

Appendix E

Closing the Loop

Vocabulary

Advertisement

A public notice or announcement, usually paid for, of things for sale or of something needed.

Aerobic

Able to live or grow only where oxygen is present.

Aluminum

A silvery nonferrous metal found in bauxite; it is used in making hard, light, corrosion-resistant materials, such as beverage containers.

Anaerobic

Able to live or grow where there is no air or oxygen, as evidenced by certain bacteria; decomposition of organic wastes by anaerobic bacteria results in the production and release of methane gas.

Aquifer

Underground rock, sand, or gravel formations which store significant amounts of water.

Biodegradable

Material which can be broken down into simple chemical compounds by bacterial, fungal, and freely occurring biochemical actions; the property of a substance that allows it to be broken down by microorganisms into simple, stable compounds, such as carbon dioxide and water.

Closing the loop

The use of recyclable material to make another item (e.g., glass bottles or fiberglass insulation made from old glass bottles; aluminum cans or aluminum trays made from reprocessed aluminum cans; fiberfill jackets made from plastic soda bottles). "Closing the loop" also refers to the last stage of the recycling process, which is buying back the products (made from recycled material) in their remanufactured form.

Compost

Material resulting from the natural decomposition (breaking down) of organic material by bacteria, fungi, and other organisms; compost is a product used to condition or enhance soil.

Composting

A controlled process of breaking down organic material by living things (e.g., by aerobic bacteria and fungi) and by mechanical means. This is done by a layering process so everything decays into fertile humus.

Conservation

The protection or planned management of natural resources, such as forests, rivers, and fossil fuels, to ensure a future supply or presence by preventing loss, destruction, or waste; the conscious practices of using resources, both natural and manufactured, repeatedly to minimize their loss.

Conserve

To protect or use natural resources knowledgeably without wasting them or using them up completely.

Consumer

A person or other living organism that consumes; an animal which eats plants and/or other animals; a person who buys goods or services for personal needs.

Corrosive

A chemical agent that reacts with or attacks the surface of a material, causing it to deteriorate or wear away; "corrosive" is one of the four characteristics of hazardous material or waste.

Crude oil

A naturally occurring liquid consisting mostly of hydrocarbons and small amounts of compounds containing oxygen, sulfur, and nitrogen, which may be refined to make fuel products (e.g., gasoline) and other organic compounds; often referred to as petroleum.

Cycle

To circle, return, or occur again; a circular movement; a series of changes which lead back to a starting point; a repeated event or sequence of events; a complete course of events.

Decompose

To decay, rot, break up or separate into basic components or parts.

Decomposer

An organism, such as a bacterium or a fungus, which feeds on dead material and causes the material to break down chemically. Decomposers help recycle nutrients into the soil, which are then available for plants to use.

Decomposition

The process by which a substance is broken down into component parts or basic elements. Food and other plant and animal matter decompose under the proper conditions of light, air, and moisture. Decomposition is an organic process necessary for the continuation of life, because it creates essential nutrients that plants and animals need and use.

Disposable

An item that is designed to be disposed of after a one-time use; disposable items, such as aseptic juice containers, baby diapers, and polystyrene packaging and food trays are so-called “convenience” items that are normally not reused.

Durable

Capable of withstanding long use, wear, and decay; this word is usually used in relation to durable products compared to disposable products.

Earthworm

Any number of oligochaetes that burrow in the soil, especially any of the genus *Lumbricus*. Earthworms are very important in aerating and fertilizing the soil.

Ecosystem

A complex community of living things interacting with each other and nonliving things. Examples of ecosystems are desert, mixed conifer or redwood forests, grassland, oak woodland, and chaparral.

Energy

The capacity of an object or a system to perform work or produce a change from existing conditions; what is required for any change to take place.

Energy recovery

Obtaining energy from waste through a variety of processes (e.g., burning solid waste materials).

Ferrous metal

Metals containing iron; these are generally magnetic.

Fossil fuels

Nonrenewable energy sources, such as coal, petroleum, and natural gas, found underground in deposits formed in a previous geological period.

Garbage

Dry waste and food waste products. Animal and vegetable waste resulting from the handling, storage, sale, preparation, cooking, and serving of foods.¹

Groundwater

The supply of fresh water contained beneath the Earth’s surface in a porous material, such as in cracks and cavities in stone, and in spaces between pieces of gravel and grains of sand; usually in aquifers, which supply wells and springs.

Hazardous material

Any material that poses a threat to human health and the environment because of its chemical makeup. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.

Household hazardous products

Hazardous materials (see above definition) that are typically used in the home, such as cleaning products, motor oil, and gasoline.

