

9.0 GLOSSARY

Abiotic: Non-living or non-biological; includes chemical and physical environments and processes.

Acoustic environment: The totality of noise within a given area.

ACHP: See "Advisory Council on Historic Preservation".

Advisory Council on Historic Preservation: An independent federal agency that promotes the preservation, enhancement, and productive use of our nation's historic resources, and advises the President and Congress on national historic preservation policy.

Aesthetic resources: See "Visual resources".

Agency for Toxic Substances and Disease Registry (ATSDR): Based in Atlanta, Georgia, ATSDR is a federal public health agency of the U.S. Department of Health and Human Services. It serves the public by using science, taking public health actions, and providing health information to prevent harmful exposures and diseases related to toxic substances.

Air quality: The characteristics of the ambient air (all locations accessible to the general public) as indicated by concentrations of the six air pollutants for which national standards have been established, and by measurement of visibility in mandatory federal Class I areas.

Airshed: A geographic area where air pollutants from sources "upstream," or within a discrete atmospheric area of flow, are present in the air. While watersheds are actual physical features of the landscape, airsheds are determined using mathematical models of atmospheric deposition.

All-requirements power contract. A formal agreement between a power supply system and its member distribution systems. In this contract the distribution systems agree to purchase all their wholesale power needs from the power supply system at rates prescribed in the agreement and adjusted periodically to meet the power supply system's cost of providing the power.

Alluvial: Pertaining to sediments deposited by modern streams or rivers.

Alternatives analysis: What CEQ calls the “heart of the EIS;” the evaluation of the Proposed Action compared to all of the alternatives used to define the issues and provide a clear basis or choice among the options

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

American Society for Testing and Materials (ASTM): ASTM develops technical standards for industry worldwide.

Anhydrous ammonia: Synthetic ammonia used as a nitrogen fertilizer, it is the basis for the production of all nitrogen fertilizers as well as being a direct application material. It is made through a reaction between gas and nitrogen.

Anthropogenic: Of or caused by humans.

Aquifer: A layer of earth materials that can yield a usable quantity of water to wells.

Archeology: The scientific study, interpretation, and reconstruction of past human cultures from an anthropological perspective based on the investigation of surviving physical evidence of human activity and the reconstruction of related past environments.

Archeological resources: Any material of human life or activities that is at least 100 years old, and that is of archaeological interest.

Attainment area: An area considered to have air quality as good as or better than the National Ambient Air Quality Standards (NAAQS) as defined in the Clean Air Act (CAA). An area may be an attainment area for one pollutant and a non-attainment area for others.

Autism: A brain disorder that begins in early childhood and persists throughout adulthood; it affects three crucial areas of development: communication, social interaction, and creative or imaginative play.

Availability Factor. The amount of time that a plant is able to produce electricity over a certain period, divided by the amount of time in that period. (See also capacity factor.)

Average Daily Traffic (ADT): Daily number of vehicular movements (e.g., passenger vehicles, buses, and trucks) in both directions on a segment of roadway, averaged over a period less than a year.

Baghouse: An enclosed structure that uses filter bags to help remove sulfur dioxide, fly ash, and other particulates from flue and other exhaust gases.

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood." The base flood is the national standard used by the NFIP and all federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. Base Flood Elevations (BFEs) are typically shown on Flood Insurance Rate Maps (FIRMs).

Base Flood Elevation (BFE): The computed elevation to which floodwater is anticipated to rise during the base flood. Base Flood Elevations (BFEs) are shown on Flood Insurance Rate Maps (FIRMs) and on the flood profiles.

Base load: The minimum demands of electricity on a power station over a given period of time; the amount of electricity required to operate a plant continuously, day and night, all year long.

Baseload Plant. A plant, usually housing high-efficiency steam-electric units, which is normally operated to take all or part of the minimum load of a system, and which consequently produces electricity at an essentially constant rate and runs continuously. These units are operated to maximize system mechanical and thermal efficiency and minimize system operating costs.

Berm: A curb, ledge, wall or mound used to contain water, separate materials, and/or prevent the spread of contaminants.

Best management practices (BMPs): Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from non-point sources, including construction sites.

BFE: See "Base Flood Elevation".

