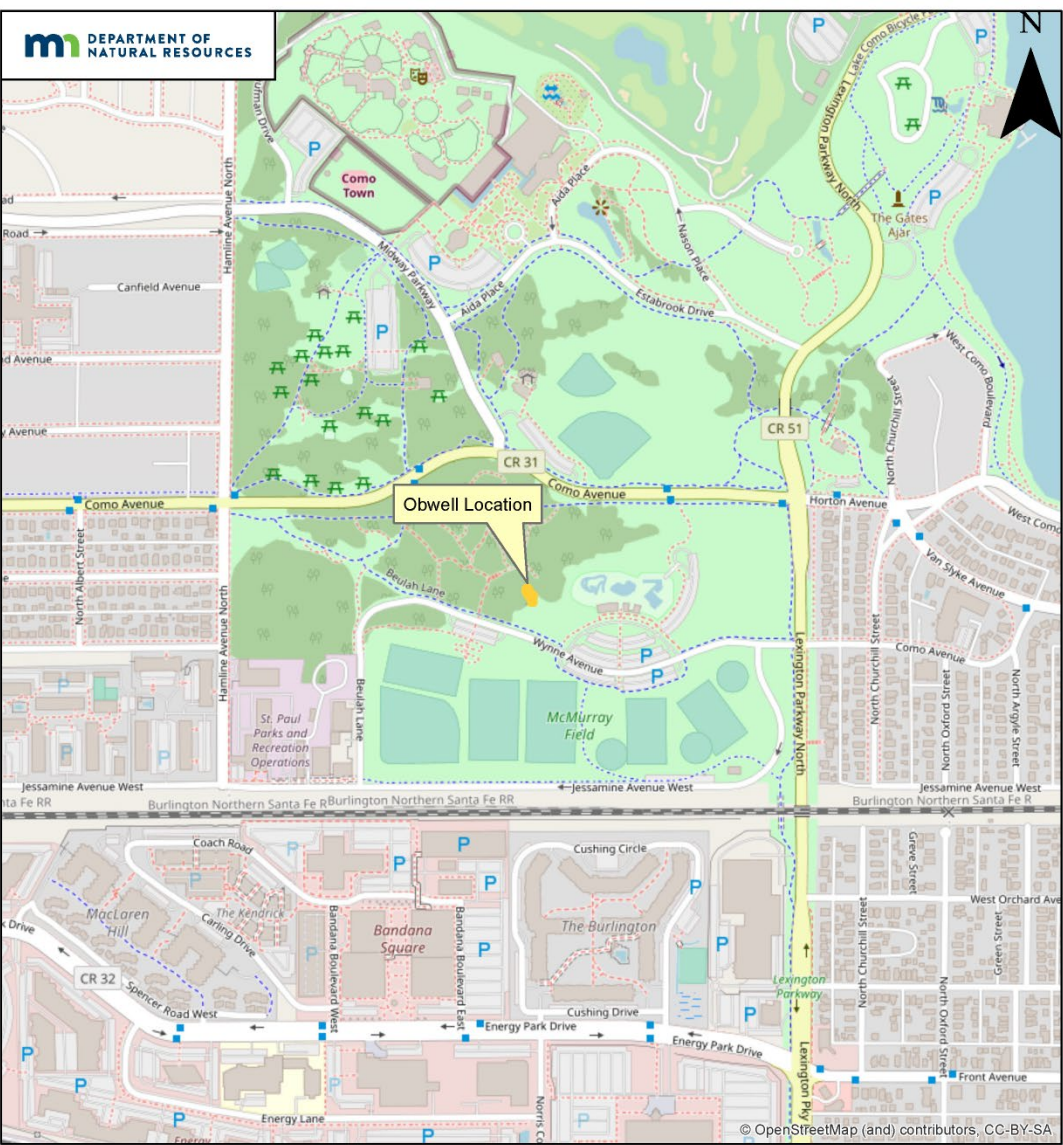


Como Regional Park: Proposed DNR Observation Well Nest

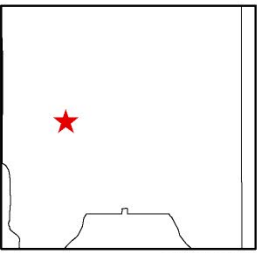
1/11/2022

Future Well Nest Location

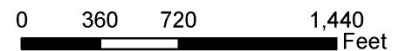
- The Minnesota Department of Natural Resources (DNR) will install an observation well nest in Como Regional Park this winter. This well nest will provide the DNR, City of Saint Paul, and the public with decades of high quality water level data for several of the most important aquifers in the area, allowing a better understanding of the water resources in the area.
- DNR will pay for all costs including installation, maintenance, and sealing costs, as well as provide all project management and oversight for the project.
- The location shown to the left is roughly 200 feet west of the Como Regional Park Pool facility and 160 feet north of Wynne Ave



