

Chapter 7

GLOSSARY

100-year flood. A flood event of such magnitude that it occurs, on average, every 100 years. This equates to a 1% probability of occurring in any given year.

Affected environment. The existing biological, physical, social, and economic conditions of an area that are subject to change, both directly and indirectly, as a result of a proposed human action.

Acre-foot. A measure of volume of water. The amount of water it would take to cover 1 acre of land to a depth of 1 foot; equal to 325,851 gallons or 43,560 cubic feet.

Air quality. The cleanliness of the air as measured by the levels of pollutants relative to standards or guideline levels established to protect human health and welfare.

Ambient concentration. The mass of a pollutant in a given volume of air, typically measured as micrograms of pollutant per cubic meter of air.

Animal unit month. Amount of forage required to sustain a cow/calf unit (one cow and one calf) or equivalent for one month.

Aquifer. A water-bearing body of permeable rock, sand, or gravel. A formation, group of formations, or part of a formation that contains sufficient saturated permeable material to conduct groundwater and yield quantities of water to wells and springs.

Area of Critical Environmental Concern. A Bureau of Land Management designation for an area within public lands in which special management is required in order to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life from natural hazards.

Assessment (environmental). An evaluation of existing resources and potential impacts to those resources from a proposed act or change to the environment.

Attainment area. A geographic region that meets the National Ambient Air Quality Standards for a criteria pollutant under the Clean Air Act.

Background concentration. The existing levels of air pollutant concentration in a given region. In general, it includes natural and existing emission sources but not future emission sources.

Baseline. The environmental conditions that form the basis against which the environmental consequences of a proposed action are evaluated.

Best management practices. Structural and operational measures undertaken to reduce erosion and sedimentation before beginning and continuing during ground-disturbing activities. Best management practices are measures that are demonstrated to be the best available for the site for controlling soil loss and protecting water quality, given the site-specific social, economic, and technical constraints.

Breccia pipe. A narrow, vertical geological structure formed by the collapse of a cavity in an underlying limestone formation, typically filled with breccia, which is a rock formed of debris from the overlying geological formation.

Candidate species. Species for which the U.S. Fish and Wildlife Service has sufficient information on file regarding biological vulnerability and threat(s) to support the issuance of a proposed rule to list the species as threatened or endangered but for which issuance of the proposed rule is precluded.

Code of Federal Regulations. The compilation of federal regulations adopted by federal agencies through a rule-making process.

Cooperating agency. A federal, state, or local government entity that provides input for and review of the compliance process required by the National Environmental Policy Act of 1969 but that is not responsible for management of that process.

Core area. A component of natural habitat composed of “contiguous blocks of uniform habitat types away from natural breaks or habitat edges,”²⁴ used to describe the inner part of the effect zone.

Council on Environmental Quality. An advisory council to the President of the United States established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

Criteria pollutants. Air pollutants for which the U.S. Environmental Protection Agency has established National Ambient Air Quality Standards. These include particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide, and volatile organic compounds.

Cultural resources. Areas, properties, or sites of importance to cultural groups. In addition to areas of importance for traditional uses or products, these include the remains of human activity, occupation, or endeavor, as reflected in districts, sites, buildings, objects, artifacts, ruins, works of art, architecture, and natural features important in human events.

Cumulative effects. The impact on the environment that results from the incremental effect of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions that take place over a period of time.

Direct effect. See *Direct impact*.

Direct impact. Beneficial or adverse effect that is caused by an action and occurs at the same time and place.

Distance zones. A subdivision of the landscape as viewed from an observer position. The subdivision (zones) includes foreground–middle ground, background, and seldom seen.

Drill site. A location, typically cleared of vegetation, at which a drill rig is placed and a vertical hole is drilled downward in order to collect geological samples and determine the presence of economic minerals.

Ecotone. The transition zone between two major ecological communities in which one does not merge gradually into the other, for example, that between grassland and woodland.

Edge area. The portion of wildlife habitat that forms the borders with nearby non-habitat area and typically provides less value to wildlife.

