CHAPTER 7. ABBREVIATIONS AND GLOSSARY

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7.1 Abbreviations

ACD	Alton Coal Development, LLC
ADT	average daily traffic
AOC	approximate original contour
AQRC	air quality-related values
AUM	animal unit month
AVF	alluvial valley floor
BLM	Bureau of Land Management
BLM-KFO	Bureau of Land Management-Kanab Field Office
BMP	best management practices
BP	before present
BOCC	birds of conservation concern
Btu	British thermal units
C	central (geographic section of tract)
CCSP	U.S. Climate Change Science Program
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CIAA	cumulative impact assessment area
CIB	Community Impact Fund Board
CO	carbon monoxide
CO_2	carbon dioxide
CRMP	cultural resource management plan
CWA	Clean Water Act
CWN	central western north (geographic section of tract)
CWS	central western south (geographic section of tract)
dBa	A-weighted decibel
DOGM	Utah Division of Oil, Gas, and Mining
DOI	Department of the Interior
DOJ	Department of Justice

EIS	environmental impact statement
EO	Executive Order
EODA	external overburden disposal area
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
F	Fahrenheit
FCAOG	Five County Association of Governments
FMU	fire management units
FRCC	fire regime conditions class
GCVTC	Grand Canyon Visibility Transport Commission
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutants
IPCC	Intergovernmental Panel on Climate Change
KFO	Kanab Field Office
KOP	key observation points
LBA	Lease by Application
Ldn	day-night sound level
Leq	equivalent continuous noise level
LOS	level of service
mg/L	milligrams per liter
MLA	Mineral Leasing Act
MSHA	Mine Safety and Health Administration
NAAQS	National Ambient Air Quality Standards
NCDC	National Climatic Data Center
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPS	National Park Service

NRHP	National Register of Historic Places
NW	northwestern (geographic section of tract)
OHV	off-highway vehicle
ONRR	Office of Natural Resources Revenue
OSM	Office of Surface Mining Reclamation and Enforcement
PAP	permit application package
Pb	lead
Ph	measure of the acidity or basicity of a solution
PM_{10}	particulate matter, having particles of 10 micrometers or less
$PM_{2.5}$	particulate matter, having particles less than 2.5 micrometers
PMT	post-mining topography
ppm	parts per million
PPMA	Paunsaugunt Plateau Management Area
PRISM	Parameter-elevation Regressions on Independent Slopes Model
PSD	Prevention of significant deterioration
R2P2	Resource Recovery and Protection Plan
RMP	resource management plan
ROD	record of decision
ROS	recreation opportunity spectrum
ROW	right-of-way
RWPP	regional wildfire protection plan
S	southern (geographic section of tract)
Sa	southern no-coal zone (geographic section of tract)
SESA	socioeconomic study area
SHPO	state historic preservation officer
SMCRA	Surface Mining Control and Reclamation Act
SO_2	sulfur dioxide
SO_x	sulfur oxides
SOP	standard operating procedure(s)
SR	State Road (e.g., SR-20)
SWCA	SWCA Environmental Consultants
SWReGAP	Southwest Regional Gap Analysis Project
TCP	traditional cultural properties

TDS	total dissolved solids
UDAQ	Utah Division of Air Quality
UDNR	Utah Department of Natural Resources
UDOT	Utah Department of Transportation
UDWR	Department of Wildlife Resources
UDWS	Utah Department of Workforce Services
UII	Utah International Inc.
UMNH	Utah Museum of Natural History
UPDES	Utah Pollution Discharge Elimination System
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	volatile organic carbons
VRM	visual resource management
WSA	wilderness study area
WUI	wildland-urban interface

7.2 Glossary

adverse impacts	An apparent direct or indirect detrimental effect.
airshed	A part of the atmosphere that responds in a coherent way with respect to the dispersion of emissions.
alkalinity	The degree to which the pH of a substance is greater than 7.
alluvial deposits	Deposits of clay, silt, sand, gravel, and/or other materials carried by moving surface water such as streams, and deposited at points of weak water flow; alluvium.
alluvial valley floor	An area of unconsolidated stream-laid deposits holding streams with water availability sufficient for sub-irrigation or flood irrigation agricultural activities (see 30 CFR 701.5).
alluvium	Sorted or semi-sorted sediment consisting of clay, silt, sand, gravel, or other unconsolidated rock material deposited in comparatively recent geologic time by a stream or other body of running water in the bed of that stream or on its floodplain or delta.

