
GLOSSARY

Acronyms

AAC	Alaska Administrative Code
AAP	Affirmative Action Plan
ACHP	Advisory Council on Historic Preservation
ACMP	Alaska Coastal Management Program
ADCED	Alaska Department of Community and Economic Development
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ADOTPF	Alaska Department of Transportation and Public Facilities
AGCF	Alaska Gas Conditioning Facility
AHRS	Alaska Heritage Resource Survey
ANCSA	Alaska Native Claims Settlement Act
ANGTS	Alaska Natural Gas Transportation System
ANNGTC	Alaskan Northwest Natural Gas Transportation Company
AQC	Air Quality Control
AQPP	Air Quality Protection Plan
AS	Alaska Statute
BLM	Bureau of Land Management
BOD	Biochemical Oxygen Demand
BTU	British Thermal Unit
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CGP	Construction General Permit
COD	Chemical Oxygen Demand
CPDB	Community Profile Database
CRP	Cultural Resource Protection
CSM	Contaminated Sites Management
CSMP	Contaminated Sites Management Plan
CWA	Clean Water Act
cy	Cubic yard
dB	Decibel

DOT	Department of Transportation
EBOE	Environmental Briefings, Orientation and Education
EC	Execution Contractor
EEO	Equal Employment Opportunity
EMP	Environmental Management Program
EMS	Environmental Management System
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and community Right to Know Act
ESA	Endangered Species Act
FEMA	Federal Emergency Management Association
FERC	Federal Energy Regulatory Commission
FNSB	Fairbanks North Star Borough
FRP	Facility Response Plan
FWPP	Fish and Wildlife Protection Program
gpcd	Gallons per capita per day
gpm	Gallons per minute
GPO	Gas Pipeline Office
GPS	Global Positioning System
GRD	Ground Resolution Distance
HAP	Hazardous Air Pollutant
HAZMAT	Hazardous Materials
HDPE	High Density Polyethylene
I/M	Inspection and Maintenance
ICS	Incident Command System
IFC	International Fire Code
JP-4	Jet fuel
LEPC	Local Emergency Planning Committee
LPG	Liquified Petroleum Gas
LQG	Large Quantity Generator
LSIC	Local Subsistence Implementation Committee
MACT	Maximum Achievable Control Technologies
mg/l	Milligrams per liter
MMBtu/hr	Million British thermal units / hour
MOA	Memorandum of Agreement
MSWLF	Municipal Solid Waste Landfill

NAFTA-TAA	North American Free Trade Agreement – Transitional Adjustment Assistance
NC	Noise Control
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollution Discharge Elimination System
NRC	National Response Center
NSPS	New Source Performance Standards
O&M	Operations and Maintenance
ODC	Oil Discharge Contingency
OFI	Office of the Federal Inspector
OHA/DNR	Office of History and Archaeology/Department of Natural Resources
OHSSCP	Oil and Hazardous Substances Spill Control Plan
OSHA	Occupational Health and Safety Act
OSHM	Oil and Hazardous Substances Management
OSW	Office of Solid Waste
PA	Programmatic Agreement
PHPM	Petroleum Handling Procedures Manual
POL	Petroleum, oil and lubricants facilities
POTW	Publicly Owned Treatment Works
ppm	Parts per million
PSD	Prevention of Significant Deterioration
QA	Quality Assurance
QI	Quality Inspection
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act
SERC	State Emergency Response Commission
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control and Countermeasures
SQG	Small Quantity Generator
STEP	State Training and Employment Program
SUP	Subsistence Users Protection
SWPPP	Stormwater Pollution Prevention Plan

TAA	Trade Adjustment Assistance
TAPS	Trans Alaska Pipeline System
TPQ	Threshold Planning Quantity
tpy	Tons per year
TRI	Toxic Release Inventory
TSDF	Treatment, Storage and Disposal Facility
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDOJ	United States Department of the Interior
USDW	Underground Sources of Drinking Water
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
VIE	Visual Impact Engineering
VRP	Visual Resource Protection
VRP	Visual Resource Management Procedures
WIA	Workforce Investment Act
WM	Waste Management
WQS	Water Quality Standards
WRP	Water Resource Protection
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

Active Fault

A fault that has present-day potential for releasing accumulated strain energy by slippage is described as "active" and typically experiences repeated displacements as long as it is in the same tectonic stress environment.

