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SWANA TECHNICAL POLICY

**DEFINITIONS OF TERMS USED
IN
SWANA TECHNICAL POLICIES
AND
SOLID WASTE MANAGEMENT**

This technical policy defines terms, acronyms and abbreviations frequently used in the solid waste management industry and in SWANA's technical policies (Attachment A). It also lists solid waste sources and types (Attachment B), organizations (Attachment C) and publications (Attachment D). Many of the definitions derive from US federal EPA definitions. States and Provinces have established their own statutory or regulatory definitions and those definitions should be consulted for legal drafting. This technical policy is intended to provide clear and consistent meaning for colloquy and for reading SWANA's technical policies, not precise technical definitions having legal implications.

SWANA members, staff and Technical Divisions may submit proposals to add, delete or amend these definitions to the Policy Committee at any time. The Policy Committee will consider the proposals no later than its next regularly scheduled annual or mid-year meeting, and may approve or disapprove proposals following review-and-comment by the Chief Executive Office and General Counsel. The Policy Committee may refer disputed proposals to the Executive Committee for guidance. Approved additions, deletions or amendments will be incorporated into appropriate Attachments to this policy.

Throughout this policy, defined terms contain initial capital letters.

Approved by the International Board on October 8, 2004.



Laurie Batchelder Adams, International Secretary

Dated October 8, 2004

ATTACHMENT A SELECTED SOLID WASTE DEFINITIONS

ADC: Alternative Daily Cover. See “Cover”.

Aerobic Decomposition: degradation of Organic Wastes in the *presence* of oxygen by microorganisms and bacteria, releasing carbon dioxide gas and heat and producing solid material (compost) that can be used as a soil amendment. An example of Aerobic Decomposition is the waste degradation that occurs in a compost pile. See “Composting”. Contrast “Anaerobic Digestion”.

Alternative Daily Cover (ADC): See “Cover”.

Anaerobic Digestion: degradation of Organic Wastes in the *absence* of oxygen by microorganisms and bacteria, releasing methane that can be collected and used as a fuel and producing relatively inert solid materials that can be processed for use as a soil amendment. An example of Anaerobic Digestion is the waste degradation that occurs in a landfill. Contrast “Aerobic Decomposition”.

Automated Collection: Solid Waste collection by mechanical means, where arms or other devices extend from the collection vehicle, grasp or otherwise manipulate containers, lift them overhead, tip them to empty solid waste into the vehicle, and set them back down on the ground. Fully Automated Collection requires no manual labor to grasp containers; semi-Automated Collection requires manual labor to position containers for mechanical grasping. Contrast “Manual Collection”.

Beneficial Use: utilization or reuse of a material that would otherwise become Solid Waste. Examples include landfill cover, aggregate substitute, fuel substitute or the feedstock in a manufacturing process.

Biodegradable: describes waste materials capable of being biologically decomposed by microorganisms and bacteria. For example, Organic Wastes such as paper, wood, food and plants are biodegradable; metals, glass and most plastics are not.

Bioreactor Landfill: engineered landfill or landfill cell where liquid and gas are actively managed in order to accelerate or enhance Biostabilization of waste. Example management includes controlled addition and recirculation of water and capture of methane gas in a piping network.

Biostabilization: biological decay of Organic Wastes through process that reduces Leachate and Landfill Gas generation.

Bottle Bill: law that requires payment of a deposit on specified beverage containers (such as aluminum cans or glass beverage bottles) by consumers at time of purchase, and subsequent refund of the deposit by the product retailer or other entity when consumers return the containers for redemption. Bottle Bills encourage container recycling and discourage littering.

Buyback Center: facility that refunds deposits on containers subject to Bottle Bill redemption and/or purchases Recyclable Materials.

Buy Recycled: purchasing Recycled Products. Buy Recycled programs often emphasize purchase of products that contain a specified or maximum level of Post Consumer content and/or Recyclable Materials content without affecting the intended use of the product.

Capture Rate: ratio of quantity of Recyclable Materials diverted for Recovery, to the total quantity of Recyclable Materials available for Recovery. See “Diversion Rate” and “Participation Rate”.

Carbone (*C&A Carbone Inc. v. Town of Clarkson* 511 U.S 383 (1994)): case in which the U.S. Supreme Court overturned a local ordinance that required all Solid Waste within the Town of Clarkstown be processed at a town-designated privately owned transfer station. The court found that the ordinance unconstitutionally discriminated against interstate commerce.

C&D Debris: See Attachment B: “Solid Waste Sources and Types”.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S. C Section 9601 *et seq.*, referred to colloquially as “Superfund”, providing for clean up and remediation of uncontrolled or abandoned Hazardous Waste sites and response to accidents, spills and other emergency releases of hazardous substances. CERCLA provides EPA with enforcement authority to ensure that responsible parties pay the cleanup costs. (“PRPs” are Potentially Responsible Parties.)