alternative	In terms of the National Environmental Policy Act, one of several substitute or alternate proposals being considered by a federal agency in an environmental analysis.
ambient	Surrounding conditions (or environment) in a given place and time.
ammonite	Extinct externally shelled cephalopod related to modern squid and cuttlefish.
angle of influence	Defines the extent of the surface area affected by ground movement that occurs as a result of removing coal from an underground mine where overlying rock layers are no longer supported by underlying coal removed during mining.
annual precipitation	The quantity of water that falls yearly in the form of rain, hail, sleet, and snow.
Aquatic	Living or growing in or on the water.
Aquifer	A layer of permeable rock, sand, or gravel that stores and transmits water in sufficient quantities for a specific use. In hydrology, a rock layer or sequence that contains water and releases it in appreciable amounts. The rocks contain water-filled pores that, when connected, allow water to flow through their matrix. A confined aquifer is overlain by a rock layer that does not transmit water in any appreciable amount or that is impermeable. There probably are few truly confined aquifers. In an unconfined aquifer, the upper surface (water table) is open to the atmosphere through permeable overlying material. An aquifer also may be called a water-bearing stratum, lens, or zone.
Ash	The residual non-combustible matter in coal that comes from included silt, clay, silica, or other substances. The lower the ash content, the better the coal quality.
Backfill	The act of refilling an excavation. Also, the material placed in an excavation when it is refilled.
Baseline	Conditions, including trends, existing in the human environment before a proposed action has started; a benchmark state from which the environmental consequences of an action are forecast; the No Action Alternative.
Beneficial impact	An apparent direct or indirect advantageous effect.
Bentonite	An absorptive and colloidal clay used especially as a sealing agent or suspending agent formed by the decomposition of volcanic ash that has the ability to absorb large amounts of water and to expand to several times its normal volume; used in adhesives, cements and ceramic fillers.
Big game	Indigenous ungulate wildlife species that are hunted (e.g., elk, deer, bison, bighorn sheep, and pronghorn).

Biological soil crust (or cryptobiotic crust)	Biological communities that form a surface layer or crust on some soils. These communities consist of cyanobacteria (blue-green bacteria), micro fungi, mosses, lichens, and green algae, and perform many important functions, including fixing nitrogen and carbon, maintaining soil surface stability, and preventing erosion. Biological soil 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.
Bonus bid	That value in excess of the rentals and royalties that is paid to the United States as part of the consideration for receiving a lease for publicly owned minerals [see 43 CFR 3400.0-5©].
Buffer zone	An area between two different land uses that is intended to resist, absorb, or otherwise preclude development or intrusion between the two use areas.
Category 1	Substantial biological information on file to support the appropriateness of proposing to list as endangered or threatened.
Category 2	Current information indicates that proposing to list as endangered or threatened is possibly appropriate, but substantial biological information is not on file to support an immediate ruling (USFWS).
Cenomanian	The first of six main divisions (in ascending order) in the Upper Cretaceous series, representing rocks deposited worldwide during the Cenomanian Age, which occurred 99.6 to 93.5 million years ago during the Cretaceous Period. Rocks of the Cenomanian overlie those of the Albian and underlie rocks of the Turonian ages.
Class I areas (air quality)	Airsheds of special national or regional natural, scenic, recreational, or historic value for which the PSD regulations provide special protection (e.g., little to no development). Class I areas include national parks larger than 6,000 acres, national wilderness areas larger than 5,000 acres, and international parks and national memorial parks larger than 5,000 acres.
Class II areas (air quality)	All other clean airsheds (in attainment of the NAAQS) where development is permitted under state authority.
Coal bed CH_4	Natural gas (CH_4) that is generated during the coal-forming process.
Colluvium	Rock fragments, sand, or soil material that accumulates at the base of slopes; slope wash.
Confluence	The point at which two or more streams meet.
Conglomerate	A rock that contains rounded rock fragments or pebbles cemented together by another mineral substance.
Conservation agreement	A formal written document agreed to by the USFWS and/or the National Marine Fisheries Service and another federal agency, state agency, local government, or private organization to achieve the conservation of candidate species or other special status species through voluntary cooperation. It documents the specific actions and responsibilities to which each party agrees to be accountable. The objective of a conservation agreement is to reduce threats to a special status species or its habitat. An effective conservation agreement may lower a species' listing priority or eliminate the need for listing.

