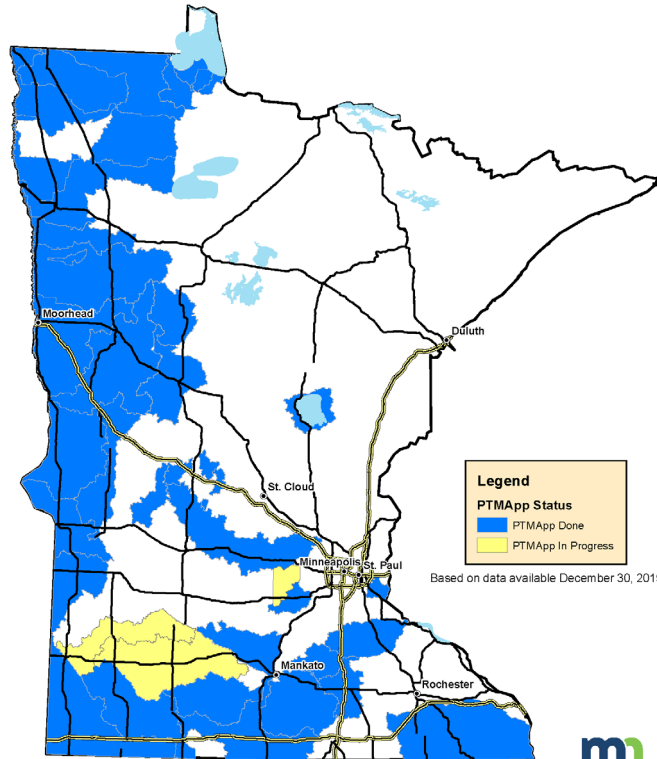


PTMapp enables planning with precision

Conservation professionals across Minnesota are coming together to pursue water quality goals at a watershed level through Minnesota Board of Water and Soil Resources (BWSR) programs such as One Watershed, One Plan (1W1P) and the Metropolitan Surface Water or Groundwater Management framework. Planning partnerships established through these programs work to develop comprehensive watershed management plans that strive to spend limited resources where they are needed most.

Planning for water quality on a watershed scale is complex. Implementing projects where they are most needed can be just as challenging. BWSR developed an online tool to help local governments implement comprehensive management plans accurately and efficiently. The Prioritize, Target, and Measure Application (PTMapp) helps local government staff plan projects with precision, explore cost-effective implementation options, and measure water quality improvements.

PTMapp evolved from the Water Quality Decision Support Application (WQDSA) developed by the International Water Institute. BWSR awarded a Clean Water Fund grant in 2011 to the Red River Watershed Management Board to support development of this tool. Access to detailed information about local landscapes through the WQDSA allowed soil and water conservation district staff to identify areas that contributed



Status of PTMapp modeling in Minnesota watersheds

the most sediment and nutrients to waterways, which helped inform decisions about which practices would be most beneficial for a specific area.

In 2014, BWSR pursued a partnership with Houston Engineering to create a tool with greater functionality than WQDSA. PTMapp uses data about soil types and land use, plus high-resolution elevation imaging and terrain data based on light detection and ranging (LiDAR) to estimate sediment- and nutrient-loading in downstream waters. These priority points are usually developed during watershed planning processes and can include lakes, rivers, and streams designated as impaired. Priority points also include water resources of local interest, such as ditches that require frequent maintenance.

“We started using the WQDSA data in 2013 to secure several Clean Water Fund grants and work with landowners to put conservation on the ground. While this older data was good, it did not quite allow us to target specific practices, evaluate their relative ability to help achieve water quality goals, or estimate the cost of moving the needle in the right direction” said Becker SWCD Administrator Peter Mead. “The new data available through PTMapp provides this additional information.”

Today, data is available through PTMapp for approximately half of the agricultural areas in Minnesota. More data is added to the system as more local governments use the tool to plan projects.

Most comprehensive watershed management plans for rural areas rank sediment- and nutrient-loading from upland sources as a priority concern. Data provided by PTMapp allows these planning partnerships to include specific reduction goals for nutrient and sediment loading. PTMapp data can also be used by local governments applying for Clean Water Fund grants.

“This approach to conservation planning and implementation helps ensure responsible public investments in conservation,” said BWSR Clean Water Specialist Henry Van Offelen. “PTMapp allows local planning teams to explore the water quality improvement outcomes of site-specific best management practice implementation.”