

Glossary

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1 Glossary

2 A

3 **Acceleration of Gravity.** 32 feet per second squared (9.8 meters per second squared).

4 **Acre-foot/acre-feet.** A unit for measuring the volume of water equal to the quantity of water required to
5 cover one acre to a depth of one foot and is equal to 43,560 cubic feet or 325,851 gallons. The term is
6 commonly used in measuring volumes of water used or stored.

7 **Affected Environment.** A NEPA term that refers to a description of the environment of the area(s) to be
8 affected or created by the alternatives under consideration. The description must include baseline
9 information to create a basis for assessing or understanding the impacts that would result from
10 implementation of the alternatives. It must contain enough detail to support the impact analyses and
11 highlight environmentally sensitive resources (e.g., floodplains, wetlands, threatened and endangered
12 species, and archeological resources).

13 **Air Model.** A mathematical simulation of how air pollutants disperse in the ambient atmosphere.

14 **Air Pollutant.** Generally an airborne substance that could, in high enough concentrations, harm living
15 things or cause damage to materials. From a regulatory perspective, an air pollutant is a substance for
16 which emissions or atmospheric concentrations are regulated and for which maximum guideline levels
17 have been established due to potential harmful effects on human health and welfare.

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

20 **Alternative:** A NEPA term that refers to a way of achieving the same purpose and need for a project that
21 is different from the recommended proposal; alternatives should be studied, developed, and described to
22 address any proposal which involves unresolved conflicts concerning different uses of available
23 resources. Analysis scenarios presented in a comparative form, to facilitate a sharp definition of the
24 issues resulting in a basis for evaluation among options by the decision maker and the public.

25 **Ambient.** The environment as it exists at the point of measurement and against which changes or
26 impacts are measured.

27 **Aquatic Bird.** Wading, swimming, and diving birds, such as waterfowl, shorebirds, seabirds, and rails.

28 **Aquatic.** Occurring in, or closely associated with, water.

29 **Aquifer.** A body of rock that is sufficiently permeable to conduct groundwater and yield economically
30 significant quantities of water to wells, springs, sands, and soils.

31 **Archaeological Resource.** "Any material remains of past human life or activities of archaeological
32 interest..." These "include, but are not limited to: pottery, basketry, bottles, weapons, projectiles, tools,
33 structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human
34 skeletal materials, or any portion or piece of any of the foregoing items. Non-fossilized and fossilized
35 paleontological specimens, or any portion or piece thereof, shall not be considered archaeological
36 resources unless found in an archaeological context. No item shall be treated as an archaeological
37 resource unless such item is at least 100 years of age." (Archaeological Resource Protection Act of
38 1979, as amended, 16 USC 470bb(1))

- 1 **Archaeological Site.** A geographic locale that contains the material remains of prehistoric or historic
2 human activity.
- 3 **Archaeology.** The reconstruction of past cultures through their material remains and the study of how
4 cultures change over time.
- 5 **Area of Critical Environmental Concern (ACEC).** An area approved through a land use plan where
6 special management attention is required to protect and prevent irreparable damage to important
7 biological, cultural, historic, or scenic values, or other natural systems or processes, or to protect humans
8 from natural hazards.
- 9 **Artesian head.** The distance in a well (feet, meters) that groundwater under pressure is able to rise
10 above the level at which it is first encountered when the well taps the aquifer. The pressure in such an
11 aquifer commonly is called artesian pressure, and the formation containing artesian water is an artesian,
12 or confined, aquifer.
- 13 **Assumptions (for analysis).** The basis for framing the analysis. Assumptions often are identified at the
14 beginning of the environmental consequences section of an EA or EIS and, as needed, at the beginning
15 of the program-specific environmental consequences analysis.
- 16 **Attainment Area.** An area that the U.S. Environmental Protection Agency has designated as being in
17 compliance with one or more of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide,
18 nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for
19 some pollutants but not for others (see National Ambient Air Quality Standards (NAAQS), nonattainment
20 area).
- 21 **Avian.** Relating to birds.
- 22 **B**
- 23 **Bald and Golden Eagle Protection Act.** A law that prohibits the take, possession, selling, purchasing,
24 bartering, or transporting of live or dead bald or golden eagles, or any parts, nests, or eggs of these
25 birds.
- 26 **Baseline.** The existing environmental conditions against which impacts of the proposed action and its
27 alternatives can be compared. For a specific NEPA document, a further statement can be included about
28 the date or conditions that are considered the baseline.
- 29 **Best Available Control Technology (BACT).** Available devices, systems, or techniques for achieving
30 the maximum reduction of air pollutant emissions while considering energy, environmental, and
31 economic impacts. BACT is determined on a case-by-case basis for new sources or major modifications
32 to existing sources in areas that are in attainment of NAAQS. BACT does not permit emissions in excess
33 of those allowed under any Clean Air Act provisions. (See Lowest Achievable Emissions Rate [LAER],
34 Maximum Achievable Control Technology [MACT], Reasonably Achievable Control Technology [RACT],
35 and National Ambient Air Quality Standards [NAAQS].)
- 36 **Best Available Retrofit Technology (BART).** An emission limitation to reduce regional haze, based on
37 the degree of reduction achievable through the application of the best system of continuous emission
38 reduction for each pollutant which is emitted by an existing stationary facility. The emission limitation
39 must be established, on a case-by-case basis, taking into consideration the technology available, the
40 costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution
41 control equipment in use or in existence at the source, the remaining useful life of the source, and the
42 degree of improvement in visibility which may reasonably be anticipated to result from the use of such
43 technology. (40 CFR 51.301)

1 **Best Management Practices (BMPs).** A practice or combination of practices that are the most effective
2 and practical means of preventing or reducing the amount of environmental impact, including but not
3 limited to, pollution generated by nonpoint sources to a level compatible with water quality goals.

4 **Big Game.** Large animals that may be taken by hunters, pursuant to local government restrictions and
5 regulations.