Conservation strategy	A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threats. Conservation strategies are generally developed for species of plants and animals that are designated as Bureau of Land Management–sensitive species or that USFWS or NOAA Fisheries have determined to be federal candidates under the ESA.
Contiguous	Lands or legal subdivisions having a common boundary (lands having only a common corner are not contiguous).
Cooperating agency	An agency that has jurisdiction by law in an action being analyzed in an environmental document and that is requested to participate in the NEPA process by the agency that is responsible for preparing the environmental document [see 40 CFR 1501.6 and 1508.5].
Cretaceous	Of or belonging to the geologic time, system of rocks, and sedimentary deposits of the third and last period of the Mesozoic Era, characterized by the development of flowering plants and ending with the sudden extinction of the dinosaurs and many other forms of life.
Crucial habitat	Any particular range or habitat component that directly limits a community, population, or subpopulation to reproduce and maintain itself at a certain level over the long term. Such habitat includes sensitive use areas that, because of limited abundance and/or unique qualities, constitute irreplaceable critical requirements for high-interest wildlife. It may also include highly sensitive habitats, including fragile soils that have little or no reclamation potential. Restoration or replacement of these habitats may not be possible. Examples include the most crucial (critical) summer and/or winter range or concentration areas; critical movement corridors; breeding and rearing complexes; spawning areas; developed wetlands; Class 1 and 2 streams, lakes, ponds, or reservoirs; and riparian habitats critical to high-interest wildlife.
Crucial wildlife habitat	Parts of the habitat necessary to sustain a wildlife population during periods of their life cycle. It may be a limiting factor on the population, such as nesting habitat or winter habitat.
Crucial winter range	The portion of the winter range to which a wildlife species is confined during periods of heaviest snow cover.
Cultural resources	The remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that reveal the nature of historic and prehistoric human events. These resources consist of 1) physical remains, 2) areas where significant human events occurred, and 3) the environment immediately surrounding the resource.
Cumulative impact	The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

decibel	A unit of sound measurement. In general, a sound doubles in loudness for every increase of 10 decibels.
Desired wildland fire condition (DWFR)	The desired condition of a vegetative community as it relates to susceptibility from severe fire effects (e.g., the loss of key ecosystem components—soil, vegetation structure, species; or alteration of key ecosystem processes—nutrient cycles, hydrologic regimes).
Direct impact	An impact caused by an action that occurs at the same time and place as the action (40 CFR 1508.8).
discharge	Any of the ways that groundwater comes out of the surface, including through springs, creeks, or being pumped from a well.
dispersion model domain	The analysis area for air resources, which consists of an approximately 150-km area surrounding the tract.
Endangered species	Any species that is in danger of extinction throughout all or a significant portion of its range (from M6840, Special Status Species Manual).
Eocene	Of or belonging to the geologic time, rock series, or sedimentary deposits of the second epoch of the Tertiary Period, characterized by warm climates and the rise of most modern mammalian families.
Ephemeral stream	A stream that flows occasionally because of surface runoff, and is not influenced by permanent groundwater.
Erosion	The wearing away of the land surface by running water, wind, ice, or other geologic agents.
Evapotranspiration	The sum total of water lost from the land by evaporation and plant transpiration.
Excavation	The scientifically controlled recovery of subsurface materials and information from a cultural site. Recovery techniques are relevant to research problems and are designed to produce maximum knowledge about the site's use, its relation to other sites and the natural environment, and its significance in the maintenance of the cultural system.
Fair market value	The amount in cash (or in terms reasonably equivalent to cash) for which in all probability a coal deposit would be sold or leased by a knowledgeable owner willing, but not obligated, to sell or lease to a knowledgeable purchaser who desires, but is not obligated, to buy or lease.
Fire management plan	A plan that identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire, prescribed fire, and wildland fire use). The plan is supplemented by operational plans, including, but limited to, preparedness plans, preplanned dispatch plans, and prevention plans. Fire management plans assure that wildland fire management goals and components are coordinated.

