Environmental Glossary of Terms

acid rain - the precipitation of dilute solutions of strong mineral acids, formed by the mixing in the atmosphere of various industrial pollutants -- primarily sulphur dioxide and nitrogen oxides -- with naturally occurring oxygen and water vapour.

aerosol - a suspension of small liquid or solid particles in gas.

air pollution - toxic or radioactive gases or particulate matter introduced into the atmosphere, usually as a result of human activity.

alternative energy - energy that is not popularly used and is usually environmentally sound, such as solar or wind energy (as opposed to fossil fuels).
alternative fibres - fibres produced from non-wood sources for use in paper making.

alternative fuels - transportation fuels other than gasoline or diesel. Includes natural gas, methanol, and electricity.

alternative transportation - modes of travel other than private cars, such as walking, bicycling, rollerblading, carpooling and transit.

ancient forest - a forest that is typically older than 200 years with large trees, dense canopies and an abundance of diverse wildlife.

aquifer - underground source of water.

ash - incombustible residue left over after incineration or other thermal processes.

atmosphere - the 500 km thick layer of air surrounding the earth which supports the existence of all flora and fauna.

atomic energy - energy released in nuclear reactions. When a neutron splits an atom's nucleus into smaller pieces it is called fission. When two nuclei are joined together under millions of degrees of heat it is called fusion.

biodegradable - waste material composed primarily of naturally-occurring constituent parts, able to be broken down and absorbed into the ecosystem. Wood, for example, is biodegradable, for example, while plastics are not.

biodiversity - a large number and wide range of species of animals, plants, fungi, and micro-organisms. Ecologically, wide biodiversity is conducive to the development of all species.

biomass - (1) the amount of living matter in an area, including plants, large animals and insects; (2) plant materials and animal waste used as fuel.

biosphere - (1) the part of the earth and its atmosphere in which living organisms exist or that is capable of supporting life; (2) the living organisms and their environment composing the biosphere.

Biosphere Reserve - a part of an international network of preserved areas designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Biosphere Reserves are vital centres of biodiversity where research and monitoring activities are conducted, with the participation of local communities, to protect and preserve healthy natural systems threatened by development. The global system currently includes 324 reserves in 83 countries.

biotic - of or relating to life.
blood lead levels - the amount of lead in the blood. Human exposure to lead in blood can cause brain damage, especially in children.

brownfields - abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

carbon dioxide (CO_2) - a naturally occurring greenhouse gas in the atmosphere, concentrations of which have increased (from 280 parts per million in preindustrial times to over 350 parts per million today) as a result of humans' burning of coal, oil, natural gas and organic matter (e.g., wood and crop wastes).

carcinogens - substances that cause cancer, such as tar.

carpooling - sharing a car to a destination to reduce fuel use, pollution and travel costs.
chlorination byproducts - cancer-causing chemicals created when chlorine used for water disinfection combines with dirt and organic matter in water.

chlorine - a highly reactive halogen element, used most often in the form of a pungent gas to disinfect drinking water.

chlorofluorocarbons (CFCs) - stable, artificially-created chemical compounds containing carbon, chlorine, fluorine and sometimes hydrogen. Chlorofluorocarbons, used primarily to facilitate cooling in refrigerators and air conditioners, have been found to damage the stratospheric ozone layer which protects the earth and its inhabitants from excessive ultraviolet radiation.

clean fuel - fuels which have lower emissions than conventional gasoline and diesel. Refers to alternative fuels as well as to reformulated gasoline and diesel.

cleanup - treatment, remediation, or destruction of contaminated material.

climate change - a regional change in temperature and weather patterns.

Current science indicates a discernible link between climate change over the last century and human activity, specifically the burning of fossil fuels.

compact fluorescents - florescent light bulbs small enough to fit into standard light sockets, which are much more energy-efficient than standard incandescent bulbs.

compost - process whereby organic wastes, including food wastes, paper, and yard wastes, decompose naturally, resulting in a product rich in minerals and ideal for gardening and farming as a soil conditioners, mulch, resurfacing material, or landfill cover.

contamination - pollution.

crop dusting - the application of pesticides to plants by a low-flying plane.

cryptosporidium - a protozoan (single-celled organism) that can infect humans, usually as a result of exposure to contaminated drinking water.

