

Glossary of Terms

Annual average daily traffic (AADT)

Daily traffic volumes averaged over all 365 days in the year.

Acid mine drainage

Drainage from mines and mine wastes with a pH between 2.0 and 4.5. It results from the oxidation of sulfides exposed during mining, which produces sulfuric acid and sulfate salts. The acid dissolves minerals in the rocks, degrading the quality of the drainage water.

Adit

An almost-horizontal entrance to a mine.

Area of Potential Effect (APE)

Geographic area likely to be affected by direct, indirect, and/or cumulative impacts of a proposed action.

Algal bloom

An excessive growth of algae on or near the surface of water, occurring naturally or as a result of an oversupply of nutrients from organic pollution.

Alluvial fan

A fan-shaped area of alluvium deposited by a river when reaching flatter land.

Attainment area

An area considered to have air quality as good as or better than the National Ambient Air Quality Standards defined in the Clean Air Act.

Avalanche

A large mass of snow, ice, soil, rock, or mixtures of these materials, falling, sliding, or flowing very rapidly under the force of gravity. Velocities can sometimes exceed 500 kilometers per hour.

Avalanche blast

A very destructive avalanche wind occurring when an avalanche is stopped abruptly, as when it falls vertically onto a valley floor or when it displaces a large volume of air by flowing horizontally for a long distance.

Braided

Composed of several interconnected tracks or channels that divide and reunite.

Brownfield

A tract of land that has been developed for industrial purposes, polluted, and then abandoned.

Cantilever

To construct something in such a way that it is attached or supported at only one end.

Catenary

Overhead wires that provide electricity for transit propulsion.

Collapsible soil

Deposits that undergo a sudden change in structural configuration when inundated with water, with an accompanying decrease in volume. This process is also known as *hydrocompaction*, *hydroconsolidation*, *collapse*, *settlement*, *shallow subsidence*, and *near-surface subsidence*. The volume change occurs with no change in vertical load, caused solely by the effects of water. Additional subsidence can be caused by solution of disseminated gypsum crystals in the soil when saturation occurs.

Criteria pollutant

A pollutant determined to be hazardous to human health and regulated under EPA's National Ambient Air Quality Standards. The 1970 amendments to the Clean Air Act require EPA to describe the health and welfare impacts of a pollutant as the "criteria" for inclusion in the regulatory regime.

Cultural resource

The physical remains of past human activity having demonstrable association with prehistoric or historical events, individuals, or cultural systems. Cultural resources may include archaeological sites, districts, and objects; standing historical structures, objects, or groups of resources; locations of important historic events; or places, objects, and living or nonliving things that are important to the practice and continuity of traditional cultures.

Cumulative impacts

Impacts that occur when the effects of an action are added to or interact with the effects of other human-initiated actions or natural events in a particular place and within a particular timeframe. Other known past, present, and future actions must be taken into account. Cumulative impacts combine to produce effects that are different than if each occurred in isolation. It is required by CEQ to address these impacts in NEPA documents. The APE is usually larger and the timeframe longer than for direct and indirect effect analyses.

dB(A)

The abbreviation for the *A-weighted sound level* measured in decibels that describes a receiver's noise at a specific moment in time. The letter *A* indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear filters sound.