6 **Bituminous Coal.** A rank class of coal defined as having less than 86 percent fixed carbon, more than
7 14 percent volatile matter on a dry, mineral-matter-free basis, and from 10,500 to 14,00 British thermal
8 units (Btu's) per pound on a moist, mineral-matter-free basis.

9 C

10 **Candidate Species.** An ESA term that refers to a plant or animal species for which the USFWS or
11 NOAA Fisheries has on file sufficient information on biological vulnerability and threats to support a
12 proposal to list as endangered or threatened.

13 **Categorical Exclusion (CE).** A NEPA term, referring to a category of actions that do not individually or
14 cumulatively have a significant effect on the human environment and have been found to have no such
15 effect in procedures adopted by a Federal agency pursuant to NEPA.

16 **Chemical of Potential Concern (COPC) or Chemical of Potential Ecological Concern (COPEC).** A
17 chemical that is potentially site related and of sufficient quality to quantify risk. Chosen primarily on the
18 basis of an evaluation of the chemical analytical data and relationship of measured levels to background
19 levels. COPC is typically used for human health risk assessments and COPEC is used for ecological risk
20 assessments.

21 **Class I Area.** A specifically designated area where the degradation of air quality is stringently restricted
22 (e.g., many national parks, wilderness areas). (See Prevention of Significant Deterioration.)

23 **Climate.** The average or prevailing weather conditions of a place over a lengthy period of years (Bureau
24 of Land Management Technical Reference 4400-7).

25 **Colorado River Compact of 1922.** Provides for the equitable division and apportionment of the use of
26 the waters of the Colorado River System between the Upper Basin states (Colorado, New Mexico, Utah,
27 and Wyoming) and the Lower Basin states (Arizona, California, and Nevada).

28 **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).** A
29 Federal law (also known as Superfund), enacted in 1980 and reauthorized in 1986, that provides the
30 legal authority for emergency response and cleanup of hazardous substances released into the
31 environment and for the cleanup of inactive waste sites.

32 **Conservation Agreement.** An ESA term referring to a voluntary agreement between FWS or NOAA
33 Fisheries and other federal or non-federal landowners to identify specific conservation measures that the
34 participants of the agreement will undertake to conserve species covered by the agreement, none of
35 which are listed under the Endangered Species Act, with the intention of preventing any need to list the
36 species.

37 **Consumptive Use.** The portion of water withdrawn from a surface water or groundwater source that is
38 consumed for a particular use (i.e., irrigation, domestic needs, and industry), and does not return to its
39 original source or another body of water.

40 **Cooperating Agency.** A NEPA term, referring to any Federal agency, other than a lead agency, that
41 has jurisdiction by law or special expertise with respect to any environmental impact involved in a

1 proposed project or project alternative. A State or local agency of similar qualifications or, when the
 2 effects are on lands of tribal interest, a Native American tribe may, by agreement with the lead agencies,
 3 also become a cooperating agency

4 **Corona.** The electrical breakdown of air into charged particles caused by the electrical field at the
 5 surface of conductors, insulators, and hardware of energized high-voltage transmission lines.

6 **Council on Environmental Quality (CEQ).** Established under Title II of NEPA to develop Federal
 7 agency-wide policy and regulations for implementing the procedural provisions of NEPA, resolve
 8 interagency disagreements concerning proposed major Federal actions, and ensure that Federal agency
 9 programs and procedures are in compliance with NEPA.

10 **Criteria Pollutant.** An air pollutant that is regulated by NAAQS. The Environmental Protection Agency
 11 must describe the characteristics and potential health and welfare effects that form the basis for setting,
 12 or revising, the standard for each regulated pollutant. Criteria pollutants include sulfur dioxide, nitrogen
 13 dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter, less than
 14 10 micrometers (0.0004 inch) in diameter, and less than 2.5 micrometers (0.0001 inch) in diameter.
 15 Pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes
 16 available. (See National Ambient Air Quality Standards.) Note: Sometimes pollutants regulated by state
 17 laws also are called criteria pollutants.

18 **Critical Habitat (threatened and endangered species).** As used by the ESA, the specific areas within
 19 the geographical area occupied by the species that contain those physical or biological features essential
 20 to the considerations or protection, and specific areas outside the geographical area occupied by the
 21 species, that are essential for the conservation of the species.

22 **Crucial Range.** Can describe any particular seasonal range or habitat component (often winter or year-
 23 long range in the project area) but describes that component which has been documented as the
 24 determining factor in a population's ability to maintain itself at a certain level (theoretically at or above the
 25 state wildlife agency population objective) over the long term.

26 **Cultural Property.** A definite location of past human activity, occupation, or use identifiable through field
 27 inventory (survey), historical documentation, or oral evidence (BLM Manual 8100).

28 **Cultural Resources.** A general term meaning any cultural property and any traditional lifeway value
 29 (BLM Manual 8100). It includes prehistoric, historic, ethnographic, tribal heritage, ethnohistoric,
 30 engineering, architectural, and technological resources.

31 **Cultural Resources Investigations**

32 **Class I (Files Search) Inventory.** A file search completed to identify all previously conducted
 33 cultural resources investigations and previously recorded cultural resources within a defined distance
 34 (typically 1 mile) on either side of proposed rights-of-way, roads, and other project facilities.

35 **Class II Inventory.** A reconnaissance-level Inventory typically combined with a Class I Inventory.
 36 Class II is usually used as a methodology in large scale projects for locating areas with good or
 37 better cultural resources potential to determine whether previously recorded cultural resources exist
 38 within the proposed project area, and to determine whether portions of the project area have been
 39 adequately surveyed in the recent past.

40 **Class III (Pedestrian) Inventory.** A Class III intensive field inventory to locate and record cultural
 41 resources and places of traditional, cultural, and religious importance to Native Americans.

