that you had their attention! ☺ Thank you for the pencils. They were a big hit.

Sincerely,

Marlette Eich

Mrs. Eich Class
Grade 4
Lincoln School

ART CONTEST ENTRY



NAME _____ SCHOOL _____

Be A Clean Water Partner.
Save Our Lakes.

Poor yard care practices

Good yard care practices

Name: _____ School: _____

Watershed Project!

Thank you, Lilias Jarding!! Thanks for taking the time to come to our school and share with us about how important water is. We thought the sewer video was cool! We learned not to put stuff down the storm sewers and how important our water is to all of us. Thanks for the pencils - we always need those.

Mrs. Macziewski's 4th grade class.

Zac Bremmer

Angel B.
Heather W.

Alysha Nachtigall

Kaelyn Hatting

Dennis S.

Dear Miss Jarding,

Thank you for comming to our classroom. We learned oil can destroy the water that we swim in. The fertilizer and sprays that goes into the lake when the snow melts. The trash we throw around can end up in the sewers.

We are going to pick up trash and put up don't litter signs.

Mandy
Duane Sorenson

Gerard M.

Ryle T.

Taylor Jamison

Molly Johnson

Jessica

Justin O.

Eric H.

Tony L.

Lacey Roth

Amanda

Sean O

Josh H.

Ashleigh

JACOB
Aus

Justin H.

Mrs. Nelson

The Madison Daily Leader

Local/State

DAKOTA STATE UNIVERSITY is one of many clean water partners for the Lake County Watershed Improvement Project. As a clean water parter, DSU agreed to hand out brochures to employees and to avoid anything that will harm the watershed. For DSU, avoiding harming the watershed means using a zero phosphorus fertilizer. Pictured are Lake County Conservation District board member Carolyn Rudebusch, Lake County Watershed Improvement Project Coordinator Lilias Jarding and DSU President Jerry Tunheim. ***(Photo by Elisa Bentler)***

Certificate of Appreciation

Presented to Lilias Jarding

in recognition of your presentation before the

Your contribution to our club is deeply appreciated.
We hope this certificate will serve as a lasting memento
of this pleasant occasion.

Harold L George — *President*

Program chairman

1-9-2001 — *Date*

The Madison Daily Leader

1/11/01

Producers learn about area watershed project

By ELISA BENTLER

Livestock producers in the Lake Madison, Lake Herman and Brant Lake Watershed had a chance Wednesday to learn more about the Lake County Watershed project and options for best management practices on their farmsteads.

A livestock waste management system workshop was held Wednesday at Nicky's sponsored by the Lake County Watershed Improvement Association. Two dozen livestock producers and 10 officials attended.

Jarding

Practices available to producers on a cost-share basis include animal waste management systems, livestock mitigation structures/diversions, nutrient management planning, grassed waterways, riparian buffer strips, multi-purpose dams, terrace or contour buffer strips, stream bank stabilization along Silver Creek and integrated crop management.

Lake County Watershed Improvement Association board member Michelle Goodale said the watershed project will cost-share about 75 percent of most projects. Goodale is also the district manager for the Lake County Conservation District, which is sponsoring the project.

The initial application deadline for producers who want to participate is Jan. 26. Goodale said this will give the watershed committee an idea of how many producers will participate. There will be an ongoing application process, though, she said.

Project Coordinator Lilias Jarding said this project is a great chance for ag producers.

"It's an opportunity for producers to get major cost-share on projects they will be expected to do anyway," Jarding said. "If people don't help us spend the money, it will go back to the federal government and we will be considered low priority in the future."

The LCWIA formed as the result of an assessment on Lake Madison and Brant Lake which indicated an abundance of phosphorus and other substances present in the watershed. A three-year project was outlined with the intention of reducing the phosphorus by 50 percent. The best management practices being implemented on a cost-share basis with producers is one facet of the project.

Another area is an assessment on the sediment in Bjorn Slough and Round Lake and the Madison storm sewer system. The LCWIA is in the process of reviewing engineer proposals for those assessments.

A second focus of the project at this time has been disseminating information to the public. Jarding has been speaking to civic and service groups, area businesses and youth in classrooms about actions they can take to improve the quality of the watershed. She has also been distributing a lot of materials.

Watershed committee members will be at the Home Show in February, the art contest should be finishing soon, and information will be sent to all city residents in March and to all lake residents as the summer gets started.

Public information meetings are also in the planning for this summer, Jarding said.

Another promotion to look forward to is the use of zero phosphorus fertilizer, Jarding said. The watershed committee is going to start promoting its use this spring and begin working with farmers to install the best management practices they have applied for.

The entire project is estimated to cost about $1.5 million. Funding has come through local support, along with state and federal grants.

The LCWIA is comprised of representatives from the city, county and lake associations.

Clean Water Chronicle

VOLUME 1, ISSUE 1
JANUARY 2001

INSIDE THIS ISSUE:

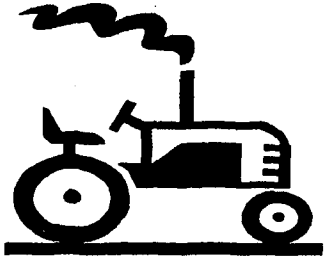
LAKES HERMAN, MADISON, BRANT NEED YOU TO BE A *CLEAN WATER PARTNER*

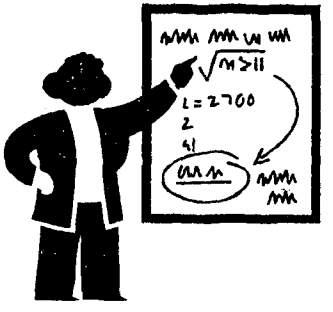
You've probably seen a brochure in the store or read something in the newspaper about the Lake County Watershed Improvement Project. We're the people who ask YOU to be a Clean Water Partner. The reason is simple — without your help, the lakes that are the gemstones of our county and a foundation of our economy will continue to turn green, smell bad, and fill with sediment. Changing this trend takes the help of every person in the watershed.

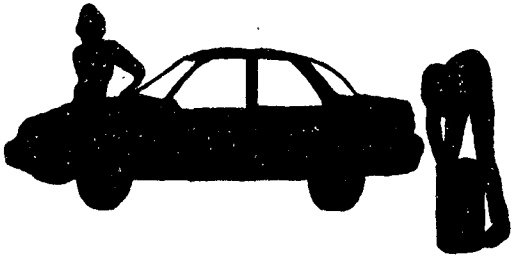
What is a watershed? A watershed includes all the land over which water drains to a certain place. In our case, we are concerned with all the land over which water runs on its way to Lake Herman, Lake Madison, and Brant Lake. Our watershed stretches from west of Junius to about 7 miles north of Madison. It starts 4 miles southwest of Lake Herman and includes the City of Madison and the shore areas of the three lakes.

Anything that ends up on the ground in this area — almost 81,000 acres — can end up in the lake (except, as one fourth grader reminded us, elephants and other really heavy objects). So what you put on the ground matters to cleaning up our lakes!

This newsletter will tell you about the Watershed Improvement Project and what you can do to help. It will be issued 4 times a year, so watch for future issues. And thanks for being a Clean Water Partner!







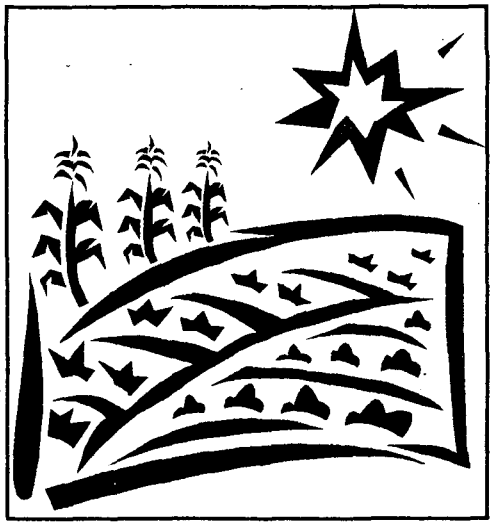
Watershed Improvement Project Has Funds to Help Farmers be Clean Water Partners

The Watershed Improvement Project is funded by a combination of local, state, and federal funds. Its total budget is $1.3 million, and the largest chunk of that money will be used to help farmers improve their practices.

The focus of farm improvements that will help clean up the lakes is keeping phosphorus from entering the watershed. This means looking at fertilizers, animal wastes, and soil runoff.

Phosphorus is naturally high here, and many crops do not need added phosphorus. So **one thing the Project encourages is soil testing before applying fertilizers that contain phosphorus.** Two of the activities the Project will cost-share are nutrient management planning and integrated crop management. Farmers can also buy zero-phosphorus fertilizers from their usual suppliers. The Project has been in communication with local suppliers, and they are ready to help farmers help the lakes.

As for animal wastes, the Project can cost-share an animal waste management system or a just few activities. These include diversions and a variety of activities designed to encourage livestock to stay away from creeks, lakes, and wetlands. The Project will cost-share at least 75% of these projects, depending on the situation.



Farm Concerns Include Soil Runoff

For both fertilizers and animal wastes, soil runoff is a factor because phosphorus attaches itself to sediment. So the Project also funds installation of grassed waterways, contour buffer strips, and buffers and filter strips along water bodies. These activities are funded in cooperation with the CRP program, and at least 90% is cost-shared by the Watershed Improvement Project in cooperation with the NRCS.

Multi-purpose dams and terraces can also be cost-shared under certain circumstances. And stream bank stabilization will be cost-shared along Silver Creek.

For more program details, see Page Three.

What Area Is Included?

The City of Madison and the following townships include part of the Lake Herman/ Lake Madison/Brant Lake watershed:

- Badus (parts of secs. 33-36)
- Chester (northern)
- Concord (southeast)
- Farmington (most of it)
- Franklin (part of sec. 6)
- Herman (most of it)
- Lake View (most of it)
- Leroy (western)
- Orland (northern)
- Wentworth (southern and western parts)
- Winfred (northeast)

If you own or operate land in these areas, please contact the Watershed Project about cost-share possibilities.

Madison Math: *On the Ground = In the Lakes*

In the city of Madison, many people live along the winding creeks that are a source of beauty and — for kids — entertainment. Those creeks are central to our watershed and drain directly into Lake Madison. So what goes on the ground in the city of Madison ends up in Lake Madison, and the key to how this happens is storm sewers.

Storm sewers are the grates along the streets that are designed to handle rainfall and drain it out of the City. Storm sewers do not go to the sewer plant, so the water that goes into them does not get cleaned up before it enters the lakes. Whatever goes into the storm sewers goes directly into a creek — and then into a lake.

> ***"The key to how this happens is storm sewers... Whatever goes into the storm sewers goes directly into a creek."***

The Watershed Improvement Project is working to let people in the City of Madison know that when they fertilize their lawns or wash their cars, they may be contributing to the problems in Lakes Madison and Brant. We encourage people to use zero-phosphorus fertilizers, which are available at most local stores that handle fertilizer. And we encourage people to use car washes, so soap from home washing doesn't go into the storm sewers.

We are also cooperating with the City to study what is going into the storm sewers and where it comes from. This study will give us more information on how we can clean up the lakes and

Golfing for Clean Water

Golf courses provide a refuge for recreation and enjoyment. They can also provide a refuge for wildlife and help filter pollutants out of water as it runs downhill — or they can provide a heavy load of fertilizers that can get into our lakes and encourage algae blooms, green water, and odor.

Luckily, **both the golf courses in our watershed are interested in helping clean up the lakes.** Both the Madison Country Club and The Lakes Golf Course are in critical locations for the watershed, because they sit astride a waterway and in the immediate vicinity of a lake. Runoff from the links goes right into the lakes!

The Watershed Improvement Project is working with The Lakes and Madison Country Club to find ways to decrease runoff of sediment and phosphorus from fertilizers.

Both courses will be trying out zero-phosphorus fertilizers in the 2001 golfing season. Both courses will also be working with the Project and U.S. Fish and Wildlife personnel to look at design changes that could further reduce runoff, and funding options are being explored.

Our area golf courses understand the importance of maintaining their scenic locations., and the Watershed Project is happy to help enhance both the scenery and water quality in the lakes.

We encourage golfers to "Hit One for Clean Lakes" next summer!

HOW YOU CAN HELP

- Use zero-phosphorus fertilizer
- Keep soil covered or contained, so it doesn't run off your property
- Look for ways to help keep the lakes clean where you work
- If you hire someone to work at your place, be sure they see this information
- Plant shrubs and other vegetation along lakeshores and creeks to filter out pollutants
- Keep fertilizer off sidewalks, driveways, streets, lake shores, creek banks, and drainage areas
- Avoid placing grass clippings, leaves, or ashes on the street
- Clean up animal waste, so it doesn't run off your property

- Cover bare dirt with mulch and replant it as soon as possible
- Use a broom, not water, to clean sidewalks and driveways
- Participate in Watershed Project activities
- Don't use soap in or near lakes or creeks
- Wash cars at a car wash

- **Spread the word about cleaning up our lakes!**

Cost Share Programs for Landowners and Operators

The Lake County Watershed Improvement Project includes all land located within the watersheds of Lake Herman, Lake Madison, Round Lake, and Brant Lake. The Project's goals are to improve land use and water quality through the implementation of best management practices by farmers, lakeshore dwellers, and town residents.

Special funds have been obtained for this project from the State of South Dakota, local lake associations, the City of Madison, the East Dakota Water Development District, and the federal government. Additional funds are being requested from private foundations to further lower the cost to local people.

Who's Eligible?

Anyone owning land located within the Lake Herman/ Lake Madison/Round Lake/Brant Lake watershed is eligible for participation in this Project. In fact, we encourage you to contact us about participation!

Priority will be given to certain areas of the watershed, including:

- Animal feeding operations located adjacent to lakes, wetlands, or waterways.
- Cropland or pastures bordering lakes, wetlands, or waterways.
- Croplands or pastures in flood plains or wellhead protection areas.
- Land identified by water quality or soil assessment as contributing elevated phosphorus levels to the watershed.

What Practices Will Be Cost-Shared?

Funds have been obtained to cost-share the operator's total cost to implement the following conservation practices:

- Animal Waste Management Systems
- Livestock Mitigation Structures/Diversions
- Nutrient Management Planning
- Grassed Waterways
- Riparian Buffer Strips
- Multi-purpose Dams
- Terraces and/or Contour Buffer Strips
- Stream Bank Stabilization along Silver Creek
- Integrated Crop Management

Recipients of grant funds will be required to sign a maintenance agreement for the anticipated life span of the practice.

How Do I Sign Up?

The sign-up deadline for the first project year is January 26, 2001, for most practices. Applications will continue be taken through 2001, but farmers are urged to apply early so there's plenty of time for planning activities.

To apply for these programs, come to the NRCS office at the Department of Agriculture service center in Madison and ask for an application form. It will only take a couple minutes to fill out.

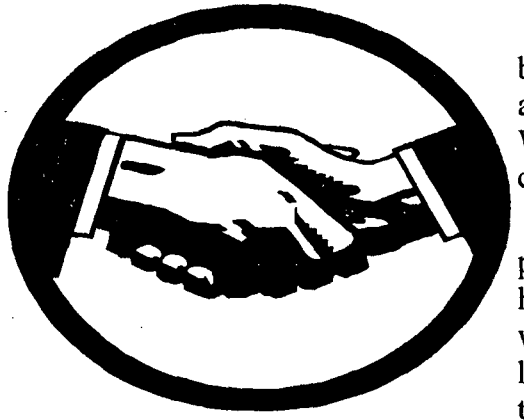
Businesses Are Clean Water Partners

Our watershed's business community is vital and growing, partly because recreation opportunities and desirable lakeshore property bring in customers. The lakes also provide leisure activities for employees and managers alike.

In November, all businesses in the watershed were contacted and asked to become Clean Water Partners. To become a Clean Water Partner, a business pledges to pass information on the Watershed Improvement Project to its employees and to do whatever it can to avoid practices that could hurt our lakes.

To date, nine of the watershed's 20 largest employers have taken up the challenge and become Clean Water Partners. These include the Gehl Company, Dakota State University, Lake Central School District, Madison Community Hospital, East River Electric, ECCO Inc., Arctic Cat, Persona, and Raven Industries. A few smaller businesses, such as the Madison Daily Leader and the Madison Sewing Center have also become Clean Water Partners. Many other businesses have helped by putting out brochures about the Watershed Improvement Project for their customers. Most businesses that sell fertilizer are going to stock zero-phosphorus products this Spring.

The Watershed Improvement Project appreciates all this cooperation, and we encourage other businesses to become Clean Water Partners. It will take everyone's help for us to meet our goal of reducing the amount of phosphorus going into the lakes by 50%.



"Studies show that cleaning up a lake brings an increase in visitors, so clean lakes are an important asset to business."

Studies show that cleaning up a lake brings an increase in visitors, so clean lakes are an important asset to local business. We know that more businesses will continue to become Clean Water Partners.

The most important businesses for purposes of watershed health are those that have large grassy areas, deal with animal wastes, move dirt or soap, or border the lakes and creeks. These enterprises are key to our Project's success!

We encourage businesses to look at their activities and think about innovative ways to help water quality in the lakes by reducing soap, fertilizer, animal waste, and soil runoff. If your business has a special situation, we're here to provide free technical assistance. If making changes would cost money, let us know. We're working to find funding to meet the needs of every sector — lakeshore residents, farmers, town dwellers, and business — so that our Project can meet its goal.

Even if your business doesn't have a lawn or work with animals, soap, or dirt, you can become a Clean Water Partner and get a certificate that's suitable for framing. Show your support for clean lakes by becoming a Clean Water Partner.

Contact the Project office with questions or ideas (see Page Four for information on contacting us).

How To Contact Us

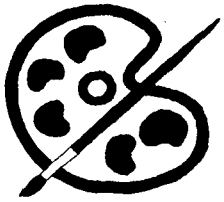
We'd like to hear from you! We have a lot of information on the watershed that we're happy to share. We've also collected information on a variety of things that people can do to help water quality. We're available to help you solve your particular business or residence problem.

The Watershed Improvement Project would like to attend your event or group meeting to talk about what we're doing. We have entertaining video presentations and can speak to all ages and all audiences. We can set up a table display, facilitate a problem-solving session, or lead a group discussion of water issues.

The Project has prepared a variety of flyers on how people can help clean up the lakes. If you know a good place to put information so people will see it, let us know.

These are just a few ideas. Contact us with your own ideas on cleaning up our watershed. **We need and appreciate your help!**

Art Contest Coming !



All students in Kindergarten through fifth grade who go to school or live in the Lake Herman/Lake Madison/Brant Lake watershed will have a chance to win prizes and recognition in our Art Contest, which starts January 1, 2001. Students in grades K-2 will be given a watershed coloring project. Students in grades 3-5 will design a watershed education poster. There will be separate prizes for the two age groups. The due date for Art Contest entries will be January 31, and art can be turned in at schools or at the Project office. ***Winners will be displayed at the Home Show.***

Fan Mail

Lilias Jarding, the Water Project Coordinator, recently spoke to fourth graders at Lincoln School about watersheds and how to keep them clean. Here were some of the thank you letters the Project received:

"Thank you for telling us about storm sewers. The movie was really neat. But I don't know why a kid would throw a half eaten jelly roll down the storm sewer."

"Thank you for coming to our classroom. It was fun. I learned a lot. I live by Lake Madison and I want the lakes to be clean. Bye!"

"Thank you for the information. I will be sure to help you out a lot. I pick up garbage all the time. The video we watched was cool. Thank you for the pencil."

"Thank you for coming and talking to us about why we should keep the ground clean because it flows into the creeks."

"Thank you for coming and telling us about the water shed! I think it is important to keep the creeks clean too! I didn't know there were so many ways to pollute the water!"

Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, S.D. 57042

Phone: 605-256-2571
Fax: 605-256-2007
Email: lakeproj-coor@sd.nacdnet.org

Don't be afraid to call or e-mail us – we're here to help !

Watershed Websites

Watershed Weekly

www.greenworks.tv/watershed_weekly/index.html

Know Your Watershed

www.ctic.purdue.edu/KYW/glossary/whatisaws.html

GREEN: Global Rivers Environmental Education Network

www.igc.apc.org:80/green/resources/html

Watershed Links

www.earthwater-stencils.com/links.html

Watersheds, Phosphorus and Water Quality

www.extension.umn.edu/yardandgarden/YGLNews/YGLN-July0100.html#sheds

What is the Watershed Improvement Project?

The Watershed Improvement Project was pulled together by concerned citizens from all parts of the Lake Herman/Lake Madison/Brant Lake watershed. The Lake County Conservation District is the Project's official sponsor, but 17 organizations have a role. These include 3 lake associations, 3 lake sanitary districts, 3 federal agencies, 3 state agencies, East Dakota Water Development District, Lake County, the City of Madison, and Dakota State University. Improving the water quality in our lakes is truly a partnership effort!

The Project was put together after earlier efforts to clean up the lakes had not brought water quality in line with federal and state standards. Eventually, people feared, regulations would force a clean-up of the lakes. But people in Lake County wanted to avoid a regulatory solution, so they began the long process of finding ways to solve the problem cooperatively.

A series of water quality assessments were done that showed that the biggest problem in the watershed was phosphorus. Phosphorus is a naturally-occurring element, but when there is too much in the lakes, there are algae blooms. The algae are what turn the lakes green and make them smell bad.

So the goal of the Watershed Improvement Project is to cut the amount of phosphorus going into the lakes by 50%. Participation in the Project is completely voluntary, but it will take the everyone's help to reach that goal.

The Watershed Improvement Project's logo emphasizes the importance of lakeshore, farm, and town dwellers in cleaning up the lakes.

The Project has raised $1.3 million to work on phosphorus reduction. The bulk of this money will go to help farmers reduce fertilizer and animal wastes entering the water (see page one).

Other Project expenditures cover public education activities, like this newsletter. Public education focuses on what people can do to solve the phosphorus problem.

The third use for Project funds is to study problems that are still in search of solutions. One is a study to see if there are water quality problems from septic systems around Lake Herman A second will monitor water quality just south of the sewage lagoons. And the largest study will look at the City of Madison's storm sewers and sediments in the bottom of Bourne Slough and Round Lake.

The Project covers all aspects of the phosphorus problem. If you have questions or ideas, call the Project office.

Madison Daily Leader
Madison, South Dakota

1/11/01

Editorial

We should take advantage of watershed opportunity

The Lake County Watershed project is in full swing (see page 1). Our most important task now is to take full advantage of this once-in-a-lifetime opportunity.

The project came about after an assessment on Lake Madison and Brant Lake indicated an abundance of phosphorus and other substances. A three-year project was developed with the goal of reducing phosphorus by 50 percent.

Phosphorus and other substances come from many places throughout the watershed, including farms, homes, businesses and recreation areas. The watershed group is trying to reach everyone who contributes to the problem.

The project has funding of about $1.5 million, provided we use it properly. Unused funds get sent back to the federal government.

We can't think of any reason why people, especially agriculture producers, wouldn't want to participate. A number of the "best practices" in the project are already required or may be required in the near future. These include animal waste management systems, livestock mitigation structures/diversions, nutrient management planning, grassed waterways, riparian buffer strips, multi-purpose dams, terrace or contour buffer strips, stream bank stabilization along Silver Creek and integrated crop management. The project could pay 75 percent of the cost of most projects.

But this project isn't just about complying with laws or getting money. It's about cleaning up the water in our area. We depend so much on local water: Madison's drinking water supply comes entirely from local wells, and the value of clean water in our local lakes can't be underestimated.

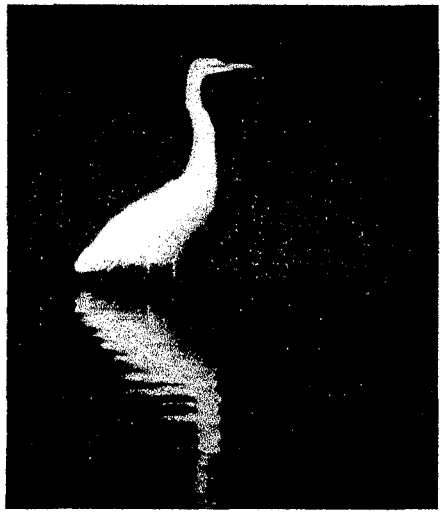
The initial application deadline for producers who want to participate is Jan. 26, although there will be other chances to apply. We encourage as many people as possible to take full advantage of this great program.

— *Jon M. Hunter*

In Appreciation

THANK YOU for being a Clean Water Partner

Name of Recipient



Your donation to the
Lake County Watershed
Improvement Project

helps provide a better future for
our lakes, our communities,
our farms, our wildlife,
and our natural environment.

Lilias Jarding, Project Coordinator

The Madison Daily Leader
1/22/01

Madison Lions Club has guests

The Madison Lions Club met on Jan. 8 at Skipper's in Madison.

The meeting was called to order by Vice President Cindy Iverson. Guests were introduced including Lilias Jarding of the Lake County Watershed Improvement Project; Marli Thurow, Peace Poster contest winner from Ramona; and Mary Jo Thurow, teacher/parent of Oldham-Ramona School.

The secretary's and treasurer's reports were presented and approved.

Committee reports were given including Patsy Clarke distributing contact sheets for the annual Membership Drive. Each Lions member is to contact a designated number of people on the list and ask them to attend the next meeting as guests.

Randy Eide reported that the next Flag Posting by the Madison Lions Club will be Feb. 19 in observance of President's Day.

Pat Gross talked to the group about the Governor's Diabetes Screening/Detection Program. A booth will be available at the Madison Home Show on Feb. 3-4 at the Dakota Prairie Playhouse.

The 2001 spaghetti supper will be held Feb. 16. That is the same night as the last Madison Bulldogs home basketball game. Each Lions member is responsible for selling 10 tickets. The alternate night is Feb. 23.

Jarding was the featured speaker for the meeting. He noted that the project was created to help clean up lakes and protect them for future use, as well as to improve the quality of the water in Lake Herman.

The Madison Daily Leader

1/23/01

Watershed cost-share deadline is Friday

The deadline for producers to apply for the first round of watershed cost-share funding is Friday.

The cost-share program would help with the construction of animal waste management systems, grassed waterways, riparian buffer strips, multi-purpose dams, terraces and similar practices.

The purpose of these projects is to contain animal waste and soil runoff in order to reduce the amount of phosphorus entering lakes Madison, Herman and Brant by 50 percent over the next three years.

The Lake County Watershed Improvement project can fund at least 75 percent of the cost of these projects.

Participation in the project and the cost-share program is voluntary, but producers are encouraged to take advantage of this opportunity.

Producers must live within the watershed and complete an application form to qualify for funding.

At this time, 11 applications have been received, five of which are for the construction of animal waste management systems. The project is budgeted to fund the construction of 10 animal waste management systems in the next three years.

Producers can apply at the Natural Resources Conservation Service Office in Madison (123 S.W. 2nd St.). For more information, call Project Coordinator Lilias Jarding.

Applications received after Friday will be considered for the second round of funding.

The Madison Daily Leader

2/9/01

Watershed project receives good number of producer applications

By ELISA BENTLER

Numerous applications have been received at the Lake County Conservation Office for the construction of animal waste management systems, terraces, multipurpose dams, buffer strips and grassed waterways.

Producers are applying to do these projects through the Lake County Watershed Improvement Project, aimed at reducing phosphorus in the watershed by 50 percent.

An assessment on the watershed of Lake Madison and Brant Lake revealed a high amount of phosphorus and other substances in the water. Following the study a committee was formed to create a project aimed at reducing the phosphorus.

Some of the things this three-year $1.5 million project will be doing include promoting public awareness; assessing the city sewer system, Bjorne Slough and Round Lake; and encouraging best management practices with producers and businesses.

Applications received from producers include 11 for the construction of animal waste management systems, seven for terraces, two for multipurpose dams, three for buffer strips and four for grassed waterways.

Project Coordinator Lilias Jarding said she is very happy with the results and the other aspects of the project.

"I am very happy with all levels of participation on this project," she said. "That's good, because that's what it will take to get those lakes cleaned up."

This is just the beginning of the project applications, however. Jarding said there is still room for more applications.

Before any project can begin, they first need to be prioritized. This is done first by the watershed committee, then by the Natural Resource Conservation Service.

The project is funded through local support, along with state and federal grants.

ART CONTEST WINNERS

Front (L to R): Stacey Hopf - Honorable Mention (Washington School – 1st grade); Ali Bulick - Honorable Mention (Washington School – 1st grade); Stephanie Jarrett - Honorable Mention (Washington School – 2nd grade); Jessica Janke – First Place (Washington School – 2nd Grade).

Back (L to R): Cory Barry – Honorable Mention (Lincoln School – 4th grade); Kaitlyn Higgins – Honorable Mention (St. Thomas School – 4th grade); Amanda Jung – First Place (Garfield School – 5th grade); Anthony J. Brown – Honorable Mention (Garfield School – 5th grade).

Judges: Allan Fischer, Ginni Frietag, and Linda Hilde

Business Displays: True Value Hardware, Central Business Supply, First Madison Insurance, NorthWestern Public Service, Gary's Bakery, Four Seasons Flea Market, Wells Fargo Bank, The Insurance Market, and MacLeod USA.

Madison Daily Leader
Madison, South Dakota

2/9/01

Local

THE LAKE COUNTY Watershed Improvement Project's recent art contest resulted in nearly 400 entries from students in Madison and Chester. Winners of the contest include (back, left) Cory Barry, honorable mention; Kaitlyn Higgins, honorable mention; Amanda Jung, first place; Anthony Brown, honorable mention; (front) Stacey Hopf, honorable mention; Ali Bulick, honorable mention; Stephanie Jarrett, honorable mention; and Jessica Janke, first place. The posters will be displayed at True Value Hardware, Central Business Supply, First Madison Insurance, Northwestern Public Service, Gary's Bakery, Four Seasons Flea Market, Wells Fargo Bank, The Insurance Market and McLeod USA.

The Madison Daily Leader
2/15/01

Firm hired to further assess watershed sites

Bourne Slough and city storm sewers will be assessed

By ELISA BENTLER

The Lake Area Watershed Improvement Project has contracted with a team of engineering companies to find specific sources of phosphorus loading within the city of Madison, and to assess the sediment in Bourne Slough on Lake Madison.

The assessment, slated to be complete by the end of the year, will cost about $46,500. Ulteig Engineering in Sioux Falls will collect the data, and Barr Engineering Company in Minneapolis will analyze the data and offer solutions.

"Past data tells us there's phosphorus coming out of the city, but we don't know where it's coming from," said Lilias Jarding, project coordinator for LAWIP. "This assessment will answer that."

Bruce Monson, Barr limnologist and environmental engineer, said the goal is to come up with ways to reduce phosphorus loading from the city into Silver Creek.

"Any parking lot or road is going to have lots of material on it naturally," said Monson. "It's there and it gets into the river and a lot of that can be removed before it gets downstream."

Monson

In a nutshell, Monson said, the project entails pulling together data already collected, entering it into a database, collecting new data, adding it to the existing database and making recommendations for best management practices to reduce the phosphorus.

To achieve that, Monson said, the first aspect of the project includes sediment mapping of Bourne Slough. "(Ulteig will be) doing soundings, finding the top of the sediment and the depth of the sediment," said Monson. "That will give us an idea of how much sediment is there. We will also be taking sediment cores."

The cores will be three inches in diameter and frozen for future analysis at the University of Minnesota. If dredging of Bourne Slough becomes an option, he said, those cores will be analyzed further.

Initially, he said, some analysis of the first 10 centimeters will be done on the cores to test for phosphorus concentration and different types of phosphorus.

"Beyond that, we won't be doing any extensive analysis," he said. One-time water samples will also be collected from Bourne Slough to identify resuspension of sediments in the slough.

In addition to the analysis of Bourne Slough, crews will analyze some storm sewer outlets throughout the city of Madison and analyze the three streams entering Madison and the one stream flowing out of Madison.

Jarding

Once that is done, and throughout the summer, crews will do storm sewer sampling.

"We've agreed to look at three inlets to the city of Madison and one outlet as well as eight to 10 storm sewer outlets in the city," Monson said, "and we'll be doing that for the snow melt and three other storm events."

A crew of Ulteig engineers will be taking those samples by hand. Those samples will then be analyzed for suspended solids and phosphorus.

"We're looking at the amount of phosphorus that's on the particles VS. the amount that's just dissolved," he said. "We are also looking at the soluble reactive phosphorus." That particular type of phosphorus is available to plants like algae commonly found in the area lakes.

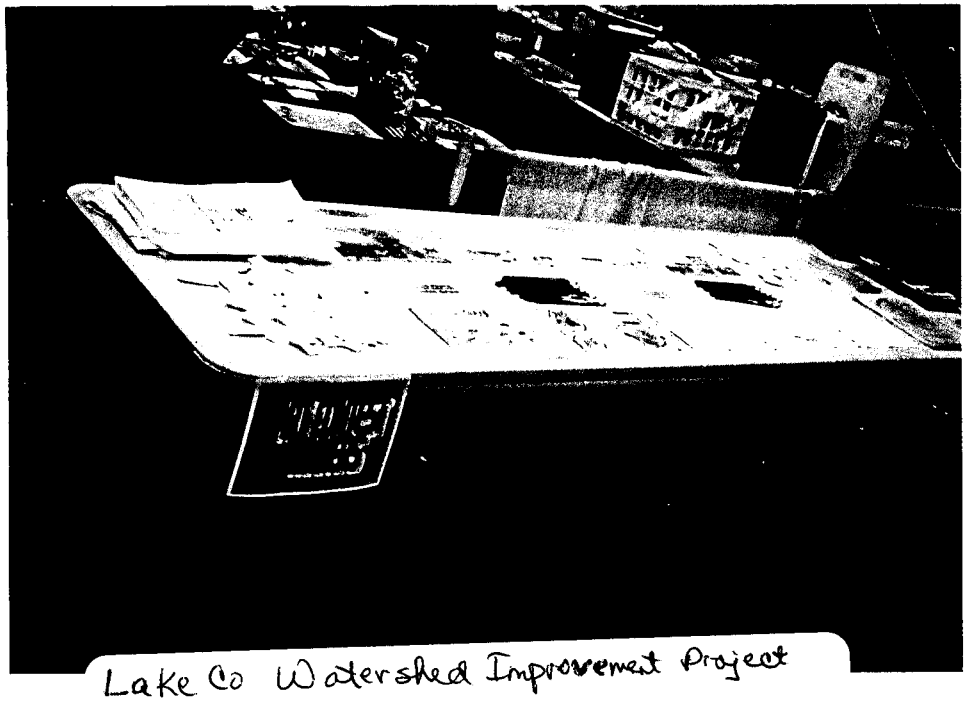
As a result of the samples, Monson said, the firms would expect to find specific areas where phosphorus loading is coming from. These spots can be found in those spots initially thought of as potential areas, he said, but could also be found in unanticipated areas.

Results of the assessment tie into Lake Area Watershed Improvement Project, which includes many separate facets happening over the course of the next three years. Other portions of the improvement project include public relations and the implementation of animal waste management practices.

The watershed improvement project came about after an assessment on Lake Madison and Brant Lake indicated a phosphorus loading problem, but didn't pinpoint specific areas as the sources of the problem.