Demand Side Management (DSM) - an attempt by utilities to reduce customers' demand for electricity or energy by encouraging efficiency.

diesel - a petroleum-based fuel which is burned in engines ignited by compression rather than spark; commonly used for heavy duty engines including buses and trucks.
diesel engine - an internal combustion engine that uses diesel as fuel, producing harmful fumes.

dioxin - a man-made chemical by-product formed during the manufacturing of other chemicals and during incineration. Studies show that dioxin is the most potent animal carcinogen ever tested, as well as the cause of severe weight loss, liver problems, kidney problems, birth defects, and death.

dump sites - waste disposal grounds.

ecologist - a scientist concerned with the interrelationship of organisms and their environment.

ecology - a branch of science concerned with the interrelationship of organisms and their environment.

ecosystem - an interconnected and symbiotic grouping of animals, plants, fungi, and microorganisms.

edge cities - cities bounded by water, usually with eroding or polluted waterfront areas.

efficiency - see energy efficiency.
electric vehicles - vehicles which use electricity (usually derived from batteries recharged from electrical outlets) as their power source.

emissions cap - a limit on the amount of greenhouse gases that a company or country can legally emit.

energy conservation - using energy efficiently or prudently; saving energy.

energy efficiency - technologies and measures that reduce the amount of electricity and/or fuel required to do the same work, such as powering homes, offices and industries.

equity - in the environmental sense, the planned dispersement of toxic or waste facilities in regions throughout the socio-economic strata.

estuary - a bay or inlet, often at the mouth of a river, in which large quantities of freshwater and seawater mix together. These unique habitats are necessary nursery grounds for many marine fishes and shellfishes.

eugenics - the study of hereditary improvement of the human race by controlled selective breeding.

Everglades - large and biologically diverse wetland ecosystem in South Florida.

fauna - the total animal population that inhabits an area.

feedlots - a plot of ground used to feed farm animals.

fisheries - an established area where fish species are cultivated and caught.

fissile material - material fissionable by slow neutrons. The fission process and the fissile isotopes are the source of energy in nuclear weapons and nuclear reactors.

fission - the process whereby the nucleus of a particular heavy element splits into (generally) two nuclei of lighter elements, with the release of substantial amounts of energy.

flora - the total vegetation assemblage that inhabits an area.

forests - lands on which trees are the principal plant life, usually conducive to wide biodiversity.

fossil fuel - a fuel, such as coal, oil, and natural gas, produced by the decomposition of ancient (fossilized) plants and animals; compare to alternative energy.

gas - natural gas, used as fuel.

gasoline - petroleum fuel, used to power cars, trucks, lawn mowers, etc.

geothermal - literally, heat from the earth; energy obtained from the hot areas under the surface of the earth.

global warming - increase in the average temperature of the earth's surface.

Golden Carrot - an incentive program that is designed to transform the market to produce much greater energy efficiency. The term is a trademark of the Consortium for Energy Efficiency.

grassroots - local or person-to-person. A typical grassroots effort might include a door-to-door education and survey campaign.

green design - a design, usually architectural, conforming to environmentally sound principles of building, material and energy use. A green building, for example, might make use of solar panels, skylights, and recycled building materials.

greenhouse - a building made with translucent (light transparent, usually glass or fibreglass) walls conducive to plant growth.

greenhouse effect - the process that raises the temperature of air in the lower atmosphere due to heat trapped by greenhouse gases, such as carbon dioxide, methane, nitrous oxide, chlorofluorocarbons, and ozone.

greenhouse gas - a gas involved in the greenhouse effect.
greenway - undeveloped land usually in cities, set aside or used for recreation or conservation.

groundwater - water below the earth's surface; the source of water for wells and springs.

growth overfishing - the process of catching fish before they are fully grown resulting in a decrease in the average size of the fish population.

habitat - (1) the natural home of an animal or plant; (2) the sum of the environmental conditions that determine the existence of a community in a specific place.

haze - an atmospheric condition marked by a slight reduction in atmospheric visibility, resulting from the formation of photochemical smog, radiation of heat from the ground surface on hot days, or the development of a thin mist.

household hazards - dangerous substances or conditions in human dwellings.

hydroelectric - relating to electric energy produced by moving water.

hydrofluorocarbons - used as solvents and cleaners in the semiconductor industry, among others; experts say that they possess global warming potentials that are thousands of times greater than CO2.

hydropower - energy or power produced by moving water.

hypoxia - the depletion of dissolved oxygen in water, a condition resulting from an overabundance of nutrients of human or natural origin that stimulates the growth of algae, which in turn die and require large amounts of oxygen as the algae decompose. It was the most frequently cited direct cause of fish kills in the U.S. from 1980 to 1989.

incinerators - disposal systems that burn solid waste or other materials and reduce volume of waste. Air pollution and toxic ash are problems associated with incineration.

insecticides - substances used to kill insects and prevent infestation.

landfill - disposal area where garbage is piled up and eventually covered with dirt and topsoil.

landings - the amount of fish brought back to the docks and marketed. Landings can describe the kept catch of one vessel, of an entire fishery, or of several fisheries combined.

land use - the way in which land is used, especially in farming and city planning.

lead - a naturally-occurring heavy, soft metallic element; human exposure can cause brain and nervous system damage, especially in children.

