Glossary and List of Acronyms

A

Aqueous
Similar to, or containing, or dissolved in, water.

Abiotic
Related to nonliving elements that impact growth, composition, and structure of ecosystems.

Activity
One or a series of related processes, natural or human that occur within a geographical area and may be related to a particular land use.

Agricultural Source Material
Any of the following treated or untreated materials, other than a commercial fertilizer or compost that meets the guidelines entitled *Interim Guidelines for the Production and Use of Aerobic Compost in Ontario* prepared by the Ministry of the Environment and dated November 2004, if they are capable of being applied to land as nutrients:

1. Manure produced by farm animals, including associated bedding materials.
2. Runoff from farm-animal yards and manure storages.
3. Washwaters from agricultural operations that have not been mixed with human waste.
4. Organic materials produced by intermediate operations that process materials described in paragraph 1, 2 or 3.
5. Anaerobic digestion output, if,
    i. the anaerobic digestion materials were treated in a mixed anaerobic digestion facility, and
    ii. at least 50 %, by volume, of the total amount of anaerobic digestion materials were on-farm anaerobic digestion materials.

Alvar
Naturally open habitats with either a thin covering of soil or no soil over a base of limestone or dolostone.

Ambient water
Natural concentration of water quality constituents prior to mixing of either point or non-point source load of contaminants.

Anthropogenic
Relating to, or resulting from, human influences.

Aquifer

From the Latin for "water carrier", a geological formation (typically porous material, such as sand or gravel, or fractured rock) that stores and is capable of transmitting water in sufficient quantities to serve as a sustainable source of water supply.

Assessment Report

A technical document that is prepared by a source protection committee under Section 15 of the *Clean Water Act, 2006* to record its knowledge of a source protection area, and to rank risks to drinking water within that area. Each report is approved by the Ontario Ministry of the Environment.

B

Bankfull stage

Stage at which a stream first overflows its natural banks.

Bedrock

The solid rock underlying soil, muck or water.

Bedrock Geology

The study of the solid rock underlying soil. Also refers to description of bedrock types.

Benthic

Occurring at the bottom of bodies of water including lakes, rivers and streams.

Biotic

Related to living organisms.

Bog

Bogs are peat-covered areas or peat-filled depressions with a high water table and a surface carpet of mosses, chiefly Sphagnum. The water table is at or near the surface in the spring, and slightly below during the remainder of the year.

C

Canadian Shield
Is made up of some of the planet's oldest rock, largely granite and gneiss. The Shield is mostly thin soil lying on top of bedrock, with many bare outcrops and thousands of lakes. This was caused during the last ice age, when glaciers covered the area and scraped the rock clean as they moved.

Capture Zone
The area surrounding a well that will supply groundwater to that well when pumped at a specified rate for a specified period of time.

Chair
The Chair of the Mississippi-Rideau Source Protection Committee as appointed by the Ontario Minister of the Environment.

Chemical
A substance used in conjunction with, or associated with, a land use activity or a particular entity, and with the potential to adversely affect water quality.

Climate
The average weather conditions of a place or region throughout the seasons.

Coagulation
When a solution reacts with elements causing it to thicken into a coherent mass.

Cold Water Streams
Average daily maximum water temperatures are approximately 18°C.

Conceptual Water Budget
A written description of the overall flow system dynamics for each watershed in the source protection area taking into consideration surface water and groundwater features, land cover (e.g. proportion of urban vs. rural uses), human-made structures (e.g. dams, channel diversions, water crossings), and water takings.

Concern
A suspected drinking water issue that has not been substantiated by monitoring or other verification methods.

Connecting Channel

Connecting channels are the St. Lawrence River, St Mary's River, St Clair River, Detroit River, Niagara River and the Welland Canal.

Conservation

The protection of natural or man-made resources and landscapes for later use.

Consumptive Water Demand

The net amount of water that is taken from a source, and not returned locally to the same source in a reasonable time.

Contaminant

Chemicals and pathogens.

Contaminant of Concern

A chemical or pathogen that is or may be discharged from a drinking water threat.

