Volume 2, Issue 1

November 24, 2008

CLEARWATER SOIL & WATER CONSERVATION DISTRICT

The Clearwater Conservator

Volunteers Help with Lake Testing

Filling a bottle with lake water to be tested for Phosphorus,& Chlorophyll .

In 2008, 19 citizen volunteers participated in the first year of a two year Citizen Lake Monitoring program. With the help of these volunteers 19 lakes were sampled every 3 weeks from June through September, for phosphorus, Chlorophyll, and water clarity. The 10 lakes selected for sampling were chosen because there is either little previous water quality data available and/or they are facing increased pressure from development. By establishing a complete dataset for these lakes, we can better understand the water quality issues of the lakes and be better prepared to prevent water quality degradation, or to work with lakeshore owners to implement practices to improve water quality.

This program is funded by a grant the Clearwater SWCD received from the MPCA. The grant provided the funds to sponsor a training session for the volunteers on basic lake limnology and proper sampling techniques, and also to covers the cost of sampling supplies and laboratory costs to analyze the water samples.

The 2008 sampling results and explanations of what the results mean, as well as other water quality and lake limnology information can be found at: http://www.rmbel.info/Reports/ReportsQuery.aspx . The information will also be available at: http://www.pca.state.mn.us/data/edaWater/index.cfm.

A special thanks

We would like to send out a special thanks to Paul Imle. Paul is resigning as a supervisor in 2009. Paul has served on the Clearawter SWCD board since 1993. In his 15 years as supervisor he has brought invaluable knowledge, expertise, and forsight to our district. Paul represents Eddy, Hangaard, Holst, Pine Lake, & Windor Townships. Thanks again Paul for your service and guidance as Supervisor.

Sincerely,

Clearwater SWCD Staff

Inside this issue:

Clearwater Soil & Water Conservation District

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SWCD Projects Completed in 2007 & 2008

Eddy Township Stream Channel Restoration Project

This project restored Silver Creek, a perennial stream and protected water, to its original stream bed. Until late last summer the stream flowed in a channelized state down the road ditch for a distance of approximately 900 ft. The erosion problem started in the 1960's when the culvert which carried the flow under the road was removed & the stream was channelized in the directing the flow to follow the road ditch; the channel had been eroding badly, adding much sediment to the stream, and washing out roadways. The restoration work included the placement of 2 new culverts where the were removed some 30 plus years ago, as well as replacing the old culverts where the Silver Creek passes back under the road. The end result of this project was the restoration of 1500 feet of meandering stream and its associated riparian habitat and a huge reduction in erosion and sedimentation of Silver Creek.

Channelized portion Before Project: Severe erosion, sedimentation and encroachment on township road. 2001 photo

Completed Project (Downstream Crossing): New culverts, Rock Rip-Rap Armoring, and vegetated streambank slopes. 2007 photo

Rain Garden Workshop at the Good Samaritan Center in Clearbrook

This past June the SWCD joined forces with the University of Minnesota Extension Service Educator Mary Blickenderfer and held a "Hands-On" Rain Garden workshop. In the morning the volunteers learned what a rain garden was, what their benefits were, how to size and install a raingarden, as well as what plants work well in rain gardens. In the afternoon the volunteers were able to get their hands dirty and help mulch and plant two rain gardens that collect the roof and surface runoff at the Good Sam Center in Clearbrook.

Volunteers sweat in the midday sun as they help install the plants in the rain garden behind the Clearbrook Good Samaritan Center this past June. Thanks to all that helped on this project.

How Rain Gardens Benefit Us and Our Community:

1. Increase the amount of water that filters into the ground, which recharges local and regional aquifers

2. Reduces the amount of storm water running into our storm sewers and eventually into our lakes and streams

3. Helps protect homes and neighborhoods from flooding and drainage problems

4. Helps protect streams and lakes from pollutants carried by stormwater - lawn fertilizers and pesticides, oil & other fluids that leak from cars, nutrient rich sediment, and numerous harmful substances that wash off roofs and impervious areas.

5. Enhances the beauty of yards and neighborhoods

Trivia ~ Do You Know Your H_2O

Q: ***One pound of phosphorous can stimulate the growth of how many pounds of Algae?***
Answer: One pound of phosphorus can stimulate the growth of 500 pounds of algae. This green muck is a real inconvenience to people who recreate in and our lakes and rivers and it is harmful to aquatic species. As algae and other plant material decompose, oxygen levels in the water are depleted. When oxygen levels drop below normal, fish and other creatures are left "gasping for a breath" and the entire river system is in jeopardy. Phosphorous is carried to our surface waters from runoff of rainfall & snowmelt. Possible phosphorous sources include: laundry soap, automatic dishwashing detergents, lawn clippings, and fertilizers.