lead poisoning - damaging the body (specifically the brain) by absorbing lead through the skin or by swallowing.

least-cost planning - a process for satisfying consumers' demands for energy services at the lowest societal cost.

light pollution - environmental pollution consisting of harmful or annoying light.

litter - waste material which is discarded on the ground or otherwise disposed of improperly or thoughtlessly.

low-emission vehicles - vehicles which emit little air pollution compared to conventional internal combustion engines.

low-impact camping - camping that does not damage or change the land, where campers leave no sign that they were on the land.

managed growth - growth or expansion that is controlled so as not to be harmful.

marsh - wetland, swamp, or bog.

megalopolis - a large city expanding so fast that city government cannot

adjust to provide services (such as garbage disposal).

methyl bromide - the gaseous compound CH3Br used primarily as an insect fumigant; found to be harmful to the stratospheric ozone layer which protects life on earth from excessive ultraviolet radiation.

mining - the removal of minerals (like coal , gold, or silver) from the ground.
mulch - leaves, straw or compost used to cover growing plants to protect them from the wind or cold.

nitrogen oxides - harmful gases (which contribute to acid rain and global warming) emitted as a byproduct of fossil fuel combustion.

noise pollution - environmental pollution made up of harmful or annoying noise.

nuclear energy - energy or power produced by nuclear reactions (fusion or fission).

nuclear power - see nuclear energy.

nuclear reactor - an apparatus in which nuclear fission may be initiated, maintained, and controlled to produce energy, conduct research, or produce fissile material for nuclear explosives.

nuclear tests - government tests carried out to supply information required for the design and improvement of nuclear weapons, and to study the phenomena and effects associated with nuclear explosions.

oil - a black, sticky substance used to produce fuel (petroleum) and materials (plastics).

oil spills - the harmful release of oil into the environment, usually in the water, sometimes killing area flora and fauna. Oil spills are very difficult to clean up.

old growth forests - see ancient forests.

over-development - expansion or development of land to the point of damage.

over-fishing - fishing beyond the capacity of a population to replace itself through natural reproduction.

over-grazing - grazing livestock to the point of damage to the land.

ozone - a naturally occurring, highly reactive gas comprising triatomic oxygen formed by recombination of oxygen in the presence of ultraviolet radiation. This naturally occurring gas builds up in the lower atmosphere as smog pollution, while in the upper atmosphere it forms a protective layer which shields the earth and its inhabitants from excessive exposure to damaging ultraviolet radiation.

ozone depletion - the reduction of the protective layer of ozone in the upper atmosphere by chemical pollution.

ozone hole - a hole or gap in the protective layer of ozone in the upper atmosphere.

paper products - materials such as paper and cardboard, produced from trees.

particulate - of or relating to minute discrete particles; a particulate substance.

particulate pollution - pollution made up of small liquid or solid particles suspended in the atmosphere or water supply.

passive solar - using or capturing solar energy (usually to heat water) without any external power.

pesticides - chemical agents used to destroy pests.

plastics - durable and flexible synthetic-based products, some of which are difficult to recycle and pose problems with toxic properties, especially PVC plastic.

plutonium - a heavy, radioactive, man-made, metallic element (atomic number 94) used in the production of nuclear energy and the explosion of nuclear weapons; its most important isotope is fissile plutonium-239, produced by neutron irradiation of uranium-238.

poison runoff - see polluted runoff.

poison - a chemical that adversely affects health by causing injury, illness, or death.

polluted runoff - precipitation that captures pollution from agricultural lands, urban streets, parking lots and suburban lawns, and transports it to rivers, lakes or oceans.

pollution prevention - techniques that eliminate waste prior to treatment, such as by changing ingredients in a chemical reaction.

population - (1) the whole number of inhabitants in a country, region or area; (2) a set of individuals having a quality or characteristic in common.

post consumer waste - waste collected after the consumer has used and disposed of it (e.g., the wrapper from an eaten candy bar).

power plants - facilities (plants) that produce energy.

public health - the health or physical well-being of a whole community.

pulp - raw material made from trees used in producing paper products.

radioactive - of or characterized by radioactivity.

radioactive waste - the byproduct of nuclear reactions that gives off (usually harmful) radiation.

radioactivity - the spontaneous emission of matter or energy from the nucleus of an unstable atom (the emitted matter or energy is usually in the form of alpha or beta particles, gamma rays, or neutrons).

radon - a cancer-causing radioactive gas found in many communities' ground water.

rainforest - a large, dense forest in a hot, humid region (tropical or subtropical). Rainforests have an abundance of diverse plant and animal life, much of which is still uncatalogued by the scientific community.

recycling - system of collecting, sorting, and reprocessing old material into usable raw materials.

