

APPENDIX D

GLOSSARY

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Air Emission Inventory: A listing, by source, of the amount of air pollutants discharged into the atmosphere of a community; used to establish emission standards.

Air Pollutant: Any substance in air could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in the form of solid particle, liquid droplets, gases, or in combination thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents, with or without photoactivation. Exclusive of pollen, fog, and dust, which are of natural origin, about 100 contaminants have been identified. Air pollutants are often grouped in categories for ease in classification; some of the categories are: solids, sulfur compounds, volatile organic chemicals, particulate matter, nitrogen compounds, oxygen compounds, halogen compounds, radioactive compounds, and odors. **Air Pollution:** The presence of contaminants or pollutant substances in the air that interfere with human health or welfare, or produce other harmful environmental effects.

Air Quality Standards: The level of pollutants prescribed by regulations that are not to be exceeded during a given time in a defined area.

Alluvium: A sediment deposited by streams and varying widely in particle size. The stones and boulders when present are round and sub-rounded. Some of the most fertile soils are derived from alluvium of medium or fine texture.

Ambient Air: Any unconfined portion of the atmosphere: open air, surrounding air.

Ambient Air Quality Standards: (See: Criteria Pollutants and National Ambient Air Quality Standards.)

Attainment Area: An area considered to have air quality as good as or better than the national ambient air quality standards as defined in the Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

Canopy: The uppermost spreading, branchy layer of a forest.

Clay Soil: Soil material containing more than 40 percent clay, less than 45 percent sand, and less than 40 percent silt.

Coastal Zone: Lands and waters adjacent to the coast that exert an influence on the uses of the sea and its ecology, or whose uses and ecology are affected by the sea.

Code of Federal Regulations (CFR): Document that codifies all rules of the executive departments and agencies of the federal government. It is divided into fifty volumes, known as titles. Title 40 of the CFR (referenced as 40 CFR) lists all environmental regulations.

Community: In ecology, an assemblage of populations of different species within a specified location in space and time. Sometimes, a particular subgrouping may be specified such as the fish community in a lake or the soil arthropod community in a forest.

Conservation: Preserving and renewing, when possible, human and natural resources. The use, protection, and improvement of natural resources according to principles that will ensure their highest economic or social benefits.

Criteria: Descriptive factors taken into account by EPA in setting standards for various pollutants. These factors are used to determine limits on allowable concentration levels, and to limit the number of violations per year. When issued by EPA, the criteria provide guidance to the states on how to establish their standards.

Criteria Pollutants: The 1970 amendments to the Clean Air Act require EPA to set National Ambient Air Quality Standards for certain pollutants known to be hazardous to human health. EPA has identified and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide. The term, “criteria pollutants” derives from the requirement that EPA must describe the characteristics and potential health and welfare effects of these pollutants. It is on the basis of these criteria that standards are set or revised.

Decibel: A unit for measuring the relative loudness of sound.

Ecological Association: A general grouping of vegetative communities typically associated with each other because of geographic, topographic, hydrologic, geologic, or vegetative variations.

Ecological Impact: The effect that a man-caused or natural activity has on living organisms and their non-living environment.

Ecology: The relationship of living things to one another and their environment, or the study of such relationships.

Ecosystem: The interacting system of a biological community and its non-living environmental surroundings.

Emission: Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

Emission Standard: The maximum amount of air polluting discharge legally allowed from a single source, mobile or stationary.

Endangered Species: Animals, birds, fish, plants, or other living organisms threatened with extinction by anthropogenic (man-caused) or other natural changes in their environment. Requirements for declaring a species endangered are contained in the Endangered Species Act.

Environmental Equity/Justice: Equal protection from environmental hazards for individuals, groups, or communities regardless of race, ethnicity, or economic status. This applies to the development, implementation, and enforcement of environmental laws, regulations, and policies, and implies that no population of people should be forced to shoulder a disproportionate share of negative environmental impacts of pollution or environmental hazard due to a lack of political or economic strength levels.