Active Layer (Permafrost)

The surface of the ground that is alternately frozen each winter and thawed each summer.

Adfreeze Bond

The bond by which two surfaces adheres to one another due to the binding action of ice as a result of the freezing of water. The adhesion of frozen soil in contact with foundation walls, piles, and belowground pipelines, due to freezing results in a bond sufficient to transfer loads from the structures to the soil.

Air Quality Area

Class II - an area defined under the "Prevention of Significant Deterioration Regulation" as being between pristine (Class I - no air pollution allowed) and industrial (Class III - some additional air pollution allowed.)

Algorithm

A detailed and logical procedure representing a solution method of a particular problem.

Aliquot

A portion of a gravel removal area that is worked independently, often sequentially, from the other portions of the area.

Alluvial Fan

A low, outspread, sloping mass of loose rock material or soil, shaped roughly like an open fan or a segment of a cone, deposited by a stream at a place where it issues from a narrow mountain valley upon a plain or broad valley or wherever the stream gradient is suddenly decreased.

Aufeis

Surface ice mass formed during the winter usually in a permafrost area by successive freezing of sheets of water that seep up from the ground or waterbody under hydrostatic pressure. For project purposes aufeis and icing are usually used interchangeably.

Backfill (Common or Native)

Fill material placed on top of the padding to provide protection from loads and downward restraint to the pipe.

Bedding

Select fill material placed in the bottom of the ditch to provide uniform support and longitudinal restraint to the pipe and protect the pipe, pipe coating or insulation from roughness in the ditch bottom when the in-situ material does not meet these requirements.

Borehole

A hole drilled into the earth to determine subsurface conditions by observations, sample collection and sometimes to facilitate the installation of monitoring instruments (thermistors, groundwater observation casings, etc.)

Borrow

Any earthen, granular, or rock material taken from one area for use in another.

Buffer Strip

Undisturbed land between the pipeline system and streams, lakes, wetlands, and public facilities such as roads.

California Bearing Ratio

A measure of subgrade or base strength that is a ratio of the measured value to a standard value.

Cathodic Protection

A technique used to prevent corrosion on buried pipeline systems.'

Clearing Limits

Limits established on construction plans for removal of trees and brush from the right-of-way for construction of the pipeline, stations, and other facilities (material sites, disposal sites, etc.).

Consolidated Rock

Unweathered or slightly weathered, non-frost susceptible, thaw stable material with rock-like structure and properties.

Construction Work Area

The area equal to or smaller than the clearing limits in which the stations, workpad and pipeline are constructed.

Construction Zone

The area permitted for disturbance associated construction; however, use of this area is minimized through application of the criteria.

Correlation

An expression of interdependence between variables.

Cover (Depth of)

The distance between the top of the pipe, pipe insulation, or pipe concrete coating and the ground/berm surface.

Cubic Yard-Mile

A unit quantity for transporting one cubic yard of a specified material one mile for a specified purpose.

Cut

As a noun, denotes an area of construction grading formed by excavation of material. Used as a verb, denotes the act of making an excavation.

Cut/fill Section

A condition where part of the embankment is in a cut and part of the embankment is fill. The center of the section will be nearly over the point where the cut ends and fill starts. Cut/fill sections are used where cross slopes exist.

Danger Tree

A tree that is leaning toward a facility with sufficient height that if it fell it would damage some portion of the facility.