Contamination

The mixing of harmful elements, compounds or microorganisms with surface or groundwater. Contamination can occur naturally (e.g. an aquifer flowing through mineral deposits that contain heavy metals) or through human activity (e.g. sewer water flowing into a river). Nutrients, such as nitrogen and phosphorus, can also cause water contamination when they are present in excessive amounts.

Cumulative (Water Quality) Effects

The consequence of multiple threats sources, in space and time, which affect the quality of drinking water sources.

Cumulative (Water Quantity) Effects

The consequence of multiple threats sources, in space and time, which affect the quantity of drinking water sources.

Contributing area

(a) in respect of a surface water intake or group of intakes, the drainage area that contributes surface water to the intakes and the area that would contribute groundwater discharge to that drainage area; and

(b) in respect of a well or group of wells, the area that contributes groundwater to the wells when the wells are pumped at a rate equivalent to the allocated quantity of water for the well or group of wells under state conditions.

D

Data Gaps

The lack of raw information for a specific geological area and/or specific type of information.

Dense Non-Aqueous Phase Liquid (DNAPL)

A liquid which is denser than water and does not dissolve in water.

Discharge

The volume of water that passes a given location within a given period of time.

Discharge Area

An area where water leaves the saturated zone across the water table surface.

Dolostone

Term used for the sedimentary rock dolomite, in order to avoid confusion with the mineral of the same name.

Drained

A condition in which the level or volume of groundwater or surface water has been reduced or eliminated from an area by artificial means.

Drinking Water

(a) water intended for human consumption; or

(b) water that is required by an Act, regulation, order, municipal by-law or other document issued under the authority of an Act,

(i) to be potable; or

(ii) to meet or exceed the requirements of the prescribed drinking water quality standards.

Drinking Water Concern

In respect of a drinking water system:

(a) a condition of the system or a condition associated with the system's waters, including any thing found in the waters;

(i) that adversely affects, or is likely to adversely affect, the health of the users of the system;

(ii) that deters or hinders, or is likely to deter or hinder, the prevention or suppression of disease; or

(iii) that endangers or is likely to endanger public health;

(b) a prescribed condition of the drinking water system; or
(c) a prescribed condition associated with the system's waters or the presence of a prescribed thing in the waters.

Drinking Water Issue

A substantiated (through scientific means) condition relating to the quality of water that interferes or is anticipated to interfere with the use of a drinking water source by a municipal residential system.

Drinking Water System

A system of works that is established for the purpose of providing users of the system with drinking water. It includes:

(a) anything used for the collection, production, treatment, storage, supply or distribution of water;

(b) anything related to the management of residue from the treatment process or the management of the discharge of a substance into the natural environment from the treatment system; and

(c) a well or intake that serves as the source or entry point of raw water supply for the system.

Drinking Water Threat

An activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as drinking water threats.

Drumlin

Glacial till material that has been formed into oval hills with smooth convex contours. In any area the drumlins all point in the same direction which is considered to be the direction of movement of the glacier which formed them.

E

Ecological

Relating to the totality or pattern of relations between organisms and their environment.

Ecosystem

A natural community of plants and animals within a particular physical environment, which is linked by a flow of materials throughout the non-living (abiotic) as well as the living (biotic) section of the system.

Endangered
A wildlife or plant species facing imminent extinction.

Eskers
A knobby, crooked ridge of coarse gravel and sand deposited by meltwater in crevasses and tunnels near the front of a glacier.

Erosion
The wearing away of the land by the action of water, wind or glacial ice.

Escherichia coli (*E. coli*)
Bacteria found in human and animal waste. Their presence in water indicates fecal contamination.

Evapotranspiration (ET)
A combination of the evaporation from surface water bodies/soil and the transpiration of water moisture from plants.

Event
Occurrence of an incident (isolated or frequent) with the potential to promote the introduction of a threat into the environment. An event can be intentional as in the case of licensed discharge or accidental as in the case of a spill.

