



Prairie grasses and flowers help filter out nutrients from runoff before they can enter the drinking water source of Remsen, seen in the background. They also provide valuable wildlife habitat. Inset: The plantings protect the town's wellhead, Clay Smith



Innovative plan helps drinking water

Folks in Remsen know that if you want clean water, you go to the source. With high nitrate levels threatening its drinking water wells, the town faced expensive treatment costs. But some innovative thinking created an affordable solution that benefits residents, students and wildlife.

Through a major source water protection project, the city created a comprehensive plan that protects drinking water sources by decreasing pollutants reaching public wells. The plan called for acquiring land in priority areas and using a number of practices, including converting cropland to native grasses. Those deep-rooted prairie plants use nitrates in the soil before they can seep into groundwater and wells, and they give shelter to wildlife, especially pheasants.

While the DNR contacted Remsen about participating in a pilot source water project, it quickly became a local effort, led by a community planning team and a supporting cast of federal, state and local partners. The planning team worked with the DNR on a groundwater investigation and water monitoring plan, as well as identifying high-nitrate wells and priority areas. USDA chose nitrate-reducing options, then Pheasants Forever provided the seed, planted the grasses and is maintaining the area's native plants. "Projects on local wellheads give us the opportunity to replace some of those acres of lost habitat – they're critical no matter where they are, and this helps a community's drinking water source," said Pheasants Forever's John Linqvist.

"The source water protection plan offers so many benefits to this community," said Becky Ohrtman, who coordinates the DNR's Source Water Protection Program. "It all goes back to the groundwater assessment, careful planning and a long-term partnership."

The Remsen Fire Department keeps weeds in check by assisting with controlled burns of the native grasses. The DNR will continue to monitor the public wells, watching for dropping nitrate levels. The community team, which worked to secure grants and State Revolving Fund loans, will also work to plug abandoned wells to prevent further groundwater contamination and on projects to keep their neighbors involved. As a result, the town gets improved drinking water, pheasants have a new place to call home and students can use the native plantings as a 70-acre outdoor classroom. "Everyone in town is pretty excited about this project," said Steve Pick, Remsen utilities director.



Steve Pick, Remsen Utilities Director, and Don Kolker, Remsen Utility Board Chairman, at the town's drinking water wellhead. Clay Smith

Project partners:

Iowa DNR
USDA-NRCS
City of Remsen
Local landowners
Pheasants Forever
Plymouth County

Plymouth SWCD
Sioux Rivers RC&D
WIRB
State Revolving Fund
USDA-Agricultural Research
Service