

ABBREVIATIONS

ACEC: area of critical environmental concern
AIRFA: American Indian Religious Freedom Act
ANILCA: Alaska National Interest Lands Conservation Act
APA: Administrative Procedures Act
ARD: acid rock drainage
ARPA: Archaeological Resources Protection Act
AUM: animal unit month
BEA: U.S. Department of Commerce, Bureau of Economic Analysis
BLM: U.S. Department of the Interior, Bureau of Land Management
CDCA: California Desert Conservation Area
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CEQ: Council on Environmental Quality
CFR: Code of Federal Regulations
COE: U.S. Army Corps of Engineers
CWA: Clean Water Act
EA: environmental assessment
EIS: environmental impact statement
EPA: U.S. Environmental Protection Agency
FLPMA: Federal Land Policy and Management Act
GAO: U.S. General Accounting Office
GDP: gross domestic product
GSP: gross state product
IBLA: Interior Board of Land Appeals
MSHA: U.S. Department of Labor, Mine Safety and Health Administration
NAAQS: National Ambient Air Quality Standards
NAS: National Academy of Sciences
NEPA: National Environmental Policy Act
NHPA: National Historic Preservation Act
NPDES: National Pollutant Discharge Elimination System
NRC: National Research Council
ORV: off-road vehicle
PFC: properly functioning condition
PSD: prevention of significant deterioration
RCRA: Resource Conservation and Recovery Act
RMP: resource management plan
ROS: recreational opportunity spectrum
SBA: Small Business Administration
T&E: threatened and endangered
TMDL: total maximum daily load
USBM: U.S. Department of the Interior, Bureau of Mines
USDI: U.S. Department of the Interior
USFS: U.S. Department of Agriculture, Forest Service
USGS: U.S. Department of the Interior, Geological Survey
UUD: unnecessary or undue degradation
VRM: visual resource management

GLOSSARY

ACCELERATED EROSION: Soil loss above natural levels resulting directly from human activities. Because of the slow rate of soil formation, accelerated erosion can lead to a permanent reduction in plant productivity.

ACID ROCK DRAINAGE (ARD) (ACID MINE DRAINAGE): The exposure, usually as a result of mining, of sulfide-bearing minerals to air and water, forming sulfuric acid. This acid dissolves metals such as lead, zinc, copper, arsenic, selenium, mercury, and cadmium, into ground and surface water. Acid rock/mine drainage can poison ground and drinking water and destroy aquatic life and habitat. Commonly mined ore bodies that pose the risk of acid rock drainage include gold, silver, copper, iron, zinc, and lead.

ACRE-FOOT: The volume of water or solids that could cover an acre at a depth of 1 foot, or 43,560 cubic feet.

ACUTE TOXICITY: Any poisonous effect produced by a single short-term exposure and resulting in severe biological harm or death.

ADMINISTRATIVE PROCEDURES ACT: (APA): A federal statute that outlines administrative procedures that federal agencies must follow to determine information to be made public; publish material in the *Federal Register*; maintain records, including those involving certain meetings and hearings; fulfill attendance and notification requirements for specific meetings and hearings; issue licenses, and review agency actions. This act also grants the public the rights to participate in the rulemaking process and comment on proposed rules.

ADIT: A nearly horizontal passage in an underground mine, driven from the surface, by which a mine may be entered, ventilated, or dewatered.

AGGRADATION: The building up of land surfaces by sedimentation or deposition of mineral matter.

ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA): Public Law 96-487, approved December 2, 1980, (94 Stat. 2371), which designated certain public lands in Alaska as units of the National Park System, National Wildlife Refuge System, Wild and Scenic Rivers System, National Wilderness Preservation System, and National Forest System, resulting in general expansion of all systems.

ALEVIN: A young fish, especially a newly hatched salmon still attached to the yolk sac.

ALLUVIAL: Pertaining to material that is carried and deposited by running water.

ALLUVIAL FAN: A low, outspread, relatively flat to gently sloping mass of loose rock material deposited by a stream where it flows from a narrow mountain valley onto a plain or broad valley.

ALLUVIUM: Any sediment deposited by flowing water, as in a river bed, floodplain, or delta.

AMERICAN INDIAN RELIGIOUS FREEDOM ACT OF 1978 (AIRFA): A federal statute that makes it a policy to protect and preserve for American Indians, Eskimos, Aleuts, and native Hawaiians their inherent right of freedom to believe, express, and exercise their traditional religions. AIRFA allows them access to sites, use and possession of sacred objects, and freedom to worship through ceremonial and traditional rites. It further directs federal departments and agencies to evaluate their policies and procedures in consultation with native traditional religious leaders to determine changes needed to protect and preserve Native American cultural and religious practices.

ANADROMOUS FISH: Fish, such as salmon and steelhead, that hatch in fresh water, migrate to the ocean, mature there, and return to fresh water to reproduce.

ANAEROBIC: Characterized by the absence of oxygen.

ANIMAL UNIT MONTH (AUM): The amount of forage needed to sustain one cow, five sheep, or five goats for a month.

ANNUAL VEGETATION: Plants that complete their life cycles and die in 1 year or less.

AQUATIC HABITATS: Habitats confined to streams, rivers, springs, lakes, ponds, reservoirs, and other water bodies.

AQUATIC RESOURCES: Plants and animals that live within or are entirely dependent upon water to live; living resources of aquatic habitats (fish, invertebrates, amphibians); aquatic species.

AQUATIC SYSTEMS: A complete interacting system of organisms (aquatic species) considered together with their environment.

AQUIFER: A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water. See UNCONSOLIDATED AQUIFER.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): A designated area on public lands where special management attention is required (1) to protect and prevent irreparable damage to fish and wildlife; important historic, cultural, or scenic values; or other natural systems or processes or (2) to protect life and safety from natural hazards.

ARID REGION: A region where precipitation is insufficient to support any but drought-adapted vegetation.

ASPECT: (1) the visual first impression of vegetation at a particular time or seen from a specific point. (2) The predominant direction of the slope of the land.

ATTENUATION: The process of decreasing contaminant concentration away from the source due to a variety of physical and chemical processes. Attenuation can occur in the unsaturated zone as contaminants move downward from the surface (from spills for example) or in the saturated zone within aquifers as contaminants move in the ground water flow system.

BACKFILL: Material used to replace soil and earth removed during mining.

BACKFILLING: The replacement of soil and earth removed during mining.

BACKGROUND LEVEL: The amount of a pollutant present in water or air from natural sources.

BANK CUBIC YARD (bcy): A unit volume for material in its natural state before disturbance, often referred to as “in-place” or “in-situ” material. See LOOSE CUBIC YARD.

BARREN SOLUTION: A solution in hydrometallurgical treatment from which all valuable constituents have been removed. See PREGNANT SOLUTION.

BASALT: Fine-grained, dark-colored igneous rock that is either intrusive or extrusive.

BASE FLOW: The portion of stream discharge derived from such natural storage sources as ground water, large lakes, and swamps but not derived from direct runoff or flow from stream regulation, water diversion, or other human activities.

BASE METAL: A metal inferior in value to gold and silver, a term generally applied to the commercial metals such as copper and lead.

BEDLOAD: Sediment in a stream that moves by sliding, rolling, or bounding on or near the streambed. See SUSPENDED SEDIMENT.

BENEFICIATION: The dressing or processing of ores to (1) regulate the size of a desired product, (2) remove unwanted constituents, and (3) improve the quality, purity, or assay grade of a desired product. Beneficiation includes concentration or other preparation of ore for smelting by drying, flotation, or magnetic separation.

BENTHIC: Occurring or living on or in the bottom of any water body.

BENTONITE: A clay mineral formed from the decomposing of volcanic ash. Commonly bentonite can readily absorb or adsorb water and well accordingly.

BEST AVAILABLE TECHNOLOGY AND PRACTICES: The applying of the most advanced systems, techniques, procedures, and controls, determined on a case-by-case basis by the regulatory agency.

BEVILL AMENDMENT: A provision of the Solid Waste Disposal Act Amendments (1980) to the Resource Conservation and Recovery Act (RCRA) that exempted from Subtitle C requirements the wastes from the extraction and beneficiation of ores and minerals, regardless of their chemical composition. The amendment further directed the U.S. Environmental Protection Agency either to develop Subtitle C regulations for this waste or determine that this exemption should continue, and to present its findings in a report to Congress.

BIOACCUMULATION: The net accumulation of a chemical by an organism as a result of

uptake from all routes of exposure.

BIOLOGICAL ASSESSMENT: The gathering and evaluation of information on proposed endangered and threatened species and critical habitat and proposed critical habitat. Required when a management action potentially conflicts with endangered or threatened species, the biological assessment is the way federal agencies enter into formal consultation with the Fish and Wildlife Service and describe a proposed action and the consequences to the species the action would affect.

BIOLOGICAL DIVERSITY (BIODIVERSITY): The full range of variability within and among living organisms and the ecological complexes in which they occur. Biological diversity encompasses ecosystem or community diversity, species diversity, and genetic diversity.

BIOLOGICAL OXYGEN DEMAND: A measure of the oxygen used in meeting the metabolic needs of aerobic microorganisms in water rich in organic matter.

BIOMAGNIFICATION: The concentration of certain substances up a food chain, an important mechanism in concentrating pesticides and heavy metals in organisms such as fish and raptors.

BIOMASS: The total amount of living material, plants and animals, above and below the soil surface in a biotic community.

BIOTIC COMMUNITIES: The assemblage of native and exotic plants and of a particular site or landscape, including microorganisms, fungi, algae, vascular and herbaceous plants, invertebrates, and vertebrates. These assemblages and their biotic and abiotic relationships serve landscape and watershed functions by promoting soil properties supporting water infiltration, recycling and transfer, species survival, and sustainable population dynamics.

