



Metropolitan Water Reclamation District of Greater Chicago

Press Release

Allison Fore

Public and Intergovernmental Affairs Officer

312.751.6626

allison.fore@mwrdd.org

100 East Erie Street, Chicago, Illinois 60611

For immediate release

February 7, 2018

MWRD research partnership with University of Illinois attracts grant to improve water quality through agricultural innovation

The Illinois Nutrient Research and Education Council (NREC) has awarded a \$350,000 grant to research partners at the University of Illinois Urbana-Champaign (UIUC) and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) to address nutrient loss reduction strategies and protect regional and national waterways downstream. The four-year study is titled: “On-Farm Evaluation and Demonstration of Reduced Off-Farm Nutrient Transport through Drainage Water Recycling.”

The study will evaluate drainage water recycling as an effective management practice to reduce nutrients like nitrogen and phosphorus from escaping to local waterways while optimizing crop yield at reduced fertilizer application rates. Fertilizer application on cropland is a major source of nutrients that is impairing the quality of water downstream once it runs off the surface or drains off the land.

The study will be conducted on MWRD-owned land in Fulton County, analyzing different best management practices (BMPs) that are attractive to farming communities from an economic standpoint and easily adoptable. Equally as important to the MWRD, it will provide valuable research into how to reduce nutrient losses from agricultural land.

“Protecting our water environment is not confined to our treatment plants and waterways,” said MWRD President Mariyana Spyropoulos. “We are working with farmers and agricultural producers and are determined to find solutions to address nutrient loss that can make a real difference in the water quality down-



Using a \$350,000 grant recently awarded by the Illinois Nutrient Research and Education Council, the MWRD and University of Illinois at Urbana-Champaign will use MWRD-owned farm pastures in Fulton County to study how to control nutrient loss.

stream. I applaud the University of Illinois at Urbana-Champaign and our talented staff of environmental soil scientists for taking on this exciting initiative.”

UIUC, which submitted the grant proposal, will administer the funding. Activities will include: installation of drainage tiles on a 20-acre field; establishment and monitoring of drainage water recycling treatments; and outreach activities and collaboration among the MWRD, UIUC, the Fulton County Farm Bureau and Ecosystem Services Exchange.

“This study has the potential to demonstrate how drainage water recycling can maintain adequate water for crops during critical periods, improve water and nutrient use efficiencies, and reduce nutrient loading in the Midwest,” said Richard Cooke, professor and drainage extension specialist at the *(continued)*

MWRD research partnership with University of Illinois *(continued)*

University of Illinois at Department of Agricultural and Biological Engineering. “The economic return will make the BMPs attractive to farming communities and encourage quick adoption. The MWRD-supported study site will be accessible for future long-term evaluation and comparative studies with other BMPs that are being studied at the same location.”

Formerly used for biosolids application, the 13,500 acres of land owned by the MWRD is located 40 miles southwest of Peoria along County Highway 5, between the cities of Canton and Cuba in Fulton County. In recent years, the MWRD has tested various BMPs in support of nutrient loss reduction strategies at the site. Researchers and agricultural producers have studied the use of interseeders, a cover crop synchronization tool that can increase nutrient capture and harvesting using cover crops. The MWRD conducted research on the use of perennial riparian grass buffer strips to reduce nutrient loss from farming fields. Also, in the plan is the demonstration of effectiveness of bioreactors in reducing nitrogen and phosphorus losses from field drainage. Adoption of BMPs could be new tools for meeting statewide nutrient reduction goals in addition to the work of the MWRD to reduce nutrient loads discharged from water reclamation plants (WRPs).

“Receiving this grant is a major accomplishment for our collaboration with the agricultural sector and our work in nutrient loss reduction strategies in Fulton County,” said MWRD Commissioner and Chairman of Finance Frank Avila. “The partnerships developed

through projects like this study have the potential to help us meet our goals of nutrient loss reduction for Illinois by combining our work in resource recovery at our plants with reductions in non-point source nutrient pollution across the state.”

In 2016, the MWRD opened the world’s largest nutrient recovery facility at its Stickney WRP to recover phosphorus and nitrogen from the water treatment process to create a high value fertilizer. In addition to developing emerging technologies like algae harvesting to recover more nutrients and reduce total phosphorus discharges into area waterways, the MWRD is also supporting nutrient trading measures that came into law in 2017. The legislation, signed by Gov. Bruce Rauner, allows the MWRD to participate in a nutrient trading program throughout Illinois to meet water quality standards. Nutrient trading allows farmers, foresters, businesses and other organizations to reduce nutrient pollution more than is legally required and to sell or trade such additional reductions as credits to other businesses, facilities, and local municipalities so they can meet their reduction requirement. Exchanging credits between various sources can provide greater efficiency in achieving water quality goals in the area waterways.

Created in 2012, the NREC represents Illinois agriculture’s commitment to enhance nutrient utilization, increase crop production and protect water quality. The NREC works with farmers and others using fertilizer products to adopt and implement best practices.

###

Recovering Resources, Transforming Water

Established in 1889, the MWRD (www.mwrdd.org) is an award winning, special purpose government agency responsible for used water treatment and stormwater management in Cook County, Illinois.