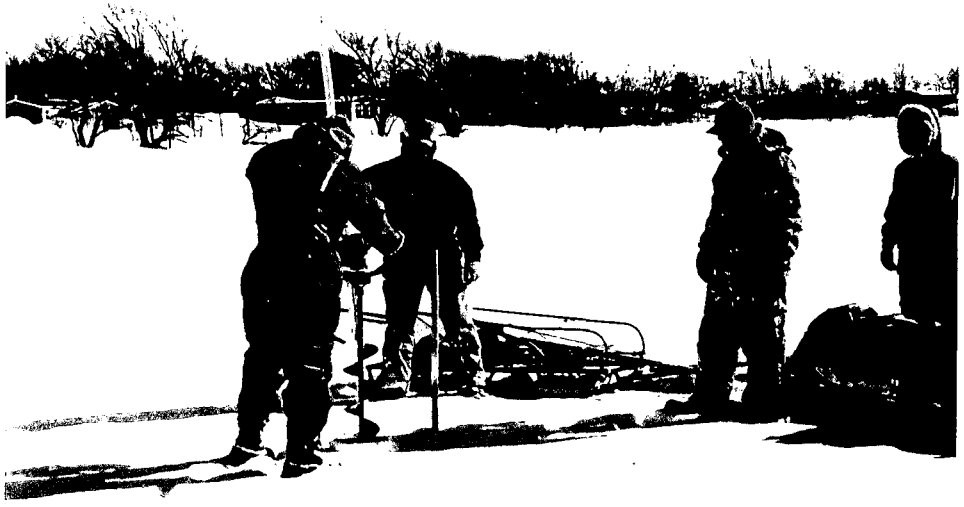
"We are excited to get this part of the project going," Jarding said. "We hope it will answer some of our questions."

The assessment should be completed by Dec. 1.



Lake Co Watershed Improvement Project
Madison Home Show Booth
February, 2001

Boring thru ice on Bourne Slough
3/01/01



Barr Engineering, Ulteig Engineering
Boring holes in ice on Bourne Slough
to take sediment & depth samples
3/01/01 (Photos on Back side also)

The Madison Daily Leader

3/1/01

Sediment testing

EMPLOYEES FROM Barr Engineering and Ulteig Engineering drill holes in the ice at Bourne Slough to determine water and sediment depth for the Lake Herman, Lake Madison and Brant Lake watershed study. Pictured (left) are Jay Johnson and John Boheman with Ulteig and Dave Melmer with Barr. Melmer is drilling the hole so Johnson can check the depth to the top of the sediment. Melmer then determines the depth of the sediment. In this particular location, there was about four feet of sediment. So far, they have found three to five feet of sediment. The purpose of the watershed project is to reduce the level of phosphorus in the watershed. The slough is being examined to determine how much sediment is present and what type of phosphorus is present. ***(Photo by Elisa Bentler)***

Save Money on Zero-Phosphorus Fertilizer + Save the Lakes = We All Win!

COOPERATING STORES:
Campbell Supply, Madison
Chester Farm Service
Domestic Seed & Supply
F & M Agronomy
True Value Hardware, Madison

Date: SAMPLE
Product:
No. Bags:

THANK YOU FROM THE LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

TAKE THIS CARD TO THE STORE. WHEN YOU BUY ZERO-PHOSPHORUS FERTILIZER, YOU GET...

$1.00 OFF

Phosphorus causes our lakes to turn green and smell bad, and it hurts game fish populations. Using zero-phosphorus fertilizer is one way you can help.

Look for a "0" as the middle number on your fertilizer rating — such as "18-0-18" — this means you are buying zero-phosphorus fertilizer.

Expiration date: 9/15/01 Limit: 5 bags

Save Money on Zero-Phosphorus Fertilizer + Save the Lakes = We All Win!

COOPERATING STORES:
Campbell Supply, Madison
Chester Farm Service
Domestic Seed & Supply
F & M Agronomy
True Value Hardware, Madison

Date: SAMPLE
Product:
No. Bags:

YOU FROM THE
OUNTY WATERSHED
EMENT PROJECT

TAKE THIS CARD TO THE STORE. WHEN YOU BUY ZERO-PHOSPHORUS FERTILIZER, YOU GET...

$1.00 OFF

Phosphorus causes our lakes to turn green and smell bad, and it hurts game fish populations. Using zero-phosphorus fertilizer is one way you can help.

Look for a "0" as the middle number on your fertilizer rating — such as "18-0-18" — this means you are buying zero-phosphorus fertilizer.

Expiration date: 9/15/01 Limit: 5 bags

Zero Phosphorus Coupons
Used in City of Lake Dwellers
Mailings 3/01

Save Money on Zero-Phosphorus Fertilizer + Save the Lakes = We All Win!

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Campbell Supply, Madison
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Save Money on Zero-Phosphorus Fertilizer + Save the Lakes = We All Win!

Lake County Watershed
Improvement Project
123 S.W. Second Street
Madison, S.D. 57042

PLEASE
PLACE
STAMP
HERE

Save Money on Zero-Phosphorus Fertilizer + Save the Lakes = We All Win!

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Madison, S.D. 57042

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Madison, S.D. 57042

PLEASE
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I HELPED CLEAN UP THE LAKES BY USING ZERO-PHOSPHORUS FERTILIZER

$5.00 OFF

Phosphorus makes the lakes turn green and smell bad. When you use zero-phosphorus fertilizer every time you treat your lawn, you're doing your part to clean up the lakes. Your fertilizer applicator:

_____

is helping by using these rebate coupons.

Expires 9/15/01.
Limit: One Rebate per Customer.

Just Complete this Card
And Drop It In the Mail
To Get Your $5.00 Rebate.

PLEASE PRINT:

Name: SAMPLE

Address: _____

THANK YOU FROM THE LAKE COUNTY WATERSHED IMPROVEMENT PROJECT !

I HELPED CLEAN UP THE LAKES BY USING ZERO-PHOSPHORUS FERTILIZER

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Phosphorus makes the lakes turn green and smell bad. When you use zero-phosphorus fertilizer every time you treat your lawn, you're doing your part to clean up the lakes. Your fertilizer applicator:

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Expires 9/15/01.
Limit: One Rebate per Customer.

Just Complete this Card
And Drop It In the Mail
To Get Your $5.00 Rebate.

PLEASE PRINT:

Name: SAMPLE

THANK YOU FROM THE LAKE COUNTY WATERSHED IMPROVEMENT PROJECT !

Rebate Coupons for Zero Phosphorus Fertilizer Applied by Commercial Applicators -

I HELPED CLEAN UP THE LAKES BY USING ZERO-PHOSPHORUS FERTILIZER

$5.00 OFF

Phosphorus makes the lakes turn green and smell bad. When you use zero-phosphorus fertilizer every time you treat your lawn, you're doing your part to clean up the lakes. Your fertilizer applicator:

_____

is helping by using these rebate coupons.

Expires 9/15/01.
Limit: One Rebate per Customer.

Just Complete this Card
And Drop It In the Mail
To Get Your $5.00 Rebate.

PLEASE PRINT:

Name: SAMPLE

Address: _____

THANK YOU FROM THE LAKE COUNTY WATERSHED IMPROVEMENT PROJECT !

I HELPED CLEAN UP THE LAKES
BY USING ZERO-PHOSPHORUS FERTILIZER

Lake County Watershed
Improvement Project
123 S.W. Second Street
Madison, S.D. 57042
(605) 256-2571

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LAKE COUNTY WATERSHED
IMPROVEMENT PROJECT
123 S.W. Second Street
Madison, South Dakota 57042

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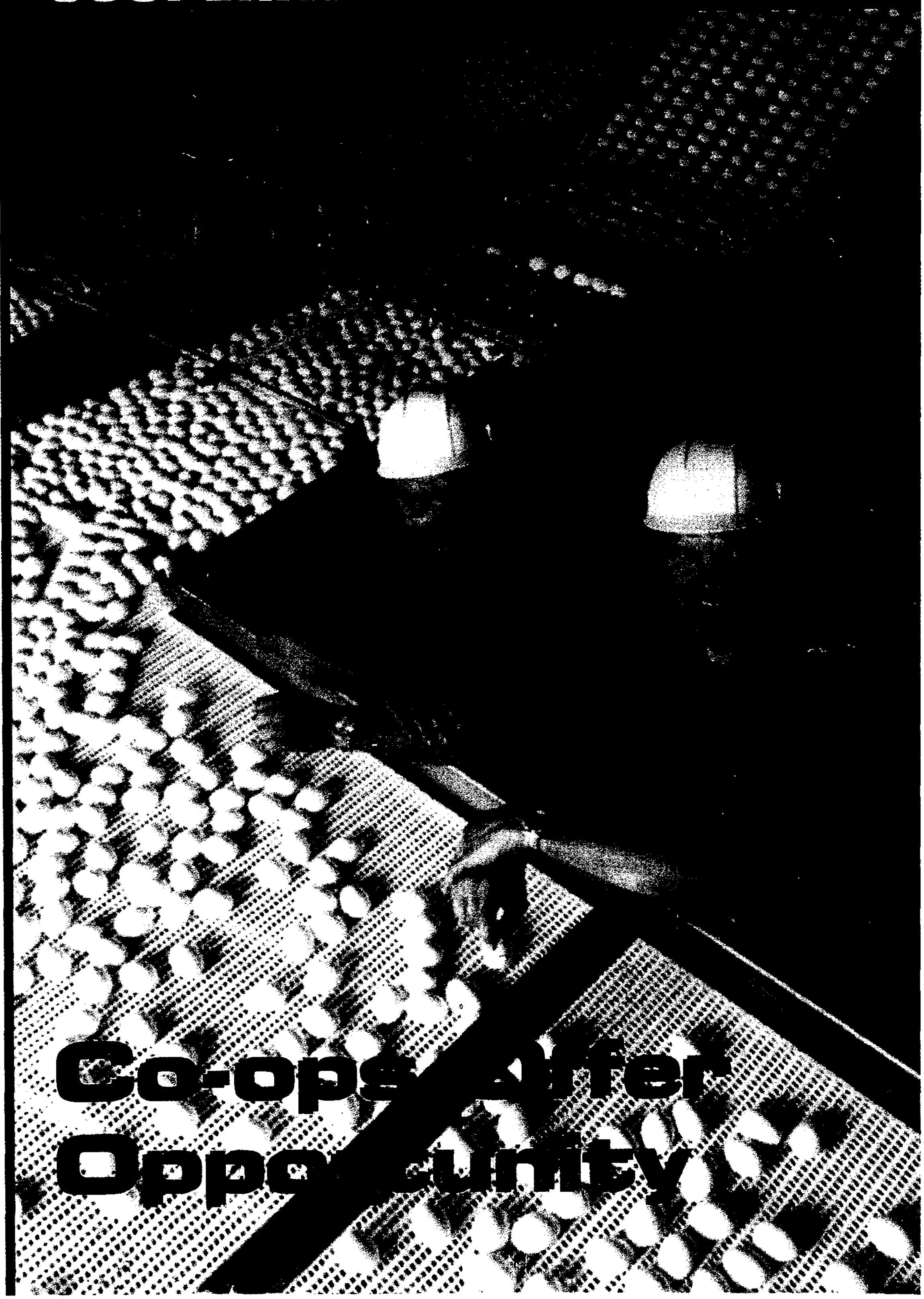
SIOUX VALLEY
SOUTHWESTERN
ELECTRIC

Sioux Valley Southwestern

COOPERATIVE CONNECTIONS

March 2001
Volume 6 • Number 1

In This Issue



Co-ops Offer Opportunity

PROJECT SEEKS TO IMPROVE LAKE COUNTY WATERSHED

People who live near Lake Herman, Lake Madison, Round Lake and Brant Lake, or who simply enjoy boating, swimming, camping or fishing in their waters, are hoping you'll want to become a "Clean Water Partner."

A Watershed Improvement Project has been initiated to help raise local awareness of the problems that phosphorous causes in area lakes, streams and rivers. It's being coordinated by Lilias Jarding and the Lake County (SD) Conservation District. It already has the support of 17 area organizations and has received financial backing from federal, corporate and private contributors. Its primary purpose is to keep phosphorus derived from fertilizers, animal waste and soap from getting into area lakes and drinking water.

Area farmers, homeowners and business operators are being asked to be Clean Water Partners by reducing or eliminating the amount of phosphorus they put into the local watershed. Project coordinators say that in the city of Madison, for example, runoff from parking lots, streets, sidewalks and driveways goes into storm sewers that are not routed through the city's wastewater treatment plant, but instead go directly into Lake Madison and then into lakes farther downstream. Lawn chemicals contribute too, they say, adding that levels of naturally-occurring phosphorus are high in the area and that additional application may be unnecessary.

Project coordinators say that right now, Lake County's lakes are "at a turning point." Response to the project will largely determine, they say, whether lakes will continue to get greener every summer or gradually become less polluted.

The local watershed covers more than 80,000 acres. The Watershed Improvement Project will conduct studies and help local citizens make the changes necessary to improve water quality by providing information, encouragement, and in some cases funding to help install improved agricultural and industrial management practices.

To join the project or to get more information, call 605-256-2571 or visit the project's web site at www.lakeproj-coor@sd.nacdnet.org.

The Madison Daily Leader
3/7/01

Lake County watershed group starts zero-phosphorus fertilizer promotion

Goal is to reduce phosphorus levels in area lakes

By ELISA BENTLER

As warmer temperatures melt the snow piles, area residents are beginning to think about outside activities.

The board for the Lake County Watershed Improvement Project wants people to think about improving the quality of the lakes as well, which means some changes in lawn-care practices. Those changes include using zero-phosphorus fertilizers.

Jarding

Phosphorus is a naturally occurring substance that produces algae once it gets into lakes. That algae production can in turn affect fish populations.

Watershed Project Coordinator Lilias Jarding said one source of phosphorus is fertilizers. Phosphorus is also naturally high in this area, she said, and most lawns don't require additional phosphorus, which can run off the lawns and into lakes.

"We want to be sure that everyone can do their part to help keep the lakes clean — not green."

— Lilias Jarding

To provide alternatives for residents, the Watershed Improvement Project is working with businesses in Madison and Chester to encourage the use of zero-phosphorus fertilizer.

To encourage residents to use that kind of fertilizer, households and businesses within the watershed of lakes Herman, Madison and Brant will receive a coupon for $1 off the price of a bag of fertilizer. Up to five bags may be purchased.

"Zero-phosphorus fertilizer is a simple answer to a big problem," Jarding said. "The only thing people have to change is which bag they reach for at the store, and we're making that easier by giving them a discount when they reach for a bag that helps clean up the lakes."

A separate program will give a rebate to residents who use a lawn service and apply zero-phosphorus fertilizer.

Jarding said that the cost of zero-phosphorus fertilizer compared with other fertilizers can be cheaper or about the same. She also said that unless a landowner is starting a new lawn, phosphorus fertilizer isn't necessary.

"We want to be sure that everyone can do their part to help keep the lakes clean — not green," Jarding said.

If residents wish to determine how much fertilizer is present in their soil, information and bags can be picked up at the Lake County Extension Office in Madison. Residents can then send the bags to South Dakota State University in Brookings for analysis. The cost for the test is $13.

Stores that plan to carry zero-phosphorus fertilizer include True Value Hardware, F&M Agronomy, Domestic Seed and Supply, and Campbell Supply in Madison, and Chester Farm Service in Chester.

Advertising Used in Madison Daily Leader - Zero Phosphorus Lawn Fertilizer 3/01

HELP CLEAN UP THE LAKES

BUY ZERO-PHOSPHORUS FERTILIZER

Look for a "0" as the middle number in your fertilizer rating – such as "18-0-18." This means you are buying zero-phosphorus fertilizer, preventing "green" water and lake odor, and helping game fish populations.

Zero-Phosphorus Fertilizer is available at:

- True Value Hardware
- F&M Agronomy
- Domestic Seed-Supply
- Chester Farm Service
- Campbell Supply
- A&B Pest Management
- Trugreen Chemlawn
- Classic Lawns

KEEP THEM CLEAN - NOT GREEN

Lake County
Watershed Improvement Project
(605) 256-2571
lakeproj-coor@sd.nacdnet.org

The Madison Daily Leader
309-01

Watershed project coordinator moving

The Lake County Watershed Improvement Association is looking for a new project coordinator for the watershed improvement project.

Current Project Coordinator Lilias Jarding announced her intentions to leave in a letter to committee members this week. Her last day will be March 23.

"I was hired with the understanding that I wouldn't be here through the end of the project," Jarding said.

She was hired to focus on the promotional aspects of the project, which are well under way.

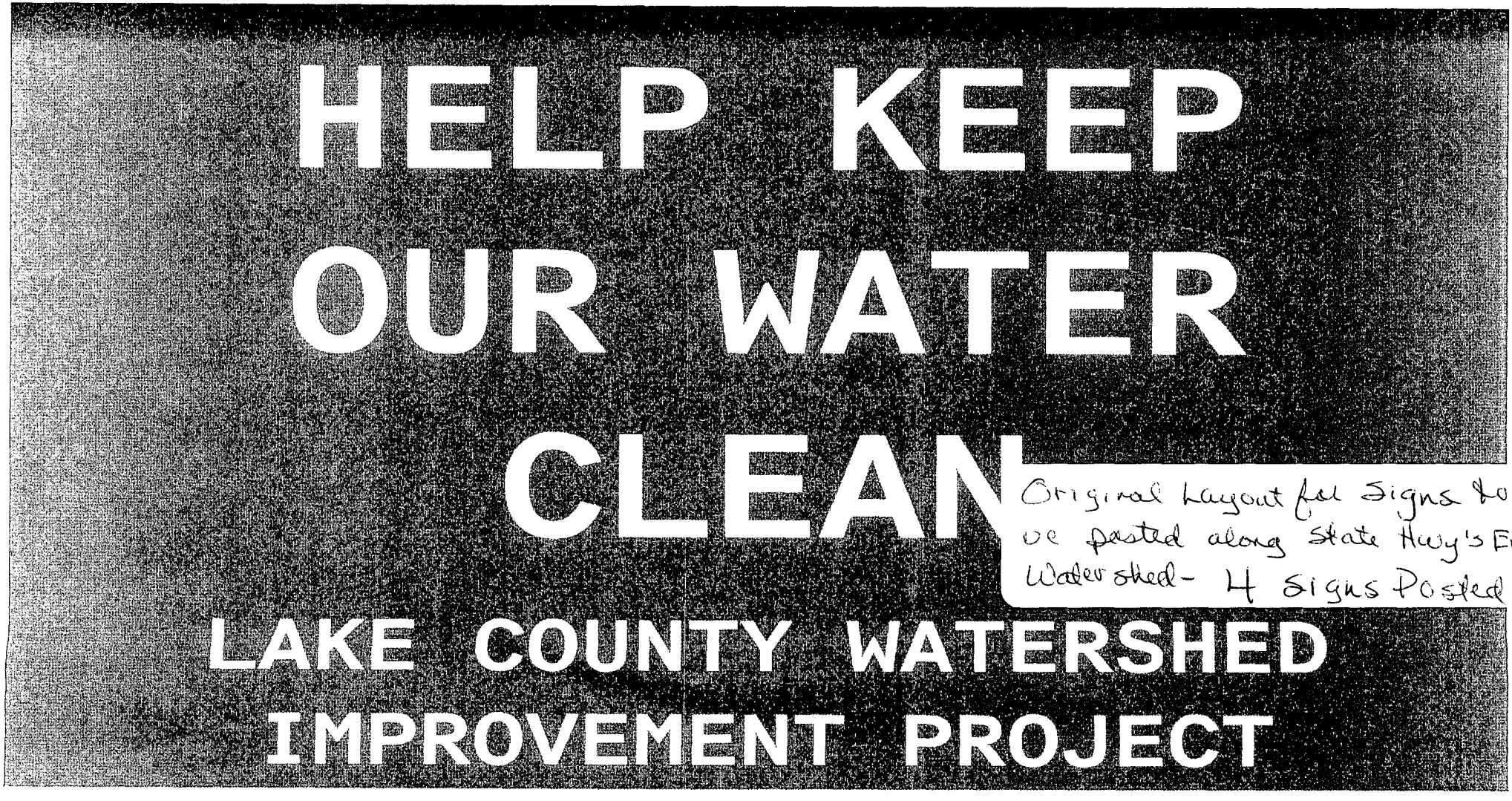
She said this is a good time to leave because there's not much activity happening with the project and the new coordinator can be trained easier. Jarding will be available to help train her replacement.

Jarding is moving back to Colorado. She will be providing technical support and networking for people doing environmental work across South Dakota and the Black Hills ecosystem.

The purpose of the watershed project is to reduce the amount of phosphorus in the watersheds of lakes Herman, Madison and Brant by 50 percent.

The application deadline for those interested in the position is March 22.

WELCOME
TO THE LAKES AREA



Original Layout for Signs to be posted along State Hwy's Ent Watershed - 4 Signs Posted

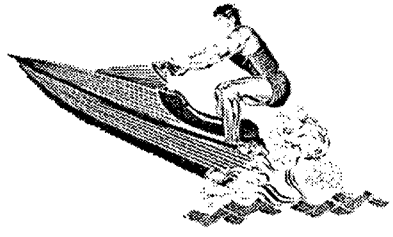
Animal Waste

Dispose of animal waste properly. If you have pens or kennels, don't wash them out if there is a chance of runoff into the lake. Pick up after pets.

Divert any runoff from feedlots or pastures away from the shore and water.

Boating and Fishing

Run boats and jet skis slowly in shallow water. Running them fast causes sediments to be mixed into the water, which releases phosphorus and increases algae growth.



Properly dispose of all wastes, including fish remains, while boating or fishing.

The watershed for Lake Herman, Lake Madison, and Brant Lake covers over 80,000 acres. The Lake County Watershed Improvement Project is a partnership between town dwellers, farmers, and lakeshore residents that will benefit and protect the entire watershed and everyone who lives or visits here. We need to keep every part of our watershed healthy to have healthy lakes.

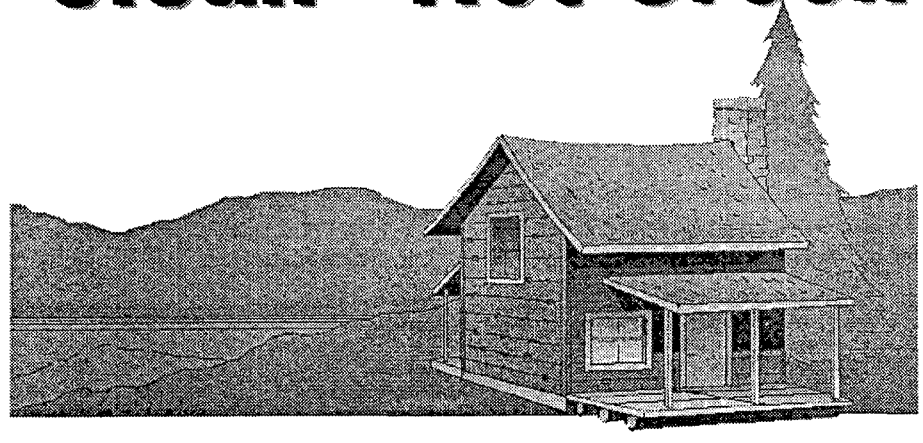
For more information contact:

Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, SD 57042

605-256-2571

lakeproj-coor@sd.nacdnet.org

Lakeshore Residents -- Help Make Our Lakes Clean - Not Green



We need healthy lakes for our area's natural environment and enjoyment. As a lakeshore landowner, you are important to water quality and lake health.

Phosphorus is damaging our lakes by causing algae blooms, odor, and loss of game fish. Our goal is to reduce the amount of phosphorus going into our lakes by 50%.

Here are a few things you can do to help.

Fertilizer

First, have your soil tested to determine how much fertilizer is needed, and then minimize use. Phosphorus is naturally high here, and you may not need to add any to have a beautiful lawn. Soil testing can be done through the Lake County Extension Service for $13 per sample. See LCES for more information.

If chemical fertilizers are used, select zero-phosphorus, slow-release (water insoluble) forms.

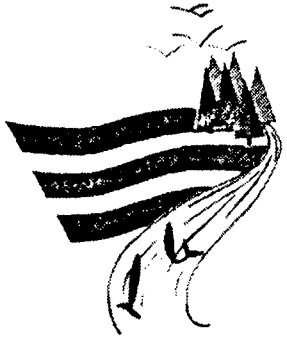
- Do not spread fertilizer within 75 feet of surface water or in low or runoff areas.

Use a drop spreader instead of a cyclone spreader to minimize the possibility of getting fertilizer in the water.

Keep fertilizer off hard surfaces so it can soak into the soil.

Erosion

Water can be contaminated by soil carried into the water. Not only does this cause a sediment problem, but soil particles carry phosphorus into the water. To avoid this problem:



- maintain a filter zone of tall grass, trees and shrubs next to surface water.
- minimize areas of exposed soil by maintaining native vegetation or dense turf.
- preserve ice ridges or construct an earth berm near the shore to minimize the possibility of runoff into the water.
- cover soil piles to prevent runoff.

Septic Systems

Maintain your septic system. A regular schedule of checking and cleaning the tank should be established. Check your septic system to be sure it isn't leaking (and fix it, if it is leaking).

Mowing and Watering Lawns

Mow grass regularly, and leave the clippings on the grass. By leaving the clippings, nutrients are naturally recycled. Don't pile grass clippings, compost, or leaves in or by the water. Clippings and other organic material contain phosphorus.

To avoid runoff, don't over-water lawns. Sandy soils require 1-2 inches of water per week. Clay soils require 1 inch of water per week.

Soap

Don't bathe or shampoo in or near the lake.

Don't wash boats, pets, or other objects in or near the lake

Don't wash cars, lawnmowers, or tractors where wash water can drain into surface water. Use a car wash, where sediments will be trapped and treated.

Use non-phosphate detergents when washing clothes and dishes.

Hard Surfaces and Runoff

Hard surfaces, such as paved driveways and sidewalks, cause runoff. When building, plan ahead to avoid paved surfaces.

Consider slope, soil type, and existing vegetation as you plan your driveways and sidewalks – don't create "pathways" for water to run off into the lake, and leave native vegetation in place. Consider building terraces on steep slopes.

Use gravel and paving stones for driveways, walkways, and patios. They allow water to seep in, instead of running off.

Use steps when a walkway must go directly up and down a slope.

Sweep driveways or sidewalks instead of washing them with a hose to prevent contaminants from being washed into the water.

We need clean lakes for recreation and for our area's environmental health. This means reducing the amount of phosphorus in the water. Phosphorous makes the lakes turn green and smell bad. Phosphorous also hurts game fish populations.

Our goal is to reduce the amount of phosphorous going into our lakes by 50%. This means we need help from both visitors and residents. Here are a few things you can do to help.

The watershed for Lake Herman, Lake Madison, and Brant Lake covers over 80,000 acres. The Lake County Watershed Improvement Project is a partnership between town dwellers, farmers, visitors, and lakeshore residents that will benefit and protect the entire watershed and everyone who lives or visits here. We need to keep every part of our watershed healthy to have healthy lakes.

For more information contact:

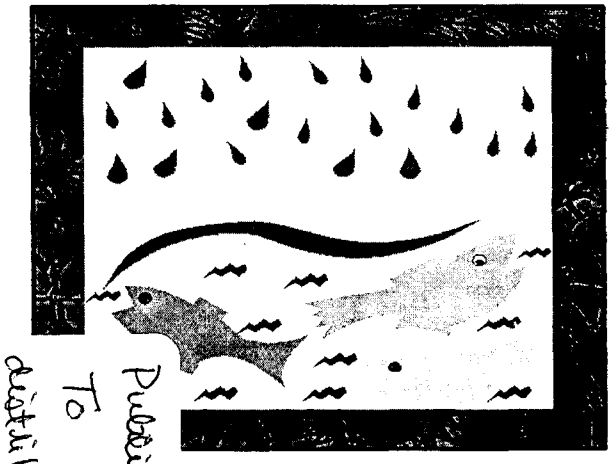
Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, SD 57042

605-256-2571

lakeproj-coor@sd.nacdnet.

WHILE YOU'RE HERE

PLEASE HELP



Save Our Lakes

Public Information & Education
To State Park Users - To be
distributed upon entering SD State Parks
on Lake Herman & Lake Madison
Summer 2001

Boating and Fishing

Be careful – using powerful boats or jet skis in shallow water stirs up lake bottom sediments, which releases nutrients that increase algae growth and turn lakes green.

Properly store and dispose of all waste while boating or fishing.

Adjust the speed of your boat or jet ski to reduce wake and wave action that could damage the shoreline and increase erosion. Observe "no-wake" and low speed zones.

Do not clean your fish and dispose of remains in the water.

When ice fishing, dispose of wastewater and other wastes on shore.

Camping

Use the latrine whenever one is provided.

Properly dispose of all garbage, including any litter you find. If you throw it on the ground, it can end up in the lake.

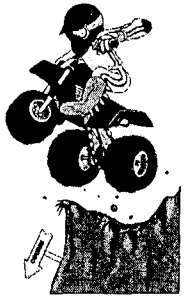
Never wash in the lake. Wash clothes, hair, dishes, and yourself at least 150 feet from the water's edge. Use phosphate-free soap.

Never wash pets in the lake.

Insist swimmers leave the water to use the bathroom.

Remember to follow the specific rules or guidelines for the areas in which you are camping.

In this area, sediment contains a lot of phosphorus. Don't dig in the dirt or let children dig in the dirt in camping areas.

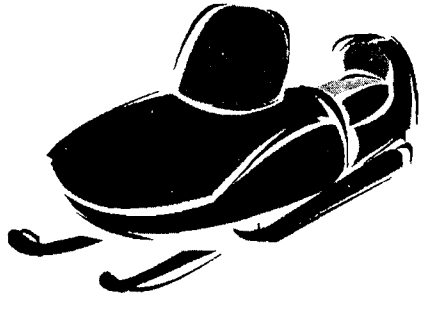


ATVs and Snowmobiles

Stay on maintained trails. When you cut through other areas, you create erosion and sediment runoff. This causes more phosphorus to run into the lakes.

When entering or leaving a lake or river – in summer or on ice -- avoid wet of muddy areas and do not break down bluffs or banks.

Stay on paved areas during spring melt when the thawing ground is likely to rut and erode.



Posters Posted by Lake Co Water Shed Improvement Project in Public Facilities at State Parks on Lake Herman & Lake Madison - Summer 2001 & 2002

Doggie Discipline:

A Saga By The Lake

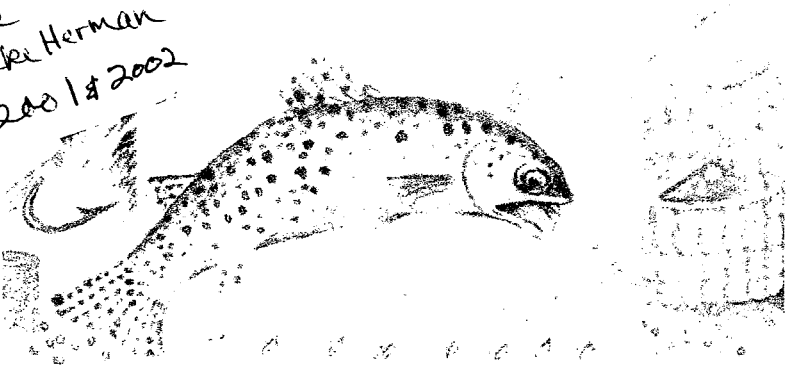
Help Clean Up the Lakes!

*** Pick Up Animal Waste & Put in a Garbage Can.**

*** Don't Wash Pets in the Lake or within 150 feet of the Lake.**

[illegible] that makes the lakes turn green and smell bad -- and hurts game fish populations.

osters Posted by Lake Watershed
Improvement Project in Public
Facilities at State Parks on Lake Herman
& Lake Madison - Summer 2001 & 2002



74100

gone fishin'?

Healthy Fish Need a Healthy Lake
Help Keep it Clean

Phosphorus Makes the Lakes Green and Hurts Game Fish Populations.

Help Reduce Phosphorus in the Lakes --

Run Boats and Jet Skis Slowly in Shallow Water

Don't Wash Boats in or Near the Lake

Dispose of All Waste Properly and On Shore

Posters Posted by Lake Co Watershed Improvement Project in Public Facilities on Lake Herman & Lake Madison at State Park Locations - Summer 2001

Having Fun?

Visiting the Lakes is Supposed to Be Fun!
While You're Enjoying Yourself,
Please Help Clean Up the Lakes by:
Riding ATVs, motorcycles, and bikes only on roads and maintained trails.
Keeping soap out of the water.
Driving boats and jet skis slowly in shallow water.

THANKS!

BULLETIN

IT'S EASIER THAN YOU THINK!

Posters Posted in Public Facilities at State Parks on Lake Herman & Lake Madison

Easy for Things to End Up In the Lake !

If It Goes on the Ground,
It Can End Up in the Lake.

Properly Dispose of all Waste.
Pick Up Animal Waste.
Collect Any Litter You Find.
Use the Latrine Whenever Provided.

[illegible] of Moving Water

Madison Daily Leader
Madison, South Dakota 3/21/01

Editorial

Hidden pollution is next push for environment

Environmentalism over the past four decades has evolved dramatically.

In its earliest stages, environmental efforts were focused on cleaning up contamination, dump sites and visible pollution. Part of Lyndon Johnson's Great Society movement was in beautifying America.

Later, catching polluters in action was the big focus. Industrial polluters throughout the country were dumping wastes into the water and air. Battling established businesses that employed thousands of workers looked to be an impossible task, but environmentalists were able to push through legislation and enforcement which reduced overt pollution.

The obvious smokestacks and drain pipes feeding into a river are now gone, but the new battlefield is in hidden polluters. Leaking underground tanks, animal waste runoff and invisible fumes from factories are the new frontier for those who seek to clean up the environment.

In our area, the development of the Lake Madison Sanitary District helped reduce some underground pollution. Yet we still know that contaminates are still carried underground to lakes, streams and the aquifer.

Citizens may have noticed heavy equipment in our area as part of the the governor's Spruce Up South Dakota program. Unused underground tanks are being removed at no cost to the property owner, and many have been discovered which have leaked petroleum into the soil and water table.

This time of year is critical as melting snow carries four months worth of contaminates into the water system. Some might argue that mud and sand are "clean" contaminants, which aren't harmful to water quality. That is partly correct. Phosphorus, of which our local lakes have too much, attaches itself to soil and is carried in the mud. Furthermore, mud is what filled up Lake Herman until it was dredged in the 1970s and steps were taken to reduce silt flowing into the lake.

We encourage determined efforts to reduce pollutants, both visible and hidden. A comprehensive effort over many years will not only clean up the environment, but also ensure its future health in decades to come.

– Jon M. Hunter

The Madison Daily Leader

May 2001

Watershed project receives grant to be used as match funding

By ELISA BENTLER

The Lake Madison, Brant and Herman watershed project has been awarded a consolidated grant through the Department of Environment and Natural Resources.

The $135,000 consolidated water facilities construction program grant was awarded to the Lake County Conservation District, the sponsor for the watershed improvement project.

It was one of 13 grants and three loans approved through the DENR Board of Water and Natural Resources Wednesday and Thursday.

"I knew we would be OK as long as funding was approved in the first round."
— Michelle Goodale, Lake County Conservation District

Conservation District Officer Michelle Goodale said the grant will be used as match for construction of agriculture waste systems and stream bank stabilization and repair.

"I knew we would be OK as long as funding was approved in the first round," Goodale said.

The grant couldn't be applied for until the major funding (EPA 319 funding) for the project was approved. That funding was approved last fall, and the next application deadline for this grant was in February.

The projects to be partly funded through this grant, however, are dependent on ground conditions and moisture conditions, Goodale said.