- 1 **Cumulative Effect/Cumulative Impact.** As used by NEPA, the impact or impacts that result from
2 identified actions when they are added to other past, present, and reasonably foreseeable future actions
3 regardless of who undertakes such other actions. Cumulative effects can result from individually minor
4 but collectively significant actions taking place over a period of time.
- 5 **D**
- 6 **dBA.** An “A” weighting is commonly used when sound is measured in decibels. It emphasizes vibrations
7 at middle frequencies where the human ear is most sensitive, and puts less emphasis on higher and
8 lower frequencies to which the ear is not sensitive.
- 9 **Decommissioning.** Removal of project facilities at the end of their operational life.
- 10 **Desiccation cracks.** Cracks that form in clayey soils because of low moisture content.
- 11 **Designated Wilderness.** See Wilderness.
- 12 **Dispersed Recreation.** Passive or active outdoor recreation that occurs outside of developed sites in an
13 unconcentrated manor.
- 14 **Drawdown.** The lowering of the water level in a well, spring, or waterbody as a result of water withdrawal
15 in another area; the reduction in head at a point caused by the withdrawal of water from an aquifer.
- 16 **Drawdown Contour.** A boundary derived from water modeling that depicts a certain reduction in the
17 water level compared to its previous level.
- 18 **E**
- 19 **Earnings.** Wages and salaries, other labor income, and proprietor’s income (including inventory
20 valuation and capital consumption adjustments).
- 21 **Ecological Resources.** Animals, plants, and the habitats in which they live.
- 22 **Ecological System.** All the organisms in a particular region and the environment in which they live. The
23 elements interact with each other in some way, and so depend on each other either directly or indirectly.
- 24 **Ecology.** The science of the interrelationships between organisms and their environment.
- 25 **Effluent.** A waste stream flowing into the atmosphere, surface water, groundwater, or soil. Most
26 frequently the term applies to wastes discharged to surface waters.
- 27 **Electromagnetic Fields (EMF).** A combination of electric and magnetic fields of energy that surround
28 any electrical device that is plugged in and turned on. EMFs are found near powerlines and other
29 electronic devices.
- 30 **Endangered Species Act (ESA) of 1973, as amended.** Federal legislation intended to provide a
31 means to conserve the ecosystems upon which endangered and threatened species depend, and which
32 provides programs for the conservation of those species, thus preventing extinction of plants and
33 animals.
- 34 **Endangered Species.** Any species defined through the Endangered Species Act of 1973, as amended,
35 as being in danger of extinction throughout all or a significant portion of its range; designations of
36 endangered species are published in the Federal Register.

- 1 **Endemic Species.** Species native to, and restricted to, a particular geographical region, community
2 type, or specific habitat; generally used for species with comparatively restricted distribution.
- 3 **Environmental Assessment (EA).** A NEPA term, which refers to a concise public document that a
4 federal agency prepares under the National Environmental Policy Act to provide sufficient evidence and
5 analysis to determine whether a proposed action requires preparation of an Environmental Impact
6 Statement (EIS) or whether a Finding of No Significant Impact can be issued. An EA must include brief
7 discussions on the need for the proposal, the alternatives, the environmental impacts of the proposed
8 action and alternatives, and a list of agencies and persons consulted.
- 9 **Environmental Consequences.** Environmental effects of project alternatives, including the proposed
10 action, which cannot be avoided; the relationship between short-term uses of the human environment,
11 and any irreversible or irretrievable commitments of resources which would be involved if the proposal
12 should be implemented.
- 13 **Environmental Impact Statement (EIS).** A NEPA term, referring to a formal document that is filed with
14 the U.S. Environmental Protection Agency and that considers significant environmental impacts
15 expected to result from implementation of a major federal action.
- 16 **Environmental Justice.** The fair treatment of people of all races, cultures, incomes, and educational
17 levels with respect to the development, implementation, and enforcement of environmental laws,
18 regulations, and policies.
- 19 **F**
- 20 **Fault.** A fault is a dislocation in the earth whereby there is movement along a fracture with the movement
21 on either side of the fracture parallel to the plane of the fracture. An active fault is a fault that movement
22 has occurred within the last 10,000 years. A Quaternary fault is a fault that that has moved within the last
23 1.6 million years.
- 24 **Federal Register.** The official daily publication for rules, proposed rules, and notices of federal agencies
25 and organizations, as well as executive orders and other presidential documents.
- 26 **Firming.** A secondary source of energy to compensate for the normal variability and irregularity of
27 renewable energy generation (e.g., if part of a solar array is shaded by cloud cover) in order to assure
28 delivery of a specific quantity of energy during a defined period of time.
- 29 **Fissures or Earth Fissures.** Cracks that form as a result of the lowering of groundwater levels in
30 unconsolidated aquifer materials such as valley fill sediments that occur in parts of Arizona.
- 31 **Floodplain.** A nearly level alluvial plain that borders a stream and is subject to inundation under
32 flood-stage conditions unless protected artificially. It is usually a constructional landform built of sediment
33 deposited during overflow and lateral migration of the stream.
- 34 **Forage.** Plant material consumed by, or available to, grazing animals.
- 35 **Fragmentation.** The breaking up of contiguous areas of vegetation/habitat into smaller patches.
- 36 **Fugitive Emissions.** 1. Emissions that do not pass through a stack, vent, chimney, or similar opening
37 where they could be captured by a control device. 2. Any air pollutant emitted to the atmosphere other
38 than from a stack. Sources of fugitive emissions include pumps; valves; flanges; seals; area sources
39 such as ponds, lagoons, landfills, piles of stored material (e.g., coal); and road construction areas or
40 other areas where earthwork is occurring.

1 **G**

2 **Game Species.** Species of animals that are hunted or fished, for purposes of sport, recreation, and food
3 capture.

4 **Geographic Information System (GIS).** A computer system capable of storing, analyzing, and
5 displaying data and describing places on the earth's surface.

6 **Greenhouse Gas.** Gases which absorb outgoing terrestrial radiation, such as water vapor, methane,
7 chlorofluorocarbons, and carbon dioxide.

8 **Groundwater.** Subsurface water that is in the zone of saturation. The top surface of the groundwater is
9 the "water table." Source of water for wells, seepage, springs.