Exposure
The extent to which a contaminant or pathogen reaches a water resource. Exposure, like a drinking water threat, can be quantified based on the intensity, frequency, duration and scale. The degree of exposure will differ from that of a drinking water threat dependent on the nature of the pathway or barrier between the source (threat) and the target (receptor) and is largely dependent on the vulnerability of the resource.

F

Floc
A product of flocculation.

Flocculation
A process where a solute comes out of solution in the form of floc or flakes. The action differs from precipitation in that the solute coming out of solution does so at a concentration generally below its solubility limit in the liquid.

Forest Cover
Land covered by forest.

Frontenac Axis
A large wedge of Precambrian rocks which separates the Palaeozoic rocks of the Lake Ontario Basin from those of the Ottawa and St. Lawrence Valleys. The axis lies just east of Kingston, in the Thousand Islands, Gananoque areas. It is an ecoregion of the Mixedwood Plains. It also separates the Canadian Shield and the Lowlands.

G

Geology
The science of the composition, structure and history of the Earth. It thus includes the study of the material of which the Earth is made, the forces which act upon these materials and the resulting structures.

Glacial
Pertaining to glaciers.

Glacial Drift
The loose and unsorted rock debris distributed by glaciers and glacial melt waters.

Glaciation
The covering of an area or the action on that area, by an ice sheet or by glaciers.

Glaciofluvial
Pertaining to glacial melt water streams.

Glaciolacustrine
Sediments deposited into lakes that have come from glaciers. These lakes include ice margin lakes or other types formed from glacial erosion or deposition.

Gneiss
A foliated rock with banded appearance formed by regional metamorphism.

Gradient
The rate or regular graded ascent or descent.

Granite

A medium- to coarse-grained, sialic, plutonic rock made predominantly of potassium feldspar and quartz.

Great Lakes Connecting Channels

The large rivers that connect the Great Lakes (e.g. St. Clair River, St. Lawrence River, Ottawa River).

Groundwater

Water beneath the earth's surface, often between saturated soil and rock, which supplies wells and springs.

Groundwater Discharge

The function of the ground below the surface to accept subsurface water and hold it for release over long periods of time through an aquifer.

Groundwater Recharge

The addition of water to a groundwater system by natural or artificial processes. In most cases, recharge is derived from the component of precipitation that infiltrates to the water table i.e. that component of precipitation that neither evapotranspirates nor runs off as overland flow, or by surface water exfiltration.

Groundwater Recharge Area

The area where an aquifer is replenished from:

(a) natural processes, such as the infiltration of rainfall and snowmelt and the seepage of surface water from lakes, streams and wetlands;
(b) from human interventions, such as the use of storm water management systems, and
(c) whose recharge rate exceeds a threshold specified in the regulations.

The Director's rules will specify the acceptable methodologies to determine groundwater recharge rates i.e. what qualifies as significant.

GUDI

Groundwater Under the Direct Influence of surface water. In sources identified as GUDI, contaminants in nearby surface water are able to travel to groundwater.

H

Hazard

In the context of this guidance, a hazard is equivalent to a contaminant and pathogen threat.

Hazard Rating

The numeric value which represents the relative potential for a contaminant of concern to impact drinking water sources at concentrations significant enough to cause human illness. This numeric value is determined for each contaminant of concern in the Threats Inventory and Issues Evaluation of the Assessment Report.

Highly Vulnerable Aquifer (HVA)

An aquifer that is or is likely to be significantly and adversely affected from external sources, and includes the land above the aquifer.

Hydraulic Conductivity

A parameter expressing the ability of a geologic medium to transmit fluids with dimension of length per unit time.

Hydraulic Gradient

The rate of change in total head per unit of distance in the direction of flow. The slope on a water surface such as the water table or potentiometric surface.

Hydrogeology

Hydrogeology is the study of the movement and interactions of groundwater in geological materials.

Hydrology

The study of the Earth's water, particularly of water on and under the ground before it reaches the ocean or before it evaporates into the air.

I

Igneous

Rock that solidified from magma.

Inland Lake

An inland body of standing water, usually fresh water, larger than a pool or pond or a body of water filling a depression in the earth’s surface.

