

US EPA ARCHIVE DOCUMENT

Definitions

Utilized in the Re-TRAC Connect™ State Measurement Template

Alternative Daily Cover: 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 (Solid Waste Association of North America).

Beneficial Use: means the use of solid waste as an ingredient in a manufacturing process, or as an effective substitute for natural or commercial products, in a manner that does not pose a threat to human health or to the environment. Avoidance of processing or disposal cost alone does not constitute beneficial use. The use of a material as an Alternative Daily Cover in a solid waste landfill is not considered a beneficial use (U.S. EPA National Measurement Workgroup, 2013).

Batteries: a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed (40 CFR 273.9).

Biosolids: are the nutrient-rich organic materials resulting from the treatment of sewage sludge (the name for the solid, semisolid or liquid untreated residue generated during the treatment of domestic sewage in a treatment facility). When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth (U.S. EPA WasteWater Website).

Collector: refers to public or private haulers that collect nonhazardous waste and recyclable materials from residential, commercial, institutional, and industrial sources. Also see Hauler.

Commingled (Mixed) Recyclables: refers to a mixture of several recyclable materials in one container (U.S. EPA, 1989).

Composting: the process of converting organic materials into a biologically stable soil amendment through intentional and active manipulation. Manipulation may include, but is not limited to, grinding, mixing, turning, and adding liquid and/or bulking agents (U.S. EPA National Measurement Workgroup, 2013).

Compost: solid waste which has undergone biological decomposition of organic matter, and has been disinfected using composting or similar technologies, and has been stabilized to a degree which is potentially beneficial to plant growth and which is suitable for use as a soil amendment, artificial top soil, growing medium amendment or other similar uses (Region 4 Workgroup).



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Construction and Demolition (C&D) Debris: refers to waste that is generated during the construction, remodeling, repair, or demolition of buildings, bridges, pavements, and other structures. C&D debris includes concrete, asphalt, lumber, steel girders, steel rods, wiring, dry wall, carpets, window glass, metal and plastic piping, tree stumps, soil, and other miscellaneous items related to the activities listed above. This category also includes natural disaster debris (U.S. EPA, 1989, 1994d).

Curbside Program: curbside collection means collection of solid waste placed adjacent to a street (40 CFR 243.101).

Disposal: means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters (Solid Waste Disposal Act, Section 1004).

Disposal Facilities: refers to repositories for solid waste including landfills and combustors intended for permanent containment or destruction of waste materials. *Excludes* transfer stations and composting facilities (U.S. EPA, 1991b and National Recycling Coalition, 1995).

Drop-Off Center: refers to a method of collection whereby recyclable or compostable materials are taken by individuals to a collection site and placed in designated containers (U.S. EPA, 1989).

Diversion: activities surrounding the handling of recovered resources such that they are not disposed of in landfills, waste piles, surface impoundments, land application units on a permanent or long-term temporary basis; and are not incinerated or converted to fuel energy, or base chemicals through combustion, pyrolysis, gasification, or other conversion technologies. Diversion can be attributed to several processes where materials are systematically redirected from disposal: **Recycling**, **Reuse**, **Beneficial Use**, and **Composting**. Each of these four processing forms of diversion are defined in a way that make them mutually exclusive to one another, yet a total diversion metric can be calculated by adding the amounts from all four processes together (U.S. EPA National Measurement Workgroup, 2013).

Dual Stream Recycling: is a system in which residents usually combine all their food and beverage containers (aluminum and steel cans, glass jars and bottles, and some or all plastic bottles) in one bin, and they put their newspapers and/or mixed paper (such as junk mail, cereal boxes, and home office paper) in another bin, or in a brown paper grocery bag. (Container Recycling Institute).

Electronics (e-waste, e-scrap): in the United States, the term "e-waste" refers to electronics such as computers, televisions, video game consoles, monitors, VCR/DVD players, cell phones, printers and scanners, fax machines, and other electrical devices that operate using a program and PWB board (Institute of Natural Resource Sustainability, University of Illinois).

Energy recovery: includes (1) harnessing the heat from solid waste incineration or other thermal destruction processes 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. Waste to energy is a subset of energy recovery (U.S. EPA National Measurement Workgroup, 2013).

Enterprise Fund Accounting (Enterprise Fund): self-supporting method of funding solid waste management programs and operations through revenues generated from service charges and fees.



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Deposited and kept separate and distinct from local governments' general funds (Solid Waste Association of North America).

Exports: refers to municipal solid waste and recyclables that are transported outside the state or locality where they originated (U.S. EPA, 1997, *Measuring Recycling: A Guide for State and Local Governments*).

