

Groundwater Use in Ontario¹

Total

Groundwater (bgd)	2.119 ²
Percentage of total water supply for Ontario	54.3% ³

Public Supply

Groundwater (mgd)	618.04 ⁴
Percentage of total groundwater.....	29.1%

Individual Household

Groundwater (mgd)	52.75 ⁵
Percentage of total groundwater.....	2.5%

Agriculture

Groundwater (mgd)	787 ⁶
Percentage of total groundwater.....	37.1%

Industrial/Commercial

Groundwater (mgd)	319 ⁷
Percentage of total groundwater.....	15.1%

Other⁸

Groundwater (mgd)	342.08
Percentage of total groundwater.....	16.1%

(bgd = billion gallons per day)
(mgd = million gallons per day)

Groundwater's Role in Ontario's Economic Vitality

- 26% of Ontario's population depends on groundwater for drinking water supplies⁹
- 1,255,800 residents served by privately owned individual wells¹⁰
- 1,905,873 residents served by groundwater supplied by community water systems¹¹
- 546,000 households served by privately owned individual wells¹²
- 2,587 communal water works served by wells¹³
- 4,000 municipal wells serve Ontario¹⁴
- 711 groundwater contracting firms are licensed by the Province of Ontario¹⁵
- An estimated 4,223 persons are employed by Ontario groundwater contracting firms¹⁶

¹ The National Ground Water Association has compiled the information on this fact sheet from the sources noted here. We have explained how certain estimates have been derived from the information sources, but we caution that they are estimates and are subject to revision.

² *Final Report: Best Practices for Assessing Water Taking Proposals*. Prepared for Ontario Ministry of Environment, prepared by Gartner Lee Limited, Ogilvie, Ogilvie & Company, and Huber Environmental Consulting, November 2002, pp. 10-12 and summation of estimates found here.

³ Ontario's total annual water withdrawals are 1.424 trillion U.S. gallons (3,901,369,863 U.S. gallons/day) according to "Summary of Water Withdrawals Across Canada," Symposium sur la gestion d'eau au Québec, Document de références, automne 1997, government du Québec.

⁴ *Ibid.*

⁵ According to "The Sources, Use and Future Demand of Great Lakes Water at a Sub-Basin Level and the Potential Implications of Climate Change," November 2, 2000, "Water use for domestic private wells will be estimated by an average rate such as 159 L/day/person used by Southam et al. 1997." Therefore, 159 L/day times 1,255,800 persons estimated to be served by privately owned individual wells, groundwater use for individual households equals 199,672,200 L/day or 52,747,761.8 U.S. gallons.

⁶ *Final Report: Best Practices for Assessing Water Taking Proposals*.

⁷ *Ibid.*

⁸ From *Final Report: Best Practices for Assessing Water Taking Proposals*. Includes remediation: 1.4%; recreational: 0.1%; institutional: 0.1%; dewatering: 12.6%; construction: 0.2%; and miscellaneous: 1.9%. Total of 16.3%.

⁹ Ontario Ministry of Environment, Environmental Monitoring and Reporting Branch, May 1, 2007.

¹⁰ *Groundwater Use in Canada*, November 2004, p. 7. Derived from rural household size of 2.3 persons each, multiplied by 546,000 individually owned private wells equals 1,255,800 persons. Rural household size found at http://www.reddi.gov.on.ca/insight_ruralontarioprofiles.htm.

¹¹ If 26% of Ontario's 12,260,383 persons (Source: Statistics Canada, 2006 Census) are served by groundwater, then the total population count served by groundwater would be 3,161,673 persons. If 1,255,800 persons are served groundwater by individually owned private wells, and assuming that most individually owned private household wells are rurally located, then it may be estimated that 1,905,873 residents of Ontario are served groundwater from public supplies.

¹² Ontario Ministry of Environment, Environmental Monitoring and Reporting Branch, May 1, 2007.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

¹⁶ Estimated using average number of employees for U.S. groundwater contracting firms of 5.94 persons, as determined by a National Ground Water Association analysis of U.S. Bureau of Census 2002 numbers for "Water Well Drilling Special Trade Contractors." Cited in *Water Well Journal*, April 2005.

NGWA Member Firms in Ontario

Contracting

Aqua-Tech Dewatering
Canadian Environmental Drilling
Conrad Water Well
Davidson Well Drilling Ltd.
Noll Drilling Inc.
PVC Plus Drilling Products
W.D. Hopper & Sons Ltd.



Manufacturing and Supply

Boshart Industries Inc.
Flexcon Industries
Heron Instruments
International Pump Technology Inc.
R-Can Environmental
Rideau Pipe & Drilling Supplies Ltd.
Solinst Canada Ltd.
USF WaterGroup Inc.



Scientific/Technical Consulting

Adventus Remediation Technologies Inc.
AGRA Earth & Environmental
AMEC Earth & Environmental Ltd.
Anderson Geologic Ltd.
Applied Groundwater Research
Aqua Terre Solutions Inc.
Aquafor Beech Ltd.
AquaResource Inc.
AquaTerre
Azimuth Environmental Consultants Inc.
Barenco Inc.
Briggs Canada Ltd.
Bruce Power
Bryant Groundwater Consulting
C3 Environmental Ltd.
Canadian Water Network
CanGEO Remediation Technologies
CH2M HILL
Charlesworth & Associates Inc.
Concord Engineering
Conestoga Rovers & Assoc. Ltd.
Conservation Authorities
Conservation Halton
CPG-Franz Environmental Inc.
Dillon Consulting Ltd.
DST Consulting Engineers Inc.

Earth Tech Canada
Ecoplans Ltd.
EnviroMetal Technologies Inc.
Environmental Site Investigations
Environmental Solutions
Fisher Environmental
Franz Environmental Inc.
Frontline Environmental Management Inc.
Gamsby & Mannerow Ltd.
Ganaraska Region Conservation Authority
Gartner Lee Ltd.
GeoMatrix Consultants Inc.
GeoSyntec
Gerber Geosciences Inc.
Golder Associates
Gowen Environmental Ltd.
Hazco Environmental Services
Henderson Paddon & Assoc. Ltd.
Hydroterra Ltd.
Imperial Oil
Insitu Contractors
Intera Engineering Ltd.
International Water Supply Ltd.
Jacques Whitford Ltd.
Jagger Hims Ltd.
Jp2g Consultants Inc.
Kodiak Environmental Ltd.
Lotowater Technical Services
MacRitchie Hydrogeological

Malroz Engineering Inc.
Marshall Macklin Monaghan
Morrison Environmental Ltd.
NAR Environmental Consultants Inc.
NEWALTA Industrial Services Inc.
Novaterra Environmental Ltd.
O'Connor Associates Environmental Inc.
Petro-Canada
Rural Development Consultants Ltd.
SP Associates Inc.
Shaheen & Peaker Ltd.
S.S. Papadopoulos & Associates Inc.
Stantec Consulting Ltd.
Suncor Energy Products Inc.
Terrapex Environmental Ltd.
The Thompson Rosemount Group Inc.
Trow Associates
URS Canada Inc.
W.B. Beatty & Associates Ltd.
Water & Earth Science Associates
Waterloo Barrier Inc.
Waterloo Hydrogeologic Inc.
WESA
XCG Consultants Ltd.

