Department of Natural Resources Fact Sheet

2008 CAPITAL BUDGET
Ground Water Monitoring, Observation Wells
Governor's Recommendation: $1,000,000

It is needed because

Two-thirds of Minnesota's public water supply comes from ground water. Demand for water resources in Minnesota is increasing at a rate greater than population growth. As demand increases, communities in some areas of the state are struggling to find an adequate water supply. Monitoring of ground water levels provides state, local, and private partners the up-to-date information needed for water supply planning.

Monitoring of ground water levels in Minnesota began in 1947, but the number of ground water monitoring wells has remained constant at approximately 750 wells for many years. In order to plan effectively for current and future water needs, more information is needed in select areas of the state where the well network is inadequate to assess ground water availability.

Major project elements

A ground water level monitoring network will collect the data needed to determine long-term trends within the state's most important aquifers. This funding is a first step toward achieving an adequate statewide ground water level monitoring system. This funding will:

1) Construct new ground water level monitoring wells in priority areas of the state, and
2) Identify and seal existing state-owned monitoring wells that are no longer needed or are no longer functional.

Priority-setting

Priority locations for new monitoring wells are in areas of the state where the density or depth of wells in the monitoring network is inadequate to provide the data necessary to assess ground water availability for water supply planning. These priority areas include bedrock aquifers with high usage, limited recharge, and identified gaps in the monitoring network.

The Twin Cities metropolitan area is a high priority monitoring area where the density of monitoring wells may be insufficient to detect the development of depressed water levels that could be caused by excessive ground water withdrawal. This deficiency is especially acute for the deeper aquifers that are known to recharge very slowly.

The south-central portion of the state is an important recharge area for some the state's major bedrock aquifers. Funding will increase knowledge of this vital area and provide critical monitoring in an area with a recent influx of water intensive industries.

Project locations

An estimated 10 to 15 deep wells (Mt. Simon aquifer) would be added to the network in the expanded 13-county Twin Cities metropolitan area.

In the south-central region of the state, along the western edge of the state's major bedrock aquifers, there are only five monitoring wells in the network, only one of which is in the deepest Mt. Simon aquifer. These funds would allow the addition of several more monitoring wells in this area.

Key measures and outcomes

Expanded ground water level monitoring network provides information critical to determining trends for aquifer sustainability and better informs management of the state's water supply.

- The addition of an estimated 10-15 deep wells in the 13-county Twin Cities metropolitan area,
- Several new monitoring locations in the state's south-central region, and
- Seal existing, state-owned wells that are obsolete or no longer functional.

For further information contact:

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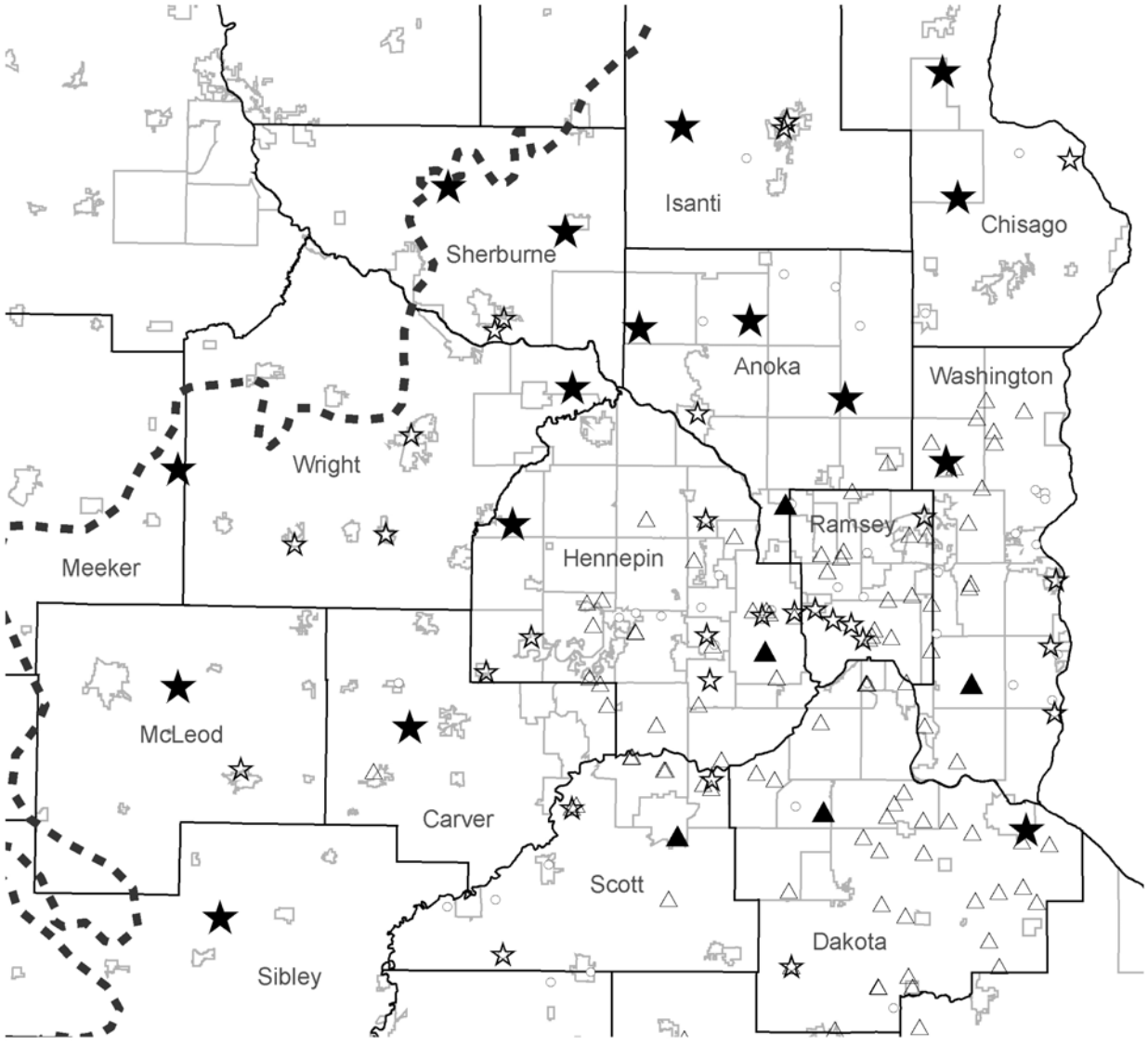
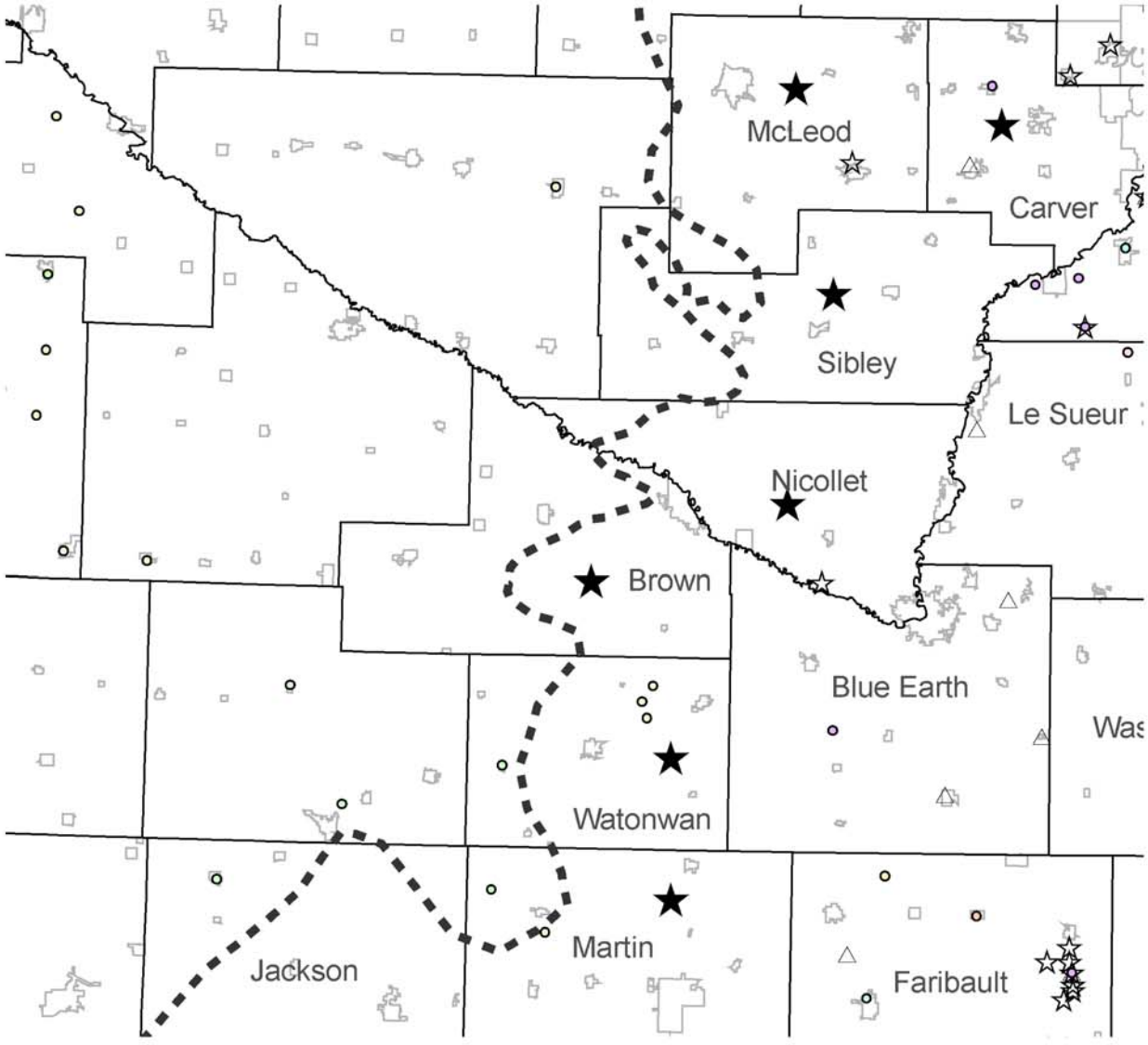
DNR Capital Project Priorities as of January 2008

Waters acquisition - metro and adjoining areas
Proposed ground water monitoring/observation well locations compared to existing network and extent of bedrock aquifers



DNR Capital Project Priorities as of January 2008

Waters acquisition - South-central Minnesota
Proposed ground water monitoring/observation well locations compared to existing network and extent of bedrock aquifers



Possible well nest locations - deepest aquifer

▲ Jordan ★ Mt. Simon

Existing Bedrock Observation (Ob) wells

△ Prairie du Chien/Jordan

☆ Mt. Simon

○ Other

West edge bedrock aquifers

County Boundaries

Municipal Boundaries

10 5 0 10 Miles

Minnesota Department of Natural Resources

10/2/07