

Provincial Groundwater Monitoring Network

A Partnership to Collect and Share Ambient Groundwater Level and Quality Information for Managing and Protecting Ontario's Groundwater Resources

The Provincial Groundwater Monitoring Network (PGMN) is a partnership program with all 36 Ontario conservation authorities and 10 municipalities (in areas not covered by a conservation authority) to collect and manage ambient (baseline) groundwater level and quality information from key aquifers located across Ontario.

Over the past two and a half years, the PGMN program has been significantly improved. The number of monitoring wells located across the province has increased from 300 to 423. The information system now has data on both water level and water chemistry.

Why do we monitor ambient groundwater levels and quality?

Monitoring ambient groundwater levels and quality helps set baseline conditions and assess how groundwater is affected by land use and water use. Monitoring helps identify trends and emerging issues, and provides a basis for making informed resource management decisions. It also helps measure the effectiveness of programs and policies that are designed to manage and protect the groundwater resource.

How does the PGMN work?

The PGMN program is implemented through formal partnership agreements between the MOE and each program partner. These agreements set out the roles and responsibilities for each of the partners.

In general, the MOE is responsible for establishing the monitoring network and the associated information system (PGMIS), program coordination, data analysis and reporting, maintaining the information system and technology transfer and training.

The conservation authorities and municipalities are generally responsible for the field operations including maintaining field equipment, collecting water level data and water samples, the chemical analyses of samples, and data analysis and reporting on a local level.

What makes the PGMN program different from other groundwater monitoring programs?

The PGMN program is designed to provide high quality, real-time groundwater level information across the province. Water levels are recorded once every hour and many of the monitoring wells are established with electronic telemetry units that transmit water level data to the central information system once every two weeks.

Water samples are analyzed according to the protocols of the Canadian Association for Environmental Analytical Laboratories (CAEAL).

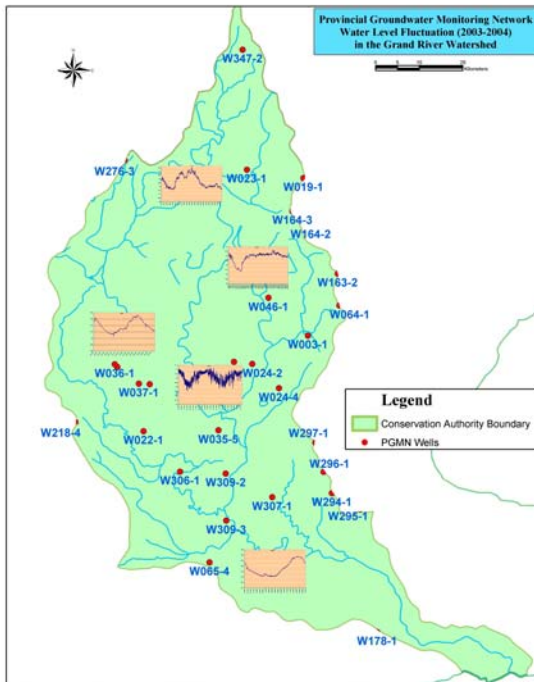
Dedicated water quality sampling equipment that stays in the monitoring well helps to ensure that contaminants are not transported from one well to another during sample collection procedures.

The web-based, central information system (PGMIS) gives network partners ready access to both the water level and water quality information.

Province-wide coverage of the network allows for the water level and quality information to be collected in a consistent and uniform manner.

The Protocol For Actions:

A protocol for follow up action deals with instances when a chemical analysis of a sample taken from a network well shows that a health-related drinking water standard is exceeded.



This protocol is currently being finalized by MOE and Conservation Ontario. It provides an opportunity for those involved in managing the local water resource and those involved in public health matters to discuss the chemical results and related information to enable the Medical Officer of Health to make informed decisions and take appropriate action.

This protocol is a means for both sharing information and for actively participating in local resource management decisions.