Bioaccumulation/ biomagnifications: The collection or amplification of a substance in a biological system; the increase in tissue concentration of

bioaccumulated chemical as the chemical passes up through two or more trophic levels.

Biogas: Gas, typically rich in methane, that is produced by the fermentation of organic matter such as manure under anaerobic conditions.

Blowdown: Removal of liquids or solids from a process, a storage vessel, or an evaporative system by the use of pressure to reduce mineral concentration that can cause scaling.

Burlington Northern and Santa Fe (BNSF) Railway: Headquartered in Fort Worth, Texas, BNSF is one of the largest railroad networks in North America. It was formed in 1996 when the Atchison, Topeka and Santa Fe Railway was merged into the Burlington Northern Railroad.

Busbar cost: The wholesale cost to generate power at a plant.

Capacity Factor. The amount of electricity that a plant produces over a period of time, divided by the amount of electricity it could have produced if it had run at full power over that time period.

Cave: A natural cavity beneath the earth's surface. Caves are formed when slightly acidic water combines with limestone or dolomitic rock, and dissolves the rock, creating a cavity.

Coal Combustion Product (CCP): Large-volume, non-hazardous waste products resulting from combustion of coal at power plants; CCPs that are disposed of in landfills, surface impoundments, or used as mine backfill, are regulated under subtitle D of the Resource Conservation and Recovery Act, and are thus subject to significantly stricter federal regulation than reused CCPs.

Co-firing: The practice of introducing biomass in high-efficiency, coal-fired boilers as a supplemental energy source.

Collector well: A well consisting of a hollow cylindrical concrete caisson that is sunk into the ground from which horizontal well screen laterals project into the surrounding aquifer that allow water to enter the well.

Combined Cycle: An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for utilization by a steam turbine in the production of electricity. This process increases the efficiency of the electric generating unit.

Combustion: Burning. Many important pollutants, such as sulfur dioxide, nitrogen oxides, and particulates (PM-10) are combustion products of the burning of fuels such as coal, oil, gas and wood.

Community (in reference to NFIP): Any state, or area or political subdivision thereof, or any Indian tribe or authorized tribal organization or Alaska Native village or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS): Contains information on hazardous waste sites, potentially hazardous waste sites, and remedial activities across the nation, including existing and potential NPL sites.

Contamination: Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use.

Contour: An imaginary line of constant elevation on the ground surface. The corresponding line on a map is called a "contour line".

Criteria: Standards, rules, or tests on which a judgment or decision may be based.

Criteria air pollutants: A group of 6 common air pollutants regulated by EPA on the basis of criteria (information on health and/or environmental effects of pollution) and for which NAAQS have been established. In general, criteria air pollutants are widely distributed over the country. They are: PM, carbon monoxide (CO), sulfur dioxide (SO₂), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb).

Cultural resources: Any building, site, district, structure, object, data, or other material significant in history, architecture, archeology, or culture. Cultural resources include: historic properties as defined in the National Historic Preservation Act (HNPA), cultural items as defined in the Native American Graves Protection and Repatriation Act (NAGPRA), archeological resources as defined in the Archeological Resources Protection Act (ARPA), sacred sites as defined in Executive Order 13007, *Protection and Accommodation of Access to "Indian Sacred Sites,"* to which access is provided under the American Indian Religious Freedom Act (AIRFA), and collections.

Cumulative impacts: Impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. Effects resulting from individually minor but collectively significant actions taking place over a period of time.

dBA (A-weighted decibel): The unit measurement of sound level calculated by taking ten times the common logarithm of the ratio of the magnitude of the particular sound pressure to the standard reference sound pressure of 20 micropascals and its derivatives.

Decibel (dB): The A-scale sound level is a quantity, in decibels, read from a standard sound-level meter with A-weighting circuitry. The A-scale weighting discriminates against the lower frequencies according to a relationship approximating the auditory sensitivity of the human ear. The A-scale sound level measures approximately the relative "noisiness" or "annoyance" of many common sounds.

Detritus: Minute fragments of plant parts found on the soil surface.

Discharge: The volume of fluid plus suspended sediment that passes a given point within a given period of time.

Dissolved Oxygen: An amount of oxygen dispersed in water, usually expressed as mg/L; DO sustains the lives of fish and other aquatic organisms; cold and flowing water usually contains more DO than warm, stagnant water.