²⁴ Weller, C., J. Thomson, P. Morton, and G. Aplet, 2002. *Fragmenting Our Lands: The Ecological Footprint from Oil and Gas Development—a Spatial Analysis of a Wyoming Gas Field*. Seattle, Washington, and Denver, Colorado: The Wilderness Society. Available at: <<http://wilderness.org/files/fragmenting-our-lands.pdf>>.

Effect. See *Impact*.

Emission. Discharge of pollutants into the atmosphere, usually specified by mass of pollutant per unit of time.

Endangered species. A plant or animal species that is threatened with extinction or serious depletion in its range and is formally listed as such by the U.S. Fish and Wildlife Service.

Environmental Impact Statement. A document prepared to analyze the impacts on the environment of a Proposed Action and released to the public for review and comment. An Environmental Impact Statement must meet the requirements of the National Environmental Policy Act and the Council on Environmental Quality and the directives of the lead federal agency responsible for the Proposed Action.

Endemic environment. Plants or animals that are native to a particular region; the surrounding conditions, influences, or forces that affect or modify an organism or an ecological community and ultimately determine its form and survival.

Ephemeral stream. A stream or portion of a stream that flows only in direct response to precipitation.

Evapotranspiration. The loss of water from the soil both by evaporation and by transpiration from the plants growing there.

Fault. A fracture or fracture zone in the earth's surface along which there has been displacement of the sides relative to one another and parallel to the fracture.

Federally listed threatened and endangered species. Species afforded protection under the Endangered Species Act. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.

Floodplain. The portion of a river or stream valley, adjacent to the river channel, that is made up of stream sediments and is inundated with water when the stream overflows its banks.

Forage. All browse and herbaceous foods available to grazing animals for feeding.

Fragmentation. See *Habitat fragmentation*.

Groundwater recharge. Water that infiltrates the land surface and is not lost to evaporation or consumed by plants can percolate downward and replenish groundwater aquifers. This deep percolation is called recharge.

Habitat. The region in which a plant or animal naturally grows or lives. A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Habitat fragmentation. The disruption (by division) of habitat into smaller habitat patches. The effects of habitat fragmentation include loss of habitat area, increased edge area, and the creation of smaller, more isolated patches of remaining habitat.

Habitat type. A habitat type is the basis of a forest ecosystem classification system. It is an aggregation of all land areas potentially capable of producing similar plant communities at climax. Habitat types are usually named for the most shade-tolerant tree species that will grow on the site and an understory plant that is represented with a high degree of constancy.

Haul road. The route over which mined ore is moved from the mine to a processing location or waste rock is moved to a storage location.

Hazardous waste. Waste that is designated hazardous by the U.S. Environmental Protection Agency or state regulations. As defined under the Resource Conservation and Recovery Act, hazardous waste is waste from production or operation activities that poses a potential hazard to human health or the environment when improperly treated, stored, or disposed of. Hazardous waste that appears on special U.S. Environmental Protection Agency lists or possesses at least one of the four following characteristics: ignitability, corrosivity, reactivity, or toxicity.

Head structure. The frame and equipment built above a vertical mine shaft in order to raise ore from the mine and lower personnel and equipment into the mine.

Human environment. The natural and physical environment and the relationship between people and the environment.

Hydrology. A science that studies the properties, distribution, and circulation of water on and below the earth's surface and in the atmosphere.

Impact. The terms "impacts" and "effects" are synonymous as used in National Environmental Policy Act analyses. Impacts may be beneficial or adverse and may apply to the natural, aesthetic, historic, cultural, and socioeconomic resources of the installation and the surrounding communities. Where applicable, impacts may be classified as direct or indirect.

Indicator species. A wildlife species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species.

Indirect effect. See *Indirect impact*.

Indirect impact. An indirect impact is caused by a proposed activity but is later in time or farther removed in distance while still being reasonably foreseeable. Indirect impacts may include land use changes or population density changes and the related effects these changes will have on air, water, and other natural or social systems.

Infiltration. Water that falls on the land surface and does not run off. Some of this water evaporates, some is used by plants, and some percolates downward to the groundwater.

Interim management (a mine under interim management). A mine operating under alternate stipulations under an approved mine plan of operations during periods when ore is not being removed because of temporary changes in economic or regulatory conditions.

