http://www.presspubs.com/white_bear/news/article_1f9d21be-ca28-11e7-9546-7f20dfae117d.html

Pumping's impact on White Bear Lake level easier to decode with new tool

By Debra Neutkens/Editor Nov 15, 2017 Updated Nov 15, 2017

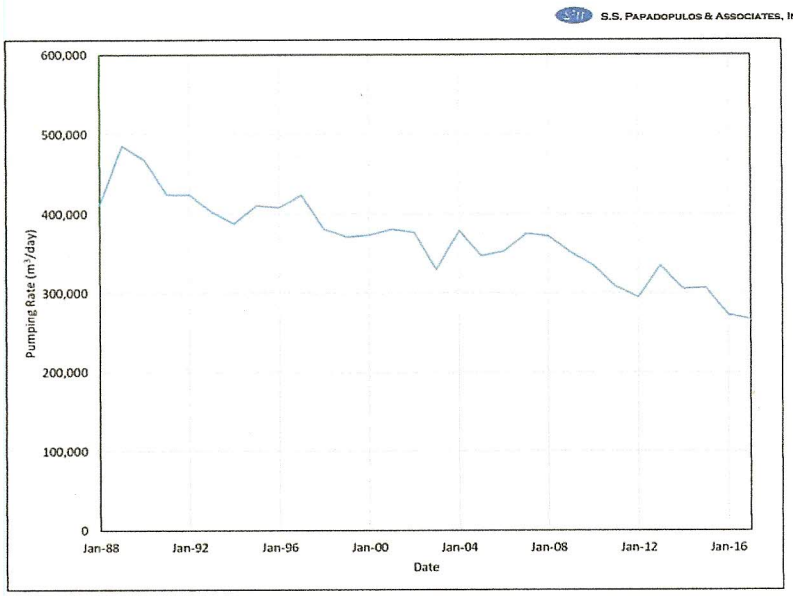

Figure 4-2 Transient Groundwater Pumping (1988-2016)

Transient groundwater pumping shows a downward trend in the management area from 1988 to 2016.
Submitted

MAPLEWOOD — The Department of Natural Resources (DNR) has a new tool in its toolbox to manage groundwater.

At a meeting with stakeholders earlier this month, the agency unveiled a water modeling tool that will help it better understand how pumping affects aquifers and lake levels within the North and East Metro Groundwater Management Area (GWMA), which includes White Bear Lake.

The "transient model" was developed by a Maryland-based firm with expertise in groundwater modeling, S.S. Papadopulos and Associates Inc.

A Nov. 3 GWMA report from the DNR indicated the new model builds off efforts of the Metropolitan Council and U.S. Geological Survey (USGS) over the last few years to predict how changes in rainfall or pumping will affect the area long term.

DNR Section Manager Jason Moeckel said the firm used the USGS steady-state model to build the transient model, which he says provides a more precise analytical tool to manage groundwater use in the north and east metro.

Officially referred to as the "Transient Northeast Metro Lakes Groundwater-flow" model, it simulates groundwater and surface water conditions throughout the area under varying conditions, including rainfall, evaporation and groundwater pumping. The model can simulate actual historical conditions or project potential future conditions.

The historical model, for example, can be used to simulate groundwater and lake levels in the past that might have resulted if pumping, rainfall or evaporation had been different.

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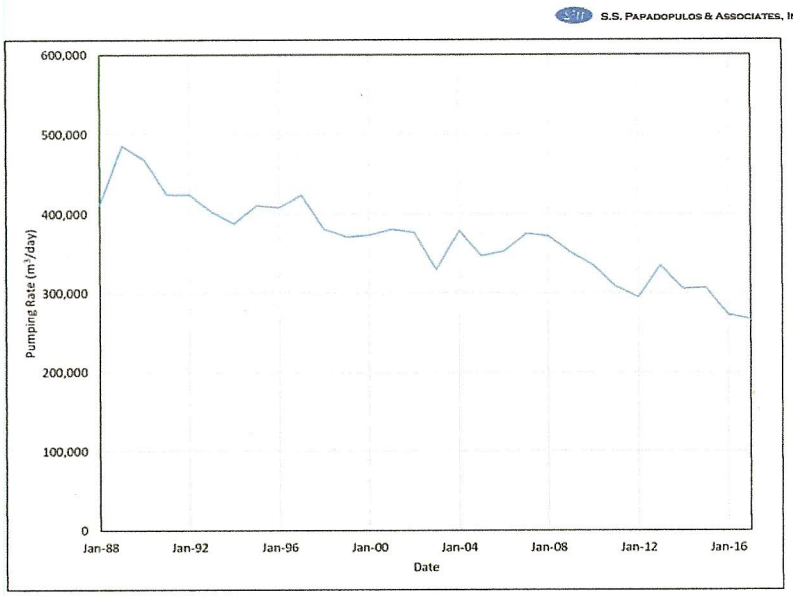

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