

## GLOSSARY OF FREQUENTLY USED TERMS AND ABBREVIATIONS

### Durham/York Residual Waste Study

<b>Aerobic Treatment:</b>	Biological treatment of organic waste by bacteria that require oxygen. (e.g. windrow composting – see Composting)
<b>Air Emissions:</b>	For stationary sources, the release or discharge of a pollutant from a facility or operation into the ambient air either by means of a stack or as a fugitive dust, mist or vapour.
<b>Alternative Disposal Technology (ADT):</b>	Technologies, other than landfill, capable of disposing municipal waste (e.g. incineration, EFW, gasification, pyrolysis, etc.).
<b>Alternative Fuel:</b>	Fuel, that is obtained via various mechanical and biological processes that recover materials such as plastics, fibre, wood and dried organic matter from the residual waste stream for input to a thermal process.
<b>Anaerobic Treatment:</b>	See Anaerobic Digestion
<b>Anaerobic Decomposition:</b>	See Anaerobic Digestion
<b>Anaerobic Digestion (AD):</b>	The controlled biological conversion of organic material, by bacteria, in the absence of oxygen, to produce biogas, liquid effluent and a solid, partially stabilized organic material.
<b>Approved Site or Facility:</b>	A landfill site or waste management facility with a current valid Certificate of Approval
<b>Ash:</b>	The non-combustible fraction that remains after combustion of waste.
<b>‘At-Source’:</b>	Referring to a waste minimization or management activity occurring at the source of waste generation (e.g. at the household, at the business, etc.).
<b>Baghouse Residue:</b>	Leftover material that is captured by an air pollution control / filtering device that removes dust and particles from the exhaust gas stream.
<b>Baling:</b>	Compacting solid waste into blocks to reduce volume and simplify handling.
<b>Biocell:</b>	A cell in which organic waste is decomposed biologically in an aerobic process and landfill gas is extracted.

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<b>Biodegradable:</b>	Capable of decomposing under natural conditions.
<b>Biogas:</b>	Gas formed during the anaerobic decomposition of organic material, mainly consisting of methane and carbon dioxide.
<b>Biological Treatment:</b>	A treatment technology that uses bacteria to process organic waste.
<b>Biomass:</b>	Plant material, vegetation, or agricultural waste used as a fuel or as an energy source.
<b>Bottom Ash:</b>	The non-airborne ash resulting from burning waste in an incinerator. The material, which falls to the bottom of the combustion grate and is removed mechanically in an EFW facility.
<b>Briquetting:</b>	The compaction of waste into small bricks to be burned in an incinerator. Bricks are easier to manage and have a higher calorific value than regular uncompacted waste.
<b>British Thermal Unit (BTU):</b>	Unit of heat energy equal to the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit at sea level.
<b>Buffer Area:</b>	That part of a disposal site or facility that is not a waste fill area (in the case of a landfill) or is not occupied by a building. (i.e., area between actual facility and the property boundary)
<b>Bulky Waste:</b>	Large items of waste materials, such as appliances, furniture, large auto parts, trees, stumps.
<b>Calorific Value:</b>	The amount of heat produced by a specific material type when combusted under specific conditions. Calorific Value is usually expressed in Calories or Joules per kilogram (i.e. Cal/Kg or J/Kg).
<b>Canadian Council of Ministers of the Environment (CCME):</b>	A council made up of environmental ministers from provincial and federal levels of government that proposes nationally consistent environmental standards and objectives to achieve high levels of environmental quality for waste management, air pollution, and toxic chemicals across Canada.
<b>Candidate Site:</b>	Property identified as suitable for consideration as a potential site for a waste management facility.

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<b>Carbon Monoxide (CO):</b>	A colourless, odourless, poisonous gas produced by incomplete fossil Fuel combustion.
<b>Carcinogenic:</b>	Capable, in sufficient quantities, of causing the cells of an organism to change in such a way as to produce cancer.
<b>Catalyst:</b>	A substance that changes the speed or yield of a chemical reaction without being consumed or chemically changed by the chemical reaction.
<b>Cells:</b>	In landfill sites, areas where waste is placed, compacted, and covered with layers of cover material on a daily basis.
<b>Cellulose:</b>	A complex carbohydrate that is composed of glucose units and makes up the cell walls in plants. Naturally occurs in wood and other fibrous products such as cotton and is the raw material of many manufactured goods, such as paper, rayon, and cellophane.
<b>Certificate of Approval:</b>	A license or permit issued by the Ministry of the Environment for the operation of a waste management site/facility.
<b>Class Environmental Assessment (EA):</b>	A planning and approvals process for a group of projects which are routine, similar in nature, limited in scale, and possess predictable environmental effects.
<b>Cogeneration:</b>	The consecutive generation of useful thermal and electric energy from the same fuel source.
<b>Combustion:</b>	1. Burning, or rapid oxidation, accompanied by the release of energy in the form of heat and light. 2. Refers to controlled burning of waste, in which heat chemically alters organic compounds, converting into stable inorganics such as carbon dioxide and water.
<b>Combustion Chamber:</b>	The actual compartment where waste is burned in an incinerator.
<b>Combustion Product:</b>	Substance produced during the burning or oxidation of a material.