10 **H**

11 **Habitat Edges.** Changes in vegetation and animal communities that are caused by one habitat type
12 being immediately adjacent to a different habitat type. Habitat edges can include changes in
13 temperature, humidity, and plant and wildlife species present in the area.

14 **Habitat.** An environment that meets a specific set of physical, biological, temporal, or spatial
15 characteristics that satisfy the requirements of a plant or animal species or group of species for part or all
16 of its life cycle.

17 **Hazardous Air Pollutants (HAPs).** Air pollutants not covered by the National Ambient Air Quality
18 Standards but which may present a threat of adverse human health effects or adverse environmental
19 effects. Those specifically listed in 40 CFR 61.01 are asbestos, benzene, beryllium, coke oven
20 emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. More broadly, HAPs are any of
21 the 189 pollutants listed in or pursuant to section 112(b) of the Clean Air Act. Very generally, HAPs are
22 any air pollutants that may realistically be expected to pose a threat to human health or welfare.

23 **Hazardous Waste.** A category of waste regulated under the Resource Conservation and Recovery Act
24 (RCRA). To be considered hazardous, a waste must be a solid waste under RCRA and must exhibit at
25 least one of four characteristics described in 40 CFR 261.20 through 40 CFR 261.24 (i.e., ignitability,
26 corrosivity, reactivity, or toxicity) or be specifically listed by the Environmental Protection Agency in
27 40 CFR 261.31 through 40 CFR 261.33. Source, special nuclear, or by-product materials as defined by
28 the Atomic Energy Act are not hazardous waste because they are not solid waste under RCRA.

29 **Heavy Metals.** Metallic and semimetallic elements that are generally highly toxic to plants and animals
30 and that tend to accumulate in food chains. Heavy metals include lead, mercury, cadmium, chromium,
31 and arsenic. . EPA regulation 40 CFR 258.4 refers to the following monitoring parameters as "heavy
32 metals": antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel,
33 selenium, silver, thallium, vanadium, and zinc. Note: The term "heavy metals" is deeply embedded in
34 environmental usage and will doubtless continue to be used. However, some of the elements commonly
35 called "heavy metals" are not heavy (e.g., beryllium) or are not true metals (e.g., arsenic). Therefore,
36 "heavy metals" should be avoided whenever more precise wording can be substituted.

37 **Historic Property.** "...any prehistoric or historic district, site, building, structure, or object included in, or
38 eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the
39 Interior. The term includes, for purposes of these regulations, artifacts, records, and remains that are
40 related to and located within such properties." (36 CFR 800.16 (l)(1))

1 **Human Health Risk Assessment (HHRA).** The process used to estimate the nature and probability of
2 adverse health effects in humans who may be exposed to hazards in contaminated environmental
3 media, now or in the future.

4 **Hydrologically Connected.** Areas where the groundwater is linked and flow is contiguous.

5 **I**

6 **Impact.** An impact has both space and time components and can be described as the change in an
7 environmental factor or characteristic over a specific period and within a defined area. The change
8 results from a particular activity compared with the situation which would have occurred had the activity
9 not been initiated. An impact may be beneficial or adverse.

10 **Indian Trust Assets.** Lands, natural resources, or other assets held in trust or restricted against
11 alienation by the United States for Native American Tribes or individual Native Americans.

12 **Indian Trust Resources.** Those natural resources, either on or off Indian lands, retained by or reserved
13 by or for Indian Tribes through treaties, statutes, judicial decisions, and Executive Orders, which are
14 protected by a fiduciary obligation on the part of the United States.

15 **Indigenous.** Living naturally within a given area and part of the area's flora or fauna prior to human
16 settlement of the region.

17 **Indirect Effect.** A NEPA term that refers to effects caused by the Federal action that are later in time or
18 farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-
19 inducing effects and other effects related to induced changes in the pattern of land use, population
20 density or growth rate, and related effects on air and water and other natural systems, including
21 ecosystems.

22 **Intermittent Stream.** A stream which carries water a considerable portion of the time, but which ceases
23 to flow occasionally or seasonally because bed seepage and evapotranspiration exceed the available
24 water supply.

25 **J**

26 **Jurisdictional Wetlands.** Those wetlands protected by the Clean Water Act. They must have a
27 minimum of one positive wetland indicator from each parameter (i.e., vegetation, soil, and hydrology).
28 The U.S. Army Corps of Engineers requires a permit to fill or dredge jurisdictional wetlands.

29 **K**

30 **Key Observation Point.** An observer position on a travel route used to determine visible area.

31 **L**

32 **Land Use Plan.** A land use plan is a public document that sets aside different areas for different uses,
33 and describes what activities are permitted or not, and any limitations or conditions associated with such
34 use.

35 **Lead Agency.** The agency or agencies responsible for preparing the environmental impact statement.

36 **Lowest Achievable Emission Rate (LAER).** The emissions rate permitted for new sources or major
37 modifications of existing sources in areas that are not in attainment of NAAQS. The LAER is defined on
38 a case-by-case basis, according to the regulations found in 40 CFR 51.165.

1 **Low-Income Population.** Low-income populations, defined in terms of Bureau of the Census annual
2 statistical poverty levels (Current Population Reports, Series P-60 on Income and Poverty), may consist
3 of groups or individuals who live in geographic proximity to one another or who are geographically
4 dispersed or transient (such as migrant workers or Native Americans), where either type of group
5 experiences common conditions of environmental exposure or effect.

6 **M**

7 **Major Federal Action.** A NEPA term referring to an action with effects that may be major and which is
8 potentially subject to Federal control and responsibility (40 CFR 1508.18).

9 **Maximum Achievable Control Technology (MACT).** Technology for achieving the maximum control of
10 air emissions from major sources of hazardous air pollutants, using particularly stringent control devices,
11 as prescribed in 40 CFR 63.41 for new sources and in 40 CFR 63.51 for existing sources.

12 **Migration Routes.** Important areas used by wildlife to connect seasonal habitats.