Household hazardous waste

Poisonous waste found in homes, such as paint thinner, used oil, and antifreeze, which can harm people and other living organisms or the environment and are explosive, toxic, corrosive to metal or skin, disease-causing, radioactive, or otherwise dangerous. Because of their hazardous nature, they should be separate from the rest of household trash and properly managed.

Household hazardous waste collection facility

A structure or area operated by a public agency, or its contractor, for the purpose of collecting, handling, treating, storing, or recycling household hazardous waste.

Humus

Organic material consisting of decayed plant matter. It provides nutrients for plants and allows soil to better hold water.

¹Environmental Protection Agency Web site: www.epa.gov/students/terms_of_environment.htm

Icon

Pictorial representation; a sign (as a word or graphic symbol) whose form suggests its meaning.

Ignitable

Having the ability to catch on fire or start burning.

Inorganic

Composed of chemical compounds not based on the element carbon; generally composed of matter that is not and was not living.

Jingle

A verse with a melody, often used in advertising.

Landfill

A large, outdoor area specially designed for disposing of solid waste on land where the solid waste burial is controlled and managed. Layers of soil and waste are alternated.

Leachate

Liquid that has percolated through solid waste and/or has been generated by solid waste decomposition, and that has dissolved or suspended materials in it; if not managed properly, the liquid may contaminate ground or surface water.

Life cycle

A continual sequence of changes which an organism undergoes from its earliest stage to the occurrence of the same stage in the next generation. The amount of time that an item (e.g., aluminum can) is used, reused, and recycled; the end of the life cycle of an item would be when it ends up in a landfill or is no longer being used.

Litter

Solid waste materials carelessly discarded or left in an inappropriate place, usually due to careless disposal practices or willful improper discarding. Littering is illegal in California, and anyone guilty of littering is subject to a fine.

Magnet

Any piece of certain kinds of material, such as iron, that has the property of attracting like material.

Manufacture

The making of goods and articles, usually by machinery and often on a large scale.

Materials recovery facility (MRF)

Centralized solid waste collection and recycling facility where waste or refuse and recyclables, either source separated or mixed, are sorted and processed for recycling. Nonrecyclable materials are transported to a landfill. Recyclables are sorted by types of materials; then they are cleaned and compressed before they are shipped to reprocessors.

Minerals

Naturally occurring inorganic substances that originally came from rock with definite chemical and physical properties, such as a crystal structure; in a broader definition, natural products of organic origin, such as coal, can be classified as minerals.

Natural resources

Living and nonliving components that may support life on Earth, such as plants, animals, water, air, soil, minerals, and energy sources, such as sunlight and fossil fuels; naturally occurring materials which people use to make things, such as energy, food, clothing, and other products.

Night crawler

A large earthworm (*Lumbricus terrestris*) that comes to the soil surface at night, commonly used as fish bait.

Nonrenewable natural resources

Natural materials that are considered finite in amount (e.g., petroleum, coal, copper); or exhaustible because of their scarcity, the great length of time required for their formation, or their rapid depletion.

Nutrient

A substance that provides food or nourishment and promotes growth, such as proteins, vitamins, minerals, or carbohydrates that sustain an organism.

Nutrient cycle

The movement of materials from living to nonliving things, ultimately providing nourishment to living things.

Organic

Composed of living or once-living matter; composed of chemical compounds based on the element carbon.

Organism

A living thing; an individual with parts that are organized as a functional whole.

Packaging

A container or wrapping made out of any number of materials and used for storing, transporting, protecting, identifying, or displaying a product.

Petroleum

A naturally occurring flammable liquid solution of hydrocarbons of organic origin found in the Earth's crust and used to make such products as natural gas, gasoline, lubricating oils, and plastic; also called crude oil.

Petroleum products

Petroleum products are the chemicals, oils, and fuels that can be separated and refined from crude oil.

Plastic

A material, made from petroleum, capable of being molded, extruded, or cast into various shapes and films.

Poison

Substance causing illness or death when eaten, drunk, or absorbed, even in relatively small quantities.

Pollution

The result of harmful substances being left in the environment and leading to a dirty, impure, or unhealthy place; contamination of air, soil, water, or the atmosphere by the discharge of wastes or other harmful materials. These materials can harm living things.

Polymer

A large molecule containing a chain of chemically linked subunits called monomers.

Post-consumer waste

Used materials that are intercepted on their way from consumer to landfill (e.g., newspaper, used office paper) and then made into new products (e.g., new newspaper and office paper).

Pre-consumer waste

Waste that has not been previously used (e.g., scraps and trimmings from paper manufacturing plants and printing offices) and from which a new product can be made (e.g., new office paper).

Properties

A characteristic trait or distinctive behavior exhibited by a particular substance.

Public service announcement

An advertisement informing the public about a particular event or service. The announcement and sometimes the event or service are offered to the public at no cost.