Fire regime	Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects, in a given area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured, such as fire return interval.
FRCC	Depiction of the degree of departure from historical fire regimes, possibly resulting in alternations of key ecosystem components. These classes categorize and describe vegetation composition and structure conditions that currently exist inside the fire regime groups. Based on the coarse-scale national data, they serve as generalized wildfire rankings. The risk of loss of key ecosystem components from wildfires increases from Condition Class 1 (lowest risk) to Condition Class 3 (highest risk).
Fixed carbon	In coal, the solid combustible material remaining after removal of moisture, ash, and volatile matter. It is expressed as a percentage.
Floodplain	The relatively flat area or lowland adjoining a body of flowing water, such as a river or stream, that is covered with water when the river or stream overflows its banks.
Forage	Vegetation used for food by wildlife, particularly big game wildlife, and domestic livestock.
Formation	A rock body distinguishable from other rock bodies and useful for mapping or description. Formations may be combined into groups or subdivided into members.
Fossil	The remains or traces of an organism or assemblage of organisms that have been preserved by natural processes in the earth's crust. Many minerals that may be of biologic origin are not considered to be fossils (e.g., oil, gas, asphalt, limestone).
fugitive dust	Small-diameter dust particles from the action of prevailing winds, the turbulence caused by moving machinery and trucks, or both.
Glare	Compromised vision due to very bright light (such as direct or indirect sunlight or artificial light).
greenhouse gas	A gas in an atmosphere that absorbs and emits radiation within the thermal infrared range; naturally occurring GHGs include water vapor, CO_2, CH_4, nitrous oxide (N_2O), and ozone (O_3).
Groundwater	Subsurface water that fills available openings in rock or soil materials to the extent that they are considered water saturated.
Habitat	A place where a plant or animal naturally or normally lives and grows.
Habitat	The place where an organism (plant or animal) lives. There are four major divisions of habitat, namely terrestrial, freshwater, estuarine, and marine.
Hazardous air pollutants (HAP)	Air pollutants that are not part of the NAAQS, but are often brought forward for analysis if their levels would be elevated by a proposed project.

Hazardous materials	Substance that, because of its potential for corrosivity, toxicity, ignitability, chemical reactivity, or explosiveness, may cause injury to persons or damage to property.
Hazardous waste	Those materials defined in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, and listed in 40 CFR 261. A used or discarded material that can damage the environment and be harmful to human health. Hazardous wastes include heavy metals and toxic chemicals used in industrial products and processes as well as infectious medical wastes and radioactive materials such as spent nuclear fuel rods.
High-value habitat	Any particular habitat that sustains a community, population, or subpopulation. It includes intensive use areas that because of relative wide distribution do not constitute crucial (Utah Division of Wildlife Resources critical) values but are highly important to high-interest wildlife. It may also include moderately sensitive habitats of high-interest species that have low reclamation potential, and Class 3 streams, lakes, ponds, or reservoirs. Reconstruction or enhancement of these areas may be possible, but should be avoided if not possible. Examples include less crucial (critical) but more widely distributed summer and/or winter ranges, important feeding areas, areas of high wildlife diversity and/or density of high-interest species, natural wetlands, and all other riparian areas.
Holocene	Of or belonging to the geologic time, rock series, or sedimentary deposits of the more recent of the two epochs of the Quaternary Period, beginning at the end of the last Ice Age approximately 11,000 years ago and characterized by the development of human civilizations.
Human environment	The natural and physical environment in which humans preside or have an impact and the relationship of people with the surrounding environment (30 CFR 1508.14).
hydraulic conductivity	The capacity of a medium to transmit water; permeability coefficient. Expressed as the volume of water at the prevailing temperature that will move in unit time under a unit hydraulic gradient through a unit area. Units include gallons per day per square foot, centimeters per second.
Hydric soil	A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic (water-loving) vegetation. Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils.
Hydrocarbon	Any organic compound, gaseous, liquid, or solid, consisting solely of carbon and hydrogen.
Hydrology	The science dealing with the behavior of water as it occurs in the atmosphere, on the surface of the ground, and underground.
Hydrology	The science dealing with the properties, distribution, and circulation of water.

