

# Groundwater management: Coming to an area near you

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**SHOREVIEW** — The Department of Natural Resources' new groundwater management area (GWMA) is termed a "wake-up call" to Minnesotans in a draft report on the program. In the land of 10,000 lakes, water is becoming scarce in some parts.

According to the department's strategic groundwater management plan, "unprecedented water use conflicts are arising between businesses, towns and residents." However, there is still time as most areas are not in "crisis" mode.

"Our responsibility is to ensure that use of groundwater is sustainable," said DNR hydrogeologist and project manager Paul Putzier. "In the metro, there is a growing number of indicators that make it clear we need to take additional steps to avoid water availability and degradation problems in the next 10 to 20 years."

There are three pilot groundwater management areas in the state, including one in the north and east metro that includes Washington County, Ramsey County and southern Anoka County. Basically, the area's boundaries stretch from the St. Croix River to the Mississippi River directly above the Prairie du Chien aquifer.

In a December presentation to the Rice Creek Watershed District board of managers, Putzier listed the program's objectives:

- All aquifers be within sustainable thresholds for water levels.
- All appropriators of groundwater have the required permits.
- All permitted users employ water conservation practices.
- All aquifers be without water use conflicts.
- Permitted groundwater appropriations have no adverse impact on trout streams, calcareous fens and other groundwater.

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Putzier

## Groundwater

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• Permitted groundwater appropriations do not adversely impact water quality.

The DNR has a statutory responsibility to protect natural resources that rely on water, Putzier said, much like the watershed district mandate.

Through the permitting process, the DNR manages water supply wells with over 1 million gallons per year capacity. There are about 300 permits for high-capacity wells in the working boundary for the north and east metro, according to Putzier, and about 8,000 wells in the state. Permits can include several wells.

The permitting process can be elaborate when a city or industry wants a well that provides more than 1 million gallons. With the GMWA, that process will be even more rigorous and based on cumulative impact, Putzier said.

Risks to the state's water future were highlighted and discussed during the 2013 legislative session. The Legislature responded by appropriating \$7 million to support enhanced water management programs, and \$3 million for statewide mapping and establishment of groundwater management areas. Some of those funds will be used for more metro observation wells that monitor groundwater.

The DNR has years of monitoring data that show the growth of groundwater use over the past decades, Putzier told the board. "Our observation wells show falling aquifer levels. These trends tell us we may have some challenges in long-term water supplies if we rely on groundwater. The GWMA will help us plan and understand what growth in the north and east metro will mean to water challenges."

One thing the hydrogeologist hopes to see change is water usage per capita.

"Water use is growing rather than stabilizing, which is a very different graphic than we see in other parts of the country. Now is the time to think about how we deal with these issues."

Efficient use of water, or lack thereof, is particularly apparent to Putzier when it comes to irrigating lawns.

"I live in Burnsville. We're using water that is 2,000 to 5,000 years old. It's painful to me to watch lawns being watered with ancient water from deep aquifers. I'm not against lawns. It's a choice we make as a society.

"My point is we need to do a better job using water more effectively. As a co-worker said, 'we need to use every gal-

lon one more time for one more thing,' to solve our problems," Putzier said. "We're not there yet."

The project manager provided a few comments on concerns he's been hearing regarding the GWMA:

• The GWMA provides new evaluation criteria for the permitting process but it is not a new authority with respect to high-capacity wells. "The DNR already has authority to set those limits," Putzier said.

• All permitted users are part of the plan, not just cities.

• Non-permitted water use within the management area will continue to be evaluated with respect to cumulative use. In rural areas like Washington County, a lot of groundwater use falls below the permitting threshold. "We are trying to understand that in context of cumulative use," Putzier noted. "In rural areas, we think 10 percent of groundwater use is from private wells, which are not permitted. Many of those are closed loop systems. They are not on sanitary sewer. Water is pumped out and goes into the septic system. There's not much impact. The problem is with sanitary sewer connections. We pump billions and billions of gallons of water through our homes, which goes down the drain to the Mississippi River. We are pumping groundwater up, out and away."

• Developing cities and fully developed cities are concerned about how water use changes and permitting issues may affect them. "We are very aware of those issues and will work with cities," Putzier continued. "We are not in a mode to ask for changes overnight for expensive infrastructure systems that have been built, have bonding or have received approval. We are aware of that and it will be incorporated into a plan."

• There will be no rationing of water in communities that aren't fully developed. "We already have that authority and look at areas in that regard," Putzier said. "Communities need water. The DNR is an economic development agency that helps communities understand what their limits are in terms of natural resources."

As population and demand increases, Putzier wants to see water use flatten out.

"It's not about who gets water, although that could happen in the long run but not because of what we're doing. If cities see limits ahead on water availabil-

### If you go:

The next meeting on the north and east groundwater management area is 6:30-8:30 p.m. Jan. 8 in Shoreview. DNR Commissioner Tom Landwehr will provide an overview followed by DNR division head Jason Moeckel, who will talk on water permitting and groundwater management. Paul Putzier will discuss project implementation followed by a question-and-answer session. The meeting will be held at the Shoreview Community Center, Shoreview Room, 4580 Victoria St. N.

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