Dominant Species: A plant species that exerts a controlling influence on or defines the character of a community.

Drained: A condition in which ground or surface water has been reduced or eliminated from an area by artificial means.

Drawdown: The change in groundwater level that results from pumping. It is determined from the difference between the depth to the groundwater surface at a given time after pumping has started and the depth to the groundwater surface prior to the start of pumping.

Electric load: The combined electrical needs of all units in a system.

Emergent plant: A rooted herbaceous plant species that has parts extending above water surface.

Endangered species: A species that is threatened with extinction throughout all or a significant portion of its range.

Entrainment (streams): The incidental trapping of fish and other aquatic organisms in the water, for example, used for cooling electrical power plants or in waters being diverted for irrigation or similar purposes.

Environment: The total surroundings of an organism, including both non-living (abiotic) and living (biotic) components, that is, other plants and animals as well as those of its own kind.

Environmental assessment: A concise public document which serves to briefly provide sufficient evidence and analysis for determining whether to prepare an EIS [environmental impact statement] or a Finding of No Significant Impact (FONSI) in compliance with NEPA.

Environmental Site Assessment: Provides a good general indication of the past and existing conditions on a site that could indicate a recognized environment condition (i.e., contamination).

Farmland Protection Policy Act (FPPA): A federal law that aims to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that,

to the extent possible, federal programs are administered to be compatible with state, local, and private programs and policies to protect farmland.

Federal Aviation Administration (FAA): Federal agency primarily responsible for the advancement, safety and regulation of civil aviation in the United States (U.S.).

Fill material: Any material placed in an area to increase surface elevation.

FIRM: See "Flood Insurance Rate Map".

Flood Insurance Rate Map (FIRM): The official map of a community on which FEMA has delineated both the special hazard areas and the risk premium zones applicable to the community.

Flood zones: Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA is defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

Flooded: A condition in which the soil surface is temporarily covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources.

Floodway: A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations. For streams and other watercourses where FEMA

has provided Base Flood Elevations (BFEs), but no floodway has been designated, the community must review floodplain development on a case-by-case basis to ensure that increases in water surface elevations do not occur, or identify the need to adopt a floodway if adequate information is available.

Flora: A list of all plant species that occur in an area.

Flue gas: The air coming out of a chimney after combustion; it can include nitrogen oxides, carbon oxides, water vapor, sulfur oxides, particles and many chemical pollutants.

Flue gas desulfurization: Removes PM and SO₂ by producing contact between the exhaust gas and a scrubbing slurry (generally lime or limestone). Mounted horizontal plates facilitate the transport of the slurry, whose contact with the exhaust gas forms a wet mixture of calcium sulfite and sulfate.

Fly ash: Non-combustible residual particles expelled by flue gas.

Frequency (inundation or soil saturation): The periodicity of coverage of an area by surface water or soil saturation. It is usually expressed as the number of years (e.g. 50 years) the soil is inundated or saturated at least once each year during part of the growing season per 100 years or as 1-, 2-, 5-year, etc., inundation frequency.

Fugitive dust: Particles lifted into the ambient air due to man-made and natural activities such as the movement of soil, vehicles, equipment, blasting, and wind. This excludes PM emitted directly from the exhaust of motor vehicles and other internal combustion engines.

Gas Turbine Plant. A plant in which the electricity is produced by a gas turbine (typically of an air compressor, one or more combustion chambers, where liquid or gaseous fuel is burned and the hot gases are passed to the turbine and where the hot gases expand to drive the generator and are then used to run the compressor).

Gasification: A method of treating coal or other carbon containing solids or liquids to produce combustible gas that can be collected and burned to generate power or processed into chemicals and fuels.

Generating capacity: The total amount of electrical power that a utility can produce at any one time, usually measured in megawatts; three types of generating capacity include a base load, an intermediate load, and a peaking capacity.

Geothermal resources: Internal heat of the earth when used as a source of energy, it is usually contained in underground reservoirs of steam, hot water, and hot dry rocks.

Glacial-Fluvial deposits: Earth materials that have been deposited or formed by either the action of glaciers or by streams or rivers, or sediments formed by glaciers and re-deposited by streams.

Groundwater: Water in the porous rocks and soils of the earth's crust; a gratuitous proportion of the total supply of fresh water.