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<b>Commercial Waste:</b>	All solid waste emanating from business establishments such as stores, markets, office buildings, restaurants, shopping centers, and theatres.
<b>Community Recycling Centre (CRC):</b>	A waste management facility that offers waste management services to small businesses and residents. A CRC is a place to drop off items such as electronics, white goods, household hazardous waste, leaf and yard waste, and blue box recyclables items.
<b>Compactor:</b>	Equipment used to crush and compact waste, to reduce volume.
<b>Completely Mixed Reactor:</b>	When liquid enters the completely mixed reactor, it quickly mixes completely with the liquid already in the reactor, making the contents of the reactor homogenous. Also, commonly referred to as a continuously stirred tank reactor.
<b>Compost:</b>	The relatively stable humus material that is produced from the aerobic decomposition or composting process in which bacteria in soil mixed with degradable organic materials break down the mixture into an organic soil amendment.
<b>Composting Facilities:</b>	1. A facility where the organic component of municipal solid waste is decomposed under controlled conditions; 2. An aerobic process in which organic materials are ground or shredded and then decomposed to humus in windrow piles or in mechanical digesters, drums, or similar enclosures.
<b>Composting:</b>	The controlled biological decomposition of organic material in the presence of air to form a humus-like material. Controlled methods of composting include mechanical mixing and aerating, ventilating the materials in a vessel or placing the compost in piles out in the open air and mixing it or turning it periodically.
<b>Contingency Plan:</b>	A plan developed to be implemented should some aspect of the project need to be altered or some aspect of the operation fail (i.e. “Plan B”).
<b>Corporations Supporting Recycling (CSR):</b>	A Canadian, not-for-profit, private sector organization that works with municipalities and industries to aid in developing sustainable municipal recycling and waste diversion systems.

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<b>Cover Material:</b>	Soil, or other approved (by MOE) materials, used to cover compacted solid waste in a sanitary landfill. Alternatives to soil include non-hazardous ash from incinerator facilities, tarps, and other materials.
<b>Cyclone:</b>	A cone-shaped air-cleaning device that collects and separates particles of different densities, from the air/gas stream, by using a rapid rotational effects and gravity.
<b>Design and Operation (D&amp;O) Plan/Report:</b>	A document (plan/report), required for obtaining a Certificate of Approval, which describes in detail the function, elements or features of a landfill site/facility or waste management facility, and how a landfill site/facility or waste management facility would function including its monitoring, and control/management systems.
<b>Digestion:</b>	The biochemical decomposition of organic matter
<b>Disposal:</b>	Final placement or destruction of wastes. Disposal is typically accomplished through use of approved sanitary landfills or incineration with or without energy recovery.
<b>Disposal Facilities:</b>	Facilities for disposing of solid waste, including landfills and incinerators, intended for permanent containment or destruction of waste materials.
<b>Diversion:</b>	The management of materials by reduction, reuse, recycling, and composting.
<b>Diversion Rate:</b>	The percentage of waste materials diverted from traditional disposal such as landfilling or incineration to be recycled, composted, or re-used.
<b>Dump:</b>	A site used to dispose of solid waste without environmental controls.
<b>Durham/York Residual Waste Study</b>	The Durham/York Residual Waste Study is a joint initiative between the Region of Durham and York Region to work together to find a way to manage solid waste remaining after at-source diversion.
<b>Ecological/Environmental Risk Assessment (ERA):</b>	A scientific method used to examine the nature and magnitude of risks from the exposure of plants and animals to contaminants in the environment.