Hydrophytic vegetation	The plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation.
Impacts (or effects)	Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable or cumulative.
Impermeable	Not capable of transmitting fluids or gasses in appreciable quantities.
Incised	Having a margin that is deeply and sharply notched.
Indirect impact (or secondary)	A reasonably foreseeable impact resulting from an action but occurring later in time than or removed in distance from that action (40 CFR 1508.8).
initial attack	An aggressive suppression action consistent with fire-fighter and public safety and values to be protected.
In-place coal reserves	The estimated volume of all of the coal reserves in a lease without considering economic or technological factors that might restrict mining.
Interburden	A layer of sedimentary rock that separates two mineable coal beds.
Interdisciplinary	Characterized by participation or cooperation among two or more disciplines or fields of study.
Intermittent stream	A stream that does not flow year-round but has some association with groundwater for surface or subsurface flow.
Key observation point	Critical viewpoints of typical landscapes in a project area (in this case, the tract) that have been selected to represent the views of disturbances throughout the life of the mine and that are encountered by the greatest number of people.
Konservat-Lagerstatte	A locality or geologic horizon with exceptionally good fossil preservation, generally exhibiting soft tissue and other organic structures.
Land and resource management plan	A land-use plan that directs the use and allocation of USFS lands and resources.
Lead agency	The agency or agencies preparing or having taken primary responsibility for preparing an environmental document (40 CFR 1508.16).
lease	A legal document executed between a mineral owner or lessor and another party or lessee that grants the lessee the right to extract minerals from the tract of land for which the lease has been obtained [43 CFR 3400.0-5®].
Lek	A traditional breeding area for grouse species where territorial males display and establish dominance, or an assembly area where birds, especially Greater Sage-grouse, carry on display and courtship behavior.

Lenticular	Term describing a body of rock or earth that thins out in all directions from the center like a double convex optical lens.
Lightscape	Characterized by the natural rhythm of sun and moon cycles, clean air, and dark nights unperturbed by artificial lights.
Limestone	A sedimentary rock consisting chiefly of calcium carbonate.
Lumens	An unit of measurement that measures the power of light perceived by the human eye.
Maximum economic recovery	The requirement that based on standard industry operating practices, all profitable portions of a leased federal coal deposit must be mined. MER determinations will consider existing proven technology; commercially available and economically feasible equipment; coal quality, quantity, and marketability; safety, exploration, operating, processing, and transportation costs; and compliance with applicable laws and regulations [43 CFR 3480.0-5(a)(24)].
Mesozoic	Of, belonging to, or designating the era of geologic time that includes the Triassic, Jurassic, and Cretaceous periods and is characterized by the development of flying reptiles, birds, and flowering plants, and by the appearance and extinction of dinosaurs.
CH_4	A colorless, odorless, and flammable gaseous hydrocarbon; the simplest hydrocarbon; chemical formula=CH_4. It is the product of decomposition of organic matter and of the carbonization of coal, is used as a fuel and as a starting material in chemical synthesis, and is the simplest of the alkanes. It is a constituent of natural gas and is also found associated with crude oil and coal.
Mineable coal	Coal that can be economically mined using present day mining technology.
Mining permit	A permit to conduct surface coal mining and reclamation operations issued by the state regulatory authority pursuant to a state program or by the Secretary pursuant to a federal program (30 CFR 701.5).
mitigation	An action to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.
Mitigation	A method or process by which impacts from actions may be made less injurious to the environment through appropriate protective measures. 40 CFR 1508.20 further defines mitigation as 1) avoiding the impact altogether by not taking a certain action or parts of an action; 2) minimizing an impact by limiting the degree or magnitude of the action and its implementation; 3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; 4) reducing or eliminating the impact over time by preservation and maintenance; and 5) compensating for the impact by replacing or providing substitute resources or environments.
Mudstone	A hardened sedimentary rock consisting of clay. It is similar to shale but lacks distinct layers.

