What challenges and opportunities confront agricultural drainage?

Many drainage systems are old, overloaded, and in need of maintenance and improvement. There are also concerns about the impact that drainage has on water quality and water flow from watersheds.

In order to address these concerns, drainage systems must be redesigned, rehabilitated, or replaced over the next 10 to 20 years in order to support the needed infrastructure for agricultural production. When these systems are upgraded, this will be a great opportunity to incorporate designs that benefit both agriculture and the environment.

Are techniques available that benefit agriculture and the environment?

Controlled drainage is a method of drainage system design and management used to optimize yield potential and minimize negative impacts on the environment. The practice uses a water level control structure in a drain tile that can be used to manage the water table at varying depths. The outlet depth is normally:

- Raised after harvest to limit drainage outflow and reduce the delivery of nutrients to ditches and streams.
- Lowered in early spring and again in the fall so the drain can flow freely before planting or harvest.
- Raised again after planting and spring field work to create a potential to store water for the crop to use in midsummer dry periods.

Controlled drainage has been shown to reduce drainage water volume and nutrient losses by 25 to 40%.

HLWD Drainage Water Management Workshop

On February 22, 2011 the HLWD will be hosting a Drainage Water Management workshop from 7:00 p.m. to 8:00 p.m. at the Heron Lake Community Center. Registration will start at 6:30 p.m. This workshop will focus on the benefits and practical issues of using controlled drainage and bioreactors, and what people around the state are saying about the potential for these and other drainage approaches. The workshop is funded through a Clean Water Partnership grant. Refreshments will be served.

Speakers

Speakers at the workshop will include:

Dr. Jeff Strock is an Associate Professor and Soil Scientist for the University of Minnesota (UM) located at the Southwest Research and Outreach Center, Lamberton. Dr. Strock’s research program focuses on providing practical solutions to soil and water management issues in drained agricultural landscapes. His goal is to provide field-based research information on developing integrated soil and water management solutions for crop and livestock producers.

Ann Lewandowski is a Research Fellow for the UM Water Resources Center where she coordinates research, training, and communication pieces related to agricultural water quality issues. In the past, she did similar work for the UM Department of Soil Water and Climate and for the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

Mark Dittrich is a planner for the Minnesota Department of Agriculture where he coordinates research, demonstrations, and outreach related to agricultural drainage. In the past, he worked with farmers and education specialists at the University of Wisconsin – Madison. He was also a dairy farmer in southeastern Minnesota.

Reinvest in Minnesota (RIM) – Wetland Reserve Program (WRP) Sign-Up Announced

The Minnesota Board of Water and Soil Resources and the USDA NRCS announced that $26 million is available to enroll marginal or damaged cropland in southern Minnesota that is frequently or occasionally flooded into a RIM-WRP contract. Highest priority will be given to sites that result in the restoration of wetlands and grasslands. Most of the available dollars will be focused in floodplain areas in the 29 counties that sustained damages during the record rainfall events on September 22-23, 2010. This is a perpetual easement that pays a one-time, lump sum. Payments range from $4,800 to $6,100 per acre, depending on which township the parcel is located in. The enrollment period for this program ends March 4, 2011. For more information, please contact your local Soil and Water Conservation District or NRCS office.
Funding for this newsletter is provided by the Minnesota Pollution Control Agency through a Clean Water Partnership grant. Please contact us with your questions or concerns! Telephone 507-793-2462; Email: hlwd@roundlk.net