Buffer law flexibility yields results

CLEAN WATER LAND & LEGACY AMENDMENT

A reduced-width buffer works in conjunction with stabilized tile intakes to improve water quality on a farm in Chisago County.
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From west to east, SWCD staff across Minnesota works with farmers to devise alternative practices best-suited to their operation, topography

A planning tool is helping local conservation staff and producers across the state consider options and choose the best alternative practices for landowners working to comply with Minnesota's riparian buffer law.

A provision of Minnesota's riparian buffer law, alternative practices allow landowners to reduce the required buffer area while complying with state statute. More than 3,000 parcels throughout Minnesota use alternative practices to adhere to buffer law requirements.

Funded by the Minnesota Corn Growers Association (MCGA), designed by the University of Minnesota, and supported by the Minnesota Board of Soil and Water Resources (BWSR), the Decision Support Tool (DST) uses site-specific data such as location, soil type, slope and current land management practices to recommend alternative practice options. The tool is based on scientific research that examines how effective 16.5-

Common milkweed seeds emerge from their pod within a riparian buffer on a Chisago County farm in fall 2018. Native plants such as milkweed play a key role in enabling buffers to effectively filter runoff, improving water quality and provide habitat for pollinators.

and 50-foot buffers are in preventing phosphorous and sediment runoff. The DST provides guidance for conservation staff and landowners, outlining options for combinations of alternative practices and a smaller buffer that would be as effective as a full-width buffer.

According to BWSR Resource Conservation Section Manager Tom Gile, the key is finding options that maintain buffers' benefits and work with the farmer's operation.

Buffers can provide multiple benefits for water quality. They stabilize banks, promote nutrient absorption, mitigate erosion and filter pollutants. Alternative practices can provide comparable water-quality benefits, and may be a better fit for site conditions and land management objectives.

With the help of soil and water conservation district staff, BWSR developed a toolbox of common alternative practices. The DST expands on the common alternative practices, recommending more ways to reduce the buffer footprint to comply with the law.

Tyler Knutson, Yellow Medicine Soil & Water Conservation District (SWCD) technical director, has worked with many local landowners on alternative practices. Situated on the border of South Dakota, Yellow Medicine County consists of highly productive agricultural land. About 87 percent of its land surface is used for agriculture, according to the state of Minnesota's geospatial information office.

Using the DST, Knutson devised a plan for the Lecy Family Farm, which produces corn and soybeans, and raises Angus cattle near the Minnesota River. Instead of a 50-foot buffer, the farm installed a 16.5-foot-wide strip buffering the river, and employed no-till in the adjacent field.

"They came to me shortly after the buffer law had passed and asked 'What do we need to do on the river?'" Knutson said. "I gave this plan to them, and it seemed like a good option. They just want to be compliant." Knutson said.

On this farm adjacent to the Minnesota River in Yellow Medicine County, cattle graze on soybean residue in a no-till field.

Nearly 200 miles east of Yellow Medicine County, producers and local conservation staff in Chisago County are also using alternative practices that fit the area's topography. Bordering the St. Croix River, St. Croix County contains a diverse physical environment that includes many bluffs, ravines, streams, wetlands and lakes. About 34 percent of Chisago County's land-use is agricultural, according to the state of Minnesota's geospatial information office.

Chisago County SWCD District Administrator Craig Mell has worked with a number of landowners to bring properties into compliance with the buffer law. Among them: the May family's corn and soybean operation. Ditches on the Mays' property had negative slopes, so SWCD staff looked at a practice outlined in BWSR's toolbox that specifically addresses negative slopes along public ditches.

SWCD staff used the DST to devise a plan that would allow the Mays to use a BWSR buffer cost-share to help pay for installing stabilized and vegetated drain tile intakes. Those intakes help filter runoff before it enters the drain tile and discharges to the ditch.

By using this best management practice in several areas that included negative slope, the Mays could comply with the law with 16.5-foot buffers. The Mays also used BWSR buffer cost-share to help pay for seeding standard 16.5-foot buffers on several parcels where they chose not to use alternative practices.

"The Mays had noticed that in some areas the erosion was really bad. Now those areas are stable, and they are happy with the results," Mell said.

Elsewhere in the county, several farmers combine strip tillage — a method of conservation tillage that disturbs only the seed row while maintaining the soil drying and warming benefits of conventional tillage — with 5-foot vegetated buffers where a 16.5-foot buffer is required. Others enrolled in the Minnesota Agricultural Water Quality Certification Program (MAWQCP) to meet Buffer Law requirements.

"All across the state, SWCDs and farmers are using alterative practices that will work within diverse landscapes and are tailored to a specific site and operation of the farmer to both improve water quality and maintain productive farmland," Gile said.

To learn more about alternative practices and buffer law, visit BWSR's buffer program website here.