Glossary

absorption – a process by which one substance is trapped throughout the volume of another, usually a liquid by a solution.

adsorption – a process by which a substance is trapped on the surface of a solid substance.

algae – single-celled plants, capable of photosynthesis.

alkalinity – the ability of a solution to neutralize acids.

aquaculture – production of aquatic plants or animals, particularly fish, for commercial purposes.

aquifer – an underground layer of relatively porous, saturated soil or rock that is capable of yielding a useful supply of water.

backwashing – the cleaning cycle of a water treatment system where clean water is forced back through the filter media.

bacteria – single-celled organisms that do not contain chlorophyll and are not capable of photosynthesis.

bentonite – a swelling clay used to construct liners for lagoons and dugouts.

blue-green algae – common expression used to refer to cyanobacteria, an aquatic microorganism which can produce powerful toxins.

bluestone – copper sulphate.

BMPs – best management practices.

coagulation – the addition of certain chemicals to water that allow very small particles to collide, stick together, and form flocs.

cfm – cubic foot per minute.

coliform – a common group of bacteria used as a biological indicator of water pollution.

contour planting – planting crops in rows that are at right angles to the direction of the slope.

cryptosporidia – a single-celled, disease-causing, parasite whose life-cycle includes a cyst-forming phase which allows the organism to survive in harsh environments.

cyanobacteria – single-celled organisms that are capable of photosynthesis but are more closely related to bacteria than plants. They are often referred to as 'blue-green algae'.

diffuser – a device for introducing small air bubbles into water.

disinfection – the process of eliminating nearly all disease-causing organisms from water.

duckweed – a floating green plant that obtains nutrients from the water using dangling roots. It often forms large floating mats.

E. coli – a species of fecal coliform bacteria, some strains of which cause disease in humans. The strain, *E. coli 0157:H7*, has been identified as the pathogen in the Walkerton water supply.

fecal coliform – coliform bacteria that live in the intestines of warm-blooded animals.

floc – a particle formed in coagulation-flocculation process which is large enough to settle out of water.

geo-textile – a manufactured material used to protect soil surfaces from erosion.

gpm – gallons per minute.

giardia – a single-celled, disease-causing parasite whose life-cycle includes a cyst-forming phase which allows it to survive in harsh environments. The disease is commonly referred to as 'beaver fever'.

gleization – a dugout sealing technique which involves packing a layer of clay over a layer of organic matter. The term is derived from a natural soil-forming process.

integrated pest management – a system of agricultural pest management based on a wide variety of practices and control measures that are economically feasible and environmentally sound.

lift – when applied to water pumping, lift indicates the distance or elevation water is to be moved vertically.

mg/L – milligrams per liter.

mIg – million Imperial gallons.

nutrient management – a system of fertilizer management that minimizes the amount of fertilizer applied on a farm.

ozonation – a process of water disinfection that uses ozone. Ozone is the next most powerful oxidant after fluorine.

pathogen – a microorganism that can cause disease.

pH – pH is a measure of the acidity of a solution. It is measured on a logarithmic scale from 1 to 14. Solutions of pH 7 are neutral, solutions below 7 are acidic and solutions above 7 are basic.

phosphorus – an essential plant nutrient but one that often causes algae blooms when an excess is present in a water-body.

pitless adapter – a mechanical device designed to provide frost-free, sanitary well conditions.

psi – pounds per square inch.

plant nutrients – mineral elements required by plants.

point-of-entry treatment – a system used to treat all or part of the water at the inlet to a facility.

point-of-use treatment – a plumbed-in or faucet-mounted system used to treat water at a single tap or multiple taps but not used to treat all the water for a facility.

pressure tank – a component of a water distribution system which holds water at higher than atmospheric pressure.

protozoa – single-celled microorganisms that consume bacteria and algae.

reverse osmosis (RO) treatment – a system used to remove dissolved solids from water.

riprap – a wall or bank of stones used to provide strength and prevent erosion.

submersible pump – a centrifugal pump which is run by an electric motor and operates while submerged under water.

total dissolved solids (TDS) – the sum of the weights of all mineral compounds dissolved in a specific volume of water.

turbidity – a measure of the light-scattering effect of small particles suspended in water.

ultra-violet disinfection – a water purification process using ultraviolet (UV) light to kill microorganisms by disrupting their DNA and preventing reproduction. In order to be effective, UV must actually strike the cell.

virus – a large group submicroscopic organisms consisting only of a core of RNA or DNA which is surrounded by a protein coat. Many viruses cause disease in humans.

Watershed – the area of land that drains runoff to a point on a stream or other water body. Also called a drainage basin.

wet well – a structure installed next to a surface water supply, rather than directly in it, to provide a safe and convenient location for a distribution pump.

zooplankton – a diverse group of tiny aquatic animals that feed on algae and bacteria.