Growing season: The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5° C) (US Department of Agriculture - Soil Conservation Service 1985).

Habitat: The environment occupied by individuals of a particular species, population, or community.

Hazardous substances: Solid or liquid materials, which may cause or contribute to mortality or serious illness by virtue of physical and chemical characteristics, or pose a hazard to human health or the environment when improperly managed, disposed of, treated, stored, or transported.

Hazardous waste: A waste or combination of wastes which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Haze: An atmospheric aerosol of sufficient concentration to be visible. The particles are too small to see individually, but reduce visual range by scattering light.

Heat: The transfer of energy from one object at a higher temperature to another object at a lower temperature.

Heavy metals: Metallic elements like mercury, lead, cadmium, arsenic, copper and zinc that can be harmful pollutants when they enter air, soil, and water.

Historic Property: As defined by the NHPA, a historic property or historic resource is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), including any artifacts, records, and remains that are related to and located in such properties. The term also includes properties of traditional religious and cultural importance (traditional cultural properties), which are eligible for inclusion in the NRHP as a result of their association with the cultural practices or beliefs of an Indian tribe or Native Hawaiian organization.

Hydraulic Conductivity: A measure of the permeability of a porous media. Specifically it is defined as the volume of water that can flow through a unit cross section of a media under a unit hydraulic gradient. It has units of a velocity and can be expressed in terms of feet per day (ft/day) or in gallons per day per square foot (gpd/ft²).

Hydric soil: A soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (US Department of Agriculture-Soil Conservation Service 1985). Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils.

Hydroelectric: Related to electric energy produced by moving water (i.e. through a dam on a river that stores water in a reservoir).

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

Hydrophytic vegetation: The sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation.

Impairment: An adverse impact on a resource or a value (i.e. when a significant adverse impact reaches the level of impairing a national park, it is prohibited under the Organic Act of 1916).

Intermediate Load. The range from base load to a point between base load and peak. This point may be the midpoint, a percent of the peakload, or the load over a specified time period.

Karst: A landscape characterized by the presence of caves, springs, sinkholes and losing streams, created as groundwater dissolves soluble rock such as limestone or dolomite.

Levee: A natural or man-made feature of the landscape that restricts movements of water into or through an area.

Levelized cost: The present value of the total cost of building and operating a generating plant over its economic life, converted to equal annual payments; costs are levelized (adjusted to remove the impact of inflation) in real dollars.

Limestone: A sedimentary rock composed of calcium carbonate; a rock of marine origin derived from the lime mud and ooze that accumulated on calm, shallow sea floors.

Losing stream: A surface stream that loses a significant amount of its flow to the subsurface through bedrock openings.

Macrophyte: Any plant species that can be readily observed without the aid of optical magnification. This includes all vascular plant species and mosses (e.g., *Sphagnum* spp.), as well as large algae (e.g. *Chara* spp., kelp).

Man-induced wetland: Any area that develops wetland characteristics due to some activity (e.g. irrigation) of man.

Mean sea level: A datum, or "plane of zero elevation", established by averaging all stages of oceanic tides over a 19-year tidal cycle or "epoch". This plane is corrected for curvature of the earth and is the standard reference for elevations on the earth's surface. The correct term for mean sea level is the National Geodetic Vertical Datum (NGVD).

Megawatthour (MWh). One million watts delivered for one hour.

Mesophytic: Any plant species growing where soil moisture and aeration conditions lie between extremes. These species are typically found in habitats with average moisture conditions, neither very dry nor very wet.

Methylation: Conversion of mercury (Hg) into methylmercury (CH₃Hg) through biotic (living) or abiotic (non-living) processes in the environment.

Metropolitan Statistical Area (MSA): As defined by the federal Office of Management and Budget, an MSA is an urban area that meets specified size criteria: either it has a core city of at least 50,000 inhabitants within its corporate limits, or it contains an urbanized area of at least 50,000 inhabitants and has a total population of at least 100,000. The Great Falls MSA is coincident with Cascade County.

Mitigation: A method or action to reduce or eliminate adverse program impacts.