Datum

Any numerical or geometrical quantity or set of such quantities which may serve as a reference or base for other quantities. An agreed standard point or plane of stated elevation, noted by permanent bench marks on some solid immovable structure, from which elevations are measured, or to which they are referred.

Dormant Period

The period of time between construction of facility or segment of pipeline and the start-up of the pipeline.

Differential Settlement

Uneven sinking of different parts of an engineering structure or of the ground surface as a result of applied loads, thermal changes or lowering of the groundwater table.

Elastic - Plastic

Used to describe stress-strain curves that are initially elastic but become plastic at some larger stress.

Earthquake Intensity

A measure of the effects of an earthquake at a particular place on humans or structures. The intensity at a point depends not only upon the strength of the earthquake, or the earthquake magnitude, but also upon the distance from the earthquake to the epicenter and the local geology at the point. Earthquake intensity is usually measured by the arbitrary Mercalli Scale ranging from I (barely detectable) to XII (total destruction).

Earthquake Richter Magnitude

A measure of the strength of an earthquake or the strain energy released by it, as determined by seismographic observations. The concept was introduced by seismologist C. F. Richter, who first applied it to Southern California earthquakes. For that region he defined local magnitude to the logarithm, to the base 10, of the amplitude in microns of the largest trace deflection that would be observed on a standard torsion seismograph at a distance of 100 km from the epicenter.

Endangered Species

A species identified as endangered per the Endangered Species Act.

Fault Zones

A fault in which movement occurs along a number of closely spaced, more or less parallel fractures rather than a single surface.

Fish Habitat

- Spawning beds are areas where fish deposit their eggs.
- Rearing areas are areas inhabited by fish during any life history stage.
- Overwintering areas are areas inhabited by fish between freezeup, and breakup.

Fish Passage

The ability of fish to move upstream or downstream through drainage structures or across modified channel areas at the necessary times without adverse delays. Requisite factors include adequate water depth, velocities, water quality and absence of obstructions.

Floodplain (Active)

The portion of a floodplain that floods frequently; it contains flowing channels, high-water channels, and adjacent bars, usually containing little or no vegetation.

Floodplain (Inactive)

The portion of a floodplain that is flooded infrequently; it may contain high-water and abandoned channels and is usually lightly to heavily vegetated.

Forested Site

Area where timber cover is a significant visual consideration.

Freeboard

The vertical distance between the design water level and the top of a hydraulic structure.

Free Draining Soils

Granular soils with less than 10 percent which will pass through the No. 200 sieve.

Frost Action

The general term for the damage caused by freezing and thawing of moisture in materials and on structures of which they are a part or with which they are in contact. The mechanical weathering process caused by alternate or repeated cycles of freezing and thawing of water in pores, cracks, and other openings, usually at the surface. This phenomenon describes the total volume increase or the buildup of expansive forces under confined condition (for example) and the subsequent thawing that leads to loss of soil strength and increased compressibility.

Frost Heave

The uneven lifting or upward movement, and general distortion, of surface soils, rocks, vegetation, and other structures, such as pavements, due to internal frost action resulting from subsurface freezing of water and growth of ice masses (especially ice lenses), and usually producing a frost mound; any upheaval of ground or structure caused by freezing.

Frost Heave Potential

The potential for unfrozen soils to heave during freezing.

Frost Jacking

A process which causes buried structures to heave upward during the cold season, with no countervailing tendency to return to the original level when thawed.

Frost Susceptible Soil

Soil in which significant ice segregation occurs resulting in frost heave or heaving pressures when the requisite moisture and freezing conditions are present.

Frozen Ground

Soil or rock having a temperature below 32°F. The definition is based solely on temperature and is independent of water, natural freeze depressants, and ice content of the soil or rock.

Geotextiles

A woven or nonwoven man-made fabric used to separate fill from base material, reinforce the base material and reduce embankment thickness.