Proposed DNR Observation Well Nest Location
Como Regional Park, Saint Paul



Proposed Well Nest Location



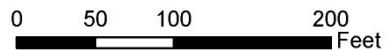
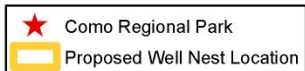
Future Well Nest Location



Proposed DNR Observation
Well Nest Location
Como Regional Park, Saint Paul



Proposed location, facing northwest



DNR Well Nest Examples

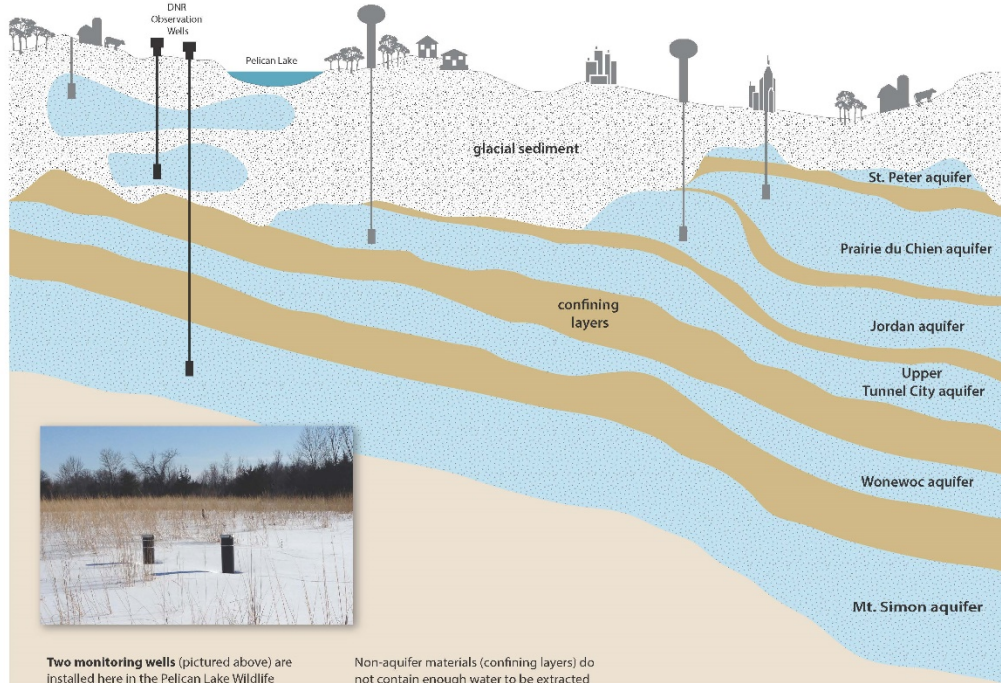


DNR nest of 4 observation wells in Solomon Park, on Minneapolis Parks and Recreation Board property. Each well is completed at the surface with a 10 to 12-inch diameter, 2 to 3 foot high locking protective casing. Total footprint is roughly 2 feet by 30 feet.

- The Como Park well nest will contain 3 different groundwater observation wells
- Each well measures water levels in a different aquifer
 - DNR has hired a drilling contractor to install two wells monitoring deeper bedrock aquifers, including the Prairie du Chien and Jordan aquifers. Data from these aquifers may be useful in assessing long term trends in groundwater and their impact on surface water bodies in the area.
 - DNR's drilling crew will then install a shallow well monitoring the Water Table Aquifer. This well may be useful for assessing the relationship between shallow groundwater and surface water bodies such as Como Lake and wetlands in the area.

Minnesota DNR Observation Wells

Monitoring for Sustainable Use



Two monitoring wells (pictured above) are installed here in the Pelican Lake Wildlife Management Area (WMA).

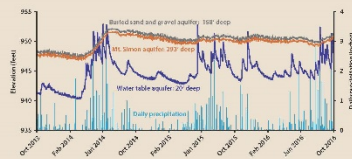
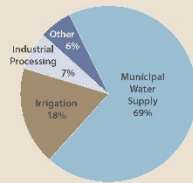
The Minnesota Department of Natural Resources (DNR) installs observation wells to monitor groundwater levels. Devices in the wells record the water level every hour. The measurements show water-level changes in aquifers and provide information on the long-term characteristics of regional aquifers and surrounding wells.

