The 411 on BWSR and Ag Drainage

November 2015 Snapshots

While not on everyone's list of most exciting topics, drainage is important to us all. Many of us don't think about it unless our basements flood or heavy rains and flooding impact our roads and infrastructure. But drainage is especially important to farmers whose very livelihood is determined by how water is managed in their fields.

Top: Historically, a barge was used to dig ditches.
Middle: A drain tile outlet.
Bottom: Drainage ditch.

When Minnesota was just a territory it became clear that the ground was rich but too wet for farming. Minnesota has been draining fields to support farming since the mid-1800s. In fact, Drainage Law (now Minnesota Statutes, Chapter 103E) was one of the first laws enacted when Minnesota became a state. For well over 100 years, the intent was to get the water off the land as fast as possible to aid crop production, protect roads and promote commerce.

In recent years, there has been a shift in thinking about agricultural drainage management as both the public and policymakers have increased awareness of the scope of effects. A greater understanding of the effects of drainage on hydrology, water quality and ecosystems downstream has led to new practices. Buffers on public drainage ditches have been allowed since 1959, and required under certain circumstances since 1977. For over thirty years, drainage authorities have been required to consider environmental and other effects of proposed drainage projects.

The Minnesota Board of Water and Soil Resources (BWSR) plays a key role in helping manage drainage in Minnesota today. BWSR's drainage-related work is focused on helping local government units (LGUs) and farmers manage drainage with less negative effects on the waters and downstream lands around them.

BWSR's Chief Engineer, Al Kean, facilitates the Drainage Work Group (DWG), made up of volunteer representatives of many stakeholders in discussions about drainage policy. The DWG works to share information and come to consensus on drainage policy recommendations to the legislature and others. Since its first meeting in 2006, four sets of revisions to Chapter 103E Drainage Law have been recommended by the DWG and subsequently passed into law by the legislature.

Conservation Drainage Engineer, Tim Gillette, facilitates the Drainage Management Team (DMT). The DMT is also a volunteer organization whose membership includes state and federal agencies and universities, focused on technical issues related to drainage. It works to stay current on research related to drainage and to come to consensus on technical issues related to managing drainage in a way that is multipurpose and helps to minimize negative effects. The DMT also emphasizes education and outreach to member organizations and other stakeholders.

BWSR currently manages two important drainage-related projects: the *Minnesota Public Drainage Manual* (MPDM) Update Project, and the Drainage Records Modernization & GIS Database (DRMGD) Project. The MPDM Update Project, which is slated for a late winter 2016 completion, will result in a web-based, user friendly public drainage manual updated to reflect changes in drainage law since 1991, current context and best management practices information in a new chapter.

The DRMGD Project is funded by LCCMR and focused on creating a GIS database template and web portal to help drainage authorities store and use public drainage system records and to enable better statewide access to hydrographic data and related information about these drainage systems. The project includes an update of the *Drainage Records Modernization Guidelines, September 2008*.

The FY 2016 Clean Water Fund, Multipurpose Drainage Management Grant Program provides a new opportunity for drainage authorities and soil and water conservation districts to work together to reduce erosion and sedimentation and associated drainage system repair needs, reduce peak flows and improve water quality on priority Chapter 103E drainage systems. The application period for this program closes October 30.

There are a number of other current state and federal programs and initiatives for which drainage water management is an important element. One Watershed, One Plan recognizes drainage systems as a key component of overall water management for multiple purposes, including water quality. The new state buffer law includes public drainage ditches. The Minnesota Agricultural Water Quality Certification Program (MAWQCP), administered by the Minnesota Department of Agriculture and assisted through SWCDs, is a voluntary opportunity for farmers to take the lead on their farms to protect water quality, including implementing drainage management practices. The USDA Environmental Quality Incentives Program (EQIP) includes an initiative for drainage water management practices.

BWSR relies on effective working relationships with partners and drainage stakeholders to move along the path of soil and water conservation. We continue to encourage and challenge LGUs and producers to incorporate multipurpose drainage management into their drainage systems and farming operations. While it may not be exciting to everyone, these partnerships, and the work being done around drainage are important for Minnesota's water and soil resources.