13 **Migratory Bird Treaty Act.** A law enacted in 1918 that prohibits pursuing, hunting, taking, capturing,
14 killing, possessing, selling, bartering, purchasing, delivering, transporting, and receiving any migratory
15 birds, parts, nests, or eggs.

16 **Migratory Bird.** A bird that moves seasonally to different ranges to maximize breeding and feeding
17 opportunities.

18 **Minority Population.** Minority populations exist where either: (a) the minority population of the affected
19 area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully
20 greater than in the general population or other appropriate unit of geographic analysis (such as a
21 governing body's jurisdiction, a neighborhood, census tract, or other similar unit). "Minority" refers to
22 individuals who are members of the following population groups: American Indian or Alaskan Native;
23 Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. "Minority populations" include either a
24 single minority group or the total of all minority persons in the affected area. They may consist of groups
25 of individuals living in geographic proximity to one another or a geographically dispersed/transient set of
26 individuals (such as migrant workers or Native Americans), where either type of group experiences
27 common conditions of environmental exposure or effect.

28 **Mitigate, Mitigation.** 1) Avoiding or reducing possible adverse impacts to a resource by limiting the
29 timing, location, or magnitude of an action and its implementation; 2) rectifying possible adverse impact
30 by repairing, rehabilitating or restoring the affected environment or resource; 3) reducing or eliminating
31 adverse impacts by preservation and maintenance operations during the life of an action.

32 **Mitigation Measure.** A measure or action taken to reduce the adverse impacts to the environment from
33 implementation of a project or another action. Such measures may include avoidance, replacement,
34 restoration, relocation, timing of operations, etc.

35 **Monitoring.** The periodic observation and orderly collection of data to evaluate: 1) Effects of
36 management actions; and 2) effectiveness of actions in meeting management objectives (43 Code of
37 Federal Regulations 4100.0.5). The orderly collection, analysis, and interpretation of resource data to
38 evaluate progress toward meeting management objectives. (BLM Technical Reference 4400-7).

39 **N**

40 **National Ambient Air Quality Standards (NAAQS).** The allowable concentrations of air pollutants in
41 the ambient (public outdoor) air. National ambient air quality standards are based on the air quality

1 criteria and divided into primary standards (allowing an adequate margin of safety to protect the public
2 health) and secondary standards (allowing an adequate margin of safety to protect the public welfare).

3 **National Emissions Standards for Hazardous Air Pollutants (NESHAPs).** Emissions standards set
4 by the Environmental Protection Agency for air pollutants which are not covered by NAAQS and which
5 may, at sufficiently high levels, cause increased fatalities, irreversible health effects, or incapacitating
6 illness. These standards are found in 40 CFR Parts 61 and 63. NESHAPs are given for many specific
7 categories of sources (e.g., equipment leaks, industrial process cooling towers, dry cleaning facilities,
8 petroleum *refineries*).

9 **National Environmental Policy Act of 1969 (NEPA).** A Federal environmental law that established a
10 U.S. national policy promoting the enhancement of the environment; also established the President's
11 Council on Environmental Quality (CEQ). NEPA's most significant effect was to set up procedural
12 requirements for all federal government agencies to prepare Environmental Assessments (EAs) and
13 Environmental Impact Statements (EISs) containing statements of the environmental effects of proposed
14 federal agency actions.

15 **National Historic Preservation Act (NHPA).** A federal law providing that property resources with
16 significant national historic value be placed on the National Register of Historic Places. It does not
17 require permits; rather, it mandates consultation with the proper agencies whenever it is determined that
18 a proposed action might affect a historic property.

19 **National Monument.** An area designated to protect objects of scientific and historic interest by public
20 proclamation by the President (under the Antiquities Act of 1906) or by Congress for historic landmarks,
21 historic, and prehistoric structures, or other objects of historic or scientific interest situated upon the
22 public lands and to provide for the management of associated features and/or values.

23 **National Pollutant Discharge Elimination System (NPDES).** A program authorized by the Clean
24 Water Act which prohibits discharge of pollutants into waters of the United States unless a special permit
25 is issued by the Environmental Protection Agency, a state, or, where delegated, a tribal government on
26 an Indian reservation. The NPDES permit lists either permissible discharges, the level of cleanup
27 technology required for wastewater, or both.

28 **National Recreation Area.** An area designated by Congress in order to assure the conservation and
29 protection of certain natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the
30 enhancement of associated recreational values.

31 **National Register of Historic Places.** A register of districts, sites, buildings, structures, and objects,
32 significant in American history, architecture, archaeology and culture, established by the National Historic
33 Preservation Act and maintained by the Secretary of the Interior.

34 **Native American.** Of, or relating to, a tribe, people, or culture that is indigenous to the United States.

35 **Native Species.** With respect to a particular ecological system, a species that, other than as a result of
36 an introduction, historically occurred or currently occurs in that ecological system.

37 **Natural Recharge.** Replenishment of groundwater storage from naturally-occurring surface water
38 sources such as rain, snow-melt, or stream flows.

39 **No Action Alternative.** A NEPA term that refers to the alternative in which the proposed Federal action
40 is not taken (40 CFR 1502.14(d)). For many Federal actions, the No Action Alternative represents a
41 scenario in which current conditions and trends are projected into the future without another proposed
42 action, such as updating a land management plan. In other cases, the No Action Alternative represents
43 the future in which the Federal action does not take place and the project is not implemented. In the

1 case of the Navajo Generating Station-Kayenta Mine Complex Project, under the No Action Alternative,
2 the power plant would cease operation, the plant lease would not be renewed, and the Kayenta Mine
3 permit revision application would not be approved.

4 **Nonattainment Area.** An area that the U.S. Environmental Protection Agency has designated as not
5 meeting (i.e., not being in attainment of) one or more of the National Ambient Air Quality Standards
6 (NAAQS) for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An
7 area may be in attainment for some pollutants, but not for others. (See attainment area, National
8 Ambient Air Quality Standards [NAAQS], and particulate matter.)