Water levels change with the season, weather, climate, changes in land use, and pumping from nearby wells. Decreasing levels over long periods can indicate drought or overuse. Heavy use may produce seasonal fluctuations that would not be observed under natural conditions.

Shallower aquifers can be found within the upper layers of sand and gravel deposited by glaciers (glacial sediment). These aquifers vary in size and productivity. Deeper sandstone and limestone aquifers are commonly used for industrial and municipal supplies, as they are capable of maintaining adequate supply under heavy demands.

Non-aquifer materials (confining layers) do not contain enough water to be extracted in useful quantities. Common confining layers in Minnesota are unsorted glacial sediments rich in clay and silt, and regional bedrock layers like shale and siltstone.

The major aquifers beneath the Twin Cities metropolitan area range in depth from just below the land surface to 1,200 feet deep. The Mt. Simon aquifer is the deepest. The Prairie du Chien and Jordan aquifers are the primary aquifers for the Twin Cities area.



The graph above shows the water levels for the two observation wells at Pelican Lake WMA and one well at Pelican Lake from October 2013–2016. It demonstrates how separate aquifers have varied responses to seasonal variations.

The pie graph to the left depicts the average reported water use from DNR permitted wells for the Twin Cities metropolitan area from 2006–2015.

Cross section information adapted from the Minnesota Geological Survey.

Interpretive Sign

- DNR will be installing an interpretive sign within 2 years of installing the wells
 - Allows us to include an example graph of water levels at the site

Minnesota Department of Health Unique Well Number: 225652

Name: MTPL at Arden Hills, LAKE JOHANNA #19

DNR Obwell Number: 62037

Aquifer Type: bedrock

County: Ramsey

Lat/Long: 45.047584/-93.173562

Read Status: actively read

Well Depth: 403 ft

Measure Point Elevation:

887.35 ft MSL (as of 1900-01-01)

887.35 ft MSL (as of 1958-08-08)

Reports and Data

- [MDH Well Log Report](#)
- Download time series data ([CSV](#) | [Excel](#))

Provisional Data[Ⓢ]

Period of Record:

2019-07-02 to 2021-10-05

Most Recent Data:

Water Level: 844.99 ft (2021-10-05 07:00)

Approved Data[Ⓢ]

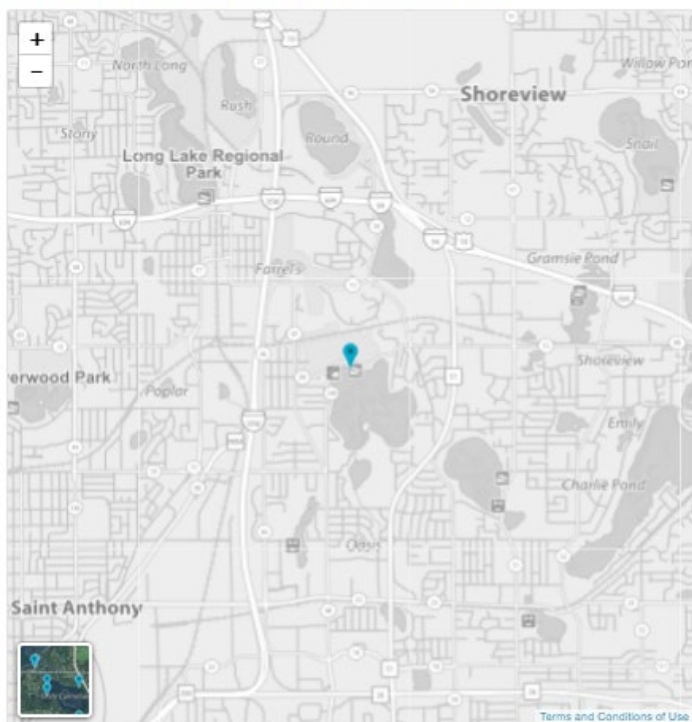
Period of Record:

2011-03-24 to 2019-07-02

Field Measurement Data[Ⓢ]

Period of Record:

1965-05-14 to 2021-10-05



Cooperative Groundwater Monitoring Website

- DNR will install data loggers in each well
- Water level data is available to the public via the DNR's Cooperative Groundwater Monitoring website:

<https://www.dnr.state.mn.us/waters/cgm/index.html>



Questions or comments?

Contact Nick Evans at:

nicholas.evans@state.mn.us

651-539-2104