CESQG (pronounced SQUEEGY): Conditionally Exempt Small Quantity Generators, which are facilities that produce less than 100 kg. (220 lbs.) of Hazardous Waste (or less than 1 kg. of acutely Hazardous Waste) per calendar month. CESQGs are exempt from many of the requirements applicable to Hazardous Waste generators provided they comply with certain conditions specified in Subtitle C regulations.

Closure: cessation of operations at a Solid Waste Management facility (especially a Sanitary Landfill) and implementing plans promulgated in accordance with provisions of RCRA in order to ensure future protection of human health and the environment. An example closure requirement is providing specified grading and final cover of a Sanitary Landfill. See “Cover – final cover” and “Post Closure Care”.

Commingled Recyclables: Recyclable Materials designated for Recycling either by (1) generators’ placement with other Recyclable Materials mixed in a single, common container for collection, or (2) collectors’ sorting and placement in a single, common compartment on the collection vehicle. See “Single Stream Recyclables”. Contrast “Source Separated Recyclables”.

Compaction Density: ratio of weight to unit volume of Solid Waste, Recyclables or other materials usually expressed as pounds per cubic yard or kilogram per cubic meter (lbs/y³ or kg/m³). Compaction is achieved in Sanitary Landfills, collection vehicles and storage containers by using Compactors. Greater Compaction Density increases the life of Sanitary Landfills, route length of collection vehicles or capacity of storage containers. Prescribed Compaction Density may be a performance standard in Solid Waste Management agreements. Compaction Density varies, depending on where and how it is measured. For example in a Sanitary Landfill, Compaction Density is affected by type of Cover, the initial moisture content of the waste, type of landfill Compactors used, number of passes by the landfill Compactors, where it is measured (e.g. on side slopes), etc.. Compaction in a Sanitary Landfill can be measured by multiple

means, including aerial surveys, GIS etc.. During collection, greater Compaction Density may be undesirable for certain Recyclable Materials such as glass.

Compactors: machines that reduce the volume of Solid Waste by crushing, compression or compaction. A **landfill Compactor** is a piece of heavy construction equipment with a blade (to push waste) and steel wheels with cleats (to minimize surface contact with waste and maximize pressure). It reduces volume of Solid Waste in a Sanitary Landfill by rolling over Solid Waste deposited on the surface of the Sanitary Landfill. A **Compactor collection truck** is equipped with a hydraulic ram and compactor plate that reduces volume by pushing and compressing wastes into the main body of the truck. **Stationary compactors** contain a ram that pushes and compresses waste into a container or bale.

Compost: the end product of Composting. It is a humus-like material that can be added to soils to increase soil fertility, aeration and nutrient retention.

Composting: biological decomposition or decay of Organic Wastes (sometimes including mixed Solid Waste) under controlled conditions. Composting takes place under aerobic conditions, typically in an open pile (called a windrow) or in a tank or container (called in-vessel composting). See “Aerobic Decomposition” and “Anaerobic Digestion”:

Contamination: commingling of Garbage, Refuse or other material having unsuitable physical or chemical properties with Recyclable Materials or Organic Wastes, thereby rendering the Recyclables Materials or Organic Wastes unfit for further Reuse, requiring processing prior to Reuse, or decreasing their value for Reuse. A Recycling example is paper products sullied by food. A Composting example is Compost degraded by glass particles (a physical property) or heavy metals (a chemical property) present in the feedstock.

Corrective Action: action taken to investigate, describe, evaluate, correct and cleanup contamination from Solid Waste Management facilities as prescribed in accordance with law, including CERCLA and RCRA.

Cover (or Cap) (noun): soil or Alternative Daily Cover used to cover exposed Solid Waste in a Sanitary Landfill. **Alternative Daily Cover (ADC)** is Cover other than soil, such as spray slurries, tarps, foams, vegetative waste and ash. **Daily Cover** is Cover applied at the end of each Sanitary Landfill operating day. **Final cover** or **cap** is Cover comprised of layers of impermeable materials such as compacted clay, drainage materials, topsoil and vegetation applied over the top of a closed cell of a Sanitary Landfill to minimize the infiltration of rainwater and the production of Leachate.

Daily Cover: See “Cover”.

Debris Boxes: See “Roll Off Boxes”.

Dioxin: group of chemical compounds sharing certain similar physical structures and biological characteristics that can be emitted when burning Solid Waste if there is incomplete combustion and inadequate air pollution control devices. Studies have shown that exposure to Dioxin at high levels may adversely effect health. Federal air quality standards for Waste-to-Energy facilities establish very stringent emission limits for Dioxin.

Diversion: re-direction of Recyclable Materials from disposal through Resource Recovery.

Diversion Goals: Diversion Rates encouraged by law or policy, carrying no penalties, fines or other adverse consequences for non-achievement. Contrast "Diversion Mandates".

Diversion Mandates: Diversion Rates prescribed by law, carrying penalties, fines or other adverse consequences for non-achievement. Contrast "Diversion Mandates".