Debris flow

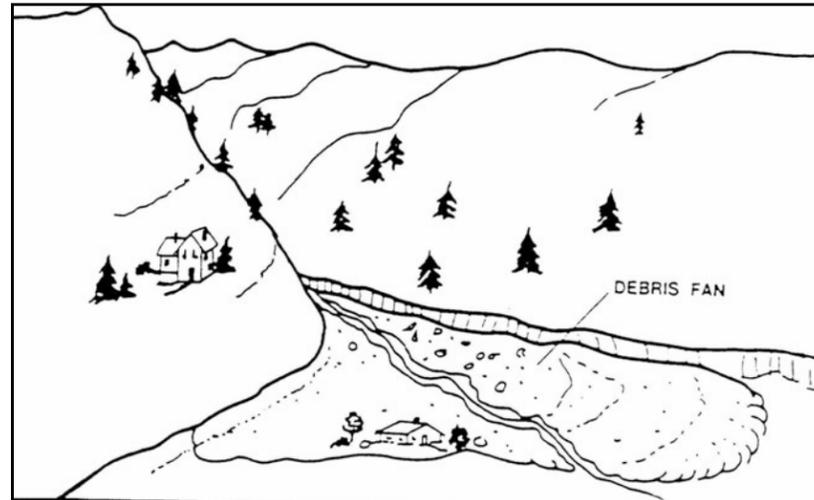
A moving mass of rock fragments, soil, and mud in which more than half of the particles are larger than sand size. *See debris fan and landslide.*

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Debris fan

The area where debris flow material is deposited. Multiple periods of deposition typically produce a fan shape over time.

Figure 1. Debris Fan Formed by Debris Flows (Jochim, et. al., 1988)



Denver metropolitan area

The greater Denver area, consisting of Adams, Arapahoe, Boulder, Denver, Douglas, and Jefferson counties.

Dewater

Remove or separate a portion of the water in a sludge or slurry to dry the sludge so that it can be handled and disposed of.

Direct impact

Effects that in some way alter the quality of life or fitness of a receptor, experienced immediately when a project is implemented.

Drainage tunnel

A drainage tunnel or adit is a horizontal opening designed to intersect mine workings and ore veins below the groundwater table to dewater the mines without pumping. Traditional use area is a place or landscape that is important to a traditional culture. It may include such things as a community, a sacred site, or an area from which food and other resources were obtained.

Ecotone

The zone where two vegetation types or successive stages meet.

Effluent

Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

Eutrophication

The slow aging process during which a lake, an estuary, or a bay evolves into a bog or marsh and eventually disappears. During the later stages of eutrophication, the water body is choked by abundant plant life due to higher levels of nutritive compounds such as nitrogen and phosphorus. Human activities can accelerate the process.

Expansive soil and rock

Soil and rock composed entirely or in part of clay or claystone; exhibits measurable swell when wet.

Extirpation

The loss or removal of a species from one or more specific areas but not from all areas.

Fault

A fracture in rock along which there has been observable displacement. Faults are rarely single planar units; normally they occur as parallel to subparallel sets of planes along which movement has taken place to a greater or lesser extent. Such sets are called fault or fracture-zones.

Fen

Wetlands with a highly organic upper soil horizon (more than 12 percent organic matter).

Friable

Descriptive of a rock or mineral that crumbles naturally or is easily broken, pulverized, or reduced to powder.

Front Range

The area of Colorado just east of the mountains, roughly from Fort Collins on the north, through Denver and Colorado Springs, south to Pueblo.