BLOCK CAVING: A method of mining in which large blocks of ore are undercut and the ore breaks and caves under its own weight.

BUCKET-LINE DREDGE (BUCKET-LADDER DREDGE): A dredge whose digging mechanism consists of a bladderlike truss on the periphery of which is attached an endless chain that rides on sprocket wheels and on which buckets are attached.

BULKHEAD: A partition or wall in mines for protection against gas, fire, and water.

BULK SAMPLING: As part of exploration, the removal of large amounts of mineral substances for testing.

CANDIDATE SPECIES: Species not protected under the Endangered Species Act but under consideration by the U.S. Fish and Wildlife Service for inclusion on the list of federally threatened or endangered species.

CANOPY: The uppermost layer consisting of the crowns of trees or shrubs in a forest or woodland.

CARLIN TREND: An area 25 miles west of Elko in northeast Nevada that has become the most productive gold district in the United States. In this 5- by 40-mile area gold production over the past several years has exceeded 4 million ounces a year.

CARRYING CAPACITY: The maximum stocking rate possible without damaging vegetation or related resources. Carrying capacity may vary from year to year in the same area due to fluctuating forage production.

CASUAL USE: Mining activities that only negligibly disturb federal lands and resources. Casual use generally includes the collecting of geochemical, rock, soil, or mineral specimens using hand tools, hand panning, and nonmotorized sluicing. It also generally includes use of metal detectors, gold spears, and other battery-operated devices for sensing the presence of minerals, and hand and battery-operated drywashers. Operators may use motorized vehicles for casual use activities if the use conforms to the regulations governing such use, off-road vehicle use designations in BLM land use plans, and temporary closures. Casual use does not include use of mechanized earth-moving equipment, truck-mounted drilling equipment, suction dredges, motorized vehicles in areas designated as closed to off-road vehicles, chemicals, or explosives. It also does not include occupancy or operations where the cumulative effects of the activities result in more than negligible disturbance. Under casual use, operators do not have to notify BLM, and operations do not need to be approved. But operations are subject to monitoring by BLM to ensure that federal lands do not undergo unnecessary or undue degradation. Casual use operations must be reclaimed.

CATION: An electrically charged particle (ion) with a positive charge.

CAVE RESOURCE: Any naturally occurring void, cavity, recess, or system of interconnected passages beneath the surface of the earth or within a cliff or ledge, including any cave resource therein, that is large enough to permit a person to enter, whether the entrance is excavated or naturally formed. Also included is any natural pit or sinkhole.

CENOZOIC: The most recent era of geologic history (65 million years ago until the present) during which the world's modern landforms, animals, and plants came into being.

CHAINED DOLLARS: Annual measures of real gross domestic product that have been adjusted with the use of an index that attempts to account for relative price changes and changes in output over time. These annual measures are considered to provide more accurate estimates of year-to-year changes in gross domestic product than measures published before 1996.

CHANNEL: A natural or artificial watercourse with a definite bed and banks to confine and conduct continuously or periodically flowing water.

CHANNEL MORPHOLOGY: The structure and form of a stream channel.

CHAPARRAL: A vegetation community consisting of dense and often thorny shrubs and small trees.

CHLOROSIS: The conditions of plants when chlorophyll fails to develop and plants are

yellowish white to white and poorly developed.

CLAIM: See MINING CLAIM.

CLIMAX VEGETATION: The final vegetation community and highest ecological development of a plant community that emerges after a series of successive vegetational stages. The climax community perpetuates itself indefinitely unless disturbed by outside forces.

COLD DESERT: Areas that are consistently dry (evaporation equals or exceeds precipitation), that have 7 or fewer months when temperatures average above 50° F, and that have average annual temperatures below 65° F.

COLLUVIAL: (1) Processes related to the slow movement of the ground (creep) due to gravity; (2) a hillside deposit developed by mass movement of rock on slopes leading away from the exposed source rock (lobe).

COLLUVIUM: Rock and soil accumulated at the foot of a slope from gravitational forces.

COMMON VARIETY MINERALS: Stone, gravel, pumice, pumicite, and cinders that, though possibly having value for trade, manufacture, the sciences, or the mechanical or ornamental arts, do not have a distinct, special value for such use beyond normal uses. On the public lands such minerals are considered saleable and are disposed of by sales or by special permits to local governments. See SALEABLE MINERALS, MINERAL MATERIALS, and UNCOMMON VARIETY MINERALS.

COMMUNITY: An assemblage of plant and animal populations in a common spatial arrangement.

COMPETENT ROCK: Rock that, because of its physical and geological character, can sustain openings without any structural support except pillars and walls left during mining.

CONE OF DEPRESSION: A change (depression) in the water table surface at the site of an active well, resulting from the withdrawal of water.

CONIFER: A tree of the order *Coniferae* with cones and needle-shaped or scalelike leaves.

CONIFEROUS: Pertaining to conifers, which bear woody cones containing naked seeds. See CONIFER.

CONSUMERS: Organisms, chiefly animals, that ingest other organisms or particulate organic matter.

COOL-SEASON PLANTS: Plants whose major growth occurs during the late fall, winter, and early spring. See WARM-SEASON PLANTS.

CORPORATE GUARANTEES (BONDING): The use of corporate assets as part or all of the financial assurance for reclamation.

COUNTRY ROCK (WALL ROCK): The general mass of rock next to a body of ore, as distinguished from the vein or ore deposit itself.

COVER: Any form of environmental protection that helps an animal stay alive (mainly shelter from weather and concealment from predators).

CRITICAL HABITAT, DESIGNATED: Specific parts of an area occupied by a federally listed threatened or endangered plant or animal at the time it is listed that contain physical or biological features essential to the conservation of the species or that may require special management or protection. Critical habitat may also include specific areas outside an area occupied by a federally listed species if the Secretary of the Interior determines that these areas are essential for the conservation of the species.

CRITICAL MINERALS: Minerals essential to the national defense, the procurement of which in war, while difficult, is less serious than those of strategic minerals because they can be either domestically produced or obtained in more adequate amounts or are less essential, and for which some degree of conservation and distribution control is needed. See STRATEGIC MINERALS.

CRYPTOBIOTIC (CRYPTOGAMIC) CRUSTS: Biological communities that form a surface layer or crust on some soils. These communities consist of cyanobacteria (blue-green bacteria), microfungi, mosses, lichens, and green algae and perform many important functions, including fixing nitrogen and carbon, maintaining soil surface stability, and preventing erosion. Cryptobiotic crusts also influence the nutrient levels of soils and the status and germination of plants in the desert. These crusts are slow to recover after severe disturbance, requiring 40 years or more to recolonize even small areas.

CULTURAL PROPERTY: The definite location of a past human activity, occupation, or use identifiable through field inventory, historic documentation, or oral evidence. Cultural properties include prehistoric and historic archaeological remains, or architectural sites, structures, objects, or places with important public and scientific uses.

CULTURAL RESOURCE: The fragile and nonrenewable remains of human activity that are found in historic districts, sites, buildings, and artifacts and that are important in past and present human events.

CUTTERHEAD DREDGE: A hydraulic dredge in which the suction action is augmented by a rotating propeller that operates at the point of suction. The cutterhead performs two functions: (1) it cuts into and loosens compacted soils and soft rock, and (2) it increases dredge capacity by channeling the soils into the end of the suction pipe.

CYANIDE LEACHING: The extraction of metal from an ore by its dissolution in a cyanide solution.

DECIDUOUS: Pertaining to plants that shed all their leaves every year in a certain season.

DE MINIMUS: Of insufficient significance to warrant judicial attention.

DESERT PAVEMENT: A desert ground surface of thin, smooth, or sheetlike, wind-polished, closely packed pebbles, boulders, gravel, and other rock fragments, where wind and sheetwash have removed all small particles. These fragments are commonly cemented by mineralized solution.

DETRITUS: Disintegrated matter such as rock fragments or organic debris accumulated in pond water or on mud or soil.

DEVELOPMENT (MINERAL): The preparation of a proven deposit for mining.

DEWATERING: The process of pumping large amounts of ground water from wells to lower the water table over a large area to allow an open pit or underground mine to operate in dry conditions.

DISCHARGE (WATER): The rate of flow or volume of water flowing in a stream at a given place or within a given period of time.

DISCOVERY: The knowledge of the presence of valuable minerals within or close enough to a location to justify a reasonable belief in their existence. Discovery is an extremely important to public lands mining because the Mining Law of 1872 provides that mining claims can be located only after a discovery is made. Discovery was first legally defined in a landmark Department of the Interior 1894 land decision—*Castle versus Womble*. The definition, now known as the “Prudent Person Test,” described a discovery as “...where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine...”

DISSEMINATED ORE: Ore carrying small particles of valuable minerals spread more or less uniformly through the worthless minerals, as distinct from massive ore, in which valuable materials occur in almost solid form with little waste material included.

DOLOMITE: A mineral that consists of calcium magnesium carbonate and is found in crystals and in extensive beds as a limestone.

DRAINAGE: The removal of excess water from land by surface or subsurface flow. See ACID ROCK DRAINAGE.

DRAWDOWN, GROUND WATER: A lowering of the ground water surface caused by pumping, measured as the difference between the original ground water level and the level after a period of pumping.

DRIFT: A voluntary or accidental dislodgment of aquatic invertebrates from the stream bottom into the water column, where they move or float with the current.

DRY DRILL HOLE: A drill hole in which no water is used for drilling.

ECHOLOCATION: A process used by bats for locating distant or invisible objects (prey) by

detecting sound waves reflected back from the objects.

ECOLOGICAL BALANCE: The stability of an ecosystem resulting from interacting processes of its components.

ECOLOGICAL SUCCESSION: An ecosystem's gradual evolution to a stable state or climax. If through the ability of its populations and elements, an ecosystem can absorb changes, it tends to persist and become stable through time.

ECOSYSTEM: A functioning unit of nature combining biotic communities and the abiotic environments with which they interact.

EDGE EFFECT: The influence of two bordering biotic communities on each other.

EFFLUENT: Treated or untreated waste material discharged into the environment.

EIS STUDY AREA: The following 12 western states: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

ELECTROWINNING: The recovery of metal from an ore by means of electrochemical processes.

ELUVIATION: A process of removal of organic material and clay in solution or in suspension from the soil by percolating waters. The removal of soil material in suspension or solution from a layer or layers of a soil. The loss of material in solution is usually called "leaching." See ILLUVIATION.

EMERGENT VEGETATION: Aquatic plant species that are rooted in wetlands but extend above the water's surface. See SUBMERGENT VEGETATION.

ENDANGERED SPECIES: Any animal or plant species in danger of extinction throughout all or a significant portion of its range as designated by the U.S. Fish and Wildlife Service under provisions of the Endangered Species Act.

ENTRY: An application to acquire title to public lands.

ENVIRONMENTAL ASSESSMENT(EA): A concise public document for which a federal agency is responsible that does the following:

- Briefly gives enough evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI).
- Aid an agency's compliance with the National Environmental Act when no EIS is needed.
- Facilitate preparing an EIS when one is needed.

ENVIRONMENTAL IMPACT STATEMENT (EIS): An analytical document that portrays potential impacts on the human environment of a particular course of action and its possible alternatives. Required by the National Environmental Policy Act (NEPA), EISs are prepared for use by decision makers to weigh the environmental consequences of potential decisions.

EQUILIBRIUM PARTITIONING SEDIMENT GUIDELINES (ESG): The U.S. Environmental Protection Agency's chemical-specific guidance for assessing and protecting against contaminated sediments.

ERICACEOUS: Of, pertaining to, or concerning the heath family of plants, Ericaceae, for example, blueberry.

EROSION BLANKET: Material such as straw, jute matting, or rock that is applied to the land surface to minimize erosion of soil particles caused by the impact of rain drop splash and by flowing water.

EUTROPHICATION: The slow aging process of a lake evolving into a marsh and eventually disappearing. During eutrophication the lake is choked by abundant plant life. Human activities that add nutrients to a water body can speed up this action.

EVAPOCONCENTRATION: The process of a solution's becoming more concentrated as its liquid evaporates.

EVAPORITE: Sedimentary rock formed by the evaporation of a saline solution. Examples include rock salt, gypsum, and chemically precipitated limestone.

EVAPOTRANSPIRATION: The combined process by which water is transferred from the earth's surface (from soil, snow, water bodies, and vegetation) to the atmosphere. Also see TRANSPIRATION.

EXOTIC SPECIES: An animal or plant species that is not a part of an area's original fauna or flora. See NATIVE SPECIES.

EXPLORATION: The work of investigating a mineral deposit to determine by geological surveys, geophysical surveys, geochemical surveys, boreholes, pits, and underground workings if it is feasible to mine. Exploration is undertaken to gain knowledge of the size, shape, position, characteristics, and value of the deposit. For the proposed 3809 regulations, exploration means creating surface disturbance that is greater than casual use and that includes sampling, drilling, or developing surface or underground workings to evaluate the type, extent, quantity, or quality of mineral values present. Exploration does not include activities where material is extracted for commercial use or sale.

EXTRA LATERAL RIGHTS: Rights relating to the apex law. If a vein outcrops (apex or highest point) on the surface of a claim, the claimant of the vein's apex has rights to all of the vein that is continuous in the downward dip, including the portion of the vein outside the claim boundary.

FACTOR OF SAFETY: The ratio of the ultimate strength of a material to the allowable or working stress.

FAIR HABITAT CONDITION: The condition of a watershed that has been moderately affected by land uses, characterized by the removal or altering in the past of natural riparian

vegetation (few large trees) and the presence of only limited amounts of large woody debris, fine sediments above natural levels, some adverse changes in water quality or quantity, and habitat that has only partly recovered or is still decreasing in trend.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA): The act that (1) set out for the Bureau of Land Management standards for managing the public lands, including land use planning, sales, withdrawals, acquisitions, and exchanges; (2) authorized the setting up of local advisory councils representing major citizens groups interested in land use planning and management; (3) established criteria for review of proposed wilderness areas; and (3) provided guidelines for other aspects of public land management such as grazing.

FIRST-ORDER TRIBUTARY: A nonbranching headwater channel segment.

FISHERY: Habitat that supports the propagation and maintenance of fish.

FISH STOCK: A discrete population of a fish species that tends to inhabit the same waters and breed in the same stream.

FLOODPLAIN: Level streamside land that may be subject to flooding.

FLOW REGIMES: Characteristics of stream discharge over time. The natural flow regime is the regime that occurred historically.

FLUVIAL: Pertaining to streams or produced by stream action.

FORB: A herbaceous plant that is not a grass, sedge, or rush.

FREE WATER: Ground water free to move in response to gravity.

FUGITIVE DUST: Particulate matter emissions that do not pass through a stack, chimney, vent, pipe, or similar opening.

FUNCTIONAL AT RISK RIPARIAN-WETLAND AREAS: Areas that are in functional condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation. See PROPER FUNCTIONING CONDITION and NONFUNCTIONAL RIPARIAN-WETLAND AREAS.

GAINING (EFFLUENT) STREAM: A stream or reach of a stream that receives water from the zone of saturation and provides base flow; its channel lies below the water table. See LOSING STREAM.

GEOPHYSICAL EXPLORATION: The use of geophysical instruments and methods to determine subsurface conditions by analyzing such properties as specific gravity, electrical conductivity, or magnetic susceptibility.

GRAMINOID HERBACEOUS VEGETATION: Herbaceous vegetation with the predominance of cover in grasses or sedges.

GRANDFATHER, TO: To exempt groups or individuals from provisions of laws or regulations because of preexisting conditions, such as exempting mining operations existing before new mining regulations are implemented from provisions of those new regulations.

GRIZZLY: In mining, a device for the coarse screening of bulk materials.

GROSS DOMESTIC PRODUCT (GDP): The sum of the gross state products of the 50 states.

GROSS STATE PRODUCT (GSD): The sum of the gross outputs of each of a state's industries minus intermediate goods and services purchased from other industries or imported. See INTERMEDIATE GOODS AND SERVICES.

GROUND WATER: Water that has percolated downward from the ground surface through the soil pores.

GROWTH MEDIA: See REPLACEMENT GROWTH MEDIA.

GULLY EROSION: The removal of soil by the forming of relatively large gullies or channels cut into the soil by concentrated surface runoff. See SURFACE EROSION.

HABITAT: The natural abode of a plant or animal, including all biotic, climatic, and soil factors affecting life.

HABITAT GENERALIST: Animals that can find food and shelter in a variety of ways and can survive quite well in different habitats.

HABITAT MANAGEMENT PLAN: A site-specific wildlife habitat plan.

HARDPAN: A hardened soil layer in the lower A horizon or the B horizon caused by cementation of soil particles with organic matter or with materials such as silica or calcium carbonate.

HEAP: A large, engineered pile of ore over which chemical agents such as cyanide are sprinkled in extracting metals by heap leaching.

HEAP LEACHING: A low-cost technique for extracting metals from ore by percolating leaching solutions through heaps of ore placed on impervious pads. This method is generally used on low-grade ores.

HEAP LEACH PAD: A large impermeable foundation or pad used as a base for ore during heap leaching.

HEAVY METAL: Any of the metals that react readily with dithizone, including zinc, copper, cobalt, lead, bismuth, gold, cadmium, iron, manganese, nickel, tantalum, tellurium, platinum, and silver.

HERBACEOUS: Pertaining to or characteristic of an herb (fleshy-stem plant) as distinguished from the woody tissue of shrubs and trees.

HERD MANAGEMENT AREA (HMA): The area of wild horse or burro habitat covered by a herd management area plan.

HERD MANAGEMENT AREA PLAN (HMAP): A site-specific plan that defines objectives for a herd management area and prescribes actions to meet the objectives. This plan outlines details of burro or horse capture plans, adoption programs, and long-term population management.

HIGHBANKER: A placer mining tool similar to a sluice box, but instead of being placed in a stream, the highbanker uses a water pump to carry water to higher and sometimes richer placer reserves. The highbanker also can run more material in less time than a sluice.

HIGHWALL: The unexcavated face of exposed overburden and ore in an open pit mine.

HOME RANGE: The area in which an animal travels in the scope of natural activities.

HORIZON: See SOIL HORIZON.

HOST ROCK: A body of rock with younger rocks or mineral deposits introduced into it or formed within or next to it.

HYDRAULIC CONDUCTIVITY: The property of a soil that governs the rate of ground water flow within it. The hydraulic conductivity of a particular soil is defined by the size, abundance, and geometry of its open pores, and the rate of ground water flow increases with increasing hydraulic conductivity. Fine-grained soils such as clay and silt have very small pores and have much lower hydraulic conductivities than coarse-grained soils such as sand and gravel.

HYDRAULIC GRADIENT: The slope of the free surface of water in a stream flowing in an open channel.

HYDRAULIC RESISTANCE: The resistance to the flow of water for a given stream channel, as defined by the mathematical relationship between stream depth, bed material size, mean flow velocity, and shear velocity.

HYDRIC: Characterized by decided moist or wet conditions.

HYDROCARBONS: Any of a vast family of compounds containing carbon and hydrogen in various combinations, found especially in fossil fuels. Hydrocarbons in the atmosphere resulting from evaporation and incomplete combustion may be a major source of air pollution.