Impact

Often considered the consequence or effect, the impact should be measurable and based on an agreed set of parameters. In the case of source water protection, the parameters may be an acceptable list of standards which identify maximum raw water levels of contaminants and pathogens of concern.

In the case of water quantity, the levels may relate to a minimum annual flow, piezometric head or lake level.

Infiltration

The movement of water into soil pores or rock fissures from the ground surface by means of rainfall, snowmelt or irrigation.

Intake protection zone (IPZ)

The area of land and water that contributes source water to a drinking water system intake within a specified distance, period of flow time (for example, two hours), and/or watershed area.

Interbedded

Occurring between beds, or lying in a bed parallel to other beds of a different material.

Intrinsic Vulnerability

The potential for the movement of a contaminant through the subsurface based on the properties of natural geological materials.

Issue

The negative effect of a land use or activity that is known to have had, or to be currently having adverse effects on a drinking water source. It is a condition of the drinking water source related to its quality substantiated by monitoring or other verification methods.

L

Land Cover

The physical and biological cover on the land, including vegetation and anthropogenic features.

Landsat Imagery

Landsat satellites have taken specialized digital photographs of Earth's continents and surrounding coastal regions for over three decades, enabling people to study many aspects of our planet and to evaluate the dynamic changes caused by both natural processes and human practices. (NASA: http://landsat.gsfc.nasa.gov/)

Liaison Member

Are those individuals who fulfill the intent of Section 19 of Ontario Reg. 288/07 to act as a liaison between the Committee and other bodies.

Limestone
A sedimentary rock consisting chiefly of calcium carbonate.

Lithology
Stratification (layering) of rock, often referring to bedrock characteristics. May refer to either the gross physical character of a rock formation, or the microscopic study, description, and classification of rock, soil, or sediment.

Loam
Soil that contains a mixture of sand, clay, and silt and a generous amount of organic matter.

M

Macroinvertebrates
Animals lacking a spinal column that are visible with the unaided eye.

March formation
A rock formation that consists of interbedded sandstones and dolostones, with boulder-and cobble-sized interclasts of quartzite where the unit is in contact with Precambrian rocks.

Marsh
Marshes are wet areas with standing or slowly moving water. They are characterized by emergent plants, which grow above the water surface, as well as anchored floating plants and submergent plants, which grow entirely below the water surface.

Member
The Chair or an Individual appointed by Mississippi-Rideau Source Protection Authority under Section 7(3) of the *Ontario Clean Water Act, 2006.*

Mesotrophic
Reservoirs and lakes which contain moderate quantities of nutrients and are moderately productive in terms of aquatic animal and plant life.

Metamorphic rock
A rock formed when igneous, sedimentary, or other metamorphic rocks re-crystallize in response to changes in temperature, pressure, chemical conditions, and/or deformation.

Model

An assembly of concepts in the form of mathematical equations or statistical terms that portrays a behavior of an object, process or natural phenomenon.

Model Calibration

The process for generating information over the life cycle of the project that helps to determine whether a model and its analytical results are of a quality sufficient to serve as the basis of a decision.

Model Validation

A test of a model with known input and output information that is used to adjust or estimate factors for which data are not available.

Moderate Drinking Water Threat

Is a drinking water threat that, according to a risk assessment, poses or has the potential to pose a moderate risk.

Monitoring

Periodic evaluation of a site to determine success in achieving goals, or to collect specific data such as water temperature, natural community populations, etc.

Moraine

A mound or ridge of till deposited directly by glacial ice.

Municipal Residential Drinking Water System

A drinking water system or part of a drinking water system;

(a) that is owned by a municipality or by a municipal service board established under the *Municipal Act, 2001* or a city board established under the *City of Toronto Act, 2006*;
(b) that is owned by a corporation established under sections 9, 10 and 11 of the *Municipal Act, 2001* in accordance with section 203 of that Act or under sections 7 and 8 of the *City of Toronto Act, 2006* in accordance with sections 148 and 154 of that Act;
(c) from which a municipality obtains or will obtain water under the terms of a contract between the municipality and the owner of the system; or
(d) that is in a prescribed class.