Fats, Oils & Grease (FOG): organic polar compounds derived from vegetable/plant or animal sources that are composed of long chain triglycerides. Food service establishment's fats, oils & grease consist of two types, yellow grease and brown grease. Major source of yellow grease is deep frying. Brown grease is floatable FOG, settled solids and associated wastewater retained by grease traps. (California Environmental Protection Agency).

Gasification: is the partial oxidation of carbon-based feedstock to generate syngas. The process is similar to pyrolysis, except that oxygen (as air, concentrated oxygen, or steam) is added to maintain a reducing atmosphere, where the quantity of oxygen available is less than the stoichiometric ratio for complete combustion. Gasification forms primarily carbon monoxide and hydrogen, but potentially other constituents such as methane particularly when operating at lower gasification temperatures. Gasification is an endothermic process and requires a heat source, such as syngas combustion, char combustion, or steam. The primary product of gasification, syngas, can be converted into heat, power, fuels, fertilizers or chemical products, or used in fuel cells (U.S. EPA, 2014, *State of Practice for Emerging Waste Conversion Technologies*, Final Project Report #EPA/600/R-12/684).

General Fund: used to account for all financial resources of the State not required to be accounted for in some other fund. Includes both the basic account and administrative accounts (GAAP 80.20.35a).

Glass: clear glass beverage and food containers (e.g. whole and broken clear soda and beer bottles, fruit juice bottles, peanut butter jars, mayonnaise jars); Green-colored glass containers (e.g. whole or broken brown soda, beer and wine bottles); Brown-colored glass containers (e.g. whole or broken brown soda, beer and wine bottles); Other colored glass containers and bottles other than green or brown (e.g. whole or broken blue or other colored bottles and containers), CalRecycle, Uniform Characterization Methodology, 1997.

Green box: unstaffed, county public collection system, usually consisting of one or two dumpsters, located in various publicly accessible areas for the use of collecting the garbage of residents in the area (Region 4 Workgroup).

Household Hazardous Waste (HHW): refers to hazardous products that are used and disposed of by residential, rather than industrial, consumers. These products include some paints, stains, varnishes, solvents, and pesticides, and other materials or products containing volatile chemicals that catch fire, react, explode under certain circumstances, or that are corrosive or toxic. HHW is derived from municipal solid waste (MSW) with the exception of used oil which is *excluded* from the category of MSW. Examples of recycling include processing HHW components into new products after they have been diverted from the waste stream. Diversion from the waste stream does not constitute recycling through collection or drop-off programs (U.S. EPA, 1992, 1993b).

Hauler: refers to a waste collection company that provides complete refuse removal services. A hauler may also collect recyclables. Includes both private and public entities. Also see Collector (U.S. EPA, 1994d).



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Imports: refers to municipal solid waste and recyclables that have been transported to a state or locality for processing or final disposition, but that did not originate in that state or locality (U.S. EPA, 1997, Measuring Recycling: A Guide for State and Local Governments).

Incinerator: refers to a furnace for burning solid waste under controlled conditions (U.S. EPA, 1994d).

Industrial Landfill refers to a landfill that receives waste which is generated by one or more industrial or manufacturing plants and is used or to be used for the disposal of solid waste generated by such plants, which may include industrial wastes, commercial wastes, institutional wastes, farming wastes, bulky wastes, landscaping and land clearing wastes, construction/demolition wastes, and shredded automotive tires. Additionally this disposal facility may also serve as a monofill for ash disposal from the incineration of municipal solid waste (Region 4 Workgroup).

Industrial solid waste: solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste (Title 40 CFR part 258).

Landfill Capacity: is the amount available airspace volume a State has for disposal. Remaining capacity is based on the rate of materials being disposed in tons per year times a compaction rate of 2:1 (cubic yards of volume: tons) compared to the cubic yards of remaining airspace available for disposal in a landfill (Region 4 Workgroup).

Equation:

Remaining Capacity in Years = (Remaining Cubic Yards of MSW Landfill Airspace (Statewide) / (2 Cubic Yards/ton Conversion Compacted MSW Waste) / (MSW Landfilled Tons of Material/Year))

Material Recovery Facility (MRF): refers to a facility where recyclables are sorted into specific categories and processed, or transported to processors, for remanufacturing (U.S. EPA, 1994d).

MRF Qualities (Region 4 Workgroup)

- 1.) Handles common recyclable commodities
- 2.) Defined by statute
- 3.) May be publicly, privately, or owned by non-profit agencies
- 4.) May be end of market user or intermediate processor.