Q: ***How much rainwater can a single tree retain in one year?***
Answer: Through a process called bioretainment a single tree can reduce storm water runoff by over 4,000 gallons/year. Bioretainment is the storage of rainfall on leaves, branches, trunk, and the bark of trees. Following a rainfall event the water is either evaporated directly into the atmosphere, absorbed by the canopy surfaces, or flows onto and over the ground as storm water.

SWCD Projects Completed in 2007 & 2008, cont.

Silver Creek Stream bank Restoration Project

This was a badly eroding streambank along Silver Creek. High flows and water conveyed from the road ditch over top of this bank contributed to the bank failures. The stabilization project reshaped the slopes and armored the streambank with rock riprap. There was also some grading and filling to convey the ditch water to a stable outlet over our newly shaped and protected streambank.

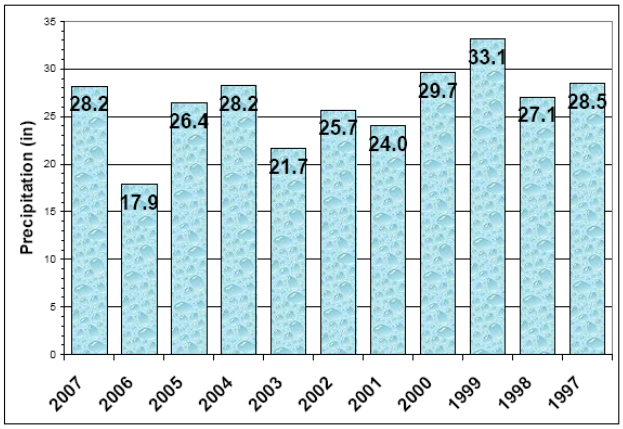
Before: Stream bank slumping and eroding into Silver Creek. Photo Taken in 2007

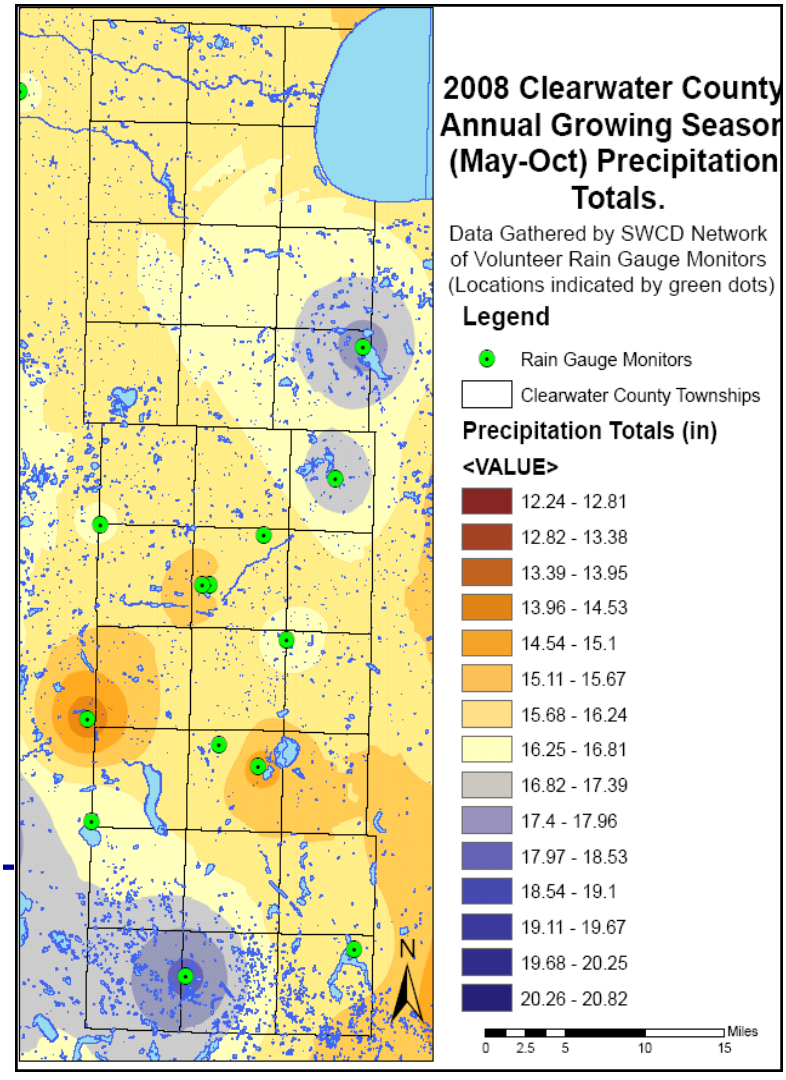
After:

The 2008 Rain Gauge Report

The Clearwater SWCD operates a Rainfall Monitoring Program throughout the county. Rain gauges are read and recorded daily by our citizen volunteers. At the end of the month our volunteers submit their monthly readings to the SWCD. The SWCD then submits those data records to the state-wide archives maintained by the State Climatology Office. This information is used for lake level and stream flow predictions, justifying crop losses, tracking drought conditions, predicting future weather conditions, and for research at many levels. This data has proven to be very helpful at the local level, and was used to make the chart below and the map to the right.