N

Naturally Occurring Processes

Processes that occur in nature and that are the result of human activity. For example, erosion along a stream that provides a source of drinking water of the leaching of naturally occurring metals found in bedrock into groundwater.

Nepean Formation

A rock formation that consists of fine-to coarse-grained quartz sandstone of marine and terrestrial origin, indicating fluctuations of the sea level. The upper part of the formation contains dolomitic beds which are characteristic of marine transgression (increase in water level).

Nonaqueous

Made from, with, or by means of a liquid other than water.

Nutrient

Something that nourishes and promotes growth. It is possible to have too many nutrients in an ecosystem, which can result in an unhealthy imbalance or overgrowth of certain species.

O

Oligotrophic

Refers to a body of water which is poor in dissolved nutrients and usually rich in dissolved oxygen.

Ontario Drinking Water Quality Standards

Is the Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards) made under the *Safe Drinking Water Act, 2002*).

Overburden

Any loose unconsolidated material which rests upon solid rock.

P

Paleozoic

Of, belonging to, or designating the era of geologic time that includes the Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian, and Permian periods and is characterized by the appearance of marine invertebrates, primitive fishes, land plants, and primitive reptiles.

Pathogen

A disease-causing organism.

Peat

A loose, unconsolidated, brownish mass of partially decayed plant matter; a precursor to coal.

Permeability

The degree to which soils and rock are interconnected, depends upon size and shape of pores; size and shape of interconnections and their extent.

Permit to Take Water (PTTW)

A normal permit issued by the Ontario Ministry of the Environment under section 34 of the *Ontario Water Resources Act (R.R.O. 1990)* to provide permission for an individual or company to take more than 50,000 litres of water in one day.

Pesticide

Any organism, substance or thing that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or of altering the growth, development or characteristics of any plant life that is not a pest and includes any organism, substance or thing registered under the *Pest Control Products Act (Canada)*.

Phosphorus

A non-toxic pollutant that is an essential nutrient. In excessive amounts it leads to eutrophication of a water system. Phosphorus accumulates along the entire length of a river or lake from a variety of point and non-point sources.

Physiography

The study or description of landforms.

Porosity

Volume of voids per given volume of rock.

Precambrian

Of, or belonging to, the geologic time period between Hadean Time and the Cambrian Period, often subdivided into the Archean and Proterozoic eras, comprising most of the earth's history and marked by the appearance of primitive forms of life.

Precipitation

The deposits of water in either liquid or solid form which reach the Earth from the atmosphere. It includes rain, sleet, snow and hail.

R

Raw Water

Water that is in a drinking-water system or in plumbing that has not been treated in accordance with:

(a) the prescribed standards and requirements that apply to the system; or

(b) such additional treatment requirements that are imposed by the license or approval for the system.

Recharge

Recharge is the process by which water moves from the ground surface, through the unsaturated zone, to arrive at the water table.

Recharge Area

An area where water enters a saturated zone at the water table surface.

Regulated Areas

Those areas for which Conservation Authorities delineate and restrict land uses by making regulations under subsection 28(1) of the *Conservation Authority Act*. This subsection applies to water courses, streams, lakes, valleys, flood plains and wetlands in Ontario. Provincially approved standards and methodologies for delineating Regulated Areas are outlined in draft guidance documents prepared by Conservation Ontario in cooperation with the Ministry of Natural Resources.

Return Period

An estimate of the interval of time between events like an earthquake, flood or river discharge flow of a certain intensity or size. It is a statistical measurement denoting the average recurrence interval over an extended period of time.

Restoration

Changing existing function and structure of wetland habitat so that it is similar to historical conditions.

Riparian Area

The area that lies as a transition zone between upland areas such as fields, etc. and streams, wetlands, lakes, rivers, etc. The zone is intermittently inundated and usually supports wet meadow, marshy or swampy vegetation.

Riparian Buffer

An area of vegetation immediately adjacent to a watercourse or a water body.