Intermittent stream. A stream that flows only at certain times when it receives water from springs or from a surface source.

Leasable mineral. Minerals that may be acquired under the Mineral Leasing Act of 1920, as amended, including coal, oil shale, oil and gas, phosphate, potash, sodium, and geothermal resources.

Listed species. Any species that occurs on a threatened or endangered species list at the state or federal level.

Lithic. Pertaining to stone or a stone tool (e.g., lithic artifact).

Lithic scatter. An archaeological site type characterized by a surface scatter of artifacts that consists entirely of lithic (i.e., stone) tools and chipped stone debris.

Locatable materials. Traditional hardrock minerals, such as gold, silver, lead, copper, and zinc, and industrial minerals, such as fluorspar, barite, and high-calcium limestone, that occur in lode or placer deposits. Lode claims are located on indurated bedrock, whereas placer claims are usually located on loosely consolidated materials, such as mineral-bearing sands and gravels.

Long-term impacts. Long-term impacts are neither temporary nor reversible. They may occur either during the construction or operation phases of an activity. For example, the construction of a new building may create long-term impacts during both the construction and operation phases. Draining of a wetland for the construction of a new building will create long-term and permanent impacts to biological resources. Likewise, once in operation, the new building may create additional long-term impacts such as increased population density, waste generation, etc.

Mine footprint. The land area within which all surface mining activities are conducted, including head structures for underground mines, stockpiles of waste rock or ore, and stormwater or process water basins.

Mine plan of operations. A description of proposed mineral exploration or mining, including the name and address of the operator, location of the operation, access to the operation, period in which the operation would take place, and other information, as required by the Bureau of Land Management in accordance with 43 CFR Part 3809 and by the U.S. Forest Service in accordance with 36 CFR Part 228.4.

Mineral entry. Authority to enter public lands for the purpose of developing minerals in an orderly, organized manner.

Mineral rights. An ownership interest in minerals that may or may not be owned by the person or party having title to the surface estate.

Mineralized breccia pipe. A breccia pipe in which, over time, various minerals have formed in fractures and pores as a result of the presence of mineral-rich groundwater, some of which may be economic to mine for uranium and other metals.

Mitigation. Actions intended to render an action less severe or harmful to environmental resources. Mitigation generally includes the following: avoiding the impact altogether by stopping or modifying the Proposed Action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by conducting preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources or environments.

National Ambient Air Quality Standards. Section 109 of the Clean Air Act requires the U.S. Environmental Protection Agency to set nationwide standards for widespread air pollutants. Currently, six pollutants are regulated: sulfur dioxide, carbon monoxide, particulate matter 10, nitrogen dioxide, ozone, and lead.

National Register of Historic Places. A listing of architectural, historical, archaeological, and cultural sites of local, state, or national significance established by the National Historic Preservation Act of 1966 and maintained by the National Park Service.

No Action Alternative. The most likely condition expected to exist in the future if current management direction were to continue unchanged.

No effect. See *No impact*.

No impact. “No impact” implies that a particular activity creates neither a direct nor indirect impact, does not have long- or short-term implications, and is neither beneficial nor negative.

Nonattainment area. An area that has been designated by the U.S. Environmental Protection Agency or the appropriate state air quality agency as exceeding one or more national or state Ambient Air Quality Standards.

Nonpoint source. Source of pollution generally attributed to urban runoff from irrigating landscapes and golf courses, draining pools to streets, washing vehicles in streets, and hosing down driveways.

Noxious weed. An undesirable weed species that typically moves into disturbed areas, grows aggressively, and outcompetes desirable or native species for resources.

Off-highway vehicle. Any motorized vehicle designated for cross-country travel over any type of natural terrain.

Ore. Naturally occurring material from which a valuable mineral or minerals can be economically extracted.

Overburden. Rock and soil cleared away prior to mining.

Ozone (ground level). A major ingredient in smog. Ozone is produced from reactions of hydrocarbons and nitrogen oxides in the presence of sunlight and heat.

Particulate. Fine liquid or solid particles, such as dust, smoke, mist, fumes, or smog, found in air or emissions.