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<b>Economies of Scale:</b>	The theory that constructing a larger facilities can be less expensive to construct and operate, on a per unit basis, than several smaller facilities having the same capacity, or throughput.
<b>Eddy Current:</b>	Circular electric currents in metals that create repulsive forces, similar to magnetic forces, in non ferrous electrical conductors such as Aluminum. (e.g., eddy current separator used to separate aluminum and other non ferrous metals).
<b>Electrostatic Precipitator (ESP):</b>	A device that removes particles from a gas stream after combustion occurs. The ESP imparts an electrical charge to the particles, causing them to adhere to charged metal plates inside the precipitator. Rapping on the plates causes the captured particles to fall into a hopper for disposal.
<b>Emission Factor:</b>	A representative value that relates the quantity of pollutant release to the atmosphere with an activity or input associated with the release of that pollutant.
<b>Emissions:</b>	Technically, all solid, liquid, or gaseous discharges from a processing facility, but normally referring to Air Emissions (with solids referred to as residue and liquids as effluent).
<b>Emissions Trading:</b>	The creation of surplus emission reductions at certain stacks, vents or similar emissions sources and the use of this surplus to meet or redefine pollution requirements applicable to other emissions sources. This allows one source to increase emissions when another source reduces them, maintaining an overall constant emission level. Facilities that reduce emissions substantially may "bank" their "credits" or sell them to other facilities or industries.
<b>Endothermic:</b>	A chemical reaction that requires (takes in) heat.
<b>Energy-from-Waste (EFW):</b>	The recovery of energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion of organic materials.
<b>Energy Recovery:</b>	The recovery of energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion of organic materials.

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<b>Environment (as it relates to the Environmental Assessment Act):</b>	Environment is broadly defined under the Environmental Assessment Act as follows: (a) air, land or water, (b) plant and animal life, including human life, (c) the social, economic and cultural conditions that influence the life of humans or a community, (d) any building, structure, machine or other device or thing made by humans, (e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or (f) any part or combination of the foregoing and the interrelationships between any two or more of them.
<b>Environmental Assessment (EA):</b>	A systematic process that is conducted in accordance with applicable laws or regulations aimed at assessing the effects of a proposed undertaking on the environment. Includes evaluation of need, alternatives, impacts, and mitigative, remedial, monitoring and/or compensatory measures.
<b>Environmental Assessment Act (EAA):</b>	Provincial (Ontario) legislation (Act), the purpose of which is to provide for the: protection; conservation; and, wise management of Ontario's environment. To achieve this, the EAA ensures that environmental problems or opportunities are considered and their effects are planned for before development or building takes place.
<b>Environment and Plastics Industry Council (EPIC):</b>	A council of the Canadian Plastics Industry Association (CPIA) dedicated to sustainable plastics recycling and to minimizing plastic waste sent to landfill.
<b>Environmental Protection Act (EPA):</b>	An Ontario Act to provide for the protection and conservation of the natural environment.
<b>Environmental Assessment Terms of Reference: (EA) Terms of Reference</b>	An Environmental Assessment Terms of Reference outlines the steps to be taken for an Environmental Assessment.
<b>Exothermic:</b>	A chemical reaction that gives off heat.

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<b>Exports :</b>	In solid waste programs, municipal solid waste and recyclables transported outside the municipal jurisdiction or locality where they originated.
<b>Expression of Interest (EOI):</b>	A preliminary document prepared by an outside source documenting their interest in a proposed project and a very general set of qualifications they possess that would make them eligible to participate further in the project.
<b>Extended Producer Responsibility (EPR):</b>	A policy to shift the responsibility of a product's life cycle away from the municipality to the producers and to provide incentives for producers to consider the environmental impacts into the selection of materials and the design of the product.
<b>Feedstock:</b>	The input material to be processed at a waste management facility.
<b>Extended Producer Responsibility (EPR):</b>	A policy to shift the responsibility of a product's life cycle away from the municipality to the producers and to provide incentives for producers to consider the environmental impacts into the selection of materials and the design of the product.
<b>Ferrous Metals:</b>	Metals derived from iron or steel; products made from ferrous metals include appliances, furniture, containers, and packaging like steel drums and barrels. Recycled products include processing tin/steel cans, strapping, and metals from appliances into new products.
<b>Flares:</b>	A controlled open flame device used to burn off unwanted or unusable natural gas, biogas, or landfill gas.
<b>Flue Gas:</b>	The air coming out of a stack or a chimney after combustion in the burner it is venting. It can include carbon oxides, water vapour, nitrogen oxides, sulphur oxides, particles and other chemical pollutants.
<b>Fluidized Bed Incinerator:</b>	An incinerator that uses a suspended bed of hot sand or other granular material to transfer heat directly to waste. Used mainly for destroying municipal sludge or other materials of uniform particle size.
<b>Fly Ash:</b>	The airborne ash resulting from burning waste in an incinerator removed by air pollution control receptor.
<b>Fugitive Emissions:</b>	Emissions not caught by a capture system.