Risk

The likelihood of a drinking water threat-causing a drinking water source to become impaired, unusable or unsustainable, or compromising the effectiveness of a drinking water treatment process, resulting in the potential adverse human health effects.

Risk Assessment

An assessment of risks prepared in accordance with the regulations and the rules.

River

Includes a creek, stream, brook and any similar watercourse but does not include a connecting channel.

Runoff

Water that moves over land rather than being absorbed into the ground. Runoff is greatest after heavy rains or snowmelts, and can pick up and transport contaminants from landfills, farms, sewers, industry and other sources.

S

Sandstone

Clastic sedimentary rock comprised primarily of lithified sand.

Scale

A graduated series or scheme of rank or order.

Sediment

Material deposited by water, wind or glaciers.

Sedimentary Rock

Rock formed of mechanical, chemical or organic sediment.

Sensitivity Analysis

Sensitivity analysis evaluates the effect of changes in input values or assumptions on a model's results.

Shadow Lake Formation

This rock formation is comprised of deeply weathered red, black, and green shales and arkose. Thin (up to 0.45 m) beds of black shale, a maximum of six metres grey sandstone and up to 12 m this beds of arkose occur.

Shale

A fine-grained clastic sedimentary rock with finely layered structure composed predominantly of clay minerals.

Significant Drinking Water Threat

Is a drinking water threat that, according to the risk assessment, poses or has potential to pose a significant risk.

Significant Groundwater Recharge Area (SGRA)

An area in which there is a volume of water moving from the surface into the ground and groundwater serves either as source water or the water that supplies a coldwater ecosystem such as a brook trout stream.

Slope

Ground that forms a natural or artificial incline.

Special Concern

A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Source Protection

A program of education, stewardship, planning, infrastructure, and regulation activities that together serve to help prevent the contamination or overuse of source water.

Source Protection Area

Those lands and waters that have been defined under Ontario Regulation 284/07 as the “study area” for an assessment report and a source protection plan under the *Clean Water Act, 2006*.

Source Protection Authority

A conservation authority or other person or body that is required to exercise powers and duties under the *Clean Water Act, 2006.*

Source Protection Committee

A group of individuals who have been appointed under the *Clean Water Act, 2006* by a source protection authority to coordinate source protection activities for a source protection area.

Source Protection Plan
A document that is prepared by a source protection committee under Section 22 of the *Clean Water Act, 2006* to direct source protection activities in a source protection area. Each plan is approved by the Ontario Ministry of the Environment.

Source Protection Region
Two or more source protection areas that have been grouped together under Ontario Regulation 284/07.

Source Water
Untreated water that is found in groundwater aquifers and surface water lakes and rivers that is used to supply a drinking water system.

Static Water Level
The level of water in a well that is not affected by pumping.

Stream
A body of running water flowing on the surface of the Earth.

Surface Water
Water that is present on the earth's surface and may occur as rivers, lakes, wetlands, ponds, etc.

Surface Water Intake Protection Zone
The area of land and water that contributes source water to a drinking water system intake within a specified distance, period of flow time (for example, two hours), and/or watershed area.

Surficial Geology
Deals with the study and description of the forms on the outer layer of the Earth.

Swamp
Wooded wetlands with 25 % cover or more of trees or tall shrubs.

T

Tables of Drinking Water Threats
The Ministry of the Environment publication of that name.

Technical Rules

Are the rules made by the Director under Section 107.

Terms of Reference (ToR)

The work plan and budget for development of the source protection plan that is subject to public comment and approval by the Ontario Minster of the Environment.

Threat

A past, present or planned land use, activity or condition that may adversely affect the quality and/or quantity of a drinking water source.

Threatened

A wildlife species likely to become endangered if limiting factors are not reversed.

Till

Sediment deposited directly by glacial ice and that has not been resorted by a stream.

Time of Concentration (ToC)

The amount of time for the entire watershed to conyribute to the outflow or the amount of time for the water to reach the outlet from the furthest point from the outlet.

Time of Travel (ToT)

An estimate of the time required for a particle in the water to move from a specific point into a well or intake.