9 **Nongame Species.** Those wildlife species that are not legally hunted.

10 **Notice of Intent (NOI).** A notice published in the *Federal Register* that an environmental impact
11 statement will be prepared and considered.

12 **O**

13 **Obligate Phreatophyte.** Plants which typically require access to groundwater at shallow soil depths for
14 the majority of the year.

15 **Occupational Safety and Health Administration (OSHA).** The main federal agency charged with
16 enforcement of safety and health legislation.

17 **P**

18 **Paleontological Resources.** Any fossilized remains, traces, or imprints of organisms, preserved in or
19 on the earth's crust, that are of paleontological interest and that provide information about the history of
20 life on earth (P.L. 111-011).

21 **Paleontology.** The study of past life on earth through the preservation and classification of fossils
22 (naturally preserved remains or impressions of organisms).

23 **Particulate matter (PM), PM₁₀, PM_{2.5}.** Any finely divided solid or liquid material, other than uncombined
24 (i.e., pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM₁₀
25 includes only those particles equal to or less than 10 micrometers (0.0004 inch) in diameter; PM_{2.5}
26 includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter. Note: The
27 applicable regulations express the diameter as the aerodynamic diameter. This is not the true diameter,
28 but is the diameter of a spherical particle of unit density (i.e., 1 gram/cubic centimeter) which behaves the
29 same way as the particle under consideration. Thus, for example, a spherical particle 10 micrometers in
30 diameter with greater than unit density would not be included as PM₁₀ because it would fall at the same
31 rate as a particle with unit density and diameter greater than 10 micrometers.

32 **Perennial Springs.** A spring in which water is present during all seasons of the year.

33 **Perennial Stream.** A stream in which water is present during all seasons of the year.

34 **Perennial Yield (sometimes also referred to as sustainable yield).** The amount of usable water from
35 a ground-water aquifer that can be economically withdrawn and consumed each year for an indefinite
36 period of time. It cannot exceed the natural recharge to that aquifer and ultimately is limited to a
37 maximum amount of discharge that can be utilized for beneficial use.

38 **Permeability.** The quality of the soil that enables water to move downward through the profile,
39 measured as the number of inches per hour that water moves downward through the saturated soil.

1 **Phase I Environmental Site Assessment (ESA).** A Phase I ESA is an inquiry conducted to determine if
2 contamination by hazardous substances as defined by CERCLA is present at a particular property. A
3 Phase I ESA inquiry is conducted under standards developed by the American Society for Testing and
4 Materials (ASTM) and USEPA rules. A Phase I ESA involves site inspection, records review, and
5 interviews with knowledgeable persons to determine whether current and past uses of a property
6 indicate the potential presence of contamination. Phase I ESA's are primarily conducted by prospective
7 buyers or lenders pursuant to transactions or lending involving real property in order to provide the basis
8 of the "innocent landowner" defense under CERCLA. If a Phase I ESA indicates the potential for
9 contamination, a Phase II ESA may be conducted to verify the presence of contamination. The Phase II
10 ESA may involve the sampling and testing of soil, water, and other media.

11 **Piezometric Surface.** The imaginary surface to which groundwater rises under hydrostatic pressure in
12 wells. It is an imaginary or hypothetical surface of the pressure (or artesian) head throughout all or part
13 of a confined or semi-confined aquifer; analogous to the water table of an unconfined aquifer.

14 **Plume.** The elongated volume of contaminated water or air originating at a pollutant source such as an
15 outlet pipe or a smokestack. A plume eventually diffuses into a larger volume of less contaminated
16 material as it is transported away from the source.

17 **Potential Fossil Yield Classification System (PFYC).** A system used by some federal agencies to
18 classify geologic units based on the relative potential of valuable vertebrate fossils or scientifically
19 important invertebrate or plant fossils. PFYC has fossil potential classes that range from one (the lowest
20 potential) to five (the highest potential).

21 **Prevention of Significant Deterioration (of air quality) (PSD).** Regulations established to prevent
22 significant deterioration of air quality in areas that already meet NAAQS. Specific details of PSD are
23 found in 40 CFR 51.166. Among other provisions, cumulative increases in sulfur dioxide, nitrogen
24 dioxide, and PM-10 levels after specified baseline dates must not exceed specified maximum allowable
25 amounts. These allowable increases, also known as increments, are especially stringent in areas
26 designated as Class I areas (e.g., national parks, wilderness areas) where the preservation of clean air is
27 particularly important. All areas not designated as Class I are currently designated as Class II. Maximum
28 increments in pollutant levels are also given in 40 CFR 51.166 for Class III areas, if any such areas
29 should be so designated by EPA. Class III increments are less stringent than those for Class I or Class II
30 areas.

31 **Programmatic Agreement.** A document that records the terms and conditions agreed upon to resolve
32 the potential adverse effects of a Federal agency program, complex undertaking or other situations in
33 accordance with 36 CFR 800.14(b).

34 **Proponents.** The non-Federal sponsors of a proposed project or undertaking that requires a Federal
35 action. For the Navajo Generating Station-Kayenta Mine Complex Project, the proponents are Salt River
36 Project Agricultural Improvement and Power District (SRP), which is the operating agent of the NGS, and
37 Peabody Western Coal Company (PWCC), which is the owner/operator of the Kayenta Mine.

38 **Proposed Action.** A NEPA term referring to a plan that contains sufficient details about the intended
39 actions to be taken, or that will result, to allow alternatives to be developed and its environmental impacts
40 analyzed.

41 **Public Health.** The science of protecting the safety and improving the health of communities through
42 education, policy making and research for disease and injury prevention.

43 **Public Scoping.** A NEPA term referring to discussions with and disclosure to agencies and the public
44 with regard to a project or undertaking wherein areas of concern or issues to be addressed in a NEPA
45 document are determined. (See Scope and Scoping.)

1 **Pumping Effects.** Any impact to natural or man-made resources that can be directly attributed to
2 groundwater pumping.

