Groundwater reports round out data

During a public informational meeting about the Thief River One Watershed, One Plan, maps and tables depicted resource concerns identified by a public vote. Houston Engineering and planning partners used input gathered at public meetings to identify 1W1P priorities.
Photo Credit: Houston Engineering

Combined with surface water reports, they give planners a more complete picture of restoration and protection strategies as they complete One Watershed, One Plan

CLEAN WATER LAND & LEGACY AMENDMENT

Conservation staff involved in the One Watershed, One Plan (1W1P) process now have access to groundwater information and technical expertise — including comprehensive data about local groundwater resources, risks and strategies.

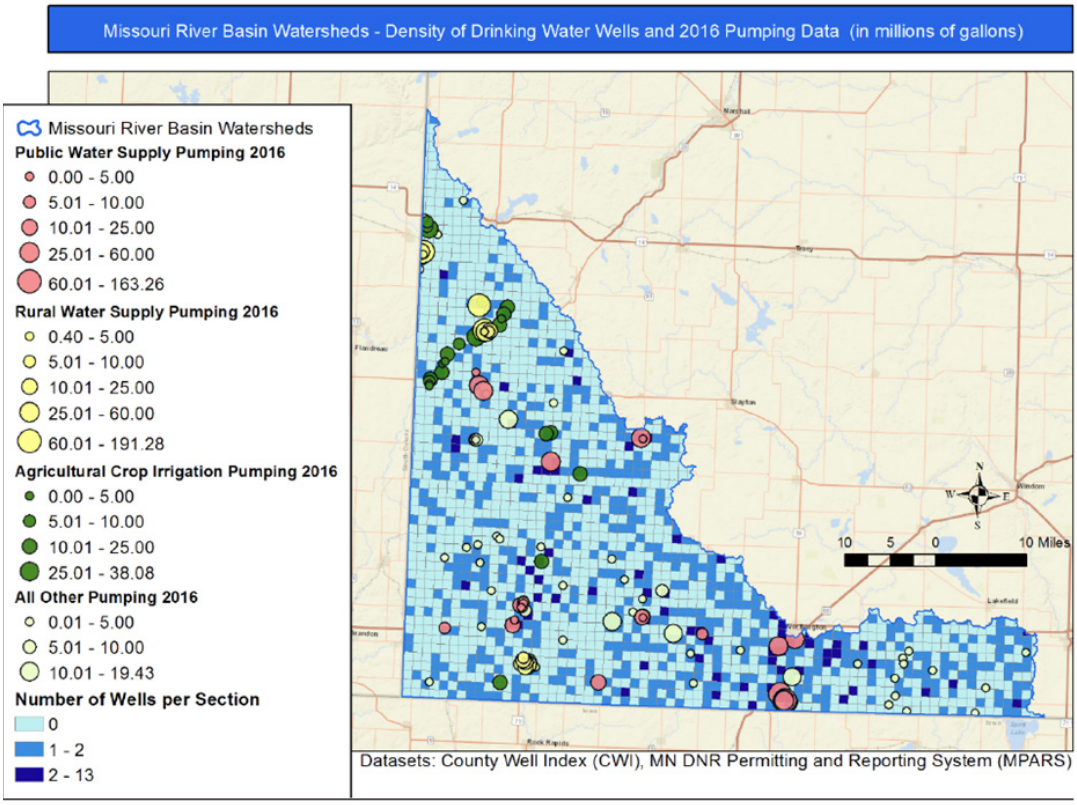
Information about groundwater quality and quantity concerns was previously available, but not everyone knew it existed or where to find it. The compilation will help groups such as those on the Cannon River, for which more than 45 state plans detail concerns.

With Groundwater Restoration and Protection Strategies (GRAPS) reports planned for each of Minnesota's 81 major watersheds, the Minnesota Department of Health (MDH) is making groundwater data readily available in a format that identifies the most significant risks.

MDH received Clean Water Funds to create the reports. State agencies contributing in-kind data and expertise include the Department of Natural Resources (DNR), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Agriculture (MDA) and Minnesota Board of Water and Soil Resources (BWSR).

> **"Hopefully groundwater will become part of their normal business plan moving forward, and part of their resource protection."**
>
> — Carrie Raber,
> Minnesota Department of Health

"Our goal is to fill in the gaps to help people make the decisions when it comes to watershed planning," said Carrie Raber, a principal planner



This map is included in the Groundwater Restoration and Protection Strategies (GRAPS) report from the Missouri River Watershed in southwestern Minnesota. It shows the density of drinking water wells per section combined with 2016 water use by public water supply, rural water supply, irrigation and other sources of pumping.
Contributed Photo

at DOH responsible for coordinating GRAPS. "We are trying to provide information so if a local group has prioritized groundwater or drinking water … it helps target where the activities would be most effective in protecting the resource."

GRAPS reports are protection-based. But restoration may become part of the plan if contaminants or over-use are identified. Because it's difficult to determine the amount of best management practices required to protect or restore groundwater, GRAPS reports don't include quantification.

"We're advocating for sourcewater protection, which is managing land uses and contamination sources for private wells and public water suppliers. As a whole, we're looking to have groundwater managed," Raber said.

The target audience — soil and water conservation districts, watershed districts and county governments — would use GRAPS in comprehensive watershed planning.

"It helps identify where the greatest risk is in a given watershed, and then the GRAPS report identifies any contaminants in a given area. It also calls out specific land uses that may lead to contamination and where that contamination is most likely, based on the geology," Raber said.

GRAPS grew out of an effort that dates to 2013, when the Minnesota Association of Soil & Water Conservation Districts (MASWCD) approved a resolution that supported sharing groundwater data.

In response, the five state agencies began compiling data in 2015.

The Department of Health provides GRAPS reports to teams working on One Watershed, One Plan — the locally driven, watershed-based approach that spans local government boundaries as it prioritizes and targets conservation work with the potential to make the biggest water-quality improvements.

GRAPS reports and Watershed Restoration and Protection Strategies (WRAPS) reports identify restoration and protection strategies in the same geographic area. WRAPS reports focus on surface water; GRAPS reports focus on groundwater.

"In addition to managing land use, we're trying to push our audience to think about comprehensive plans, where development is best-suited, do they have an adequate source of water to (handle) growth," Raber said.

GRAPS reports

See completed GRAPS reports here: https://bit.ly/2x76QuV

A GRAPS report for the Missouri River Basin became available when the 1W1P process was underway.

"Because the Missouri River One Watershed, One Plan's priorities are so heavily weighted toward groundwater, (GRAPS) definitely is and will be used (for targeting local priorities) in the 10-year cycle," said BWSR Board Conservationist Douglas Goodrich.

"Groundwater data tends to be kind of here and there amongst different agencies. This attempt to put it in one spot is helpful to planners. Otherwise we'd have to be bobbing and weaving everywhere to find all of this data," Goodrich said.

Once a 1W1P team sets priorities, it can use the targeted strategies and actions table from the GRAPS report to develop a local implementation plan.

Most 1W1Ps have identified groundwater and/or drinking water as a priority in their local plans. The GRAPS reports and the data compiled in report development have been a valuable resource for developing a deeper understanding of groundwater data, protection strategies and actions.

The five-agency team plans to produce GRAPS reports for 2017 1W1P grant recipients. Eventually, all planning areas will have a report. Next, Raber said the team will create an online tool that allows real-time data access.