Monitoring (monitor): Systematically observing, recording, or measuring some environmental attribute, such as air quality or water quality, or ascertaining compliance with a given law, regulation, or standard. For example, measurement of air pollution is referred to as monitoring. EPA, state and local agencies measure the types and amounts of pollutants in the ambient air. The 1990 CAA Amendments require certain large polluters to perform enhanced monitoring to provide an accurate picture of how much pollution is being released into the air. The 1990 CAA requires states to monitor community air in polluted areas to check on whether the areas are being cleaned up according to schedules set out in the law.

Mottles: Spots or blotches of different color or shades of color interspersed within the dominant color in a soil layer, usually resulting from the presence or periodic reducing soil conditions.

MSA: See "Metropolitan Statistical Area".

National Environmental Policy Act (NEPA): Establishes procedures that federal agencies must follow in making decisions on federal actions that may

impact the environment. Procedures include evaluation of environmental effects of proposed actions, and alternatives to proposed actions, involvement of the public and cooperating agencies.

National Ambient Air Quality Standards (NAAQS): Standards established at the federal level that define the limits for airborne concentrations of designated "criteria" pollutants (e.g. nitrogen dioxide, sulfur dioxide, CO, PM, O₃, and lead) to protect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility, and materials (secondary standards). States may establish more stringent standards if they want to do so.

National Flood Insurance Program (NFIP): The NFIP is a federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages.

National Priorities List (NPL): List of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the U.S. and its territories; sites listed in the NPL also are known as Superfund sites.

National Register of Historic Places (NHRP): The nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service.

Native vegetation: Plant life that occurs naturally in an area without agriculture or cultivation efforts.

Navigable waters: The Waters of the United States, including the territorial seas; all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide, as defined by Title 40 of the Code of Federal Regulations, Section 110.1 (40 CFR 110.1).

NEPA: See "National Environmental Policy Act".

Net Generation. Gross generation minus plant use from all electric utility owned plants. The energy required for pumping at a pumped-storage plant is regarded as plant use and must be deducted from the gross generation.

Neurotoxicity: Having the capability of harming nerve tissue.

NFIP: See "National Flood Insurance Program".

Noise: Sound that is perceived by humans as annoying and unwanted.

Non-attainment area: An area that has been designated by the U.S. Environmental Protection Agency and the appropriate state air quality agency as exceeding one or more National Ambient Air Quality Standards.

Non-hydric soil: A soil that has developed under predominantly aerobic soil conditions. These soils normally support mesophytic or xerophytic species.

No-rise Certification for Floodways: Any project in a floodway must be reviewed to determine if the project will increase flood heights. An engineering analysis must be conducted before a permit can be issued. The community's permit file must have a record of the results of this analysis, which can be in the form of a No-rise Certification. This No-rise Certification must be supported by technical data and signed by a registered professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM).

NPL: See "National Priorities List".

NRHP: See "National Register of Historic Places".

Organic soil: soil is classified as an organic soil when it is: (1) saturated for prolonged periods (unless artificially drained) and has more than 30-percent organic matter if the mineral fraction is more than 50-percent clay, or more than 20-percent organic matter if the mineral fraction has no clay; or (2)

never saturated with water for more than a few days and having more than 34-percent organic matter.

Palustrine emergent wetland: Classification of the U.S. Fish and Wildlife Service for non-tidal wetlands dominated by trees, shrubs, or persistent emergent vegetation. Palustrine emergent wetlands include vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie. They also include small, shallow, permanent or intermittent water bodies often called ponds.

Particulate matter (PM): Solid or liquid matter suspended in the atmosphere.

Peak Demand. The maximum load during a specified period of time.

Peak Load Plant. A plant usually housing gas turbines; diesels; or pumped-storage hydroelectric equipment normally used during the peak-load periods.

Peaking Capacity. Capacity of generating equipment normally reserved for operation during the hours of highest daily, weekly, or seasonal loads. Some generating equipment may be operated at certain times as peaking capacity and at other times to serve loads on an around-the-clock basis.

Photochemical: Of or pertaining to chemical action of light, or produced by it.

Photovoltaic: Converting light into electricity; semiconductor devices that convert sunlight into direct current electricity (i.e. solar cells).

Plant community: All of the plant populations occurring in a shared habitat or environment.

Plume: A continuous emission from a point source of contamination that has a starting point and a noticeable pathway.

Poorly drained: Soils that commonly are wet at or near the surface during a sufficient part of the year that field crops cannot be grown under natural conditions.