NAAQS	Standards set by the Clean Air Act for pollutants considered harmful to public health and the environment. They consist of CO, lead, nitrogen dioxide, PM (PM_{10} and $PM_{2.5}$), ozone, and SO_2.
NRHP	A list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, and culture maintained by the Secretary of the Interior. Expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 USC 462) and Section 101(a)(1) (A) of the NHPA.
Native species	Wild animals and plants that have evolved in a particular region and environment. Native species are the most adapted to the area and are more disease and drought resistant than non-native species. Native plants provide the greatest benefits to wildlife because the native wildlife evolved with native plants. Often the food provided by native plants is the most nutritious to our native wildlife.
NEPA process	All measures necessary for compliance with the National Environmental Policy Act of 1969 (40 CFR 1508.21).
No Action Alternative	An alternative where no activity would occur. The development of a no action alternative is required by regulations implementing the National Environmental Policy Act (40 CFR 1502.14). The No Action Alternative provides a baseline for estimating the effects of other alternatives.
nonattainment	A designated air quality area or airshed that exceeds a NAAQS. Areas with levels of a criteria pollutant below the health-based standard are designated as “attainment.”
OHV	Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding 1) any non-amphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorized officer or otherwise officially approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used for national defense (from H-1601-1, BLM Land-use Planning Handbook).
outcrop	A rock formation that appears at or near the surface; the intersection of a rock formation with the surface.
overburden	Overburden is the term used in mining to describe material above (excluding topsoil) the area of economic interest, e.g., the rock and soil above the coal seam. Also known as 'waste'. Overburden is distinct from tailings, the material that remains after economically valuable components have been extracted from the generally finely milled ore. Overburden is removed during surface mining, but is typically not contaminated with toxic components and may be used to restore a mining site to a semblance of its appearance before mining began. Overburden may also be used as a term to describe all soil and ancillary material above the bedrock horizon in a given area.
Paleogene	The older of two subdivisions of the Tertiary Period, including the Paleocene, Eocene, and Oligocene Epochs.

paleontological resource	A site containing evidence of plant or non-human animal life of past geological periods, usually in the form of fossil remains.
PM	Complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.
peak discharge	The highest discharge of water recorded over a specified period of time at a given stream location; also called maximum flow. Often thought of in terms of spring snowmelt, summer, fall, or winter rainy season flows.
perennial species	Vegetation that lives over from season to season.
perennial stream	A stream or part of a stream that flows continuously during the calendar year as a result of groundwater discharge or surface runoff.
permeability	The ability of rock or soil to transmit a fluid.
permit application package	A proposal to conduct surface coal mining and reclamation operations on federal lands, including an application for a permit, permit revision, or permit renewal and all the information required by SMCRA, the applicable state program, any applicable cooperative agreement, and all other applicable laws and regulations including, with respect to federal leased coal, the MLA and its implementing regulations.
permit area	The area of land, indicated on the approved map submitted by the operator with his or her application, required to be covered by the operator's performance bond under the regulations at 30 CFR 800 and that shall include the area of land upon which the operator proposes to conduct surface coal mining and reclamation operations under the permit, including all disturbed areas (30 CFR 701.5).
physiography	Physical geography
Pleistocene	Of or belonging to the geologic time, rock series, or sedimentary deposits of the earlier of the two epochs of the Quaternary Period, characterized by the alternate appearance and recession of northern glaciation, the appearance and worldwide spread of hominids, and the extinction of numerous land mammals, such as the mammoths, mastodons, and saber-toothed tigers.
predator	An animal that obtains food by killing and consuming other animals.
prescribed burning	Application of prescribed fire.
prescribed fire	The intentional application of fire to wildland fuels in either their natural or modified state under conditions that will allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further certain planned objectives (i.e., silviculture, wildlife management, etc.). Any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. A written, approved prescribed fire plan must exist, and NEPA requirements must be met, prior to ignition.

Prevention of significant deterioration (PSD)	Regulations promulgated by the EPA to further protect and enhance air quality. They use an incremental approach and are intended to help maintain good air quality in area that attain that NAAQS and to provide special protections for national parks.
Proboscidean	Any member of the elephant family.
proper functioning condition (PFC)	1) An element of the Fundamentals of Rangeland Health for watersheds, and therefore a required element of state or regional standard and guidelines under 43 CFR §4180.2(b). 2) A condition in which vegetation and ground cover maintain soil conditions that can sustain natural biotic communities. For riparian areas, the process of determining function is described in BLM Technical Reference (TR) 1737-9. 3) Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bed load, and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is influenced by geomorphic features, soil, water, and vegetation. 4) Uplands function properly when the existing vegetation and ground cover maintain soil conditions capable of sustaining natural biotic communities. The functioning condition of uplands is influenced by geomorphic features, soil, water, and vegetation. See also, Nonfunctioning Condition and Functioning at Risk (from H-4180-1, BLM Rangeland Health Standards).
Proposed Action	In terms of NEPA, the project, activity, or action that a federal agency proposes to implement or undertake and that is the subject of an environmental analysis. In this EIS Alternative B is the Proposed Action.
raptor	Bird of prey, such as an eagle, falcon, hawk, owl, or vulture.
recharge	The processes by which groundwater is absorbed into a zone of saturation.
reclamation	Rehabilitation of a disturbed area to make it acceptable for designated uses. This normally involves regrading, replacement of topsoil, revegetation (with native plant life), and other work necessary to restore the disturbed area for post-mining use. In general and where viable, an attempt to put the terrain back to the pre-mining contours is also of paramount importance.
Record of Decision	A document separate from, but associated with, an EIS that publicly and officially discloses the responsible official's decision on the proposed action (see 40 CFR 1505.2).
recoverable coal	The amount of coal that (is economically feasible to recover) can actually be recovered for sale from the demonstrated coal reserve base.
rental payment	Annual payment from a lessee to a lessor to maintain the lessee’s mineral lease rights.