Diversion Rate: ratio of the quantity of Recovered materials, to the sum of the quantity of Recovered materials plus the quantity of disposed materials. What materials are deemed Recovered or disposed may vary among different local, state, provincial and national governments. "Diversion Rate" is often referred to as "recycling rate" or "recycling diversion rate". Compare "Capture Rate" and "Participation Rate".

Drop-Off Center: containers such as bins and Roll Off Boxes placed at collection sites designated for deposit by generators of specified materials such as Recyclable Materials or Solid Waste.

EIS: Environmental Impact Statement, a document that identifies and analyzes in detail the environmental impacts of a proposed action, including in some instances, the construction of Solid Waste Management facilities, prepared in compliance with the National Environmental Policy Act or state and provincial laws.

Energy Recovery: includes (1) harnessing the heat from Solid Waste incineration or other thermal destruction process to produce steam for direct use or the generation of electricity; (2) extracting fuel from landfill gas, and (3) converting Solid Waste into liquid or gaseous fuels by chemical, thermal or biological processes.

Enterprise Fund: self-supporting method of funding Solid Waste Management programs and operations through revenues generated from service charges and fees, deposited and kept separate and distinct from local governments' general funds.

Environmental Justice: fair distribution of environmental risks among all socioeconomic and racial groups. From a Solid Waste perspective, Environmental Justice concerns arise when Solid Waste Management facilities are, or are perceived to be, located predominantly in areas with minority or lower income populations.

Ergonomic Injuries: injuries to the musculoskeletal system resulting from repetitive motion, heavy lifting, forceful exertion, contact stress, vibration, awkward posture, rapid hand and wrist movement, etc.. Responsible Solid Waste Management operations implement training programs and workplace controls to reduce Ergonomic Injuries.

Financial Assurance: regulatory requirements designed to ensure that Solid Waste facility owners will have the financial resources to pay for Closure, Post Closure Care and Corrective Action, for example through dedicated trust funds, insurance or bonds, revenue pledges or meeting prescribed financial tests.

Flow Control: overt regulatory measure - usually in the form of a local governmental ordinance or official directive - mandating that Solid Waste, Recyclable Material or other material be transported to one or more designated Sanitary Landfills, transfer stations, Materials Recovery Facilities or other Solid Waste Management facilities. Flow Control has been significantly curtailed by *Carbone*. Some local governments have created financial incentives for haulers to bring wastes to particular facilities, and such methods (known as **economic flow control**) tend

to withstand legal challenges. Contrast “Flow Control” with “facility designation”, which is not regulatory in nature: for example where a service provider agrees, by contract, to transport or deliver waste or other material in accordance with the provisions of an agreement between the service provider and a governmental authority.

Franchise: right or privilege conferred by a local government on one or more private entities for the collection, transportation or other handling of Solid Waste or Recyclable Materials. A Franchise may extend throughout the corporate limits of the local government or may be limited to a specified area. Local power to grant Franchises typically stems from state or provincial law, municipal charter, or home rule authority. Franchisees may be required to secure licenses or permits in order to perform franchised services.

Front End Loaders: include (1) Solid Waste collection vehicles (a) originally designed to collect Commercial, Institutional and Industrial Solid Waste from large containers such as dumpsters, having 2 forks attached to the front that lift bins overhead and empty them into a hopper on top of the vehicle, and (b) adopted to collect Residential Solid Waste, for example, from cans dumped manually into buckets or hoppers attached to the front that lift the emptied Solid Waste overhead and empty it into the hopper (compare “Side Loaders”); and (2) heavy equipment with a bucket or grapple used to push or pickup materials in Solid Waste facilities.

Garbage: putrescible Solid Waste. Contrast “Refuse”.

Green Purchasing (or environmentally preferable purchasing): buying environmentally preferable products or services that have a less or reduced adverse effect on human health and the environment than competing products or services that serve the same purpose, considering life cycle impacts: raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal.

Groundwater Monitoring: sampling and analysis of water beneath the surface of the ground for the purpose of detecting the release of contamination from a Solid Waste Management facility.

Hazardous Waste Screening Protocol: procedures implemented in accordance with law or best industry practice to identify and remove Hazardous Waste from further handling within the Solid Waste Infrastructure, including during collection and upon delivery to transfer or disposal facilities.

Heavy Metals: trace metals present in Solid Waste that are sometimes found in the air emissions and ash from Solid Waste Combustors, Leachate, Compost or other products or residuals resulting from the processing of Solid Waste. Examples include mercury, cadmium, lead and chromium. Studies have shown that exposure to Heavy Metals at high levels may adversely effect health.

HDPE: High-Density Polyethylene, a plastic used to make a variety of products including milk jugs and landfill liners. HDPE containers are often identified by the number “2” inside the recycling arrows stamped on the container.