Past 10 years of Average Annual Rainfall in Clearwater County. 1997-2007





If you live in the communities of Clearbrook or Gonvick, or in the following townships: Pine Lake, Leon, Windsor, Greenwood, and would like to be a volunteer rain gauge monitor feel free to give our office a call at (218) 694-6845.

New Clearwater SWCD Website!!!

Get to Know Clearwater County Environmental Services

The Environmental Services office is located in the courthouse and is responsible for the administration of many ordinances, rules and statutes within the County. Many of your questions when you buy or plan on developing a parcel of property are answered here. Everything from solid waste and septic systems to shoreland development and noxious weeds are our area of expertise. The following is a list of our office's responsibilities to administer and enforce: Clearwater County Shoreland Management Ordinance, Clearwater County Subdivision Control Ordinance, Minnesota Wetland Conservation Act, Clearwater County Solid Waste Management Ordinance, Clearwater County Sewage and Wastewater Treatment Ordinance, Operate the Demolition Landfill – Transfer Station, Issue Land Use Permits within Shoreland Areas, Issue Sewage Treatment System Permits County-wide, Review and Inspect New Sewage Treatment Systems, County Ag (Noxious Weed Law and Seed Law), Recycling Program.

To gain a further understanding of how all of these things work together lets take a look at a common example. Say you have just purchased a parcel of property on a lake in a new subdivision and would like to build a home and garage. Environmental Services would have already been involved with the subdivision of the land and now, under the administration of the Shoreland Management Ordinance and Sewage Treatment Ordinance, our office would issue a building and sewage system permit to assure compliance with setbacks and proper septic system design for the property. If there are property characteristics that may pose a challenge during construction, such as a bluff or if a wetland may be impacted, Environmental Services will help guide you through the steps with technical assistance from the SWCD when needed.

Now that construction is done you have a lot of cleaning up to do. The Demolition Landfill will accept your leftover scrap lumber, metal, trees and many other items as well. If you happen to go through Bagley or Clearbrook on your way you can drop off all that cardboard packaging from your construction project at the recycling bins. Oh, and don't forget to wave at our Weed Specialist on your way home when you see him in the ditches inspecting the noxious weeds we had sprayed!

For more detailed information on all our services visit the Environmental Services web pages at www.co.clearwater.mn.us or call the office at 218-694-6183.

Cost-Share Available for Conservation Practices

Cost-share assistance is now available for landowners to help with the cost of establishing a variety of conservation practices which help protect and restore water and soil resources in the county. Up to 75% cost of implementing the conservation practice may be covered by cost-share dollars.

Eligible conservation practices commonly used in this area include:

WINDBREAK ESTABLISHMENT/RENOVATION – A planting of single or multiple rows of trees and/or shrubs to protect an area from the prevailing winds. Also includes management activities to enhance the functioning of existing, previously planted windbreaks.

FILTERSTRIP - An area of permanent vegetation established between cropland, grazing land, or other disturbed areas and sensitive areas such as lakes, streams or wetlands, to reduce runoff and prevent contaminants from entering sensitive areas.

CRITICAL AREA PLANTING – Establishing permanent vegetation on sites that have or are expected to have high erosion and on site that have conditions that prevent the establishment of vegetation with normal planting procedures.

GRASSED WATERWAY – A natural or constructed channel with permanent suitable vegetation, which serves to transport runoff from fields and other areas with little erosion and soil loss.

STREAMBANK, SHORELAND & ROADSIDE PROTECTION – Using vegetation and/or engineered structures to stabilize and protect stream banks, lakeshore and other water channels from erosion and scour.

SHELTERBELT PLANTING/RENOVATION – Planting single or multiple rows of trees and/or shrubs around buildings and homesteads to provide protection from wind and snow.

SEDIMENT BASINS – A basin, pond, or structure designed and constructed to collect and hold sediment or debris.

What's This two-person Contraption?

Its actually our Nu-Way tree planter! You can rent this planter and others from the Clearwater SWCD office. Plant up to 3,000 trees per day! Call our office today.

Additional eligible conservation practices include **STRIPCROPPING, TERRACES, DIVERSION, UNUSED WELL SEALING AND FEEDLOT/WASTEWATER RUNOFF CONTROL.**

All conservation practices and sites must meet certain eligibility requirements. To apply for cost share or for questions or more information