reduce - act of purchasing or consuming less to begin with, so as not to have to reuse or recycle later.

refrigerants - cooling substances, many of which contain CFCs and are harmful to the earth's ozone layer.

renewable energy - energy resources such as wind power or solar energy that can keep producing indefinitely without being depleted.

reservoir - an artificial lake created and used for the storage of water.

reuse - cleaning and/or refurbishing an old product to be used again.

risk assessment - methods used to quantify risks to human health and the environment.

run-off - precipitation that the ground does not absorb and that ultimately reaches rivers, lakes or oceans.

salvage logging - the logging of dead or diseased trees in order to improve overall forest health; used by timber companies as a rationalization to log otherwise protected areas.

second-growth forests - forests that have grown back after being logged.

sick building syndrome - a human health condition where infections linger, caused by exposure to contaminants within a building as a result of poor ventilation.

smog - a dense, discolored radiation fog containing large quantities of soot, ash, and gaseous pollutants such as sulfur dioxide and carbon dioxide, responsible for human respiratory ailments. Most industrialized nations have implemented legislation to promote the use of smokeless fuel and reduce emission of toxic gases into the atmosphere.

solar energy - energy derived from sunlight.

solid waste - non-liquid, non gaseous category of waste from non-toxic household and commercial sources.

soot - a fine, sticky powder, comprised mostly of carbon, formed by the burning of fossil fuels.

sprawl - the area taken up by a large or expanding development or city.

stratosphere - the upper portion of the atmosphere (approximately 11 km to 50 km above the surface of the earth).

strip mining - mining technique in which the land and vegetation covering the mineral being sought are stripped away by huge machines, usually damaging the land severely and limiting subsequent uses.

sulfur dioxide (SO2) - a heavy, smelly gas which can be condensed into a clear liquid; used to make sulfuric acid, bleaching agents, preservatives and refrigerants; a major source of air pollution in industrial areas.

surface water - water located above ground (e.g., rivers, lakes).
sustainable communities - communities capable of maintaining their present levels of growth without damaging effects.

tap water - drinking water monitored (and often filtered) for protection against contamination and available for public consumption from sources within the home.

telecommuting - working with others via telecommunications technologies (e.g., telephones, modems, faxes) without physically travelling to an office.
thermonuclear - the application of high heat, obtained via a fission explosion, to bring about fusion of light nuclei.

threatened species - species of flora or fauna likely to become endangered within the foreseeable future.

TNT Equivalent - a measure of the energy released in the detonation of a nuclear weapon, expressed in terms of the quantity of TNT which would release the same amount of energy.

toxic - poisonous.

toxic emissions - poisonous chemicals discharged to air, water, or land.

toxic sites - land contaminated with toxic pollution, usually unsuitable for human habitation.

toxic waste - garbage or waste that can injure, poison, or harm living things, and is sometimes life-threatening.

toxification - poisoning.

traffic calming - designing streets to reduce automobile speed and to enhance walking and bicycling.

transit - see public transportation.

trash - waste material that cannot be recycled and reused (synonymous with garbage).

trip reduction - reducing the total numbers of vehicle trips, by sharing rides or consolidating trips with diverse goals into fewer trips.

uranium - a heavy, radioactive metal (atomic number 92) used in the explosion of nuclear weapons (especially one isotope, U-235).

urban parks - parks in cities and areas of high population concentration.

utilities - companies (usually power distributors) permitted by a government agency to provide important public services (such as energy or water) to a region; as utilities are provided with a local monopoly, their prices are regulated by the permitting government agency.

virgin forest - a forest never logged.

waste - garbage, trash.

waste site - dumping ground.

waste stream - overall waste disposal cycle for a given population.

waterborne contaminants - unhealthy chemicals, micro-organisms (like bacteria) or radiation, found in tap water.

water filters - substances (such as charcoal) or fine membrane structures used to remove impurities from water.

water quality - the level of purity of water; the safety or purity of drinking water.
water quality testing - monitoring water for various contaminants to make sure it is safe for fish protection, drinking, and swimming.

watershed - a region or area over which water flows into a particular lake,

reservoir, stream, or river.

well - a dug or drilled hole used to get water from the earth.

wetland - land (marshes or swamps) saturated with water constantly or recurrently; conducive to wide biodiversity.

wilderness - land remaining in basically wild (i.e., undisturbed) condition

wildlife - animals living in the wilderness without human intervention.

wildlife refuges - land set aside to protect certain species of fish or wildlife (administered at the federal level in the U.S. by the Fish and Wildlife Service).

windpower - power or energy derived from the wind (via windmills, sails, etc.).

zero emission vehicles - vehicles (usually powered by electricity) with no direct emissions from tailpipes or fuel evaporation.

zoning - the arrangement or partitioning of land areas for various types of usage in cities, boroughs or townships.