Incinerator: generic term for an enclosed unit that burns Solid Waste, sometimes without energy recovery. See also “Solid Waste Combustor” and “Waste-to-Energy”.

Inerts: materials such as concrete, fully cured asphalt paving, glass, plastics, fiberglass, asphalt or fiberglass roofing shingles, brick, slag, ceramics, plaster, clay and clay and clay products that do not degrade or putrefy and are not Hazardous Waste.

Integrated Solid Waste Management (ISWM): environmentally and economically sound, systematic approach to Solid Waste handling that combines Source Reduction, Reuse, Recycling, Composting, Energy Recovery, collection, transfer, transport and disposal in Sanitary Landfills, Solid Waste Combustors or other Solid Waste Disposal and processing facilities in order to conserve and recover resources and dispose of Solid Waste in a manner that protects human health and the environment.

Intermediate Processing Center (IPC): term used interchangeably with “MRF”, or to signify MRF that not only sorts and recovers Single Stream and Commingled Recyclables (usually from residential and commercial sources) but additionally processes them into new Recycled Materials feedstock or Recycled Products. See “MRF”.

Interstate Commerce Clause: provision of the United States Constitution prohibiting state and local governments from discriminating against interstate commerce *unless* they are acting as market participants like private parties. See “*Carbone*” and “Flow Control”.

ISWM: See “Integrated Solid Waste Management”.

Landfill Gas: gas produced when Organic Waste naturally decomposes in a Sanitary Landfill, comprised of approximately 50 percent methane (the primary component of natural gas) and 50 percent carbon dioxide. Landfill gas can be collected and used as a fuel for heating, generating electricity or fueling engines.

Leachate: liquid that has percolated through or drained from Solid Waste, often containing suspended or dissolved waste materials.

Liner: layer of natural or synthetic material laid beneath and on the sides of a Sanitary Landfill that restricts the downward or lateral escape of Leachate and Landfill Gas. **Clay liners** can be constructed from tightly compacted clay soils or manufactured geosynthetic clay. **Synthetic liners** (sometimes called flexible membrane liners or FML) are constructed from plastic membranes (geomembranes). **Composite liners** combine layers of both clay and synthetic liners. State, provincial and national law may prescribe minimum specifications for liner systems.

Managed Competition: process where municipal or public sector Solid Waste departments submit proposals or bids in competition with private sector Solid Waste companies in response to a publicly tendered service contract. Managed competition could be applied to any Solid Waste service (or any other municipal service) but generally has been applied to Solid Waste collection services.

Manual Collection: Solid Waste collection by hand rather than machine, where workers grasp, lift and empty cans or toss bags into hoppers or buckets on a collection vehicle. Contrast “Automated Collection”.

Materials Recovery Facility (MRF): building where Commingled Recyclables are separated and processed (including sorting, baling and crushing) or where Source Separated Recyclables are processed for sale to various markets. See “Intermediate Processing Center”. In a **Dirty**

MRF the incoming Recyclable Materials are co-collected and commingled with other non-Recyclable portions of Solid Waste. See “Mixed Waste Processing”.

Mixed Waste Processing: picking, sorting and otherwise separating Recyclable Materials from commingled Refuse and Garbage, as opposed to picking, sorting and otherwise separating one type of Commingled Recyclables (such as fiber) that was separated and collected separately from Solid Waste from another type of Commingled Recyclable (such as containers). See “MRF”.

MOLO: Manager of Landfill Operations, one of SWANA’s certification disciplines. See “SWANA Certified”.

MRF (pronounced MURF): See “Materials Recovery Facility”.

MSW: municipal Solid Waste. See Attachment B “Solid Waste Sources and Types.”

NIMBY (Not In My Backyard): neighborhood, community or local political opposition to the siting and development of Solid Waste Management facilities.

Participation Rate: ratio of generators (e.g. individuals, households or businesses) of Recyclables Materials that actually participate in a Recycling Program by setting out Recyclables for collection during a prescribed period of time, to generators who are served by the Recycling Program and could participate in the Recycling Program. See “Capture Rate” and: “Diversion Rate”.

PAYT (Pay As You Throw): See “Variable Rates”.

PET (Polyethylene Terephthalate): plastic commonly used to make containers such as soft drink bottles. PET containers are often identified by the number “1” inside the recycling arrows stamped on the container.

Post Closure Care: activities during the period after Closure of a Solid Waste Disposal facility where the facility owner is required to carry out monitoring, maintenance and any necessary Corrective Action needed to contain liquid, gas and Solid Waste and to detect, prevent or respond to the release of liquid, gas and Solid Waste.

Post Consumer: describes products purchased and used by consumers, then discarded or recycled, such as a newspaper that has been purchased and read, Recycled, then used to make newsprint. Contrast “Pre Consumer”.

Pre Consumer: describes feedstock used in manufacturing, fabrication or industrial production, then discarded or recycled, comprised of scrap, trimmings, cuttings and other post-production discards such as overruns, over issue publications, and obsolete inventories. Contrast “Post Consumer”.

Privatization: use of the private sector to provide Solid Waste Management services, ranging from complete private ownership and operation of ISWM facilities, service contracts or Franchise agreements between local governments and private parties to provide ISWM services, to private operation of ISWM facilities or equipment owned by the public sector.

Procurement Preference: purchase of Recycled Products even though their price exceeds the price of similar products with lesser or no Recycled Materials content, often by creating exceptions to procurement laws or practices that require purchasing qualifying products having the lowest cost.

Products of Combustion: gases and particulates that result from the combustion of Solid Waste.

Product Stewardship: appeal to all parties in a product life cycle - manufacturers, retailers, users and waste managers - to share responsibility and costs for reducing the adverse environmental impacts of products. From a Solid Waste Management perspective, Product Stewardship involves the actions taken to improve the design and manufacture of products to facilitate either their reuse, recycling or disposal, as well as actions to establish programs to collect, process and Reuse or Recycle products when they are discarded.

Pyrolysis: thermal and chemical decomposition of Organic Waste in a furnace operated without sufficient oxygen to allow combustion. Pyrolytic products include combustible gases, oils, charcoal and mineral matter. Contrast "Incineration".

Rail Haul: transportation of Solid Waste (generally long distances) by railroad.

Recovery: (or Recovering): See "Resource Recovery".

RCRA (pronounced RECK RAA): Resource Conservation and Recovery Act, 42 S.S. C. Section 6901 *et. seq.*, as amended, the major U.S. federal legislation first adopted in 1976 that governs the management of Solid Waste and Hazardous Waste in the U.S.

Recyclables Broker: individual or entity that acts as agent or intermediary between the sellers and buyers of Recyclable Materials such as metals, paper and glass.

Recyclable Material: substance that can potentially be reused as or recycled into a Recycled Material or Recycled Product. See also "Recycled Material" and "Recycled Product".

Recyclables: See "Recyclable Material".

Recycled Content: portion of a product's or package's weight that is composed of materials re-manufactured from a Recyclable Product or packaging material, including Pre-Consumer Materials or Post-Consumer Materials.

Recycled Material: Recyclable Material that has been converted into feedstock for use in the manufacture of a new Recycled Product, including containers or packaging. See also "Recyclable Material" and "Recycled Product".

Recycled Products: includes (1) products having specified percentages of their total weight comprised of Pre-Consumer or Post Consumer Recycled Material and/or secondary materials (such as certain paper products, plastic products, aluminum containers, Compost and co-compost, glass products, lubricating oils, paints and solvents); (2) used products that are not disposed but refurbished for Reuse without substantial alteration (such as refilling beverage bottles returned to a bottler, dock bumpers made of scrap tires, remanufactured laser toner cartridges, repaired office furniture, reconditioned carpet, retreaded tires, and reformatted computer disks).

Recycled or Recycling: includes (1) collection, sorting, marketing, processing, and transforming or remanufacturing Recyclable Materials into Recycled Materials and Recycled Products, including marketing thereof; and (2) the purchase and use of Recycled Products. See “Recyclable Materials”, “Recycled Materials” and “Recycled Products”.

Redemption: return of Recyclable Materials such as beverage containers covered by Bottle Bills to the retailer thereof or a Buy Back Center for refund of amounts at least equal to the deposit, made at the time of sale.

Refuse: non-putrescible Solid Waste. Contrast “Garbage”.

Remanufacture: disassembling used products that have been recovered instead of discarded, including cleaning, repairing or replacing necessary parts, and reassembling them for resale and reuse. “Remanufacture” often involves breaking down a used product into its main / core subsystems / modules and adding extensive parts and labor. “Remanufacture” may be distinguished from “**refurbishing**”, which is less extensive, including renovating, repairing, restoring, or generally improving the appearance, performance, quality, functionality, or value of the used product for reuse or resale.

Request for Bids (RFBs. tender): procurement in which a local government solicits price bids for goods or services (such as Solid Waste collection and disposal, Recycling, or facility development or operation) based on prescribed, detailed specifications, usually with limited authority to negotiate or modify bids unless bidder does not meet minimum qualifications. The form, manner and timing of requests for bids are mandated by law. Once bidders meet minimum qualifications (such as experience), price is the only criteria. Contrast “Requests for Proposals (RFPs)”.

Request for Proposals (RFPs): procurement in which a local government solicits price and/or program proposals for goods or services (such as Solid Waste collection and disposal, Recycling, or facility development or operation) based on prescribed but possibly alternative and general specifications, usually with broad authority to negotiate or modify proposals. The form, manner and timing of requests for proposals are subject to the local government’s discretion. Not only price, but additional factors such as proposed program, experience, references, environmental record, history of litigation, recycling achievements, etc., may be criteria. Contrast “Requests for Bids (RFBs)”.