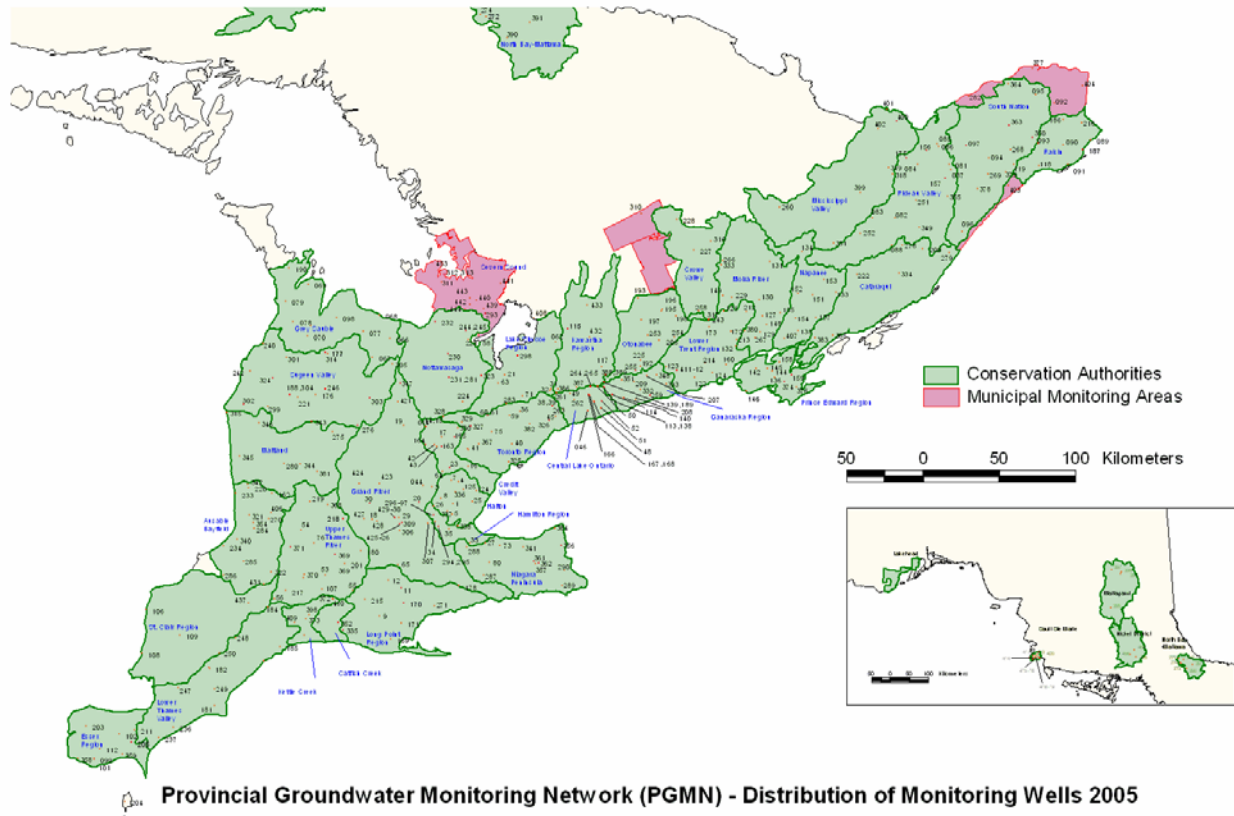
How is the information used?

Information generated by the PGMN provides vital baseline data for the development and implementation of water management programs and activities such as source protection plans, nutrient management plans, assessing applications for water takings, drought response decisions, and resolving groundwater interference complaints.

How does the information generated by PGMN benefit source protection planning?

The PGMN provides critical information on ground water quantity and quality on a regional scale that can be used by municipalities, conservation authorities and local planners as they move ahead with source protection planning.

This baseline information is also critical in characterizing the watersheds, establishing and refining water budgets, and recognizing correlations between land use and groundwater chemistry, water use and water levels.



Where can I find more information about the PGMN?

For information about the PGMN visit:
<http://www.ene.gov.on.ca/envision/water/watershed/index.htm>

For more information about the program information system (PGMIS) visit:
<http://www.ene.gov.on.ca/environet/PGMIS>

or contact :

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