Environmental Impact Statement: A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals significantly affecting the environment. A tool for decision making, it describes the positive and negative affects of the undertaking and cites alternative actions.

Estuary: An arm of the sea at the mouth of a river.

Game Fish: Species like trout, salmon, or bass, caught for sport. Many of them show more sensitivity to environmental change than “rough” fish.

Generator: 1. A facility or mobile source that emits pollutants into the air or releases hazardous waste into water or soil. 2. Any person, by site, whose act or process produces regulated medical waste, or whose act first causes such waste to become subject to regulation. Where more than one person (e.g., doctors with separate medical practices) is located in the same building, each business entity is a separate generator.

Ground Water: The supply of fresh water found beneath the Earth’s surface, usually in aquifers, which supply wells and springs. Because ground water is a major source of drinking water, there is growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

Habitat: The place where a population (e.g., human, animal, plant, microorganism) lives, including its surroundings, both living and non-living.

Hardpan: A horizon cemented with organic matter, silica, sesquioxides, or calcium carbonate. Hardness or rigidity is maintained when wet or dry.

Heavy Metals: Metallic elements with high atomic weights; (e.g., mercury, chromium, cadmium, arsenic, and lead); can damage living things at low concentrations and tend to accumulate in the food chain.

Hydrogeology: The geology of ground water, with particular emphasis on the chemistry and movement of water.

Hydrology: The science dealing with the properties, distribution, and circulation of water.

Ignitable: Capable of burning or causing a fire.

Infiltration: The penetration of water through the ground surface into sub-surface soil or the penetration of water from the soil into sewer or other pipes through defective joints, connections, or manhole walls.

Inversion: A layer of warm air that prevents the rise of cooling air and traps pollutants beneath it; can cause an air pollution episode.

Invertebrates: Any animal without a backbone or spinal column.

Irrigation: Applying water or wastewater to land areas to supply the water and nutrient needs of plants.

Karst: Terrain with distinctive characteristics of relief and drainage arising from dissolution of rock in natural waters, either at the surface or underground.

Large Quantity Generator: Person or facility generating more than 2200 pounds of hazardous waste per month. Such generators produce about 90 percent of the nation's hazardous waste, and are subject to all RCRA requirements.

Leachate: Water that collects contaminants as it trickles through wastes, pesticides, or fertilizers. Leaching may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil.

Leaching: The process by which soluble constituents are dissolved and filtered through the soil by a percolating fluid. (See: leachate.)

Lead (Pb): A heavy metal that is hazardous to health if breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations. (See: heavy metals.)

Loam: Rich, permeable soil composed of a mixture of clay, salt, sand, and organic matter.

Major Stationary Sources: Term used to determine the applicability of Prevention of Significant Deterioration and new source regulations. In a non-attainment area, any stationary pollutant source with potential to emit more than 100 tons per year is considered a major stationary source.

Material Safety Data Sheet (MSDS): A compilation of information required under the OSHA Communication Standard on the identity of hazardous chemical, health, and physical hazards, exposure limits, and precautions. Section 311 of SARA requires facilities to submit MSDSs under certain circumstances.

Midstory: The layer of vegetation that is taller than 4 feet, but fall short of the canopy layer. Young trees, woody vines, and shorter mature trees are found in this layer.

Military Operations Area (MOAs): An airspace assignment of defined vertical and lateral dimensions established outside positive control areas to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

Million-Gallons Per Day (MGD): A measure of water flow.

Mobile Source: Any non-stationary source of air pollution such as cars, trucks, motorcycles, buses, airplanes, and locomotives.

Mollusc: Any of a large phylum of invertebrate animals including the chitons, oysters, clams, mussels, snails, whelks, slugs, squid, and octopuses, characterized by a soft, unsegmented body, often enclosed wholly or in part in a mantle and a calcareous shell and usually having gills and a foot.