Request for Qualifications (RFQs): in advance of issuing Requests for Proposals, local governments solicit qualifications of potential proposers. Contrast “Requests for Proposals (RFPs)”.

Resource Recovery: recovery rather than disposal of Recyclable Materials or energy from Solid Waste, encompassing Recycling, Reuse, Composting and Energy Recovery.

Reuse: use of a product more than once in its same form for the same or different purpose without substantial alteration. See “Recycled Product”.

RFP: See “Request for Proposals”.

RFQ: See “Request for Qualifications”.

Roll Off: open-topped rectangular containers for storage, collection and transport of Solid Waste that are rolled on and off flatbed collection vehicles via winches or reeving cylinders (hooks), originally servicing Commercial, Institutional and Industrial Solid Waste but increasingly servicing Drop-Off Centers for Residential Solid Waste or Recyclables or sites that generate C&D Debris. See also “Debris Boxes”.

Route Efficiency: measurements of efficiency or productivity of a collection vehicle from the time it leaves the maintenance yard until it returns from collecting Solid Waste or Recyclable Materials and delivering them to Solid Waste Management facilities. Efficiency may be measured in various ways, including stops / route, time / route, cycling time, time between stops, etc.

Route-Selected Recyclables: Recyclables collected by a hauler with scheduled stops structured to minimize contamination of Recyclables by Garbage, Refuse or other unacceptable materials and maximize Resource Recovery, such as excluding restaurant and grocery stores from routes that collect paper from office buildings.

Sanitary Landfill: engineered Solid Waste disposal method on the land in accordance with Subtitle D, designed and operated to protect human health and the environment by establishing requirements with respect to location, operation, design, ground water monitoring, corrective action, closure and post-closure, and financial assurance.

Scavenging: (1) theft of Recyclable Materials set out by the generators, prior to collection by the hauler, done by individuals or illicit businesses, and (2) uncontrolled (and generally unsafe) removal of Recyclable Materials from the working areas of a Sanitary Landfill, Transfer Station, MRF or other Solid Waste Management Facility.

Side Loaders: collection vehicles that are loaded from the side manually or with fully or semi-automated mechanical arms that grip containers (primarily small residential carts), lift them overhead, and empty them into the collection vehicle. Compare “Front End Loaders”.

Single Stream Recycling: See “Commingled Recycling”.

Small Quantity Generator (pronounced SQUEEGY): facilities that generate very small quantities of Hazardous Waste, between 100 kg. (220 lbs.) and 1000 kg. (2,200 lbs.) per calendar month. The regulatory requirements for Small Quantity Generators are less stringent than persons who, or entities that, generate larger quantities of Hazardous Waste.

Solid Waste: any Garbage, Refuse, sludge, and other discarded material, including solid, liquid, semisolid, or contained gaseous material, resulting from residential habitation; industrial, commercial, mining, and agricultural operations; and community activities. This definition may vary under diverse local, state, provincial and national laws. See also Attachment B “Solid Waste Sources and Types”.

Solid Waste Combustor: furnace that combusts Solid Waste as defined in regulations promulgated under the US Clean Air Act. Solid Waste Combustors are subject to stringent federal regulations that control the combustion process and establish emission limits for various air pollutants including Dioxin, Heavy Metals, acid gases (hydrogen chloride and sulfur dioxide), particulates and nitrogen oxides.

Solid Waste Combustor Ash: noncombustible residue remaining after the combustion of Solid Waste. **Bottom ash** is the noncombustible residue that falls to the bottom of the combustion chamber and is removed mechanically. **Fly ash** is particles of noncombustible residue that are entrained in the exhaust gases during combustion prior to exhaust into the atmosphere.

Solid Waste Disposal: the discharge, deposit, injection, dumping, spilling, leaking or placing of Solid Waste on or in the land or water. This definition may vary under diverse local, state, provincial and national laws.

Solid Waste Infrastructure: facilities, furnishings, equipment, systems and programs developed to provide Solid Waste services, including privately or publicly owned or operated collection fleets, transfer stations, MRFs, composting facilities, Sanitary Landfills, Solid Waste Combustors and other Solid Waste Disposal facilities, or operation or service contracts therefor.

Solid Waste Management: planned and organized handling of Solid Waste and Recyclable Materials in an environmentally and economically sound manner, encompassing the generation, storage, collection, transfer, transportation, processing, Resource Recovery, Reuse, and disposal of Solid Waste and Recyclable Materials and including all administrative, financial, educational, environmental, legal, planning, marketing and operational aspects thereof.

Source Reduction (or Waste Reduction): actions taken to reduce Solid Waste toxicity or disposal, including (1) manufacturers' redesign and management of products and packaging to extend product life, and facilitating repair, (2) consumers' reduced purchase and consumption of products that become wastes; and (3) manufacturers' and consumers' reuse of products.