HYDROGRAPHIC AREAS: Areas defined and used by the State of Nevada to delineate watersheds into the smallest units possible for conducting hydrologic studies. The U.S. Geological Survey also bases its Nevada hydrological studies on these areas. Hydrographic areas are numbered 1-234.

HYDROLOGIC BALANCE: An accounting of water inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, lake, or reservoir; the relationship between evaporation, precipitation, runoff, and change in water storage.

HYDROSTATIC PRESSURE: The pressure exerted by the water in any given point in a water body at rest. The hydrostatic pressure of ground water is generally due to the weight of water at higher levels in the zone of saturation.

HYPORHEIC ZONE: The area where water in a stream channel has moved back into the subsurface sediments. The hyporheic zone may occur under or next to the streambed.

IGNEOUS ROCK: Rock, such as granite and basalt, that has solidified from a molten or partially molten state.

ILLUVIATION: The process of deposition of soil material removed from one horizon to another in the soil, usually from an upper to a lower horizon in the soil profile. See ELUVIATION.

INCLINE: A nonvertical mining shaft, usually along the dip of a vein.

INDEPENDENT MILLSITE: A millsite whose mill does not depend on specific mines for the minerals it processes.

INDUSTRIAL MINERALS: Rock and minerals that are not produced as sources of metals and are not mineral fuels. Examples include salt, gravels, building materials, talc, and sands.

INFILTRATION: The downward entry of water into the soil or other material.

IN SITU MINING: A method of extracting valuable minerals from ore by remobilizing or leaching them from where they occur in the ground. Under this process the ore deposit is drilled with holes in a grid pattern, and a dissolving or leaching solution is injected through the holes into the deposit, where the chemicals extract the desired minerals. The pregnant liquid is then recovered at a different well or series of wells and is piped to a recovery plant. There the minerals are recovered. The barren solution is then returned to the injection wells, and the cycle begins again.

INTERIOR BOARD OF LAND APPEALS (IBLA): The Department of the Interior, Office of Hearings and Appeals board that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because IBLA acts for and on behalf of the Secretary of the Interior, its decisions usually represent the Department's final decision but are subject to the courts.

INTERMEDIATE GOODS AND SERVICES: Goods and services that are purchased for further reprocessing and resale, as opposed to final goods and services, which are sold to ultimate users. For example, wool would be an intermediate good, whereas a wool shirt would be a final good.

INVERSION: The state of the atmosphere in which a layer of cool air is trapped near the earth's

surface by an overlying layer of warm air so that the lower layer cannot rise. Serious air pollution problems may result from air pollutants being emitted into the limited mixing depth below the inversion.

INVERTEBRATES: Animals without backbones or internal bony skeletons.

ISOPLETH: A line on a map connecting points at which a given variable has a specified constant value.

JIB: The lifting arm of a crane or derrick having a pulley at its outer end over which the hoisting rope passes.

JIG: An appliance in which a vertically pulsed column of water is manipulated to stratify crushed ore with lighter particles above and heavier particles below.

JURISDICTIONAL WETLANDS: Wetlands regulated by the Army Corps of Engineers under Section 404 of the Clean Water Act. The Corps and the Environmental Protection Agency define such wetlands as follows: *Areas that are inundated or saturated by surface or ground water 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.* See WETLANDS

KARST: A area underlain by limestone in which erosion has formed sinkholes, fissures, caverns, and underground streams.

LEACHATE: The liquid that has percolated through and dissolved minerals out of ore.

LEACHING: The separating or dissolving of soluble constituents from a rock or ore by chemical solutions or water.

LEACH PAD: See HEAP LEACH PAD.

LEASABLE MINERALS: Minerals whose extraction from federal land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands, potash, phosphate, sodium, and geothermal steam.

LEGAL LAND DESCRIPTION: The method of locating or describing the land in relation to the public land survey.

LEK: An assembly area where birds, especially sage grouse, carry on display and courtship behavior.

LIGNIN: The major noncellulose constituent of wood.

LITTER: The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

LOADING: The total amount of a pollutant generated from a specific area of land or received by a water resource during a fixed period of time. See ORGANIC LOADING.

LOAMY: Intermediate in texture and properties between fine- and course-textured soils.

LOCATABLE MINERALS: Minerals that may be acquired under the Mining Law of 1872, as amended.

LOCATABLE-TYPE MINERALS: Minerals that, if located on public lands, would be considered locatable under the Mining Law of 1872, as amended. In the Economic Conditions section of Chapter 3 of this EIS the term “locatable-type minerals” refers to mineral production from all land ownership types (federal and nonfederal). Therefore, the portion produced only on BLM-managed lands is a subset of the larger “locatable-type” category.

LOCATION: The act of taking or appropriating a parcel of mineral land, including the posting of notices, the recording thereof when required, and marking the boundaries so they can be readily traced; also the claim acquired by an act of location. See MINING CLAIM.

LOCATION QUOTIENT: An index for comparing an area’s share of a particular activity with the area’s share of some basic or aggregate phenomenon.

LODE: A mineral deposit in solid rock.

LODE CLAIM: A public lands mining claim that contains valuable minerals occurring in a vein or lode.

LODE MINING: Mining of a mineral deposit in solid rock.

LOOSE CUBIC YARD (lcy): A unit volume for material that is in a loose, broken, or blasted state or that has been excavated or loaded. See BANK CUBIC YARD.

LOSING (INFLUENT) STREAM: A stream or reach of a stream that contributes water to the zone of saturation and develops bank storage; its channel lies above the water table. See GAINING STREAM.

MACROINVERTEBRATES: Large or exceptionally prominent animals that lack a spinal column.

MACROPHYTE: Any plant that can be seen with the unaided eye, such as aquatic mosses, ferns, liverworts, or rooted plants.

MASS MOVEMENT: A single landslide or the gradual simultaneous downhill movement of the whole mass of loose earth material on a slope face.

MAXIMUM CONTAMINANT LEVEL (MCL): The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG): A number that is associated with no adverse health effects from drinking water containing a particular contaminant over a lifetime; a nonenforceable, ideal health goal issued as part of the National Primary Drinking Water Regulations.

MESOZOIC: The era of geologic history (245 million to 65 million years ago) during which the world's animal and plant life changed dramatically. The Mesozoic is called the age of the dinosaurs because it witnessed the evolution and extinction of these creatures. See PALEOZOIC.

METAMORPHIC ROCK: Any rock derived from preexisting rocks by mineralogical, chemical, and structural changes, essentially in the solid state, in response to marked changes in temperature, pressure, shearing stress, and chemical environment at depth in the earth's crust.

METES AND BOUNDS: The boundaries of land established by reference to natural or artificial monuments along the boundaries as distinguished from boundaries established by beginning at a fixed starting point and running stated compass courses and stated distances.

METRIC TON: 1.102 short tons or 2,204 pounds.

MICROCLIMATE: Local site-specific climatic conditions that differ from the general climate because of local differences in elevation and exposure.

MICROHABITAT: A small habitat within a larger one in which environmental conditions differ from those in the surrounding area. A hole in a tree trunk or an animal carcass is a microhabitat within a forest.

MIL: A unit of length equal to 1/1,000 of an inch.

MILL: A plant in which ore is treated for the recovery of valuable minerals or valuable minerals are concentrated into a smaller bulk for shipping to a smelter or other reduction works.

MILLSITE CLAIM (MILLSITE): A site located on nonmineral land and used for erecting a mill or reduction works, or for other uses reasonably incident to support of a mine. Millsites are limited to 5 acres and may be located either by metes and bounds or by legal subdivision. See LOCATION and MINING CLAIM.

MINE: An opening or excavation in the earth for extracting minerals.

MINE CAPACITY: The greatest amount of production a mine is designed to produce.

MINE DRAINAGE: Any water forming on or discharging from a mine. See ACID ROCK DRAINAGE.

MINERAL: Any solid or fluid inorganic substance that can be extracted from the earth for profit.

MINERAL ACTIVITY: In this EIS, mining and mineral exploration.

MINERAL CLAIMANT: A person, association, corporation, or government that claims minerals rights or title in the public lands.

MINERAL ENTRY: The filing of a claim on public land to obtain the right to any minerals it may contain.

MINERALIZATION: The processes taking place in the earth's crust resulting in the formation of valuable minerals or ore bodies.

MINERAL MATERIALS: Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended. See COMMON VARIETY MINERALS.

MINERALOGY: The study of minerals: their formation, occurrence, properties, composition, and classification.

MINERAL PROSPECT: A mineral property whose value has not been proved by exploration.

MINERAL RIGHTS: Ownership of all minerals, including all rights needed for access, exploration, development, mining, ore dressing, and transportation.

MINERAL WITHDRAWAL: A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.

MINE TAILING IMPOUNDMENT: An area closed at its lower end by a constraining wall or dam into which mill effluents are run and from which, after solids have settled out, clear water may be returned via penstocks and piping.

MINIMAL HABITAT CONDITION: Major alterations in a watershed, in water quality or quantity, in natural stream habitat, or in riparian areas, characterized by few or no large trees or mature native vegetation in riparian areas, little or no large woody debris, few and shallow pools, and excessive sedimentation of the streambed.

MINIMIZE: To reduce the adverse impact of an operation to the lowest practical level.

MINING CLAIM: A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A single mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, millsite, and tunnel site. For the proposed 3809 regulations, mining claim means any unpatented mining claim, millsite, or tunnel site located under the mining laws. The term also applies to mining claims and millsites that were located in the California Desert Conservation Area and patented after the enactment of the Federal Land Policy and Management Act of 1976. See LOCATION, LODGE CLAIM, PLACER CLAIM, MILLSITE CLAIM, and TUNNEL SITE CLAIM.

