REPORT OF THE GOVERNOR'S REPRESENTATIVE

Steve Diercks, Coloma, WI

As a potato and vegetable grower member of the Wisconsin Potato & Vegetable Growers Association (WPVGA) and the Governor's Representative on the Wisconsin Groundwater Coordinating Council, I am pleased to report that the WPVGA continues to collaborate with multiple stakeholders to achieve sustainable groundwater quantity and quality.

Wisconsin's Central Sands region remains one of the most productive irrigated vegetable areas in the United States with top five rankings for potatoes, sweet corn, green beans, peas, carrots, cucumbers, beets for canning and cabbage for kraut. This production, which is valued at nearly $6 billion annually would not be possible without irrigation. At the same time, concerns have been raised over the potential impact of irrigated agriculture on the groundwater aquifer and surface waters of the Central Sands. In response, the WPVGA continues to bring together the people, organizations and expertise to foster the sustainable use of water resources. It is an example of collaboration involving GCC member agencies and the agricultural industry.

Voluntary conservation practices, groundwater monitoring, state-of-the-art technology and applied research are the focal points of the WPVGA's efforts. The Association continues to engage in activities that consolidate and build on the existing knowledge-base related to the hydrogeology of the Central Sands. Among these activities are the following:

- Every year, the WPVGA funds several applied research projects led by Dr. Yi Wang, UW Professor of Horticulture, and Dr. Matt Ruark, UW Professor of Soil Science, evaluating the performance of multiple potato varieties in low nitrogen environments as well as studying nitrate concentrations in irrigation water. The research results will provide important information for growers. It will help them develop improved nutrient management programs that account for nitrogen being applied in the irrigation water. It will also identify new varieties that use less nitrogen and existing varieties that perform well with less nitrogen. This research also includes the study of slow- release nitrogen products with a goal of reducing nitrate leaching into groundwater. These studies are being conducted on-farm as well as at the UW-Hancock Agricultural Research Station. In 2024, the WPVGA is funding research by new UW Assistant Professor in the Dept. of Plant and Agroecosystem Sciences Dr. Steven Hall. His project is titled: Testing a "Liquid Cover Crop" to Decrease Nitrate Leaching from Potato Fields.

- Ongoing collaboration on a research project with the UW Atmospheric and Oceanic Sciences Department looking at newer, more accurate and advanced methods of measuring evapotranspiration (ET), which is the term used for crop water use. This project is being led by Dr. Ankur Desai and uses the latest technology of an eddy covariance flux tower system to measure ET in an irrigated vegetable field as well as using another flux tower system to measure ET in a nearby forest. Research results are being shared with growers to assist them in their irrigation management and scheduling regimes. Four years of data have also helped improve the Wisconsin Irrigation Scheduling Program by fine-tuning the ET measurements used in that system.

- In 2024, the WPVGA was successful in receiving a fourth Producer-Led Watershed Protection Grant from the Wisconsin Dept. of Agriculture, Trade and Consumer Protection. Eight member farms are now participating in the project which is located in the Little Plover River/Wisconsin River watershed. Called the Central Wisconsin Farmers Collaborative, the group seeks to promote innovative conservation and stewardship practices that benefit the watershed, the landscape, and the land managers themselves through collaborative partnerships, farm-to-farm education programs and other strategic actions. Conservation practices employed by the group include the extensive use of cover crops, prairie and pollinator plantings, and no-till/minimum till practices. There are also extensive wetlands restoration practices employed in this watershed.

- An additional Producer-Led Watershed Protection group was formed in 2022 in the Central Sands and they are receiving third-year funding in 2024: Farmers of the Roche-A-Cri. Farmers of the Roche-A-Cri has WPVGA members representing Coloma Farms, Signature Farms, Heartland Farms, Nathan Bula Farms LLC, Sterling Farms and Flyte Family Farms. The WPVGA continues to encourage more member farms to participate in the Producer-Led Watershed Protection Grant program. Plans are underway to form a Producer-Led Watershed Protection group in the Antigo potato growing region in 2025.

- Multiple WPVGA members are participating in the Nitrogen Optimization Pilot Program through WDATCP. Coloma Farms, Plover River Farms and Flyte Family Farms all received grant funding to conduct commercial nitrogen optimization research in 2023 (grant funding is for two years). Coloma Farms also received a separate NOPP Grant in 2024, working with UW Water Quality Specialist Dr. Steven Hall on the use of a liquid cover crop (glycerol) to reduce nitrate leaching. Isaac Isherwood received a 2024 NOPP Grant on optimizing nitrogen in potatoes to reduce nitrogen leaching on sandy soil; and McCain Foods is continuing its work with a second NOPP Grant in 2024 working with two farms to optimize nitrogen use for potatoes in Central Wisconsin.

- Collaboration with the Village of Plover, the Wisconsin Wetlands Association, the Wisconsin Wildlife Federation, Wisconsin DNR, UW-Stevens Point, and others on the Little Plover River Watershed Enhancement Project (LPRWEP). This multi-party collaboration has improved the health and flow of the Little Plover River (LRP) and the quality of life of the surrounding community. The WPVGA recognizes that restoring the health of the river requires an array of on-the-ground practices and voluntary landowner participation, and is committed to utilizing a combination of protection, restoration and management practices that ensure the project's success. WPVGA member farm Myron Soik & Sons was instrumental in the success of this project by agreeing to take a vegetable field out of production and decommissioning a high capacity well near the headwaters of the Little Plover River.

- Maintaining and monitoring a network of privately-owned irrigation wells in the Central Sands to measure groundwater levels. The network currently consists of over 50 wells across multiple Central Wisconsin counties sampled one to three times/year. The database is maintained by GZA GeoEnvironmental, Inc., and information is available on the WPVGA website (www.wisconsinpotatoes.com).

- The WPVGA continues to collaborate with the University of Wisconsin and the DNR on a new initiative to recognize and reward water conservation. The Wisconsin Water Stewards Program establishes a baseline of water stewardship practices and assists growers in making continuous improvements in the area of water conservation. Growers have access to a broad range of expertise to help determine the best way to manage and conserve water resources on their individual farms. This has also become a component of the WPVGA's high-bar sustainability program known as Healthy Grown.

- The WPVGA is partnering with Discovery Farms Wisconsin on a grower-led project in the Antigo Flats, an area of 70,000 acres in north central Wisconsin. The project is interested in documenting Phosphorus (P) loss from runoff events, learning about stream flow, reducing P loads to the Spring Brook and Eau Claire River watersheds and evaluating the impact of in-field actions on water quality. Two edge-of-field surface monitoring sites are located in Langlade County on seed potato operations. The Nature Conservancy is also contributing grant funds toward this project (seven years at $15,000/year).

- In cooperation with the DNR, the WPVGA continues to collect and post data from over 25 monitoring wells to continuously track fluctuations in groundwater at regular intervals across three areas designated as high risk for surface water impacts (Little Plover River/Plover area, Long Lake/Plainfield area, and Pleasant Lake/Coloma area). Groundwater elevations are posted at https://wisa.cals.wisc.edu every three weeks. The DNR received permission from the WPVGA to conduct the data collection and posting from the monitoring wells in the Plainfield and Coloma areas as part of the Central Sands Lakes Study component of 2017 Wisconsin Act 10, related to the potential impacts of groundwater withdrawals on three lakes in the Central Sands.

All these WPVGA initiatives are working toward sustainable groundwater quantity and quality through evaluating and implementing strategies to increase the efficiency of irrigation and crop production while conserving the amount of water used and maintaining or improving water quality.