Particulate matter. Particulate matter is regulated under the Clean Air Act. Particulate matter 10 is particulate matter that is 10 microns or less in effective diameter (also called fine particulate matter). Particulate matter 2.5 is particulate matter that is 2.5 microns or less in diameter.

Patent. A document by which the United States conveys, to those entitled thereto, legal title to some portion of the public lands (Glossaries of Bureau of Land Management Surveying and Mapping Terms).

Patented claims. Private land that has been secured from the U.S. government by compliance with laws relating to such lands.

Percent grade (of uranium). The total amount of processed uranium that can be extracted from a given amount of ore, typically given as percent U_3O_8 .

Perennial. Lasting or active throughout the entire year.

Perennial stream. A stream or reach of a stream that flows throughout the year, fed by springs or groundwater.

Permeability. The measure of the ease with which a fluid can diffuse through a particular porous material.

Petroglyph. Literally, a rock carving; petroglyphs usually exclude writing and are of prehistoric or protohistoric age.

Physiographic. Describing the shape and features of the land's surface.

Physiographic province. An area characterized by distinctive topography, geological structure, climate, drainage patterns, and other features and phenomena of nature.

Plan of operations. See *Mine plan of operations*.

Point source. Any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, or conduit, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Preferred Alternative. The alternative recommended for implementation by the project proponent based on the evaluation completed in the NEPA process.

Prevention of significant deterioration. A regulatory program based not on the absolute levels of air pollution allowable in the atmosphere but on the amount by which a legally defined baseline condition will be allowed to deteriorate in a given area. Under this program, geographic areas are divided into three classes, each allowing different increases in nitrogen dioxide, particulate matter, and sulfur dioxide concentrations. Prevention of significant deterioration above legally established levels includes the following, used to classify a region:

- Class I—minimal additional deterioration in air quality (certain national parks and wilderness areas).
- Class II—moderate additional deterioration in air quality (most lands).
- Class III—greater deterioration for planned maximum growth (industrial areas).

Primacy state. A state of the United States that is authorized by the U.S. Environmental Protection Agency to administer portions of the Clean Water Act; Arizona is a primacy state.

Project alternatives. Alternatives to the proposed project developed through the National Environmental Policy Act process.

Quaternary. The geological period following the Tertiary in the Cenozoic Era, beginning about 1.8 million years ago, composed of the Pleistocene and Holocene epochs, characterized by the evolution of hominids into modern humans.

Rangeland. Land used for grazing by livestock and big-game animals on which vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.

Reasonably foreseeable development scenario. Predicts the level and type of reasonably foreseeable future locatable mineral exploration and development that could occur in the proposed withdrawal area.

Reclamation. The process of contouring, stabilizing, and/or vegetating to convert disturbed land to its former use or other productive uses.

Record of Decision. A public document that explains which alternative will be selected for the area of concern. In addition to the decision, the Record of Decision states the alternatives considered, environmentally preferable alternative or alternatives, factors considered in the agency's decision, and mitigation measures that will be implemented and identifies any applicable enforcement and monitoring programs.

Right-of-way. Strip of land acquired by legal means over which, for example, power lines and access roads would pass.

Riparian. Typically refers to vegetation that requires the continual presence of water and therefore tends to grow near streams, springs, or lakes.

Riparian area. Land areas that are directly influenced by water. They usually have visible vegetative or physical characteristics that show water influence. Stream sides, lake borders, and marshes are typical riparian areas.

Road density. The number of miles of road per square mile.

Runoff. Precipitation that is not retained on the site where it falls and that is not absorbed by the soil or lost to the atmosphere.

Salable minerals. Common-variety mineral materials, such as sand, gravel, cinders, and building stone, that are sold on a permit basis. Also referred to as mineral materials.

Scope. The range of actions, alternatives, and impacts to be considered in an Environmental Impact Statement.

Scoping. A term used to identify the process for determining the range of issues related to a Proposed Action and for identifying significant issues to be addressed in an Environmental Impact Statement. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, and comments received by the lead federal agency in response to news releases, direct mailings, articles, and Internet postings about the Proposed Action.

Sediment. Soil or mineral particles transported by moving water, wind, gravity, or glaciers and deposited in streams or other bodies of water or on land.