Muck Soils: Earth made from decaying plant materials.

National Ambient Air Quality Standards (NAAQS): Standards established by EPA that apply for outdoor air throughout the country. (See: criteria pollutants, state implementation plans.)

National Emissions Standards for Hazardous Air Pollutants (NESHAPS): Emission standards set by EPA for an air pollutant not covered by NAAQS that may cause an

increase in fatalities or in serious, irreversible, or incapacitating illness. Primary standards are designed to protect human health, secondary standards to protect public welfare (e.g., building facades, visibility, crops, and domestic animals).

Nautical Mile: A unit of length used in sea and air navigation based on the length of one minute of arc of a great circle and equivalent to about 6,076 feet.

Navigable Water: Traditionally, waters sufficiently deep and wide for navigation by all, or specific vessels; such waters in the United States come under federal jurisdiction and are protected by certain provisions of the Clean Water Act.

Nitric Oxide (NO): A gas formed by combustion under high temperature and high pressure in an internal combustion engine; it is converted by sunlight and photochemical processes in ambient air to nitrogen oxide. NO is a precursor of ground-level ozone pollution, or smog.

Nitrogen Oxide (No_x): The result of photochemical reactions of nitric oxide in ambient air; major component of photochemical smog. Product of combustion from transportation and stationary sources and a major contributor to the formation of ozone in the troposphere and to acid deposition.

Non-Attainment Area: Area that does not meet one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act.

No Observable Adverse Effect Level (NOAEL): An exposure level at which there are no statistically or biologically significant increases in the frequency or severity of adverse effects between the exposed population and its appropriate control; some effects may be produced at this level, but they are not considered as adverse, or as precursors to adverse effects. In an experiment with several NOAELs, the regulatory focus is primarily on the highest one, leading to the common usage of the term NOAEL as the highest exposure without adverse effects.

Ordnance: Any munitions, device, or agent that can be intentionally launched, fired, released, expended, or activated. This includes ammunitions of all types, rockets, probes, missiles, bombs, flares, targets (including drones), a tow cable, dropable tanks, shapes, chaff, spheres, and any other live or inert item that can be expended. Also includes laser operations and sonic booms when related to test and training projects.

Outstanding Florida Waters: An Outstanding Florida Water (or OFW for short) is a water designated worthy of special protection because of its natural attributes. This special designation is applied to certain waters with the intent of maintaining existing good water quality. Most OFWs are areas managed by the state or federal government as a park. Examples include wildlife refuges, preserves, marine sanctuaries, estuarine

research reserves, certain waters within state or national forests, scenic and wild rivers, or aquatic preserves. Generally, the waters within these managed areas are OFWs because the managing agency has requested this special protection to help protect the water quality. The Environmental Regulation Commission may designate waters of the state as a Special Water after making a finding that the waters are of exceptional recreational or ecological significance, and a finding that the environmental, social, and economic benefits of the action outweigh the environmental, social, and economic costs (Rules 62-302.700 (5), F.A.C.

Overstory: See canopy.

Particulates: 1. Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog, found in air or emissions. 2. Very small solids suspended in water; they can vary in size, shape, density, and electrical charge and can be gathered together by coagulation and flocculation.

Peat: An accumulation of dead plant material often forming a layer many meters deep. It is only slightly decomposed due to being completely waterlogged.

Permeability: The rate at which liquids pass through soil or other materials in a specified direction.

Permit: An authorization, license, or equivalent control document issued by EPA or an approved state agency to implement the requirements of an environmental regulation; e.g., a permit to operate a wastewater treatment plant or to operate a facility that may generate harmful emissions.

pH: An expression of the intensity of the basic or acid condition of a liquid; may range from 0 to 14, where 0 is the most acid and 7 is neutral. Natural waters usually have a pH between 6.5 and 8.5.

Photochemical Oxidants: Air pollutants formed by the action of sunlight on oxides of nitrogen and hydrocarbons.