Due to current high water levels, repair and bank stabilization probably won't be possible until late summer or early fall, she said.

Construction of the ag waste systems will also probably take place this fall.

As projects are completed, vouchers are submitted to DENR, which in turn provides reimbursement through the grant.

The main goal of the three-year $1.5 million project is to reduce the phosphorus level in the watershed by 50 percent.

The goal will be accomplished through controlling some sediment and erosion problems, creating a public awareness program and conducting feasibility studies for future project.

The project was developed by a committee after the results of an assessment project on lakes Madison and Brant found that the lakes had an abundance of phosphorus and other substances in the watershed.

One study currently under way is examining samples of water and sediment depth on Bourne Slough. The study is also examining samples from different locations throughout the Madison storm sewer system.

The goal of the study of storm sewer samples is to further pinpoint where potential locations for high concentrations of phosphorus would be.

Examination of Bourne Slough is taking place to determine the amount of sediment in the slough and what types of phosphorus are in the sediment.

2 May 2001

The Madison Daily Leade

Serving the Interlakes area

New watershed project coordinator hired

By ELISA BENTLER

A new project coordinator for the Lake Area Watershed Improvement project has been hired.

Christine Schuldes of Colton started her duties Tuesday. She replaces Lilias Jarding, who announced in March that she was moving to Colorado.

Schuldes and her husband Michael moved to South Dakota in June 1998. She has been teaching college courses at Colorado Technical University and National American University, both in Sioux Falls.

She has previously worked as an Aquatics Ecologist where her interest in watersheds and the urban effects of phosphorus grew.

Schuldes

From the moment she moved here, Schuldes said, she began to see a number of things that could be done to preserve the natural resources in the area. Upon hearing about the watershed improvement project, she was excited, and that excitement grew when she saw an opening for a project coordinator.

"It's great to be involved in something where you can see the results of your elbow grease," Schuldes said.

"It seemed like this project was the ideal way to make lakes Herman, Brant and Madison the way we want them to be," she said. "If the lakes continue, in 10 years no one will want to be around the lakes in July and August, they will smell so bad."

Reducing the input of phosphorus into the lakes, however, is only part of the solution to reversing the worsening of the lakes, she said.

The goals of the project — reducing phosphorus through controlling sediment, erosion and runoff — are achievable, she said, and have been proven to be successful. Some results might be seen after three years, but others may take longer.

She has worked on projects like this in Wisconsin, she said, and they have seen reduction in algae after 10 years.

"I've seen a lot of these things used in Wisconsin and seen them pay off and work," she said.

"I like (this project)," she said, "because there's going to be real evidence and real results to show what we've done."

BIG SIOUX WATER FESTIVAL

In Appreciation
To
Lake County Conservation District

For your volunteering in the 2001 Big Sioux Water Festival in Brookings, South Dakota. It is with deep appreciation that we present you this certificate and thank you for your support of this project.

Lisa Bretsch

The Big Sioux Water Festival
Lisa Bretsch, Project Coordinator

In Appreciation

THANK YOU

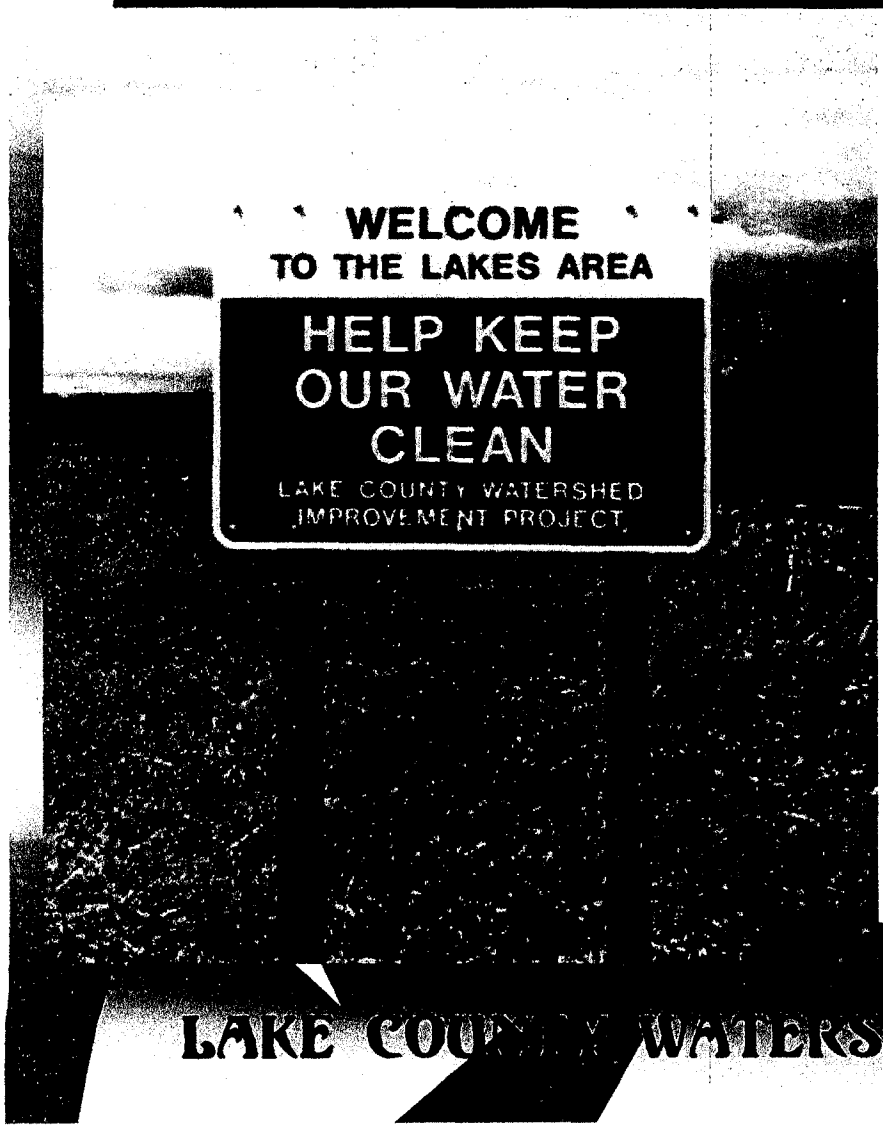
for being a

CLEAN WATER PARTNER!

WE APPRECIATE YOUR USE OF ZERO-PHOSPHORUS FERTILIZER.

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

In Appreciation



THANK YOU

for being a

CLEAN WATER PARTNER!

WE APPRECIATE THE DONATION OF YOUR TIME & EFFORT TO HELP US POST OUR ROAD SIGNS.

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

Clean Water Chronicle

VOLUME 1, ISSUE 3

JULY 2001

INSIDE THIS ISSUE:

THE WATERSHED IMPROVEMENT PROJECT: CLEAN LAKES ARE A PRIORITY

The Lake County Watershed Improvement Project is part of a nationwide effort to clean up lakes, rivers, and streams that do not meet state and federal water standards. These clean-up efforts focus on water bodies that have become "impaired" and aren't clean enough for various purposes.

Lake Herman, Lake Madison, and Brant Lake are considered "impaired" waters by state and federal environmental agencies. This means we are qualified to receive money to clean up the lakes. In fact, our lakes are a high priority, and the Project has received the largest federal grant of any water clean-up project in eastern South Dakota!

The Watershed Improvement Project was pulled together by concerned citizens from all parts of the Lake Herman/Lake Madison/Brant Lake watershed. The Lake County Conservation District is the Project's official sponsor, but 17 organizations have a role. These include 3 lake associations, 3 lake sanitary districts, 3 federal agencies, 3 state agencies, East Dakota Water Development District, Lake County, the City of Madison, and Dakota State University. Improving the water quality in our lakes is truly a partnership effort!

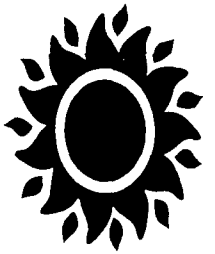
The Project was put together after earlier efforts to clean up the lakes had not brought water quality in line with federal and state standards. Eventually, people feared, regulations would force a clean-up of the lakes. But people in Lake County wanted to avoid a regulatory solution, so they began the long process of finding ways to solve the problem cooperatively.

A series of water quality assessments were done that showed that the biggest problem in the watershed was phosphorus. Phosphorus is a naturally-occurring element, but when there is too much in the lakes, there are algae blooms. The algae are what turn the lakes green and make them smell bad.

So the goal of the Watershed Improvement Project is to cut the amount of phosphorus going into the lakes by 50%. Participation in the Project is completely voluntary, but it will take the everyone's help to reach that goal.

Continued on Page 2

WARM WEATHER IS FINALLY HERE!



And that means time for fun on the lakes!

This year, remember the Watershed Improvement Project while you have fun. With your help, we can clean up the lakes. Then we can all enjoy our summer fun even more!

THE AGING OF LAKES - EUTROPHICATION: WHAT IS IT?

When lakes age, their appearance changes, and this natural process is called eutrophication [yoo tròffi káysh'n]. Which is a cyclical process in which a body of water becomes rich in dissolved nutrients, thereby encouraging the growth of plant life and resulting in the decomposition of plant matter, which continues to enhance the process of eutrophication. Eutrophication naturally occurs over many centuries, but it occurs at a faster pace when humans allow sewage or phosphates from fertilizers and soaps to drain into them. When human activities increase the rate of eutrophication, aging occurs very rapidly, this is called cultural eutrophication (see Figure 1).

The aging process is speed up by the addition of nutrients that enhance the growth of algae. In freshwater systems, such as lakes, streams, and rivers, phosphorus is the nutrient that enriches the water and causes algal blooms. Humans increase the rate of phosphorus addition to freshwater systems when rainfall causes run-off of sediments, animal wastes, and fertilizers from land adjacent to the water.

Early in the life cycle of a lake, the water is clear and low in nutrients (Frame 1 of Figure 1) and the sediment in the bottom of the lake is sand. As time passes, the amount of nutrients in the lake increases naturally and these nutrients allow for the growth of plants in shallow areas (Frame 2 of Figure 1). As the plants continue to grow and die, decomposition of plant matter and debris brought into the lake cause the lake to fill in with soft, fluffy sediment, along with additional nutrients which cause the water quality of the lake to decrease (Frame 3 of Figure 1). When there are more nutrients available than the plants can use or light penetration is too poor to allow for plant growth, the nutrients are used by algae.

Algal blooms can become very unpleasant, because blue-green algae have a noxious odor and displeasing appearance. Blue-green algae thrive when other less annoying algae (green) are unable to survive, allowing the blue-greens to dominate a lake. When the blue-green algae persist as the dominant algae and phosphorus levels are high, lakes are given the special designation of hypereutrophic (hyper meaning excessive or abnormally high levels and eutrophic referring to nutrients), which indicates that the lake is now considered to be "old". Human activities increase the rate of eutrophication by increasing the amount of phosphorus entering a lake and resulting in many lakes becoming hypereutrophic before they would have under natural conditions. Simple steps can be taken by humans to decrease the amount of phosphorus entering lakes. (see articles on pages 2 & 3)

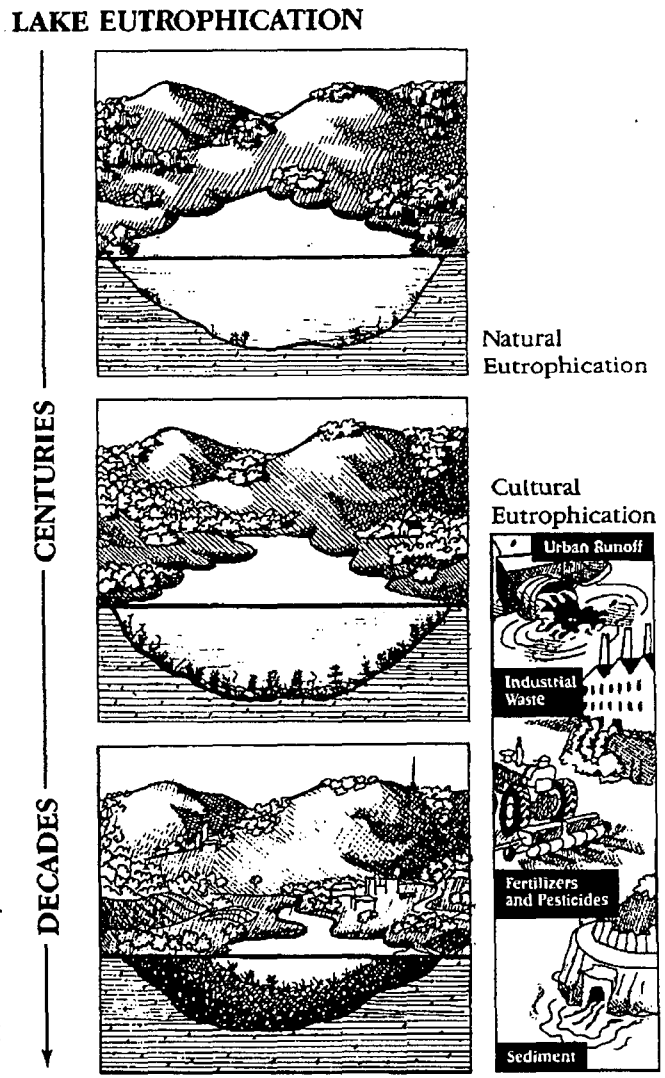


Figure 1. The natural process by which lakes age takes thousands of years. Human activities can change these lakes in less than a single generation.

CLEAN LAKES A PRIORITY (continued)

The Project has raised $1.3 million to work on phosphorus reduction. The bulk of this money will go to help farmers reduce fertilizer and animal wastes entering the water.

Other Project expenditures cover public education activities, like this newsletter. Public education focuses on what people can do to solve the phosphorus problem.

The third use for Project funds is to study problems to which we are searching for solutions. One is a study to see if there are water quality problems from septic systems on Lake Herman. A second will monitor water quality just south of the sewage lagoons. The largest study is looking at the City of Madison's storm sewers and sediments in the bottom of Bourne Slough and Round Lake.

The Project covers all aspects of the phosphorus problem. If you have questions or ideas, call the Project office.

But just having money is not enough to clean up the lakes. It takes the involvement of local residents and visitors, businesses and nonprofit groups, school children and grandparents. In short, it will take everyone to clean up our lakes.

The Lake County Watershed Improvement Project is working with a variety of groups, businesses, and government offices. In this newsletter, you'll find out more about what the Project is doing. You'll also find out more about what you can do to help clean up our lakes.

Your participation is important! We need your help to keep things like soap, animal wastes, sediment, and fertilizer out of lakes and streams. All these things contain phosphorus, which is what causes algae to grow and lakes to turn green and smell bad. Algae blooms also hurt game fish populations.

On land, remember that if it goes on the ground, it can end up in the lake! Don't be fooled by dry-weather conditions, and don't underestimate the power of moving water. When it comes to phosphorus, every little bit hurts.

On the lakes, remember to go easy in shallow water. Running jet skis or boats hard in shallow areas stirs up sediments that contain phosphorus and increases algae.

If you have questions, feel free to call or e-mail us. Our job is to make it as easy as possible for everyone to make the changes that will make our lakes clean — not green.

SPECIAL THANKS

To George Flannery and Lake Herman and Walker's Point State Parks employees for posting signs and handing out Clean Water flyers.

NEW PROJECT COORDINATOR

A new project coordinator was hired to replace Lilias Jarding, who was hired last fall and resigned in March to pursue a career opportunity in Colorado. Christine Schuldes started with the project in May and has been very busy with project activities. Christine moved from Wisconsin in 1998 to a home outside Colton with her husband Michael. Michael will be a Professor at DSU in the Computer Science Department this fall.

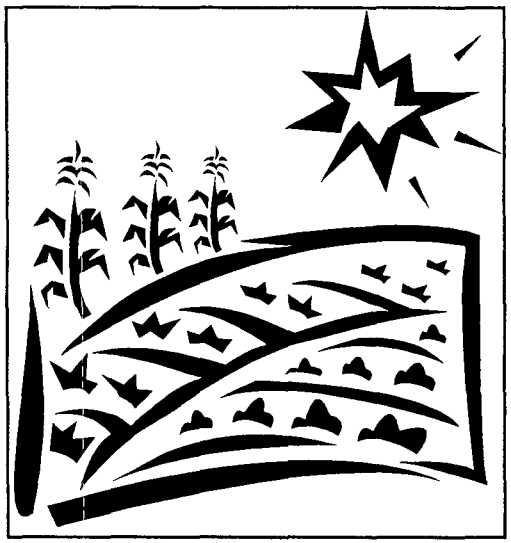
Watershed Improvement Project Has Funds to Help Farmers be Clean Water Partners

The Watershed Improvement Project is funded by a combination of local, state, and federal funds. Its total budget is $1.3 million, and the largest chunk of that money will be used to help farmers improve their practices.

The focus of farm improvements that will help clean up the lakes is keeping phosphorus from entering the watershed. This means looking at fertilizers, animal wastes, and soil runoff.

Phosphorus is naturally high here, and many crops do not need added phosphorus. So **one thing the Project encourages is soil testing before applying fertilizers that contain phosphorus.** Two of the activities the Project will cost-share are nutrient management planning and integrated crop management. Farmers can also buy zero-phosphorus fertilizers from their usual suppliers. The Project has been in communication with local suppliers, and they are ready to help farmers help the lakes.

As for animal wastes, the Project can cost-share an entire animal waste management system or just a few activities. These activities include diversions and a variety of activities designed to encourage livestock to stay away from creeks, lakes, and wetlands. The Project will cost-share at least 75% of these projects, depending on the situation.



For both fertilizers and animal wastes, soil runoff is a factor because phosphorus attaches itself to sediment. So the Project also funds installation of grassed waterways, contour buffer strips, and buffers and filter strips along water bodies. These activities are funded in cooperation with the CRP program, and at least 90% is cost-shared by the Watershed Improvement Project in cooperation with the NRCS.

Multi-purpose dams and terraces can also be cost-shared under certain circumstances. And stream bank stabilization will be cost-shared along Silver Creek.

What Area Is Included?

The City of Madison and the following townships include part of the Lake Herman/ Lake Madison/Brant Lake watershed:

- Badus (parts of secs. 33-36)
- Chester (northern)
- Concord (southeast)
- Farmington (most of it)
- Franklin (part of sec. 6)
- Herman (most of it)
- Lake View (most of it)
- Leroy (western)
- Orland (northern)
- Wentworth (southern and western parts)
- Winfred (northeast)

If you own or operate land in these areas, please contact the Watershed Project about cost-share possibilities.

STREAMSIDE AND LAKESHORE OWNERS PLAY AN IMPORTANT ROLE IN PRESERVING WATER QUALITY

Anybody living next to a stream, lake, or river plays an important role in protecting water quality. Water appearance and odor affect the value of lakefront properties, and many people want to be able to swim, fish, boat, and sit outside without worrying about water quality.

The four things that have to be kept out of the lakes for water quality to improve are animal waste, sediment runoff, fertilizer, and soap. By following some simple guidelines, streamside and lakeshore residents can do a lot to keep these things out of the lakes. Because these things all have phosphorus in them, they need to be kept from entering the water.

> "Soap, fertilizer, animal waste, and sediment runoff are all things that contribute to poor water quality."

The highest priority for the landowner should be to limit run-off from their land, which is a complex issue, because it involves keeping animal wastes, soil, fertilizer, and soap out of the water, in addition to stopping erosion of stream banks and shoreline.

The most important thing the landowner can do is to keep a filter zone of tall grass, shrubs, and trees between lawns and the lake. Taller plants catch sediment and fertilizer before they enter the lake. Contact the Watershed Project for ideas on what types of plants work best. Soil piles should be covered to avoid runoff, and exposed soil should be replanted right away.

Also, it is important to remember that hard, paved surfaces increase runoff. On the other hand, gravel and paving stones allow water to seep in. It is also important to avoid creating paths for water to run quickly into the lake. Plan driveways and walks so they don't funnel water into the lake. Use terraces on steep slopes to slow runoff — and increase your property value.

For those who fertilize their lawns, here are a few pointers. Fertilizer should not be used within 75 feet of surface water, on low areas, or in runoff areas. Fertilizer should not be left on hard surfaces. A zero-phosphorus product should be used (see below). Leave grass clippings on the lawn, and don't pile them, compost, or leaves in or near the water. And last, but not least, water your lawn sparingly to avoid runoff.

There are two basic ideas that will keep soap out of the lakes. The first is to keep it off the ground. This means taking vehicles to a car wash, instead of washing them at home — or at least avoiding using soap. The second is to keep soap out of the water by not washing pets, boats, people, or other items in the lake.

If you want more information on any of these topics, feel free to call the Watershed Improvement Project. We're here to help you clean up the lakes!

THANKS!

<u>Thank You</u> to everybody who purchased ZERO-PHOSPHORUS fertilizer this spring to use on their lawn, we greatly appreciate the support of the project. We hope you are enjoying your lawns this summer and will choose to purchase zero-phosphorus fertilizer again the next time you fertilize your lawn or garden.

HELP CLEAN UP THE LAKES

BUY ZERO-PHOSPHORUS FERTILIZER

The Watershed Improvement Project is making it easy for homeowners to help clean up the lakes by giving discounts to people who use zero-phosphorus fertilizer. A zero-phosphorus fertilizer has a "0" as the middle number in the fertilizer rating – such as "18-0-18". For those who use lawn fertilizer, reaching for a bag of zero-phosphorus fertilizer is an easy way to clean up our lakes and help game fish populations.

The Watershed Project is working with local businesses to be sure everyone can get zero-phosphorus fertilizer – and save money at the same time. In March, discount coupons were mailed to every household in the City of Madison and along Lakes Herman, Madison, and Brant. These coupons can be used at local stores to save $1 off a bag of zero-phosphorus fertilizer – up to $5 off on 5 bags. Just take the coupon (a blue postcard) to the store with you. If you didn't receive one in the mail and would like one, contact Chris Schuldes the Project Coordinator at 256-2571.

Arrangements were also made with local lawn services to provide a $5 rebate to people who use zero-phosphorus products. Ask your lawn service to use zero-phosphorus fertilizer when you place your order, then be sure to ask for your rebate card. The card is pre-printed and stamped. All you have to do is fill in your name and address, then drop it in the mail. Your rebate will be sent to you by the Watershed Project.

Zero-Phosphorus Fertilizer is available at:

- **True Value Hardware, Madison**
- **F&M Agronomy**
- **Domestic Seed & Supply**
- **Chester Farm Service**
- **Campbell Supply, Madison**
- **A&B Pest Management**
- **TruGreen ChemLawn**
- **Classic Lawns**

KEEP THEM CLEAN - NOT GREEN

How To Contact Us

We'd like to hear from you! We have a lot of information on the watershed that we're happy to share. We've also collected information on a variety of things that people can do to help water quality. We're available to help you solve your particular business or residence problem.

The Watershed Improvement Project would like to attend your event or group meeting to talk about what we're doing. We have entertaining video presentations and can speak to all ages and all audiences. We can set up a table display, facilitate a problem-solving session, or lead a group discussion of water issues.

The Project has prepared a variety of flyers on how people can help clean up the lakes. If you know a good place to put information so people will see it, let us know.

These are just a few ideas. Contact us with your own ideas on cleaning up our watershed. **We need and appreciate your help!**

Maybe You Saw Us at Local Events

Members of the Watershed Committee got a chance to talk to a lot of people at the Dakota State University Earth Day Event in May or at the Chamber of Commerce's Lakes Appreciation Day Pancake Breakfast in June. We handed out mints, magnets, golf tees, flyswatters, brochures, and newsletters. We got a lot of positive feedback on the need to clean up the lakes. A hearty thanks to everyone who stopped by our table. If you missed us then, watch for our display at other upcoming events. We'll be happy to pass out mints and answer your questions about keeping our lakes clean.

Maybe You Saw Our Road Signs

These signs (in blue) are posted on each state highway coming into the Lake Herman/Madison/Brant watershed. The signs are designed to raise awareness of the watershed boundaries and encourage residents & visitors to help keep our lakes clean.

THANK YOU

To the Lake County Road Crew for posting our Clean Water signs on the four highways entering town.

Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, S.D. 57042

Phone: 605-256-2571
Fax: 605-256-2007
Email: lakeproj-coor@sd.nacdnet.org

Don't hesitate to call or e-mail us. We're here to help !

Cyber Corner

For those who like to surf the 'Net, there is now a local site dedicated to one of our lakes:

www.lakemadisonlive.com

This site features information on Lake Madison activities, the current weather, and a fishing report, as well as information on the Watershed Project.

When the site is fully up and running, it will include a live video camera that will allow you to see what is happening at the Lake moment by moment. This will be handy if you're at work or on the road and wonder what the weather's like, if the fish are biting, how many people are out on the Lake, and the like.

Or you can just sit at your computer and dream about really being on the water!

13 EASY WAYS YOU CAN HELP

1.Use zero-phosphorus fertilizer

2.Keep soil covered or contained, so it doesn't run off your property

3.Look for ways to help keep the lakes clean where you work

4.If you hire someone to work at your place, be sure they see this information

5.Plant shrubs and other vegetation along lakeshores and creeks to filter out pollutants

6.Keep fertilizer off sidewalks, driveways, streets, creek banks, and drainage areas

7.Avoid placing grass clippings, leaves, or ashes on the street

8.Clean up animal waste, so it doesn't run off your property

9.Cover bare dirt with mulch and replant it as soon as possible

10.Use a broom, not water, to clean sidewalks and driveways

11.Participate in Watershed Project activities

12.Don't use soap in or near lakes or creeks

13. Wash cars at a car wash

• Spread the word about cleaning up our lakes!

The Madison Daily Leader
Thursday
July 19, 2001

Report: Bourne Slough is half full of sediment

Recommendations are still being studying

By ELISA BENTLER

Bourne Slough on the northwest side of Lake Madison is at least half full with sediment, according to preliminary information from officials.

According to a report from Barr Engineering Company of Minneapolis, Bourne Slough covers 92 acres of land and is holding 410,000 cubic yards of sediment.

Christine Schuldes, project coordinator for the Lake County Watershed Improvement Project, said with that amount of sediment, the slough is at least half full.

The sediment study is part of the Watershed Improvement project currently under way. The overall goal of the three-year, $1.3 million project is to reduce the amount of phosphorus in the watershed by 50 percent. That, in turn, may eventually reduce the algae production on the lake.

Project committee members decided to study Bourne Slough to determine how much sediment was present, if the slough was still functioning as a sediment basin, and if dredging the sediment from the slough was a feasible alternative.

Barr Engineering, along with Ulteig Engineering of Sioux Falls, was hired to conduct the sediment study last winter and conduct storm sewer sampling.

As part of the study, Barr was to determine the amount of phosphorus in the sediment and the amount of phosphorus that would be disturbed if dredging took place.

According to the report, Barr concluded there was 280-350 milligrams of phosphorus per liter of water, and about 5-6 percent of the phosphorus (15-19 mg/L) would be released if the sediment was disturbed.

Jay Gilbertson, manager of the East Dakota Water Development District, said dredging costs an average of $3 per cubic yard, or about $1.2 million to dredge Bourne Slough.

Committee members looked over the information on Tuesday but took no action. Instead, they're waiting for additional information from Barr which should contain suggested remedies.

Based on the information given, however, committee members are aware the slough isn't functioning as a sediment basin.

"There's not a lot of room for more sediment loading in the slough," committee chairman Linda Hilde said. "The lake (Lake Madison) is already getting some sediment from water bypassing Bourne Slough and entering the lake."

Other aspects of the project

The Watershed Improvement project includes other facets as well.

A zero-phosphorus fertilizer promotion started this spring. Coupons for discounts on zero-phosphorus fertilizer were sent to every home in Lake County.

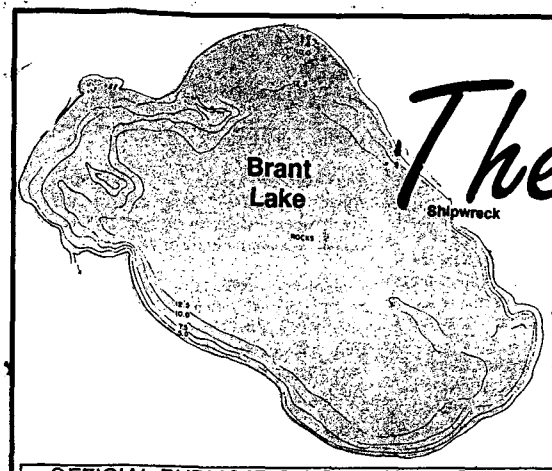
Schuldes

Schuldes said not a lot of businesses requested reimbursement for the coupons, but the businesses that participated did report selling a number of bags of fertilizer. TrueValue and Chester Hardware estimated sales at 30-40 and 40-50 bags, respectively. Domestic Seed estimated about 80 bags sold while Campbell Supply reported 70 bags sold.

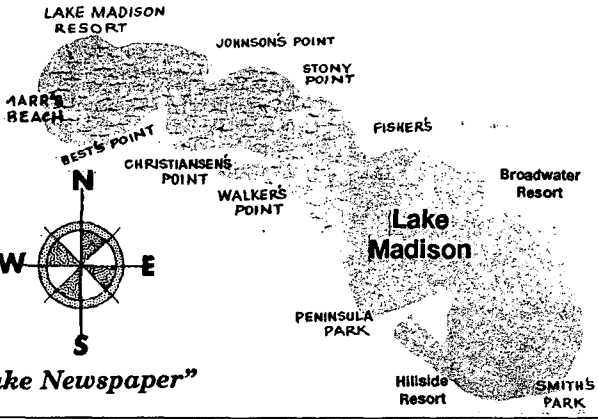
The project also has a portion of funding allocated for cost-sharing in the construction of animal waste management systems.

Survey work is in progress or has been done on four locations but work on the systems hasn't begun.

A large portion of funding for the project is coming from EPA 319 funds. Other funding is coming from matching funds from landowners, the city of Madison, lake associations, the East Dakota Water Development District, the Lake County Conservation District and other federal and state funds.



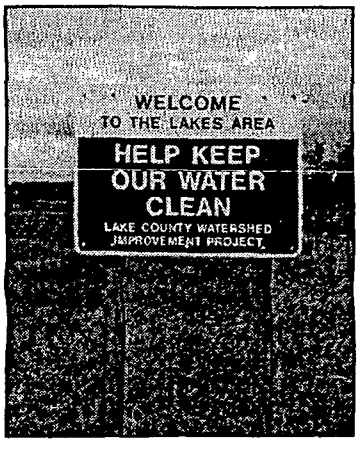
The Lake News



"World's Largest Lake Newspaper"

OFFICIAL PUBLICATION OF LAKE MADISON AND BRANT LAKE DEVELOPMENT ASSOCIATIONS • BOX 296 • MADISON,SD 57042

WHAT'S HAPPENING WITH THE WATERSHED PROJECT?



There has been a tremendous amount of interest in the Lake County Watershed Improvement Project from farmers, lake residents, and city of Madison residents. The focus of the watershed project is to reduce phosphorus inputs into Lake Herman, Lake Madison, and Brant Lake, in an attempt to reduce the occurrence of noxious blue-green algal blooms. The Watershed Project has funding to cost share activities can be obtained at the Natural Resources Conservation Service (NRCS) Office in Madison. Since the project began last fall, there have been a variety of activities with which the project has been involved; the following is a brief summary of what has been happening with the project.

One of the largest aspects of the project is aimed at reducing run-off from animal feedlots. There have been numerous landowners interested in building animal waste management systems, which are designed to prevent phosphorus in the manure from running off into streams and lakes. So far, there are 12 producers that have applied up for technical and financial assistance to build animal waste management systems. We are conducting surveys on several of the feedlots and completing preliminary designs on two systems. If things go smoothly, we may be able to begin construction on one or two this fall.

Another project activity was aimed at reducing phosphorus inputs from lawn care activities. This spring a zero-phosphorus fertilizer promotion was sponsored by the project, where in participants were eligible for rebates on fertilizer purchased at 4 local stores. There has been a great deal of interest in this aspect of the project and we had a lot of people purchasing zero-phosphorus fertilizer. A preliminary assessment of the fertilizer sales indicates that between April and June for fertilizing lawns in Madison and around the lakes. Both area golf courses participated in the promotion and fertilized several areas with zero-phosphorus fertilizer. Participation in this aspect of the project qualifies the golf course as Clean Water Partners.

Recently signs (like the one shown) were posted on the four major highways entering town. The County Highway Department deserves a special thank you for assisting the project by posting the Clean Water signs that mark the edges of the watershed. This contribution makes the County Highway Department and the Superintendent Scott Mathison Clean Water Partners.

We are pleased to have such a strong showing of support for the project, and wish to thank all of you that have participated in any of the various aspects of the project. For more detailed information on the project please see the Clean Water Chronicle that is being distributed with the Lake News. If you have any questions or comments, please contact Chris Schuldes, the Project Coordinator, at 123 SW 2nd St., Madison, SD 57042, call 256-2571, or email at: lakeprojcoor@sd.nacdnet.org.

Madison Daily Leader

Madison, South Dakota

THE LAKE MADISON DEVELOPMENT Corporation recently presented a check for $5,000 to the Lake County Watershed Improvemnt Association. Eugene Moser presented the check to the watershed project coordinator Christine Schuldes. The check was the second half of a $10,000 contribution. The funding will go toward the cost of the assessment on Bourne Slough. ***(Photo by Elisa Bentler)***

Thank You

Chris,

Thank you so much for coming to our classroom to share about the watershed project! We really learned a lot about how important it is to protect our water! We liked all of the things that you brought to share with us, including the video and the stuff in your box! We hope we can help protect our water in Lake County! Mrs. Macziewski's class

Jorgen Nicole

Brooke Johnson

Tracy Boose

Dalton Warren

Lacey

Mindy

Joshua

Crystal

David

Tony

Chase Christiansen

Sir Bowers

Nick

Mrs. Macziewski

The Madison Daily Leader
Wednesday
January 16, 2002

Water quality, sediment study discussed

Dredging suggested to reduce phosphorus as part of local water assessment

By ELISA BENTLER

Dredging a portion of Bourne Slough could help reduce some of the phosphorus in the local watershed.

A recently completed water quality assessment and sediment composition study analyzed storm sewer runoff from the city of Madison and sediment samples from Bourne Slough and Round Lake.

The Lake County Watershed Improvement Association gathered Tuesday to hear a summary of the report, which was prepared by Bruce Monson of Barr Engineering.

Monson

The study showed Bourne Slough had approximately 410,000 cubic yards of sediment and covers about 92 acres. The deepest sediment is toward the middle at the northwest and southeast ends of the slough. At its deepest point, it is five and four feet deep, respectively.

Monson recommended dredging about 100,000 cubic yards and creating a horseshoe-shaped canal within the slough that would allow settlement of sediment to take place before the water enters Lake Madison.

"The water goes through too fast and isn't getting a chance to settle," Monson said.

He also recommended placing the dredged material in the middle of the slough, creating an island.

The first step toward dredging would be creating a conceptual design for the canal, Monson said, but he was unable to give an estimate on what this aspect would cost.

Alternatives to dredging are also a possibility. Watershed committee members discussed creating a constructed wetland or a dry basin.

The assessment on storm sewer runoff from the city of Madison concluded that an estimated 1,445 pounds of phosphorus per year comes from runoff.

That conclusion was based on water samples from 11 storm sewers and 14 in-stream samples. The samples were taken during the snowmelt in March and rain storms in April, June and November.

The original assessment of the watershed done in 1997 estimated the total phosphorus loading at 23,351 lbs. per year, with about 4,889 lbs. per year coming from the city.

Schuldes

Watershed Project Coordinator Chris Schuldes said these numbers are comparable if you take into account that 1997 was a dryer year than 2001 and phosphorus concentrations would have been higher at that time. The study in 1997 also used an automatic sampling method vs. a manual sampling method in 2001.

Monson suggested some practices to reduce the phosphorus loading, including: street sweeping, fertilizer management, litter control, catch basin cleaning, covering salt piles and establishing construction site erosion control plans.

Madison Street Superintendent Dick Birk said all streets are currently swept a minimum of once a month and the downtown area is swept twice a week. The storm sewer system is also regularly cleaned.

The study also revealed certain areas of Madison that contribute more phosphorus than others. That area includes a section south of the railroad tracks extending about two blocks to the east and west of Egan Avenue. The next highest areas include some industrial areas in the southwest area of town, and a section on north Washington.

The Watershed Committee will meet later to further discuss the findings of the study and decide what action to take.

Clean Water Chronicle

VOLUME 2, ISSUE 1
JANUARY 2002

REPORT PRESENTED ON MADISON STORM SEWER AND BOURNE SLOUGH STUDIES

The Lake County Watershed Improvement Project is part of a nationwide effort to clean up lakes, rivers, and streams that do not meet state and federal water standards. These clean-up efforts focus on water bodies that have become "impaired" and aren't clean enough for various purposes.

Lake Herman, Lake Madison, and Brant Lake are considered "impaired" waters by state and federal environmental agencies. This means we are qualified to receive money to clean up the lakes. In fact, our lakes are a high priority, and the Project has received the largest federal grant of any water clean-up project in eastern South Dakota!

As part of the Watershed Improvement Project, two studies were conducted to investigate some unanswered questions. The Project hired Barr Engineering, an environmental consulting firm out of Minneapolis, to evaluate the amount of phosphorus in runoff from the City of Madison storm sewers, and assess Bourne Slough's ability to act as a natural settling basin for water entering Lake Madison from Silver Creek.

Barr Engineering sampled Bourne Slough last spring just before ice melt. They collected sediments, measured water and sediment depths, analyzed the results, and created a map of Bourne Slough, indicating how much sediment was found in the slough and where the phosphorus concentration was highest.

The City of Madison storm sewers were sampled during snow melt in March and rainfall events during April, June, and November. Barr Engineering selected 25 sites to sample within the City along Park, Memorial, and Silver Creeks. The samples were analyzed for phosphorus content and a map of the results was generated indicating areas of high phosphorus inputs.

On January 15th, Bruce Monson of Barr Engineering presented the results of the studies to the Lake County Watershed Improvement Project Committee. Monson said, the storm sewer study results indicates that the annual phosphorus load for the City of Madison was 1,445 pounds. Which is a small fraction of the annual phosphorus load for the Silver Creek and Memorial Creek watersheds (roughly 23,000 pounds/year). So, Monson concluded that roughly 6 - 10% of the

Continued on Page 2

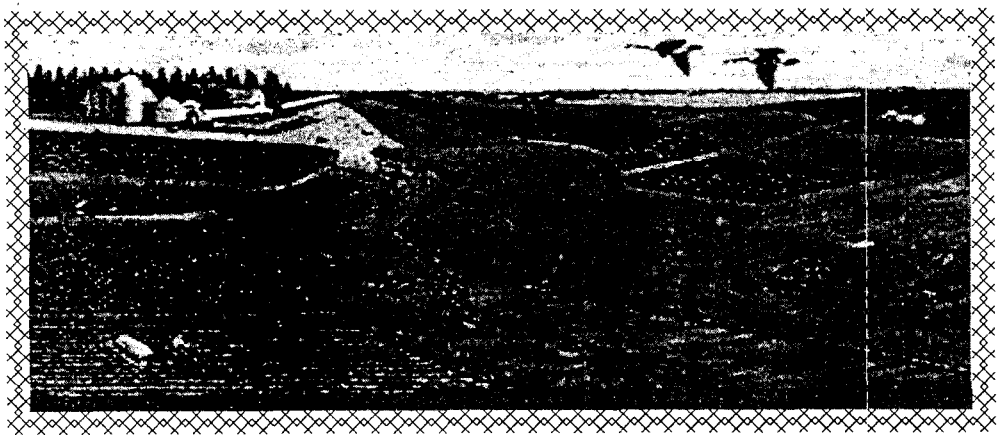
INSIDE THIS ISSUE:

WINTER WEATHER IS HERE!

And that means snow and ice!

This winter, remember that what you put on the ground ends up in the lake. Help the Watershed Improvement Project clean up the lakes. When you spread salt and sand try to minimize the amount you use. Have a safe winter!!

NonPoint Source Pollution and The Watershed Approach to Clean Water



Why is there still water that's too dirty for swimming, fishing, or drinking?

The United States has made tremendous advances since the Clean Water Act was enacted more than 25 years ago to protect the nations waters from pollution. Since then, the Environmental Protection Agency has recorded substantial reductions in pollution generated by industries that discharge substances directly into waterways from a single point or pipe (known as "point source pollution"). But, the reduction of pollution from "nonpoint sources" has not meet with as much success, even though there has been a focused effort to reduce "*nonpoint source pollution*" (NPS). Today, NPS pollution remains the Nation's largest source of water pollution problems.

NPS pollution occurs when rainfall, snowmelt, or irrigation runs over land or through the ground, picks up pollutants, and deposits them into rivers, lakes, and coastal waters or introduces them into ground water. Imagine the path taken by a drop of rain from the time it hits the ground to when it reaches a river, lake, or ground water. Any pollutant it picks up on its journey can become part of the NPS problem. Potential sources of NPS pollution include agriculture, forestry, grazing, septic systems, recreational boating, urban runoff, construction, habitat degradation, and changes to stream channels. The latest National Water Quality Inventory indicates that agriculture is the leading contributor to water quality impairments, degrading 60 percent of impaired river miles and half the impaired lake acreage surveyed, and that the most common NPS pollutants are sediments and nutrients, like nitrogen and phosphorus. Beach closures, destroyed habitat, unsafe drinking water, fish kills, and many other sever environmental and human health problems result from NPS pollution, in addition, the pollutants ruin the beauty of healthy, clean water habitats.

Each year there are millions of dollars spent trying to restore and protect the areas damaged by NPS pollutants. During the last 10 years, our. Country has made significant headway in addressing NPS pollution. At the federal level, one recent NPS control program is the Nonpoint Source Management Program established by the 1987 Clean Water Act Amendments. At the regional and local level, use of the *watershed approach* has helped communities address water quality problems caused by NPS pollution. The *watershed approach* looks at not only a water body, but also the entire area that drains into it. This allows communities to focus resources on a watershed's most serious environmental problems, which are often NPS pollutants. Just as important, more citizens are practicing water conservation, using zero-phosphorus fertilizers, and using other "environmentally friendly" practices to reduce individual contributions to water problems. By helping out in such efforts, citizens address the Nation's largest water quality problem, and ensure that even more of our rivers and lakes are safe for swimming, fishing, drinking, and aquatic life.

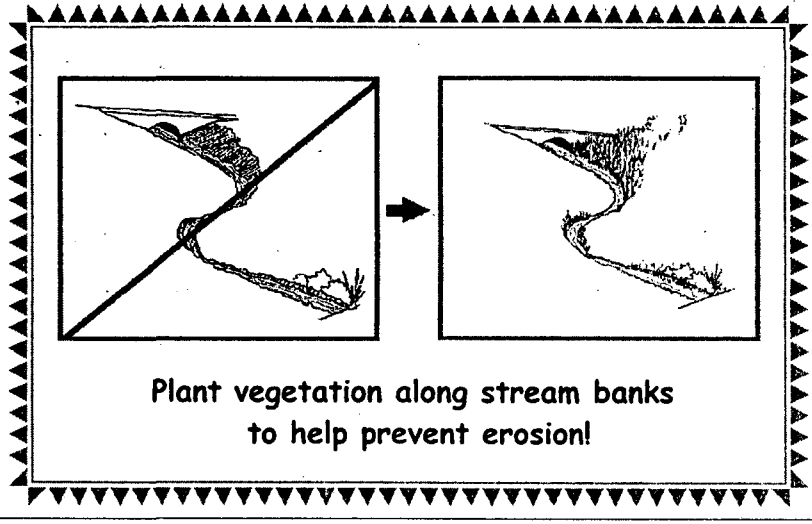
Please Help Clean Up Our Lakes!

MADISON STORM SEWERS & BOURNE SLOUGH (continued)

phosphorus entering Lake Madison was coming from the City. Monson suggested some practices for the City to implement to prevent phosphorus from entering storm sewers, including zero-phosphorus fertilizer use, street sweeping, litter control, covering piles of salt or dirt, catch basin cleaning, and construction site erosion control plans. The City currently cleans streets a minimum of once a month and the downtown area twice a week, and vacuum cleans the storm sewers regularly. The study also revealed that a section of Madison just south of the railroad tracks and two blocks east and west of Egan Avenue contributed higher levels of phosphorus than the rest of the city. Additional discussion focused on ways to remove sediment and nutrients before they enter Lake Madison, including building storm sewer sediment traps, a constructed wetland or settling basin. The issue was raised as to whether Bourne Slough was functioning as a natural settling basin, which was the focus of the second study conducted by Barr Engineering.

Monson stated that Bourne Slough sediments were very high in phosphorus, but only a small amount (5%) would be released if dredging occurs. The slough contains approximately 410,000 cubic yards of sediment, which would be cost prohibitive to dredge. Since dredging the entire slough is not an option, Monson suggested dredging only about 100,000 cubic yards and creating a horse-shoe shaped canal around the perimeter of the slough. The purpose of the canal would be to route the water around the slough so that the water can slow down and deposit phosphorus-laden sediments before entering Lake Madison. The cost of dredging this canal is unknown, and to determine the cost would require an additional study to determine the optimal placement of the canal and the dredge spoils. The Lake County Watershed Improvement Project Committee will further investigate this option and seek funding for this activity if it is determined to be cost-effective and beneficial to the Watershed Improvement Project.

When it comes to phosphorus, every little bit hurts!



Plant vegetation along stream banks to help prevent erosion!

PROPER STABILIZATION TECHNIQUES CAN PREVENT STREAM BANK EROSION AND ADDITION OF DIRT TO RIVERS AND LAKES

Sometimes plants and trees are disturbed or moved during construction. When this happens, the soil that was underneath can be easily washed into nearby lakes and streams by rain or wind. Soil from eroding land that washed into streams makes the water look muddy and can smother aquatic life, clog fish gills, and cut off light that underwater plants need to grow. Help your community plant trees or leave native grasses and shrubs along a stream bank to reduce erosion. **Plants prevent erosion by keeping soil where it belongs - on the land, and out of the water!**

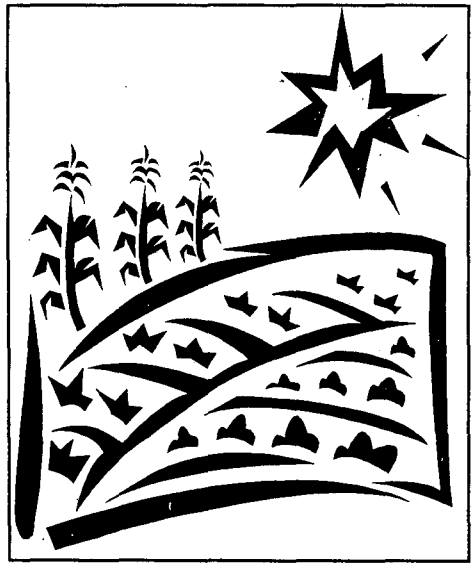
AGRICULTURAL MANAGEMENT PRACTICES TO REDUCE PHOSPHORUS RUNOFF

The Watershed Improvement Project is funded by a combination of local, state, and federal funds. The largest chunk of the Project's $1.3 million budget will be used to help farmers improve their practices.

The focus of the management practices that will help clean up the lakes is keeping phosphorus from entering the watershed. This means looking at fertilizers, animal wastes, and soil runoff.

Phosphorus is naturally high here, and many crops do not need added phosphorus. So **one thing the Project encourages is soil testing before applying fertilizers that contain phosphorus.** The Project will cost-share nutrient management planning to help farmers maximize yield without over-fertilizing. If soil testing indicates that no phosphorus is needed, farmers can buy zero-phosphorus fertilizers from their usual suppliers. The Project has been in communication with local suppliers, and they are ready to help farmers help the lakes.

There are several management practices that can be implemented to reduce phosphorus and sediment runoff, including animal waste management systems, grassed waterways, riparian buffers, filter strips, and terraces. All of these activities have cost-share funds available through the Project. Please contact the Project Coordinator for information on these cost-share activities.



Help Clean Up Our Lakes

BUY ZERO-PHOSPHORUS FERTILIZER !

A zero- phosphorus fertilizer has a "0" as the middle number in the fertilizer rating – such as "18-0-18." For those who use lawn fertilizer, reaching for a bag of zero-phosphorus fertilizer is an easy way to clean up our lakes and help game fish populations. Zero-Phosphorus Fertilizer is available at:

- **True Value Hardware, Madison**
- **F&M Agronomy**
- **Domestic Seed & Supply**
- **Chester Farm Service**
- **Campbell Supply, Madison**
- **A&B Pest Management**
- **Trugreen Chemlawn**
- **Classic Lawns**

The Scoop on Fertilizers and Pesticides

Fertilizers contain large amounts of nutrients, such as nitrogen and phosphorous that can wash into lakes and streams, and may cause algal blooms (overgrowth of aquatic plants that smother other aquatic life). These blooms use up the oxygen in the water that fish and other organisms need to breathe.

Pesticides (substances that kill bugs and animals) and herbicides (substances that kill weeds and plants) also contain toxic materials that are harmful to humans, fish, and "good" plants. When it rains, these toxic materials can run off into storm drains, roadside ditches, and nearby waterways.

Use fertilizers and pesticides properly. Ask to have your soil tested to determine the right amount an type of fertilizers you need. **NEVER apply fertilizers before it is supposed to rain.** Use organic fertilizers such as manure, mulch, or compost. Landscape with native plants that require less water and fewer pesticides.

UNDERSTANDING THE TOTAL MAXIMUM DAILY LOAD PROCESS

High water quality is an extremely valuable commodity. States decide how clean they want each stream or lake to be by establishing water quality standards. A total maximum daily load (TMDL) is a part of a plan to fix water quality problems. Each TMDL identifies the actions needed to restore and protect our water. Therefore, a TMDL provides a valuable link between water quality standards and the management practices needed to improve our watersheds.

TMDLs quantify pollutant levels that can be tolerated without causing impairment. Sediments, excess nutrients, and harmful microorganisms are the pollutants most frequently identified as causing water quality impairment, and will be addressed by TMDLs. Congress has charged states to develop TMDLs for priority watersheds. Waterbodies are assessed and TMDLs are established where needed by state water agencies under USEPA oversight. If a TMDL has not been developed for an impaired waterbody, one will be developed in the next 15 years. How to control pollutants that exceed these levels will be decided by communities within the watershed. In watersheds where agriculture contributes to water quality impairment, TMDL implementation plans could call for landowners to change certain management practices in order to reduce runoff. TMDL implementation plans—or clean up plans—will be developed by local government and natural resources authorities, with community based watershed partnerships.

What is TMDL?

A Total Maximum Daily Load (TMDL) is the amount of a given pollutant that can be allowed to enter a waterbody without causing the water quality standards to be exceeded. A TMDL is also a blueprint for identifying and cleaning up an impaired stream, river, or lake.

In order to effectively develop a TMDL process and set TMDLs for critical areas, it is important that private citizens and landowners, community groups, land management agencies, and local governments all understand TMDLs and the TMDL process. The process includes the following steps:

1. Identify the sources and causes of pollutant problems;
2. Identify the water quality goal (how much does the pollutant needs to be reduced to meet the goal);
3. Identify the TMDL by estimating the total amount of pollutant that can be allowed into the water and what needs to be done to achieve that amount;
4. Identify and implement the best management practices (BMPs) needed to achieve the goal;
5. Monitor the water bodies to assure that goals are being met and modify the plan.

TMDLs have been set for Lake Madison & Brant Lake in order to achieve a 50% reduction in phosphorus entering the lakes. BMPs will be implemented to accomplish this goal.

THANKS!

Thank You to everybody who purchased **ZERO-PHOSPHORUS fertilizer** last spring to use on their lawn, we greatly appreciate the support of the project. We hope you will choose to **PURCHASE ZERO-PHOSPHORUS FERTILIZER** the next time you fertilize your lawn or garden. **Remember, when it comes to phosphorus, every little bit hurts!**

HELP WANTED:

Citizens to Monitor **Water Quality!**

For more information contact Christine Schuldes,
Lake County Watershed Improvement Project Coordinator at 256-2571.

- ☺ **Test Water Quality of Local Lakes & Streams**
- ☺ **Track Long-term Trends in Water Quality**
- ☺ **Build Community Awareness of and Support for Good Water Quality!**

How To Contact Us

We'd like to hear from you! We have a lot of information on the watershed that we're happy to share. We've also collected information on a variety of things that people can do to help water quality. We're available to help you solve your particular business or residence problem.

The Watershed Improvement Project would like to attend your event or group meeting to talk about what we're doing. We have entertaining video presentations and can speak to all ages and all audiences. We can set up a table display, facilitate a problem-solving session, or lead a group discussion of water issues.

The Project has prepared a variety of flyers on how people can help clean up the lakes. If you know a good place to put information so people will see it, let us know.

These are just a few ideas. Contact us with your own ideas on cleaning up our watershed. **We need and appreciate your help!**

WHERE DOES ALL THE WATER GO?

National Freshwater Consumption Patterns

Water consumption varies by water use category, with irrigation consuming the highest percent (81 percent), public supply (9 percent), industrial (6 percent), mining (1 percent), livestock (1 percent), domestic (1 percent), and commercial (1 percent). The difference between the volume of water withdrawn and that consumed is the return flow. As more good-quality water is available in return flows, more water is available for other beneficial uses. Some categories of water use, such as irrigation and livestock watering, consume a high percentage of water that is withdrawn from surface and ground water sources. Thus, less water is available for return flows from these high-consumption activities. Other categories of use like thermoelectric power consume only a small fraction of the water they withdraw, and therefore, they provide large quantities of return flow.

MOTOR OIL OR ANTIFREEZE
CAN DAMAGE OR KILL
PLANTS AND ANIMALS!

THREE THINGS TO REMEMBER!

1. NEVER pour used motor oil or antifreeze down a storm drain, onto the soil, or into a waterway.
2. Put used oil or antifreeze in a sturdy container and take it to a local service station or other approved center for recycling.
3. Stencil "*DUMP NO WASTE, DRAINS TO LAKE*" (or river, or whatever) so others will know that allowing liquids other than storm water to get into the drain leads to pollution of lakes and streams.

Lake County Watershed Improvement Project
123 S.W. Second Street
Madison, S.D. 57042
Phone: 605-256-2571
Fax: 605-256-2007
Email: lakeproj-coor@sd.nacdnet.org

Don't hesitate to call or e-mail us. We're here to help !

Cyber Corner

For those who like to surf the 'Net, here are a few websites that contain watershed information:

EPA:

Clean Lakes Program

www.epa.gov/owow/lakes/lakes.html

Volunteer Monitoring

www.epa.gov/owow/monitoring/vol.html

North American Lakes Management Society (NALMS)

www.nalms.org

Watershed Weekly

www.greenworks.tv/watershed_weekly/index.html

Or you can just sit at your computer and dream about really being on the water!

15 EASY WAYS YOU CAN HELP

1. **Use zero-phosphorus fertilizer**
2. Keep soil covered or contained, so it doesn't run off your property
3. Don't use soap in or near lakes or creeks
4. Wash cars at a car wash
5. Plant shrubs and other vegetation along lakeshores and creeks to filter out pollutants
6. Keep fertilizer off sidewalks, driveways, streets, creek banks, and drainage areas
7. Avoid placing grass clippings, leaves, or ashes on the street
8. Clean up animal waste, so it doesn't run off your property
9. Use a broom, not water, to clean sidewalks and driveways

Home Sweet Home !

10. If you hire someone to work at your home, be sure they see this information
11. Look for ways to help keep the lakes clean where you work
12. Participate in Watershed Project activities
13. Become involved in local land-use and development decisions

14. Become a Volunteer Water Quality Monitor!

15. Spread The Word About Cleaning Up Our Lakes!

Serving the Interlakes area

The Madison Daily Leader

50¢

Monday

March 11, 2002

Madison, South Dakota

112th year, No. 237

Watershed committee seeks more information in study

By ELISA BENTLER

The Lake Area Watershed Improvement Association is seeking addition information from Barr Engineering in regard to the water quality assessment and sediment composition study completed by the Minneapolis firm.

The study analyzed storm sewer runoff from the city of Madison and sediment samples from Bourne Slough and Round Lake.

The committee met Friday to discuss the report and the next step to take. The committee agreed to seek information on structural changes that have taken place within the watershed (new bridges, highways, etc.); information on catchment basins; and additional recommendations on Bourne Slough.

The study showed Bourne Slough had approximately 410,000 cubic yards of sediment and covers about 92 acres. The deepest sediment is toward the middle at the northwest and southeast ends of the slough. At its deepest points, it is five and four feet deep, respectively.

Currently, the water entering the slough outlets almost immediately, and no sediment is allowed to settle from the water.

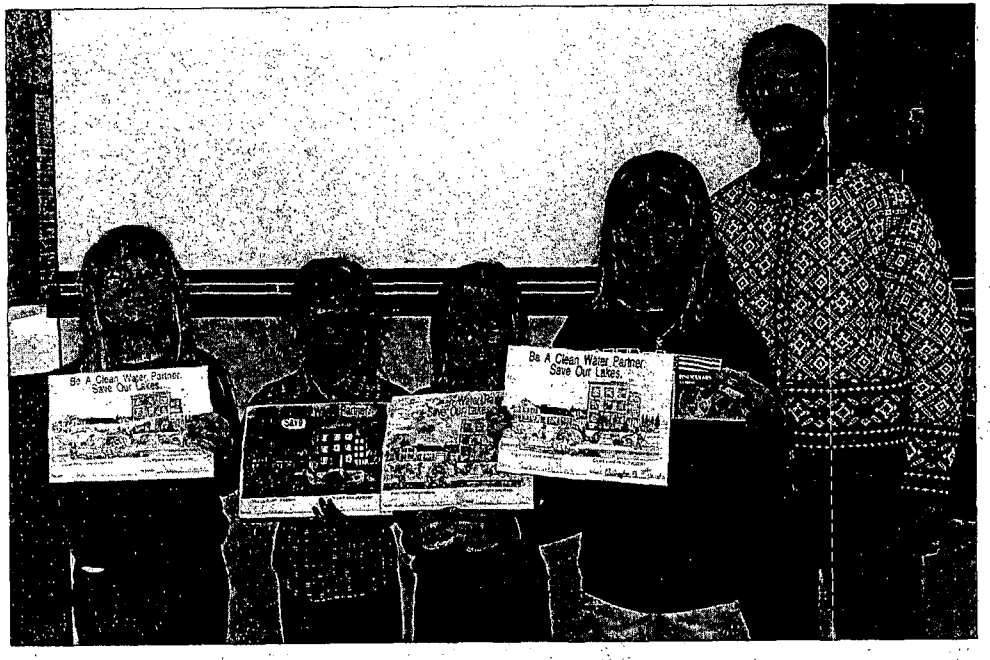
The study recommended dredging a portion of the sediment (100,000 cubic yards) and creating a horseshoe-shaped canal within the slough.

Members of the committee were disappointed this was the only alternative presented in the study.

Project Coordinator Chris Schuldes said another alternative would be to reinforce the wall of the slough where water is currently outleting and divert the water toward its natural outlet.

The additional information requested from Barr Engineering is information initially requested by the watershed committee.

In other aspects of the watershed improvement project, Schuldes is anticipating the construction of three animal waste management systems in Lake County. These systems are almost ready to go out for bids, she said.



CHRIS SCHULDES (right), project coordinator for the Lake Area Watershed Improvement Association, held a coloring contest recently for students in grades K-5. The winner of the K-2 grade was second-grader Tayler Welling (next to Schuldes). Runners-up were (left) Breanna Kaiser, first-grader at Washington; Kylie Salmen, second-grader at St. Thomas; and Libby Riley, second-grader at Washington.

CHRIS SCHULDES (back), project coordinator for the Lake Area Watershed Improvement Association, held a coloring contest recently for kindergarten through fifth-grade students. The winner of the 3rd- through 5th-grade contest was Garfield fifth-grader Laura Niedert (second from left). Runners-up were (left) Eric Heppler, fifth-grader at Garfield; Danny Norby, fourth-grader at Lincoln; and Mikayla McNary, third-grader at St. Thomas. *(Photos by Elisa Bentler)*

Certificate of Achievement

CLEAN WA

This certificate is presented to

Laura Niedert

For winning the 2002 Lake County Watershed Improvement Project Art Contest.

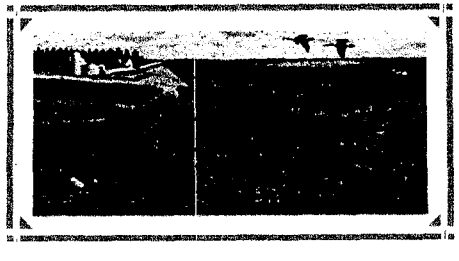
Christine Schuldes

Christine Schuldes, Project Coordinator

6 March 2002

Date

ke County Watershed Improvement Proje



The Madison Daily Leader

Tues. April 30, 2002

HELP CLEAN UP THE LAKES

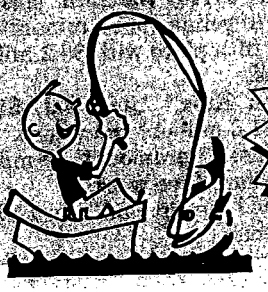
Zero-Phosphorus Fertilizer is available at:

- ACE Hardware, Madison
- Campbell Supply, Madison
- Chester Farm Service
- Classic Lawns
- Domestic Seed-Supply
- F&M Agronomy
- Lake Area Lawns
- TruGreen ChemLawn

Lake County Watershed Improvement Project
(605) 256-2571
lakeproj-coor@sd.nacdnet.org

BUY ZERO-PHOSPHORUS FERTILIZER

Look for a "0" as the middle number in your fertilizer rating — such as "18-0-18." This means you are buying zero-phosphorus fertilizer, which cleans up the lakes and helps game fish populations.



KEEP THEM CLEAN - NOT GREEN!

10TH ANNUAL BIG SIOUX WATER FESTIVAL

Wishes to thank

Chris Schuldes

For your volunteering in the 2002 Big Sioux Water Festival in Brookings, South Dakota. It is with deep appreciation that we present you this certificate and thank you for your support of this project.

The Big Sioux Water Festival
Lisa Bretsch, Project Coordinator

June 19, 2002

Farm

Madison Daily Leader
Madison, South Dakota

Waste management plan is essential

By ELISA BENTLER

Utilizing manure to its fullest potential is one key to farming. Developing a manure management plan is a free service available through the local Natural Resources Conservation Services Office.

Chris Schuldes, project coordinator for the Lake County Watershed Improvement Project, said this service has been utilized recently by farmers interested in creating an animal waste management system through the Watershed Improvement Project. A manure management plan was required to proceed with the animal waste management systems.

Schuldes

Eight plans have been done for local farmers for the Watershed Improvement Project. Those manure management plans will be implemented in 2002 or 2003.

The goal of the Lake County Watershed Improvement Project is to reduce the amount of phosphorus found in lakes Madison, Herman and Brant by 50 percent.

Some of the activities being sponsored by the three-year project include controlling some sediment and erosion problems, creating a public awareness program and conducting feasibility studies for future projects.

Although all of the farmers who pursued the construction of the systems didn't continue with the project, most are at the very least following the recommendations of the manure management plan.

The plan takes into consideration the nutrients in the land, plant requirement and the nutrients in the manure.

"It matches the need with what's available," Schuldes said.

To develop the plan, a NRCS employee in Mitchell takes information from soil and manure samples. Utilizing the number of acres farmed and what crops are grown, the conservation officer determines how much manure could be spread in order to provide the necessary amount of phosphorus for the plants to grow.

The plan will calculate the nitrogen and the phosphorus requirements for the cropland. The manure is spread based on the phosphorus requirements and a specific amount of supplemental nitrogen fertilizer is recommended.

"It becomes custom tailored to the farmer," Schuldes said.

Adding phosphorus through the manure is an advantage, Schuldes said, because it is less likely to run off as much as phosphorus in fertilizer. It also adds fibers to the soil and allows the soil to hold together more, she said.

Construction of the first animal waste management systems is scheduled to begin this summer.

The Madison Daily Leader
Thursday
July 25, 2002

Watershed project makes progress, seeks involvement

By ELISA BENTLER

The multifaceted watershed improvement project in Lake County is making steady progress toward meeting its goals, but additional involvement is still welcome.

The goal of the three-year project is to reduce the amount of phosphorus in the watershed that feeds Lake Herman, Lake Madison and Brant Lake.

The $1.5 million project was organized by a committee after a two-year study by the S.D. Department of Environment and Natural Resources determined there was an excessive amount of phosphorus and other nutrients in the lake. The study, however, pointed to many potential sources of the nutrients.

The watershed improvement project aims to reduce the phosphorus by 50 percent. Some of the methods of achieving this goal are through the control of sediment and erosion problems, public awareness, further assessment of Bourne Slough, the construction of animal waste management systems and assessing septic tanks for leakage into the lakes.

Schuldes

Project Coordinator Christine Schuldes said about a third of the funding allocated for the construction of grassed waterways and terraces has been spent, and additional interest in that area is welcome.

The construction of animal waste management systems is making progress as well. Bids on two projects have been approved at this point and a third project is expected to go out to bid toward the end of the summer.

The two projects anticipated to begin shortly are located north of Madison and south of Lake Herman. The third project is located in the Ramona area.

"We plan to build four next summer," Schuldes said.

The delay on the bid letting for the third project is due to a delay in the allocation of USDA Environmental Quality Incentives Program funding, which is authorized through the farm bill.

The farm bill was passed in May and included some changes, Schuldes said. All three projects are anticipated to use some EQIP funding. Bids for the first two projects were more than $100,000.

"We will take additional sign-ups for animal waste management systems," Schuldes said. The project can accommodate one or two more.

An assessment of Bourne Slough has been conducted by a Minnesota firm. The study confirmed there was too much sediment in the slough, but the watershed committee is waiting on additional information from the firm before it takes any action.

Some project areas where response has been little or none includes assistance with integrated crop management and the testing of septic tanks.

The integrated crop management segment of the project hasn't gotten any response, Schuldes said. Funding was set aside to help assist farmers with the cost of working with a crop consultant who advises farmers on crop rotation, fertilizer, insecticides and herbicides.

Schuldes said this aspect of the project is most likely overlapping with benefits that are already available.

The septic tank testing was targeted for the Lake Herman area to determine if any leakage was taking place.

Schuldes said so far one system has been tested and no leaks were detected.

"If we could find one that's leaking we can get the funds to update to a better way of dealing with the systems," Schuldes said.

One alternative would be clustering the systems so a group of homes in a specific area would retain the use of individual tanks but they would all drained into a designated spot, she said.

Funding for the project also remains strong, Schuldes said. Funding has been donated and allocated for specific portions of the project, but the budget is running short on operating expenses.

The watershed improvement project is in its second year.

WANTED:

Citizens to Help Monitor **Water Quality!**

For more information contact Christine Schuldes, Lake County Watershed Improvement Project Coordinator at 256-2571.

- **Test Water Quality of Local Lakes & Streams**
- **Track Long-term Trends in Water Quality**
- **Build Community Awareness of and Support for Good Water Quality!**

This was Monday's paper 9-30-02

Madison Daily Leader
Madison, South Dakota

0

Editorial

Newly constructed system should have big impact

One of the most substantial projects of the Lake Area Watershed Improvement Project is near completion, and we expect it to show results.

The watershed project gained approval for funding in 1999 with a primary stated goal of reducing phosphorus levels in Lake Herman, Lake Madison and Brant Lake. The methods for lowering levels include reducing animal waste runoff, reducing fertilizer runoff and improving erosion control, along with further study and public education.

Most of the methods are currently being implemented in one stage or another. The most significant systems, which also require the most money, are the animal waste control systems installed at larger livestock operations.

Rick Doblar, who has an operation south of Lake Herman, was among the first to volunteer to participate (see page 1). The grant from the Environmental Protection Agency will likely pay for seven waste control systems, depending on particular designs and needs.

Designs can be complicated, depending on the operation itself, soil composition, natural water flow, even wind patterns. In addition to the physical structure, changes in operations are important as well.

The system at Doblar's operation is the first, but two others could be in place later this year. Each of the projects is expected to yield substantial results, and the combination of all of them should help the watershed project to make progress toward its goals.

— Jon M. Hunter

Madison Daily Leader

50¢
Friday
October 25, 2002
Madison, South Dakota
113th year, No. 144

Madison cattle farmer makes improvements to his operation

Manure management goes through local watershed project

By ELISA BENTLER

A farmer north of Madison is completing some mitigation work to improve the manure management for his cattle operation.

Doyle Paul, through funding from the Lake County Watershed Improvement Project, is moving his operation west and installing a sediment basin and evaporation pond to handle the manure from his cattle.

Watershed Improvement Project Coordinator Chris Schuldes said the new system will include four feedlots with a sediment basin to the west and an evaporation pond west of that.

The system is set up so the manure flows into the sediment basin and the liquid filters out and into the evaporation pond.

One of Paul's two feedlots currently in use will be abandoned. The second feedlot will be for temporary use (less than 45 consecutive days). Manure will also drain from the temporary lot into the sediment basin and evaporation pond.

The entire system is situated no closer to the city limits than Paul's current system.

The project will cost about $100,000 to complete. Ten percent of the cost is paid by Paul, and the remainder of the funding is paid through USDA, State Consolidated and EPA funds appropriated to the watershed project for the construction of this system.

"If it weren't for the programs (the watershed project) had, I wouldn't be doing this," Paul said.

Paul currently handles an average of 300 to 400 cattle. The maximum number of cattle he's had on his property is 600. The feedlots in the new system will is designed to hold 500 cattle. Paul has been raising cattle at this location since 1980.

CONSTRUCTION WORKERS work to finish the surface of the evaporation pond at the new site of Doyle Paul's cattle operation. The system will include an evaporation pond, sediment basin and feedlots. *(Photo by Elisa Bentler)*

Paul said he has no immediate plans for increasing the number of cattle in his operation.

"It's not an expansion," he said.

The new system will allow for more room for the cattle to move, he said, adding that the improvements will also make his operation more environmentally friendly.

During wet years, runoff from his operation has run along the road ditch and cut west before it reached the city limits, Paul said.

"It's definitely an improvement for the city as far as water pollution and smell," Schuldes said.

Paul said he thought about moving his feedlots 15 years ago, but he wouldn't have installed an evaporation pond.

"It's a very good location," he said. "There's a lot of natural slope. I think it's coming around really nice."

Schuldes said this facility is being built 500 feet from Memorial Creek — one of the two main creeks which runs through Madison — and no discharge will come from Paul's system.

Paul's operation was established before zoning regulations on animal confinement operations went into effect (January 1998). But, according to the Lake County Zoning regulations, for a facility that has up to 999 animal units, the system must be a minimum of 200 feet from lakes and streams classified as waters of the state. One cow is equivalent to one animal unit.

Chuck Lebeda, conservation officer for the Lake County Natural Resources Conservation Service Office, said evaporation ponds have been used for more than 10 years.

Paul's project is similar to the facility used on Rick Doblar's property, another system being constructed as a result of the Watershed Improvement Project. His facility is located near Lake Herman. In Doblar's system, the evaporation pond is located in the middle of the operation with feedlots on either side.

"There's a marker on them (the evaporation ponds), that if it gets to a certain elevation, the producer has to pump it," Lebeda said. "It's designed to hold a significant storm event."

Lebeda said the evaporation pond covers a 300x700-foot area and is designed to catch runoff from the feedlots and rain that falls directly on the system.

The feedlots were designed by a South Dakota State University Extension Agent, and the system was designed by an NRCS engineer. By meeting NRCS standards, it meets the state standards.

(Cont. on page 2)

(Cont. from page 1)

A significant amount of dirt and cement work is required for this project. Zoning regulations simply require a construction permit for this type of work. No public hearings are required. That permit was issued along with all other proper state permits.

County zoning requirements allow operations the size of this system to be a minimum of a half-mile from the city limits. The Pauls are located about a half-mile from the city limits. They are one of three cattle operations within a half-mile north of the Madison city limits.

Dirt work at the site began in September and is nearly finished. The project could be completed in about a month, providing the temperature is warm enough that cement work can be completed.

Fencing, water lines and electrical lines also need to be installed.

The goal of the Watershed Improvement Project is to achieve a 50 percent reduction in the amount of phosphorus in the watershed that encompasses lakes Herman, Madison and Brant.

Paul and Doblar are two of three producers participating in the construction of animal waste management systems. The third operation is a dairy farm in the Ramona area.

Three other feeder operations and one cow-calf operation are set for construction in 2003.

The watershed project began in May 2000 and was originally slated for completion in 2003. Schuldes said she is in the process of applying for an extension to continue the project through the spring or summer of 2004.

Serving the Interlakes area

The Madison Daily Leader

Monday
September 30, 2002
Madison, South Dakota
113th year, No. 125

Watershed projects improve some systems

Upgrades are made to animal waste management plans

By ELISA BENTLER

Rick Doblar is one of three area producers who are working with the Lake Area Watershed Improvement Project to upgrade their animal waste management systems.

The facilities are currently under construction and Doblar's system is slated for completion in mid-October.

The purpose of the three-year watershed improvement project is to reduce the amount of phosphorus in the watershed, which includes Lake Herman, Lake Madison and Brant Lake.

Doblar, owner of a cow-calf operation on the south side of Lake Herman, volunteered to participate in the project. Surveying started in the summer of 2001 and the facility was designed in the fall. The facility design was finalized throughout the winter and the bidletting was held this spring. Construction began this summer and the facility is about two weeks from completion.

Watershed project coordinator Chris Schuldes said Doblar's facility originally was placed 1/4 mile from the lake, with runoff from the feedlots going directly into the lake.

"It was real wise for him to do this project now with the cost-share opportunities," Schuldes said.

The project moved Doblar's operation 1/4 mile west. Doblar is contributing 10 percent of the cost necessary to complete the project.

Doblar did have some retention dams in place on his property, Schuldes said. The dams were installed in the 1980s and slowed down the water before it reached the lake.

"He is a conservation-minded producer," she said.

Doblar said he had discussed improving his facility with the Lake County Conservation Office long before the watershed project came about.

The new facility will be located at a higher elevation, Schuldes said, and it is being built to accommodate the current number of cattle in Doblar's operation.

The facility will include one area for the cows and one area for the calves, an artificial windbreak and a settling pond.

"I think it'll work," Doblar said.

Schuldes said the artificial windbreak will replace the shelterbelt where the operation currently sits.

"It's a great setup," Schuldes said. "I'm really glad producers like Rick are in the watershed and willing to participate in the project."

The Doblar facility is one of seven animal waste confinement operations to be built as a result of the project.

"All (of them) volunteered due to concerns about their proximity to streams or lakes," Schuldes said.

Two other operations are being constructed this fall. One is a cattle operation north of Madison and the other is a dairy operation located in the Ramona area.

Three other feeder operations and one cow-calf operation are set for construction in 2003.

The watershed project began in May 2000 and was originally slated for completion in 2003. Schuldes said she is in the process of applying for an extension to continue the project through the spring or summer of 2004.

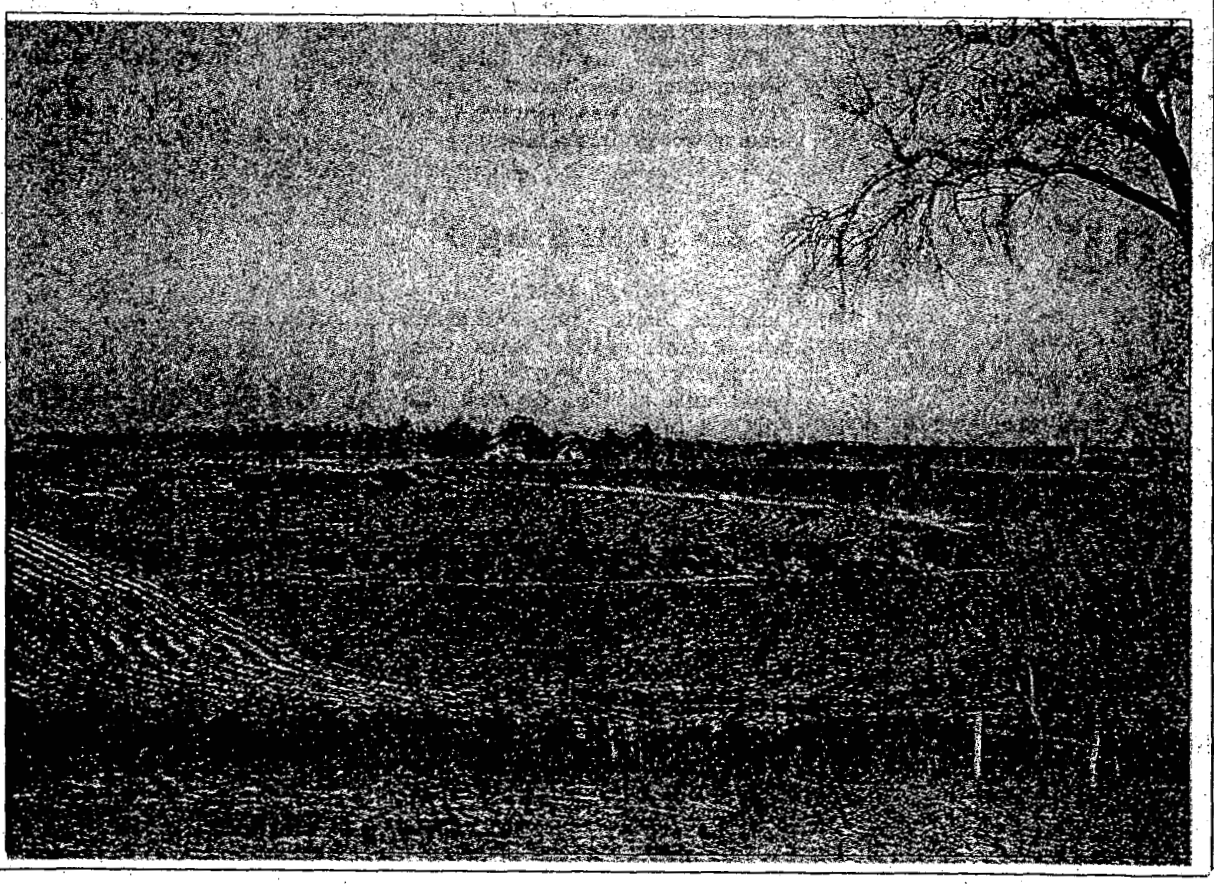
CONSTRUCTION WORKERS busy themselves with digging the trench for the utilities and putting up fence posts on Rick Doblar's new cow-calf operation south of Lake Herman. The system is being built through a cost-share program that is part of the Lake Area Watershed Improvement Project. *(Photo by Elisa Bentler)*

November 1, 2002 Madison Daily Leader

Watershed Tour

CHRIS SCHULDES (left), project coordinator for the Lake County Watershed Improvement Project, shows area politicians and members of the Lake Madison Development Association the different aspects of the watershed project. The watershed encompasses land surrounding lakes Madison, Herman and Brant.

THOSE ON THE TOUR BUS were able to see examples of current projects, like this terracing project that has been completed southeast of Junius. The group was also shown the sites of current and future animal waste management systems. The tour was held Friday to promote the watershed project and some of the projects that have been completed so far. *(Photos by Elisa Bentler)*



Chris,

Thank you for giving us a tour of the Doolar farm. We appreciate your time and effort.

MHS Environmental Chemistry Class

Justin Alan Keaton Amanda

Greg Jenny Maureen

Angie Kelli Anna Erin Brian

Andrew Samantha Sarah

Cody

Dawn Swenson

Clean Water Chronicle

VOLUME 2, ISSUE 3
JULY 2002

LAKES HERMAN, MADISON, BRANT NEED YOU TO BE A *CLEAN WATER PARTNER*

You've probably seen a brochure in the store or read something in the newspaper about the Lake County Watershed Improvement Project. We're the people who ask YOU to be a Clean Water Partner. The reason is simple — without your help, the lakes that are the gemstones of our county and a foundation of our economy will continue to turn green, smell bad, and fill with sediment. Changing this trend takes the help of every person in the watershed.

What is a watershed? A watershed includes all the land over or under which water drains on its way to a stream or lake. ***Everyone lives in a watershed***, and is part of a watershed community. In our case, we are concerned with all the land over which water runs on its way to Lake Herman, Lake Madison, and Brant Lake. Our watershed stretches from west of Junius to about 7 miles north of Madison. It starts 4 miles southwest of Lake Herman and includes the City of Madison and the shore areas of the three lakes. (See Watershed Map shown on page 3.)

Anything that ends up on the ground in this area — almost 81,000 acres — can end up in the lake. So what you put on the ground matters to cleaning up our lakes! Agriculture and construction are two activities that contribute significant amounts of pollution to runoff. Urban activities like fertilizing lawns, disposing of leaves or grass clippings, and washing cars, boats, or other vehicles can also add pollution to lakes and streams.

This newsletter will tell you about water pollution, the Watershed Improvement Project, and what you can do to help clean up our lakes.

Thanks for being a Clean Water Partner!

INSIDE THIS ISSUE:

Simple Guidelines For Watershed Residents To Help Clean Up The Lakes

Anybody living in a watershed plays an important role in protecting water quality. Water is of vital importance to human beings, for a variety of reasons, including drinking, watering crops and cattle, recreating, washing, and bathing. All these activities require water to be of a certain quality. When waters do not meet these standards, efforts must be made to improve water quality.

The four things that have to be kept out of the lakes for water quality to improve are animal waste, sediment runoff, fertilizer, and soap. By following some simple guidelines, watershed residents can do a lot to keep these things out of the lakes. Because these things all have phosphorus in them, they need to be kept from entering the water.

The highest priority for the landowner should be to limit run-off from their land, which is a complex issue, because it involves keeping animal wastes, soil, fertilizer, and soap out of the water, in addition to stopping erosion of stream banks and shoreline.

The most important thing the landowner can do is to keep a filter zone of tall grass, shrubs, and trees between lawns and a creek, stream, or lake. Taller plants catch sediment and fertilizer before they enter the water. Contact the Watershed Project for ideas on what types of plants work best. Soil piles should be covered to avoid runoff, and exposed soil should be replanted right away.

Also, it is important to remember that hard, paved surfaces increase runoff. On the other hand, gravel and paving stones allow water to seep in. It is also important to avoid creating paths for water to run quickly to receiving waters. Plan driveways and walks so they don't funnel water into the creek, stream, or lake. Use terraces on steep slopes to slow runoff — and increase your property value.

For those who fertilize their lawns, here are a few pointers. Fertilizer should not be used within 75 feet of surface water, on low areas, or in runoff areas. Fertilizer should not be left on hard surfaces. A zero-phosphorus product should be used. Leave grass clippings on the lawn, and don't pile them, compost, or leaves in or near the water. And last, but not least, water your lawn sparingly to avoid runoff.

There are two basic ideas that will keep soap out of the lakes. The first is to keep it off the ground. This means taking vehicles to a car wash, instead of washing them at home — or at least avoiding using soap containing phosphorus. The second is to keep soap out of the water by not washing pets, boats, people, or other items in the lake or stream.

If you want more information on any of these topics, feel free to call the Watershed Improvement Project.

We're here to help you clean up the lakes!

Help Clean Up Our Lakes

BUY ZERO-PHOSPHORUS FERTILIZER !

A zero-phosphorus fertilizer has a "0" as the middle number in the fertilizer rating – such as "18-0-18." For those who use lawn fertilizer, reaching for a bag of zero-phosphorus fertilizer is an easy way to clean up our lakes and help game fish populations.

Zero-Phosphorus Fertilizer is available at:

- **Ace Hardware, Egan Ave., Madison**
- **F&M Agronomy**
- **Domestic Seed & Supply**
- **Chester Farm Service**
- **Campbell Supply, Madison**
- **TruGreen ChemLawn**
- **Classic Lawns, Chester**

THANKS

to everybody that used ZERO-PHOSPHORUS FERTILIZER. The Watershed Project appreciates your efforts to clean up the lakes and hopes the you'll choose to use ZERO-P FERTILIZER again!

Storm Sewers:
A Direct Connection to the Lakes

In the city of Madison, many people live along the winding creeks that are a source of beauty and — for kids — entertainment. Those creeks are central to our watershed and drain directly into Lake Madison. What goes on the ground in the city of Madison ends up in Lake Madison, and the key to how this happens is storm sewers.

Every Curb is a Shoreline!

Storm sewers are the grates along the streets that are designed to handle rainfall and drain it out of the City. **Storm sewers do not go to the sewer plant, so the water that goes into them does not get cleaned up before it enters the lakes. Whatever goes into the storm sewers goes directly into a creek — and then into a lake.**

The Watershed Improvement Project is working to let people in the City of Madison know that when they fertilize their lawns or wash their cars, they may be contributing to the problems in Lakes Madison and Brant. We encourage people to use zero-phosphorus fertilizer, which is available at most local stores that handle fertilizer. And we encourage people to use car washes, so soap from home washing doesn't go into the storm sewers.

We are also cooperating with the City to study what is going into the storm sewers and where it comes from. This study will give us more information on how we can clean up the lakes and keep them from getting greener and smellier in the future.

THE NEW TMDL RULE AND AGRICULTURE

The United States has over 330 million acres of agricultural land that produce an abundant supply of low-cost, nutritious food and other products. American agriculture is noted worldwide for its high productivity, quality, and efficiency in delivering the goods to the customer. However, when improperly managed, agricultural activities can affect water quality.

Changes to the Total Maximum Daily Load (TMDL) rule are being developed by the U.S. Environmental Protection Agency (USEPA) and they will have an impact on agriculture. "The old rule, which was promulgated in 1985 and amended in 1992, needs to be updated to reflect what we know about TMDLs today," says Charles Sutfin, director of the Assessment and Watershed Protection Division of the USEPA. Sutfin explains, "The main difference of this new proposed rule is it will enable agriculture to meet requirements of the Clean Water Act through voluntary, incentive-based programs by supporting watershed planning and directing available funds from programs like USDA's Environmental Quality Incentives Program (EQIP) and USEPA's Section 319 (non-point source) programs toward implementation of TMDLs." The goal of the USDA Natural Resources Conservation Service (NRCS) and Forestry Service is to provide input that will help USEPA develop a new rule that is more workable for agriculture and forestry. The purpose of TMDLs is to improve water quality by decreasing the amount of phosphorus and sediment running off the land into streams, rivers, and lakes.

There are several management practices that can be implemented to reduce phosphorus and sediment runoff, including animal waste management systems, nutrient management plans, grassed waterways, riparian buffers, filter strips, and terraces. All of these activities have cost-share funds available through the Project. For more information, please contact the Project Coordinator, Chris Schuldes.

What is TMDL?

A Total Maximum Daily Load (TMDL) is the amount of a given pollutant that can be allowed to enter a waterbody without causing the water quality standards to be exceeded. A TMDL is also a blueprint for identifying and cleaning up an impaired stream, river, or lake.

EPA's National Agriculture Compliance Assistance Center

Website: http://es.epa.gov/oeca/ag

The National Agriculture Compliance Assistance Center is presented by the EPA in cooperation with the U.S. Department of Agriculture. The website provides **instructions on complying with agriculture regulations in an environmentally safe way**. The site offers fax-on-demand service allowing the public to request and receive via fax machine many of the Ag's Center documents and other EPA publications related to agriculture. There is also information on agriculture grants provided by the USDA and EPA coalition. The Learning Center page offers information for teachers, students, and kids.

URBAN STORMWATER POLLUTION PREVENTION

Stormwater can cause a multitude of problems in urban settings, from flooding to degrading the water quality of lakes, streams, and rivers that eventually receive it. The EPA-sponsored National Urban Runoff Program (NURP) identified the potential of stormwater to adversely affect receiving waters and aquatic biota through increased frequency and duration of peak flow rates, erosion/sedimentation, eutrophication or toxic impact. The majority of pollutant loading attributed to urban stormwater originates from endemic sources, such as motor vehicle traffic, construction, and atmospheric fallout, and enters surface waters through storm sewers. So, anything that ends up on the street can be carried by runoff water to the storm sewer inlet and ultimately to nearby water bodies.

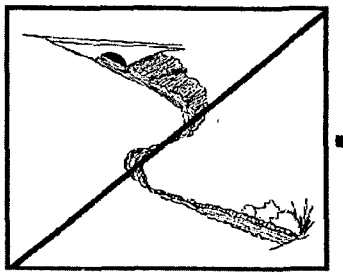
As development of land occurs, the importance of managing storm water is becoming increasingly apparent. Stormwater discharges can be responsible for water quality degradation, flooding, and stream channel erosion.

Because human development is continually creating more impervious surfaces, and increasing erosion in areas adjacent to the pavement. This prevents rain and storm water from soaking into the ground, and does not allow grasses to trap sediment and debris. Instead, storm water runs off roofs and paved surfaces with more velocity than before. Additionally, natural areas such as wetlands and flood plains have been lost to development furthering the deleterious effects of construction and development, by decreasing natural infiltration and purification areas. The overall effect is increased flooding, stream bank erosion, and pollution of streams and lakes.

Approaches to the management of these problems have been piecemeal at the State and local levels, indicating the need for local stormwater management ordinances. These ordinances also generally address both stormwater quantity and quality, with the emphasis being on quality.

PROPER STABILIZATION TECHNIQUES CAN PREVENT STREAM BANK EROSION AND ADDITION OF DIRT TO RIVERS AND LAKES

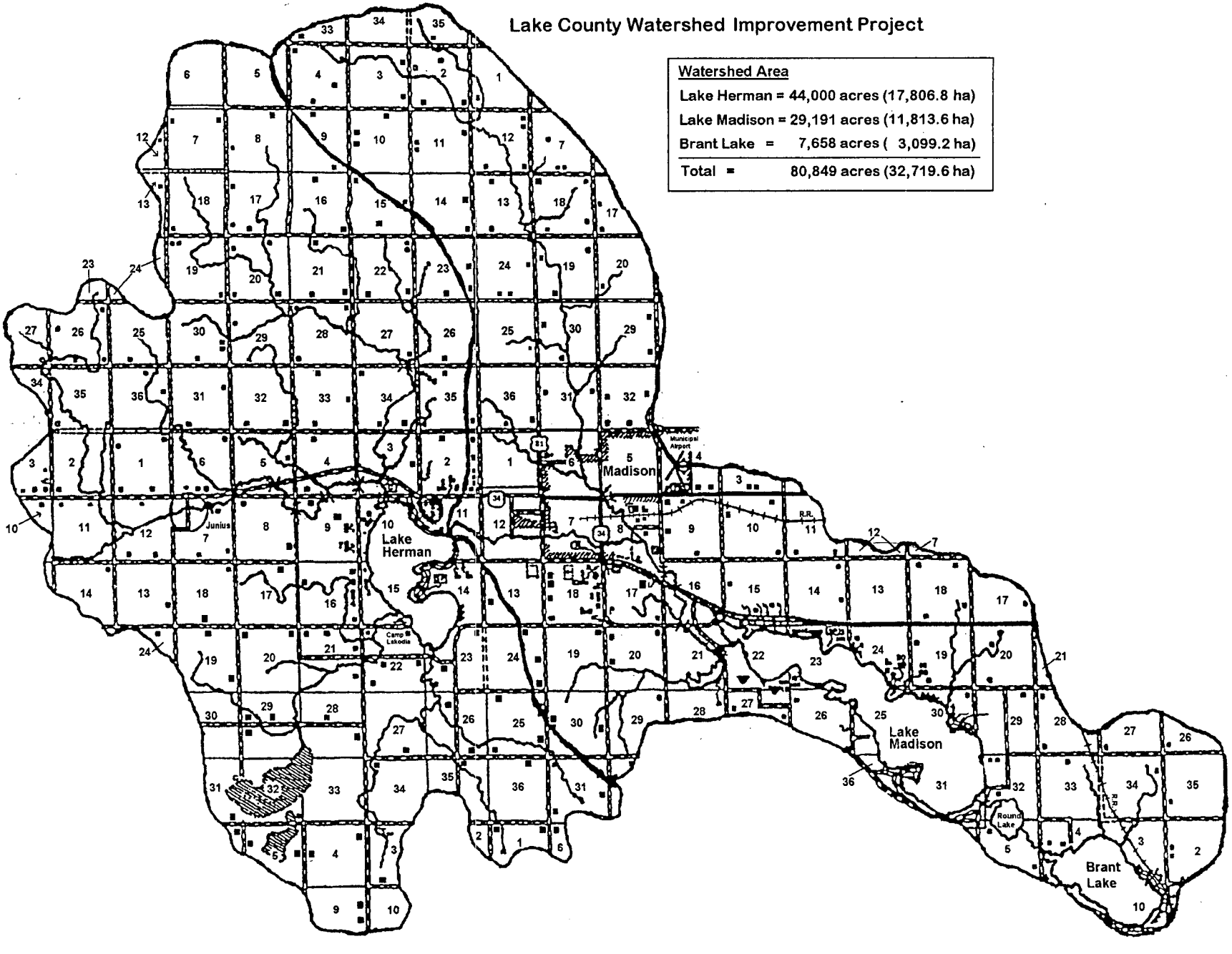
Sometimes plants and trees are disturbed or moved during construction. When this happens, the soil that was underneath can be easily washed into nearby lakes and streams by rain or wind. Soil from eroding land that washed into streams makes the water look muddy and can smother aquatic life, clog fish gills, and cut off light that underwater plants need to grow. Help your community plant trees or leave native grasses and shrubs along stream banks to reduce erosion. **Plants prevent erosion by keeping soil where it belongs - on the land, and out of the water!**



Planting vegetation along stream banks helps prevent erosion!

Lake Herman, Lake Madison, and Brant Lake Watershed

Lake County Watershed Improvement Project



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North American Lakes Management Society (NALMS)

www.nalms.org

Watershed Weekly

www.greenworks.tv/watershed_weekly/index.html

Or you can just sit at your computer and dream about really being on the water!

15 EASY WAYS YOU CAN HELP

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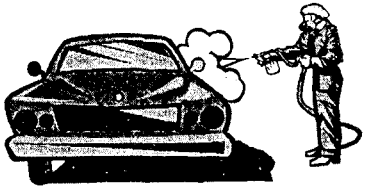
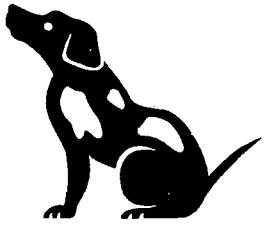
3. **Don't use soap in or near lakes or creeks.**



4. **Wash cars at a car wash.**
5. **Plant shrubs and other vegetation along creeks and lakeshores to filter out pollutants.**



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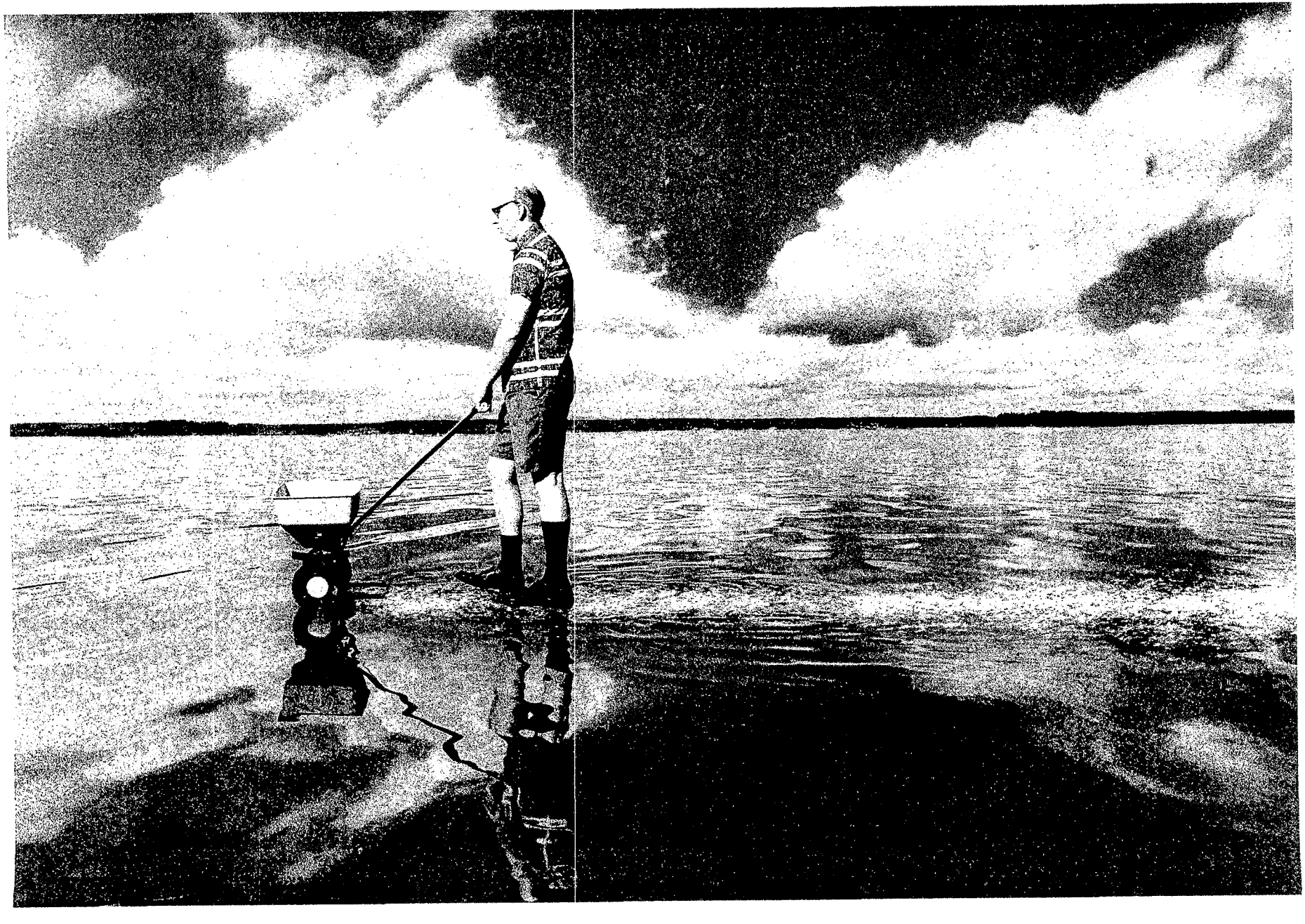
How Do Watersheds Work?

The landscape is made up of many interconnected basins, or watersheds. Within each watershed, all water runs to the lowest point—a stream, a river, or a lake. On its way, water travels over the surface of the ground across farm fields, forest land, suburban lawns, and city streets, or it seeps into the soil and travels as ground water. Larger watersheds are made up of many smaller watersheds. For example, the watersheds for Lakes Herman & Madison and Brant Lake are part of the Big Sioux River Watershed, which in turn is part of the Missouri River watershed, and eventually becomes part of the watershed for the Mississippi River. The Mississippi River Watershed is one of the largest, most important, and most developed watersheds in the country. What happens in our watershed not only determines the quality Lake County waters, but also affects the larger watershed down stream!


240 FDL

WHEN YOU'RE WASHING
YOUR CAR
IN THE DRIVEWAY,
REMEMBER YOU'RE NOT
JUST WASHING YOUR
CAR IN THE DRIVEWAY.



WHEN YOU'RE OUT
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YOUR LAWN.

Clean Water Chronicle

VOLUME 2, ISSUE 4
OCTOBER 2002

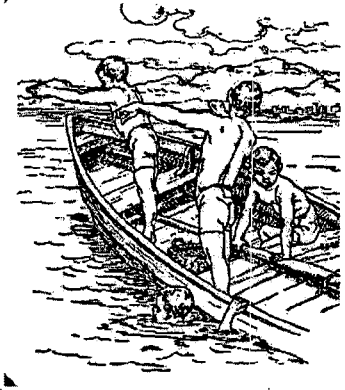
Watershed Improvement Project Makes Strides Toward Completing Goals

In an attempt to limit the amount of algae produced in Lakes Herman, Madison, and Brant, the Lake County Watershed Improvement Project has completed several activities that should help reduce the amount of phosphorous entering the lakes. In the past nine months, numerous best management practices (BMP's) have been implemented in the watershed, including terraces, grassed waterways, and animal waste management systems (AWMS).

Agriculture and construction are two activities that contribute significant amounts of pollution, such as phosphorus or nitrogen to runoff. Urban activities like fertilizing lawns, disposing of leaves or grass clippings, and washing cars, boats, or other vehicles can also add pollution to lakes and streams. The project worked with farmers to reduce the sediment & phosphorus run-off from agricultural activities in the watershed.

A watershed includes all the land over or under which water drains on its way to a stream or lake. ***Everyone lives in a watershed,*** and is part of a watershed community. In our case, we are concerned with all the land over which water runs on its way to Lake Herman, Lake Madison, and Brant Lake, covering **almost 81,000 acres**. Our watershed stretches from west of Junius to about 7 miles north of Madison. It starts 4 miles southwest of Lake Herman and includes the City of Madison and the three lakes.

The Project has implemented several BMP's in the watershed to decrease the amount of run-off entering the lakes. BMP's were installed north and west of Lake Herman, including three terraces and two grassed waterways, which are designed to stop sediment from leaving crop fields.



"The Watershed Project is trying to clean up the lakes for recreational activities like swimming and water skiing!"

The practice that is the most beneficial to water quality improvement is construction of an AWMS. Anytime domesticated animals are confined for 45 days or more and the area they occupy has exposed soil, run-off of sediment and phosphorus is a problem. These feedlots are called animal feeding operations (AFO), which are the primary source of non-point source pollution entering fresh water resources in the United States. The best way to prevent run-off from an AFO is to build an animal waste management system that deals with all the potential run-off from the AFO and results in no discharge leaving the lots. The construction of these systems is required as part of a permitting process for operations larger than 1,000 animal units (AU), called confined animal feeding operations (CAFO). The Project has federal funding to cost-share the construction of AWMS's for operations smaller than 1,000 AU. So far, the Project has helped to construct three AWMS's in the watershed and plans to build four more next summer. Other activities that prevent run-off are also eligible for cost-share. For more information, please contact the Watershed Improvement Project Coordinator, Christine Schuldes at 256-2571.

INSIDE THIS ISSUE:

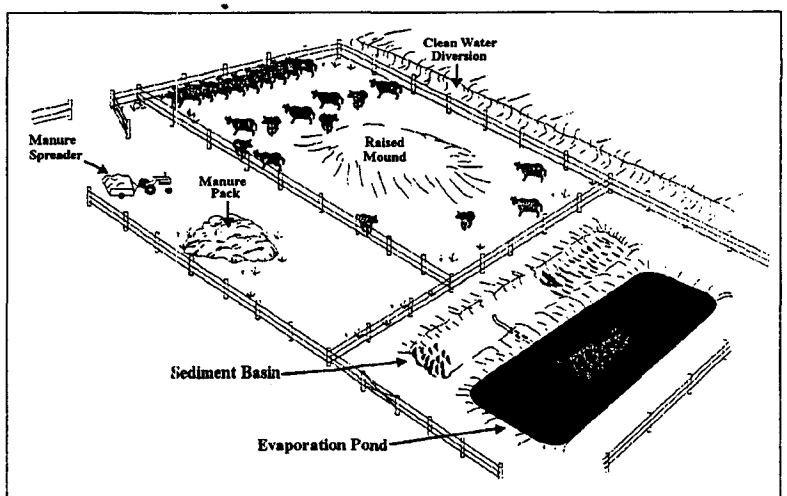
Construction of an Animal Waste Management System

Construction of an Animal Waste Management System (AWMS) is a complex and time consuming process. The time it takes from the initial site visit to the completion of construction can be as long as two or more years. There are several steps required before construction of an AWMS can begin. The actual construction is a very intense period of hard work, yet it takes only three maybe four months to complete. Which leads to the questions... what takes so long and what exactly is involved in building an AWMS from start to finish? Keep reading, and you'll find out!

The first thing that needs to be done is a survey of the current feedlot needs to be conducted, and then an engineer determines if there is enough area to build an AWMS on the existing location or if relocation of the feedlot is necessary. Frequently, relocations are needed because feedlots were often placed up hill from or very near a stream or lake.

If a relocation of the feedlot is required, the new site needs to be surveyed. After the survey is completed on, an engineer develops a preliminary design based on conversations with the producer & the information from the survey. The producer has the opportunity to comment on and make changes to the preliminary design. When the preliminary design is approved by the producer, the engineer completes the final design. A soil sample is obtained to determine if the soil type is adequate for the lining of the evaporation pond. If the sample indicates the soils are suitable for the pond lining, then the design is finalized, and the design is shown to the producer for final approval. Then, it's time to prepare for construction.

The initial step in construction is to advertise for bids. This is a requirement when more than $20,000 of State money is being spent. The bid request must be advertised in two newspapers, one of which is local, and the earliest the bid can be opened is 10 days later. At the opening, all sealed bids received before the deadline are opened and a record is made of the company name, the bid amount, and the amount of the bid bond, further information regarding minority and women businesses is also required. The job is awarded to the lowest responsible bidder that meets the federal & state requirements within 30 days of the bid opening.



Components of an Animal Waste Management System include a feedlot, sediment basin, & evaporation pond.

Before construction starts, stakes with flags are placed on the ground to indicate to the contractor where to cut and fill. After staking is completed (1-2 weeks), construction can begin. Depending upon how many scrappers a contractor uses, dirtwork takes anywhere from 3 to 6 weeks. The rest of the system takes 3 to 5 weeks to complete, depending on whether the feedlot was relocated.

After the contractor has completed the construction activities, the engineer and technician inspect the construction work to determine if it meets specified standards. The engineer approves the AWMS if it meets the standards. At that time reimbursement requests are filed to the appropriate granting agency to pay the producer the Project's share of the cost. In about a month, the payments are disbursed to the producer, who pays the contractor.

The Lake County Watershed Improvement Project has built three AWMS's in 2002 and plans to build four more in 2003. If you are interested in building an AWMS for your cattle, and would like more information about the Project, please contact Christine Schuldes at 605/256-2571.