Source Separated Recyclables: Recyclable Materials that are sorted and removed from Refuse, Garbage and Commingled Recyclables by the generator or owner of those Recyclable Materials so that they can be collected in different containers for Recycling or Composting. Examples include sorting newspapers, glass bottles, metal cans, plastic containers, corrugated cardboard, office papers and lawn and garden wastes. Contrast "Commingled Recyclables" and "Single Stream Recyclables".

Subtitle C: section of RCRA that authorizes U.S. EPA to establish regulations regarding Hazardous Waste management

Subtitle D: section of RCRA that authorizes U.S. EPA to establish regulations for Sanitary Landfills.

Superfund: common name for CERCLA, including generally the entire CERCLA program as well as specifically the trust fund established to fund cleanup of contaminated sites. See "CERCLA".

SWANA Certified: describes a Solid Waste professional who meets SWANA's eligibility requirements for education and experience, and who has passed one of SWANA's Certification Exams for a particular Solid Waste management discipline. SWANA currently offers Certification in seven disciplines:

- Management of Collection Systems,
- Management of Composting Programs,
- Management of Construction and Demolition Materials,
- Management of Recycling Systems,
- Management of Landfill Operations,

- Management of Transfer Stations and
- Principles of Management of Municipal Solid Waste Systems.

TCLP: Toxicity Characteristic Leaching Procedure, a lab test designed to determine whether a Solid Waste is a Hazardous Waste because it releases toxic chemicals in Leachate.

Tipping Fee: fee charged for accepting Recyclable Materials or Solid Waste at a Solid Waste Management facility (such as a transfer station, Solid Waste Combustor, MRF, IPC or Sanitary Landfill.).

Transfer Station: facility that receives and consolidates Solid Waste or Recyclable Materials from municipal or commercial collection trucks and self-haulers' vehicles and loads the Solid Waste onto tractor trailers, railcars or barges for long-haul transport to a distant disposal facility.

Universal Wastes: several widely generated Hazardous Wastes identified by US EPA (such as batteries, pesticides, thermostats and mercury containing lamps and equipment) that are subject to streamlined requirements for collection, storage and processing if they are Recycled in accordance with law rather than disposed.

Upstream Diversion: Diversion of Recyclable Materials that occurs prior to a specified place or time before setting out the balance of Recyclable Materials at the curb for collection in a Recyclables collection program. An example of Upstream Diversion is as a generator's Source Reduction, charitable donation or delivery of Recyclable Materials to a Buy Back Center

Variable Rates (or PAYT / Pay as You Throw): charges for Solid Waste collection services that incrementally increase with disposed Refuse and Garbage volume (such as 32, 64 or 96 gallon carts) or weight, with lesser or no charges for Recyclables collection services, to encourage Recycling and discourage disposal. Variable rates do not necessarily reflect actual operational costs but rather constitute behavioral incentives (or disincentives)

WASTECON®: SWANA's Annual Conference and Solid Waste Exposition.

Waste Exchange: organization or service that facilitates or arranges for Recyclable Materials or discarded materials from various generators or industries to be Recycled or Reused by others.

WasteExpo: an annual Solid Waste conference and equipment exposition owned by Primedia, Inc.

Waste Generation: total amount of disposed Solid Waste and diverted Recyclables.

Waste Reduction: See "Source Reduction".

Waste Screening: monitoring and inspecting incoming Solid Waste at a Solid Waste Management facility in order to screen out Solid Waste and other materials that are prohibited or otherwise unacceptable.

Waste-to-Energy: controlled combustion of Solid Waste in Solid Waste Combustors having state-of-the-art pollution controls, and Energy Recovery there from. Types of Waste-to-Energy facilities include **mass burn units** that incinerate mixed Solid Waste with little or no prior separation, and **RDF** (Refuse Derived Fuel) units that separate combustible Solid Waste from

noncombustible Solid Waste prior to combustion. See “Solid Waste Combustors” and “Incinerators”.

Zero Waste: efforts to reduce Solid Waste generation waste to nothing, or as close to nothing as possible, by minimizing excess consumption and maximizing the recovery of Solid Wastes through Recycling and Composting.