3 **Q**

4

5 **R**

6 **Raptor.** A bird of prey that feeds upon smaller animals.

7 **Reasonably Achievable Control Technology (RACT).** Technology for control of air pollutant
8 emissions from existing sources in areas that are not in attainment of NAAQS. RACT may include
9 devices, systems, process modifications, or other apparatus or techniques that are reasonably
10 achievable taking into account: (1) the necessity of imposing such controls in order to attain and maintain
11 an NAAQS; (2) the social, environmental, and economic impact of such controls; and (3) alternative
12 means of providing for attainment and maintenance of such a standard.

13 **Reclamation.** The process by which lands disturbed as a result of human activity are restored by
14 grading, planting, seeding, etc., to stabilize the disturbed area and simulate original conditions.

15 **Record of Decision.** A NEPA term which refers to a document separate from but associated with an
16 environmental impact statement (EIS) that publicly and officially discloses the responsible agency's
17 decision on the EIS alternative to be implemented.

18 **Regional Air Quality.** The measure in the outdoor atmosphere of one or more contaminants such as
19 dust, fumes, gas, mist, odor, smoke, or vapor.

20 **Regional Haze.** Visibility impairment that is caused by the emission of air pollutants from numerous
21 sources located over a wide geographic area. Such sources include, but are not limited to, major and
22 minor stationary sources, mobile sources, and area sources. (40 CFR 51.301)

23 **Reserve Power.** The electrical energy required for Central Arizona Project pumping requirements, which
24 is currently approximately two-thirds of the United States' 24.3 percent interest in the power and energy
25 generated at NGS.

26 **Resource Conservation and Recovery Act (RCRA).** A law that gives the U.S. Environmental
27 Protection Agency the authority to control hazardous waste from "cradle to grave" (i.e., from the point of
28 generation to the point of ultimate disposal), including its minimization, generation, transportation,
29 treatment, storage, and disposal. RCRA also sets forth a framework for the management of non-
30 hazardous solid wastes.

31 **Resource Management Plan.** A Bureau of Land Management multiple-use planning document,
32 prepared in accordance with Section 202 of the Federal Land Policy and Management Act, that:

- 33
- Establishes resource conditions goals and objectives to be attained;
 - 34 • Allocates resources and identifies allowable uses;
 - 35 • Identifies land area for limited, restrictive, or exclusive uses; and
 - 36 • Provides guidance for implementation of the decisions made in the plan.

37 **Revegetation.** The reestablishment and development of self-sustaining plant cover.

1 **Richter Scale or Richter Magnitude Scale.** The Richter scale is used to estimate the magnitude of
2 earthquakes. It is a base-ten logarithmic scale that has largely been replaced with other scales by
3 researchers, but is still used to communicate earthquake magnitudes to the public.

4 **Riparian Communities/Areas.** Vegetation communities that occur adjacent to waterways such as
5 streams, rivers, springs, ponds, lakes, or tidewater and that provide habitat for numerous plant and
6 animal species. They generally occupy transitional areas between aquatic and upland habitats and may
7 function as vegetative buffers for aquatic resources.

8 **Runoff.** Surface water, from rain, snow melt, or other sources, that flows off the surface of the land
9 without sinking into the soil. The precipitation discharged into stream channels from an area.

10 **S**

11 **Sacred Landscapes.** Natural places recognized by a cultural group as having spiritual or religious
12 significance.

13 **Sacred Site.** Any specific, discrete, narrowly delineated location of federal land that is identified by an
14 Indian tribe, or individual determined to be an appropriately authoritative representative of an Indian
15 religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian
16 religion; provided that the tribe or appropriately authoritative representative of an Indian religion has
17 informed the agency of the existence of such a site (Executive Order 13007, Section 7 1[b][iii]).

18 **Scope.** The range of actions, alternatives, and impacts to be considered in an EA or EIS.

19 **Scoping.** An early and open process for determining the extent and variety of issues to be addressed
20 and for identifying the significant issues related to a proposed action that should be evaluated in an EA
21 or EIS.

22 **Scoria (clinker).** Rock that has been baked or melted because of the burning of adjacent coal seams.

23 **Section 7 of the Endangered Species Act.** Describes the responsibilities of Federal agencies in
24 conserving threatened and endangered species.

25 **Seep.** Wet areas, normally not flowing, arising from an underground water source.

26 **Significant.** Use of this term in NEPA requires consideration of both context and intensity (40 CFR
27 1508.27): Context - significance of an action must be analyzed in its current and proposed short-and
28 long-term effects on the whole of a given resource (e.g.-affected region) Intensity – Refers to the severity
29 of the effect.

30 **Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance
31 divided by horizontal distance, then multiplied by 100. For example, a slope of 20 percent is a drop of
32 20 feet in 100 feet of horizontal distance.

33 **Small Game.** Small animals that may be taken by hunters, pursuant to local government restrictions
34 and regulations.

35 **Socioeconomics.** The social and economic conditions in the study area.

36 **Special Status Species.** Plant or animal species that are federally listed, proposed, or Bureau of Land
37 Management or USFS sensitive species.