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<b>Gasification:</b>	Conversion of solid material such as coal or waste into a gas for use as a fuel.
<b>Gigajoule (GJ):</b>	A measurement of energy. A typical single family household (approx. 2000 sq. ft.) uses approximately 60 to 90 GJ annually for heating (NRCan).
<b>Grapple:</b>	A mechanical device used to grasp materials (e.g., waste). A bucket, with several hooks to grasp, hold and release material.
<b>Grapple Feeding:</b>	A process in which material is fed by a grapple into the processing system. Usually involves grasping a planned amount of the material from a large pile.
<b>Greenhouse Effect:</b>	The warming of the Earth's atmosphere attributed to a build-up of carbon dioxide or other gases; some scientists think that this build-up allows the sun's rays to heat the Earth, while making the infra-red radiation atmosphere opaque to infra-red radiation, thereby preventing a counterbalancing loss of heat.
<b>Hazardous Waste:</b>	Materials that can pose a substantial or potential hazard to human health or to the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special MOE or EPA lists.
<b>High Density Polyethylene (HDPE):</b>	A material used to make plastic rigid containers, milk and juice jugs, margarine tubs, and detergent bottles. The plastic is translucent or opaque and does not crack when bent. Referred to as No. 2 Plastic.
<b>Household Hazardous Waste (HHW):</b>	Hazardous products used and disposed of by residential as opposed to industrial consumers. Includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.
<b>Household Waste (Domestic Waste):</b>	Solid waste, composed of garbage and rubbish, which normally originates in a private home or apartment house
<b>Hydrolysis:</b>	Decomposition of a chemical compound by reaction with water, such as the dissociation of a dissolved salt or the catalytic conversion of starch to glucose.

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<b>Impact Studies:</b>	Studies that predict negative consequences (if any) of a proposed undertaking. Air, visual, natural environmental, traffic, hydrogeological, Noise, Health Risk, Land Use and Hydrological Impact Studies are required under the Environmental Protection Act.
<b>Imports:</b>	Municipal solid waste and recyclables that have been transported to a jurisdiction or locality for processing or final disposition (but that did not originate in that jurisdiction or locality).
<b>Incineration:</b>	A thermal treatment technology involving destruction of waste by controlled burning at high temperatures with the overall aim of reducing the volume of waste.
<b>Incinerator:</b>	A furnace for burning waste under controlled conditions.
<b>Individual Environmental Assessment:</b>	An Individual Environmental Assessment requires the following steps to fully address the requirements of the EAA: <ol style="list-style-type: none"><li>1) Preparation of the Proposed EA Terms of Reference;</li><li>2) Submission of the EA Terms of reference to Minister of Environment for Approval;</li><li>3) Completion of the EA Study in accordance with approved EA Terms of Reference, and;</li><li>4) Submission of the EA Study to Minister of Environment for Approval.</li></ol>
<b>Industrial, Commercial &amp; Institutional (IC&amp;I) Waste:</b>	Combination of wastes generated by industrial, commercial and institutional sectors that are not typically picked up at the curb or accepted at public drop-off facilities as part of the municipal waste collection process. These wastes are primarily managed by way of contract with private waste management service providers.
<b>Industrial Waste:</b>	Unwanted materials from an industrial operation; may be liquid, sludge, solid, or hazardous waste.
<b>Institutional Waste:</b>	Waste generated at institutions such as schools, libraries, hospitals, prisons, etc. (part of the IC&I waste stream).
<b>In-Feed:</b>	Material that is fed into the front-end of a process.

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<b>Integrated Waste Management System:</b>	The combination of diversion and disposal alternatives comprising one waste management system. For example - blue box recycling, source-separated organics composting, incineration, and landfilling of ash and residuals could all form part of an integrated waste management system.
<b>Landfills:</b>	Sanitary landfills are outdoor disposal sites for non-hazardous solid wastes. Waste is spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day.
<b>Leachate:</b>	Liquid that collects contaminants as it trickles through wastes, or other materials. Leaching may occur in landfills and may result in hazardous substances entering surface water, ground water, or soil.
<b>Leachate Collection System:</b>	A system that gathers leachate and pumps it to the surface for treatment
<b>Lift:</b>	In a sanitary landfill, a compacted layer of solid waste placed on top of a lower level of compacted solid waste including appropriate cover material.
<b>Limestone Scrubbing:</b>	Use of a limestone and water solution to remove gaseous stack-pipe sulphur before it reaches the atmosphere.
<b>Liner:</b>	A relatively impermeable barrier designed to keep leachate inside a landfill. Liner materials include plastic and/or dense clay.
<b>Magnetic Separation:</b>	Use of magnets to separate ferrous materials from mixed municipal waste stream.
<b>Mass Burn Incineration:</b>	The incineration of waste with minimal initial pre-treatment or separation of wastes.
<b>Materials Recovery (or Recycling) Facility (MRF):</b>	A facility that processes (separates, bales) residentially collected mixed recyclables individual recyclable product streams, for shipment to market.
<b>Mechanical Separation:</b>	The physical separation of wastes by material type, size or density using trommels, cyclones, and various screens.