MINING CLAIM VALIDITY EXAMINATION: An examination of a mining claim by a mineral examiner to determine if the claim has a discovery or if all requirements for a millsite claim have been met. All claims for which a patent application has been filed must undergo such an exam.

MINING DISTRICT: An area, usually designated by name, with described or understood boundaries, where minerals are found and mined under rules prescribed by the miners, consistent with the Mining Law of 1872.

MINING LAW OF 1872 (GENERAL MINING LAW): The federal act that, with its amendments, formed the framework for the mining of locatable minerals on the public lands. This law declared that “valuable” mineral deposits rather than simply “mineral deposits” were to be free and open to exploration and purchase, limited individual claims to 20 acres, required \$100 worth of assessment work yearly, and allowed milling or processing claims of 5 acres or less to be entered on nonmineral lands.

MINING LAWS: the Lode Law of July 26, 1866, as amended (14 Stat. 251); the Placer Law of July 9, 1870, as amended (16 Stat. 217); and the Mining Law of May 10, 1872, as amended (17 Stat. 91); as well as all laws supplementing and amending those laws, including the Building Stone Act of August 4, 1892, as amended (27 Stat. 348); the Saline Placer Act of January 31, 1901 (31 Stat. 745); the Surface Resources Act of 1955 (30 U.S.C. 611-614); and the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 *et seq.*).

MINING LOCATION: A mining claim on the public lands.

MITIGATION: As defined in 40 CFR 1508.20, one or more of the following: (1) avoiding impacts altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying impacts by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating impacts over time by preservation and maintenance operations during the life of the action; and (5) compensating for impacts by replacing or providing substitute resources or environments.

MODIFICATION: A change in a Plan of Operations that requires some level of review by BLM because it exceeds what was described in the approved Plan of Operations.

MONOCULTURE: The growth of only a single plant species within an area.

MORAINE: An accumulation of boulders, stones, and other earth debris carried and deposited by a glacier.

MOST APPROPRIATE TECHNOLOGY AND PRACTICES : The use of technology and practices that have demonstrable feasibility, success, and practicality in meeting performance standards.

MUD: The mixture of water or oil and clay, and sometimes other special materials, used as a drill circulation liquid in drilling a borehole.

MULTIPLIER: The number of times new investment spending will be respent to produce a certain amount of new income.

NATIONAL AMBIENT AIR QUALITY STANDARDS (KNACKS): The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. National ambient air quality standards are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including (but not limited to) effects on soils, water, crops, vegetation, human-made materials, animals, wildlife, weather, visibility, climate, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

NATIONAL CONSERVATION AREA: A congressionally designated public land area that contains important resources and whose management objectives are (1) to conserve and protect these resources, (2) to maintain environmental quality, and (3) to provide for present and future users within a framework of multiple use and sustained yield.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): The federal law, going into effect on January 1, 1970, that established a national policy for the environment and requires federal agencies (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decisionmaking, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

NATIONAL HISTORIC LANDMARKS: Nationally significant historic sites, buildings, and objects designated by the Department of the Interior for having exceptional value in illustrating and interpreting the heritage of the United States. Only 3% of the properties on the National Register of Historic Places are national historic landmarks. See NATIONAL REGISTER OF HISTORIC PLACES.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): A federal statute that established federal program to further the efforts of private agencies and individuals in preserving the Nation's historic and cultural foundations. NHPA (1) authorized the National Register of Historic Places, (2) established the Advisory Council on Historic Preservation and a National Trust Fund to administer grants for historic preservation, and (3) authorized the development of regulations to require federal agencies to consider the effects of federally assisted activities on properties included on or eligible for the National Register of Historic Places. See NATIONAL REGISTER OF HISTORIC PLACES.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): A process for controlling the amount of pollution discharged into waters by requiring polluters to obtain NPDES permits from the states involved and to comply with discharge standards. The NPDES is mandated by the Federal Water Pollution Control Act Amendments.

NATIONAL PRIMARY DRINKING WATER STANDARDS (NPDWS): Developed by the Environmental Protection Agency to keep drinking water clean and protect the public from waterborne disease, these standards define either a maximum contaminant level or a treatment

technique requirement to control the presence of contaminants in drinking water.

NATIONAL REGISTER OF HISTORIC PLACES: The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Register is maintained by the National Park Service. See NATIONAL HISTORIC PRESERVATION ACT.

NATIONAL WILD AND SCENIC RIVERS SYSTEM: A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams: (1) recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.

NATIVE SPECIES: A species that is part of an area's original fauna or flora. See EXOTIC SPECIES.

NEOTROPICAL MIGRATORY BIRDS: Birds that travel to Central America, South America, the Caribbean, and Mexico during the fall to spend the winter and then return to the United States and Canada during the spring to breed. These birds include almost half of the bird species that breed in the United States and Canada.

NONFUNCTIONAL RIPARIAN-WETLAND AREAS: Areas that clearly are not providing adequate vegetation, landform, or large woody debris to dissipate the stream energy of high flows and thus are not reducing erosion, improving water quality, and performing the other functions of an area in properly functioning condition. See FUNCTIONAL AT RISK RIPARIAN-WETLAND AREAS and PROPER FUNCTIONING CONDITION.

NONNATIVE SPECIES: See EXOTIC SPECIES.

NOTICE: The notification a mining operator must submit to BLM of the intention to begin an operation that will disturb 5 acres or less a year within a mining claim or project area. The intent of a Notice is to permit operations with limited geographic disturbance to begin after a quick review for potential resource conflicts and to eliminate the need for federal action. A Notice requires no special forms, but an operator must submit specific information. BLM must complete its review of the Notice within 15 calendar days of its receipt unless more information is needed to determine if the operation would cause unnecessary or undue degradation.

NOTICE-LEVEL OPERATION: A mining or exploration operation involving more than casual use but requiring that the operator submit only a Notice rather than a Plan of Operations.

NOTICE OF NONCOMPLIANCE: An authorized officer's decision, sent to the mining operator and claimant, that (1) details provisions of the regulations that a mining operation has violated and (2) states corrective actions that the operator must take within a specified time. See RECORD OF NONCOMPLIANCE.

NOXIOUS WEED: According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease or has other adverse effects on humans and their environment and is therefore detrimental to public health and the agriculture and commerce of the United States.

NUTRIENT CYCLING: The circulation of chemical elements such as nitrogen, oxygen, carbon, and phosphorus in specific pathways from the abiotic (not involving or produced by organisms) portions of the environment into organic substances in plants and animals and then back into abiotic forms.

OBLIGATE: Essential, necessary, unable to exist in any other state, mode, or relationship.

OFF-ROAD VEHICLE (ORV) or OFF-HIGHWAY VEHICLE (OHV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. This definition excludes (1) any nonamphibious registered motorboat; (2) any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; and (3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved.

OPEN PIT MINING: A surface mining method in which overlying rock and soil are removed to expose an ore body, which is then drilled, blasted, and hauled from the pit.

OPERATIONS: All functions, work, facilities, and activities on public lands in connection with prospecting, exploration, discovery, and assessment work, development, extraction, and processing of mineral deposits locatable under the mining laws; reclamation of disturbed areas; and all other reasonably incident uses, whether on a mining claim or not, including the building of roads, transmission lines, pipelines, and other means of access across public lands for support facilities.

OPERATOR: Any person who manages, directs, or conducts mining operations at a project area, including a parent entity or an affiliate who materially participates in such management, direction, or conduct. An operator on a particular mining claim may also be the mining claimant.

ORE: A mineral deposit of high enough quality to be mined at a profit.

ORE BODY: A mineralized mass whose characteristics have been determined and deemed commercially viable. The term ore body is used once the economic limits of the mineralized mass and its grade have been examined.

ORE DRESSING: Sorting ore.

ORE RESERVES: The portion of a mineral deposit that can be profitably mined. Use of this term implies detailed knowledge of all the geological, engineering, economic, and environmental

parameters that might affect the profitability of an operation. For a new mining project or for the mining of new zones in an existing mine, a formal feasibility study is conducted to evaluate all the project's parameters.

ORGANIC LOADING: The total amount of organic matter generated from a specific area of land or received by a water resource during a fixed period of time. See **LOADING**.

OROGRAPHIC EFFECT: The effect of mountains on the passing flow of air. Mountains may cause lifting or diverting of air, creation of clouds, and decreases in leeward precipitation.

OVERBURDEN: All the earth and other materials that overlie a natural mineral deposit.

OVERBURDEN RATIO: In strip mining the ratio of the vertical thickness of overburden to the vertical thickness of the underlying ore.

OVERSTORY: The layer of foliage in a forest canopy.

OXIDATION: The process of combining with oxygen.

OXIDE ORE: Ore containing minerals that have been altered by oxidation or the weathering process.

PALEONTOLOGICAL RESOURCES (FOSSILS): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PALEOZOIC: An era of geologic time between the Precambrian and the Mesozoic (about 550 million to 245 million years ago) whose beginning witnessed an explosion in the diversity of multicelled animals and whose conclusion experienced the greatest mass extinctions in history. See **MESOZOIC**.

PARENT MATERIAL (SOIL): The unconsolidated more or less chemically weathered mineral or organic matter from which the upper level of the soil profile has developed.

PARTICULATE MATTER: Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals.

PASSERINE BIRDS: Birds of the order Passeriformes, which includes perching birds and songbirds such as blackbirds, jays, finches, warblers, and sparrows. More than half of all known birds belong to this order.

PATENT: The instrument by which the Federal Government conveys title to the public lands.

PAY GRAVEL: Placer gravel of good to strong profitability.

PAY STREAK: The areas of concentration of gold in placer deposits.

