2015 Annual Report of the Yellow Medicine River Watershed District



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Mission

The mission of the Yellow Medicine River Watershed District (YMRWD) is to provide an organized means for proper management and protection of the water resources in the Yellow Medicine River Watershed. The YMRWD places emphasis on flood control, water control management through the process of viewing and approving drainage permits, and water quality problems. We view and approve all water-related projects in the district. The YMRWD partners with federal, state, and local government agencies in the management and planning of water resources. The YMRWD employs a technical staff person who conducts water quality monitoring of lakes, rivers and streams in the watershed, and establishes and maintains records and hydrological data. The District endeavors to provide for wildlife and create opportunities to enhance the recreational opportunities as a supplementary benefit of projects that improve water quality and provide flood protection.

Summary of Work

During 2015, the Yellow Medicine River Watershed District (YMRWD) served as the ditch authority for nine ditch systems and provided services to the general public through the administration of tiling and drainage projects, beaver damage control, and river maintenance. The organization was also involved in three grant-funded projects including a Watershed Restoration and Protection Strategies (WRAPS) Project, Terrain Analysis Project, and a pilot One Watershed One Plan Project.

Drainage Authority Work

During 2015, all nine ditches were inspected by Tom Barber at an expense of \$4952. Ditches 4 and 5 were cleaned out by B&R Tiling at an expense of \$46,126.43. There were two buffer violations that included the removal of required buffers and the planting and harvesting of corn in that area. The YMRWD also accepted petitions for improvements on CD 38 and CD 39.

Program: Tiling and Drainage Permitting

75 tiling and drainage permits were viewed and approved in 2015, down from 128 in 2014. Once again throughout 2015, landowners were instructed at the time of obtaining a blank permit, to contact their neighbors, and were instructed as to where the neighboring landowners needed to sign on the permit. By instructing the farmers to negotiate prior to the tile being installed, the Yellow Medicine River Watershed District Board of Managers believes this will alleviate future disputes. When there were instances regarding permit disputes, the Watershed Board would ask the landowners to come to a Board Meeting to discuss how to reconcile the differences. In August, the Board of Managers changed the \$250.00 fee for unpermitted drainage to include a range of fees varying from \$250 to \$750 per incident. The fees are based on the type of unpermitted work that was done, and how adversely it affected neighboring landowners and the watershed.

Program: Beaver Damage

The YMRWD allocates funds annually to operate a beaver damage control program to remove nuisance beavers in order to lessen crop damage as a result of flooding created by beaver dams. In 2015, trappers removed 83 beavers and the District paid \$2490 in bounties. Expenditures for removing beaver dams once the beavers were removed totaled \$625.

Program: River Maintenance

For the past few years the Yellow Medicine River Watershed District has managed a fallen tree removal program, working with contractors to remove and dispose of fallen trees. The blockages caused by the fallen trees can redirect the flow of water outside of its normal channel, eroding the banks, overflowing onto farmer's fields and creating oxbows. This in turn causes excessive silt to be washed into the stream causing further turbidity problems. Fallen trees can also block culverts and roads can be washed out as a result.

In 2015, the Watershed District spent \$2800 on river maintenance. Residents of the watershed routinely inform the District Office as to the location of the blockage, whereupon, a staff member will visit and assess the site before bringing a contractor in the remove the debris.

Project: Terrain Analysis

In 2014, the YMRWD was awarded a grant from the Board of Water and Soil Resources to have a terrain analysis completed for the watershed. This effort allows more accurate watershed delineations, making project targeting and design more accurate and reliable. The District has contracted with Minnesota State University, Mankato's Water Resources Center to complete the work.

Several components of the grant were completed in 2015 including the hydro-conditioning and calculations for the stream power index and compound topographic index. The hydro-conditioning effort takes elevation data, obtained by a detailed Light Detection and Ranging (LiDAR) survey, and adds infrastructure, such as culverts, to indicate when water can flow under a road. However, LiDAR DEM's do not inherently include important information about subsurface water conveyance connections such as culverts, drain tiles, and storm sewers. As a result, bridges, roads and other structures on the landscape effectively act as virtual dams preventing terrain analysis algorithms from properly routing the flow of water across the DEM landscape. This project will create an inventory of burn lines and culverts for use in creating hydrologically corrected DEM's from Minnesota LiDAR data for long range use in improving water quality and quantity models in the Yellow Medicine River watershed. The various secondary datasets we will create are Critical Source Areas, Specific Catchment Areas, Stream Power Index, Compound Topographic Index, and Environmental Benefit Index. We will also be able to identify bluff and ravine areas using the LiDAR data. The grant is for \$88,612.00, of which, \$35,200.00 has been used to date.

Project: Watershed Restoration and Protection Strategies (WRAPS)

The District worked with the MN Pollution Control Agency and area partners to determine strategies that would restore the surface waters of the Yellow Medicine River watershed. Intensive watershed monitoring began in 2010. This monitoring work expanded on previously established routine water quality and flow sampling to include extensive fish and aquatic invertebrate surveys. Following completion of the intensive watershed monitoring in 2011, the data was assessed and the stressors leading to water quality impairments were identified. In 2015, the project partners worked to identify strategies that would reverse the impairments and set timelines for meeting goals set by project partners. The WRAPS report is expected to go out for public comment in March 2016. The findings from this project informed the One Watershed One Plan project described in the next section.

Pilot Project: One Watershed, One Plan (1W1P)

One Watershed-One Plan grant is a Pilot Project with BWSR. It is a Targeted Watershed Project in which cooperating agencies, including: the county SWCD's (Lincoln, Lyon, Yellow Medicine, and Lac qui Parle) and Area II Minnesota River Basin Projects, work together with the Watershed District and State Agencies to combine the various water plans, including the County Water Plan, the SWCD Water Plan, and the Watershed's Plan, into one single comprehensive watershed management plan that is specific the Yellow Medicine River Watershed.

The planning began in August of 2014. The project is scheduled to be completed by the end of 2016. Tasks completed in 2015 include setting priorities and measureable goals for targeted areas in the watershed. Partners also started to identify how the organizations will work collectively to meet the goals of the plan.

Appreciation

This concludes the 2015 annual report of the Yellow Medicine River Watershed District. The Yellow Medicine River Watershed District Board of Managers and staff would like to take this opportunity to express our appreciation for the support given to our organization, by the various county offices and personnel, as well as the Commissioners of Lyon, Lincoln, and Yellow Medicine Counties. We appreciate the opportunity to work with each of you, in meeting the goals of the Watershed District, in our efforts to successfully manage and monitor the waters of the Yellow Medicine River Watershed.

Respectfully submitted,		
John Boulton, 2016 YMRWD Secretary		