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<b>Mechanical Treatment:</b>	Involves the physical treatment of waste materials to recover recyclable materials and to prepare waste for further treatment or disposal.
<b>Mediation:</b>	An attempt to bring about a peaceful settlement or compromise between disputants through the objective intervention of a neutral party.
<b>Ministry of the Environment (MOE) Ontario:</b>	The MOE monitors pollution and restoration trends in Ontario and uses that information to develop environmental laws, regulations, standards, policies, programs, and guidelines. The MOE works to provide cleaner air, land, and water for Ontarians.
<b>Mitigation:</b>	Measures taken to reduce adverse impacts on the environment.
<b>Mixed Municipal Waste:</b>	Solid waste that has not been sorted into specific categories (such as plastic, glass, yard trimmings, etc.)
<b>Modular Facility:</b>	A facility of several parallel units designed to allow for an expansion by adding additional units in parallel.
<b>Moisture Content:</b>	The percentage of a material that is water.
<b>Monitoring:</b>	Periodic or continuous surveillance or testing to determine the characteristics of a substance or the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals.
<b>Municipal Solid Waste (MSW):</b>	Common garbage or trash generated by industries, businesses, institutions, and homes.
<b>National Pollutant Release Inventory (NPRI):</b>	The only legislated, nation-wide, publicly accessible inventory of information on annual releases to air, water, land, and disposal or recycling from all sectors in Canada.
<b>Non-combustible waste:</b>	Waste, which cannot be combusted (burned) even if energy is added. (e.g. stone, glass and metals).
<b>Non-Ferrous Metals:</b>	Nonmagnetic metals such as aluminum, lead, and copper. Products made all or in part from such metals include containers, packaging, appliances, furniture, electronic equipment and aluminum foil.

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<b>Old Corrugated Cardboard (OCC):</b>	Bulky cardboard that is typically found in boxes used for shipping and packaging. It is made from 2 strips of cardboard with a wavy, or “corrugated” strip running through the centre.
<b>Old Newspaper (ONP):</b>	Old news papers set out, collected and processed for recycling.
<b>Ontario Guideline A-7:</b>	Air emission guidelines developed by the Ministry of the Environment (MOE) to govern combustion and air pollution control requirements for new municipal waste incinerators and gasifiers in the Province of Ontario.
<b>Ontario Regulation 347 (O. Reg. 347):</b>	A regulation under the Environmental Protection Act that specifies standards and approval requirements for waste management sites and systems in Ontario.
<b>Operating and Maintenance Costs:</b>	Usually expressed annually, operation and maintenance costs are a sum of money to operate and maintain the facility in operating order (i.e., labour, utilities, equipment repairs, materials, supplies, disposal fees, etc.)
<b>Open Burning:</b>	Uncontrolled fires in a dump.
<b>Organic:</b>	Referring to or derived from living organisms. In chemistry, any compound containing carbon except carbon dioxide.
<b>Organic Matter:</b>	Carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.
<b>Package Plant:</b>	Small wastewater treatment systems designed to treat limited sewage flow at the facility site.
<b>Particulate:</b>	A particle of a solid or liquid that is suspended in air.
<b>Pelletizing:</b>	The compaction of waste into small pellets to be thermally processed in an incinerator or gasifier. Pellets are easier to manage and have a higher calorific value than regular uncompacted waste.
<b>Pilot Tests:</b>	Small-scale testing of a waste management technology under actual site conditions to identify potential problems prior to full-scale implementation.