Topography

A detailed description or representation of the features, both natural and artificial, of an area. Also the physical and natural features of an area, and their structural relationships.

Transmissivity

The property of an aquifer which defines the rate at which water moves through it.

Transport Pathways

These are natural or human-made routes where water can flow (e.g. sewer discharge pipes, drainage ditches, utility trenches, and transportation corridors, small tributary channels, fractured rock, and sand lenses) on its way to a drinking water intake or well.

Tritium
A radioactive isotope of hydrogen; atoms of tritium have three times the mass of ordinary hydrogen atoms.

U

Uncertainty Analysis
Uncertainty analysis investigates the effects of lack of knowledge and other potential sources of error.

Unconfined Aquifer
An aquifer in which there are no confining layers between the zone of saturation and the surface. A confining layer has low or no hydraulic conductivity, so allows little or no water movement through it.

V

Vulnerable Area
May be a significant groundwater recharge area, a highly vulnerable aquifer, a surface water intake protection zone, or a wellhead protection area.

W

Water Budget
A description and analysis of the overall movement of water within each watershed in the source protection area taking into consideration surface water and groundwater features, land cover (e.g. proportion of urban versus rural uses), human-made structures (e.g. dams, channel diversions, water crossings), and water takings.

Water Control Structure
A structure designed to hold back water at a planned level by directing, limiting, reducing or containing the flow of surface water.

Water Reserve
A proportion of surface water flow that must be sustained to support anthropogenic or ecological requirements.

Watershed
The area of land that contributes water to one lake, river, or stream.

Water Quantity Risk

The likelihood that the threats to water quantity may render an existing or planned drinking water source impaired, unusable or unsustainable.

Watershed

An area of land from which surface runoff, including water, sediments, nutrients and contaminants, drains into a common water body, such as a lake, river, stream, creek or estuary.

Watershed Characterization Report

A general description of the watersheds, communities, source water, drinking water systems, patterns of water use, and drinking water problems within a given source protection area.

Water Table

The elevation of the water in an unconfined aquifer where the groundwater pressure is equal to atmospheric pressure. It is indicated by the level at which water stands in a well.

Weathering

The disintegration of the Earth crust by exposure to the atmosphere, most importantly, rain.

Well Capture Zone

The area in the aquifer that will contribute water to a well in a certain time period. Often measured in days and years. Area at the ground surface is also included if the time period chosen is longer than the travel time for water in the aquifer and the groundwater recharge area is incorporated.

Wellhead Protection Area (WHPA)

An area of land surrounding a well where human activities may need to be regulated to protect the quality and quantity of ground water that supplies that well.

Well Yield

The maximum amount of water that can be withdrawn from a water supply well. This value is typically based on a 6 hour to 72 hour aquifer/pumping test, extrapolated to determine long term drawdown.

Wetlands

Land such as a swamp, marsh, bog or fen that is seasonally or permanently covered by shallow water or has the water table close to or at the surface, and that has hydric soils and vegetation dominated by water-tolerant plants.

Working Group

A set of individuals who have been asked to conduct research or develop recommendations about a particular theme, topic, or geographic area.

List of Acronyms

CCME - Canadian Council of Ministers of the Environment

DNAPL - Dense Non-Aqueous Phase Liquid

GUDI - Ground Water Under the Direct Influence (of Surface Water)

HVA - Highly Vulnerable Aquifer

IPZ - Intake Protection Zone

ISI - Intrinsic Susceptibility Index

MNR - Ontario Ministry of Natural Resources

MOE - Ontario Ministry of Environment

MRSPR – Mississippi-Rideau Source Protection Region

MVC – Mississippi Valley Conservation

PGMN - Provincial Groundwater Monitoring Network

PTTW – Permit To Take Water

PWQMN - Provincial Water Quality Monitoring Network

RVCA – Rideau Valley Conservation Authority

SGRA - Significant Groundwater Recharge Area

ToT - Time of Travel

WHPA - Wellhead Protection Area

WTP - Water Treatment Plant

WWIS - Water Well Information System