We're here to help you clean up the lakes!

THANKS

to everybody that used ZERO-PHOSPHORUS FERTILIZER. The Watershed Project appreciates your efforts to clean up the lakes and hopes the you'll choose to use ZERO-P FERTILIZER again!

Help Clean Up Our Lakes

BUY ZERO-PHOSPHORUS FERTILIZER !

A zero-phosphorus fertilizer has a "0" as the middle number in the fertilizer rating – such as "18-0-18." For those who use lawn fertilizer, reaching for a bag of zero-phosphorus fertilizer is an easy way to clean up our lakes and help game fish populations.

Zero-Phosphorus Fertilizer is available from:

- Ace Hardware, Egan Ave., Madison
- F&M Agronomy
- Domestic Seed & Supply
- Chester Farm Service
- Campbell Supply, Madison
- TruGreen ChemLawn
- Classic Lawns, Chester

Lakeshore Runoff Can Affect Your Lake

The Wisconsin Department of Natural Resources and the US Geological Survey just concluded a lakeshore runoff study on eleven shoreland areas on four lakes in northern Wisconsin. The studies compared nutrient runoff-phosphorus and nitrogen-from paired lakeshore sites that were covered either by lawns or by natural forest vegetation.

The final report will be available later this winter. However, preliminary reports point to an interesting finding-the concentration of phosphorus in runoff from the lawn sites and the natural forest sites were basically the same. However, the volume of runoff was up to 10 times higher from the lawn sites as from the forest sites. Since nutrient loading is simply a product of concentration times volume, the total load of phosphorus coming from the lawn sites was substantially higher. The study points to the value of reducing the volume of runoff. The more rainwater and snowmelt that can be kept on the land to filter into the soil, the fewer nutrients that will be transported into surface water.

Steve Greb, Wisconsin DNR scientist in charge of the study commented, "Lawns often are smoothed for optimal water drainage, where forest lands tends to be hummocky, with many depressions to catch and hold runoff. A strategy for lake protection may be creating shoreland depressions that can hold and infiltrate runoff from rainfalls up to a half inch-much like the "rain garden" practice being used in urban residential areas." Think about trying this on your land!

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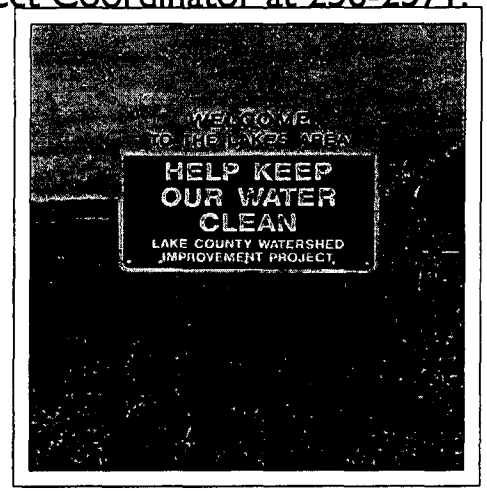


EPA to Announce Final Rules for Animal Waste

On December 16th, 2002, the Environmental Protection Agency will announce the final rules to regulate the manure produced by large U.S. livestock farms, one of the nation's leading causes of water pollution. The industry produces about 220 billion gallons of manure annually, according to the U.S. Department of Agriculture. The final rule should impact about 12,000 farms. Currently, the EPA water rules apply to only about 2,500 farms, according to industry standards. Farm groups and environmentalists say one of the biggest concerns is how the rules would regulate the disposal of manure. Current EPA regulations only mandate how farms must store and treat animal waste. Strict new rules on disposing of the mountains of manure could be costly for the industry. The estimated cost of compliance with the clean water rules proposed by the EPA last year ranges as high as $1.2 million for a large cattle producer, according to government estimates. To help subsidize the extra cost to farmers, Congress boosted conservation funding for livestock operations in the new Farm Bill.

USING WATER WISELY IN THE HOME

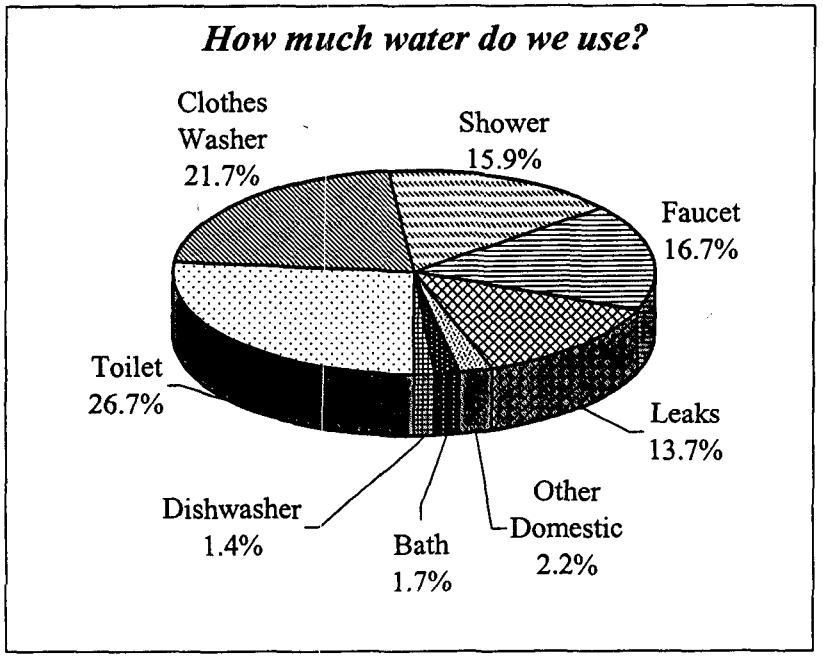
Water efficiency plays an important role in protecting water sources and improving water quality. By using water wisely, you can save money and help protect our environment.

Water efficiency means using less water to provide the same benefit. There are many ways to increase water efficiency in your home—detecting and fixing leaking faucets, installing high-efficiency appliances and fixtures, and watering the lawn or garden with the minimum amount of water needed. Since watering the landscape with an automatic irrigation system is likely the single largest use of water in the home, you can dramatically improve your water efficiency by using proper irrigation and scheduling techniques, such as cycling the sprinklers.

Using water saving techniques not only can save you hundreds of dollars per year but also can reduce the amount of pollutants entering rivers, lakes, and streams. In addition, efficient water use can reduce water and wastewater treatment costs and the amount of energy used to treat, pump, and heat water. And it could help ease the burden on water resources in drought conditions.

Home water use varies considerably depending upon household size, water use practices, climate, type of plumbing fixtures and appliances, and a number of other factors. The two largest water users are toilets and clothes washers. Note that nearly 14% of the water the typical homeowner pays for is never used — it leaks down the drain.

The typical family of four spends about $820 per year on water and sewer charges, but costs can be twice that or more in some places because of higher rates or greater amount of lawn watering and other outdoor uses. But that's just part of the cost. American households spend an average of $230 per year to heat water. By changing appliances like the dishwasher and clothes washer and inefficient fixture like shower heads and toilets, a family of four can save as much as $210 per year in water, sewer, and energy costs..



TOP THREE WAYS TO SAVE

1. Stop Leaks — faucets, toilets, home water treatment units, & outdoor sprinklers are common sources of leaks.
2. Replace Old Toilets — install new high-efficiency toilets that use only 1.6 gallons or less of water per flush. A family of four can save 14,000—25,000 gallons of water per year by making this change.
3. Replace Clothes Washers — Consider purchasing a new washer with EPA Energy Star certification. Energy Star washers use 35 to 50% less water & 50% less energy per load.

What You Can Do!

In the Bathroom: don't use the toilet as a waste basket, don't let the water run while you brush your teeth or shave, take showers instead of baths, & turn off the water flow while soaping or shampooing.

In the laundry: use the appropriate water level or load size selection on the washing machine, & wash full loads whenever possible.

In the kitchen: keep drinking water in the refrigerator instead of letting the faucet run until the water is cool, wash fruits and vegetables in a basin, use a vegetable brush to clean produce, add food to your compost pile instead of using the garbage disposal, use a dishpan for rinsing and washing dishes, and operate the dishwasher only when completely full.

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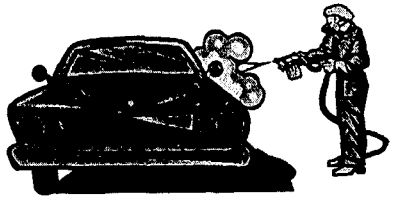

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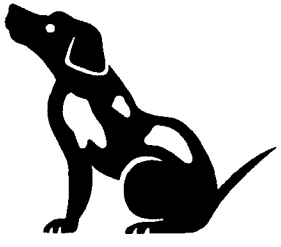

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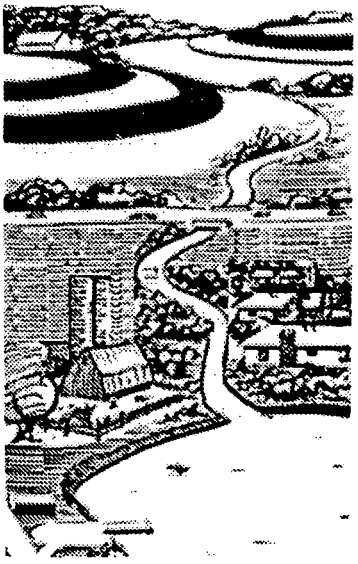

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123 SW 2nd St.
Madison, SD 57042-1999
Phone # 605-256-2571
Fax # 605-256-2007
lakeproj-coor@sd.nacdnet.org

Wednesday, January 29, 2003

NOTICE TO PRODUCERS

FEEDLOT ANIMAL WASTE MANAGEMENT SYSTEM TOUR

Monday, February 10, 2003 from 1 p.m. to 3 p.m.

The USDA Natural Resources Conservation Service (NRCS) and the Lake County Watershed Improvement Project would like to invite you to attend a tour of the three animal waste management systems (AWMS) that were constructed in Lake County during 2002. There are cost-share monies available to build more AWMS's and the tour will help you decide if an AWMS is something you are interested in. The tour will begin at the NRCS building located at 123 SW 2nd Street in Madison, SD at 1 p.m. and should take about 2 hours. The Project Coordinator, Christine Schuldes, and Chuck Lebeda (NRCS) will be available during the tour to answer questions about applying for funds, cost-share rates, construction timeline, and any other questions you might have. If you plan to attend this tour, please contact the NRCS Office as soon as possible at 605/256-2571 or 256-3594.

COLORING CONTEST winners for the Lake County Watershed Improvement Project in grades K-2 were (from left) Amy Shan, Gretchen Iverson, Michaela Duff and (not pictured) Kyle Willard, from Chester. Duff was the overall winner. Pictured with the group is Watershed Project Coordinator Chris Schuldes.

COLORING CONTEST winners for the Lake County Watershed Improvement Project in grades were (back, left) Sam Wilkens, David Langner, Kaitlyn Walker and Amy Jones. Langner was the overall winner. Pictured with the group is Watershed Project Coordinator Chris Schuldes. Entries in the contest exceeded 360. ***(Photos by Elisa Bentler)***

The Madison Daily Leader
March 12, 2003

Watershed project applies for extension

Coordinator dismissed, Goodale will fill in

By ELISA BENTLER

The Lake County Watershed Improvement Project is trying to gain approval for an extension.

The project was originally scheduled to be completed by the end of March, but a significant amount of funding has yet to be spent at this time.

Committee members met last week to discuss the status of the project.

The project is funded through the Environmental Protection Agency, state consolidated funds, local donations and matching funds.

The goal of the project is to reduce the amount of phosphorus and other nutrients in the Lake County Watershed by 50 percent.

Interim project contact Michelle Goodale said the extension received tentative verbal approval from the Department of Environment and Natural Resources. Official paperwork is expected at any time.

The extension would give project administrators until the end of 2004 to complete the project and turn in final paperwork.

Goodale said the extension is needed because the project initially got off to a slow start three years ago because the initial funding appropriation came late in the year and was followed by the need to hire a project coordinator.

Lining up the initial projects also took more time.

Without the extension, funds earmarked for the project would revert back to the state and be appropriated for another project.

Goodale said the extension was originally going to include a request for additional funding, but the EPA instead asked if money from one area of the budget could be transferred to another area.

As a result, money earmarked for some areas — including the construction of grassed waterways, terraces, multi-purpose dams, integrated crop management and bank stabilization — was transferred for construction of animal waste management systems.

Three area producers took advantage of the construction of animal waste management systems this past year, and four are in the planning stages for this next year.

The three projects in 2002 cost a little less than $500,000 to complete.

Goodale said the majority of the remaining funds will be spent on animal waste management systems in 2003. An application is pending for some additional matching state funds.

Additional projects in the planning for this year include some terraces and grassed waterways.

Bourne Slough

Committee members agreed to move forward and hire Schmitz Kalda Associates, Inc., to assess the cost of berm restoration between Bourne Slough and Lake Madison.

Committee Chair Linda Hilde said the berm washed out during the flood of 1993 and has yet to be restored. As a result, Hilde said, the slough is no longer able to be used as a settling basin because the water flows in and out of the area too quickly.

Goodale said the assessment will allow for an adequate estimate for berm restoration to be put together so funds can be sought to complete that specific project.

Estimates for berm restoration were provided by Barr Engineering as a result of an assessment conducted on that area in 2001. Barr said the slough was not an effective settling basin as it currently was, and recommended dredging a portion of the sediment.

Barr also provided estimates on berm restoration, but committee members felt the estimates were insufficient and agreed last week to get a second opinion.

The estimate, to be provided by Schmitz, Goodale said, will include cost estimates for not only restoring the most critical area but also the additional costs for restoring two other areas.

Funding for the berm restoration would be applied for this fall.

New coordinator sought

Committee members were also informed that the Lake County Conservation District Board recently dismissed Project Coordinator Christine Schuldes.

Goodale was appointed temporary contact and said all projects in the works with producers will continue as planned.

Committee members agreed to begin a search for a new project coordinator immediately.

The conservation district is the governing entity for the watershed project.

The Madison Daily Leader

4-03-03

Funds awarded to watershed project

Additional funding was allocated to the Lake County Watershed Improvement Project.

The board of Water and Natural Resources approved an additional $82,500 grant from the Consolidated Water Funding program to the project in a meeting last week.

Interim project coordinator Michelle Goodale said the money will be put toward 15 percent of the cost share for the construction of Animal Waste Management Projects this year.

The overall goal of the project is to reduce, by 50 percent, nutrient loadings, specifically phosphorus, to Lakes Herman, Madison and Brant.

The grant will be matched with USDA, EQIP, and U.S. EPA funds.

Watershed project seeks funds

Paul Hoff getting new animal waste management system

By ELISA BENTLER

Additional funding could be on the horizon for the Lake County Watershed Improvement project.

By Aug. 1, Project Coordinator Roger Strom said, the project will be applying for additional EPA funding that would allow for the construction of two more animal waste management systems and a potential berm restoration project.

The project aims to reduce the amount of phosphorus in the Lake Herman, Lake Madison Madison and Brant Lake watershed by 50 percent through a variety of projects, including the construction of animal waste management systems, terraces and grassed waterways.

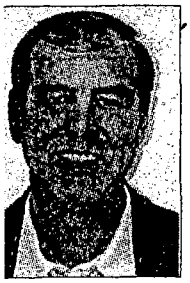
Federal and state funding was allocated for the project in late 2000 and projects have been under way since 2001.

Three animal waste management projects were completed in 2002 or are nearly complete.

Three additional projects are at various stages this year. A project on Paul Hoff's property started in June and a second is almost ready to be bid.

The third system will most likely be bid closer to fall.

That producer is going through the application process to be permitted through the state. That application is currently under review.

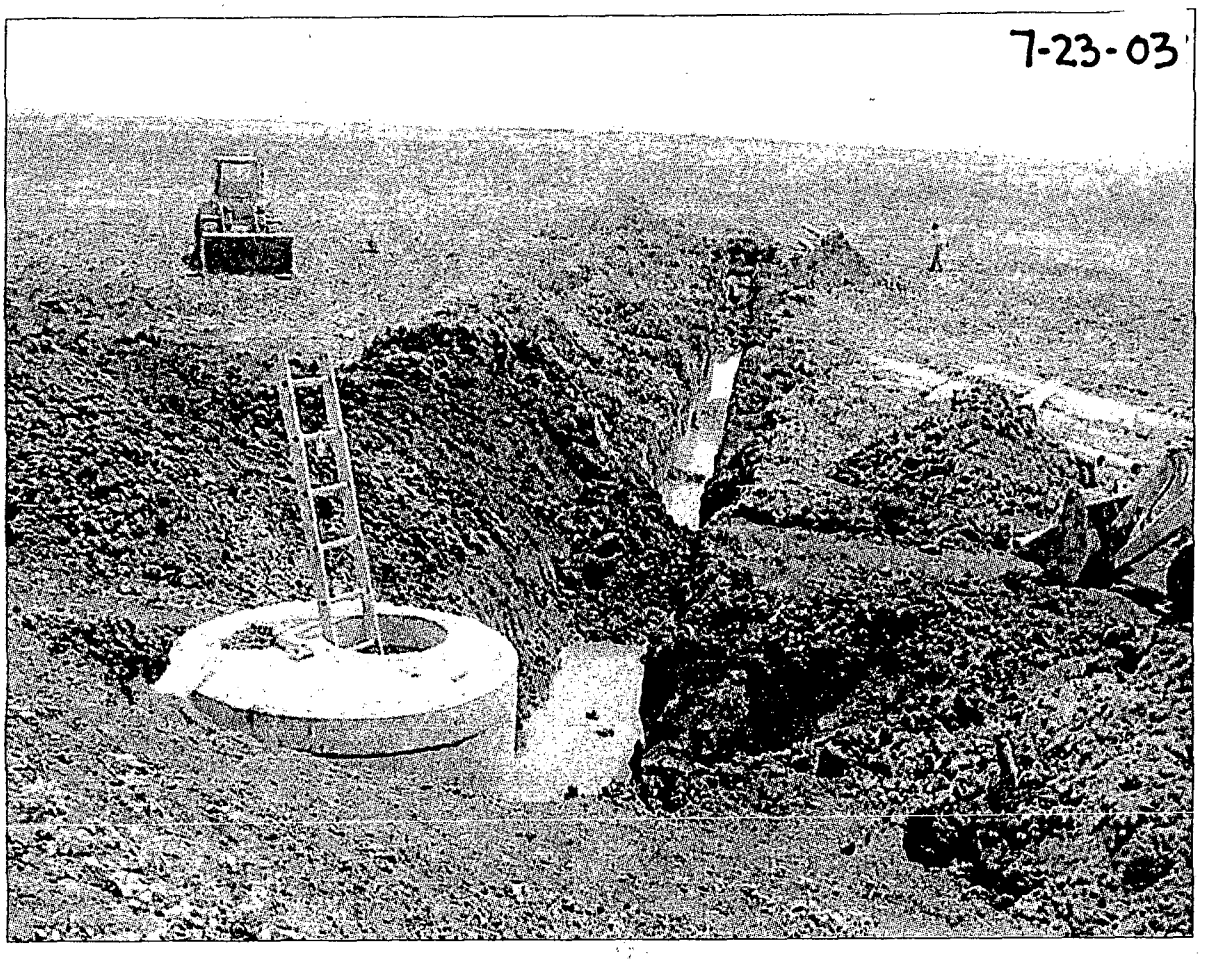


Strom

Strom said the system being constructed on the Hoff property northwest of Madison includes construction of an evaporation pond, sediment basin and feedlots for some of his cattle to replace a portion of his feedlots that will no longer be in use.

Strom said producer response to the animal waste management system construction projects has been so good that the watershed improvement project is looking to apply for additional funds to serve two more producers.

The animal waste management system projects include construction of a sediment basin, evaporation pond and cattle lots.



7-23-03

PAUL HOFF is the current producer participating in the construction of an animal waste management system on his property. Pictured above is a large pump that will transfer water from a sediment basin to the evaporation pond. A water line has been installed in the trench leading to the evaporation pond. ***(Submitted photo)***

and sediment basins are not readily used by producers today, but will likely become mandatory for operations with 1,000 animal units or more within the next five years.

An animal unit is equivalent to one dairy cow.

No timetable has been set for smaller operations, he said. "But we would like to see more operations going to something like this because they control the runoff and they contain the animal waste material."

A combination of federal, state and local matching funds pay for the completion of the animal waste management system projects and any other projects implemented through the watershed improvement project.

"We help offset expenses for replacement of existing facilities," he said.

GRAZING SYSTEM

In addition to the animal waste management system projects, grassed waterways and terraces have also been installed, along with a grazing system.

installed on a property north of Brant Lake and involved dividing the pasture and adding water access to the new section.

Strom said the goal of this project is to allow for the rotation of cattle between pastures so that pastures have a rest period between grazings.

"Ideally we would set it up into four pastures," he said.

The extra division would allow for rotation of the cattle every three weeks and provide nine weeks of rest for each pasture.

Division into two pastures allows for, at most, six weeks of rest, he said.

BERM RESTORATION

The proposed berm restoration project aims to rebuild the berm between Bourne Slough and Lake Madison. But, Strom said, before any funding can be applied for, Game, Fish and Parks will have to approve the project because that department owns the land.

If GF&P refuses to go along with the project, it could not move forward, he said.

The proposed project would

berm to a 100-year peak elevation mark and the next 1,100 feet to a 25-year elevation mark.

In all, the project would entail rebuilding the berm about two to three feet, he said.

Engineers recently surveyed the land and determined the current elevation and peak elevation marks for 25-year, 50-year, 75-year and 100-year storm events.

The berm has been eroding since the flood in 1993.

Prior to the flood, Bourne Slough had acted as a settling basing for Lake Madison. Sediment settled there before water entered Lake Madison.

Today, water currently bypasses Bourne Slough and goes directly into Lake Madison.

"We're looking to restore the berm so water goes into the slough instead of bypassing it," Strom said. "The restoration project would add about two to three feet of elevation to build the berm back up to its recommended level."

The project would also entail widening the berm and providing some stabilization or armoring to

The Madison Daily Leader
4-28-03

Watershed project has new coordinator

By ELISA BENTLER

The Lake County Watershed Improvement Project has new leadership, but his face is not new to the community.

Roger Strom lived in Madison from 1972 through May 1976. While here, he first worked on a Creel Census Project on Lake Herman and Brant Lake, and then became a patrolman for the city of Madison in November 1974.

Following his time in Madison, Strom became a Wildlife Conservation Officer and was stationed in Winner and Huron. Four years ago, after 23 years in that field, Strom became a financial adviser for Waddell and Reed Financial Services.

Strom said his career change stemmed from a need to get out of law enforcement, but he still retained his enjoyment of wildlife and land management.

Strom

When the opening came for a project coordinator for the Watershed Improvement Project here, Strom said it appealed to him because it was a familiar field.

"It brought me back to working with groups I'm familiar with," he said.

Strom started work with the project April 14.

The goal of the project is to reduce the amount of phosphorus and other nutrients in the watershed by 50 percent. The project started in the fall of 2000 and is projected to wrap up by the end of 2004.

Strom's goals for the project are to continue with the programs already in progress, including the construction of additional animal waste management systems this summer, terraces and grassed waterways.

Three animal waste management systems are currently in the development stages, with one project currently seeking construction bids.

Strom said these projects are win-win situations for the entire watershed. Not only does the landowner get a new system, for which he provides some matching funds, but the systems also lead to an improvement in the quality of the water, he said.

"We have to look at them as a win-win situation for everyone," said Strom.

Although there are projects in the works, funding is still available for additional animal waste management systems and other projects, Strom said.

"I'm interested in meeting with people who have projects they want to do, and discussing what can be done and the potential for developing future projects," he said.

Strom holds a degree from South Dakota State University in wildlife biology with a minor in chemistry. He was raised on a farm near Pipestone, Minn.

His wife Debra, a Dakota State University graduate, teaches in the Huron School District. She will continue teaching there while Strom is project coordinator in Madison.

The Madison Daily Leader

8-14-03

EPA concerned about Johnson site

Wetland being restored isn't holding water

By ELISA BENTLER

A restored wetland area is not holding water, and one EPA representative is wondering why.

Rex Fletcher, District 8 representative for the EPA, was in Madison Wednesday to visit with members of the Izaak Walton League and the Lady Ikes during the IWL meeting.

Earlier in the day, Fletcher visited the site northwest of Madison where Mark and Dan Johnson have been restoring a wetland they started draining in January 2002.

"When I saw it today, I felt someone had done something," he said.

The EPA ordered the Johnson brothers to develop a restoration plan in May 2002. After many drafts, Fletcher said, the plan was approved and restoration work began.

During his visit to the site this week, he said, he was disappointed.

Although water has come into the basin, he said, the water is quickly draining out.

The initial drainage of the site caught the attention of many groups and individuals as it flowed around KJAM's AM transmitter site north of The Moonlite and later ran along the ditch and into the rough of the Madison Golf and Country Club, before it was redirected along Lake Herman's Territorial Road ditch.

At the end of January 2002, the Johnsons were ordered by the U.S. Army Corps of Engineers to cease drainage because no authorization had been granted for the drainage.

A citizen's action was later filed in March 2002, prompting the EPA to also make a ruling on the drainage that had taken place.

The EPA ruling stated that the water drained affected waters of the United States because the water that flowed from the wetland flowed into Lake Herman and eventually flows into the Big Sioux River and the Missouri River — both navigable, interstate waters.

Because of that, the Johnsons were ordered to restore the area to the condition it had been before the drainage took place.

"With the restoration plan, they had to restore the drainage that was destroyed," he said. "If done correctly, the water will stay."

But the water is not staying now, Fletcher said, and many factors could be the cause. The soil may not be saturated enough, the soil could have been changed, or a drain tile could have been installed under the soil.

"If they replaced the type of soil that was there, it won't ever fill up and will drain," he said.

Fletcher said that although the land isn't holding water at this time, he is recommending no action by the EPA yet. Rather, he is leaning toward giving the site another year to develop and see what is happening then.

"If if doesn't start developing the way it should, the EPA can take further enforcement action."

The Lake News
July 2003

Local watershed issues at turning point for better

With the ice out of local lakes and creeks flowing freely, the area watershed is back in action.

Four Lake County lakes are served by a single watershed, which gathers water throughout the county and generally runs toward the southeast.

While we often think of spring runoff as being a time of contaminants running into the creeks and lakes, the following months are often the bigger culprit. Winter snow can melt slowly into the ground, while heavy spring rains — with little vegetation to slow them down — are usually what carries soil, phosphates and sulfates.

The Lake County Watershed Project is designed to reduce the phosphorus running into local lakes by 50 percent. The project has an aggressive agenda to reduce input from all sources, including residential lawns, livestock operations and water treatment facilities.

The bulk of the grant money from the Environmental Protection Agency has been used to construct waste management systems at local livestock operations. For a number of them, this is the first spring they will be in full operation. Shoreline stabilization projects have already been completed and we'd expect to see reduced silt buildup in project areas.

But there is work yet to be done. Other waste management systems are on the boards, and continuing education among homeowners and others would pay off in significant ways.

The watershed project is in the process of hiring a coordinator. This is a critical juncture for the effort, a point at which the tremendous gains of the recent past can be built upon, and the final activities completed.

— Jon M. Hunter *(Reprinted with permission from Madison Daily Leader)*

The Madison Daily Leader

8-4-2003

Watershed project applies for $444,000 in EPA funding

By ELISA BENTLER

An additional $444,000 in EPA 319 funding is being requested to fund a portion of a berm restoration project and allow for the construction of two additional animal waste management projects in the Madison area.

The Lake County Watershed Project applied for the funding. Project Coordinator Roger Strom said a decision on the application, which was due Friday, is expected in October.

Of the $444,000 applied for, $144,000 is earmarked for the berm restoration project, he said. That project aims to rebuild the berm separating Bourne Slough from Lake Madison.

The proposed project would rebuild the first 600 feet of the berm to a 100-year peak elevation mark and the next 1,100 feet to a 25-year elevation mark.

In all, the project would entail rebuilding the berm about two to three feet, he said.

The entire project is estimated to cost about $192,000, of which about $20,000 will be local funds.

The project is proposed on land owned by Game, Fish & Parks. Strom said he plans to meet with GF&P officials in the next few weeks.

Engineers recently surveyed the land and determined the current elevation and peak elevation marks for 25-year, 50-year, 75-year and 100-year storm events.

The berm has been eroding since the flood in 1993.

Prior to the flood, Bourne Slough had acted as a settling basin for Lake Madison. Sediment settled there before water entered Lake Madison.

Today, water currently bypasses Bourne Slough and goes directly into Lake Madison.

The remaining $300,000 will be used for the construction of animal waste management systems.

That additional funding will cover some funds needed to complete the three animal waste management projects in progress this year and the construction of two additional systems.

The watershed improvement project aims to reduce the amount of phosphorus in the Lake Herman, Lake Madison and Brant Lake watershed by 50 percent through a variety of projects, including the construction of animal waste management systems, terraces and grassed waterways.

Federal and state funding was allocated for the project in late 2000, and projects have been under way since 2001.

Three animal waste management projects were completed in 2002 or are nearly complete.

12-04-03

Madison Daily Leader
Madison, South Dakota

Opinion

Editorial

We need one more reminder about how to help the lakes

As the Lake County watershed project approaches the end of its existence, we believe long-term success requires another push for public education.

The project started in 1995 with an assessment study of Lakes Madison, Herman and Brant. With a primary goal of reducing phosphorus concentration by 50 percent, the project gained funding to begin work.

The first coordinator was hired in September 2000. Lilias Jarding began work on the watershed project, informing the public as to how they could help, working with local stores to sell phosphorus-free lawn fertilizers and starting discussions with area farmers on how federal funds could be used to help control animal waste.

Jarding started publishing a regular newsletter, speaking to schools throughout the county, and even hosting a booth at the annual Chamber of Commerce Home Show in the Dakota Prairie Playhouse.

As the project matured, the focus of the project shifted more toward getting the animal waste control projects started and finished. A surprising amount of work is required to make it all come together.

The final waste control projects, along with a berm restoration project, are either under way or expected to be in place in 2004. As funding runs out in the next year or so, the project will come to a close.

We think the time is right for another burst of public education. If we're serious about reaching the 50 percent goal, we'll need continued help from property owners throughout the watershed, including homeowners on the lakes and citizens of Madison.

Current watershed coordinator Roger Strom hopes to boost public education this winter. We can use a reminder about the types of fertilizers to use and how to apply them. We need to know that we should let the soap from washing cars run out into the street, where it makes it way to the lakes. And school children need to relearn the importance of protecting the water quality of local lakes and streams.

The likelihood of meeting the phosphorus reduction goal will be increased if the whole community contributes to its success.

— *Jon M. Hunter*

The Madison Daily Leader

11-24-03

Watershed project continues work with two more producers

Hansen, Lee join project to clean up local watershed

By ELISA SAND

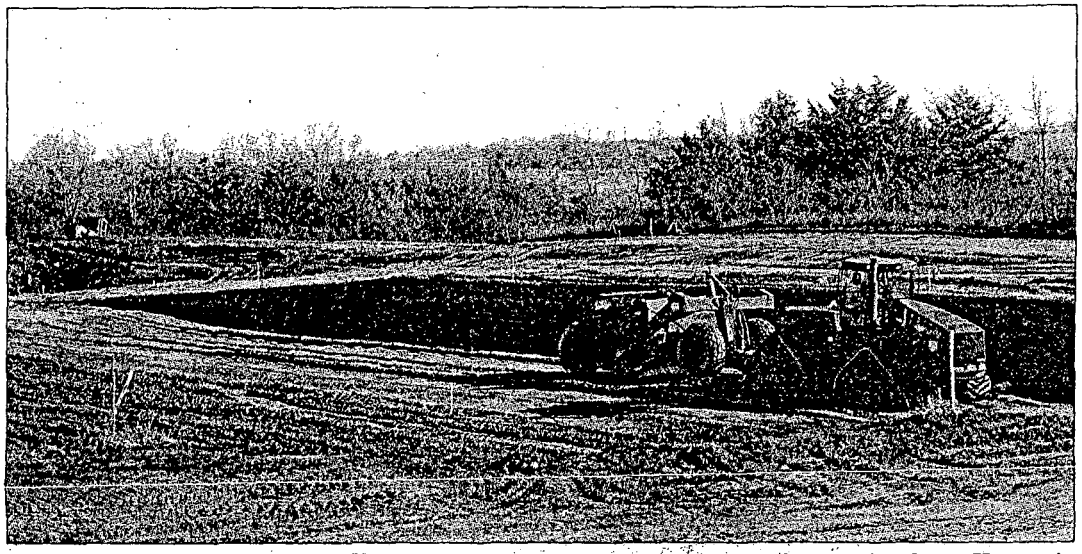
Two animal waste management systems are currently under construction — one nearing completion and one just getting started.

Jarret Lee and Don Hansen are the fifth and sixth area farmers to participate in these projects, which are coordinated through the Lake County Watershed Improvement Project.

The watershed project as a whole aims to reduce the amount of phosphorus and other nutrients in the watershed by 50 percent through the construction of these animal waste management systems and other projects that reduce runoff into the creeks or area lakes.

Producers and area residents who participate in these projects contribute a percentage of the cost, while the rest is paid through EPA and state grant funds.

The Hansen project is located approximately one mile south and one mile east of Madison in the vicinity of Lake Herman.



DIRT WORK CONTINUES on Don Hansen's property as part of an animal waste management system being installed to prevent runoff into the nearby creek where Hansen's feedlot and pit silo had been located. ***(Photo by Elisa Sand)***

Project coordinator Roger Strom said dirt work for this project started Oct. 31 and, aside from some delay the first week of November, continues on schedule.

"We are hoping to have the majority of the earthwork done by today," he said Friday.

The completion of the dirt work would conclude the first phase of the project, which is divided into four phases.

The project includes the relocation of Hansen's feedlot and pit silo.

The dirt work currently under way shapes the area for the feedlot and the lagoon which hold the liquid runoff.

The remaining aspects of the project will depend on the weather, but likely will occur next spring, Strom said.

The next step of the project is to supply the fence material and complete the concrete work. Additional Earth and gravel work is then done, the feedlots shaped and the fences constructed.

The last step, he said, is the construction of the pit silo, which holds the silage.

"We're hoping for completion by midsummer," Strom said.

Strom said this project would have started earlier, but Hansen has been going through the process of obtaining a state permit for his facility, and this added extra time to the planning of the project.

This step wasn't required, Strom said, but Hansen wanted to get the permit in order to avoid future issues with his facility.

The Lee project includes the relocation of one of the two feedlots on the Lee farmstead, the construction of a dike around the remaining existing feedlot, and the construction of a lagoon system to contain the liquid runoff.

The Lee project is located 2 miles north of Junius.

Strom said items remaining on this project include the construction of fence, gravel work and electrical work.

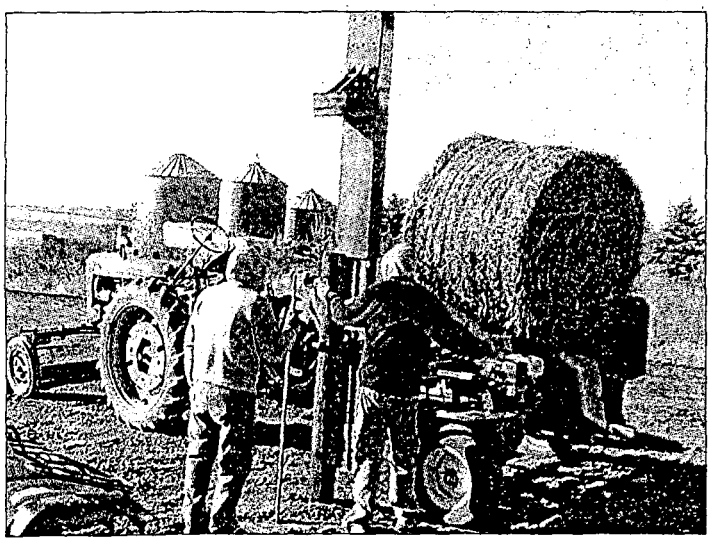
This project also ran into delays the first week of November because of the weather, Strom said, but should be completed soon.

Lee said that he had some reservations to getting involved with the watershed project, because it was partially federal and state funds that paid for the project. But now he wishes more people could join.

Two additional projects are in the works for 2004. The watershed project has applied for additional funding for the completion of those projects, as well as for a berm restoration project on Bourne Slough.

Strom said funding looks favorable for both of these items, but the official announcement of the funding award hasn't been made.

With the completion of those projects and some smaller ones in 2004, the watershed project will conclude its activities.



GLEN (left) AND JARRET LEE work to secure fenceposts in the ground as the construction of the animal waste management system on the Lee farmstead comes to a finish. ***(Submitted photo)***

The Madison Daily Leader

Tuesday
December 2, 2003
Madison, South Dakota
114th year, No. 171

Commissions hear request from Watershed

By ELISA SAND

While Madison city commissioners approved funding for a berm restoration project, Lake County commissioners deferred any commitment of funds until the end of the year.

Roger Strom, project coordinator for the Lake County Watershed Improvement Project requested funds from city commissioners Monday and county commissioners Tuesday.

Strom requested funds needed for a $192,000 berm restoration project on Bourne Slough. Sixty percent of the project will be funded through federal 319 funds, he said, and the remaining 40 percent needs to be raised through a combination of local or state funds.

Strom requested $19,200 from the city, which represented 10 percent of the total cost of the project. City commissioners approved $10,000 for the project.

Tuesday, Strom said he currently has $37,200 committed by local entities. The balance of matching funds needed for the project is $39,800.

Strom said he also plans to apply for $19,200 in state consolidated funds, and he should hear on the award of those funds in January.

Strom requested a matching contribution from the county, Tuesday stressing the need for local entities to match funding needed for the project.

"Without the local dollars I cannot utilize the federal dollars," he said.

Although commissioners voiced their support of the project, they were reluctant to commit funds until all year-end funding requests came through to determine the final balance of the contingency fund.

"Without the local dollars I cannot utilize the federal dollars."
— Roger Strom, project coordinator for the Lake County Watershed Improvement Project

Water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm.

"The restoration is to force the water to go into the slough," Strom said.

By forcing the water to stay in the slough longer, he said, sediment will settle in the slough before the water enters Lake Madison and reduce sediment loading.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes, he said.

The berm restoration project would likely take place in 2004 once all funding is secured.

The restoration project is one of many being conducted by the Watershed Improvement Project. Other activities include the construction of animal waste management systems, terraces and grassed waterways within the county.

The intent of all the projects is to reduce sediment loading into the lakes.

The berm restoration project would restore the main outlet of the berm to a 100 year peak flood elevation and a second section to a 25 year peak flood elevation. A third section of the berm would be left alone.

The restoration also includes the construction of rock ribrap on the west side of the berm to support the wall, Strom said.

The Madison Daily Leader

Monday
December 29, 2003
Madison, South Dakota
114th year, No. 189

Watershed project still seeking funding

County to discuss issue Tuesday

By ELISA SAND

A project aimed at restoring the berm between Bourne Slough and Lake Madison is still in need of local funds.

Roger Strom, project coordinator for the Lake County Watershed Improvement Project, requested funds from both the city and county earlier this month.

While the city approved $10,000 toward the $192,000 project, county leaders deferred any decision on funding the project until the board's year-end meeting. That meeting is Tuesday when the county commission has various cash transfers on the agenda.

Lake County Commission Chair Bert Verhey said he can't be certain whet her funding of the watershed berm restoration project will be discussed.

Before committing funds, he said, the commission has to see how much funding is left to work with.

If a decision is not made Tuesday, said Verhey, it's possible the county commission will make a determination at its first meeting in January.

When approached earlier about the project, county commissioners expressed their support of the project and said that allocating funds would depend on the county's year-end balance in its contingency fund.

Sixty percent of the berm restoration project will be funded through EPA 319 funds, and the remaining 40 percent must come through state or local funds.

Strom was out of the office Monday, but Michelle Goodale, district manager of the Lake County Conservation District, said that fund-raising for the project is currently where it was at the time the request was made to county commissioners.

The Lake County Conservation District oversees the administration of the grant funds awarded to the watershed project.

Goodale said at this time, a total of $37,200 has been committed to the project by the city of Madison, Game, Fish & Parks, East Dakota Water Development District and a Witecaps grant.

The balance needed for the project is $39,800.

Strom requested $10,000 from the county and has an application pending for $19,200 in consolidated funds from the state.

Goodale said no funding has been approved by the lake associations.

The berm restoration project has been put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and reduce sediment loading.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes.

The berm restoration project would likely take place in 2004 once all funding is secured.

The project would restore the main outlet of the berm to a 100-year peak flood elevation and a second section to a 25-year peak flood elevation. A third section of the berm would be left alone.

The restoration also includes construction of rock riprap on the west side of the berm to support the wall, Strom said.

The Madison Daily Leader

12-30-03

Watershed funding gets county OK pending year-end balances

By ELISA SAND

The county has committed funds for the watershed project pending the outcome of its contingency fund. At Tuesday's meeting, Lake County Commissioners approved $10,000 toward the Lake County Watershed Improvement Project that aims at restoring the berm between Bourne Slough and Lake Madison.

The $192,000 project is funded 60 percent through federal EPA 319 funds, provided that 40 percent can be raised through local and state funds.

Watershed Project Coordinator Roger Strom approached both the county and the city for local support in early December. The city allocated $10,000 for the project at that time, and the county deferred action until the end of the year.

Auditor Kay Schmidt said it is premature to know what funds are available from the contingency fund because the board still has to consider some unknown amounts.

By the board's Jan. 6 meeting, Schmidt said, a contingency balance should be known.

Watershed committee chair Linda Hilde was present at Tuesday's county commission meeting. When asked about the project and other sources of matching funds, Hilde said the Lake Madison Development Association has been approached, but no decision has been made.

To date, a total of $37,200 has been committed to the project by the city of Madison, Game, Fish & Parks, East Dakota Water Development District and a Witecaps grant.

The balance needed is $39,800.

Not included with the committed funds are the $10,000 request from the county and a pending application for $19,200 in consolidated funds from the state.

If both sources allocate funds, the watershed project would still need $10,600 in matching funds to proceed.

Commissioner Shirlee Leighton asked if commissioners should look at allocating more for the watershed project if the contingency fund were sufficient, but that suggestion was met with hesitation from other commissioners.

"We're tight this year," Commissioner Ron Jorgensen said. "I don't want to commit any more than we have to."

The berm restoration project has been put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and reduce sediment loading.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes.

The berm restoration project would likely take place in 2004 once all funding is secured.

The Madison Daily Leader

1-06-04

Lake County Commission OKs watershed funding

By ELISA SAND

The county has given a firm commitment to provide $10,000 toward a Lake County Watershed Improvement Project that aims at restoring the berm between Bourne Slough and Lake Madison.

The Lake County Commission made the announcement Tuesday at its regular meeting.

Newly appointed chair Ron Jorgensen said the funds were approved by the county last week contingent upon money being available at the end of the year.

Jorgensen

"Money was available," he said. "The funding was approved contingent upon the additional funds being raised for the project."

The berm restoration project will cost $192,000 with 60 percent of the project funded through federal EPA 319 funds. The remaining 40 percent must be raised through local and state funds.

Of the $77,000 needed, the project now has $47,200 (including the county commitment). The project also has an application pending for $19,200 in state funds, leaving $10,600 to be raised.

Steve Snyder, president of the Lake Madison Development Association, appeared at the commission meeting and indicated that the LMDA has been approached and plans to discuss supporting the project at its Jan. 23 meeting.

Other entities contributing funds are the city of Madison, Game, Fish & Parks, East Dakota Water Development District and Whitecaps.

The berm restoration project has been put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and reduce sediment loading.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes.

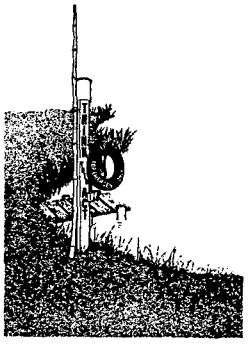
The berm restoration project would take place this year once all funding is secured.

2004

Watershed Improvement Project

Lakes Herman, Madison and Brant are a vital part of the quality of life in Lake County. The nutrients that make the corn grow and the grass in the lawns green are good if they are where we need them. Unfortunately, when the same elements reach the lake we are not happy with the outcome. We produce more algae. That is the aquatic plant that floats in the water. The higher the concentration of phosphorus, the more plants we produce.

The goal of the Lake County Watershed Improvement Project was to lower the level of Phosphorus in the watershed by 50 percent. One component of the project is to work with willing landowners to implement Best Management Practices on their agricultural land.



Where do you and I fit into this picture? When we are out at the lake, here are some things that Boater and Personal Watercraft Operators should do:

- Reduce speed when you are in shallow water. Sediment on the lake bottom is high in phosphorus. Stirring action of the propeller brings nutrient into the water column making it available for the algae.

- Reduce speed near the shoreline. Wave action increases the erosive effect of the water to the shoreline. This brings nutrient rich soil into the water. A slow no-wake speed is best when within 150 feet of the shore.

Everyone should:

- Pick up your garbage and any litter you find, and then dispose of it properly. This includes waste materials from our pets. Anything left on the ground can end up in the lake.

- Don't wash cars, boats, pets or other objects in or near the lakes.

- Use non-phosphorus detergents while camping at the lake.

We wish that your time in the community be safe and enjoyable. The lakes make this area special. Your participation today will make that possible.

For more information on the Lake County Watershed Improvement Project, call 256-2571 or e-mail us at Lakeproj-coor@sd.nacdnet.org

2004 MADISON HOME SHOW

(Vendor list as of 2/13/04 11:00 am
for a total of 40 booths)

ABC Seamless Siding
B&B Appliance
Cabinet Factory Outlet / Rosebud Manufacturing
Community Counseling Services
CRC Seamless Siding
Custom Touch Homes, Inc.
CustomView Windows, Inc.
Dakota Tubs
Family Memorials by Gibson
First American Bank & Trust
Great Western Bank
Home & Garden Party
Homestead Building Supply / Homestead Do It Center
KolorWorks Paint & Decorating
Lake Co. Watershed Improvement Project
Madison Chamber of Commerce
Madison Community Hospital & Auxiliary
Madison Radio Shack
Madison Realty Inc.
Marko's Boat Motor Small Engine Repair
Midstates Glass & Mirror
Miller Construction Inc.
Montgomery's Furniture Outlet
Perry Electric
Reliv International
Security Bank
Sioux Valley Energy / Sioux Valley Wireless
The Governor's House
The Homemaker's Idea Company
United Building Centers
Waddell & Reed *(Becky Halma & Tim Schut)*
Wells Fargo Bank South Dakota, N.A.


LAKE COUNTY
WATERSHED
IMPROVEMENT
PROJECT

The Madison Daily Leader

Thursday
March 11, 2004

Watershed project raises needed local support

State grant still needed to proceed

By ELISA SAND

A berm-restoration project between Bourne Slough and Lake Madison has received enough local support for the project to begin this year, but the project still awaits word on a state grant.

The Lake County Watershed Improvement Association has been seeking local funds for the $192,000 restoration project.

Sixty percent of the cost for the restoration project is funded through EPA 319 funds, with the remaining 40 percent coming from local and state sources.

Of that 40 percent, or $77,000, the project is seeking $19,200 from state consolidated grant funds. Project Manager Roger Strom said those funds will be considered March 25 by the State Board of Water and Natural Resources in Pierre.

Strom said the remaining $57,800 in local match has been committed. Up until recently, he said, the project had raised all but $10,200, which has since been committed by the development associations for Brant Lake ($1,600) and Lake Madison ($9,000).

Additional local funds were committed by Lake County; the city of Madison; Game, Fish & Parks; East Dakota Water Development District; and Whitecaps.

Whitecaps is a local water protection foundation with a mission to protect, preserve or restore the water quality and habitat of aquatic organisms in fresh water lakes, rivers and streams in watersheds.

The berm restoration project has been put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and, therefore, will reduce sediment loading.

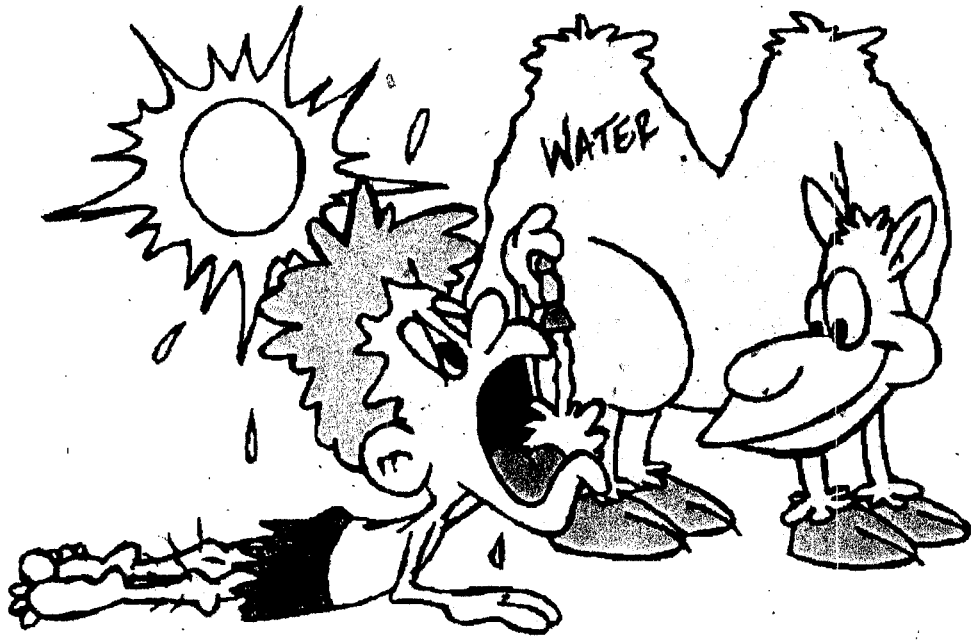
The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes.

The berm restoration project will take place in 2004 once all funding is secured.

The goal of the Lake Madison Watershed Improvement Project is to reduce the phosphorus levels and levels of other nutrients in the watershed by 50 percent through this and other projects.

The 2004 Big Sioux Water Festival Wishes To Thank

Roger Strom



For your volunteering in the 2004 Big Sioux Water Festival in Brookings, South Dakota. It is with deep appreciation that we present you this certificate and thank you for your support of this project.

Lisa Bretsch

The Big Siout Water Festival
Lisa Bretsch, Project Coordinator

The Madison Daily Leader
September 10, 2004

Work beginning on Lake Madison outlet

Bourne Slough berm restoration 'scaled back considerably'

By ELISA SAND

There may be quite a bit of dirt moving within the outlet of Lake Madison near Smith Park, but the outcome is going to be a sloped, cleaner looking landscaped area aimed at preventing further erosion.

The project is a cooperative effort between four landowners and the Lake County Watershed Improvement Project. The project begins at the outlet and runs about 400 feet to the first culvert.

"We're not altering the capacity of the channel," said Watershed Project Manager Roger Strom. "All we're trying to do is protect the shoreline and improve the appearance."

Strom said any restriction in the water flow will be from the current box culverts in place, not the work being done.

This shoreline stabilization project is being done by BJ Construction of Rutland. The cost is between $20,000 to $25,000.

Strom said the project was brought up two years ago, but some issues of property ownership needed to be resolved.

Through the project, a 15-foot diagonal slope will be created on both sides of the channel, which will be covered with rip-rap and rock. No alteration will be done to the bottom of the channel.

"It's designed to accommodate the majority of runoff and rainfall events," he said.

Strom said the project has been discussed numerous times by the Lake Madison Development Association. As a result, he said, when work began, area residents did not bring concerns to his attention.

This is one of two projects that will be taking place this fall, along with the animal waste management systems currently under construction.

The second fall project, which has yet to go out for bids, is the berm restoration project between Lake Madison and Bourne Slough.

That project was put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and, therefore, will reduce sediment loading.

All funding has been secured for the project, which was originally estimated at $192,000. After discussion with Game, Fish & Parks, however, Strom said, the project has been "scaled back considerably."

What was originally a project to restore 1,700 feet of the berm will now focus on about 400 feet.

Strom said the project was scaled back because the GF&P felt it was not appropriate to restore the entire area.

The 400 feet that will be rebuilt is where the majority of the damage has been done. That area will be rebuilt to the 100-year elevation mark, or 2 to 3 feet.

Because the project is being scaled back, Strom said, the cost will also be less. The local match used for the berm restoration was raised specifically for the project.

Strom said unused funds will be prorated and returned to the entities that supported the project.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction will lead to less algae production in the lakes.

SHORELINE STABILIZATION work is currently under way at the outlet of Lake Madison near Smith Park. The project is a cooperative effort between landowners and the Lake County Watershed Improvement Project. Project Manager Roger Strom (front) discusses the progress of the project with construction manager Bill Orton. *(Photo by Elisa Sand)*

church, which seats 1,000 people,

Argus Leader March 28, 2004

Water Board funds 25 environmental projects

FROM STAFF REPORTS

The state Water and Natural Resources Board in Pierre approved 25 grants and loans worth $5.7 million for environmental projects last week.

Winners of Solid Waste Management/Regional Landfill Assistance funds:

■ Brown County Regional Landfill, $30,000 grant in cost-share funds, waste tire removal project.

■ B-Y Water District, $21,000 grant and $155,000 loan, monofill construction for lime sludge disposal at water treatment plant.

■ Northwest Regional Landfill, $82,000 grant and $250,000 loan, new disposal cell at the landfill and new equipment.

■ State Department of Environmental and Natural Resources, $100,000 grant, waste tire removal project.

■ Yankton, $190,000 grant and two loans for $360,000, transfer/recycling station expansion.

Drinking Water State Revolving Fund loan recipients:

■ Keystone, $762,000, water system distribution improvements.

■ Centerville, $870,000, new PVC water mains to replace old cast-iron drinking water distribution system.

Recipients of consolidated grants:

■ Aurora-Brule Rural Water System, $150,000, and Elk Point, $350,000, expansion of water treatment plant capacity.

■ Brookings-Deuel and Kingsbrook rural water systems, $150,000 each, expansion to provide water to new rural connections, dairy and future livestock development.

■ Corsica, $300,000, upgrading water and wastewater systems for new economic development.

■ Freeman, $100,000, and Parker, $350,000, refurbishing old water and sewer lines and extending to new service areas.

■ Gayville, $100,000, upgrading wastewater treatment plant to meet discharge permit standards.

■ Hecla, $500,000, building wastewater treatment system to meet standards.

■ Lake County Conservation District, $19,200, Bourne Slough restoration to reduce sediment and phosphorus loads to Lake Madison.

■ Lake Poinsett Sanitary District, $200,000, extending wastewater system along lakeshore to serve 91 new users.

■ Lead, $75,000, improving 75-year-old water and sewer lines with state Department of Transportation project to rebuild Highway 85.

■ Lennox, $300,000, increasing drinking water system capacity to keep up with new growth.

■ Platte, $25,000, upgrading old cast-iron drinking-water mains.

The Madison Daily Leader

Letters to the Editor

4-7-04

Madison, April 2

Editor, The Daily Leader:

We owe thanks to so many that have supported our Lake County Watershed Project. Both rural and city people have come together to participate in lowering the nutrient levels that enter our surface water. But we all know that the need for water protection is not a one-time effort. We need the continued protection that only you can give.

Please help us protect our water resources by using zero phosphorous fertilizer on your lawn. Local sources for this kind of fertilizer are Chester Farm Service, Ace Hardware, Domestic Seed and Pamida. Watch the Friday Madison *Daily Leader* for coupons that will assist you in purchasing zero phosphorous fertilizer. Thank you for helping to protect our watershed by doing your part.

Linda Hilde

2004

Waste management makes progress

Berm restoration, bank stabilization will begin later

By ELISA SAND

Two animal waste management projects will be completed by the end of summer or early fall, while two other watershed improvement projects in the area will begin later this summer.

The Lake County Watershed Improvement Project is completing a project at the Donald Hansen property near Lake Madison and just beginning a project with Rick Jung north of Madison.

Strom

Bids for the concrete work and silo for the Hansen project were opened Tuesday afternoon. Project Coordinator Roger Strom said that a couple of bids were rejected, and some negotiations will be taking place for the concrete work.

An animal feeding operation for approximately 500 cattle is being constructed on the Hansen property. This operation will combine those that have been located on Hansen's property and his father's. Dirt work started late last fall.

"We're hoping the feedlot and silo will be operational this fall," Strom said.

The Jung project is also an animal feeding operation being constructed to replace two existing operations.

"Both will still have stock cows in the yards," Strom said, "but the feeding will be in the new lot."

Dirt work on this project started July 9. The entire project will take up to two months to complete.

Another project due to begin later this summer is a bank stabilization project at the outlet of Lake Madison. Strom said the area is between The Lakes Golf Course and Smith Park.

The project got started a couple of years ago, he said, but was put on hold in order to clear up some questions. The project is due to resume later this summer.

A berm restoration project on Bourne Slough will also begin later this summer. Strom said all the necessary funding is in place, but he needs to get the final engineer's design and advertise for bids on the project.

The restoration project will rebuild the first 600 feet of the berm to a 100-year peak elevation mark and the next 1,100 feet to a 25-year elevation mark.

In all, the project would entail rebuilding the berm about two to three feet. The entire project is estimated to cost $192,000, of which 40 percent is local and state funds. The balance of the project is covered by EPA 319 funds.

The project is proposed on land owned by Game, Fish & Parks. The berm has been eroding since the flood in 1993.

Prior to the flood, Bourne Slough had acted as a settling basin for Lake Madison. Sediment settled there before water entered Lake Madison.

Today, water bypasses Bourne Slough and goes directly into Lake Madison.

Activities in the Watershed Improvement Project will continue through the end of 2005. Strom said negotiations are under way for animal waste management projects for next summer, but there is still time for individual producers to participate in the project through the installation of grassed waterways or terracing.

Anyone interested should contact Strom at the Lake County Conservation Office at 256-2571.

The Madison Daily Leader

Madison Daily Leader
Madison, South Dakota April, 2004

Opinion

Editorial

Even city residents can do something to help the lakes

Improving the quality of local lakes is a complex business, with high-profile projects usually making the headlines.

The Lake County Watershed Improvement Project has established as one of its goals the reduction of phosphorus by 50 percent in Lake Madison, Lake Herman and Brant Lake. Phosphorus is one of the elements contributing to excessive algae blooms each summer.

Phosphorus comes to the lakes from many different sources: animal waste, detergents and fertilizers, to name just a few. Since phosphorus stays in the lakes for some time, reducing the input into the lakes becomes even more important.

The watershed project has worked to reduce phosphorus input from all sources, and has worked to filter out even more as it approaches the lakes. The most expensive projects have involved waste management systems for livestock operations. More recently, rebuilding a detention berm in Bourne Slough has been in the news.

This month, however, the focus has been on a public education program about phosphorus in lawn fertilizers. Since phosphorus is naturally abundant in most soil in Lake County, it isn't necessary to add even more for most lawns. So the watershed project is encouraging the use of phosphorus-free fertilizers (see page 6).

On the surface, changing fertilizers for lawns miles away seems like a minor improvement. But considering that all the runoff from Madison makes its way to Lake Madison, and that there are more than 2,000 homes with lawns in the city, we can see the impact.

We support the Watershed Improvement Project, and if buying a different type of fertilizer can make a difference in the quality of local lakes, we endorse it.

— *Jon M. Hunter*

Local/State

Bourne Slough restoration project to proceed

Funding secured for berm project

By ELISA SAND

The final piece of funding needed for a berm restoration project between Bourne Slough and Lake Madison was approved late last week.

The state Board of Water and Natural Resources met Thursday and Friday and approved a $19,200 state consolidated grant with the recommendation for approval by Gov. Mike Rounds.

"Restoration of Bourne Slough is a project that will help protect the water quality in Lake Madison by trapping sediment and phosphorus before it gets to the lake," Rounds said.

The funding was awarded to the Lake County Conservation District, the local administrator for the Lake County Watershed Improvement Plan. Project activities are coordinated by Roger Strom.

"It's good news because now we have the funding package in place. That was the final component we needed," Strom said.

The Watershed Improvement Plan started in late 2000 and has implemented a variety of projects intended to achieve 50 percent reduction in the amount of phosphorus and nutrient loading in Lake Madison, Lake Herman and Brant Lake.

The berm restoration project was not originally intended to be part of the Watershed Improvement Plan. Project coordinator Roger Strom recently submitted an amendment to the original plan that includes this project and the construction of additional animal waste management systems.

The Lake County Watershed Improvement Association has been

"It's good news because now we have the funding package in place. That was the final component we needed."

— Roger Strom, project coordinator

lining up funding for the $192,000 restoration project for the past few months.

Sixty percent of the cost for the restoration project is funded through EPA 319 funds, with the remaining 40 percent coming from local and state sources.

Of that 40 percent, or $77,000, the project sought and received $19,200 from state consolidated grant funds. The remaining $57,800 in local match has been committed by the development associations for Brant Lake and Lake Madison; Lake County; the city of Madison; Game, Fish & Parks; East Dakota Water Development District; and Whitecaps.

Whitecaps is a local water protection foundation with a mission to protect, preserve or restore the water quality and habitat of aquatic organisms in fresh water lakes, rivers and streams in watersheds.

The berm restoration project has been put together because water currently enters Bourne Slough from Silver Creek, which runs through Madison, and immediately flows into Lake Madison due to erosion in the berm. The goal of the restoration is to force the water to go into the slough before it enters Lake Madison.

By forcing the water to stay in the slough longer, sediment will settle in the slough before the water enters Lake Madison and, therefore, will reduce sediment loading.

The proposed project would rebuild the first 600 feet of the berm to a 100-year peak elevation mark and the next 1,100 feet to a 25-year elevation mark.

In all, the project would entail rebuilding the berm about two to three feet. The berm has been eroding since the flood in 1993.

"The next step is meeting with the engineer and Game, Fish & Parks to work out the details of the final design," Strom said. "Once we get together to discuss the activities, then the engineer needs to come up with the design specs so a bid package can be put together."

Strom said meetings with engineers and GF&P won't change the scope or cost of the project, but might result in changes in the specific materials used in portions of the project.

"If we can utilize some more natural protection of shoreline, we want to explore that option," he said.

The purpose of the Watershed Improvement Project has been to reduce the sediment loading in Lake Madison, Lake Herman and Brant Lake. A reduction in the sediment loading will ultimately lead to less algae production in the lakes.

The berm restoration project is slated to take place in 2004, Strom said.

$$$$$ ZERO-Phosphorus Fertilizer Money SAVING Coupon $$$$$

Save Money on ZERO-Phosphorus Fertilizer
+
SAVE THE LAKES
=
WE ALL WIN!

$2 OFF
Each Bag
(limit 5 bags)
Expiration Date: 9/15/2004

Phosphorus causes our lakes to turn green and smell bad, and it hurts game fish populations. Using zero-phosphorus fertilizer is one way you can help. Look for a "0" as the middle number in your fertilizer rating - such as - "18-0-18." This means you are buying zero-phosphorus fertilizer.

Cooperating Stores In The Watershed:

- Chester Farm Service, Chester
- Domestic Seed & Supply, Madison
- Jones Ace Hardware, Madison
- Pamida, Madison

Date: _____

Name: _____

Product: _____

No. Bags: _____

Thank you from the Lake County Watershed Improvement Project.

Present this coupon When you buy **ZERO-Phosphorus Fertilizer.**

This ad is a 3 col. X 3.5 inches
Cost is 42 per run.

April. 2004

MADISON DAILY LEADER

Bourne Slough bids approved

Work begins soon on restoration project to cut flow of sediment

By ELISA SAND

The cost of a restoration project aimed at reducing the sediment flow directly into Lake Madison may have been cut back by 77 percent, but the goal is still the same.

"The main objective is to repair that berm and get that restored and back in condition," said Conservation Office District Manager Michelle Goodale.

The project, which repairs the berm between Lake Madison and Bourne Slough, is being coordinated through the Lake County Watershed Improvement Project.

The restoration project is being done because water currently runs from Silver Creek directly into Lake Madison and bypasses Bourne Slough.

Bids for the project were opened Oct. 21 and awarded to Bill Orton of BJ's Construction. The total construction cost of the project is about $34,000.

Originally, construction was to cost $145,000 and restore about 1,700 feet of the berm. The first 600 feet were to be restored to the 100-year peak elevation mark, and the rest was to be restored to the 25-year elevation mark.

With 60 percent of the funding coming from EPA 319 funds, the balance of $77,000 was raised through local donations, a state grant and Game, Fish & Parks funds.

In a previous interview with The Daily Leader, Project Manager Roger Strom said the scope of the project was scaled back as a result of conversations with GF&P. GF&P owns the property and felt that only the first 400 feet needed restoration.

As a result, Strom said, the local donations for the project will be prorated proportionate to each entity's original contribution.

Work on the berm restoration project should start soon, said Goodale.

Friday Nov 5th, 2004.

The Madison Daily Leader

Wednesday
March 30, 2005

Watershed project concludes at end of 2005

Work isn't done yet; evaluation is final stage to see results

By ELISA SAND

At the end of this year, the Lake County Watershed Project will come to an end, but there's plenty of work yet to be done.

The watershed project is aimed at reducing the amount of phosphorus input into the lakes through the construction of animal waste management systems, terraces, grassed waterways, multi-purpose dams, a berm restoration project, streambank stabilization and various educational activities including a zero phosphorus fertilizer campaign. The goal is to reduce the phosphorus input by 50 percent.

Six animal waste management systems have been completed.

Project coordinator Roger Strom said one animal waste management system north of Madison had dirt and concrete work completed in 2004. All that's left for the system to be operational is fence installation.

A dairy farmer near Ramona is also in the planning stages to put together a containment system for his dry cows, Strom said. That project will be completed this year.

A second animal waste management system which was also to start this year fell through, Strom said, meaning that funding is available for any interested producer within the watershed.

Also completed were two multi-purpose dams in the Chester area.

The berm restoration project, which began in the fall 2004, was the result of a sediment study on Bourne Slough completed in 2001.

The study found that the slough has about 410,000 cubic yards of sediment and that water was bypassing the slough and going straight into Lake Madison without allowing the sediment to settle first.

The restoration of the berm, which is on schedule, Strom said, will contain the water prior to entering Lake Madison.

Other projects completed include 9,231 linear feet of terraces, 6,700 feet of grassed waterways and a variety of conservation practices on 200.5 acres.

"When you look at the last four years, a lot of changes have been made."

— Roger Strom, project coordinator

Those practices include filter strips on 14.2 acres; wetland restoration, 36.2 acres; vegetative cover-grass, 55.1 acres; wildlife food plot, 1 acre; vegetative cover-contour grass strips, 3.6 acres; establishment of native grasses, 25.2 acres; field windbreak establishment, 27.6 acres; farmable wetlands, 14.2 acres; farmable wetland buffers, 17 acres; and marginal pastureland wetland buffers, 6.4 acres.

These projects were completed last year. Strom said that additionally, the watershed project is working with three individuals who want terrace work done and the installation of a couple of grassed waterway systems.

The final stage of the project, Strom said, is a project evaluation, which entails quite a bit of data entry.

"You can't go put in a system and see a direct change," Strom said.

Nutrients are currently out there, he said, and they have to be used first.

Because of that, a computer model is used to project the reduction in phosphorus as a result of the various projects that have been implemented.

"That should give us our load reductions," Strom said. "When you look at the last four years, a lot of changes have been made."

Each project completed within the watershed is done through a combination of EPA 319 funds and a landowner cost-share. For some projects, additional cost-share comes from the conservation commission, state consolidated funds and EQIP funds.

Madison Daily Leader
Madison, South Dakota

Monday, April 5, 2004

Use of zero phosphorus fertilizer encouraged

Watershed group begins campaign

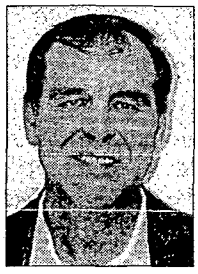
By ELISA SAND

Area residents looking to purchase fertilizer for their lawns or cropland are encouraged to utilize the zero phosphorus brands available at four area businesses.

Chester Farm Service, Domestic Seed, Jones Ace Hardware and Pamida each carry a zero phosphorus fertilizer as part of a zero-phosphorus campaign organized by the Lake County Watershed Improvement Project.

The campaign kicked off Friday.

The goal of the watershed improvement project is to reduce the amount of phosphorus entering the lakes through various efforts. One of those efforts has been a zero-phosphorus campaign that was first introduced to area residents in 2001 and 2002. No campaign was held in 2003 due to a transition taking place with the hire of a new project coordinator.



Strom

While a reduction in the amount of phosphorus in fertilizer can impact the growth of vegetation, Project Coordinator Roger Strom said what has been discovered is that in some areas, there is already an abundance of phosphorus available.

"That's where soil samples come into play," he said.

Existing soil sample records from 2001-02 for southeastern South Dakota indicate the average cropland has what is considered a high level of phosphorus. Of those areas tested, the report said, 9 percent rank very low.

"To know where you're at, you need a soil test," said Strom, adding that even without a soil test, statistics reflect phosphorus isn't needed to have healthy growth.

Phosphorus levels are even higher for residential gardens and lawns.

According to the same statistics, phosphorus levels on the average ground used for gardens or lawns shows phosphorus levels of 47 ppm or about three times the suggested amount needed for healthy growth (16 ppm).

The three main supplements in fertilizer are nitrogen, phosphorus and potassium. The amount of each nutrient is indicated by three numbers on the bag of fertilizer. The middle number signifies the amount of phosphorus.

Phosphorus is added for root development and seed production; nitrogen is added to provide the green color; and the purpose of potassium is unknown.

While nitrogen is water soluble and integrates into the soil, phosphorus is known to attach to soil particles. By attaching to the soil, the phosphorus is more likely to be added to the lake water as a result of runoff and is therefore targeted as the nutrient to eliminate when trying to reduce the amount of phosphorus that enters the lake water.

"The same nutrient that makes crops grow also promotes growth of algae," Strom said, referring to phosphorus.

Every pound of phosphorus added to the lakes can result in the growth of up to 500 pounds of algae.

"We're not saying fertilizer is bad," he said. "In the proper location, it's fine. But the concern is when nutrients run off into the lake. We all have an impact. Erosion from lawn areas have just a high a stake as farmers."

Lawns can even contribute more, he said, because of the higher level of nutrients found there.

"So it's really critical that we don't let that phosphorus get into the water," he said.

Here are some tips and suggestions for applying fertilizer:

— When applying fertilizer apply to ground that is not frozen and do not apply to ground water.

— If loose fertilizer falls on sidewalks, streets or driveways, sweep it up and apply it to the ground.

