

BIG BIRCH LAKE PROJECT NEWSLETTER

SAUK RIVER WATERSHED DISTRICT PROJECT NEWSLETTER

2001 Proved A Successful Year For Monitoring

The Sauk River Watershed District (SRWD) continued monitoring the Big Birch Lake Subwatershed in 2001. The SRWD has monitored the area since 1997 after concerned area citizens petitioned them to aid in water quality improvement.



The SRWD monitors tributaries and numerous in-lake sites on Big Birch Lake. The monitoring parameters in-

clude, but are not limited to: flow rates, conductivity, pH, total and ortho phosphorus, pH, ammonia, nitrates, temperature, turbidity, dissolved oxygen, chlory-

phyll-A, and suspended solids.

The SRWD staff sample tributaries twice a month in the spring, once per month during dry, summer months, and after every rain event. In-lake samples are taken once a month during the open water season.

This past year, the Big Birch Lake area had a very wet spring. High

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Special Points of Interest

- **The SRWD is looking for area volunteers to help plant shoreline vegetation (10,000 plants). The City of Sauk Centre is working with the SRWD to rehabilitate the Sinclair Lewis Park Shoreline in June of 2002. Call SRWD today to help 352-2231.**
- **Visit the Sauk River Watershed District's New WEB Site at www.saukriver-watersheddistrict.org**
- **Phosphorus Free Fertilizer Available at local Merchants. Pick your up today!**

BBL Project Gets National Attention!

Big Birch Lake Watershed Management Project was recognized by top environmental professionals at the North American Lake Management Society Conference in November 2001.

The Conference was held in Madison, WI and included environmental enthusiasts from United States, Canada, and North America, as well as, experts from Germany, Israel, Australia and many other countries.

The Sauk River Watershed District presented their 10 years of re-

search on Big Birch Lake and proved that "success stories" happen.

The Big Birch Lake Management Project was recognized and complimented on improving the water quality of a lake's watershed through people working together.

The Sauk River Watershed District, Big Birch Lake Association and Big Birch Lake Watershed Land Owners put differences aside, compromised, and combined best management practices with community

involvement. This interaction directly attributed to the increased water quality of Big Birch Lake

The workshop include presentation on monitoring equipment, new public education programs, and improved best management practices.

The Sauk River Watershed District is honored to work with the caring and concerned landowners of the Big Birch Lake Watershed. Uniting Ag-Producers, Lakeshore owners and government agencies amazing results are seen.

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Monitoring Equipment Re-Installed on Big Birch Lake Tributaries

The SRWD and Minnesota Pollution Control Agency re-installed monitoring equipment throughout the year on Big Birch Lake tributaries. This equipment is primarily measuring rainfall and flow levels to determine the velocity and amount of sediment and nutrients entering Sauk Lake.



In addition to continuous moni-

toring, the SRWD routinely visits each site to collect lab sam-

ples and download important data from the electronic equipment.

The SRWD also monitors the water within Sauk lake. In-lake data is collected once per month in various spots along the lake.

Anyone interested in learning more about the environmental monitoring program, please call the SRWD office at 352-2231.

Rain Gardens Gaining in Popularity!

Rain Gardens are gaining popularity all over the nation. They are environmentally valuable and aesthetically pleasing. Landowners are attracted to rain “water” gardens because of the natural beauty they add to existing landscapes while filtering runoff from the land

Rain Gardens consists of flowers, shrubs, grasses and trees that can withstand both wet and dry conditions. Rain garden location, size, and shape can vary from location to location. They are located on a property in an area that seems to collect the most rain water. No matter what the shape or size of the garden is

the filtering system will benefit water quality in the area.

It is simple to create a rain garden. Once you find your location, and determine the size and shape, you can remove the grass and create pocket with a dip in the center to collect rainwater, run-off and snowmelt from the surrounding property. Once the plants are in place and roots established, a natural means of filtering begins

This design filters or purifies storm water by trapping impurities like pesticides, fertilizers, oil and gas within the plants and roots in the garden while recharging the groundwater supply.

The water trapped within the rain garden, would normally travel down the street, into the storm water system, carrying pollutants with it into nearby rivers or lakes. Many people believe runoff water from the streets travels down the “man-hole” and into a “purifying system, when intact, the water runs directly into the lake and nearby river.

This common practice of direct discharge into lakes and rivers is seen throughout the nation and its adverse effects are apparent.

Residents in the Big Birch Lake Watershed must work together to keep our lake and streams clean for social, economical, and environmental reasons.



Reaches of Sauk River on State's TMDL list

Reaches of the Sauk River are on the State of Minnesota's Total Maximum Daily Load list (TMDL). Total maximum daily load is the "maximum amount of a pollutant that a water body can receive and still meet water quality standards".