Potable: A liquid, usually water, which is drinkable.

Powder River Basin: An area containing the world's largest single deposit of low-sulfur coal, located in southeastern Montana and northeastern Wyoming.

Power purchase agreement: The off-take contract from a large customer to buy the electricity generated by a power plant.

Pressure Transducer: A device that generates an electrical signal that varies in proportion to the amount of pressure that the device is exposed to. The electrical signal can be converted to a digital signal that can be stored on a computer as a record of the pressures that the transducer is exposed to, such as head pressures (groundwater levels) within a well.

Pulverized coal: A coal that has been crushed to a fine dust in a grinding mill. It is blown into the combustion zone of a furnace and burns very rapidly and efficiently.

Radiative forcing. Radiative forcing is a measure of how the energy balance of the Earth-atmosphere system is influenced when factors that affect climate are altered. The word radiative arises because these factors change the balance between incoming solar radiation and outgoing infrared radiation within the Earth's atmosphere. This radiative balance controls the Earth's surface temperature. The term forcing is used to indicate that Earth's radiative balance is being pushed away from its normal state.

Reclamation/ remediation: The process of restoring an area to an acceptable pre-existing condition; an action to correct damage to the environment (i.e. after a power plant is decommissioned or shut down).

Relief: The change in elevation of a land surface between two points; collectively, the configuration of the earth's surface, including such features as hills and valley.

Rhizosphere: The zone of soil in which interactions between living plant roots and microorganisms occur.

Routine wetland determination: A type of wetland determination in which office data and/or relatively simple, rapidly applied onsite methods are employed to determine whether or not an area is a wetland.

Runoff: The non-infiltrating water entering a stream or other conveyance channel shortly after a rainfall.

Sample plot: An area of land used for measuring or observing existing conditions.

Saturated soil conditions: A condition in which all easily drained voids (pores) between soil particles in the root zone are temporarily or permanently filled with water to the soil surface at pressures greater than atmospheric.

Scenic resources: See "Visual resources".

Scoping: Planning process that solicits people's and "stakeholders'" opinions on the value of a park, issues facing a park, and the future of a park. Also used in the NEPA process at the outset of preparing an EA or an EIS to help determine the scope of the study and the major issues that merit investigation and analysis.

Sediment: Particles derived from rock or biological sources that have been transported by water.

Selective catalytic reduction: A non-combustion control technology that converts nitrogen oxides (NO_x) into molecular nitrogen and water by injecting a reducing agent (i.e. ammonia) into the flue gas in the presence of a catalyst.

Sensitive receptor: Areas defined as those sensitive to noise, such as hospitals, residential areas, schools, outdoor theaters, and protected wildlife species.

SFHA: See "Special Flood Hazard Area".

SHPO: See "State Historic Preservation Officer".

Siltation: Deposition of fine mineral particles (silt) on the beds of streams or lakes.

Sinkhole: A rounded depression in the landscape formed when an underground cavity collapses.

Soil: Unconsolidated mineral and organic material that supports, or is capable of supporting, plants, and which has recognizable properties due to the integrated effect of climate and living matter acting upon parent material, as conditioned by relief over time.

Special Flood Hazard Area (SFHA): The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The SFHA includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V.

Specific Capacity: A measure of the productivity of a well. It is determined by dividing the pumping rate of a well by the amount of drawdown. It is typically expressed in units of gallons per minute per foot of drawdown (gpm/ft).

Specific Conductance: A measure of the ability of water to conduct electricity. It roughly correlates to the total dissolved concentration of ionic constituents (chemicals that form charged particles when dissolved) in the water, and is thus a general indicator of water quality. Pure water has very low specific conductance. As the amount of ionic constituents dissolved in the water increases, the specific conductance increases. It is expressed in units of microsiemens per centimeter ($\mu\text{S}/\text{cm}$) or the equivalent unit micromhos per centimeter ($\mu\text{mhos}/\text{cm}$)

Source: Any place or object from which pollutants are released. A source can be a power plant, factory, dry cleaning business, gas station or farm. Cars, trucks and other motor vehicles are sources, and consumer products and machines used in industry can be sources too. Sources that stay in one place are referred to as stationary sources; sources that move around, such as cars or planes, are called mobile sources.

Species: All organisms of a given kind; a group of plants or animals that breed together but are not bred successfully with organisms outside their group.