Mixed Metals: refers to recovered metal that is not sorted into specific categories (aluminum cans, tin/steel cans, other ferrous, and other nonferrous) U.S. EPA, 1997, Measuring Recycling: A Guide for State and Local Governments.

Mulching: refers to the process by which the volume of organic waste is reduced through shredding or grinding (Region 4 Workgroup).

Mulch: is commonly defined as a soil covering used to control weeds or



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erosion; retain moisture in soil; and insulate soil from cold weather. It is also used for aesthetic purposes. Organic materials commonly used for mulch include wood chips, ground up landscape trimmings, shredded bark, coarse compost material, straw, and shredded paper. Nonorganic materials include crushed concrete and brick, stones and gravel, lava rock, and plastic film (California Environmental Protection Agency).

Municipal Solid Waste: means discards from residential and commercial sources that does not contain regulated hazardous wastes. (MSW = Residential + Commercial), U.S. EPA National Measurement Workgroup, 2013.

The older and more specific definition of MSW refers to wastes such as durable goods, nondurable goods, containers and packaging, food scraps, yard trimmings, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources, such as appliances, automobile tires, old newspapers, clothing, disposable tableware, office and classroom paper, wood pallets, and cafeteria wastes. *Excludes* solid wastes from other sources, such as construction and demolition debris, auto bodies, municipal sludges, combustion ash, and industrial process wastes that might also be disposed of in municipal waste landfills or incinerators (U.S. EPA, 1996b).

MSW Landfill: an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A MSW landfill may also receive other types of RCRA Subtitle D wastes (§ 257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion (Title 40-Protection of Environment, Section 60.751, 1999).

Organic Materials: the remains, residues or waste products of any organism that are recovered resources from solid waste disposal. Such materials may include, but not limited to: food residuals; yard debris; and wood, plant or paper products. This term does not include metals, glass, or petroleum based plastic (U.S. EPA National Measurement Workgroup, 2013).

Pallet: refers to a portable platform made of wood or plastic lumber used for storing or moving cargo or freight (National Wooden Pallet and Container Association).

Paper (Recovered Fiber): post-consumer fiber such as paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; and all paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste (U.S. EPA, Paper Products Recovered Materials Advisory Notice; Federal Register, May 29, 1996, Volume 61, Number 104; Pages 26985-26993).

Pay as You Throw: is a system under which residents pay for municipal waste management services per unit of waste collected rather than through a fixed fee (U.S. EPA, 1994, Pay-As-You-Throw, Lessons Learned About Unit Pricing).

Plastic: refers to plastic containers and packaging made from various resins, including PETE, HDPE, PVC, LDPE, PP, and PS (U.S. EPA, 1996b).



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Pyrolysis: defined as an endothermic process, also referred to as cracking, involving the use of heat to thermally decompose carbon-based material in the absence of oxygen. Its main products are a mixture of gaseous products, liquid products (typically oils of various kinds), and solids (char and any metals or minerals that might have been components of the feedstock). For its predominate use in North America on mixed plastics, liquid petroleum-type products predominate, which generally require additional refining. Application of pyrolysis to mixed MSW could potentially generate a gaseous mixture of carbon monoxide (CO) and hydrogen (H₂) called "syngas" that can be used for steam and electricity generation. Products of process are commonly reported, but the list and proportion of each differs depending on reactor design, reaction conditions, and feedstock (U.S. EPA, 2014, State of Practice for Emerging Waste Conversion Technologies, Final Project Report #EPA/600/R-12/684).

Recovery: refers to the diversion of materials from the municipal solid waste stream for the purpose of recycling or composting. *Excludes* reuse and source reduction activities such as yard trimmings diverted to backyard (onsite) composting, the repair of wood pallets, and the refilling of beverage containers (U.S. EPA 1996b).

Recycling: refers to the series of activities by which discarded materials are collected, sorted, processed, and converted into raw material and returned to the economic mainstream by being used in the production of new products. Does not include the use of these materials as a fuel substitute or for energy production (Modification of U.S. EPA 1997).

Reuse: refers to the use of a product or component of municipal solid waste in its original form more than once. Examples include refilling glass or plastic bottles, repairing wood pallets, using corrugated or plastic containers for storage, and returning milk crates (U.S. EPA, 1994d).

Sector:

Residential Sector (Region 4 Workgroup)

- post-consumer recycling from inhabited dwellings
- materials directly managed by local governments as this is the most reliable
- materials generated by the general public at large

Commercial Sector (Region 4 Workgroup)

- created from doing business in retail sales including supply chain
- materials from commercial office space from business complexes, and other office buildings

Commercial sector examples include big box stores, grocery stores, restaurants, storefront operations, etc. Events from sports arenas and stadiums that are repetitive would be considered retail sales. This includes government generated material that cannot be separated out and may be mixed with other commercially generated material.

