

# SAUK RIVER CHAIN OF LAKES

## SAUK RIVER WATERSHED DISTRICT INSERT

### Sauk River Chain of Lakes in 2001-2002

The Sauk River Chain of Lakes experiences an influx of visitors each year. Although this is great for business owners, the lakes in the area have a difficult providing good water quality levels.

Over the years, 13 lakes within the chain of lakes system were monitored monthly during the open water season and tributary sites were visited bi-monthly and after each rainfall event.

Monitoring the lakes and streams is a crucial step in improving water quality of the chain of lakes. The monitoring data identifies areas of

overall environment and appearance of the lake they empty into. Especially when streams are the major source of water for the lake. With the incoming high volume water supply, excessive nu-



trients (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, and animal wastes are natural carriers of phosphorus, where as run-off from lakeshore lawns, farmlands, and city streets are contribute phosphorus to the water as a result of human influences.

Phosphorus enters the waterways like this, it 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 2001-2002.

Graph 1 shows the differing phosphorus levels in the Sauk River at the Richmond and Cold Spring sites. Data suggests the chain of lakes acts like a filtering system, trapping sediment and nutrients that are coming into the lake, confining them to the water column or

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### Reaches of Sauk River on State's TMDL list (MPCA)

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.

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](http://www.pca.state.mn.us) or SRWD web-site.



## SRWD Thanks Volunteers

The Sauk River Watershed District (SRWD) would like to thank local volunteers for their participation in the 2001 & 2002 SRWD monitoring program.

Volunteers are a crucial element in obtaining data during the open water season. They enable the SRWD to collect more data, more often at more sites with their help.

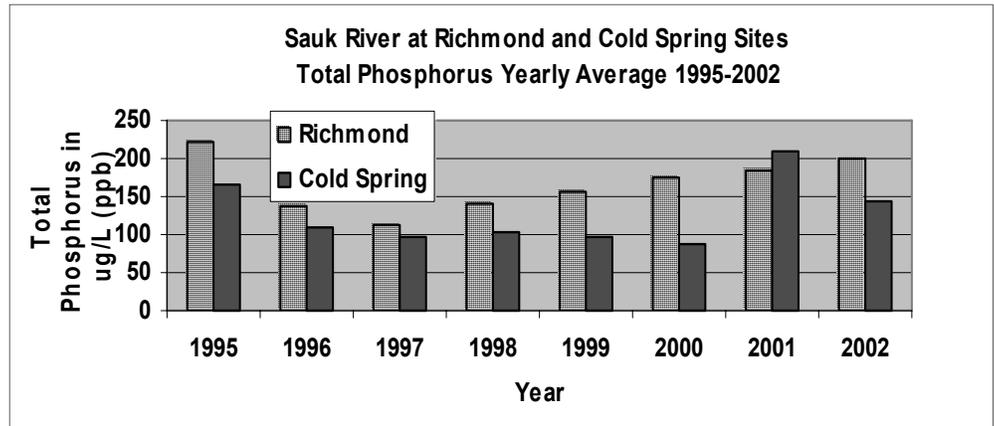
Volunteers can help in many ways: boat driving, secchi disc, rain gauge and staff gauge reading, lake and river watching, and many other ways.

The Sauk River Watershed District gives a big round of applause for your time, energy and enthusiasm to better water quality. **Thank You!** We could not have done it without you.

## Volunteer Training in January.

# Top Ten Things a Lake Resident Can Do to Improve Lake Water Quality

1. Use Phosphorus-free fertilizers
  2. Stop mowing to the waters edge (leave a minimum of 10' buffer)
  3. Clean (pump) your septic tank through the manhole regularly (every 2-3 years)
  4. Leave aquatic vegetation in place except for swimming area
  5. Make sure you have a septic system that is properly treating sewage
  6. Cleanup pet waste and dispose of it
  7. Keep boat oil, gasoline, and other such fluids from seeping into the lake
  8. Limit the use of any lawn fertilizer or pesticide (or better yet, don't use any)
  9. Keep leaves, grass clippings, fire pit ashes, trash, etc, out of the lake
  10. Get involved in your lake association and township meetings to become better informed about issues that impact our lakes
- (borrowed from the Wright County Shoreland Volunteers)



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bottom of the lake, thus prohibiting the discharge of them into the river at the Cold Spring site.

Graph 2 illustrates phosphorus levels within the chain of lakes.

exhibits elevated levels of total phosphorus.

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, bank stabilization, conservation equipment, fencing to keep animals out of the creeks, lakeshore re-vegetation and mainte-