

Summary of 2009 Program Activities

Erosion and Sediment Control Permit Inspections

Soil erosion from land disturbance activities, urban land development and re-development, continues to be one of the leading causes of water quality pollution to our lakes. Studies have shown that exposed soils associated with construction sites can erode at rates between 20 and 250 tons per acre per year depending on the slope and soil type i.e., sand silt, or clay. Preventing soil erosion from happening and managing the sediment from erosion is the only way to minimize soil impacts to water quality.

Federal, State, and local governments all have rules and regulations that apply to construction activities in Ramsey County. In 2009, the RCD assisted the MN Pollution Control Agency (MPCA) and the cities of Shoreview and Arden - Hills inspect and enforce erosion and sediment control rules and regulations.

To control soil erosion and sedimentation, contractors/developers are required to develop stormwater pollution prevention plans that address the needed conservation practices to control their site.

MPCA Construction Stormwater Permit Inspections:

The RCD was one of ten SWCDs across the State to be selected as partner to enhance State permit compliance.

MPCA construction permits are required for all land disturbance activities that disturb one acre or more of land. The RCD inspected over 100 permitted sites in the first six months of 2009 (the District's contract for inspection services expired on July 1st due to program cut-backs by the MPCA). On average permit sites require 3 to 10 inspections per year. RCD staff assisted the MPCA with enforcement actions on three permit sites. District inspection reports and supporting documentation lead to successful remediation for permit violations.

City Permit Inspections:

The cities of Arden Hills, and Shoreview have contracted with the RCD to provide construction site permit inspections. These contracts took effect the last ½ of 2009 with more than 30 inspections performed on 10 sites.

Lake Aquatic Plant Surveys

RCD staff partnered with Ramsey County Public Works staff to inventory and assess aquatic plant communities on 8 lakes within Ramsey County. Surveys are completed every three to five years to monitor for the presence of invasive aquatic plant species, assess and quantify the diversity and plant species, and monitor trends in plant diversity and the trophic status of lakes.

Plant samples are taken from within 70 meter grids spread over the entire lake. Large lakes may have 200 or more sampling points. Individual plant species, the depth to plants, and the number of plants per sampling point are all recorded to gather a "snap-shot" of lake vegetation. Lakes sampled in the summer of 2009 included; Johanna, Josephine, Wabasso, Crosby, Twin, Valentine, Otter, and Bennett.

Groundwater Protection

All citizens and business entities within Ramsey County depend on clean, safe, and sustainable supply of groundwater. Ramsey County is located over a vast water-rich geologic formation (aquifer) that supplies drinking water to the entire metro-area. With our expanding metro-area, demand for safe and plentiful drinking water will increase. Stewardship of this finite resource is a very high priority for the RCD.

Groundwater Protection Planning:

Ramsey County has a groundwater protection plan that was authored by the RCD and adopted by the Ramsey County Board of Commissioners in 1996. Since this original plan was adopted, much has changed in State requirements for groundwater protection, our knowledge of groundwater science has improved, and the discovery of new contamination sites and sources have warranted a plan revision to meet the challenges of the future.

In June of 2008, the RCD began a process to revise the plan that has included an advisory committee of over 25 stakeholder entities that share our concerns for groundwater protection. The revised draft plan has been submitted to the County Board for their consideration. Successful implementation of the plan will require a partnership of State, County, and local government. We anticipate a revised plan to take effect in early 2010.

Sealing Unused Wells:

Unused water wells are a major threat to groundwater quality in Ramsey County. Contamination can move from one location to another via groundwater flow. If a poorly constructed well is intercepted by groundwater flow, contamination can be transported via the well pipe to deeper aquifers. To prevent the spread of contamination in groundwater, it is very important to properly seal unused wells. The District completed an inventory of unused wells in the mid-1990's and we have estimated that there may be as many as 27,000 unused wells in existence in Ramsey County serving as conduits to groundwater pollution translocation. It is imperative that we minimize this threat to groundwater quality as quickly as we can.

The RCD, with a \$10,000 Neighborhood Development Block Grant from Ramsey County, assisted 18 well owners, of limited financial means, seal abandoned wells in 2009. In addition to our well sealing cost-share dollars, the District has provided consultation and advice to over 200 citizens seeking help with their water wells.

Groundwater Monitoring

The RCD, like most SWCDs, is part of the MN DNR's "Ob-Well" network. The District monitors and reports to the DNR, on a monthly basis, aquifer water depth in 16 wells across Ramsey County.

This past year, the District was fortunate to be able to assist the City of Shoreview install monitoring equipment and sample groundwater as part of a large pervious pavement road reconstruction project. This unique monitoring opportunity will provide much needed real-time data on the impacts to groundwater by pervious pavement stormwater management practices.

Rain Gauge Network

The District manages a network of 50 volunteer Rain Gauger's that report their daily precipitation totals to the District every month. Our network is one of several SWCD networks across the State that reports yearly to the Office of the State Climatologist.

There can be great variation in rainfall totals, both storm event and annual, across Ramsey County. Our network is essential to public works departments and water management authorities for the design and management of stormwater conveyance systems.

Wetland Conservation

Soil and water conservation districts are key to the success of the MN Wetland Conservation Act. State law requires that the RCD assist the DNR enforce the law. This past year the RCD was critical to the successful prosecution of a violation in St. Paul as well as assisting DNR personnel evaluate three other suspect violation sites.

In addition to enforcement of the law, SWCD's are required to assist local government administrate the law by serving on what is called the Technical Evaluation Panel (TEP). SWCD staff are trained in wetland identification and serve to both qualify and quantify wetland boundaries.

Cooperative Weed Management Association

The District was instrumental in organizing a confederation of local government agencies to prepare for the management of new invasive plant species that are making their way to Ramsey County from out of State and Greater Minnesota. The Ramsey County Cooperative Weed Management Association was officially chartered in 2008. Through a small "seed-grant" from the MN Board of Water and soil resources and the DNR, supplemented by in-kind contribution of the District, Ramsey County Parks Department and several other cities, within Ramsey County, we were able to inventory "pioneer" populations of new invasive plant species. The District will maintain a web-site for public access to aid the public in the identification of invasive species. In addition to the web-site, the association was able to hold several educational workshops to "get the word out" on the advance of these new species. We are very proud to have had the opportunity to initiate this organization.

Natural Resource Database Management and Geographic Information system (GIS)

One of the major long-term goals of the RCD has been to provide the public with the opportunity to access up-to-date data regarding their natural resources. With good information, the job of environmental stewardship is made much easier.

The District is part of a consortium of local governmental agencies that have organized to create and share information and make this data available to the public. The Ramsey County GIS User's Group supports "On-Line Mapping" that can be accessed from the RCD's web-site. Wetland, soils, water features, land use, and other information relevant to land and community management decisions can be viewed by the public. In addition, Links to State water quality database are also made easy through the District's web-site.

In the past year, the District has assisted the County Public works Department inventory and map their stormwater conveyance system for inclusion in a comprehensive GIS map system. State law requires all public agencies that install and maintain stormwater conveyance systems to inventory and map these features. The District's GIS technicians are well suited to assist with this requirement.