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<b>Plasma-Arc Reactor:</b>	A thermal waste treatment technology that operates at extremely high temperatures and can produce a synthetic gas.
<b>Plug Flow Reactor:</b>	When a high solid slurry enters a plug flow reactor, its flow is unidirectional with minimal to no mixing in the axial direction, making the contents of the reactor heterogeneous.
<b>Point of Impingement (POI):</b>	A defined point or points set at a defined distance from a facility (usually between the facility and sensitive community receptors) at which a specific limit for air pollutants must be met.
<b>Pollutant:</b>	Generally, any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.
<b>Pollution:</b>	Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects
<b>Polyethylene Terephthalate (PET):</b>	A type of plastic that is clear or coloured transparent with high gloss. It is used for carbonated beverage bottles, peanut butter jars, and some household cleanser cleaners. Bottles have a raised dot on the base and is referred to as No. 1 Plastic.
<b>Positive Displacement Pumps:</b>	A pump that forces fluid from one chamber to another by reducing the volume of the first chamber while increasing the volume in the second chamber.
<b>Post-Closure:</b>	The time period, following the shutdown of a landfill, waste management or manufacturing facility; established for monitoring purposes.
<b>Potable Water:</b>	Water that is safe for drinking and cooking.
<b>Powdered Activated Carbon (PAC):</b>	Used in air pollution control systems to control mercury and dioxins/furans. PAC has a large surface area, which allows the carbon to adsorb (stick to) and react with contaminants.
<b>Precipitator:</b>	Pollution control device that collects particles from an air stream.
<b>Proponent:</b>	Proponent means a person/persons who: 1) carries out or proposes to carry out an undertaking, or 2) is the owner or person having charge, management or control of an undertaking.

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<b>Proprietary Devices:</b>	A device that is either used, produced, or marketed under exclusive legal right of the maker.
<b>Putrescible:</b>	Able to rot quickly enough to cause odours and attract flies.
<b>Pyrolysis:</b>	Decomposition of waste and its constituent chemicals by heat in the absence of oxygen.
<b>Quench:</b>	A method to cool a substance quickly and suddenly after heating. Often performed by placing the hot material in water.
<b>Receptor:</b>	The person, plant or wildlife species that may be affected due to exposure to a contaminant.
<b>Recycle/Reuse:</b>	Minimizing waste generation by recovering and reprocessing usable products that might otherwise become waste (i.e. recycling of aluminum cans, paper, and bottles, etc.).
<b>Refuse Derived Fuel (RDF):</b>	Waste that has been processed to remove non-combustible materials. RDF can be compacted or compressed through processes such as pelletizing or briquetting. Pelletized or Bricked RDF is easy to manage and handle, and also usually has a higher calorific value because of the increased density and reduced moisture content.
<b>Refuse Reclamation:</b>	Conversion of solid waste into useful products; e.g., composting organic wastes to make soil conditioners or separating aluminum and other metals from waste for recycling.
<b>Reserve Capacity:</b>	Extra treatment capacity built into infrastructure such as solid waste and wastewater treatment plants and interceptor sewers to accommodate flow increases due to future population growth.
<b>Residential Waste:</b>	Waste generated in single and multi-family homes, including newspapers, clothing, disposable tableware, food packaging, cans, bottles, food scraps, and yard trimmings other than those that are diverted to backyard composting.
<b>Residual:</b>	Amount of a pollutant remaining in the environment after a natural or technological process has taken place; e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after it passes through a scrubbing or other process.

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<b>Residual Municipal Solid Waste (RMSW):</b>	Common garbage or trash generated by industries, businesses, institutions, and homes that remains after diversion programs have been used to remove recoverable materials.
<b>Resource Recovery:</b>	The process of obtaining matter or energy from materials formerly discarded.
<b>Rotary Lobe Pumps:</b>	Type of rotary pump where two or more rotating lobes are put in a chamber between suction and discharge nozzles. Fluid that enters the suction nozzle is trapped in the pockets formed by the lobes. The fluid is then carried around and eventually forced out through the discharge nozzle.
<b>Scrubber:</b>	An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.
<b>Selective Catalytic Reactor (SCR):</b>	An air pollution control device that reduces the nitrogen oxide emissions, with a catalyst, to water vapour and elemental nitrogen by injecting ammonia into the flue gases. The catalyst is required because SCR systems occur at much lower temperatures than SNCR (see below) systems.
<b>Selective Non-Catalytic Reduction (SNCR):</b>	An air pollution control device that converts nitrogen oxide emissions into elemental nitrogen and water by injecting a chemical reagent typically urea, or another ammonia-based solution into the flue gas.
<b>Self Hauled Wastes:</b>	Wastes that are delivered to a waste management facility by the waste generator.
<b>Shrouded Flares:</b>	Flares that are enclosed in order to control combustion and monitor emissions more reliably, as opposed to an open flame where there is a lack of control.
<b>Siting:</b>	The process of choosing a location for a facility.
<b>Source Reduction:</b>	Reducing the amount of materials entering the waste stream from a specific source by redesigning products or patterns of production or consumption (e.g., using returnable beverage containers). Synonymous with waste reduction.