PAY LAYER: Ore, a mineral deposit of high enough quality to be mined at a profit.

PERCHED WATER TABLE: A water table, usually of limited area, held above the main body of ground water by an impermeable layer such as clay.

PERENNIAL STREAM: A stream that flows continuously during all seasons of the year.

PERENNIAL VEGETATION: Plants that have a life cycle of 3 or more years.

PERIPHYTON: Microscopic plants and animals that are firmly attached to such solid surfaces under water as rocks, logs, pilings, and other structures.

PERSONAL INCOME: The sum of wage and salary disbursements, other labor income, proprietors' income, rental income of persons, personal dividend income, personal interest income, and transfer payments to persons, less personal contributions for social insurance.

pH: A measure of acidity or hydrogen ion activity. Neutral is pH 7.0. All values below 7.0 are acidic, and all values above 7.0 are alkaline.

PHOTOSYNTHESIS: The manufacture by plants of carbohydrates and oxygen from carbon dioxide and water in the presence of chlorophyll, using sunlight as an energy source.

PHREATOPHYTE: A plant that absorbs its water from a permanent supply in the ground.

PHYLA: In taxonomy, the primary divisions of the plant and animal kingdoms.

PHYSIOGRAPHIC PROVINCE: A region defined by a unified geologic history and a characteristic geologic structure and climate that differs from adjoining regions.

PHYTOPLANKTON: Unattached microscopic plants of plankton, subject to movement by wave or current action. See PLANKTON.

PIT LAKE: Water body that forms at the bottom of an open pit mine when mining extends below the water table.

PLACER: An alluvial deposit of sand and gravel containing valuable minerals such as gold.

PLACER CLAIM: A mining claim located upon gravel or ground whose mineral contents are extracted by the use of water.

PLACER DEPOSIT: A mass of gravel, sand, or similar material resulting from the crumbling and erosion of solid rocks containing particles of gold or other valuable minerals that have been derived from rocks or veins.

PLACER MINING: A method of mining in which the overburden is removed to expose gold-bearing gravel deposits beneath. The gravel is then sluiced to separate the gold.

PLAN: See PLAN OF OPERATIONS.

PLANKTON: Suspended, floating, or weakly swimming microscopic plants and animals in the water that provide a basis for the aquatic food chain. Plankton include bacteria, algae, protozoans, rotifers, larvae, and small crustaceans. See PHYTOPLANKTON.

PLAN OF OPERATIONS: A plan for mining exploration and development that an operation must submit to BLM for approval when more than 5 acres a year will be disturbed or when an operator plans to work in an area of critical environmental concern or a wilderness area. A Plan of Operations must document in detail all actions that the operator plans to take from exploration through reclamation.

PLAYA: A dried-up, flat-floored area consisting of thin, evenly layered sheets of fine clay, silt, or sand, and representing the bottom of a shallow, undrained desert lake basin in which water accumulates and is quickly evaporated, usually leaving deposits of soluble salts.

PLEISTOCENE MEGAFUNA: Large mammals that inhabited North America before the end of the last glaciation and that became extinct. Such animals include the mammoth, mastodon, camel, giant sloth, *Bison antiquus*, and *Bison occidentalis*.

PLUME: A visible or measurable discharge of a contaminant from a given point of origin. A plume can be visible or thermal in water, or visible in the air.

POPULATION: Within a species, a distinct group of individuals that tend to mate only with members of the group. Because of generations of inbreeding, members of a population tend to have similar genetic characteristics.

PORE WATER PRESSURE (PORE PRESSURE): The stress transmitted through the fluid that fills the voids between particles of a soil or rock mass.

POROSITY: A rock, soil, or other material's property of containing interstices. Porosity is commonly expressed as a percentage of the bulk volume of a material occupied by interstices. See PRIMARY POROSITY and SECONDARY POROSITY.

PRECAMBRIAN ERA: The earliest era of geological history, extending from 4.5 billion to 540 million years ago and encompassing 7/8 of the earth's history. Just before the end of the Precambrian, complex multicellular organisms, including animals, evolved.

PRECIOUS METAL: A general term for gold, silver, or any of the minerals of the platinum group.

PREGNANT POND: A pond containing liquid that is charged with valuable minerals.

PREGNANT SOLUTION: A solution in hydrometallurgical treatment that is charged with valuable minerals and awaits their removal. See BARREN SOLUTION.

PREY BASE: Populations and types of prey species available to predators, for example fish

species and populations available to river otters.

PRIMARY CONTAINMENT: The vessel, package, tank, or pond that holds hazardous materials. See SECONDARY CONTAINMENT.

PRIMARY POLLUTANT: A pollutant emitted directly from a source. See SECONDARY POLLUTANT.

PRIMARY POROSITY: The porosity that developed during the final stages of sedimentation or was present within sedimentary particles at the time of deposition. See POROSITY and SECONDARY POROSITY.

PRIMARY PRODUCERS: Green plants that can manufacture food from simple organic substances.

PRIMARY PRODUCTION: The production of organic substances by photosynthesis; the amount of material so produced per unit time.

PROBABLE MAXIMUM PRECIPITATION: The precipitation that may be expected from the most severe combination of critical meteorologic conditions and that is reasonably possible in an area as found in the National Weather Service Hydrometeorological Reports.

PROJECT AREA: The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.

PROPER FUNCTIONING CONDITION (RIPARIAN-WETLAND AREAS): The condition where (1) enough vegetation, landform, or large woody debris is present to dissipate the stream energy of high water flows, thereby reducing erosion and improving water quality; (2) sediments are filtered, bedload is captured, and floodplains develop; (3) flood water retention and ground water recharge are improved, root masses that stabilize streambanks against cutting action develop, and diverse ponding and channel characteristics are created to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses; and (4) greater biodiversity is supported. See FUNCTIONAL AT RISK RIPARIAN-WETLAND AREAS and NONFUNCTIONAL RIPARIAN-WETLAND AREAS.

PROPRIETARY INCOME: Payments received by the self-employed as income, including income received by private business owners, doctors, and lawyers.

PRUDENT OPERATOR: An operator who in good faith tries to develop a mineral operation, doing the best possible job, both economically and environmentally.

PUBLIC LANDS: Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except for (1) land located on the Outer Continental Shelf and (2) land held for the benefit of Indians, Aleuts, and Eskimos.

PUBLIC RANGELANDS IMPROVEMENT ACT OF 1978: An act that sought to improve range conditions on the public lands. Among its provisions are a definition of the current grazing fee formula and the requirement that allotment management plans be developed “in careful and considered consultation, cooperation, and coordination” with the lessees, permittees, and landowners involved.

QUARTERNARY PERIOD: The current period of geologic history and second period of the Cenozoic era, which is believed to have covered the last 2 million to 3 million years.

RAPTORS: Birds of prey.

RARE EARTH METALS: A group of widely distributed metals consisting of the elements scandium, yttrium, and 15 elements of atomic numbers 57 to 71, inclusive. These metals have the same arrangement of the two external shells of electrons in their atoms and resemble one another closely in chemical and physical properties, being thus most difficult to separate from each other. It is for this property, rather than their actual rarity in nature, that they are so described.

REACH: A specified length of a stream or channel.

REACTIVITY: A substance’s tendency to undergo chemical reaction either by itself or with other materials with the release of energy. Undesirable effects such as pressure buildup, temperature increase, or formation of noxious, toxic, or corrosive byproducts may result from a substance’s reactivity to heating, burning, direct contact with other materials, or other conditions.

RECHARGE AREA: An area that absorbs water that eventually reaches the zone of saturation in one or more aquifers.

RECLAMATION: Measures required by the proposed 3809 regulations after the disturbance of public lands from mining operations to meet performance standards and achieve conditions required by BLM at the end of operations. Components of reclamation may include (1) isolating, controlling, or removing acid-forming, toxic, or deleterious substances; (2) regrading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage, and minimize erosion; (3) rehabilitating fisheries or wildlife habitat; (4) placing growth media and establishing self-sustaining revegetation; (5) removing or stabilizing buildings, structures, or other support facilities; (6) plugging drill holes and closing underground workings; and (7) providing for postmining monitoring, maintenance, or treatment.

RECORD OF DECISION: A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement.

RECORD OF NONCOMPLIANCE: Under the 43 CFR 3809 regulations, an administrative compliance procedure and document that BLM issues to an operator who has not resolved a notice of noncompliance. If an operator is issued a record of noncompliance, BLM can upgrade all of the operator’s Notice-level operations to Plan-level operations and require the operations to be bonded at 100% of reclamation costs. See NOTICE OF NONCOMPLIANCE.

RECREATION OPPORTUNITY SPECTRUM (ROS): A planning process that provides a

framework for defining classes of outdoor recreation environments, activities, and experience opportunities. In ROS the settings, activities, and opportunities for experiences are arranged along a continuum or spectrum of six classes: primitive, semi-primitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban. The resulting ROS analysis defines specific geographic areas on the ground, each of which encompasses one of the six classes.

REDD: The spawning ground or nest of various fishes.

REDUCERS (DECOMPOSERS): Organisms, usually bacteria or fungi, that break down complex organic material into simple compounds.

REFRACTORY-GRADE ORES: Ores that resist the action of chemical reagents in the normal treatment processes and generally require roasting or other means to fully recover valuable minerals.

REGIONAL AQUIFER: An aquifer that occupies a relatively large area.

RELICT: A remnant or fragment of the vegetation of an area that remains from a former period when the vegetation was more widely distributed.

RAIN SHADOW: An area on the leeward side of mountains that is relatively dry because the mountains block the movement of moisture-laden winds and cause most of the precipitation to fall on the windward side.