ATTACHMENT B SOLID WASTE SOURCES AND TYPES

- **Agricultural Wastes:** Solid Waste comprised of crop residues and animal manures resulting from agricultural operations.
- **Biosolids:** solid, semisolid, or liquid waste generated from a wastewater treatment plant. Sometimes referred to as Sewage Sludge.
- **Bulky Wastes:** Solid Waste comprised of large discarded materials such as appliances, furniture, automobile parts. Large branches and tree stumps are sometimes included by local definitions.
- **C&D Debris:** materials resulting from the construction and demolition (C&D) of buildings and other structures, including materials such as metals, wood, gypsum, asphalt shingles, roofing, concrete, rocks, rubble, soil, paper, plastics and glass, but excluding putrescible wastes.
- **Combustible Waste:** Solid Waste that will burn, such as waste paper, cardboard, wood, plastics, textiles and leaves, with or without Resource Recovery.
- **Commercial Waste or Recyclables:** Solid Waste or Recyclables from businesses, office buildings, stores and markets and sometimes including Institutional Waste. Contrast “Household Waste or Recyclables”.
- **E-Scrap or E-Waste:** discarded electronic equipment including computers, monitors, printers, TVs, stereo systems, VCRs and other personal electronic devices.
- **Food Residuals or Waste:** animal and vegetable materials resulting from the handling and preparation of foods.
- **Garbage:** putrescible Solid Waste.
- **Green Waste:** Solid Waste comprised of grass clippings, shrub and tree cuttings and other Organic Wastes resulting from lawn care and gardening. See also “Yard Debris”.
- **Hazardous Waste:** Solid Wastes with properties that make them dangerous or capable of having a harmful effect on human health and the environment. Under RCRA, Hazardous Wastes are specifically defined as wastes that exhibit a specific characteristic (toxicity, flammability, ignitability or infectious) or are specifically listed as a hazardous waste in the Subtitle C. States and provinces may promulgate their own definitions of “Hazardous Waste”.
- **Household Waste or Recyclables (or residential or domestic waste):** Solid Waste or Recyclables originating from homes and residences. Contrast “Commercial Waste”.
- **Household Hazardous Waste (HHW):** certain Hazardous Wastes generated in small quantities by homes and residences, such as batteries, paint and oil.

- **Industrial Waste:** Solid Waste originating from industrial processes or manufacturing operations.
 - **Institutional Waste:** Solid Waste originating from schools, universities, hospitals and other institutions.
 - **Medical Waste (pathological or infectious wastes):** certain materials from hospital and health care facilities, including infectious materials, human pathological wastes, human blood products and used sharps.
 - **Municipal Solid Waste (MSW):** Solid Waste other than Hazardous Wastes comprised of Commercial, Household, and Institutional Wastes.
 - **Organic Wastes:** Solid Wastes containing carbon compounds that are capable of being biologically degraded, including paper, Food Residuals, wood wastes, Yard Debris and plant wastes but not metals and glass or plastic. (Plastic contains carbon compounds and is theoretically organic in nature, but generally is not readily biodegradable.)
- Sewage Sludge:** See the correct term, "Biosolids".
- **Sharps:** discarded needles and syringes.
 - **Special Wastes:** Solid Wastes that are often separated from mixed Solid Waste for special handling or management, including Household Hazardous Waste, tires, batteries, discarded pesticides, E-Waste, and Bulky Wastes.
 - **White Goods:** discarded household appliances such as stoves, refrigerators, and washing machines.

Yard Debris: Another term for "Green Waste".

ATTACHMENT C
PARTIAL LIST OF SOLID WASTE ORGANIZATIONS AND ENTITIES

- **ALMR:** The Association of Lighting and Mercury Recyclers
- **APWA:** The American Public Works Association
- **ASTSWMO:** The Association of State and Territorial Solid Waste Management Officials
- **A&WM:** The Air and Waste Management Association
- **Composting Council of Canada**
- **CARI-ACIR:** Canadian Association of Recycling Industries
- **CMRA:** The Construction Materials Recycling Association
- **EIA:** The Environmental Industries Association
- **Environment Canada**
- **EPA:** The U.S. Environmental Protection Agency
- **GRRN:** The Grassroots Recycling Network
- **ISRI:** The Institute of Scrap Recycling Industries
- **ISWA:** The International Solid Waste Association
- **IWSA:** The Integrated Waste Services Association
- **OSHA:** The Occupational Safety and Health Administration
- **MWMA:** The Municipal Waste Management Association
- **NEMA:** The National Electrical Manufacturers Association
- **NRC:** The National Recycling Coalition
- **NSWMA:** The National Solid Waste Management Association
- **STMC:** The Scrap Tire Management Council
- **SWANA:** The Solid Waste Association of North America
- **USCC:** The US Composting Council
- **WASTEC:** The Waste Equipment Technology Association.

ATTACHMENT D
PARTIAL LIST OF SOLID WASTE PUBLICATIONS

- **American Waste Digest:** Solid Waste products and information,
- **Biocycle:** journal of Composting and Organic Waste Recycling,
- **E News:** SWANA's Monthly Electronic Newsletter,
- **The Hauler Magazine:** Solid Waste equipment catalog,
- **MSW Management:** SWANA's Official Journal for SOLID WASTE professionals,
- **MSW Solutions:** SWANA's Monthly Membership Newsletter,
- **Public Works Journal:** information on Solid Waste and public works issues,
- **Recycling Product News:** Recycling equipment,
- **Resource Recycling:** Recycling and Composting journal,
- **Solid Waste and Recycling:** Canadian solid waste issues,
- **Solid Waste Digest:** regional and state-wide volume and pricing information,
- **Waste Age:** business magazine for the waste industry,
- **Waste Management World:** ISWA's Official Magazine, international coverage,
- **Waste News:** information for businesses that generate and manage wastes.