



TWO RIVERS WATERSHED DISTRICT CULVERT INVENTORY

By Boyd Johnson

The Two Rivers Watershed District has been making an effort to account for existing culverts since 1996. This process, referred to as the "Culvert Inventory," has recorded over 7,200 culverts to date. Over 1,100 culverts were added during a three-week timeframe during the spring of 2005 when Boyd Johnson, the watershed district's Technician, and three Minnesota Conservation Corps workers, took to the roads to locate culverts. They covered

Moose, Skagen, Barnett, Huss, Soler and a significant portion of Barto townships



in Roseau County. For 2006 the District is again working on this effort.

The culvert inventory provides information about the size, type, condition, direction of flow, drainage area, and location of culverts, as well as some data about the surrounding land. This information is used by the watershed district and assists in determining drainage areas when permit applications are received and reviewed.

The data gathered by the inventory crews is a valuable tool the watershed district will

use to assess flooding, improve drainage, and gain a better knowledge of how water travels through the system. The data will be entered into a computer program, Arc Map, which is a geographic information system that allows the user to analyze the information in a mapping format relative to other information layers (i.e. soils, wetlands, ditches, land use, permits issued, and topography). In addition, the District will use this information in conjunction with hydrologic flow models, which will help to predict flooding and analyze potential flood elevations at a given location.

The condition of culverts and ditches varied considerably. Some of the most frequent problems are as follows:

Damaged Culvert Openings -- The openings of culverts, especially at field accesses, had been run over and partially (or completely in some cases) crushed.

Culverts partially or completely filled with sediment -- A culvert filled with dirt or debris won't function properly.

Excessive ditch vegetation -- Vegetation, especially cattails, will greatly reduce flow in a ditch. Also, leaves and stalks carried by water can clog the culvert entrance.

With some minor maintenance each year, most of the culverts would operate with a greater efficiency. Landowners, road authorities, and drainage authorities alike should emphasize maintenance programs in order to promote better drainage and flood control. For more information on the District's culvert inventory, please contact the office, located in the Kittson County Courthouse at Hallock, MN.

THE RIPPLE EFFECT

From the Red River Basin Commission

WHAT IS A WATERSHED?

No matter where you are, you are in a watershed. The term watershed refers to the geographic boundaries of a particular water body, its ecosystem and the land that drains to it. A watershed also includes groundwater aquifers that discharge to and receive discharge from streams, wetlands, ponds and lakes.

More than just an area of land, a watershed also provides us with a very useful way of looking at the area where we live. Rivers and lakes don't stop at a state border, and neither does a watershed. Large watersheds are sometimes referred to as river basins.

The Red River of the North Basin stretches from northeastern South Dakota and west-central Minnesota northward through eastern North Dakota and northwestern Minnesota into southern Manitoba. It ends where the Red River empties into the southern end of Lake Winnipeg.

Because all water in a watershed eventually drains into the same creek, river, lake, or bay, everyone in the watershed is connected through the

water we use for drinking, recreational activities and industries.

So 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, river or lake. On its way, water travels over the surface and across farm fields, forest land, suburban lawns, and city streets, or it seeps into the soil and travels as ground water.

You and everyone in your watershed are part of the watershed community. The animals, birds, and fish are too. You influence what happens in your watershed, good or bad, by how you treat natural resources - the soil, water, air, plants, and animals. What happens in your small watershed also affects the larger watershed downstream.

Always consider the "ripple effect" of your actions, everything you do in your watershed impacts others!

Until the next Ripple Effect,
**The Red River Basin
Commission (RRBC)**

The RRBC is a grassroots organization that is a chartered not-for-profit corporation under the provisions of Manitoba, North Dakota, Minnesota, and South Dakota law. Our offices in Moorhead, MN and Winnipeg, MB can be reached at (218) 291-0422 and (204) 982-7254, or you can check out our website at www.redriverbasincommission.org.

WATERSHED DISTRICT DEVELOPMENTS

MIDDLE-SNAKE-TAMARAC RIVERS WD

The Middle-Snake-Tamarac Rivers WD reported on the Public Law 566 (Snake River Watershed) project. The project is now complete with only some areas of the Snake River remaining to be re-zoned out of the flood plain. This process is estimated to take one to two years. The backfilling of the diversion structure has also been completed. Wetland mitigation of the Off-Channel Storage Site continues.

RED LAKE WD

The Red Lake WD reported on the new building project. The board has approved the final plans and specifications for the construction of the new building and has instructed the architect to proceed with the advertising for bids. Bids were opened for

the construction of the new building October 12, 2006 at the District office. Four contractors submitted bids for the project, with the low bid being awarded to Schmitz Builders, Inc. from Red Lake Falls, MN in the amount of \$596,000.00. The board issued the order to proceed with plans of completing the new office building in the spring.

WILD RICE WD

The Wild Rice WD reported on the South Branch Storage project. Boring analysis on the upstream sites were completed on 6 sites of which 4 were favorable to support retention structures. There were alternative sites identified for the lower off-channel area. Because of the soil analysis, Site No. 3 has been eliminated from further consideration. The District will continue to investigate the lower area through soil

analysis to identify the potential for a physically feasible site this fall.

BOIS DE SIOUX WD

The Bois de Sioux WD reported that progress on the North Ottawa project has continued over the past month. Comstock Construction has completed work on the outlet structures so that the contract will be closed out. The structures are all in place, outlet and inlet pipes have been laid, cement work has been completed, rip rap has been installed, and the gates are ready for operation.

Midwest Construction, Inc. is continuing with earthwork. The rains over the last month have delayed some of the core dike construction. Work has continued on the interior dikes and more work on perimeter ditches has occurred.

The next scheduled meeting of the RRWMB will be held at the Sand Hill River Watershed District, Fertile, MN, on November 21st, starting at 9:30 a.m.

RRWMB MEETING HIGHLIGHTS

At its regularly scheduled October meeting, the RRWMB:

- *Received a report from Dan Thul, Red River Coordinator.*
- *Received an update on activities of the Red River Basin Commission from Dan Wilkens-Chairman.*
- *Received a report from Naomi Erickson, Administrator.*
- *Accepted a promissory note from the Middle-Snake-Tamarac Rivers WD for repayment of the loan of \$1,700,000 made by the RRWMB to facilitate the timely implementation of the Agassiz Valley Water Management Project.*
- *Authorized the Human Resource Committee to offer the position of Financial Coordinator to Ron Harnack and proceed with the process of hiring.*
- *Authorized the removal of the original Hay Creek project of the Roseau River WD from the list of Step I submittals of the RRWMB.*
- *Received the Step I submittal for the Roseau River WD's revised Hay Creek project.*
- *Toured the Hay Creek project of the Roseau River WD.*

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Your comments and contributions are always welcome. If you are receiving this newsletter and are not currently a member of a governing unit in the Red River Basin, please notify us and provide the name of the appropriate person to be added to our mailing list. News & Views, c/o RRWMB, P.O. Box 763, Detroit Lakes, MN 56502-0763, Phone: (218) 844-6166; Fax: (218) 844-6167.