Spring: A natural discharge of water from a rock or soil to the surface.

State Historic Preservation Officer (SHPO): Appointed under the authority of the National Historic Preservation Act of 1966, the State Historic Preservation Officer is the official in each state and territory charged with administering national and state historic preservation program at the state level.

Storativity: A measure of an aquifer's ability to store water. Specifically it is the volume of water that an aquifer stores or releases per unit surface area of the aquifer per unit change in hydraulic head. Storativity is a unitless value.

Storm water: Runoff water resulting from precipitation.

Sub-bituminous coal: A coal with a heating value between bituminous (soft; high in carbon) and lignite (young; low-grade; low in sulfur) with low-fixed carbon and high percentages of volatile matter and moisture. Coal mined in the Power River Basin of Wyoming is an example of sub-bituminous coal.

Topography: The configuration of a surface, including its relief and the position of its natural and man-made features.

Toxicity: A measure of how toxic or poisonous something is.

Tree: A woody plant plan 3.0 in. in diameter at breast height, regardless of height (exclusive of woody vines).

Turbidity: A measure of water clarity; a measure of the amount of suspended solids (usually fine clay or silt particles) in water and thus the degree of scattering or absorption of light in the water.

Viewshed: Subunits of the landscape where the scene is contained by topography, similar to a watershed.

Visual resources: The quality of the environment as perceived through the visual sense; visual resources are evaluated by comparing project features with the major features in the existing landscape; denotes an interaction between a human observer and the landscape he or she is observing.

Volatile Organic Compounds (VOCs): Any organic compound that participates in atmospheric photochemical reactions. Some compounds are

specifically listed as exempt due to their having negligible photochemical reactivity. [40 CFR 5 1.100.] Photochemical reactions of VOCs with oxides of nitrogen and sulfur can produce O₃ and PM.

Waste-to-energy: A range of processes associated with municipal or industrial waste where the waste is burned, gasified or digested at a high temperature. Energy is recovered from these processes (usually in the form of heat) and is reclaimed to produce steam and/or generate electricity.

Water table: The upper surface of groundwater or that level below which the soil is saturated with water. It is at least 6 in. thick and persists in the soil for more than a few weeks.

Well Development: The process of removing fine-grained materials from around a well screen to ensure that the screen is open to the aquifer and to maximize the well's performance. Well development is typically accomplished by pumping or surging the well. Pumping for development can be accomplished by air-lifting, a method in which a pipe is installed into the well through which compressed air is injected. The air forces water up out of the well casing carrying the fine-grained materials that can pass through well screen along with it.

Well Screen: Part of a well in an unconsolidated aquifer that is designed to maximize the amount of water that enters the well while minimizing the amount of sand or fine-grained materials that can enter the well. A well screen can be simply pipe with numerous slots cut through it. Wire-wrapped well screen provides the maximum amount of open area. It is constructed from a number of metal rods running the length of the screen around which a wire is wrapped and attached by welding. A gap is left between successive wraps of the wire to form a continuous slot that allows the entrance of water into the screen. For either cut slot or wirewrapped well screen, the size of the slot opening is selected based on the grain-size distribution of the aquifer materials.

Wetland determination: The process or procedure by which an area is adjudged a wetland or non-wetland.

Wetland hydrology: The sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation.

Wetland plant association: Any grouping of plant species that recurs wherever certain wetland conditions occur.

Wetland soil: A soil that has characteristics developed in a reducing atmosphere, which exists when periods of prolonged soil saturation result in anaerobic conditions. Hydric soils that are sufficiently wet to support hydrophytic vegetation are wetland soils.

Wetland vegetation: The sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. Hydrophytic vegetation occurring in areas that also have hydric soils and wetland hydrology may be properly referred to as wetland vegetation.

Wetlands: Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Xerophytic: A plant species that is typically adapted for life in conditions where a lack of water is a limiting factor for growth and/or reproduction. These species are capable of growth in extremely dry conditions as a result of morphological, physiological, and/or reproductive adaptation.

Zone A (in reference to FEMA FIRMs): Areas subject to inundation by the 1-percent-annual chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zones AE and A1 through 30 (in reference to FEMA FIRMs): Areas subject to inundation by the 1-percent-annual chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.