Gradation Frequency Curve

Design curves which presents the data in terms of the frequency with which a certain value or a number less than that value occurs in the database. For example, a value of 80 percent on the Y-axis where the 75 percent curve crosses the No. 200 sieve on the X-axis, means that: 75 percent of the samples in the data base have 80 percent or less passing the No. 200 sieve.

Grain-Size Distribution

Proportion of material of each grain size present in a given soil, determined by mechanical and hydrometer analyses.

Ground Ice

All ice, of whatever origin or age, found below the surface of the ground, especially a lens, sheet, wedge, seam, or irregular mass of nonglacial ice enclosed in permanently or seasonally frozen ground.

Ice-Poor Soil

A frozen soil with low ice content.

Ice-Rich Soil

A frozen soil with a high water content in a variety of forms of ice.

Ice Layer

An approximately horizontal layer of ground ice, sometimes, lenticular (see Ice lens).

Ice Lens

A discontinuous layer of ground ice tapering at the periphery; ice lenses in soil commonly occur parallel to each other in repeated layers. They are generally normal to the direction of heat loss.

Ice (Massive)

A comprehensive term used to describe large (with dimensions measuring at least 10 - 100 cm) masses of underground ice including ice wedges, pingo ice, and ice lenses.

Ice Segregation

The process of formation of segregated ice (i.e., ice that is separated from the general mass) by freezing of water in mineral or organic soil. The growth of ice lenses, layers, veins and masses in soils, commonly, but not always, oriented normal to the direction of heat loss.

Ice Segregation Ratio (ISR)

Empirically derived ratio of the vertical heave of a specified plane at any given time to the frost front depth below the heaved plane at the same time.

Ice Wedge

A large usually wedge - shaped mass of foliated ground ice produced in permafrost, occurring as a vertical or inclined sheet, dike or vein tapering downward, and generally measuring from a few millimeters to 3 meters wide (some massive wedges are 6 meters wide) and 1-10 meters high. It originates by the growth of hoar frost or by the freezing of water in a narrow crack or fissure produced by thermal contraction of the permafrost.

Let Down Structure

A structure designed to transport water down across cuts or fills without erosion damage.

Levee

A structure constructed of various materials whose purpose is to direct runoff water in a direction other than directly down the slope.

Liner

A layer of material placed over the soil surface of a ditch channel or other surface to retard or prevent hydraulic erosion.

Liquefaction

The transformation of a soil from a solid state into a liquid state as a consequence of increased porewater pressures. The highest potential for liquefaction occurs in saturated, fine-grained sands with low density that are subjected to a long duration of strong ground motion.

Material Site (MS)

A site from which mineral materials may be removed for civil or pipeline construction. Also known as a borrow site.

Matrix

A rectangular, usually square, array of elements.

Non-frost Susceptible Soil

Soil exhibiting low heave potential.

Optimum Moisture Content

The water content at which a soil can be compacted to the maximum dry unit weight by a given compactive effort.

Organic Layers (Pedology)

Organic material (over 30 percent organic matter) on the surface of mineral soils, or at any depth in buried soils, or overlying geological deposits

Outwash

A glaciofluvial-sediment that is deposited by meltwater streams emanating from a glacier.

Padding

Selected fill material placed around a pipe to provide lateral support and longitudinal restraint to the pipe and to protect the pipe, pipe coating or insulation from abrasion or impact damage during backfilling operations.

Peat

An unconsolidated, compressible soil consisting of partially decomposed, semi-carbonized remains of plants such as mosses, sedges and trees, some animal residues, and commonly some mineral soil. Peat must have an organic content of not less than 20 percent of the total dry weight. It develops usually in a waterlogged environment but dry peats do exist in dry tundra sites. The thickness of peat in permafrost regions has been observed to range from about 10 cm. to 6 or 7 m.

Permafrost

Perennially frozen ground where temperature has stayed below 32°F for more than 1 year.