REPLACEMENT GROWTH MEDIA: Material below the C horizon of the soil that can be substituted for topsoil or subsoil when it is equal or superior in quality as a surface cover for growing plants on reconstructed mine surfaces.

RESERVE BASE: The part of an identified resource that meets specified minimum physical and chemical criteria for current mining and production. The reserve base includes resources that are currently economic and marginally economic and some that are currently subeconomic.

RESOURCE ADVISORY COUNCILS (RACs): Advisory councils appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (commodity industries, recreation, environmental, and local area interests) in a state or smaller area. RACs advise the Bureau of Land Management, focusing on a full array of multiple use public land issues. RACs also help develop fundamentals for rangeland health and guidelines for livestock grazing.

RESOURCE MANAGEMENT PLAN (RMP): A BLM planning document, prepared in accordance with Section 202 of the Federal Land Policy and Management Act, that presents systematic guidelines for making resource management decisions for a resource area. An RMP is based on an analysis of an area's resources, their existing management, and their capability for alternative uses. RMPs are issue oriented and developed by an interdisciplinary team with public participation.

RIGHT-OF-WAY: A permit or easement that authorizes the use of lands for specified purposes,

such as for a forest access road or a powerline.

RILL: A small, intermittent water course with steep sides, usually only a few inches deep.

RIPARIAN AREA: A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

ROASTING: Heating sulfide-bearing ores to release sulfur dioxide.

ROCK CHARACTERIZATION: A program of testing and evaluating the physical, chemical, and mineralogical nature of rock to evaluate its potential to produce acid rock drainage or other deleterious leachate.

SALEABLE MINERALS: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments. See COMMON VARIETY MINERALS and UNCOMMON VARIETY MINERALS.

SALMONID: Any fish of the Salmonidae family, including salmon and trout.

SCARIFY: To break the surface of the soil with a narrow bladed instrument.

SCOPING: An early and open process for determining the scope of issues to be addressed in an environmental impact statement and the significant issues related to a proposed action. Scoping may involve public meetings; field interviews with representatives of agencies and interest groups; discussions with resource specialists and managers; and written comments in response to news releases, direct mailings, and articles about the proposed action and scoping meetings.

SECONDARY CONTAINMENT: An outer structure that would contain hazardous materials in the event of chronic or catastrophic spillage. See PRIMARY CONTAINMENT.

SECONDARY POLLUTANT: A pollutant that is formed by a chemical or photochemical reaction in the atmosphere rather than emitted from an identifiable source. See PRIMARY POLLUTANT.

SECONDARY POROSITY: The porosity developed in a rock formation after its deposition or emplacement, either through the natural processes of dissolution or stress distortion, or artificially through acidization or the mechanical injection of coarse sand. See POROSITY and PRIMARY POROSITY.

SECTION 106 COMPLIANCE: The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to significant historic properties and that the State Historic

Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

SECTION 7 CONSULTATION: The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

SEDIMENTARY ROCKS: Rocks, such as sandstone, limestone, and shale, that are formed from sediments or from transported fragments deposited in water.

SEDIMENTATION: The process or action of depositing sediment.

SEDIMENT YIELD: The amount of sediment removed from a watershed over a specified period, usually expressed as tons, acre-feet, or cubic yards of sediment per unit of drainage area per year.

SEEDBANK: Seeds stored in the soil, generally as hard seed, that are viable and will germinate given the proper conditions. This seedbank is mainly built up by seed produced by plants growing on or next to the site over many years. Species long gone may still be represented in the seedbank if their seed is especially long lived.

SEGREGATION: Any act such as a withdrawal or exchange that suspends the operation of the public land laws. See WITHDRAWAL.

SENSITIVE LANDS: Any areas recognized in BLM land use or activity plans where BLM has determined that a Plan of Operations is required to provide detailed review of project effects on unique, irreplaceable, or outstanding historical, cultural, recreational, or natural resource values, such as threatened or endangered species or their critical habitat.

SENSITIVE SPECIES: All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include threatened, endangered, and proposed species as classified by the Fish and Wildlife Service and National Marine Fisheries Service.

SERAL: Pertaining to the successional stages of biotic communities.

SETTLING POND: A natural or artificial pond for recovering the solids from the excess water discharged from a washery—the place where ore is freed from impurities and dust by washing.

SHAFT: A vertical or inclined opening to an underground mine.

SHEAR STRENGTH: The maximum resistance of a soil to shearing stress.

SHORT SELLING: Selling a security that the seller does not own but is committed to repurchasing eventually. Short selling is used to capitalize on an expected decline in a security's price

SHORT TON: 2,000 pounds.

SKARN: Contact metamorphic rock rich in iron; ores consisting almost entirely of lime-bearing silicates and derived from nearly pure limestones and dolomites in which large amounts of silicon, aluminum, iron, and magnesium have been introduced.

SLOPE FAILURE: The downward and outward movement of rock or unconsolidated material as a unit or series of units.

SLOPE STABILITY: The resistance of any slope to failure by sliding or collapsing.

SLUICE BOX (SLUICE): A long, inclined trough or launder containing in its bottom, riffles that provide a lodging place for heavy minerals in ore concentration. The material to be concentrated is carried down through the sluices on a current of water. Sluice boxes are widely used in placer operations for concentrating such minerals as gold and platinum from stream gravels.

SNOWPACK: A seasonal accumulation of slow-melting packed snow.

SOIL HORIZON: A layer of soil or soil material roughly parallel to the land surface and differing from adjoining genetically related layers in physical, chemical, and biological properties or characteristics, such as color, structure, and texture.

SOIL PROFILE: A vertical section of the soil from the surface through all of its horizons.

SOIL REGIME: The layer of soil or growth media roughly parallel to the land surface upon which plants and their roots will penetrate and grow.

SOIL STRUCTURE: The physical constitution of soil material as expressed by size, shape, and the degree of development of primary soil particles and voids into naturally or artificially formed structural units.

SOIL TEXTURE: The relative proportions of the three size groups of soil grains (sand, silt, and clay) in a mass of soil.

SPAWNING GRAVELS: Stream-bottom gravels where fish deposit and fertilize their eggs. The covering of these gravels with silt can block the supply of oxygen to the eggs or serve as a cementing agent to prevent fry from emerging.

SPECIAL STATUS AREAS: Areas that BLM has determined to have resources of unique or distinct value. These lands have a variety of designations, depending on the authority under which they were designated and the resources present. Such areas include (1) lands in the California Desert Conservation Area (CDCA) designated by the CDCA Plan as “controlled” or “limited” use areas, (2) areas in or designated for potential addition to the National Wild and Scenic Rivers System, (3) areas of critical environmental concern (ACECs), (4) designated wilderness areas administered by BLM, and (5) areas closed to off-road vehicle use.

SPECIAL STATUS SPECIES: Plant or animal species listed as threatened, endangered, candidate, or sensitive by federal or state governments. See SENSITIVE SPECIES.

SPLIT-ESTATE: Land whose surface rights and mineral rights are owned by different entities. Such a condition commonly occurs when surface rights are owned by the Federal Government and the mineral rights are privately or state owned.

SPOIL: In surface mining, overburden or waste excavated and redeposited.

STOCK (FISH): A group of fish that is genetically self-sustaining and isolated geographically or temporally during reproduction. Generally, stock refers to a local population of fish. More specifically, stock refers to a local population, especially of salmon, steelhead, or other anadromous fish, that originates from specific watersheds as juveniles and as adults generally returns to its birth streams to spawn.

STOCK RAISING HOMESTEAD LANDS: Lands patented under the Stock Raising Homestead Act of December 29, 1916. These lands were not considered suitable for cultivation but were considered suitable for stock grazing. All minerals on these lands were retained by the United States.

STOPE: An area in an underground mine where ore is mined.

STRATEGIC MINERALS: Minerals essential to the national defense for the supply of which during war we are wholly or partly dependent upon sources outside the continental limits of the United States, and for which strict measures are needed to control conservation and distribution. See CRITICAL MINERALS.

STRATIFICATION, LAKE: In a lake the presence of two or more horizontal layers of water of differing characteristics, such as density.

STREAM ORDER: A stream classification system based on the number of tributaries a stream has. The smallest unbranched tributary in a watershed is designated an Order 1 stream. A stream formed by the confluence of two Order 1 streams is designated an Order 2 stream. A stream formed by the confluence of two Order 2 streams is designated an Order 3 stream, and so on.

STRIP MINING: A form of surface mining in which relatively shallow overburden is stripped off the surface and the ore extracted. Usually designed for shallow, tabular deposits that are longer than they are wide, strip mines typically are located in areas of rugged topography where the deposit is interbedded between uneconomic rock units.

STRIPPING RATIO: In open pit mining, the ratio of the total waste removed to the total ore mined.

STRUCTURAL DIVERSITY (OF A STREAM CHANNEL): Within a stream channel the diversity of objects that control water movement.

STRUCTURE (STREAM CHANNEL): Any object, usually large, in a stream channel that

controls water movement.

STUDY AREA: See EIS STUDY AREA.

SUBMERGENT VEGETATION: Aquatic plants that grow only within water and do not break the water's surface. See EMERGENT VEGETATION.

SUBPERMAFROST AQUIFERS: Permeable material below the base of permafrost. In the continuous permafrost zone these aquifers consist mostly of consolidated rock. In the discontinuous permafrost zone, they commonly consist of unconsolidated deposits.

SUBSISTENCE USES: As stated in the Alaska National Interest Lands Conservation Act (ANILCA), the customary and traditional uses by rural Alaska residents of wild renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption, for barter, or sharing for personal or family consumption; and for customary trade.

SUBSOIL: The B horizon of soils with distinct profiles, or the soil below the plowed soil (or its equivalent of surface soil) in soils with weak profile development.