## GLOSSARY OF FREQUENTLY USED TERMS AND ABBREVIATIONS

### Durham/York Residual Waste Study

<b>Source Separated Organics (SSO):</b>	Organics separated by the household or business that include food wastes and leaf and yard wastes. Source separated organics are collected by a separate collection vehicle and sent for processing/composting.
<b>Source Separation:</b>	Segregating various wastes at the point of generation (e.g., separation of paper, metal and glass from other wastes to make recycling simpler and more efficient).
<b>Spent Media:</b>	Odour control equipment that can no longer be used as a result of trapping solid residue.
<b>Stabilized Organic Material:</b>	Organic material that has converted to a form that resists any further change. Bacteria stabilizes organic material and converts the material to gases and other more inert materials.
<b>Stack:</b>	A chimney, smokestack, or vertical pipe that discharges flue gas or used air.
<b>Stakeholder:</b>	Any organization, governmental entity, or individual that has a stake in or may be impacted by a given approach to environmental regulation, pollution prevention, energy conservation, etc.
<b>Stoichiometric:</b>	A chemical condition where by there exists a mixture of chemicals having the exact proportions required for complete chemical combination, applied especially to combustion of materials. (e.g. stoichiometric conditions occur in an incinerator when there is sufficient oxygen present to completely combust the waste material)
<b>Stratigraphy:</b>	The order of rock or soil layers in a geological formation.
<b>Syngas:</b>	A gas product (primarily hydrogen and carbon monoxide) resulting from gasification processes and can be used as a fuel or feedstock chemical.
<b>Terms of Reference:</b>	A terms of reference is a document that sets out detailed requirements for the preparation of an Environmental Assessment.
<b>Thermal Treatment:</b>	Use of elevated temperatures to treat wastes (e.g., combustion or gasification)
<b>Tipping Fee:</b>	A monetary fee paid to process a dispose of waste at a facility.

## GLOSSARY OF FREQUENTLY USED TERMS AND ABBREVIATIONS

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<b>Toxic Equivalents (TEQs):</b>	Used to report toxicity-weighted masses of mixtures of dioxins. The dioxin toxicity equivalent value is compared to 2, 3, 7, 8, tetrachloridibenzo- <i>p</i> -dioxin, and determined by adding the products of the measured concentration of each dioxin and furan congener multiplied by the toxicity equivalent factor.
<b>Toxic Waste:</b>	A waste that can produce injury if inhaled, swallowed, or absorbed through the skin.
<b>Transfer Station:</b>	Facility where material is transferred from collection vehicles to larger trucks or rail cars for longer distance transport.
<b>Trommel:</b>	A rotary cylindrical screen, typically inclined at a downward angle that separates materials of different physical size. Trommel screens are used to separate mixed recyclables, municipal solid waste components, or to screen finished compost from windrow and aerated static pile systems.
<b>Undertaking:</b>	A project or facility that is subject to an environmental assessment. It is defined in the Environmental Assessment Act as follows: <ol style="list-style-type: none"><li>1. an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities,</li><li>2. a major commercial or business enterprise or activity or a proposal, plan or program in respect of a major commercial or business enterprise or activity of a person or persons other than a person or persons referred to in clause (1) that is designated by the regulations, or</li><li>3. an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity of a person or persons, other than a person or persons referred to in clause (a), if an agreement is entered into under section 3.0.1 in respect of the enterprise, activity, proposal, plan or program; ("entreprise")</li></ol>
<b>United States Environmental Protection Agency AP-42 (US-EPA AP-42):</b>	US-EPA document <i>Compilation of Air Emission Factors, Volume 1: Stationary Point and Area Sources</i> .
<b>Urea:</b>	A form of nitrogen that converts readily to ammonium.
<b>User Fee:</b>	Fee collected from only those persons who use a particular service, as compared to one collected from the public in general.