Photochemical Smog: Air pollution caused by chemical reactions of various pollutants emitted from different sources. (See: photochemical oxidants.)

Plume: A visible or measurable discharge of a contaminant from a given point of origin. Can be visible or thermal in water, or visible in the air as, for example, a plume of smoke.

Point Source: A stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution; e.g., a pipe, ditch, ship, ore pit, factory, smokestack.

Pollutant: Generally, any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

Pollution: Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects. Under the Clean Water Act, for example, the term has been defined as the man-made or man-induced alteration of the physical, biological, chemical, and radiological integrity of water and other media.

Pollution Prevention: 1. Identifying areas, processes, and activities that create excessive waste products or pollutants in order to reduce or prevent them through alteration, or through eliminating a process.

Population: A group of interbreeding organisms occupying a particular space; the number of humans or other living creatures in a designated area.

Population at Risk: A population subgroup that is more likely to be exposed to a chemical, or is more sensitive to the chemical, than is the general population.

Potable Water: Water that is safe for drinking and cooking.

Potentiometric Surface: The surface to which water in an aquifer can rise by hydrostatic pressure.

Primary Drinking Water Regulation: Applies to public water systems and specifies a contaminant level, which, in the judgment of the EPA Administrator, will not adversely affect human health.

Primary Standards: National ambient air quality standards designed to protect human health with an adequate margin for safety. (See: National Ambient Air Quality Standards, secondary standards.)

Public Comment Period: The time allowed for the public to express its views and concerns regarding an action of a government agency.

Reasonable Maximum Exposure: The maximum exposure reasonably expected to occur in a population.

Receptor: Ecological entity exposed to a stressor.

Recharge Area: A land area in which water reaches the zone of saturation from surface infiltration; e.g., where rainwater soaks through the earth to reach an aquifer.

Recharge: The process by which water is added to a zone of saturation, usually by percolation from the soil surface; e.g., the recharge of an aquifer.

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous or toxic chemical or extremely hazardous substance.

Resource Recovery: The process of obtaining matter or energy from materials formerly discarded.

Restricted Area: Airspace designated under (FAA) Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. Joint Use Airspace is restricted area airspace that is authorized for joint use for IFR/VFR operations by the controlling Air Traffic Control facility when it is not being utilized by the using agency.

Riparian Habitat: Areas adjacent to rivers and streams with a differing density, diversity, and productivity of plant and animal species relative to nearby uplands.

Riparian Rights: Entitlement of a landowner to certain uses of water on or bordering the property, including the right to prevent diversion or misuse of upstream waters. Generally a matter of state law.

Riparian Zone: Pertaining to the banks and other adjacent, terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, and surface-emergent aquifers (e.g., springs, seeps, oases), whose imported waters provide soil moisture significantly in excess of that otherwise available through local precipitation - soil moisture to potentially support a mesic vegetation, distinguishable from that of the adjacent more xeric upland.

River Basin: The land area drained by a river and its tributaries.

Secondary Drinking Water Regulations: Non-enforceable regulations applying to public water systems and specifying the maximum contamination levels that, in the judgment of the EPA, are required to protect the public welfare. These regulations apply to any contaminants that may adversely affect the odor or appearance of such water and consequently may cause people served by the system to discontinue its use.

Secondary Standards: National ambient air quality standards designed to protect welfare, including effects on soils, water, crops, vegetation, man-made materials,

animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort and well-being.

Sediments: Soil, sand, and minerals washed from land into water, usually after rain. They pile up in reservoirs, rivers, and harbors, destroying fish and wildlife habitat, and clouding the water so that sunlight cannot reach aquatic plants. Careless farming, mining, and building activities will expose sediment materials, allowing them to wash off the land after rainfall.

Silt: Sedimentary materials composed of fine or intermediate-sized mineral particles.

Silviculture: Management of forestland for timber.

Soil and Water Conservation Practices: Control measures consisting of managerial, vegetative, and structural practices to reduce the loss of soil and water.

