

particle size - The diameter, in millimeters, of suspended sediment or bed material. Particle-size classifications are:

- Clay - 0.0000094-0.0001575 inch (0.00024-0.004 mm)
- Silt - 0.0001575-.0024409 inch (0.004-0.062 mm)
- Sand - 0.0024409-0.0787402 inch (0.062-2.0 mm)
- Gravel - 0.0787402-2.519685 inch (2.0-64.0 mm)

pathogen - A disease-producing agent; usually applied to a living organism. Generally, any viruses, bacteria, or fungi that cause disease.

periphyton - Microscopic underwater plants and animals that are firmly attached to solid surfaces such as rocks, logs, and pilings.

persistence - Refers to the length of time a compound stays in the environment, once introduced. A compound may persist for less than a second or indefinitely.

phenols - Organic compounds that are byproducts of petroleum refining, tanning, and textile, dye, and resin manufacturing. Low concentrations cause taste and odor problems in water; higher concentrations can kill aquatic life and humans.

phosphates - Certain chemical compounds containing phosphorus. Phosphogypsum Piles (Stacks): Principal byproduct generated in production of phosphoric acid from phosphate rock. These piles may generate radioactive radon gas.

phosphorus - An essential chemical food element that can contribute to the eutrophication of lakes and other water bodies. Increased phosphorus levels result from discharge of phosphorus-containing materials into surface waters.

photosynthesis - The manufacture by plants of carbohydrates and oxygen from carbon dioxide mediated by chlorophyll in the presence of sunlight.

point-source pollution - Water pollution coming from a single point, such as a sewage-outflow pipe.

plume - A three-dimensional body of fluid emanating from a point source or point sources with a chemistry or physical composition differing from the ambient groundwater, atmosphere, or surface water body.

pollution prevention - 1. Identifying areas, processes, and activities which create excessive waste products or pollutants in order to reduce or prevent them through, alteration, or eliminating a process. Such activities, consistent with the Pollution Prevention Act of 1990, are con-

ducted across all EPA programs and can involve cooperative efforts with such agencies as the Departments of Agriculture and Energy. **2.** EPA has initiated a number of voluntary programs in which industrial, or commercial or "partners" join with EPA in promoting activities that conserve energy, conserve and protect water supply, reduce emissions or find ways of utilizing them as energy resources, and reduce the waste stream.

potable water - Water of a quality suitable for drinking.

precursor - In photochemistry, a compound antecedent to a pollutant. For example, volatile organic compounds (VOCs) and nitric oxides of nitrogen react in sunlight to form ozone or other photochemical oxidants. As such, VOCs and oxides of nitrogen are precursors.

prescriptive - Water rights which are acquired by diverting water and putting it to use in accordance with specified procedures; e.g. filing a request with a state agency to use unused water in a stream, river, or lake.

prior appropriation doctrine - The system for allocating water to private individuals used in most Western states. The prior appropriation doctrine is based on the concept of "First in Time, First in Right." The first person to take a quantity of water and put it to beneficial use has a higher priority of right than a subsequent user. The rights can be lost through nonuse; they can also be sold or transferred apart from the land.

PRPs - Potential responsible parties. Waste generators who are responsible for the ultimate fate of toxic wastes. Includes property owners, industries, government agencies, etc. The current federal laws make the PRPs liable in perpetuity for these wastes.

reaeration - Introduction of air into the lower layers of a reservoir. As the air bubbles form and rise through the water, the oxygen dissolves into the water and replenishes the dissolved oxygen. The rising bubbles also cause the lower waters to rise to the surface where they take on oxygen from the atmosphere.

receiving waters - A river, lake, ocean, stream or other watercourse into which wastewater or treated effluent is discharged.

recharge - The process by which water is added to the groundwater system or, more precisely, enters the phreatic zone. Can be expressed as a rate (i.e., in/yr) or a volume.

recharge basin - A basin or pit excavated to provide a means of allowing water to soak into the ground at rates exceeding those that would occur naturally.

relative ecological sustainability - Ability of an ecosystem to maintain relative ecological integrity indefinitely.

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.

remedial action (RA) - The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.

remediation - The process by which contaminated groundwater systems are cleansed of their pollutants or in which the pollutants are managed to avoid their deleterious release to the biosphere.

reservoir - 1. An impoundment of surface water behind a dam; **2.** A porous and permeable subsurface formation or part of a formation containing a natural, individual, and separate accumulation of hydrocarbons (oil or gas).

safe water - Water that does not contain harmful bacteria, toxic materials, or chemicals, and is considered safe for drinking even if it may have taste, odor, color, and certain mineral problems.

saline water - Water that contains significant amounts of dissolved salts. Salinity is defined as:

- Fresh water - Less than 1,000 parts per million (ppm)
- Slightly saline water - From 1,000 ppm to 3,000 ppm
- Moderately saline water - From 3,000 ppm to 10,000 ppm
- Highly saline water - From 10,000 ppm to 35,000 ppm

sediment - Usually applied to material in suspension in water or recently deposited from suspension. In the plural the word is applied to all kinds of deposits from the waters of streams, lakes, or seas.

sedimentary rock - Rock formed of sediment, and specifically: **1.** Sandstone and shale, formed of fragments of other rock transported from their sources and deposited in water; and **2.** Rocks formed by or from secretions of organisms, such as most limestone.

semi-arid - Pertaining to climatic conditions in which the precipitation, although slight, is sufficient for growth of short sparse grass. A semi-arid climate is sometimes referred to as a steppe climate.