resource management plan	A land-use plan prescribed by Federal Land Policy and Management Act that directs the use and allocation of public lands and resources managed by BLM. Prior to selection of the RMP, different alternative management plans are compared and evaluated in an EIS to determine which plan will best direct the management of the public lands and resources.
revegetation	The reestablishment and development of self-sustaining plant cover following land disturbance. This may occur through natural processes, or the natural processes may be enhanced by human assistance through seedbed preparation, reseeding, and mulching.
ROW	The right to pass over property owned by another. The strip of land over which facilities such as roadways, railroads, or power lines are built.
riparian	The area adjacent to rivers and streams that lies between the stream channel and upland terrain and that supports specific vegetation influenced by perennial and/or intermittent water.
riparian area	A form of wetland transition between permanently saturated wetlands and upland areas. A riparian area is defined as an area of land directly influenced by permanent (surface or subsurface) water. 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, hanging gardens, and areas surrounding seeps and springs. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.
royalty	A share of production that is free of the expense of production. It is generally paid by a lessee to a lessor of a mineral lease as part of the terms of the lease.
runoff	That portion of rainfall that is not absorbed; it may be used by vegetation, lost by evaporation, or it may find its way into streams as surface flow.
salinity	Refers to the solids such as sodium chloride (table salt) and alkali metals that are dissolved in water. In non-saltwater areas, the term “TDS” is often used as an equivalent term.
sandstone	A common sedimentary rock primarily composed of sand grains, mainly quartz, that are cemented together by other mineral material.
scoping	A public informational process required by NEPA to determine private and public concerns, scope of issues, and/or questions regarding a proposed action to be evaluated in an EIS.
sedimentation pond	An impoundment used to remove solids from water to meet water quality standards or effluent limitations before the water leaves the permit area (30 CFR 701.5).
sensitive noise receptor	Receptors that only consider noise as it relates to the human environment, for example, residences, hospitals, libraries, recreation areas, churches, etc.

sensitive species	Those species designated by a state director, usually in cooperation state natural heritage programs and the state agency responsible for managing the species as sensitive. They are those species that 1) could become endangered in or extirpated from a state, or within a significant portion of its distribution; 2) are under status review by USFWS and/or National Marine Fisheries Service; 3) are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution; 4) are undergoing significant current or predicted downward trends in population or density such that federal listed, proposed, or candidate or state listed status may become necessary; 5) typically have small and widely dispersed populations; 6) inhabit ecological refugia or other specialized or unique habitats; or 7) are state listed but which may be better conserved through application of BLM sensitive species status.
septarian	Carbonate concretionary mass formed in shale with hollow or crystal filled interiors. Sedimentary equivalent of geodes, which are mostly volcanic in origin.
Sevier Thrust Belt	Zone of low angle faulting- and folding-caused uplift that follows the Wasatch Front and that was active in the Cretaceous.
shale	A very fine-grained clastic rock or sediment consisting predominately of clay-sized particles.
significant impact	A qualitative term used to describe the anticipated importance of impacts to the human and or the environment as a result of a direct or indirect action (or actions).
siltstone	A fine-grained clastic rock consisting predominately of silt-sized particles.
skyglow	The wide-scale illumination of the night sky or parts of it. The most common cause of skyglow is artificial light that emits light pollution.
socioeconomics	The social and economic situation that might be affected by a proposed action.
soil survey	The systematic examination, description, classification, and mapping of soils in an area, usually a county. Soil surveys are classified according to the level of detail of field examination. Order I is the most detailed and Order V is the least detailed.
special status species	Includes proposed species, listed species, and candidate species under the ESA; state-listed species; and BLM state director-designated sensitive species (see BLM Manual 6840, Special Status Species Policy).
stipulations	Requirements that are part of the terms of a mineral lease. Some stipulations are standard on all federal leases. Other stipulations may be applied to specific leases at the discretion of the surface management agency to protect valuable surface resources or uses existing on those leases.
stratigraphic	Of, relating to, or determined by stratigraphy, which is the branch of geology dealing with the study of the nature, distribution, and relations of layered rocks in the earth’s crust.