Permafrost Aggradation

An increase in thickness or areal extent of permafrost because of natural or artificial causes as a result of climatic cooling or change of terrain conditions, such as vegetation succession or infilling of lake basins. Permafrost aggradation may be expressed as a thinning of the active layer or a thickening of the permafrost, or an increase in areal extent.

Permafrost Degradation

A decrease in thickness or areal extent of permafrost because of natural or artificial causes as a result of climatic warming or change of terrain conditions such as disturbance or removal of an insulating vegetation layer by fire, water or human means. Permafrost degradation may be expressed as a thickening of the active layer, a lowering of the permafrost table, a raising of the permafrost base, or a reduction in areal extent.

Phreatic Zone

The zone of soil and rock in which pores are completely filled with groundwater. Also called the saturated zone.

Pipeline Design Flood (PDF)

An estimate representing flood discharges that may be expected from severe combination of meteorologic and hydrologic events that are considered reasonably characteristic of the geographical region involved, excluding extremely rare combinations.

Pit Run (Common)

A description of unprocessed material removed from material sites for construction of the pipeline. The material may meet the specifications for select material.

Plunge Basin

A water velocity control structure and energy dissipater.

Poorly Graded Soil

A soil having nonuniform distribution of particle sizes, with an excess in some grain sizes and a deficiency in others.

Processed Material

Select or special material prepared for construction by processing in a screening or crushing plant to meet gradation requirements.

Protected Species

Any species identified in accordance with the Federal Grant of Right-of-Way Stipulation 2.5.5.1.

Recurrence Interval (Return Period)

The average interval of time statistically, within which a given event will be equaled or exceeded once.

Resolution

The degree to which equal values of a quantity can be discriminated by a device.

Restoration

Soil surface stabilization of disturbed areas and the utilization of appropriate erosion and sediment control, revegetation techniques, establishment of native species and visual amelioration.

Restricted Areas

See Sensitive Wildlife Areas.

Revegetation

The establishment of plant cover on disturbed lands through techniques including but not limited to, seedbed preparation, seeding, planting, fertilization, mulching and watering.

Revegetation (Active)

Final step of restoration of disturbed areas with the applications of seed.

Revegetation (Passive)

Completion of restoration by the natural reinvasion and recolonization of native flora.

River Terrace

One of a series of level surfaces on a stream valley flanking and parallel to a stream channel and above the stream level, representing the uneroded remnant of an abandoned floodplain or stream bed. Also known as stream terrace.

Rock Quarry Site

A bedrock material site where material removal requires drilling and blasting. Material usage will likely be for riprap.

Seasonally Frozen Ground

Surface ground that freezes during the winter.

Seasonally Thawed Ground

Surface ground affected by thaw during the summer.

Sediment Basin

Small pond or reservoir constructed to allow soil to settle out of water.

Segment (Geotechnical).

A portion of the alignment that has similar soil properties and stratigraphy.

Seismic Forces

Forces induced by earthquake-related phenomena, typically ground shaking. Also forces due to artificially induced ground shaking.

Seismic Loading

Earthquake-induced phenomena which affect the state of stress or strain of a structure, e.g., differential displacement, or ground shaking.

Seismic Monitoring System

A system designed to measure ground motions in the vicinity of the pipeline together with operating procedures which establish the actions to be taken in the event of seismic conditions that may affect pipeline integrity.

Seismic Sensors

Hardware to measure acceleration, velocity or displacement in soil, rock or in a structure.

Sensitive Wildlife Areas

Localized geographical areas, delineated per Federal Right-of-Way Stipulation 2.5.5.1, where gas pipeline project activities may be restricted. The restrictions are both spatial and temporal and can affect project activities as well as facility siting in selected areas. Also called Restricted Areas.

Slash

Unmerchantable downed trees, logs, chunks and limbs remaining on the ground after logging or clearing operations.

Solid Waste Disposal Site

An area used for disposal of non-salvageable, non-combustible and non-putrescible waste materials.