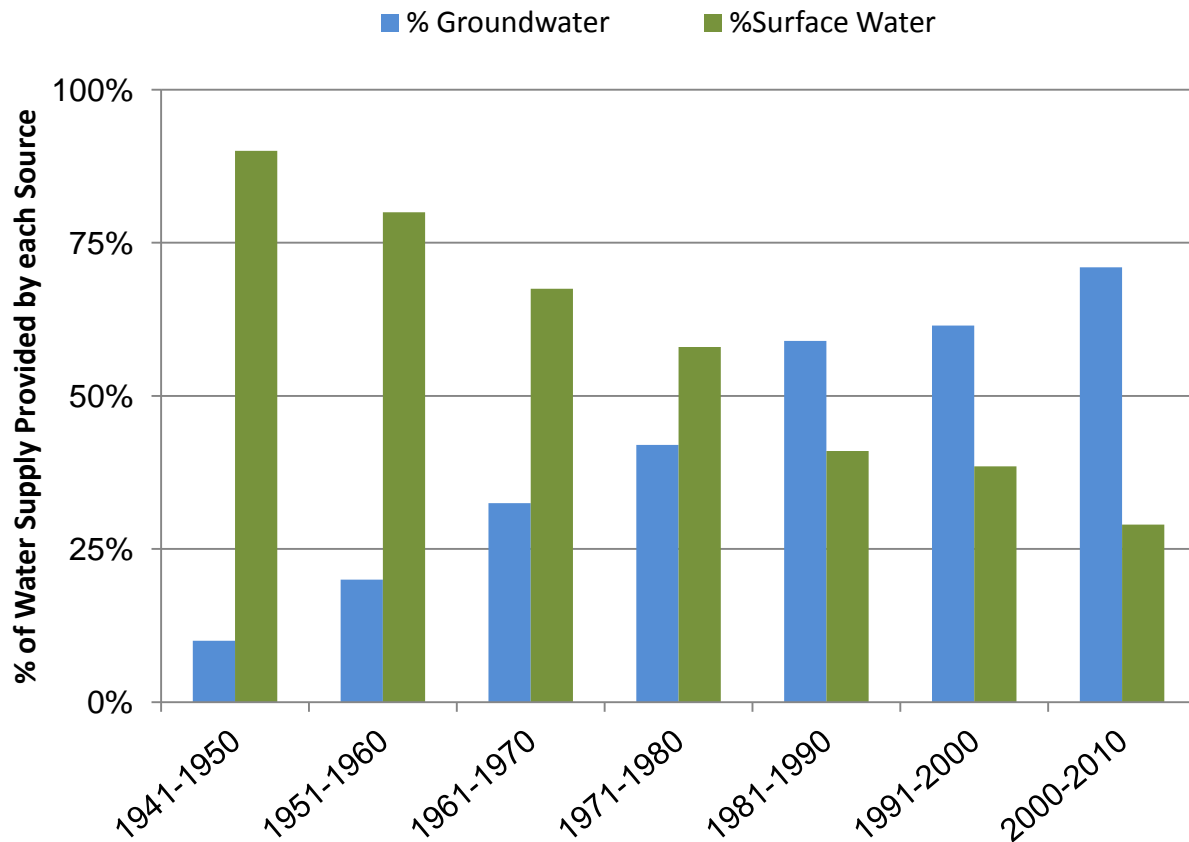


## Water Supply Issues Twin Cities Metropolitan Area, Minnesota

April 17, 2013

Surface water and groundwater resources in the Twin Cities Metropolitan Area, Minnesota are at growing risk of being impacted by changing land use and increasing water demand, including a historical trend toward increased groundwater pumping.



A series of maps illustrate areas of concern for surface water and groundwater in the region:

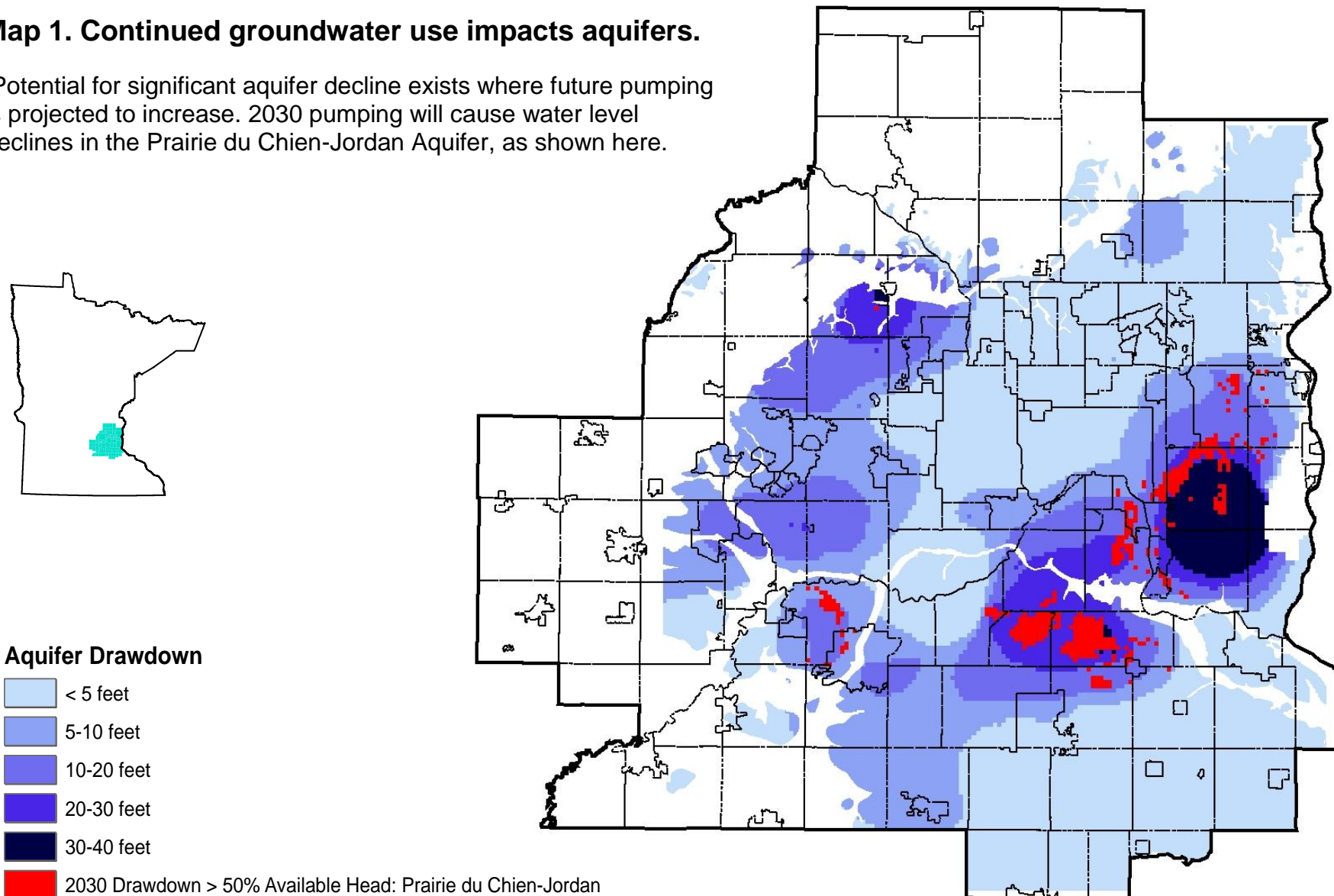
Map 1: Potential for significant aquifer decline.

Map 2: Potential for significant groundwater contamination.

Map 3: Potential for impact to vulnerable surface water features.

**Map 1. Continued groundwater use impacts aquifers.**


Potential for significant aquifer decline exists where future pumping is projected to increase. 2030 pumping will cause water level declines in the Prairie du Chien-Jordan Aquifer, as shown here.



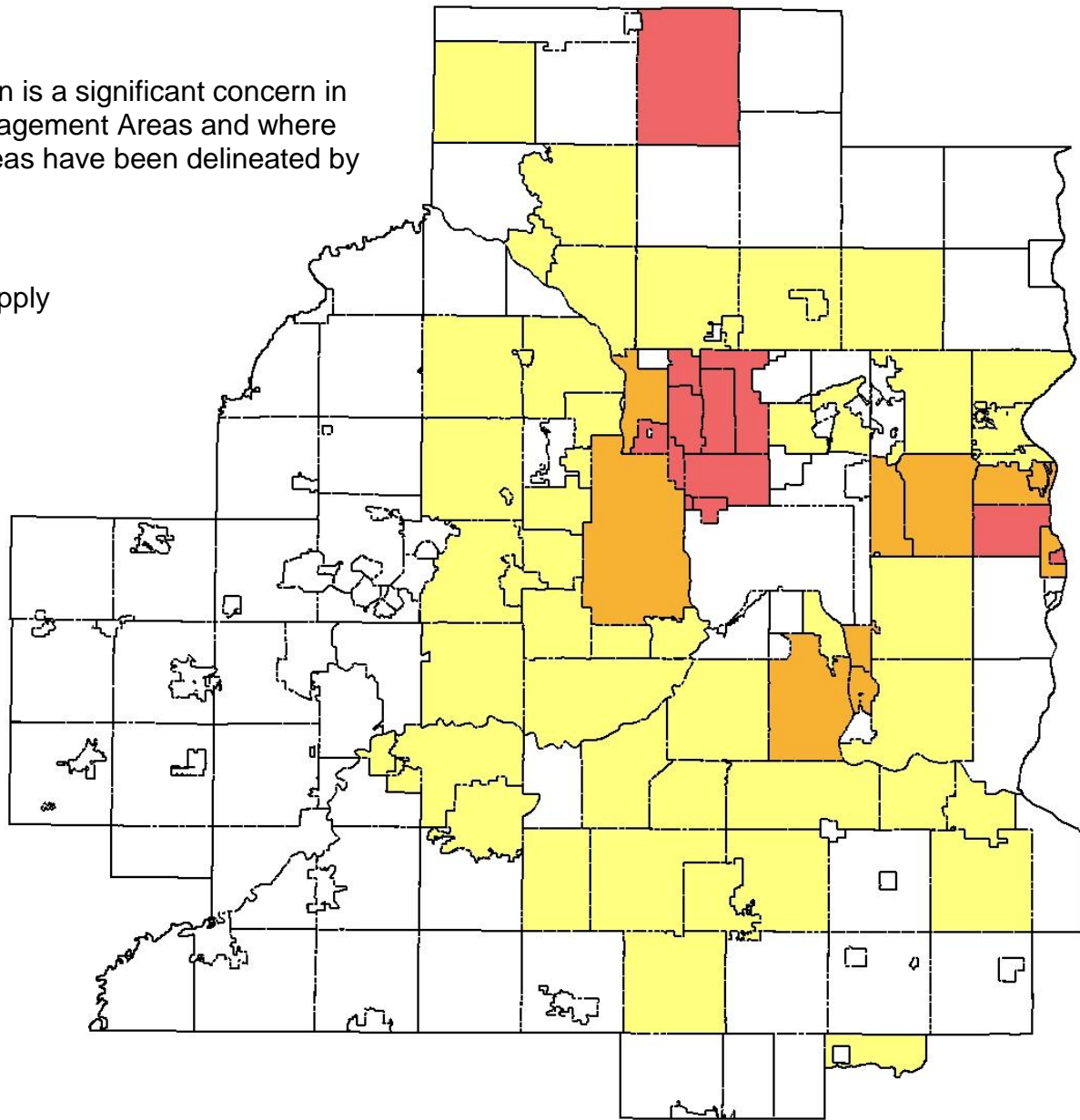
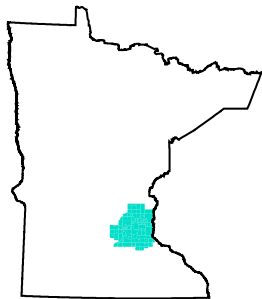
## Map 2. Groundwater quality.

Potential for groundwater contamination is a significant concern in vulnerable Drinking Water Supply Management Areas and where Special Well Construction & Boring Areas have been delineated by the MN Department of Health.

 Vulnerable Drinking Water Supply Management Area (MDH)



 Well drilling restricted due to severe contamination (MDH)


 Both



### Map 3. Impacts on surface water.

Potential for impacts to surface water features exists where surface waters are in direct connection to the regional groundwater system below.

-  Surface water features in direct connection with the regional groundwater system below
-  Community with one or more vulnerable surface water features

 Example of surface water where impacts are being evaluated:

- 1) Ramsey Wetlands
- 2) Brooklyn Park Wetlands
- 3) White Bear Lake
- 4) Seminary Fen
- 5) Savage Fen