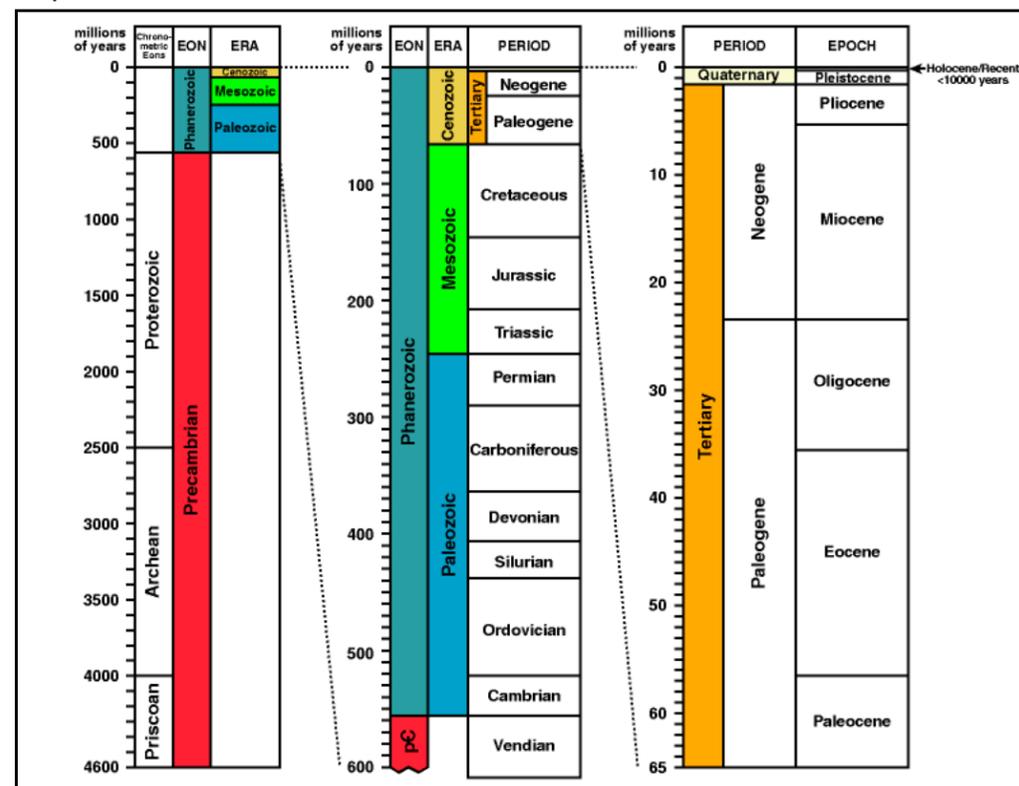
Geology

The study of the planet Earth: the materials of which it is made, the processes that act on these materials, the products formed, and the history of the planet and its life forms since its origin. Geology considers the physical forces that act on the Earth, the chemistry of its constituent materials, and the biology of its past inhabitants as revealed by fossils.

Geologic hazard

A naturally occurring or man-made geologic condition or phenomenon that presents a risk or potential danger to life and property. Examples include landslides, flooding, earthquakes, ground subsidence, faulting, dam leakage and failure, mining disasters, pollution, and waste disposal.

Geologic time periods



or a traditional use area. Not all such sites meet the specific NRHP criteria for historic property designation.

In situ

In its original place; unmoved and unexcavated; remaining at the site or in the subsurface.

Indirect effect

Effect on a receptor, its habitat, or its environment that occurs after project implementation; often not immediately obvious.

Krummholz

Small, misshapen trees and shrubs in small clusters near timberline.

Ldn

Noise level measurement over 24 hours that accounts for the influence of noise during both daylight and night hours. Ldn is calculated by averaging the 24-hour Leq measurement for each hour of the day, adding a 10-decibel penalty to Leq values occurring between 10 PM and 7 AM.

Leq

Measure of the increase in cumulative noise level over a specified time period, usually 1 hour (for example, when traffic noise is likely to have the greatest impact on noise levels).

Landslide

A perceptible movement of earth material (rock, debris, or soil) down a slope. The specific name for a landslide is defined by the type of movement and the type of material: rockfall, debris flow, mudflow, rotational earth flow, et cetera. (Varnes et al. 1978)

Geomorphology

The science that treats the general configuration of the Earth's surface; specifically, the study of the classification, description, nature, origin, and development of present landforms and their relationships to underlying structures, and the history of geologic changes as recorded by these surface features. The term applies especially to the genetic interpretation of landforms and is also used to describe features produced only by erosion or deposition.

Glory hole

A type of open-cut mining in which the orebody is worked from the top down in a conical excavation and the ore is removed by an underground system beneath the orebody. Synonym: *mill-hole mining*.

Gold Medal fishery

Designations made by CDOW based on more formal studies of fish population and fish weight and on "exceptional" recreational value.