strutting ground	An area used by Greater Sage-grouse in early spring for elaborate, ritualized courtship displays (see also Lek).
subbituminous	A lower rank of coal (35%–45% carbon) with a heating value between that of bituminous and lignite, usually 8,300 to 11,500 BTU per pound. Sub-bituminous coal contains a high percentage of volatile matter and moisture.
surface disturbance	Greater than casual-use actions created through mechanized or mechanical means that would cause soil mixing and result in alteration or removal of soil and vegetation, exposing the mineral soil to erosive processes to the extent that reclamation may be required. These actions may include the use of mechanized earth-moving equipment; truck-mounted drilling equipment; geophysical exploration; vehicle travel off routes in areas designated as limited or closed to OHV use; placement of surface facilities such as utilities, pipelines, structures, and oil and gas wells; new road construction; and use of pyrotechnics, explosives, and hazardous chemicals.
suspended solids	The very fine soil particles that remain in suspension in water for a considerable period of time without contact with the stream or river channel bottom.
threatened and endangered species	These species of plants or animals classified as threatened or endangered pursuant to Section 4 of the ESA. Any species that is in danger of extinction, or is likely to become so within the foreseeable future.
timing limitation	A fluid minerals leasing constraint that prohibits surface use during specified time periods to protect identified resource values. The constraint does not apply to the operation and maintenance of production facilities unless analysis demonstrates that such constraints are needed and that less stringent, project-specific constraints would be insufficient.
topography	Physical shape of the ground surface; the configuration of land surface including its relief, elevation, and the position of its natural and human-made features.
topsoil	The upper portion of a soil, usually dark colored and rich in organic material. It is more or less equivalent to the upper portion of an A horizon in an ABC soil.
TDS	The total quantity in milligrams per liter of dissolved materials in water.
uranium	A very hard, heavy, metallic element that is crucial to development of atomic energy.
vegetation type	A kind of existing plant community with distinguishable characteristics described in terms of the present vegetation that dominates an area.
vertebrate fossils	The fossilized remains of animals that possessed a backbone; examples are fish, amphibians, reptiles, dinosaurs, birds, and mammals.
VRM	The systematic means to identify visual values, establish objectives that provide the standards for managing those values, and evaluate the visual impacts of proposed projects to ensure that objectives are met.

visual resources	The physical features of a landscape that can be seen (e.g., land, water, vegetation, structures, and other features).
waterfowl	A bird that frequents water, especially a swimming bird such as a duck or swan.
wetlands	Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs (33 CFR 328.3[a][7][b]).
wild and scenic rivers	Rivers or sections of rivers designated by Congressional actions under the 1968 Wild and Scenic Rivers Act as wild, scenic, or recreational by an act of the Legislature of the state or states through which they flow. Wild and scenic rivers may be classified and administered under one or more of the following categories: **Wild river areas**: Rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. **Scenic river areas**: Rivers or sections of rivers that are free of impoundments, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. **Recreational river areas**: Rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.
wilderness	An area of undeveloped federal land designated wilderness by Congress, retaining its primeval character and influence, without permanent improvements or human habitation, protected and managed to preserve its natural conditions and that 1) generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable, 2) has outstanding opportunities for solitude or primitive and unconfined recreation, 3) has at least 5,000 acres or is of sufficient size to make practical its preservation and use in an unimpaired condition, and 4) also may contain features that are of ecological, geological, scientific, educational, scenic, or historical value. These characteristics were identified by Congress in the Wilderness Act of 1964.
wildfire	An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.
wildfire suppression	An appropriate management response to wildfire, escaped wildland fire use, or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

wildland fire	A non-structure fire, other than prescribed fire, that occurs in the wildland. Any fire originating from unplanned ignition.
wildland fire use	The application of the appropriate management response to naturally ignited wildland fires to accomplish specific resource management objectives in pre-defined designated areas outlined in fire management plans.
WUI	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.