— When washing a vehicle at home keep in mind any soil that is washed off a vehicle gets saturated with the soap used to clean a vehicle, and that soap contains phosphorus.

— Always follow directions when applying fertilizer and only apply the suggested amount.

— Don't fertilize right before a heavy rain.

— Lightly water the lawn after applying fertilizer to incorporate the fertilizer into the ground.

— For those lake residents, establish a 5- to 10-foot buffer between the lakeshore and where fertilizer is applied and leave that buffer of grass taller.

— For farm land a wider buffer of 50-100 feet is suggested.

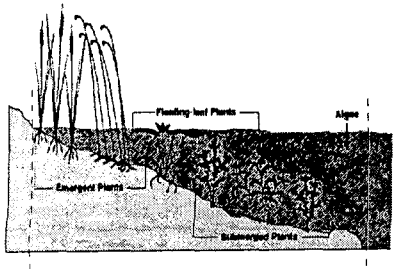
— Keep grass about 2 to 2 1/2 inches tall. Grass at this length will tolerate dry conditions better and help filter materials.

— Use slow-release fertilizer. This fertilizer will release nutrients into the ground over a staggered period of time rather than all at once.

Other sources of phosphorus include pet waste, grass clippings and leaves.

Permit Requirement

SD Game, Fish and Parks needs to be contacted before any alterations are made below Ordinary High Water Line (OHWL). The first step is to develop a plan for your shoreline. This needs to include the amount and type of material to be used. Then contact the local Wildlife Conservation Officer or the fisheries officer at the GFP regional office for your area. They will be able to provide guidance if you need to solicit a permit from the Corp of Engineers. The Corp requires a permit if there will be material added or removing from the area below the OHWL



← Littoral Zone →

Organization

Lake County Watershed
Improvement Project

Lake County Conservation District
123 SW 2nd Street
Madison, SD 57042-1999
Phone: 605-256-2571
Fax: 605-256-2007
Email: roger.strom@sd.nacdnet.net

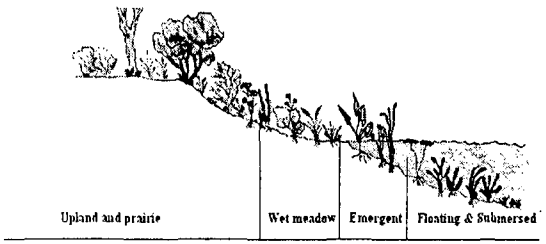
Lake County Watershed
Improvement Project

PROTECTING THE SHORELINE WITH PLANTS

Water Quality Improvement

Tel: 605-256-2571

PROTECTING THE SHORELINE WITH PLANTS



Hard Armor Technique

for the structural protecting of the shore using rock riprap or concrete. This creates a physical separation from the continuous vegetation of the upland to a few feet below the waters surface.

Soft Armor Technique

is the use of plants and other natural materials to protect the shoreline. Other benefits includes filtering out nutrients and holding sediment in place. Because bioengineering uses vegetation, it creates wildlife habitat for birds, insects, and amphibians. Shrubs provide nesting sites and food for birds. Insects and other species can live among vegetation beneath the shrubs. This area includes emergent, floating and submerged vegetation. Native plants are naturally adapted to withstand wave action, ice action and flowing water. This is South Dakota Game Fish and Parks prefers method.

Aquatic Plants

Submerged plants have stems and leaves that grow entirely under water although some may also have floating leaves. They grow in the area of standing water and extend to a greater depth than the next plants. A group of plants suitable for our region include the Canada waterweed, coontail and several varieties of pondweeds can be used. The list of pondweeds include: broad-leaf, narrow-leaf, bushy and curlyleaf.

Cattails (Typha latifolia) are one of the most common plants found on lake and marsh borders.

Emergent plants are rooted in the lake bottom, but their leaves and stems extent out of the water. Cattails, bulrushes and arrowhead are common emergent plants that grow along the shore where the water is less than 4 feet deep. The depth is a influenced by the water clarity. A list of the plants suitable for southeastern South Dakota includes the broad-leaf cattail, common and northern arrowhead, giant bur-reed, hardstem, river, softstem and three-square bulrush.

Floating-Leaf Plants include species rooted on the lake bottom and others that are free-floating. They will be found in ponds and quiet backwater portion of the lake. This group has limited application for bank stabilization.

Wave Breaking Devices

Unless your shoreline is in a quiet bay or protected area, you will need to either install a temporary wave break or anchor the plants. In some area you may need to do both. This should provide time for the plants to become firmly rooted to the bottom soils. These devices can be made of branches or sticks tied or woven together, rocks within filter fabric, plywood or a double lay of plastic wind fence that has been staked into place. There are coconut-fiber logs that can be purchased for this purpose. They need to be out in the water beyond the planted area. The purpose is to reduce the wave action caused by the wind or boat traffic. They need to remain in place for one growing season.

Lake County Watershed Improvement Project

Lake County Conservation District
123 SW 2nd Street
Madison, SD 57042-1999

Phone: 605-256-2571
Fax: 605-256-2007
Email: roger.strom@sd.nacdnet.net

WATERSHED PROJECT GOALS

The overall goal of the restoration effort is to decrease the phosphorus loading of Lake Herman / Lake Madison / Brant Lake by 50 percent in compliance with the total maximum daily load (TMDL) in accordance with the Clean Water Act. Activities include: the construction of terraces, grass waterways, animal waste management system, grazing systems, stream bank stabilization and Bourne Slough Berm restoration. We provide educational materials and information for the public.

INFORMATION SOURCES

"Share Your Space a homeowner's guide to attracting backyard wildlife" available from Game Fish and Parks. "Trees for South Dakota" and Native shrubs of South Dakota" available from Cooperative Extension Service.

Native Grass Advantage..

Kentucky bluegrass and most lawn grasses have shallow root system, 2-3 inches. Western wheat (4.5-8 feet) Prairie cordgrass and reed canarygrass have roots that range in depth of 2-3 feet range. The root systems of native grasses may be effective for preventing soil erosion.

Organization

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

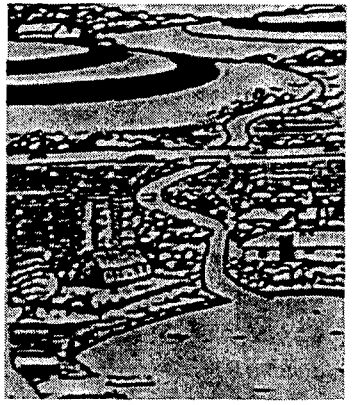
Lake County Conservation District
123 SW 2nd Street
Madison, SD 57042-1999
605-256-2571

Phone: 605-256-2571
Fax: 605-256-2007

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

THE SHORELAND BUFFER

Water Quality Improvement



Tel: 605-256-2571

SHORELINE BUFFER

A shoreline buffer is the land that serves as a bridge between the aquatic and the upland area. The size of this zone can extends from the ordinary high water mark (OHWM) inland 35 feet. The buffer restoration seeks to re-establish native vegetation this area and re-store the natural ability to provide habitat, hold soil in place, intercept and filter runoff water. The benefits include:

- Less Time and Cost for Maintenance
- Improved Water Quality
- Natural Screening and Privacy
- Shading for Shallow Water Habitat
- Wildlife Habitat

For the greatest benefit, this area should in-clude native tree, shrubs and ground cover. It should extend from the OHWM inland for a distance of 15 to 100 feet and from the prop-erty line on each side to the access corridor. One should limit use and keep disturbance to a minimum in this area.

Access Corridor should not be wider than 30 feet. This is where the walkways or paths, docks and lifts need to be placed.

PROTECTING WATER QUALITY

One of the primary functions of this zone is filtration of sediments from runoff waters. The addition of sediment to the lake can block light needed for plant growth, can smooth life on the bottom like fish eggs and insects. Sediments also can carry contaminants such as phos-phorus and agricultural chemicals into surface waters. Shore land buffer zones also serve to stabilize shoreline banks, and reduce bank erosion.

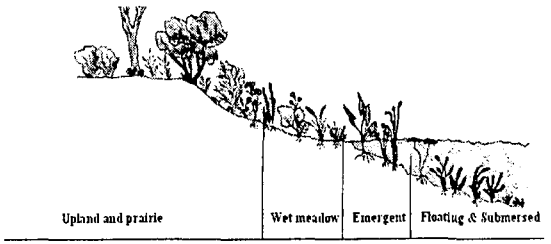
The vegetation aids in slowing down the speed of the runoff water. As the speed of the moving water is re-duced, the ability to carry larger material is lost and the sediment is left on the land prior to reaching the water. Plants growing in the undisturbed buffer area will trap nutrients and other run-off from the upland and imper-vious surfaces. The impervious surfaces are the side-walks, driveways, decks and roofs.

PASSIVE RESTORATION

The easiest approach to restoring your shoreland is the "No-mow" approach. Even though you may not see native plants growing in that section of land, the seed of native plants often lie dormant in the soil for years. Once you stop mowing, you allow these seeds to germinate and grow.

ACTIVE RESTORATION

If native plants are missing from your shoreland you can begin by actively plant native species that are appropriate to particular site. Before planting one should examine the existing conditions and develop a plan that include proper use of naïve plants.



Darlene Charboneau

PLANT SELECTION CONSIDERATION:

Are they native species or adapted to the wet meadow section? Are they suited to poorly drained soils? Do they have a wildlife value? Suitable grass species include the western wheatgrass, a native variety and creeping foxtail, a non-native variety which are cool season grass that can grow to 1-3 feet in height. Reed canarygrass, cool-season and prairie cordgrass, a warm-season native are both suited to this area but are known to grow quite tall. Possibly 5-8 feet in height. The last two would work well if the owner is interested in creating a visual barrier and reduce noise from the lake. There are several sedge that are suitable as well.

Four native shrubs that would be suitable are: redosier dogwood, highbush cranberry American elder and the nannyberry. The first three shrubs would reach a height of 3-10 feet and the nannyberry is a large shrub that has a size of 15-30 feet.

Three trees to consider are the silver maple, peace leaf willow and the cottonwood.

WATERSHED PROJECT GOALS

The overall goal of the restoration effort is to decrease the phosphorus loading of Lake Herman / Lake Madison / Brant Lake by 50 percent in compliance with the total maximum daily load (TMDL). Activities include: the construct of terraces, grass waterways, animal waste management system, grazing systems, stream bank stabilization and Bourne Slough Berm restoration. We provide educational materials and information for the public.

When You're Fertilizing the Lawn Remember You're NOT just Fertilizing the Lawn.
A cooperative venture between the Water Quality Consortium.

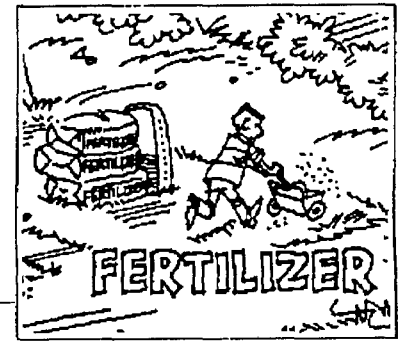
Organization

LAKE COUNTY WATERSHED IMPROVEMENT PROJECT

LAKE County CONSERVATION DISTRICT
123 SW 2nd STREET
MADISON, SD 57042
Phone: 605-256-2571
Fax: 605-256-2007
Email: roger.strom@sd.nacdnet.net

LAKE COUNTY
WATERSHED
IMPROVEMENT PROJECT

KEEP THE GREEN OUT OF THE LAKES- USE ZERO PHOSPHORUS FERTILIZER



ZERO PHOSPHORUS FERTILIZER

Phosphorus is an essential nutrient for grass. Quite often, lawns do not need supplemental phosphorus. In southeastern South Dakota the average soil test result from the South Dakota State University Soil Testing Laboratory for 2001 - 2003 has been 14 ppm or higher which is considered to be at a high level. Once in the soil, phosphorus quickly becomes bonded to a soil particles; this reduces the potential for ground water pollution.

The potential for surface water pollution is high because of sources of phosphorus such as soil particles, grass clippings and other organic matter can be carried into surface water supplies.

ALGAE BLOOM

Phosphorus often is the least plentiful nutrient is surface water supplies. According to different sources **one pound** of phosphorus can produce **500 pounds of algae**. It becomes apparent that we need to limit the amount of phosphorus entering the surface water supply.

CLEAN WATER TIPS

Sweep up the leaves and grass clippings and put them in a compost bin or trash container.

Have your soil tested. The average lawn and garden sample tested at SDSU Soil Testing Lab. had over 45 ppm phosphorus.

Don't fertilize before a Storm.

Use slow release or organic fertilizer. They release nutrients more slowly reducing the number of times that you need to fertilize and less the impact to the water.

Sweep up spilled fertilizer or pesticides and apply it to the lawn. NEVER wash spill chemical onto the street or road or sewer where it can be carried to a surface water supply.

Read and follow the label instruction exactly as written.

Use fertilizer sparingly. Many plants do not use as much fertilizer or need it as often as you think.

Pick up pet waste and flush it down the toilet or bag it and place in the garbage.

After washing your car pour the bucket of soapy water down the drain NOT in in the street. Or better yet go to the commercial car wash.

FERTILIZER LABEL

Look for the Zero in the middle , 27-0-4, the middle number represents the percent of phosphorus that is contained in the bag of fertilizer

LEADER-LAND.

Madison Daily Leader
Madison, South Dakota

$$$$$ ZERO-Phosphorus Fertilizer Money SAVING Coupon $$$$$

Save Money on ZERO-Phosphorus Fertilizer
+
SAVE THE LAKES
=
WE ALL WIN!

$2 OFF
Each Bag
(limit 5 bags)
Expiration Date: 9/15/2005

Phosphorus causes our lakes to turn green and smell bad, and it hurts game fish populations. Using zero-phosphorus fertilizer is one way you can help. Look for a "0" as the middle number in your fertilizer rating - such as - "18-0-18." This means you are buying zero-phosphorus fertilizer.

Cooperating Stores In The Watershed:

- Chester Farm Service, Chester
- Jones Ace Hardware, Madison
- Chester Hardware Store, Chester
- Domestic Seed & Supply, Madison
- Pamida, Madison

Date: _____
Name: _____
Product: _____
No. Bags: _____

Thank you from the Lake County Watershed Improvement Project.

Present this coupon when you buy **ZERO-Phosphorus Fertilizer.**

Madison Daily Leader
Madison, South Dakota

Aquatic vegetation serves a purpose for lakes

By ELISA SAND

Plant life found growing in the lakes may be a turnoff for those who use the lake for recreational purposes, but it serves several important functions.

According to the Minnesota Department of Environment and Natural Resources, aquatic vegetation provides shelter for fish, improves water clarity and quality, protects shorelines and lake bottoms, provides food and shelter for waterfowl, improves aesthetics and improves the economic value.

There are four types of vegetation: algae, submergent plants, floating leaf plants and emergent plants. Most people in Lake County are familiar with algae, which blooms in abundance, and emergent plants like cattails or bullrushes.

One key benefit of the vegetation, no matter the type, is that the plants use the nutrients present in the water and sediment to grow.

The Lake County watershed improvement project has been working on a number of projects aimed at reducing the nutrients loading into the water, which will eventually lead to a reduction in algae production.

Project Coordinator Roger Strom said the disadvantage is that even though algae utilizes the phosphorus and other nutrients in the water to bloom, too much algae will reduce sunlight penetration in the water and restrict growth for other aquatic vegetation.

"Algae will bloom as a result of nutrients loading in the water," Strom said. "But the algae dies and decomposes and a lot of the nutrients remain in the water."

The other forms of aquatic vegetation are more beneficial for the lakes, Strom said. The submergent, emergent and floating leaf plants all have root systems that will absorb the nutrients during growth. These forms of vegetation will also reduce wave action and erosion along the shoreline and act as natural filtering systems.

"The goal of the water project is to hold the nutrients in the field where they are needed and prevent them from leaving and entering the waterways," Strom said.

"Plants are not weeds. Plant life in the lakes is serving useful and valuable purposes. Their proper management is important."

But, once removed, aquatic vegetation is difficult to re-establish.

"It's a lot easier to keep what you've got than to plant new or transplant. In addition, when you want to go in and alter anything below the ordinary high water line, you have to work with the Game, Fish & Parks and get a permit."

Strom said that if vegetation exists along a shoreline, residents should look at sharing that space. He suggests creating a path for recreational access to the lake that takes up about 1/3 of the shoreline, leaving the remaining 2/3 for the vegetation.

Strom said a reduction in aquatic vegetation can be attributed to a number of factors, including land practices that disturb the soil like an increase in home construction, an increase in surfaces that cause additional runoff and a decrease in areas that can absorb water.

An imbalance in the fish population can also affect the vegetation, Strom said, and an abundance of algae or sediment can start reducing the sunlight penetration into the lake, which will also reduce the amount of vegetation growth.

"If the balance of vegetation and fish is disturbed by vegetation being removed, lakes find a new balance," Strom said. "The balance now, however, is an abundance of algae.

"If there is more submergent and emergent vegetation, it will tie up more nutrients in the water, and there will be less algae."

Strom suggests talking with GF&P or the Lake County Conservation Officer about vegetation re-establishment. The best areas for re-establishment, he said, are bays and protected areas, but landowners can also set up wave breaks to reduce wave action.

As with any plant life, there are nuisance plants that are ill advised.

"We don't want invader species," Strom said. Two common invader species are Eurasian Watermilfoil and Purple Loosetrife.

Beauty is possible in small garden spaces

Tight on yard or garden space? Don't let lack of room cramp your creativity. The Old Farmer's Almanac Gardener's Companion All-Seasons Garden Guide shows you how to create and maintain a variety of petite beds that will offer instant garden delight.

You can create a dazzling miniature bed in only a few square feet — under a tree, near the front door, or even in that sun-baked skinny strip between the house and the sidewalk. Small-space gardening offers immediate gratification. Plus, small gardens are easy to maintain, so there is more time to enjoy them.

Try this tip for stone wall plantings: Fill an old nylon stocking with soil so that it looks like a sausage and tie off the top. Set it into a deep crack between stones, with the knot toward the inside of the crack. Cut a slit in the end that faces out, and tuck a trailing plant — ivy, hanging petunias, or portulaca — into the contained soil.

When planting vegetables (seeds or seedlings), thin them two to three inches apart in every direction. The same goes for annual herbs such as basil, cilantro, and dwarf dill.

Go vertical to add dimension and take advantage of every bit of space. Cucumbers, pole beans, and squash do well on trellises in a square foot of ground. Pink mandevilla or 'Blue Light' clematis vines on supports lift color up to eye level.

Put a border around your small garden, even if it's only a line of stones. It will make your garden stand out against its competing environment.

ZERO-Phosphorus Fertilizer

$$$ MONEY SAVING COUPON $$$

Save Money on ZERO-Phosphorus Fertilizer
+
SAVE THE LAKES
=
WE ALL WIN!

$2 OFF
Each Bag
(limit 5 bags)
Expiration Date: 9/15/2005

Phosphorus causes our lakes to turn green and smell bad, and it hurts game fish populations. Using zero-phosphorus fertilizer is one way you can help. Look for a "0" as the middle number in your fertilizer rating - such as - "18-0-18." This means you are buying zero-phosphorus fertilizer.

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- Pamida, Madison

Date: _____

Name: _____

Product: _____

No. Bags: _____

Thank you from the
Lake County Watershed Improvement Project.

Present this coupon when you buy **ZERO-Phosphorus Fertilizer.**

5-17-2005

Madison Daily Leader
Madison, South Dakota

Opinion

Editorial

Watershed has improved; work must yet be done

The Lake County Watershed Project will wrap up operations later this year, and we're glad to see it make progress toward cleaner water in area lakes.

The project was originally funded by a grant from the Environmental Protection Agency and was expected to last three years, with the primary goal being to reduce phosphorus levels in local lakes by 50 percent. The project was allowed to extend operations until the end of 2005.

The project worked to reduce incoming sources of phosphorus, like livestock operations, lawn fertilizers and soaps containing phosphorus. Among the most prominent projects were animal waste control systems, a berm restoration project in a slough, and a public education program to encourage homeowners to use phosphorus-free fertilizer.

The reality is that we don't know the success of the project just yet. Reducing phosphorus input helps, but the phosphorus levels will be reduced in local lakes only as it is consumed as a nutrient. In theory at least, this means we should be glad to see algae each summer because it is consuming phosphorus, reducing the amount available for future years.

Even with the progress made so far, we're fooling ourselves if we think the work is done. In fact, without the visibility of the watershed project, we could even take steps backward in coming years, as people forget about planting grass buffers near waterways, or washing soaps down storms sewers, or allowing livestock waste get into creeks.

Add to that the continued growth in the number of homes and lawns on all three major lakes in Lake County, and we have serious concerns about future phosphorus levels.

We think local lake associations, which have been tremendous supporters of the watershed project, should prepare for the future by researching additional grant funds, and looking for other ways to reduce phosphorus coming into local lakes. There is plenty of work yet to be done.

— Jon M. Hunter

The Madison Daily Leader
Monday
May 23, 2005
Madison, South Dakota
116th year, No. 32

Lake Herman algae, smell concern residents

To improve water quality, LHDA forms three committees, one to study sediment

By ELISA SAND

Members of the Lake Herman Development Association are concerned about the quality of the lake water, stemming from algae bloom production. A public meeting was held last week, with state officials invited to discuss what can be done to improve the situation.


Strom

The biology of Lake Herman as a large shallow lake is a significant factor that led to its current state with algae bloom production. Algae feeds off the phosphorus and other nutrients. Because the lake is shallow, as the wind stirs up the water, it also stirs up the sediment, which then stirs up the nutrients like phosphorus that attach to the sediment.

But algae has a short lifespan, and as it dies, it smells. Landowners around the lane are saying that smell has become a nuisance.

Roger Strom, project coordinator for the Lake County Watershed Improvement Project, said that two dredging projects have been done, one from 1970-72 and another from 1988-90. In addition, three dams were installed to trap the sediment and keep it from flowing into Lake Herman.

Strom and other state officials said that the additional nutrients are coming into the lake from feedlot runoff, fertilizer, poor tilling practices, erosion and other factors.

While some of the landowners at the meeting wanted to know how much the geese contributed to the problem, Resource Conservationist Sara Thompson said that biology of the lake is leading to the algae.

"A lot will have problems with algae blooms," she said.

Thompson asked about specific issues with the lake, and said that sediment and shoreline erosion were two topics discussed with her.

Don Marquardt from the South Dakota Lakes and Streams Association said that talking about a problem won't solve it.

"If you can identify it, it works," he said, but the state is steering away from dredging projects at this time. Although some people at the meeting felt dredging was the only solution, Marquardt said the success of a dredging project depends on the conditions of the lake.

Five streams flow into Lake Herman and three have dams. Marquardt said if residents could identify that the two inlets without dams were contributing sediment, "someone would listen."

Marquardt described funding as a "moving target." Rather than identifying specific funding sources, he said, residents should determine the problem areas and gather statistics that prove there is a problem.

Committees have now been set up to focus on updating the bylaws, recruiting members and measuring the sediment in the lake.

Volume 2, Issue 22

South Dakota Lakes and Streams *SPLASH*

SECTION D: STATE WATER SCENE

KEEP THE GREEN OUT OF THE LAKES:
USE 0 BASED P

(A Lake County Watershed Improvement Project)

Part of the restoration goals of the Watershed Project is to decrease phosphorus loading of Lake Herman /Lake Madison/Lake Brant by 50% in compliance with the TMDL's. Activities include construction of terraces, grass waterways, animal waste management systems, grazing systems, stream bank stabilization and Bourne Slough Berm restoration. The Project has been instrumental in getting 0 Based P fertilizer on the shelves of suppliers in Madison.

SECTION D: STATE WATER SCENE

THE LAKE HERMAN DEVELOPMENT ASSOCIATION (LHDS) MEETS

Sara Thompson, Resource Conservationist with USDA/NRCS in Huron, called the meeting at Camp Lakodia on Lake Herman, to discuss the role that the Lake Herman Development Association might play in the Watershed.

Present at the meeting was Janet Eisfeld, Charlie and Peggy Stonehack, Fay Dimick, Kathy England, and Steve Williams of the Lake Herman Development Ass'n; Mark Stahn, Don Marquardt, and Jerry Myers, S.D. Lakes and Streams; Ken Madison, DENR; Chuck Lebeda, NRCS; John Deppe, Lower James RC&D; Michelle Goodale, Lake County Conservation District; and Roger Strom, 319 EPA Coordinator.

Roger Strom presented a brief activities history of Lake Herman, including current projects and programs.. Ken Madison presented the TMDL evaluations for total phosphorus in Lake Herman from March, 2004, and the Phase III Post Implementation Investigation Final Report Lake Herman, Oct. 1994.

A 50% Phosphate reduction was planned, so a determination needs to be made to determine if this happened. The Herman Watershed is rather large, extending as far north as Ramona.

Shoreline erosion took place during the high waters of 1993 and 1997, resulting in much of the sediment deposition in the Lake.

Although there were options discussed, it was realized that there is little dollars available for restoration. A May 18 meeting to discuss options was planned.

Lake Herman Development Ass'n meets May 18.
(from The Madison Daily Leader, 5/23/05)

Members of the LHDA are concerned about the quality of the lake water. Lake Herman is a large shallow lake which is subject to upturns from wind action. Phosphorus, carried into the lake by sedimentation, is made available for algal bloom production and increases algal growth. As the algae dies, it smells, which is becoming a nuisance. The additional nutrients are entering the lake from feedlot runoff, fertilizer, poor tilling practices, erosion and other factors.

Sara Thompson, Resource Conservationist, who moderated the group of 30+ attendees, said that sediment and shoreline erosion were two topics discussed with her.

Don Marquardt, SDL&SA consultant present at the meeting, said "Talking about the problem won't solve it". The state is steering away from dredging projects at this time. Some people in attendance thought dredging was the only solution. Marquardt said that the success of a dredging project depends on the conditions of the lake. Three of the 5 streams entering Lake Herman have dams. If two of the inlets without dams were contributing sediment and the other 3 weren't, someone would listen. He went on to say that "Funding is a 'moving target'. Rather than identify potential funding sources, residents should detemine the problem aresas and gather statistics that prove there is a problem."

****

Editor's Interview with Don Marquardt 9/29/05

During the meeting, the audience was encouraged to bring up concerns they had about the lake. Many items was mentioned: Goose droppings contributing to the sediment in the lake (aerators running during the Fall migration caused ducks and geese to stay here rather than migrating); Money running out during the building of silt holding ponds on the inlet sites into the lake (two additional ponds should have been built); Burning of brush and rubble on the lake shore; Fertilizer on lake shore lawns and the local golf course; Water backing up into the creek next to the golf course in Spring (when water drops, the water in the creek becomes stagnated due to dead fish, etc..; A land owner in the shallowest area on the lake water wants to build a dike to regain lost land to the lake, then use lake sediment to fill the diked area;

(continued next page)

The Madison Daily Leader

5-26-05

Shoreline work affects quality of water in area lakes

By SHON EIDE
Lake County
Conservation Officer

Water quality in our area lakes is of great concern to many homeowners, fishermen and boaters. One of the things that affects water quality is work done that alters the lake's natural shoreline.

Eide

Statues and rules were enacted by the state Legislature and the Game, Fish & Parks Commission to allow the state's water resources to be managed and utilized in a practical manner while protecting these resources for the benefit, welfare and enjoyment of the citizens of this state and its visitors.

Also, GF&P rule 41:04:03:05 states that no person may modify shore or bottom lands below the ordinary high-water mark (OHWM) of meandered waters or other waters to which the state has acquired a right, title or interest without permission of the commission or its designated agent.

What does this mean for the homeowners on our area lakes? It means that before proceeding with any work that will alter or disturb the lakeshore (below the OHWM), lakebed or lake, a person must first obtain and possess a permit issued by the GF&P Commission or its designee.

Some types of work that would qualify are: construction of ditches or channels, dredging, seawall installation, construction of retaining walls, rip rap installation, filling, artificial beach construction, removing aquatic vegetation, putting debris (rocks, brush, trees, construction materials, etc.) in the lake, and so on.

Approval of applications for lakeshore alteration will be evaluated by its singular and cumulative impact on the lake. The criteria evaluated during a project's assessment include whether or not the project will:

1. Result in a taking of the lake, lakebed or lakeshore.
2. Diminish water quality.
3. Result in significant environmental harm to the lake.
4. Diminish habitat for fish and wildlife.
5. Adversely impact navigation or other lawful recreation.
6. Create a public nuisance or public safety hazard.
7. Alter the natural characteristics or the shoreline.

Applicants for alteration permits should apply to GF&P at least 30 days prior to starting the project. Any person who performs work in the lake, lakebed or lakeshore (below the OHWM) without a permit for that work may be fined and/or required to restore the lake, lakebed or lakeshore (below the OHWM) to its original condition before it was disturbed.

A permit for lakeshore alteration from the GF&P does not eliminate the need to obtain any other applicable federal, state, tribal or local permits for the project. Any work done in the waters of the United States will need to be authorized by the U.S. Army Corps of Engineers in the form of a 404 permit.

To start the application process, call me at 256-5005 or Regional Fisheries Manager Todd St. Sauver at 362-2700.

Madison Daily Leader Nov 2005

Projects continue in effect to improve Lake Madison Watershed

Strom sees results from terracing, zero phosphorus efforts

By ELISA SAND

A water improvement project has about four months before it is scheduled for completion, but the activity level remains fairly high.

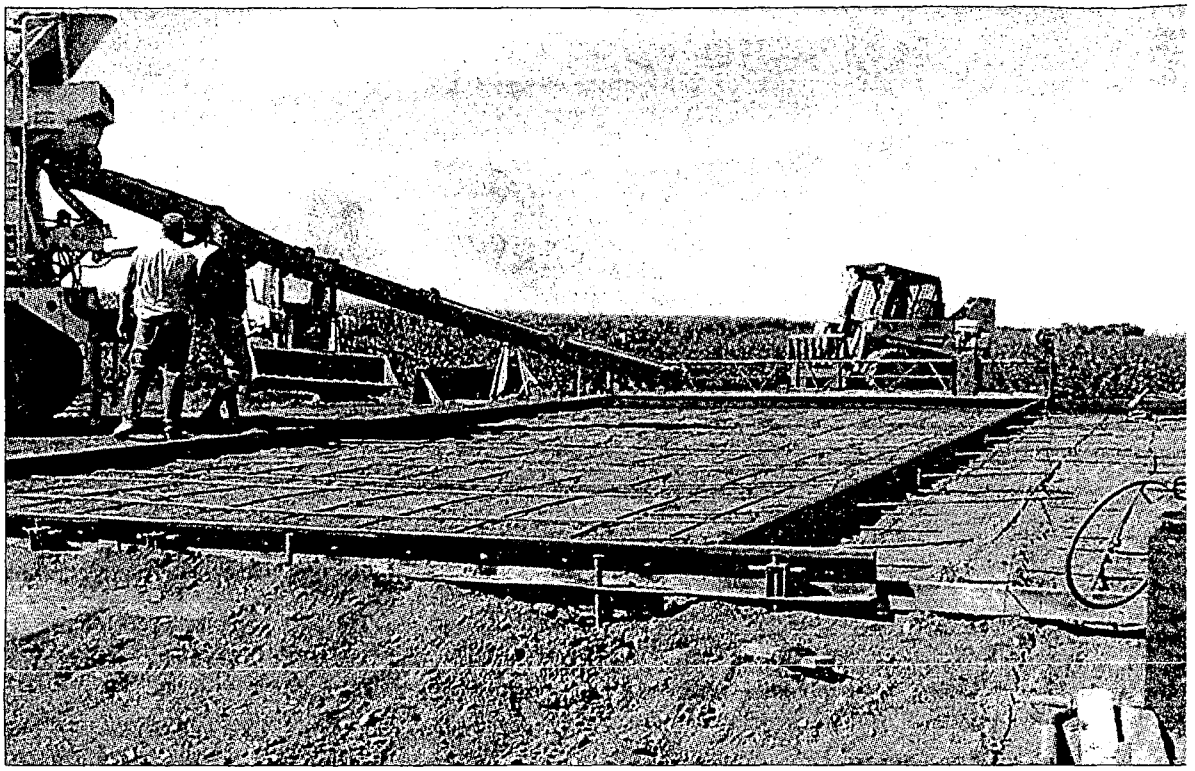
The project goal is to reduce the amount of phosphorus draining into the watersheds for Lake Madison, Lake Herman and Brant Lake. To accomplish that, a variety of projects have been taking place, including the installation of grassed waterways, terraces, animal waste management systems, a Lake Madison outlet restoration project, a berm restoration project on Bourne Slough and a zero phosphorus fertilizer campaign.

All projects are accomplished through a combination of federal and state funding sources with some local cost share included.

Strom

Project Coordinator Roger Strom said that projects currently in the works include the installation of an animal waste management system; promotion of the zero phosphorus fertilizer use; and working with some area producers to update their nutrient management plans. Efforts are also under way to mark the storm sewer drains in Madison to make people more aware that the storm sewers drain directly into the creeks, which then drain into the lakes.

The animal waste management system is being installed at a Ramona farmer's operation. Floyd Swier's dairy operation is getting a feed containment area, feedlot for the dry cows and calves, and an evaporation pond for manure management. This is the second project for Swier; the first was completed three years ago to address his dairy operation east of Ramona.



DONNIE BRUNS works to lay the concrete foundation for the self contained silage storage area. The concrete is being laid on Floyd Swier's property east of Ramona. It is the final animal waste management system being constructed for the Lake County Watershed Improvement Project. (Submitted photo)

Strom said the Swier project is about a month from completion. Work yet to be done includes some cement work, electricity, water lines, landscaping, grading and fences.

"It'll still be at least another month or two when the landowner will be in a position where everything is going to be done," Strom said.

Another manure management plan being completed is on north US-81 at Rick Jung's property. While the dirt work was completed last fall, Strom said, fence installation is still taking place.

A second animal waste management system was discussed this year, but no agreement was reached, Strom said. But discussion is taking place on the installation of some additional terraces and grassed waterways, which would be done this fall.

Berm and Outlet Restoration

Two restoration projects completed last year are functioning well, Strom said.

Construction workers laid rock on either side of the Lake Madison outlet and restored the berm between Bourne Slough and Lake Madison. Berm restoration was finished in May and the outlet restoration was completed last year, but Strom said the additional rain this year has allowed project officials to see the result of the projects.

"Both are doing very well with what we wanted to achieve," he said.

Zero Phosphorus

A campaign promoting the use of zero phosphorus fertilizer continues. The annual campaign promotes the use of zero phosphorus fertilizer as an alternative to standard fertilizer.

Strom said that quite a bit of fertilizer has been sold this year.

"Community participation has been excellent," he said.

So far, reports indicate that three tons of fertilizer have been sold at one location alone. Strom said that's encouraging because if the average household purchases about 20 pounds of fertilizer, ther at least 300 households are partic ipating.

Zero phosphorus fertilizer is available at Chester Farm Service Domestic Seed, Ace Hardware and Pamida.

"We have had very good utiliza tion," Strom said, indicating he hopes to have some participation numbers by Sept. 15 when the coupons issued for the campaign expire.

In all, Strom said, the water shed project has accomplished quite a bit.

"A lot of good things have been achieved with the project," he said

Although the project is winding down, however, Strom said that people can continue to think about conservation and nutrient management, including the use o proper fertilizer and cleaning up after pets and themselves.

"You don't need a watershed project to keep that going," he said. "Water is a valuable resource. You need to manage and protect it."