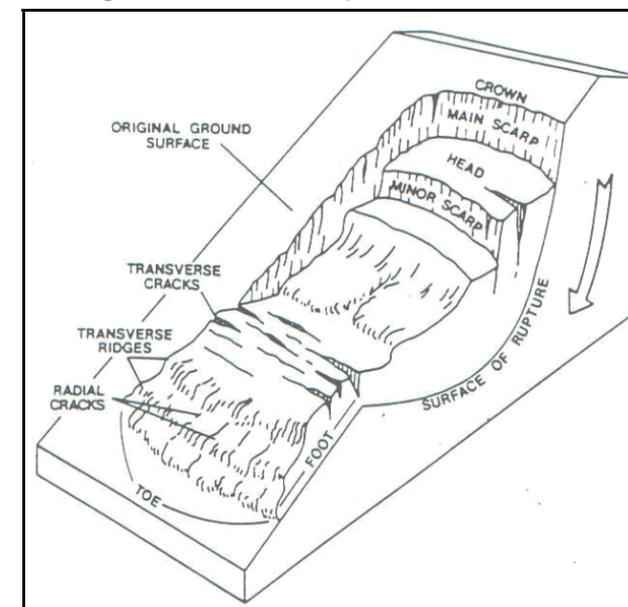
Habitat

The environment suitable to meet the needs of an animal, a fish, or a plant; includes food, water, shelter, and space.

Historic property

A legal term that refers specifically to any cultural resource listed on or eligible for inclusion in the National Register of Historic Places. A historic property can be an archaeological site, a historic site,

Figure 2. Block Diagram of Idealized Complex Landslide-Earth Flow (Varnes 1978)



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Linkage interference zone

A term for habitat connectivity that refers to the connection or interference with connection of habitats across a barrier. Linkage zones are not necessarily associated with predictable daily or seasonal movements.

Low-income population

Individuals living at or below 50 percent of an area's median income as defined by the Community Development Block Grant level for the county.

Maintenance area

An area in compliance with the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act.

Management indicator species

A list of wildlife species developed by the USFS and used to track ecological conditions in key habitats associated with each species.

Mill tailings

Remnant rock that was crushed and ground to 40 mesh size and processed through amalgamation or other procedures to extract precious metals.

Mine

(1) An underground excavation for the extraction of mineral deposits, in contrast to surface excavations such as quarries. The term is also applied to various types of open pit workings. (2) The area or property with a mineral deposit that is being excavated; a mining claim. (3) To excavate for and extract mineral deposits or building stone.

Mitigation measure

Action developed in response to an impact identified in the analysis that could be taken to avoid, reduce, or compensate for the projected impact. Usually includes appropriate monitoring and enforcement activities to comply with NEPA's intent.

Mudflow

Similar to a debris flow, with mud the predominant material. *See landslide.*

Nonattainment area

An area that fails to meet one or more National Ambient Air Quality Standards for the criteria pollutants designated by the Clean Air Act.

Prospect hole

General term for any shaft, pit, adit, drift, tunnel, or drill hole made for prospecting mineral-bearing ground. More specific terms such as *prospect shaft* and *prospect pit* are generally used.

Placer mine

The extraction and concentration of heavy metals or minerals from placer deposits by various methods, generally using running water. Also *hydraulic mining*, *drift mining*.

Receptor

Another term for an affected resource, either human or natural. NEPA provides a complete list of receptors that must be analyzed in EIS documents.

Re-entrained road dust

Material resuspended in the air by vehicles traveling on unpaved and paved roads. Re-entrained dust on road and pavement surfaces arises from winter sanding, vehicle tires tracking soil from unpaved roads, the erosion of the road surface itself, and the degradation of parts of the vehicle, especially the tires.

Residual impact

Any direct, indirect, or cumulative impact of an action that remains after application of all mitigation measures. When describing residual impacts, consideration must be given to future generations, long-term productivity of resources, and irreversible and irretrievable commitments of resources.