- 1 **Species.** A group of interbreeding individuals not interbreeding with another such group; similar and
2 related species are grouped into a genus.
- 3 **Spring.** Flowing water originating from an underground source.
- 4 **State Historic Preservation Officer (SHPO).** The State official appointed or designated pursuant to
5 section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation
6 program. (36 CFR 800.16 (v))
- 7 **Study Area.** The physical extent of a resource as related to the area of the proposed project.
- 8 **Subbituminous Coal.** A rank class of coal that has a heating value that ranges from 8,300 to
9 10,500 Btu's per pound on a moist, mineral-matter-free basis.
- 10 **Subsidence.** Lowering of the land surface that can be caused by natural or anthropogenic-caused
11 processes.
- 12 **Surface Water.** All bodies of water on the surface of the earth and open to the atmosphere, such as
13 rivers, lakes, reservoirs, ponds, seas, and estuaries.
- 14 **Surplus Power.** The electrical energy from the United States' share of NGS power that is excess to that
15 used by the Central Arizona Project. This surplus power is sold at market rates with the revenues being
16 deposited to the Lower Basin Development Fund.
- 17 **Syncline.** A syncline is a geologic fold structure where the strata have been folded downward.
- 18 **T**
- 19 **Technical Work Group (TWG).** A stakeholder group formed by SRP, comprised of DOI, Gila River
20 Indian Community, Navajo Nation, Salt River Project, Environmental Defense Fund, Central Arizona
21 Water Conservation District, and Western Resource Advocates. The TWG developed an alternative to
22 U.S. Environmental Protection Agency's proposed BART for NGS, and submitted it for U.S.
23 Environmental Protection Agency's consideration.
- 24 **Terrestrial.** Relating to land; a land animal.
- 25 **Threatened Species.** Any plant or animal species defined under the Endangered Species Act of 1973
26 as likely to become endangered within the foreseeable future throughout all or a significant portion of its
27 range. Requirements for declaring a species threatened are contained in the Endangered Species Act of
28 1973; listings are published in the Federal Register.
- 29 **Topography.** The form and structure of the land surface.
- 30 **Traditional Cultural Property.** A cultural property that derives significance from traditional lifeway
31 values associated with it. A traditional cultural property may qualify for the National Register if it meets
32 the criteria and criteria exceptions at 36 Code of Federal Regulations 60.4.
- 33 **Traditional Use.** A term referring to a category that is applied to any cultural resource known to be
34 perceived by a specified social and/or cultural group as important in maintaining the cultural identity,
35 heritage, or well-being of the group. Cultural properties assigned to this category are to be maintained in
36 ways that recognize the importance ascribed to them and seek to accommodate their continuing
37 traditional use.

1 **Tribal Historic Preservation Officer (THPO).** The tribal official appointed by the tribe's chief governing
2 authority or designated by a tribal ordinance or preservation program who has assumed the
3 responsibilities of the SHPO for purposes of section 106 compliance on tribal lands in accordance with
4 section 101(d)(2) of the National Historic Preservation Act. (36 CFR 800.16 (w))

5 **Tribal Lands.** In the Native American Graves Protection and Repatriation Act, tribal land is defined as:
6 (a) all lands within the exterior boundaries of any Indian reservation; (b) all dependent Indian
7 communities; and (c) any lands administered for the benefit of Native Hawaiians pursuant to the
8 Hawaiian Homes Commission Act, 1920, and section 4 of Public Law 86-3. In the National Historic
9 Preservation Act, tribal land is defined as: (a) all lands within the exterior boundaries of any Indian
10 reservation; and (b) all dependent Indian communities.

11 U

12 **Unavoidable Adverse Effects.** Effects that cannot be avoided due to constraints in alternatives. These
13 effects do not have to be avoided by the planning agency, but they must be disclosed, discussed, and
14 mitigated, if practicable.

15 **Unconformity.** A geological surface that represents missing strata that either was not deposited or was
16 eroded.

17 **U.S. Fish and Wildlife Service (USFWS).** 1940 reorganization plan (54 Stat. 1232) in the Department
18 of the Interior consolidated the Bureau of Fisheries and the Bureau of Biological Survey into one agency
19 to be known as the Fish and Wildlife Service. The Bureau of Sport Fisheries and Wildlife was created as
20 a part of the U.S. Fish and Wildlife Service in the Department of the Interior on November 6, 1956, by the
21 Fish and Wildlife Act of 1956 (70 Stat. 1119). That act was amended on July 1, 1974, by Public Law 93-
22 271 (88 Stat. 92) to, among other purposes, abolish the position of Commissioner of Fish and Wildlife
23 and designate the Bureau as the U.S. Fish and Wildlife Service.

24 V

25 **Vegetation Communities.** A combination of dominant plant species that live together in the same
26 region or on the same landform.

27 **Visual Resource Management Classes.** A classification of landscapes according to the kinds of
28 structures and changes that are acceptable to meet established visual goals.

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

31 W

32 **Water Right.** A legal entitlement of an individual or entity to extract water from a water source (surface
33 water or groundwater) and to use it for a beneficial use (e.g., potable water supply, irrigation, mining,
34 livestock).

35 **Watershed.** 1) A total area of land above a given point on a waterway that contributes runoff water to the
36 flow at that point; 2) A major subdivision of a drainage basin.

37 **Wetlands.** Areas that are inundated or saturated by surface water or groundwater at a frequency and
38 duration sufficient to support, and that under normal circumstances do support, a prevalence of
39 vegetation typically adapted for life in saturated soils

1 **Wilderness.** An area designated by Congress and defined in Section 2(c) of the Wilderness Act of 1964
2 as an area where the earth and its community of life are untrammled by man, where man himself is a
3 visitor who does not remain. An area of wilderness is further defined as an area of undeveloped federal
4 land retaining its primeval character and influence, without permanent improvements or human
5 habitation, which is protected and managed so as to preserve its natural conditions and which: 1)
6 generally appears to have been affected primarily by the forces of nature, with the imprint of man's work
7 substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined
8 type of recreation; 3) has at least 5,000 acres of land or is of sufficient size as to make practicable its
9 preservation and use in an unimpaired condition; and 4) also may contain ecological, geological, or other
10 features of scientific, educational, scenic, or historical values.

11 **Wind Rose.** A circular diagram showing, for a specific location, the percentage of the time the wind is
12 from each compass direction. A wind rose for use in assessing consequences of airborne releases also
13 shows the frequency of different wind speeds for each compass direction.

14 **X**

15 **Xeric.** An environment or habitat that is extremely dry, lacking humidity and water.

16 **Y**

17 **Z**

18 **Zone of Saturation.** The area in an aquifer, below the water table, in which relatively all pores and
19 fractures are saturated with water. Also called the phreatic zone, it may fluctuate with changes of season
20 and during wet and dry periods. Multiple zones of saturation may occur below any given point on the
21 surface.

22

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