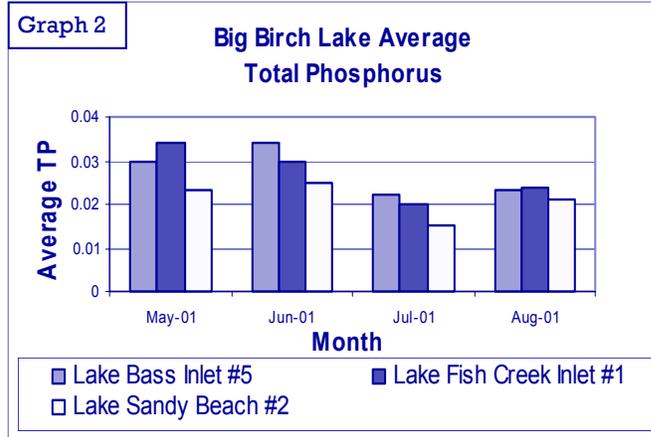
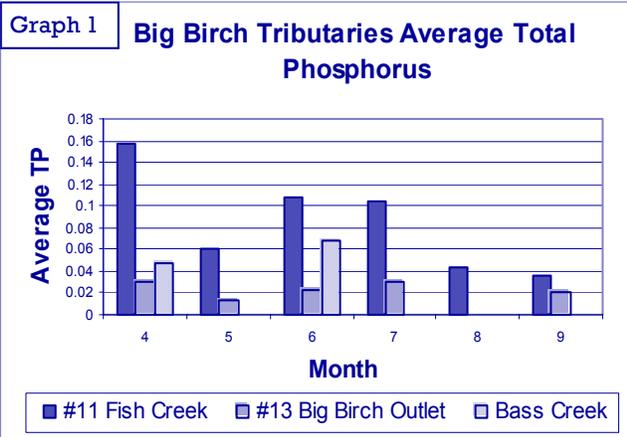
The federal government requires states to publish an updated TMDL list of streams and lakes that are not meeting their

designated uses because of the excessive pollutants in the waters.

The strategy is to restore the lakes and streams on the TMDL list to "state standards by using monitoring and assessment programs". The state will work on local TMDL's through the watershed district. Three reaches of the Sauk River are currently on the list and are expected to receive funding in 2004.

The federal government believes states need to protect their lakes and streams in order to "maximize their contributions to the state's economy and quality of life and protect them as a resource for future generations".

For more information on TMDL's log onto the MPCA web site www.pca.state.mn.us.



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water continued through May; however, the drier months which bring low flows were evident already in June.

The water quality of streams and creeks is important to the overall environment and appearance of the lake they empty into, specifically when streams are the major source of water for the lake. With the incoming high volume water supply, excessive nutrients (i.e. phosphorus/nitrogen) and pollutants are carried into the lake.

One of the most important measurements taken throughout the year is total phosphorus (TP), which is an indicator of water quality. This key element is linked to nuisance algae growth and weeds in the lake.

Total phosphorus enters the lake water in many different ways, by both natural and human induced measures, for example: decomposed vegetation and animal remains, spring and fall turn-over, human and animal wastes, and run-off from lakeshore lawns, farmlands, and city streets.

Phosphorus attaches itself to sediment and often enters and stays in the lake until these particles are flushed out. Graphs 1 & 2 reflect the total phosphorus averages for 2001 on tributary sites and lake sites.

Graph 1 shows that fish creek is contributing the greatest amount of phosphorus to the lake via tributaries. Graph 2 shows the different phosphorus levels at three stream inlets to Big Birch Lake. Phosphorus levels are higher in the spring throughout the lake, but both bass and fish creek

inlets have higher phosphorus levels than the sandy beach area.

The first step in resolving water quality problems, once base data is collected, is to evaluate and manage human activity within the watershed. Once the nutrients and sediment levels are controlled, water quality improvements within the lake will be evident.

The Sauk River Watershed District offers grants and/or loans to people wishing to make improvements on their land to better water quality. Varying projects qualify, they include, but are not limited to, the following: septic upgrades (loan only), feedlot improvements, conservation equipment, fencing to keep animals out of the creeks, and lakeshore revegetation and maintenance.

Call today to see if your project qualifies, 352-2231.

**Sauk River Watershed
District**

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WE'RE ON THE WEB
[WWW.SAUKRIVER-
WATERSHEDDISTRICT.ORG](http://WWW.SAUKRIVER-WATERSHEDDISTRICT.ORG)

Green Lawns, Clean Lakes: You Can Have Both This Spring

(Information from U of MN Extension Service newsletter)

As the days warm and snow melts, we awake to the promise of budding trees and lush, green lawns. We can't wait to get out with the fertilizer and lawnmower. That's fine— as long as we don't overdo it.

If you're planning to use lawn fertilizer, use only what's necessary. Excessive use of fertilizer is partly to blame for green, algae-laden water in our lakes. Fertilizer in runoff feeds algae. When algae die and decompose, they deplete oxygen in the water, causing fish and other aquatic life to suffer and die.

It's a good idea to test lawn and garden soil before fertilizing. A soil test tells you exactly what type and amount of nutrients your lawn needs. You don't



need to buy or apply nutrients your lawn and garden already have. Contact your county Extension Service for information about soil testing.

Measure the size of your lawn before buying fertilizer, to make sure you don't purchase (and use) more than you need. Also, look for phosphorus-free fertilizer. A fertilizer has no

phosphorus if the middle analysis number on the bag is zero. For example, fertilizer with an analysis of 10-0-10 is phosphorus-free. In most cases, your soil already contains ample phosphorus. Phosphorus you add contributes to water pollution

Finally, remember that anything you rake or throw into the street, beach or lake— fertilizer, leaves, sand, salt, animal wastes or soapy water, for example - may end up in your lake, river or stream shortly afterward. Those April showers become storm water runoff, rinsing pollutants into lakes or into storm drains and from there into water resources.