Riffle

A stretch of choppy water caused by a shoal or sandbar; a rapid.

Roadless area

USFS-managed lands that are larger than 5,000 acres or adjacent to Wilderness or Primitive Areas, contain no roads, and have been inventoried by USFS for potential inclusion in the Wilderness Protection System.

Rockfall

Can occur on any slope where loose rock exists; common in areas where bedrock is highly jointed and exposed in outcrops. Areas where joints dip downslope are especially prone to rockfall. Physical weathering effects such as freezing/thawing, significant temperature changes, increased pore pressure from water in the joints, and root wedging can loosen rock. *See landslides.*

Sacred site

A location important to the practice of traditional religion. While sacred sites' relationship to religions can enable the sites to become historic properties, they are also considered under statutes designed to protect First Amendment guarantees of the free practice of religion.

Scarp

A line of cliffs produced by faulting or erosion.

Secondary effect

Another term for indirect effect.

Sedimentation

The deposition of soil or mineral particles, usually into a water body or drainage.

Settling basin

(1) An artificial basin or trap designed to collect the suspended sediment of a stream before it flows into a reservoir and prevent rapid siltation of the reservoir; for example, a desilting basin. The settling basin is usually provided with means to draw off the clear water. (2) A sedimentation structure designed to remove pollutant materials from mill effluents; a tailings pond.

Solid waste

Nonliquid, nonsoluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Special management area

Public lands with federal management prescriptions that favor wildlife and their habitats because of limits they impose in some way on human activities.

State Transportation Improvement Plan

A plan that establishes state transportation spending for a period of six years.

Talus

A pile of rock fragments lying at the bottom of the cliff or steep slope from which they have broken off.

Traditional use area

An area or a landscape of importance to a traditional culture. It may include a community, a sacred site, or an area from which food and other resources were or are obtained.

Ungulates

A hoofed animal (typically mammal) of a polyphyletic group formerly considered a major mammalian taxon (Ungulata).

Vehicle mile of travel (VMT)

A unit to measure vehicle travel made by a private vehicle, such as an automobile, van, pickup truck, or motorcycle. Each mile traveled is counted as one vehicle mile regardless of the number of persons in the vehicle.

Vehicles per day (vpd)

This is a measure of traffic volume and is used as the unit for Average Annual Daily Traffic.

Vehicles per hour (vph)

A ratio used in defining the hourly volume.

Volume/capacity (V/C) ratio

The ratio of flow rate to capacity. The V/C may be the actual or projected rate of flow on a designated lane group during a peak 15-minute interval divided by the capacity of the lane group. The V/C ratio is a measure of capacity sufficiency, that is, whether or not the physical geometry provides sufficient capacity for the subject movement. Low V/C ratios depict relatively free flow conditions. High V/C ratios depict more congested conditions. Actual V/C ratios are calculated from vehicle count data (defining volume) and the geometrics of a roadway (determining capacity). V/C ratios are used to broadly define problem areas on a freeway and to make preliminary operational decisions concerning the freeway (for example, ramp metering rates). In some cases, the V/C ratio is used to define Level of Service.

Waste rock

Material excavated from mine workings and disposed of without further processing.

Weighted Hazard Index (WHI)

Compares the weighted accident rate, measured as weighted accidents (higher weight given to a higher severity accident) per million vehicle miles of travel, at a location to the statewide average weighted accident rate for similar roadways and determines if the observed rate is higher than the statewide average. If a WHI is greater than zero, it signifies that the location in question has a higher weighted accident rate than the statewide average and is, hence, a potentially problematic area in terms of either number of accidents observed or their severity.

Wilderness area

An area of at least 5,000 acres that contains most of its natural characteristics, is little influenced by human activities, and provides opportunities for solitude. Wilderness areas are protected and managed to preserve these natural conditions.

Wildlife movement corridor

A segment of land that maintains connectivity between areas of critical wildlife habitat, allowing members of a species to travel across and between landscapes.

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