Sedimentary rock. Rock formed from consolidation of loose sediment that has accumulated in layers and become cemented.

Seepage. The discharge of water from an unlined facility or mine.

Sensitive species. Species whose populations are small and widely dispersed or restricted to a few localities; species that are listed or candidates for listing by the state or federal government.

Short-term impacts. Short-term impacts are temporary and either direct or indirect. Short-term impacts usually occur during the construction phase of the activity.

Significance. Significance requires consideration of the context and intensity of the impact under consideration. Significance can vary in relation to the context of the Proposed Action. Both short- and long-term impacts may be relevant. Impacts may also be evaluated in terms of their intensity or severity.

Soil productivity. The capacity of a soil to produce a plant or sequence of plants under a system of management.

Soil texture. The relative proportions of sand, silt, and clay particles in a mass of soil. Basic textural classes, in order of increasing proportion of fine particles, are as follows: sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, silty clay loam, clay loam, sandy clay, and clay.

Species. A group of individuals of common ancestry that closely resemble each other structurally and physiologically and in nature interbreed, producing fertile offspring.

Stand. A community of trees possessing sufficient uniformity of composition, constitution, age, spatial arrangement, or condition as to be distinguishable from adjacent communities, forming a silvicultural management entity.

Stratigraphy. The arrangement of rock strata, especially as relates to geographic position and chronological order of sequence.

Subsidence. The gradual settling or sinking of an area, usually as a result of the withdrawal of large amounts of groundwater.

Subsurface. A zone below the surface of the earth whose geological features are principally layers of rock that have been tilted or faulted and are interpreted on the basis of drill hole records and geophysical (seismic or rock vibration) evidence. Generally, it is all rock and solid materials lying beneath the earth's surface.

Tertiary. The older of the two geological periods, from 62 million to 2 million years ago, that form the Cenozoic Era; also, the system of rock strata deposited during that period.

Threatened and endangered species. Animal or plant species that are listed under the Federal Endangered Species Act of 1973, as amended.

Ton. A short ton (2,000 pounds).

Tonne. A metric tonne (2,204.6 pounds).

Total suspended particulates. All particulate matter less than 70 microns in effective diameter that is suspended in a water body.

Traditional Cultural Property. A location that is valued by a group, such as an ethnic group, because it is a place of cultural patrimony and an important place in the traditional cultural landscape.

Uranium. A metallic element naturally occurring in the earth's surface. Uranium is present in water, soil, and rock and is always found combined with other elements to form a variety of common minerals.

Uranium endowment. The uranium occurring in rock that exceeds 0.01% U_3O_8 (see *Percent grade*).

Viewshed. The visible portion of the specific landscape seen from a specific viewpoint, normally limited to landform, vegetation, distance, and existing cultural modifications.

Visual quality objectives. The degree of acceptable alteration of the characteristic landscape.

Visual resources. The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

Waste rock. Non-ore rock that is extracted to gain access to ore. It contains no ore metals or contains ore metals at levels that are below the economic cutoff value and that must be removed to recover the ore.

Water table. The elevation of water at saturation in subsurface materials, whether permeable, porous, or not. Typically, it is the level of the groundwater in a given location.

Waters of the United States. A jurisdictional term typically associated with Section 404 of the Clean Water Act that refers to water bodies such as lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds with defined bed and bank, the use, degradation, or destruction of which could affect interstate or foreign commerce.

Watershed. The entire land area that contributes water to a drainage or stream.

Wetlands. An area that is regularly saturated by surface water or groundwater and subsequently supports vegetation that is adapted for life in saturated soil conditions. To qualify as a U.S. Army Corps of Engineers jurisdictional wetland, it must have hydric soil, be saturated to the surface sometime during the growing season, and contain wetland plant species.

Wildfire. Any fire on wildlands that was not intentionally set for management purposes and confined to a predetermined area.

Wind rose. Any one of a class of diagrams designed to illustrate the distribution of wind direction experienced at a given location over a given period. Wind roses may also give information concerning stability, distribution of wind speed, and other meteorological parameters.

Withdrawal. As defined in FLPMA, the term “withdrawal” means withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area of reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than 'property' governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472) from one department, bureau or agency to another department, bureau or agency.