Soil Erodibility: An indicator of a soil's susceptibility to raindrop impact, runoff, and other erosive processes.

Soil Moisture: The water contained in the pore space of the unsaturated zone.

Solid Waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Source Reduction: Reducing the amount of materials entering the waste stream from a specific source by redesigning products or patterns of production or consumption (e.g., using returnable beverage containers). Synonymous with waste reduction.

Species: 1. A reproductively isolated aggregate of interbreeding organisms having common attributes and usually designated by a common name. 2. An organism belonging to such a category.

Standards: Norms that impose limits on the amount of pollutants or emissions produced. EPA establishes minimum standards, but states are allowed to be stricter.

State Aquatic Preserve: "Aquatic Preserve" means an exceptional area of submerged lands and its associated waters set aside for being maintained essentially in its natural or existing condition and characterized as being one or more of the following principal types: (1) Biological, an area set aside to promote certain forms of animal or plant life or their supporting habitat (2) Aesthetic, an area set aside to maintain certain scenic

qualities or amenities (3) Scientific, an area set aside to maintain certain qualities or features which have scientific value or significance. More specific information on State Aquatic Preserves may be found in Florida Statute Chapter 258 Part II.

State Implementation Plans (SIP): EPA approved state plans for the establishment, regulation, and enforcement of air pollution standards.

Stationary Source: A fixed-site producer of pollution, mainly power plants and other facilities using industrial combustion processes. (See: point source.)

Steephead: A nearly vertical, semicircular well at the head of a valley enclosed by steep walls, at the base of which underground water emerges as a spring.

Stressors: Physical, chemical, or biological entities that can induce adverse effects on ecosystems or human health.

Surface Water: All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.).

Swamp: A type of wetland dominated by woody vegetation but without appreciable peat deposits. Swamps may be fresh or salt water and tidal or non-tidal. (See: wetlands.)

Tidal Marsh: Low, flat marshlands traversed by channels and tidal hollows, subject to tidal inundation; normally, the only vegetation present is salt-tolerant bushes and grasses. (See: wetlands.)

Topography: The physical features of a surface including relative elevations and the position of natural and man-made features.

Toxicity: The degree to which a substance or mixture of substances can harm humans, plants, or animals. Acute toxicity involves harmful effects in an organism through a single or short-term exposure. Chronic toxicity is the ability of a substance or mixture of substances to cause harmful effects over an extended period, usually upon repeated or continuous exposure sometimes lasting for the entire life of the exposed organism. Subchronic toxicity is the ability of the substance to cause effects for more than one year but less than the lifetime of the exposed organism.

Turbidity: 1. Haziness in air caused by the presence of particles and pollutants. 2. A cloudy condition in water due to suspended silt or organic matter.

Understory: A layer of vegetation growing near the ground and beneath a taller layer.

Upland: An area where soils are relatively well drained, such that the water table is significantly below the soil surface most of the year.

Volatile: Any substance that evaporates readily.

Volatile Liquids, Volatile Organic Compounds, and Volatile Solids: Liquids that easily vaporize or evaporate at room temperature. Volatile Organic Compound (VOC): Any organic compound that participates in atmospheric photochemical reactions except those designated by EPA as having negligible photochemical reactivity. Volatile Solids: Those solids in water or other liquids that are lost on ignition of the dry solids at 550° centigrade.

Volatile Organic Compounds: Organic chemicals that tend to evaporate.

Waste: Unwanted materials left over from a manufacturing process.

Wastewater: The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter.

Water Quality Standards: State-adopted and EPA-approved ambient standards for water bodies. The standards prescribe the use of the water body and establish the water quality criteria that must be met to protect designated uses.

Water Table: The level of groundwater.

Water Well: An excavation where the intended use is for location, acquisition, development, or artificial recharge of ground water.

Wetlands: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, as swamps, bogs, fens, marshes, and estuaries (see: Tidal Marsh).