Industrial Sector (Region 4 Workgroup)

- any material generated on site at a manufacturing plant
- Standard Industrial Code (SIC code) would be used to determine the appropriate sector, helping to differentiate between commercial and industrial sectors



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Institutional Sector (Region 4 Workgroup)

- government agencies at any level (federal, state, or local)
- government facilities (parks, government buildings, military bases, etc.)
- hospitals of all types
- educational institutions of all types and levels
- correctional facilities of all types

Other Sector (Region 4 Workgroup)

Special event recycling from festivals or one time or once a year type events.

Examples include, music festivals, strawberry festivals, Memphis in May Barbeque, Dancing in the District.

Public: is any solid waste management activities (collection, disposal, recycling, composting, diversion, etc.), directly operated by a government agency for the direct benefit of the public to meet the material management needs of their political subdivision. Material source may include commercial, industrial, institutional or residential sources (Region 4 Workgroup).

Private: is any solid waste management activities (collection, disposal, recycling, composting, diversion, etc.), directly operated and owned by a private individual, private corporation, conglomerate, partnership for consideration for the purposes of creating profit. Material source may include commercial, industrial, institutional or residential sources (Region 4 Workgroup).

Single stream recycling: (also referred to as commingled recycling) is a system in which all recyclables, including newspaper, cardboard, plastic, aluminum, junk mail, etc., are placed in a single bin or cart for recycling (Container Recycling Institute).

Source separated: collecting recyclable materials which have been separated at the point of generation and keeping those materials separate from other collected solid waste in separate compartments of a single collection vehicle or through the use of separate collection vehicles (40 CFR 246.101).

Source Reduction: (also known as waste prevention) is the practice of designing, manufacturing, purchasing, or using materials in ways that reduce the amount or toxicity of trash created. Reusing items is another way to stop waste at the source because it delays or avoids that item's entry in the waste collection and disposal system. Examples include: selling for reuse, donating for reuse, double-sided copying, etc. (U.S. EPA WasteWise).

Special Revenue Fund: used to account for the proceeds of specific revenue sources (other than trusts for individuals, private organizations, or other governments or for major capital projects) that are restricted or committed to expenditures for specified purposes other than debt service or capital projects (GAAP 80.20.35a).

Tipping Fee/Gate Charge: 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, compost facility or sanitary landfill (Solid Waste Association of North America).

Textiles: refers to fibers from discarded apparel, furniture, linens (sheets and towels), and carpets. Examples of recycling include converting apparel and linens into wiper rags and processing textiles into new products such as linen paper or carpet padding (U.S. EPA, 1996b).



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Tires: refers to passenger car and light - and heavy - duty truck tires, high-speed industrial tires (from airplanes), bus tires, motorcycle tires, and special service tires, such as military, agricultural, off-road, and slowspeed industrial tires (from construction vehicles). Examples of recycling include processing car and truck tires into new rubber products (trash cans, storage containers, and rubberized asphalt), and the use of whole tires for playground and reef construction (U.S. EPA National Measurement Workgroup).

Tire Processor: refers to an intermediate operating facility where recovered tires are processed in preparation for recycling (Region 4 Workgroup).

Transfer Station: refers to a facility where solid waste is transferred from collection vehicles to larger trucks or rail cars for longer distance transport (U.S. Congress, 1989).

Used Oil: refers to spent motor oil from passenger cars and trucks that is collected at specified locations for recycling. Used oil is excluded from the category of municipal solid waste (Region 4 Workgroup).

White Goods: large household appliances such as refrigerators, stoves, air conditioners, and washing machines (U.S. EPA Decision Maker's Guide to Solid Waste Management – Vol. II).

Waste to energy Facility/Combustor: refers to a facility where recovered municipal solid waste is converted into a usable form of energy, usually through combustion (U.S. EPA, 1995b).

Waste to energy: energy produced from the combustion of post-recycled municipal solid waste, animal waste or animal byproducts, biogas, landfill methane, or other biomass that has been diverted from or separated from other waste out of a municipal waste stream. Existing waste-to-energy facilities must be in compliance with all applicable environmental regulations for new facilities within the applicable source category under the Clean Air Act (Clean Energy Standard Act of 2012).

Yard Trimmings: refers to grass, leaves, tree branches and brush, and tree stumps from residential, institutional, and commercial sources (U.S. EPA, 1996b).



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