Pulp

Moist fibrous material for papermaking from sources such as wood, rags, crop residue, and recycled paper, derived by chemical or mechanical processes or a combination of both.

Pulp slurry

Pulp that has been liquefied by the addition of water to be used in making paper or cardboard.

Raw material

Any basic material that has been mined or harvested for industrial processes, that has not previously been used (e.g., trees, iron ore, silica sand, crude oil, and bauxite), and that has not as yet become a product.

Reaction

The mutual action of substances undergoing chemical change and the state resulting from such changes.

Reactive

In hazardous waste labeling, reactive means that the material may explode (see "Reaction").

Recoverable material

Any material that can be recycled and used again.

Recyclable

Previously used material (e.g., plastic, paper, glass, tin and aluminum cans, and used oil) capable of being reprocessed and manufactured into new products.

Recycle

The process of collecting, sorting, processing, and using already manufactured materials for remanufacturing of new products (e.g., newspaper recycled into newspaper or cardboard).

Recycled material

A substance (e.g., aluminum, paper, glass) that has been used and from which new products can be made.

Recycling

The process of collecting materials from the waste stream and separating them by type, re-making them into new products, and marketing and reusing the materials as new products.

Reduce

To lessen in any way, as in size, weight, or amount; the process of decreasing the amount of waste generated.

Red worm

Any of various small red annelid worms. Red worms are well suited to use in worm composting, because they can process food waste quickly, are able to live within a small area, tolerate a wide range of temperatures, reproduce quickly, and mate throughout the year.

Refuse

Nonliquid, nonsoluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Refuse also includes sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, refuse also refers to liquids and gases in containers.²

Renewable natural resources

Natural resources (e.g., plants, animals, sunlight) which can be renewed, restored, or regenerated by natural ecological cycles or sound management practices.

Resin

Any of various solid or semisolid viscous, usually clear or translucent, yellowish or brownish organic substances exuded from various plants and trees; used as modifiers in synthetic plastics.

Reusable

Those objects which can be used more than once in their same form for the same purpose or for different purposes. For example, a peanut butter jar may be reused in the home as a container for leftover food.

Reuse

The practice of using an object more than once in its same form for the same purpose or for different purposes to extend the life of the object. This can be done by cleaning it and using it again as is, by repairing or modifying it, or by determining new uses for it.

Scavengers

An animal which eats dead remains and wastes of plants and/or other animals.

²Environmental Protection Agency Web site: www.epa.gov/students/terms_of_environment.htm

Slogan

A catchy phrase used to advertise a product.

Soil

The surface layer of the Earth supporting plant life. A naturally occurring mixture of minerals, organic matter, water, and air which has a definite structure and composition and forms on the surface of the land.

Solid waste

All solid, semisolid, liquid, and gaseous wastes, including trash, garbage, yard waste, ashes, industrial waste, construction waste, and household discards, such as appliances, furniture, and equipment.³

Solid waste management

The controlling, handling, and disposing of all solid waste. One goal of solid waste management is to reduce waste to the least amount possible.

Source or waste reduction

Action by people to reduce waste through educated consumer choices.

Sustainable

The ability to support, endure, or keep up economically without depleting or damaging natural resources. Using a resource so that it is not depleted or permanently damaged; of or relating to a lifestyle that reflects an understanding of practices that maintain or prolong the availability of natural resources.

Topsoil

The upper layer of soil, usually darker and richer than the subsoil; surface soil.

Toxic

Producing or containing a poisonous substance that may be harmful or deadly.

Trash

Dry waste; material considered worthless or offensive that is thrown away. Generally defined as dry waste material, but in common usage it is a synonym for garbage, rubbish, or refuse.⁴

Used oil

Any oil that has been refined from crude oil, or any synthetic oil, that has been used and, as a result of use or as a consequence of extended storage or spillage, has been contaminated with physical or chemical impurities.

³*Ibid.*

⁴*Ibid.*

Vermicomposting

The use of red worms to transform kitchen scraps and other plant materials into compost.

Virgin Paper

Paper made from raw materials, usually wood from trees.

Waste

Materials that have been used by manufacturers or consumers and are not reused, recycled, or composted.

Waste stream

The total waste produced by a community or society.

Water cycle

The cyclical movement of water from the atmosphere to the Earth and back again through these steps: evaporation, transpiration, condensation, precipitation, percolation, runoff, and storage.

Water table

The level below which the ground is saturated with water.

Worm castings

Excrement from worms (e.g., undigested materials, soil, and bacteria excreted by a worm); often used as a soil amendment or enhancer.

Note: For definitions of other words used in solid waste management, visit the following sites:

- Environmental Protection Agency's Web site: www.epa.gov/students/terms_of_environment.htm
- Wisconsin Department of Natural Resources's glossary: