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## **Appendix A**

# **Glossary of Terms and Acronyms/Abbreviations**

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# GLOSSARY OF TERMS

**A-weighted Sound Level**—a number representing the sound level which is frequency-weighted according to a prescribed frequency response established by the American National Standards Institute (S1.4-19711) and accounts for the response of the human ear

**Adjacent Band**—all frequencies that are within approximately 5 percent of the operating frequency of the interfering transmitter

**Advisory Council on Historic Preservation**—a 19-member body appointed, in part, by the President of the United States to advise the President and Congress and to coordinate the actions of Federal agencies on matters relating to historic preservation, to comment on the effects of such actions on historic and archaeological cultural resources, and to perform other duties as required by law (Public Law 89-655; 16 U.S. Code 470)

**Aeronautical Chart**—a map used in air navigation containing all or part of the following: topographic features, hazards and obstructions, navigation aids, navigation routes, designated airspace, and airports

**Aesthetic**—a pleasing appearance, effect, or quality that allows appreciation of character-defining features, such as of the landscape

**Aggregate**—materials such as sand, gravel, or crushed stone used for mixing with a cementing material to form concrete or alone as railroad ballast or graded fill

**Air Basin**—a region within which the air quality is determined by the meteorology and emissions within it with minimal influence on and impact by contiguous regions

**Air Defense Identification Zone**—the area of airspace over land or water, extending upward from the surface, within which the ready identification, the location, and the control of aircraft are required in the interest of national security

**Air Quality Control Region**—a contiguous geographic area designated by the Federal government in which communities share a common air pollution status

**Air Route Traffic Control Center (ARTCC)**—a facility established to provide air traffic control service to aircraft operating on Instrument Flight Rules flight plans within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to aircraft operating under Visual Flight Rules.



**Air Shed**—a volume of air with boundaries chosen to facilitate determination of pollutant inflow and outflow

**Air Traffic Control**—a service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic

**Airspace**—the space lying above the earth or above a certain land or water area (such as the Gulf of Mexico); the space lying above a nation and coming under its jurisdiction

**Airspace, Controlled**—airspace of defined dimensions within which air traffic control service is provided to Instrument Flight Rules flights and to Visual Flight Rules flights in accordance with the airspace classification. Controlled airspace is divided into five classes, dependent upon location, use, and degree of control: Class A, B, C, D, and E.

**Airspace, Special Use**—airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon non-participating aircraft

**Airspace, Uncontrolled**—uncontrolled airspace, or Class G airspace, has no specific definition but generally refers to airspace not otherwise designated and operations below 365.7 meters (1,200 feet) above ground level. No air traffic control service to either Instrument Flight Rules or Visual Flight Rules aircraft is provided other than possible traffic advisories when the air traffic control workload permits and radio communications can be established.

**Airway**—Class E airspace established in the form of a corridor, the centerline of which is defined by radio navigational aids

**Alkaline**—basic, having a pH greater than 7

**Alluvium**—general term for deposits made by streams on river beds, flood plains, and alluvial fans

**Ambient Air**—that portion of the encompassing atmosphere, external to buildings, to which the general public has access

**Ambient Air Quality Standards**—standards established on a state or Federal level that define the limits for airborne concentrations of designated "criteria" pollutants (nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter, ozone, and lead) to protect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility, and materials (secondary standards)



**American National Standards Institute (ANSI)**—serves as a consensus standard developed by representatives of industry, scientific communities, physicians, Government Agencies, and the public

**Amplitude**—the maximum departure of the value of a sound wave from the average value

**Anadromous**—going from salt water to fresh water or up rivers to spawn

**Annual Average Daily Traffic (AADT)**—the total volume passing a point or segment of a highway facility in both directions for 1 year divided by the number of days in the year

**Aquifer**—the water-bearing portion of subsurface earth material that yields or is capable of yielding useful quantities of water to wells

**Archaeology**—a scientific approach to the study of human ecology, cultural history, and cultural process

**Area of Potential Effect**—the geographic area within which direct and indirect impacts generated by the Proposed Action and alternatives could reasonably be expected to occur and thus cause a change in historic, architectural, archaeological, or cultural qualities possessed by the property

**Asbestos**—a carcinogenic substance formerly used widely as an insulation material by the construction industry; often found in older buildings

**Asbestos-containing material (ACM)**—any material containing more than 1 percent asbestos

**Association**—a group that forms together because of similar environmental requirements

**Attainment Area**—an air quality control region that has been designated by the U.S. Environmental Protection Agency and the appropriate state air quality agency as having ambient air quality levels as good as or better than the standards set forth by the National Ambient Air Quality Standards, as defined in the Clean Air Act. A single geographic area may have acceptable levels of one criteria air pollutant, but unacceptable levels of another; thus, an area can be in attainment and non-attainment status simultaneously.

**Average daily traffic (ADT)**—the total volume of traffic passing a given point or segment of a roadway in both directions divided by a set number of days



**Ballistic Missile**—any missile that does not rely upon aerodynamic surfaces to produce lift and consequently follows a ballistic trajectory when thrust is terminated

**Bedrock**—the solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface

**Benthic**—associated with the bottom of a body of water

**Bifaces**—stone tools that have been flaked on both sides

**Biological Resources**—a collective term for native or naturalized vegetation, wildlife, and the habitats in which they occur

**Booster**—an auxiliary or initial propulsion system that travels with a missile or aircraft and that may not separate from the parent craft when its impulse has been delivered; may consist of one or more units

**Boreal**—pertaining to the north

**Borough**—civil division of the State of Alaska corresponding to a county in most other states

**B.P.**—Before the present

**Burin Technology**—a class of artifacts consisting of chisel-like tools

**Candidate species**—a species of plant or animal for which there is sufficient information to indicate biological vulnerability and threat, and for which proposing to list as “threatened” or “endangered” is or may be appropriate

**Capacity**—the maximum rate of flow at which vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions

**Carbon Monoxide**—a colorless, odorless, poisonous gas produced by incomplete fossil-fuel combustion; it is one of the six pollutants for which there is a national ambient standard (see Criteria Pollutants)

**Cenozoic**—the latest of the four eras into which geologic time is divided. It extends from the close of the Mesozoic Era (about 65 million years ago, to the present. The Cenozoic Era is subdivided into the Tertiary and Quaternary periods.

**Census tract**—small, relatively permanent statistical subdivisions of a county that are delineated for all metropolitan areas and other densely populated counties



**Chlorofluorocarbons (CFCs)**—a group of inert, nontoxic, and easily liquefied chemicals (such as Freon) used in refrigeration, air conditioning, packaging, or insulation or as solvents or aerosol propellants

**Colluvium**—a general term applied to loose deposits, usually at the foot of a slope or cliff and brought there chiefly by gravity; includes talus and cliff debris

**Continental United States**—the United States and its territorial waters between Mexico and Canada, but excluding overseas states; often abbreviated CONUS

**Control Area (CTA)**—a controlled airspace extending upwards from a specified limit above the earth

**Controlled Airspace**—an airspace of defined dimensions within which air traffic control service is provided to Instrument Flight Rules flights and to Visual Flight Rules flights in accordance with the airspace classification

**Controlled Environment**—areas that may be occupied by personnel who accept potential exposure to radiation as a contingency of employment or duties, by individuals who knowingly enter areas where such levels of radiation are to be expected, and by personnel passing through such areas

**Controlled Firing Area (CFA)**—airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to non-participating aircraft and to ensure the safety of persons and property on the ground

**Council on Environmental Quality (CEQ)**—established by the National Environmental Policy Act (NEPA), the CEQ consists of three members appointed by the President. A CEQ regulation (Title 40 Code of Federal Regulations 1500-1508, as of July 1, 1986) describes the process for implementing NEPA, including preparation of environmental assessments and environmental impact statements, and the timing and extent of public participation.

**Criteria Pollutants**—pollutants identified by the U.S. Environmental Protection Agency (required by the Clean Air Act to set air quality standards for common and widespread pollutants); also established under state ambient air quality standards. There are standards in effect for six criteria pollutants: sulfur dioxide, carbon monoxide, particulate matter, nitrogen dioxide, ozone, and lead.

**Cultural Resources**—prehistoric and/or historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered of import to a culture, subculture, or community for scientific, traditional, religious, or any other reason



**Cumulative Impact**—the impact of the environment which results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

**Decatherm**—a unit of heating capacity used by some utility companies to measure natural gas consumption. It is equal to one million British thermal units of energy.

**Decibel (dB)**—a unit of measurement on a logarithmic scale which describes the magnitude of a particular quantity of sound pressure or power with respect to a standard reference value; the accepted standard unit for the measurement of sound

**Decibel milliwatt (dBm)**—a measure of power in communications: the decibel referenced to 1 milliwatt

**Degradation**—the process by which a system will no longer deliver acceptable performance

**Demersal species**—bottom dwellers that generally lack swim bladders

**Department of Defense Flight Information Publication (DOD FLIP)**—a publication used for flight planning, en route, and terminal operations. FLIP is produced by the Defense Mapping Agency.

**Detritus**—loose rock and mineral material produced by mechanical means

**Dewater**—to remove water, such as in sewage processing

**Distance Measuring Equipment (DME)**—equipment on-board aircraft that transmits paired pulses at a specific spacing which are received at a ground station. The station's transponder then transmits paired pulses back to the aircraft at the same pulse spacing but on a different frequency. The time required for the round trip of this signal exchange is measured in the airborne distance measuring equipment unit and is translated into distance from the aircraft to the ground station.

**Drainage Basin**—watershed

**Drive-to-Work Area**—The area within which it would be reasonably expected that personnel would commute to the site of the proposed action. This region may vary in size considerably from place to place, depending on the quality of roads, the level of traffic congestion and the local availability of similar quality jobs.

**Drumlin**—a low, smoothly rounded, elongated hill of compact glacial till



**Easement**—a right of privilege (agreement) that a person or organization may have over another's property; an interest in land owned by another that entitles the holder of the easement to a specific limited use

**Effluent**—an outflowing branch of a main stream or lake; waste material (such as smoke, liquid industrial refuse, or sewage) discharged into the environment

**Electroexplosive Device**—a single unit, device, or subassembly in which electrical energy is used to initiate an enclosed explosive, propellant, or pyrotechnic material

**Electromagnetic Interference**—electromagnetic radiation that disrupts electronic and electrical systems

**Electromagnetic Radiation (EMR)**—waves of energy with both electric and magnetic components at right angles to one another

**Emission Inventory**—a listing, by source, of the amount of air pollutants discharged into the atmosphere of a community

**Encroachment**—the placement of an unauthorized structure or facility on someone's property or the unauthorized use of property

**Endangered Species**—a plant or animal species that is threatened with extinction throughout all or a significant portion of its range

**En Route Airway**—a low altitude (below 18,000 feet mean sea level) airway based on a center line that extends from one navigational aid or intersection to another navigational aid (or through several navigational aids and intersections) specified for that airway

**Environmental Justice**—an identification of potential disproportionately high and adverse impacts on low-income and/or minority populations that may result from proposed Federal actions (required by Executive Order 12898)

**Eolian**—wind deposited; usually applied to sediments that have been wind deposited

**Epipelagic**—living offshore in less than 200 meters (650 feet) of water

**Erosion**—the wearing away of a land surface by water, wind, ice, or other geologic agents

**Estuary**—a water passage where the tide meets a river current; an arm of the sea at the lower end of a river; characterized by brackish water

**Expenditure, Direct**—the amount of the increased expenditures of inputs used to manufacture or produce the final goods and services purchased by consumers



**Expenditure, Indirect**—the value of the inputs used by firms that are called upon to produce additional goods and services for those firms first impacted directly by consumer spending

**Expenditure, Induced**—related to persons and businesses that received added income as a result of local spending by consumers affected by the direct and indirect effects

**Explosive Class 1.1**—explosives that have a mass explosion hazard (one that affects almost the entire load instantaneously)

**Explosive Class 1.3**—explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard, or both, but not a mass explosion hazard

**Explosive Class 1.4**—explosives that present a minor explosion hazard with no projection of fragments of appreciable size or range expected

**Explosive Safety Quantity-Distance**—the quantity of explosive material and distance separation relationships providing defined types of protection based on levels of risk considered acceptable

**Flight Information Region (FIR)**—an airspace of defined dimensions within which flight information service and alerting service are provided. Flight information service is provided for the purpose of giving advise and information useful for the safe and efficient conduct of flights, and alerting service is provided to notify appropriate organizations regarding aircraft in need of search and rescue aid and to assist such organizations as required.

**Flight Level**—a level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury stated in three digits that represent hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255 represents an indication of 25,500 feet.

**Flood Hazard Zones**—typically lowland areas bordering streams or rivers onto which overflow is most likely to spread at flood stage

**Floodplain**—the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands; includes, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year (100-year floodplain)

**Fluvial**—of or pertaining to rivers; of or produced by the action of a river or stream

**Fly-by-Wire**—aircraft that rely completely on electrical wires to relay flight commands instead of the usual cables and linkage controls



**Friable**—easily crumbled or reduced to powder

**Fugitive Dust**—any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man. Fugitive dust may include emissions from haul roads, wind erosion of exposed soil surfaces, and other activities in which soil is either removed or redistributed.

**Geomorphic history**—history of the formation of the earth or its surface features

**Glacial till**—unstratified drift, deposited by a glacier without reworking by meltwater, and consisting of a mixture of clay, silt, sand, gravel, and boulders ranging widely in size and shape

**Global Positioning System (GPS)**—a space-based radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis to unlimited number of properly equipped users. The system is unaffected by weather, and provides a world-wide common grid reference system.

**Great Circle Route**—the shortest course between two points on the surface of a sphere. Great circle routes, which require constantly changing headings, are most useful beyond the equatorial regions and for distances greater than several hundred miles. Long-distance air traffic uses great circle routes routinely, saving time and fuel. Navigational radio signals also follow great circle paths.

**Groundwater**—water within the earth that supplies wells and springs; specifically, water in the zone of saturation where all openings in rocks and soil are filled, the upper surface of which forms the water table

**Grub**—to clear by digging up roots and stumps

**Habitat**—the area or type of environment in which an species or ecological community normally occurs

**Harmonically Related Band**—harmonically related receivers and sub-harmonically related transmitters. Harmonic frequencies include those frequencies that are integer multiples of the operating frequencies of the interfering transmitter. Subharmonic frequencies are those frequencies that are simple fractions of the operating frequencies of the interfering transmitter.

**Hazardous Material**—a substance that can cause, because of its physical or chemical properties, an unreasonable risk to the health and safety of individuals, property, or the environment



**Hazardous Waste**—a waste, or combination of wastes, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed

**Hertz**—the standard radio equivalent of frequency in cycles per second of an electromagnetic wave. Kilohertz (kHz) is a frequency of one thousand cycles per second. Megahertz (MHz) is a frequency of one million cycles per second.

**High Energy Radiation Area**—an area charted on visual aeronautical charts for radar systems that emit energy that could be hazardous to certain aircraft instrument systems. These areas required to be charted by the Federal Aviation administration shall be shown on sectionals, terminal air charts, and world aeronautical charts with the "sawtooth" symbol. Aircraft flight through the area is not subject to restrictions.

**High Power Effects**—interference in electronic devices produced by very high power emitters which has not been predictable by the classical analysis processes; i.e., processes that predict antenna-coupled, case-coupled, spurious and intermodulation responses

**Historic Properties**—under the National Historic Preservation Act, these are properties of national, state, or local significance in American history, architecture, archaeology, engineering, or culture, and worthy of preservation

**Holocene**—an epoch of the Quaternary period, from the end of the Pleistocene, approximately 8,000 years ago, to the present time

**Hydrocarbons**—any of a vast family of compounds containing hydrogen and carbon, including fossil fuels

**IFR Military Training Routes (IR)**—training routes mutually developed by the Department of Defense and the Federal Aviation Administration to provide for military operational and training requirements that cannot be met under the terms of FAR 91.117 (Aircraft Speed). Accordingly, the Federal Aviation Administration has issued a waiver to DOD to permit operation of an aircraft below 10,000 feet mean sea level in excess of 250 knots indicated airspeed along Department of Defense/Federal Aviation Administration mutually developed and published Instrument Flight Rules routes.

**Igneous**—rock derived from molten material, formed slowly at depth, under great pressure



**Impacts (effects)**—an assessment of the meaning of changes in all attributes being studied for a given resource; an aggregation of all the adverse effects, usually measured using a qualitative and nominally subjective technique. In this EIS, as well as in the Council on Environmental Quality regulations, the word impact is used synonymously with the word effect.

**Impervious Surface**—an external part or layer whose impermeability does not allow entrance or passage of water

**In-band**—all frequencies that are within the operating frequency of the interfering transmitter

**Individual Transferable Quota**—each fisherman allowed a percentage of the allowable catch based on past history with the fishery

**Infrastructure**—the system of public works of a country, state, or region, such as utilities or communication systems; physical support systems and basic installations needed to operate a particular area or facility

**Instrument Flight Rules (IFR)**—rules governing the procedures for conducting instrument flight; also a term used by pilots and controllers to indicate type of flight plan

**Inversion**—an increase of temperature with height through a layer of air; usually associated with stable (but stagnant) air conditions

**Ionizing Radiation**—particles or photons that have sufficient energy to produce direct ionization in their passage through a substance. X-rays, gamma rays, and cosmic rays are forms of ionizing radiation.

**Jet Routes**—a route designed to serve aircraft operating from 5,486 meters (18,000 feet) up to and including flight level 450, referred to as J routes with numbering to identify the designated route

**Lead**—a heavy metal which can accumulate in the body and cause a variety of negative effects; one of the six pollutants for which there is a national ambient air quality standard (see Criteria Pollutants)

**Lead-based Paint**—paint on surfaces with lead in excess of 1.0 milligram per square centimeter as measured by X-ray fluorescence detector or 0.5 percent lead by weight

**Level of Service**—describes operational conditions within a traffic stream and how they are perceived by motorists and/or passengers; a monitor of highway congestion that takes into account the average annual daily traffic, the specified road segment's number of lanes, peak hour volume by direction, and the estimated peak hour capacity by a roadway's functional classification, area type, and signal spacing



**Littoral**—species found in tide pools and near-shore surge channels

**Low-income**—low-income populations, as used in this EIS, refer to those people with an income below the poverty level (\$12,764 for a family of four in 1989, as reported in the 1990 Census of Population and Housing)

**Maritime**—of, relating to, or bordering on the sea

**Material Safety Data Sheet**—presents information, required under the Occupational Safety and Health Act Standards, on a chemical's physical properties, health effects, and use precautions

**Maximum Permissible Exposure**—as established by the Nuclear Regulatory Commission, exposure standards set at a level where apparent injury from ionizing radiation during a normal lifetime is unlikely

**Mesopelagic**—typically living between 200 to 1,000 meters (650 to 3,300 feet) of water

**Metamorphic**—rock derived from preexisting igneous rock changed by temperature, stress, chemical environment or any combination of these factors

**Microblades**—a diminutive blade generally made by removing flakes by pressure (e.g., with an antler)

**Midden**—a trash or other refuse deposit

**Migratory Birds**—avians characterized by their practice of passing, usually periodically, from one region or climate to another

**Military Authority Assumes Responsibility For Separation of Aircraft (MARSA)**—a condition whereby the military services involved assume responsibility for separation between participating military aircraft in the ATC system. It is used only for required Instrument Flight Rules operations that are specified in letters of agreement or other appropriate Federal Aviation Administration or military documents.

**Military Operations Area**—an airspace assignment of defined vertical and lateral dimensions established outside Class A areas (formerly Positive Control Areas) to separate certain military activities from Instrument Flight Rules traffic and to identify for Visual Flight Rules traffic where these activities are conducted

**Military Training Routes (MTR)**—airspace of defined vertical and lateral dimensions established for the conduct of military flight training at airspeeds in excess of 250 knots



**Minority**—minority populations, as reported by the 1990 Census of Population and Housing, includes Black, American Indian, Eskimo or Aleut, Asian or Pacific Islander, Hispanic, or other

**Mitigation**—a method or action to reduce or eliminate adverse environmental impacts

**Mobile Sources**—any movable source that emits any regulated air pollutant

**Mortality**—the number of deaths in a given time or place

**National Airspace System (NAS)**—the common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

**National Ambient Air Quality Standards (NAAQS)**—as set by the U.S. Environmental Protection Agency under Section 109 of the Clean Air Act, nationwide standards for limiting concentrations of certain widespread airborne pollutants to protect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility and materials (secondary standards). Currently, six pollutants are regulated: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide (see Criteria Pollutants).

**National Environmental Policy Act (NEPA)**—Public Law 91-190, passed by Congress in 1969. The Act established a national policy designed to encourage consideration of the influences of human activities, such as population growth, high-density urbanization, or industrial development, on the natural environment. NEPA procedures require that environmental information be made available to the public before decisions are made. Information contained in NEPA documents must focus on the relevant issues in order to facilitate the decisionmaking process.

**National Register of Historic Places (National Register)**—a register of districts, sites, buildings, structures, and objects important in American history, architecture, archaeology, and culture, maintained by the Secretary of the Interior under authority of Section 2 (b) of the Historic Sites Act of 1935 and Section 101 (a)(1) of the National Historic Preservation Act of 1966, as amended

**Native Americans**—used in a collective sense to refer to individuals, bands, or tribes who trace their ancestry to indigenous populations of North America prior to Euro-American contact

**Native Species**—plants or animals living or growing naturally in a given region and often referred to as indigenous



**Navigable Airspace**—airspace at or above the minimum flight altitudes prescribed in the Federal Aviation Regulations including airspace needed for safe takeoff and landing

**Navigational Aid**—any visual or electronic device, airborne or on the surface, which provides point-to-point guidance information or position data to aircraft in flight

**Neotropic**—of the biogeographic realm that includes South America, the West Indies, Central America, and tropical Mexico

**Nitrogen Dioxide**—gas formed primarily from atmospheric nitrogen and oxygen when combustion takes place at high temperatures

**Nitrogen Oxides**—gases formed primarily by fuel combustion

**Non-attainment Area**—an area that has been designated by the U.S. Environmental Protection Agency or the appropriate state air quality agency as exceeding one or more of the national or state ambient air quality standards

**Non-directional Radio Beacon (NDB)**—a L/MF or UHF radio beacon transmitting non-directional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine the aircraft's bearing to or from the radio beacon and "home" on or track to or from the station

**Non-ionizing Radiation**—electromagnetic radiation at wavelengths whose corresponding photon energy is not high enough to ionize an absorbing molecule. All radio frequency, infrared, visible, and near ultraviolet radiation are non-ionizing.

**Nonpoint Source**—type of pollution originating from a combination of sources

**Notice to Airmen (NOTAM)**—a notice containing information, not known sufficiently in advance to publicize by other means, the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations

**Out-of-Band**—those frequencies that are not in-band, adjacent-band, or harmonically related band frequencies

**Ozone**—a compound consisting of three oxygen atoms

**Ozone-depleting Substances**—a group of chemicals that are inert under most conditions but within the stratosphere react catalytically to reduce ozone to oxygen



**Paleontology**—the study of life in the past geologic time, based on fossil plants and animals

**Paleozoic**—an era of geologic time from the end of the Precambrian to the beginning of the Mesozoic, or from about 570 to about 225 million years ago

**Palustrine emergent**—small, shallow, permanent, or intermittent water bodies dominated by trees, shrubs, persistent emergents, and emergent mosses or lichens

**Particulate Matter**—particles small enough to be airborne, such as dust or smoke (see Criteria Pollutants)

**Peak-hour volume (PHV)**—the hourly volume during the maximum volume hour of the day

**Pelagic**—of the ocean waters

**Per Capita**—per unit of population; by or for each person

**Permafrost**—permanently frozen subsoil, for a minimum of 2 years, occurring in perennially frigid areas

**Permeability**—a quality that enables water to penetrate

**Permissible Exposure Limit (PEL)**—that exposure level expressed in electric field, magnetic field, or plane wave power density to which an individual may be exposed and which, under conditions of exposure, will not cause detectable bodily injury in light of present medical knowledge

**Pesticide**—any substance, organic, or inorganic, used to destroy or inhibit the action of plant or animal pests; the term thus includes insecticides, herbicides, fungicides, rodenticides, miticides, fumigants, and repellents. All pesticides are toxic to humans to a greater or lesser degree. Pesticides vary in biodegradability.

**Photochemically Reactive**—substances whose chemical reactions are initiated by sunlight

**Physiographic province**—a region of which all parts are similar in geologic structure and climate and which has had a unified geomorphic history

**Phytoplankton**—single-celled marine plants that are found for at least part of their lives in the water column (pelagic), although a few species live on the sea floor (benthic)

**Pinniped**—having finlike feet or flippers, such as a seal or walrus



**Pleistocene**—an epoch of the Quaternary period, after the Pliocene and before the Holocene, approximately 2 million years ago to 8,000 years ago

**PM-10**—particulate matter less than or equal to 10 micrometers in diameter

**Point Source**—a distinct and identifiable source, such as a sewer or industrial outfall pipe, from which a pollutant is discharged

**Population Density**—the average number of individuals per unit of space

**Positive Controlled Area**—airspace designated in Federal Aviation Administration Regulation Part 71 within which there is positive control of aircraft; also referred to as Class A airspace

**Power Density**—the amount of power per unit area in a radio frequency field, usually expressed in milliwatts per square centimeter

**Prehistoric**—the period of time prior to European contact, established in 1769 in the western United States

**Prevention of Significant Deterioration**—the Prevention of Significant Deterioration program, created by the Clean Air Act, consists of two parts—requirements for best available control technology on major new or modified sources and compliance with an air quality increment system

**Prime Farmland**—environmentally significant agricultural lands protected from irreversible conversion to other uses by the Farmlands Protection Policy Act

**Prohibited Area**—airspace designated under FAR Part 73 within which no person may operate an aircraft without the permission of the using agency

**Radar**—a radio device or system for locating an object by means of radio waves reflected from the object and received, observed, and analyzed by the receiving part of the device in such a way that characteristics (such as distance and direction) of the object may be determined

**Region of Influence**—the geographical region that would be expected to be affected in some way by the Proposed Action and alternative

**Relative Humidity**—the ratio of the amount of water vapor actually present in the air to the greatest amount possible at the same temperature

**Relief**—the difference in elevation between the tops of hills and the bottoms of valleys



**Restricted Area**—airspace designated under Federal Aviation Administration Regulation Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use, and Instrument Flight Rules/Visual Flight Rules operations in the area may be authorized by the controlling air traffic control facility when it is not being utilized by the using agency. Restricted areas are depicted on en route charts.

**Rookery**—breeding place or colony of gregarious birds or animals

**Runoff**—the portion of precipitation on land that ultimately reaches water bodies

**Scoping**—a process initiated early during preparation of an environmental impact statement to identify the scope of issues to be addressed, including the significant issues related to the Proposed Action. During scoping, input is solicited from affected agencies as well as the interested public.

**Seine**—a large net with sinkers on one edge and floats on the other, which hangs vertically in the water and is used to enclose fish when its ends are pulled together or are drawn ashore

**Sensitive Habitat**—habitat that is susceptible to damage from intrusive actions

**Sensitive Receptor**—an organism or population of organisms sensitive to alterations of some environmental factor (such as air quality or sound waves)

**Shrink-Swell Potential**—the volume change of a particular soil with changes in moisture content

**Slow Routes**—slow speed, low altitude training routes used for military air operations at or below 1,500 feet at airspeeds of 250 knots or less

**Soil Complex**—a mapping unit consisting of two or more recognized taxonomic units used in detailed soil studies and classifications

**Solid Waste**—municipal waste products and construction and demolition materials; includes non-recyclable materials with the exception of yard waste

**Specific Absorption Rate**—the time rate at which radio frequency energy is absorbed per unit mass of material, usually measured in watts per kilogram (W/kg)

**State Historic Preservation Officer (SHPO)**—the official within each state, authorized by the state at the request of the Secretary of the Interior, to



act as liaison for purposes of implementing the National Historic Preservation Act

**Stationary Source**—any building, structure, facility, installation, or other fixed source that emits any regulated air pollutant

**Subsistence**—the traditional harvesting of natural resources for food, clothing, fuel, transportation, construction, art, crafts, sharing, and customary trade

**Substrate**—the layer of soil beneath the surface soil; the base upon which an organism lives

**Sulfur Dioxide**—a toxic gas that is produced when fossil fuels, such as coal and oil, are burned

**Thermal Distress/Damage**—the process by which heat generated in the body causes harm to cell tissue

**Threatened Species**—a plant or animal species likely to become endangered in the foreseeable future

**Topography**—the configuration of a surface including its relief and the position of its natural and man-made features

**Traditional Native Resources**—prehistoric sites and artifacts, historic areas of occupation and events, historic and contemporary sacred areas, material used to produce implements and sacred objects, hunting and gathering areas, and other botanical, biological, and geographical resources of importance to contemporary American Indian groups

**Transient**—remaining a short time in a particular area

**Turbid**—the condition of being thick, cloudy, or opaque as if with roiled sediment; muddy

**Ulu**—a knife with a rounded blade

**Uncontrolled Environment**—areas where personnel would not expect to encounter higher levels of radiation such as living quarters, workplaces, and public access areas

**Understory**—a foliage layer occurring beneath and shaded by the main canopy of a forest

**Unstratified**—sediments deposited with an absence of layering

**Upland**—an area of land of higher elevation

**Vista**—a distant view through or along an avenue or opening



**Visual Flight Rules**—rules that govern the procedures for conducting flight under visual conditions. It is also used by pilots and controllers to indicate type of flight plan.

**VFR Military Training Routes (IR)**—training routes developed by the Department of Defense to provide for military operational and training requirements that cannot be met under the terms of FAR 91.117 (Aircraft Speed). Accordingly, the Federal Aviation Administration has issued a waiver to DOD to permit operation of an aircraft below 10,000 feet mean sea level in excess of 250 knots indicated airspeed along Department of Defense developed and published Instrument Flight Rules routes.

**Volatile Organic Compound**—one of a group of chemicals that react in the atmosphere with nitrogen oxides in the presence of heat and sunlight

**Volcaniclastic**—containing volcanic material

**Wastewater**—water that has been previously utilized; sewage

**Water Table**—the upper limit of the portion of the ground wholly saturated with water

**Wetlands**—those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This classification includes swamps, marshes, bogs, and similar areas.

**Yearly Average Day-Night Sound Level**—utilized in evaluating long-term environmental impacts from noise; annual mean of the day-night sound level

**Zooplankton**—single and multi-celled animals that live passively or semi-passively in the water column

**Zoning**—the division of a municipality (or county) into districts for the purpose of regulating land use, types of buildings, required yards, necessary off-street parking, and other prerequisites to development. Zones are generally shown on a map, and the text of the zoning ordinance specifies requirements for each zoning category.



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## ACRONYMS/ABBREVIATIONS

|                        |                                                                       |
|------------------------|-----------------------------------------------------------------------|
| AADT                   | Annual Average Daily Traffic                                          |
| AAQS                   | Ambient Air Quality Standards                                         |
| ACHP                   | Advisory Council on Historic Preservation                             |
| AFB                    | Air Force Base                                                        |
| AFS                    | Air Force Station                                                     |
| AICUZ                  | Air Installation Compatible Use Zone                                  |
| ANILCA                 | Alaska National Interest Land Conservation Act                        |
| ANSI                   | American National Standards Institute                                 |
| AS                     | Air Station                                                           |
| AWCRSA                 | Aleutians West Coastal Resource Service Area                          |
| B.P.                   | Before Present                                                        |
| BMC2                   | Battle Management, Command and Control                                |
| BMC3                   | Battle Management, Command, Control, and Communications               |
| BRAC                   | Base Realignment and Closure                                          |
| Btu                    | British Thermal Unit                                                  |
| C                      | Degrees Celsius                                                       |
| CDP                    | Census Designated Place                                               |
| CERCLA                 | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR                    | Code of Federal Regulations                                           |
| CR                     | County Road                                                           |
| CTA/FIR                | Control Area                                                          |
| CWA                    | Clean Water Act                                                       |
| dB                     | Decibel                                                               |
| dBA                    | A-weighted decibel                                                    |
| DNL (L <sub>dn</sub> ) | Day-night Equivalent Sound Level                                      |
| DOD                    | Department of Defense                                                 |
| EA                     | Environmental Assessment                                              |
| EIS                    | Environmental Impact Statement                                        |
| EMR                    | Electromagnetic Radiation                                             |
| EPCRA                  | Emergency Planning and Community Right to Know Act                    |
| ESQD                   | Explosive Safety Quantity Distance                                    |



|           |                                                            |
|-----------|------------------------------------------------------------|
| F         | Degrees Fahrenheit                                         |
| FAA       | Federal Aviation Administration                            |
| FAR       | Federal Aviation Regulation                                |
| FCC       | Federal Communications Commission                          |
| GBI       | Ground-Based Interceptor                                   |
| GBR       | Ground-Based Radar                                         |
| HABS      | Historic American Building Survey                          |
| HAER      | Historic American Engineering Record                       |
| HAZCOM    | Hazard Communication                                       |
| ICAO      | International Civil Aviation Organization                  |
| IDLH      | Immediately Dangerous to Life and Health                   |
| IEEE      | Institute of Electrical and Electronic Engineers           |
| IFF       | Identify Friend or Foe                                     |
| IFICS     | In-Flight Interceptor Communications System                |
| IRP       | Installation Restoration Program                           |
| $L_{eq}$  | Continuous Equivalent Sound Level                          |
| $L_{max}$ | Maximum Instantaneous SPL                                  |
| LOS       | Level of Service                                           |
| MDU       | Montana-Dakota Utilities Company                           |
| $mg/m^3$  | Milligrams per Cubic Meter                                 |
| ms        | Millisecond                                                |
| NAAQS     | National Ambient Air Quality Standards                     |
| NAGPRA    | Native American Graves Protection and Repatriation Act     |
| ND        | North Dakota roadway                                       |
| NEPA      | National Environmental Policy Act                          |
| NESHAP    | National Emissions Standards for Hazardous Air Pollutants  |
| NHPA      | National Historic Preservation Act                         |
| NMD       | National Missile Defense                                   |
| NMFS      | National Marine Fisheries Service                          |
| NPDES     | National Pollutant Discharge Elimination System            |
| NRHP      | National Register of Historic Places                       |
| NTIA      | National Telecommunications and Information Administration |
| ODS       | Ozone Depleting Substances                                 |
| OSHA      | Occupational Safety and Health Administration              |



|                   |                                                                                                     |
|-------------------|-----------------------------------------------------------------------------------------------------|
| OT-5              | Ordnance Training Site 5                                                                            |
| PCB               | Polychlorinated Biphenyl                                                                            |
| PEL               | Permissible Exposure Limits                                                                         |
| PM-10             | Particulate matter with a mean aerodynamic diameter less than or equal to a nominal 10 micrometers  |
| PM-2.5            | Particulate matter with a mean aerodynamic diameter less than or equal to a nominal 2.5 micrometers |
| POL               | Petroleum, Oil, and Lubricants                                                                      |
| ppm               | Parts per million                                                                                   |
| PSD               | Prevention of Significant Deterioration                                                             |
| RCRA              | Resource Conservation and Recovery Act                                                              |
| ROI               | Region of Influence                                                                                 |
| SAC               | Strategic Air Command                                                                               |
| SBIRS             | Space-Based Infrared System                                                                         |
| SEL               | Sound Exposure Level                                                                                |
| SHPO              | State Historic Preservation Officer                                                                 |
| SPCC              | Spill Prevention Control and Countermeasures                                                        |
| SPL               | Sound Pressure Level                                                                                |
| spp.              | Species                                                                                             |
| SRMSC             | Stanley R. Mickelsen Safeguard Complex                                                              |
| SWPPP             | Storm Water Pollution Prevention Plan                                                               |
| TPI               | Total Personal Income                                                                               |
| U.S. EPA          | U.S. Environmental Protection Agency                                                                |
| UEWR              | Upgraded Early Warning Radar                                                                        |
| µg/m <sup>3</sup> | Micrograms per cubic meter                                                                          |
| UHF               | Ultra High Frequency                                                                                |
| USFWS             | U.S. Fish and Wildlife Service                                                                      |
| USGS              | U.S. Geological Survey                                                                              |
| VHF               | Very High Frequency                                                                                 |
| XBR               | X-Band Radar                                                                                        |



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