

Water WoRDs

Updates from the Water Resources Division

It's Harvest Time in Michigan and We Want to Help Too

We all love Michigan-grown fruits and vegetables and buying products made in our home state. Judging from the piles of produce that appear in the break rooms during the harvest season, WRD staff enjoys sharing in the bounty. The WRD understands the vital role that agriculture plays in Michigan and we strive to support the agricultural sector while ensuring that groundwater resources are protected. Michigan residents really get the best of both worlds: first-class food products and clean water.

Groundwater is an important source of drinking water for over 4 million people in the state. Do you have a water supply well at your house? What is your city's drinking water source? There's a good chance that you're drinking Michigan's groundwater. You drink it, so we protect it.

The WRD's Groundwater Discharge Program issues permits for groundwater discharges under the Part 22 Groundwater Quality Rules and related statutes. A groundwater discharge is the disposal of wastewater on or below the land surface that soaks in and eventually reaches the groundwater. Under the Groundwater Discharge Program, permittees are required to meet permit limits that protect the groundwater. Our big goal recently is to get Michigan's food processors under permits that will benefit the companies, the environment, and the people in the surrounding areas.

Our wastewater discharge strategy is to identify Michigan's food processors with groundwater discharges and then prioritize our work with them based on our knowledge of the discharge and the risks to groundwater. The strategy is being implemented via a special food processor discharge permit that addresses the unique challenges faced by the food processing industry. The permit was developed under a collaborative effort of the WRD, the Department of Agriculture and Rural Development, and the Michigan Food Processors Association.

Under the strategy, staff members work with the state's food processors to set attainable goals to meet permit limits. This involves adding wastewater treatment and fine-tuning land application methods that are protective of our groundwater. We also make sure there's a monitoring system to check on how well it's working. If there's a problem, we work with these companies on clean-up efforts-production is important, but so is your drinking water.



Wastewater lagoons at Birds Eye in Fennville



Spray irrigation guns at Birds Eye for distributing wastewater

One of the biggest issues we work on with food processors is management of their wastewater, which is typically high in organic content (like sugars from fruit/vegetable juices). Past practices have caused contamination of groundwater by metals like iron, arsenic, and manganese that were once bound in the soil but moved into the groundwater when soils became overloaded with organic wastes. High levels of organic matter combined with wet soils mean that there is a lot of material to decompose and not a lot of oxygen available for bacteria to do the work. Metals are released from their bonds in the soil when all of the oxygen gets used up. We try to prevent this from happening by thoroughly reviewing proposed discharges to identify which ones may have high organic content. When a problem does occur, we track the spread of the contamination and make sure that impacted water supply wells are replaced and people in those areas have a clean drinking water source once again.

The WRD has shown that its strategy works for Michigan. One of our success stories involves Birds Eye Foods, Inc. and their Fennville processing plant. The WRD worked with Birds Eye, the city of Fennville and surrounding townships, and other state agencies to reach a solution to Birds Eye's wastewater treatment issues that is beneficial to both the company and local residents. Birds Eye has performed numerous upgrades to their wastewater treatment system and performed environmental investigations, while the city of Fennville has extended its municipal drinking water supply to residents affected by groundwater contamination. Recently, WRD staff toured the Birds Eye facility and saw major improvements first-hand. It was a real pleasure to see the reward of everyone's efforts.

The WRD works hard to help Pure Michigan stay pure. We value these resources as much as you do and we've enjoyed partnering with Michigan's agricultural producers to enhance Michigan's economy *and* the environment together.

What do you do in the WRD?

Meet Heidi Ziegenmeyer

I am new to the WRD's Groundwater Permits Unit, but I have loved every minute of it. I am a Permit Coordinator in the Unit, which means that I am responsible for the development of a permit from initial contact with a facility, through the application, technical review, and public notice periods, to issuing the permit. I enjoy talking with permit applicants and visiting sites as part of the permit issuance process in order to better understand what is happening at each facility. I really care about developing the best permit possible—one that fits the permittee's needs and also complies with all state and federal environmental regulations.

I prepared for work in Michigan's government by attending U of M for my B.S. and MSU for my M.S. in Fisheries and Wildlife. I collaborated on projects with DEQ and DNR personnel throughout my education, so I knew when I graduated from MSU in 2011 that I wanted to work for the state. I believe in making a difference through positive actions from inside the government. Michigan has always been my home and promoting wise use of its natural resources is my passion.



Heidi Ziegenmeyer

WRD Question of the Week

What concerns (or comforts) you about Michigan's groundwater?