SUBSTRATE: The mineral or organic material that forms the bed of a stream; the base upon which an organism lives; the surface on which a plant or animal grows or is attached.

SUCTION DREDGE: A dredge that lifts material and pumps it through a suction pipe.

SULFIDE ORE: Ore in which sulfide minerals predominate.

SUMMER RANGE: Range that is grazed mainly during the summer growing season. See WINTER RANGE.

SURFACE EROSION: Erosion that removes materials from the surface of the land as distinguished from gully, or channel erosion. See GULLY EROSION.

SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977 (SMCRA): A federal act that set rules for surface mining and reclamation of mined land, providing for transfer of much authority to states with approved programs.

SUSPENDED SEDIMENT: The very fine soil particles that are maintained in suspension in water for a considerable time by the upward components of turbulent currents or because they are fine enough to form a colloidal suspension. See BEDLOAD.

SWELL FACTOR: The percentage of increase in the volume of waste rock from before its excavation to its placement in a waste rock dump.

TAILINGS: The waste matter from ore after the extraction of economically recoverable metals and minerals.

TAKE: As defined by the Endangered Species Act, “to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct.”

TAKING: In Anglo-American legal tradition, the right of eminent domain—the right of the sovereign or government to take private property to meet public needs. The takings clause of the Fifth Amendment to the U.S. Constitution prohibits the taking of private property for public use without just compensation. But recently, under the concept of regulatory taking, landowners have been demanding that the government pay them for losses resulting from regulations that have reduced profits from the use of their land.

TAXA: A group of organisms sharing common characteristics in varying degrees of distinction and constituting one of the categories in taxonomic classification, such as a phylum, order, family, genus, or species.

TERMINAL WETLAND: A wetland that forms from water flowing into a closed basin that has no outlet. Most such wetlands are small and only seasonally filled with water, but they may support unique aquatic species.

TERRESTRIAL SPECIES: Ground-dwelling plants and animals.

TERTIARY: The earlier (12 million to 5 million years ago) of the two geologic periods in the Cenozoic era of geologic time.

THREATENED SPECIES: Any plant or animals species likely to become endangered within the foreseeable future throughout all or a part of its range and designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. See ENDANGERED SPECIES.

TOTAL MAXIMUM DAILY LOAD (TMDL): Under the Clean Water Act, the amount of pollution a water body can absorb and still support aquatic life and uses such as water for drinking and recreation. The Clean Water Act requires states to list lakes, rivers, and streams that do not meet water quality standards. For each of those water bodies, a state must establish a total maximum daily load (TMDL) for each nonattainment pollutant, including nonpoint source pollutants, at a level to ensure that water quality standards can be met.

TOTAL DISSOLVED SOLIDS (TDS): Salt—an aggregate of carbonates, bicarbonates, chlorides, sulfates, and nitrates of calcium, magnesium, manganese, sodium, potassium, and other cations that form salts. High TDS solutions can change the chemical nature of water, exert varying degrees of osmotic pressure, and often become lethal to aquatic life.

TOTAL SUSPENDED PARTICULATES (TSP): Particulate matter in the atmosphere that is generally less than 50 micrometers in diameter and that settles slowly and includes droplets, dust, fumes, pollen, sand, and soot.

TRACE METALS: Metals that are present in small concentrations.

TRADITIONAL CULTURAL PROPERTY (TCP): A cultural property that is eligible for inclusion in the National Register of Historic Places because of its association with a living

community's cultural practices or beliefs that (a) are rooted in that community's history and (b) are important in maintaining the community's continuing cultural identity.

TRADITIONAL LIFEWAY VALUES: Values that are important for maintaining a group's traditional system of religious belief, cultural practice, or social interaction. A group's shared traditional lifeway values are abstract, nonmaterial, ascribed ideas that cannot be discovered except through discussions with members of the group. These values may or may not be closely associated with definite locations.

TRANSPIRATION: The photosynthetic and physiological process by which water in plants is transported as water vapor to the atmosphere.

TRIBE (TRIBAL): Terms that refer to federally recognized Indian tribes.

TROPHIC LEVEL: The level in a nutritive series of an ecosystem in which a group of organisms in a certain stage in the food chain secures food in the same general manner. The first or lower trophic level consists of producers (green plants), the second level consists of herbivores, the third level consists of secondary carnivores, and the fourth level consists of reducers (decomposers).

TROY OUNCE: A unit of measure based on troy weight (12 ounces to a pound) and equal to 1.09714 avoirdupois ounces. (An avoirdupois ounce is the conventional U.S. weight measure in which 16 ounces equal 1 pound.)

TUFF: A compacted pyroclastic deposit of volcanic ash and dust that may contain up to 50% sediments such as sand or clay.

TUNDRA: Treeless arctic and alpine areas where cover may consist of bare ground, grasses, sedges, forbs, dwarf shrubs, mosses, or lichens.

TUNNEL: A nearly horizontal underground passage open to the surface at both ends.

TUNNEL SITE CLAIM: A mining claim located to secure an area for a tunnel. A tunnel site claim may be located on land where a tunnel is run to develop a vein or lode, or for intersecting unknown veins or lodes. See LOCATION and MINING CLAIM.

UNCOMMON VARIETY MINERALS: On the public lands stone, gravel, pumice, pumicite, and cinder deposits that have distinct and special properties making them commercially valuable for use in a manufacturing, industrial, or processing operation. Such minerals are locatable under the Mining Law of 1872, as amended. In determining a deposit's commercial value, the following factors may be considered: quality and quantity of the deposit, geographic location, accessibility to transportation, and proximity to market or point of use. See COMMON VARIETY MINERALS.

UNCONSOLIDATED AQUIFER: An aquifer that occurs in sediment that is loosely arranged or unstratified, or whose particles are not cemented together. See AQUIFER.

UNGULATES: Hoofed animals, including ruminants but also horses, tapirs, elephants, rhinoceroses, and swine.

UNNECESSARY OR UNDUE DEGRADATION: Under the proposed final 3809 regulations, the affect of conditions, activities, or practices that (1) fail to comply with one or more of the following: the performance standards in §3809.420, the conditions of an approved Plan of Operations, operations described in a complete Notice, and other federal and state laws for environmental and cultural resource protection; (2) are not reasonably incident to prospecting, mining, or processing; (3) fail to attain a stated level of protection or reclamation required by law in such areas as the California Desert Conservation Area, wild and scenic rivers, BLM-administered portions of the National Wilderness Preservation System, and BLM-administered national monuments and national conservation areas; or (4) occur on mining claims or millsites located after October 21, 1976 (or on unclaimed lands), result in substantial irreparable harm to significant scientific, cultural, or environmental resources of the public lands; and inflict harm that cannot be effectively mitigated.

UPLANDS: Lands at higher elevations than alluvial plains or low stream terraces; all lands outside the riparian-wetland and aquatic zones.

VALID EXISTING RIGHTS: Locatable mineral development rights that existed when the Federal Land Policy and Management Act (FLPMA) was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands requires BLM to conduct a validity examination and is called a “valid existing rights” determination.

VANDALISM: The unauthorized collecting, excavating, or defacing of cultural resources.

VASCULAR: Having vessels for circulating or transmitting plant or animals fluids.

VEGETATION COMMUNITY: An assemblage of plant populations in a common spatial arrangement.

VEIN: A well-defined, typically tabular zone or belt of mineral-bearing rock confined between nonmineralized rock.

VESICLE: A cavity or variable space in lava formed by the entrapment of a gas bubble while the lava was solidifying.

VISION QUEST: A solitary vigil by an adolescent American Indian male to seek spiritual power and learn through a vision of a guardian spirit.

VISITOR DAY: 12 visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more people.

VISUAL RESOURCE MANAGEMENT (VRM): The planning, design, and implementing of

management objectives to provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCE MANAGEMENT (VRM) CLASS: The degree of visual change that is acceptable within the characteristic landscape. Based on the physical and sociological characteristics of any given homogeneous area, the VRM class serves as a management objective.

WARM-SEASON PLANTS: Plants whose major growth occurs during the spring, summer, or fall, and are usually dormant in winter. See COOL-SEASON PLANTS.

WASTE ROCK (WASTE): Barren rock at a mine or material that is too low in grade to be of economic value.

WATERSHED: The total area above a given point on a stream that contributes runoff water to the streamflow at that point.

WEATHERING: The disintegration and decomposition of rocks and other earth materials through exposure to the atmosphere. Weathering is one of the major factors in soil formation.

WETLANDS: Areas that are inundated or saturated by surface or ground water often and long enough to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. See JURISDICTIONAL WETLANDS.

WETTED PERIMETER: The length of the wetted contact between a stream of flowing water and the stream bottom in a vertical plane at right angles to the direction of flow.

WILD AND SCENIC RIVER: See NATIONAL WILD AND SCENIC RIVERS SYSTEM.

WILDERNESS AREA: A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

WILDERNESS STUDY AREA: On BLM-managed lands, a roadless area that has been inventoried (but not designated by Congress) and found to have wilderness characteristics as described in Section 603 of the Federal Land Policy and Management Act of 1976 and Section 2(c) of the Wilderness Act of 1964. BLM manages wilderness study areas to protect their wilderness characteristics until Congress decides whether to designate them as wilderness.

WILD HORSES AND BURROS (WILD FREE-ROAMING HORSES AND BURROS): All unbranded and unclaimed horses and burros using public lands as all or part of their habitat.

WINTER RANGE: Range that is grazed during winter. See SUMMER RANGE.

WITHDRAWAL: An action that restricts the use of public lands by removing them from the operation of some or all of the public land or mining laws. See SEGREGATION and MINERAL WITHDRAWAL.

ZONE OF SATURATION (PHREATIC ZONE): A subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere.