

## **Chapter 9**

### **Glossary**



## 9.0 GLOSSARY

**above ground level (AGL):** Altitude expressed in feet measured above the ground surface.

**Air Force Instruction (AFI):** Air Force Instructions implementing United States laws and regulations, and providing policy for Air Force personnel and activities.

**air-to-air training:** Air-to-air training prepares aircrews to achieve and maintain air superiority over the battlefield and defeat enemy aircraft. Air-to-air training often includes some aircraft playing the role of adversaries, or enemy forces. Air-to-air training activities include advanced handling characteristics, air combat training, low-altitude air-to-air training, air intercept training, and the use of defensive countermeasures, such as chaff and flares.

**air-to-ground training:** Air-to-ground training employs all the techniques and maneuvers associated with weapons use and includes low- and high-altitude tactics, navigation, formation flying, target acquisition, and defensive reaction. Training activities include surface attack tactics, different modes of weapons delivery, electronic combat training, and the use of defensive countermeasures, such as chaff and flares.

**air traffic:** Aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.

**Air Traffic Control (ATC):** A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

**Air Traffic Control Assigned Airspace (ATCAA):** Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic.

**Alluvial fan:** Fan-shaped deposits of water-transported material (alluvium). They typically form at the base of topographic features where there is a marked break in slope.

**Anadromous:** Generally refers to a fish species that is born in fresh water, spends most of its life in the sea and returns to fresh water to spawn. Salmon, smelt, shad, striped bass, and sturgeon are common examples.

**Annual Average Daily Traffic (AADT):** Represents an estimate of the number of vehicles traveling along a given point on a highway on an average day in the year. Most traffic counts are reported in AADT.

**Asbestos Hazard Emergency Response Act (AHERA):** AHERA regulates hazardous forms of asbestos, including the inspection, transport, disposal, and post-remediation surveillance of asbestos-related activities.

**avoidance areas:** Defined areas that are avoided by specified lateral or vertical distances during training events; often designated to avoid or reduce noise impacts.

**Bight:** A body of water bounded by a bend or curve of the seashore.

**Chaff:** Chaff is the term for small fibers of aluminum-coated mica packed into approximately 150 gram bundles and ejected by aircraft as a self-defense measure to reflect hostile radar signals.

**Clean Air Act (CAA):** This Act empowered the U.S. Environmental Protection Agency to establish standards for common pollutants that represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect public health and safety.

**Close Air Support:** Air action by fixed- or rotary-winged aircraft against hostile targets that are close to friendly forces and which requires detailed integration of each air mission with fire and movement of these forces.

**Combined arms training:** Combined arms training integrates the effects and capabilities of combat, combat support, and combat service support units in training conditions that replicate battlefield conditions. This integration of units in a synchronized operation characterizes the Army's doctrine of how to fight.

**Community Environmental Response Facilitation Act of 1992 (CERFA) (42 USC 9620):** This act amended CERCLA, requiring agencies to identify real property where hazardous wastes were stored, released, or disposed of prior to the Federal Government terminating its activities on property it owns.

**Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):** CERCLA (also known as Superfund) addresses the management of existing contaminated sites and acts as the governing regulation of remediation practices. CERCLA oversees remediation actions for contaminated or potentially contaminated sites by requiring investigation, assessment, and development of remediation programs to contain contamination. CERCLA includes removal of hazardous substances for emergency response and long-term monitoring of contamination levels at applicable sites.

**Council on Environmental Quality (CEQ):** The Council is an Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Members are to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs of the nation and to formulate and recommend national policies to promote the improvement of quality of the environment.

**C-Weighted Day-Night Average Sound Level (CDNL):** A day-night average sound level computed for areas subject to impulsive noise such as sonic booms. Areas subjected to supersonic noise are typically also subjected to subsonic noise, which is assessed based on the  $L_{dnmr}$  metric.

**Day-Night Average Sound Level (DNL):** Day-Night Average Sound Level is a noise metric combining the levels and durations of noise events and the number of events over an extended time period. It is a cumulative average computed over a 24-hour period to represent total noise exposure. DNL also accounts for more intrusive nighttime noise, adding a 10-decibel penalty for sounds after 10:00 p.m. and before 7:00 a.m. DNL is the FAA's primary noise metric. FAA Order 1050.1E defines DNL as the yearly day/night average sound level.

**decibel:** Logarithmic unit of measure used to describe the intensity of sound.

**dropsonde:** An information-gathering device designed to be dropped from an aircraft at altitude. Dropsonde can contain a global positioning system (GPS) receiver, along with pressure, temperature, and humidity sensors to capture atmospheric profiles and thermodynamic data. It typically relays these data to

a computer in the aircraft by radio transmission. The device's descent is usually slowed by a parachute, allowing for more readings to be taken before it reaches the water beneath.

**Dry Target:** Sites where pilots can practice bombing tactics without releasing any ordnance.

**Dud/Low Order Detonation:** A dud is a round that is fired/initiated, but completely fails to function at the target. A low-order detonation is a high-explosive round that is fired/initiated, but only partially functions at the target.

**Dudded Impact Area:** An impact area potentially containing duds and/or low order detonations. An impact area not yet assessed and/or remediated, as determined by the DoD.

**Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA):** EPCRA requires emergency planning for areas where hazardous materials are manufactured, handled, or stored and provides citizens and local governments with information regarding potential hazards to their community.

**Endangered Species:** The Endangered Species Act of 1973 defined the term “endangered species” to mean any species (including any subspecies of fish or wildlife or plants, and any distinct population segment of any species or vertebrate fish or wildlife which interbreeds when mature) that is in danger of extinction throughout all or a significant portion of its range.

**Environmental Justice:** As defined by Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, review must be made as to whether an action disproportionately causes high and adverse human health or environmental effects on minority and/or low-income populations.

**Federal land:** Land owned and managed by the U.S. Federal government. game management unit: Administrative subdivisions of Alaskan State lands by the Alaska Department of Fish and Game for the purpose of managing hunting and game resources.

**Fire Weather Index:** The fire weather index is a tool that meteorologists use to estimate the wildfire risk in forested regions. Calculation of the index is based on consecutive daily observations of factors such as temperature, relative humidity, wind speed and 24-hour rainfall. Based on these factors, a numerical rating is generated that may be used as a general index of fire danger.

**Flares:** A device that produces a bright light for signaling, illumination, or identification.

**Flight Level:** The flight level (FL) refers to the altitude above mean sea level (MSL). FL230, for example, is approximately 23,000 feet MSL.

**frequency weighting:** Application of weighting to noise energy in specific frequency bands to yield noise levels that correspond to a phenomenon of interest, such as human hearing.

**Hazardous Materials/Hazardous Waste:** substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Solid Waste Disposal Act (SWDA), as amended by the Resource Conservation and Recovery Act (RCRA) or the Toxic Substances Control Act. In general, hazardous materials include substances that, based on quantity, concentration, or characteristics (physical, chemical, or infectious), may present substantial danger to public health or the environment when released into the environment. Hazardous wastes regulated under RCRA are defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that exhibit one

or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity, or are listed as a hazardous waste under 40 CFR 261

**Historic Property:** Significant archaeological, architectural, or traditional resources that are listed or eligible for listing on the National Register of Historic Places (as defined in the National Historic Preservation Act [16 U.S.C. 470*et seq.*] and in 36 CFR 800).

**Home Station Training:** Individual and crew weapons proficiency training typically occurring in the local training area for continental U.S.-based active army units. Local training area facilities allow familiarization, qualification, and sustainment training with minimum impact on resources for travel to and from other types of training areas. Training focuses on individual through platoon weapons proficiency and battalion maneuver requirements. Tactical engagement simulation systems and other weapon system training simulators support maneuver and live-fire exercises.

**Housing Unit:** Defined by the Census as, “a single-family house, townhouse, mobile home or trailer, apartment, group of rooms, or single room that is occupied as a separate living quarters or, if vacant, is intended for occupancy as a separate living quarters” (USCB 2011-7)

**hydric soils:** Soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile. These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

**Impact Area:** The ground and associated airspace within the training complex used to contain fired or launched ammunition and explosives, and the resulting fragments, debris, and components from various weapon systems. A weapon system impact area is the area within the surface danger zone used to contain fired or launched ammunition and explosives, and the resulting fragments, debris, and components. Indirect fire weapon system impact areas include probable error for range and deflection. Direct fire weapon system impact areas encompass the total surface danger zone from the firing point or position downrange to Distance X.

a. **Temporary impact area:** An impact area within the training complex used for a limited period of time to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components. Temporary impact areas are normally used for non-dud-producing ammunition and explosives, and should be able to be cleared and returned to other training support following termination of firing.

b. **Dedicated impact area:** An impact area that is permanently designated within the training complex and used indefinitely to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components. Dedicated impact areas are normally used for non-sensitive ammunition and explosives.

c. **High-hazard impact area:** An impact area that is permanently designated within the training complex and used to contain sensitive high-explosive ammunition and explosives and the resulting fragments, debris, and components. High hazard impact areas are normally established as part of dedicated impact areas where access is limited and strictly controlled due to the extreme hazard of dud ordnance (for example, ICM, HEAT, 40-mm, and other highly sensitive ammunition and explosives.)

**Impact Area, dudded:** An area having designated boundaries within which all dud-producing ordnance will detonate or impact. This area may include vehicle bodies that serve as targets for artillery/mortar direct and indirect fire. Impact areas containing unexploded ordnance may not be used for maneuver.

**Impact Area, non-dudded:** An area having designated boundaries within which ordnance that does not produce duds will impact. This area is composed mostly of the safety fans for small arms ranges. These impact areas may be used for maneuver, at the cost of curtailing use of weapons ranges.

**impulsive noise:** Noises, such as clapping, banging, or thunder, that begin and end suddenly.

**Inert Ordnance:** Ordnance without explosive or incendiary material. This inert (non-explosive) ordnance is used by training aircrews authorized to verify that aircraft systems are functioning properly, without the use of live ordnance. Inert ordnance is only used at authorized air-to-ground training ranges

**Instrument Flight Rules (IFR):** A standard set of rules that all pilots, civilian and military, must follow when operating under flight conditions that are more stringent than visual flight rules. These conditions include operating an aircraft in clouds, operating above certain altitudes prescribed by Federal Aviation Administration regulations, and operating in some locations like major civilian airports. Air traffic control agencies ensure separation of all aircraft operating under IFR.

**Legislatively designated areas:** Land areas designated by the Alaska legislature for a special purpose or use, including refuges, sanctuaries, critical habitat areas, ranges, special management areas, forests, parks, recreation areas, preserves, public use areas, recreation rivers, and recreational mining areas.

**Limited use areas:** USAG-FWA lands that are open to all non-motorized recreation (hunting, fishing, trapping, hiking, skiing, and berry picking) year round but are not open to any type of Off-Road Recreational Vehicle at any time. Motorized watercraft must stay within existing open water channels.

**Maximum Noise Level ( $L_{max}$ ):** The highest sound level measured during an event, such as a single aircraft overflight.

**Mean Sea Level (MSL):** Altitude expressed in feet measured above average sea level.

**Median Value:** refers to the middle value (if n is odd) or the average of the two middle values (if n is even) in an ordered list of data values

**Military land:** Land owned and managed by the Department of Defense or legislatively withdrawn from public domain a period of time (usually 20 to 50 years) for the primary purpose of supporting military purposes.

**Military Munitions Response Program (MMRP):** A subset of the Defense Environmental Restoration Program (DERP). The MMRP is intended to address potential explosives safety, as well as health and environmental issues caused by past DoD munitions related activities.

**Military Operations Area (MOA):** Airspace below 18,000 feet MSL established to separate military activities from instrument flight rule traffic and to identify where these activities are conducted for the benefit of pilots using visual flight rules.

**Military Training Route (MTR):** A Military Training Route is a corridor of airspace with defined vertical and lateral dimensions established for conducting military flight training at airspeeds in excess of 250 nautical miles per hour.

**Mitigation:** CEQ Sec. 1508.20 defines “Mitigation” to include:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

**Modified use areas:** USAG-FWA lands that are open to all types of off-road recreational vehicles. No restrictions for any off-road recreational vehicles when soil is frozen. All off-road recreational vehicles must stay on existing roads and trails during the summer. Motorized watercraft must stay within existing open water channels. Open to all other recreational activities year round.

**Moose range:** Areas classified by the Alaska Department of Fish and Game for priority management of moose habitat and populations.

**Municipal land:** Land patented or State land selected for municipal ownership.

**Munitions:** All ammunition products and components produced or used by or for DoD or the U. S. Armed Services for national defense and security. The term "munitions" includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, smokes, and incendiaries used by the DoD including bulk explosives, rockets, guided missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, cluster munitions and dispensers, demolition charges, and devices and components thereof.

**National Environmental Policy Act (NEPA):** The National Environmental Policy Act of 1969 directs Federal agencies to take environmental factors into consideration in their decisions.

**National Historic Landmark:** National Historic Landmarks are places that “possess exceptional value or quality in illustrating and interpreting the heritage of the United States” and include battlefields, architectural or engineering masterpieces, ruins, and historic towns and communities.

**National Historic Preservation Act (NHPA):** The NHPA of 1966, as amended, established a program for the preservation of historic properties throughout the United States.

**National Register:** The National Register of Historic Places maintained by the Secretary of the Interior.

**Native land:** Land patented or selected for Native Corporation and village ownership. The Alaska Department of Natural Resources classifies Native land as private land in its geographic information system.



**Nautical Mile (NM):** Equal to 1.15 statute miles.

**Notice to Airmen (NOTAM):** A notice containing information (not known sufficiently in advance to publicize by other means) concerning 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.

**Off-limits areas:** Areas on USAG-FWA lands where public access is not permitted due to hazards associated with military activities on land condition.

**Onset Rate-Adjusted Day-Night Average Sound Level ( $L_{dnmr}$ ):** A noise metric combining the levels and durations of noise events and the number of events over a 24-hour period.  $L_{dnmr}$  also accounts for more-intrusive nighttime noise, adding a 10-dB penalty for sounds after 10:00 p.m. and before 7:00 a.m. and for high onset rate noise events with potential to induce a startle reaction, adding a penalty of 0 to 11 dB.

**Open use areas:** USAG-FWA lands that are open to all types of off-road recreational vehicles, and open to all other recreational activities year round.

**Ordnance:** Military materiel such as combat weapons of all kinds with ammunition and equipment required for their use. Ordnance includes all the things that make up an aircraft's armament including guns, ammunition, and all equipment and ordnance related software needed to control, operate, and support the weapons.

**permafrost:** Soil that is always frozen.

**PK 15(met):** The peak impulsive noise levels, in decibels, generated by the most intense of one or more munitions detonation noise events on an unfavorable weather day; specifically, on a day in which weather conditions are less favorable than 85 percent of days (or more favorable than only 15 percent of days).

**POLs:** Petroleum, Oils, and Lubricants.

**Population:** All people, male and female, child and adult, living in a defined geographic area

**Private land:** Land owned by a private (non-governmental) entity or individual.

**Productive-use:** A use of land that extracts a tangible resource (e.g., minerals, timber) or produces a product (e.g., agriculture).

**Public access:** Access for non-military use on military land.

**Range:** A designated land or water area that is set aside, managed, and used for range activities of the Department of Defense. The term includes firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas. The term also includes airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration (Title 10 USC 101(e)(1)(A) and (B)).

**Region of Influence (ROI):** The geographic area of interest or influence that is being evaluated for a particular resource.

**Renewable energy:** Energy that is produced by a naturally recurring and continuous source such as the sun, wind, waves.

**Resource Conservation and Recovery Act (RCRA):** RCRA is relevant to the management of hazardous waste from point of generation to its disposal. RCRA requirements include the tracking and storage of hazardous waste and the enforcement of safe management practices. The main focus of RCRA is to prevent the release of petroleum products and hazardous substances.

**Restricted Areas:** A restricted area is designated airspace that supports ground or flight activities that could be hazardous to nonparticipating aircraft.

**Revised Statute (RS) 2477 trails:** These trails, throughout Alaska, follow rights-of-way over Federal land. The Mining Act of 1866 granted unrestricted right-of-way over Federal land that had no existing reservations or private entries for the purpose of constructing highways. In the case of Alaska, this included trails. In 1976, this law was repealed but pre-existing rights-of-way in effect up through 1976 remained in effect.

**Surface danger zone (SDZ):** The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions.

**See-and-avoid:** When weather conditions permit, pilots operating IFR or VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in Federal Aviation Regulations Part 91.

**soil:** A natural body consisting of layers (soil horizons) of primarily mineral constituents of variable thicknesses, which differ from the parent materials in their morphological, physical, chemical, and mineralogical characteristics.

**Sonic Boom:** A sonic boom is the impulsive noise created when a vehicle flies at speeds faster than sound.

**Sortie:** A sortie is a single flight, by one aircraft, from takeoff to landing.

**Sortie-Operation:** The use of one airspace unit (e.g., Military Operations Area or Warning Area) by one aircraft. The number of sortie-operations is used to quantify the number of uses by aircraft and to accurately measure potential impacts (e.g., noise, air quality, and safety impacts). A sortie-operation is not a measure of how long an aircraft uses an airspace unit, nor does it indicate the number of aircraft in an airspace unit during a given period; it is a measurement for the number of times a single aircraft uses a particular airspace unit.

**Sound Exposure Level (SEL):** A noise metric in which all noise energy of an event is normalized to one second. The SEL accounts for the maximum sound level of an event and the length of time that an event lasts.

**Special use area(s):** Areas that are defined by the managing entity for a special use or interest, usually due to particular qualities, resources, or value to the public at large.

**Spill Prevention, Control, and Countermeasure (SPCC):** The SPCC Rule regulates requirements for oil spill prevention, preparedness, and response to prevent oil discharges. It oversees management practices and contamination response programs to limit contact and exposure of the environment, wildlife, and humans to petroleum products.

**Startle effect:** The likely response by humans or animals caused by a sudden loud noise.

**State Historic Preservation Officer (SHPO):** The official appointed or designated pursuant to section 101(b)(1) of the NHPA to administer the State historic preservation program or a representative designated to act for the State historic preservation officer.

**State land:** Land owned and managed by the State (of Alaska) including Federal lands that are selected for the State and are pending final patenting.

**Superfund:** See CERCLA (above)

**Surface Danger Zone:** The ground and airspace designated within the training area (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions. Areas designated as SDZs must be evacuated of all personnel during training operations.

**thermokarst:** Land-surface configuration that results from the melting of ground ice in a region underlain by permafrost. In areas that have appreciable amounts of ice, small pits, valleys, and hummocks are formed when the ice melts and the ground settles unevenly.

**Threatened Species:** A species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

**Total Employment:** Sum of, “persons 16 years and over in the civilian noninstitutional population who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees; worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family; and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs. Each employed person is counted only once, even if he or she holds more than one job. Excluded are persons whose only activity consisted of work around their own house (painting, repairing, or own home housework) or volunteer work for religious, charitable, and other organizations” (BLS, 2011-1)

**Toxic Substance Control Act (TSCA):** The TSCA enforces management of harmful or potentially harmful substances. The TSCA requires the testing of chemicals that could be harmful to humans or the environment, imposes limits on the availability of certain substances, and establishes guidelines and programs for the safe management of chemicals.

**Traditional Cultural Property (TCP):** A TCP is defined as a property that is eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs of a

living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

**Traditional Cultural Resource:** Traditional cultural resources include all properties of traditional religious and cultural importance to an Alaska Native or Indian tribe, whether determined eligible for inclusion in the National Register of Historic Places (i.e., a TCP) or not, and include resources identified as important to Native American or other traditional groups as outlined in the American Indian Religious Freedom Act (AIRFA); the Native American Graves Protection and Repatriation Act (NAGPRA); and Executive Order 13007, Indian Sacred Sites.

**Unexploded Ordnance (UXO):** Explosive ordnance that has been primed, fuzed, armed, or otherwise prepared for action, and that has been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material and remains unexploded either by malfunction or design or for any other cause.

**Vehicle Miles of Travel (VMT):** Vehicle miles of travel are based on AADT estimates and include the distance traveled element and thus provide a measure of highway vehicle travel usage over a geographic area, such as a specific region or highway system. The formula to calculate VMT is as follows:  $VMT = \text{Link Length} \times \text{Link AADT}$ .

**Visual Flight Rules (VFR):** A standard set of rules that all pilots, both civilian and military, must follow when not operating under Instrument Flight Rules. These rules require that pilots remain clear of clouds and avoid other aircraft. (See glossary entry for Instrument Flight Rules.)