## GLOSSARY OF FREQUENTLY USED TERMS AND ABBREVIATIONS

### Durham/York Residual Waste Study

<b>Venturi Scrubbers:</b>	Air pollution control devices that use water to remove particulate matter from emissions.
<b>Volume Reduction:</b>	Processing waste materials to decrease the amount of space they occupy, usually by compacting, shredding, incineration, or composting.
<b>Waste:</b>	1. Refuse from places of human or animal habitation. 2. Unwanted materials left over from a manufacturing process.
<b>Waste Characterization:</b>	The process of identifying the various components, including quantities, and materials found within a waste stream.
<b>Waste Exchange:</b>	Arrangement in which individuals or companies exchange their wastes for the benefit of both parties.
<b>Waste Feed:</b>	The continuous or intermittent flow of wastes into an incinerator or other device.
<b>Waste Generation:</b>	The weight or volume of materials and products that enter the waste stream before recycling, composting, landfilling, or combustion takes place. Also can represent the amount of waste generated by a given source or category of sources.
<b>Waste Generator:</b>	The individual, household, establishment or business engaged in an activity that generates a specific waste or wastes.
<b>Waste Management System:</b>	A set of facilities or equipment used in, and any operations carried out for, the management of waste including the collection, handling, transportation, storage, processing or disposal of waste, and may include diversion programs and facilities and one or more waste disposal sites.
<b>Waste Minimization:</b>	Measures or techniques that reduce the amount of wastes generated during industrial production processes; term is also applied to recycling and other efforts to reduce the amount of waste going into the waste stream.
<b>Waste Reduction:</b>	Using at-source reduction, reuse, or composting to prevent or reduce waste generation.

## GLOSSARY OF FREQUENTLY USED TERMS AND ABBREVIATIONS

### Durham/York Residual Waste Study

<b>Waste Stream:</b>	The total flow of solid waste from homes, businesses, institutions, and manufacturing plants that is recycled, burned, or disposed of in landfills, or segments thereof such as the "residential waste stream" or the "recyclable waste stream."
<b>Waste-to-Energy (WTE) Facility/Municipal-Waste Combustor:</b>	Facility where recovered municipal solid waste is converted into a usable form of energy, usually via combustion.
<b>White Goods:</b>	Usually large household appliances such as washing machines, dishwashers, and refrigerators/freezers.
<b>Yard Waste:</b>	The part of solid waste generated at the household in the yard composed of grass clippings, leaves, twigs, branches, and other garden refuse.
<b>Zero Waste:</b>	Refers to efforts to reduce solid waste disposal to zero, or as close to zero as possible, by minimizing excess consumption and maximizing the recovery of wastes through recycling and composting.

## UNITS OF MEASUREMENT

### Area

m<sup>3</sup> cubic metre

scf standard cubic feet 35.3 m<sup>3</sup>

### Mass/Weight

Re. Orders of Magnitude:  $x 10^2 = x 100$ ,  $x 10^3 = x 1000$ , etc.

g gram

mg milligram  $1 \times 10^{-3}$  grams

µg microgram  $1 \times 10^{-6}$  grams

ng nanogram  $1 \times 10^{-9}$  grams

kg kilogram  $1 \times 10^3$  g

pg picogram  $1 \times 10^{12}$  grams

t metric tonne  $1 \times 10^3$  kg

kt kilotonne  $1 \times 10^6$  kg

lb pound 1 lb = 453.592 grams

### Power

W watt

kW kilowatt  $1 \times 10^3$  W

MW megawatt  $1 \times 10^6$  W

## Volume

L litre .

mL millilitre  $1 \text{ L} = 1 \times 10^3 \text{ mL}$

m<sup>3</sup> cubic metre  $1 \text{ m}^3 = 1 \times 10^3 \text{ L}$

Rm<sup>3</sup> and DS<sup>m</sup> dry cubic metre of flue gas corrected to standard conditions (25°C, 101.3 kPa, 11% O<sub>2</sub>) as defined by MOE APC on Incinerators Policy 01-03-02

## Time

s second

min minute

hr hour

wk week

y year

## ELEMENTS

Cd - Cadmium

Hg - Mercury

Pb - Lead

## COMPOUNDS

CO - Carbon Monoxide

CO<sup>2</sup> - Carbon Dioxide

CH<sub>4</sub> - Methane

HCl - Hydrogen Chloride

TPM - Total Particulate Matter

PM<sub>2.5</sub> - Particulate Matter Diameter  $\leq 2.5 \mu\text{m}$

NO<sub>x</sub> - Nitrogen Oxides

N<sub>2</sub>O - Nitrous Oxide

PCDDs - Polychlorinated Dibenzodioxins

PCDFs - Polychlorinated Dibenzofurans

SO<sub>2</sub> - Sulphur Dioxide

VOCs - Volatile organic compounds

## MISCELLANEOUS

BTU - British Thermal Unit

°C - temperature in degrees Celsius

N/A - not available

% - percent

cfm - cubic feet per minute

ppmdv - part per million by dry volume

ppmv - part per million by volume

ppm - part per million

min - minimum

max - maximum