

## GLOSSARY

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1E+0	scientific notation	neutral power indicates a number greater than one and less than ten and in this case 1
1E+01		scientific notation – positive power indicates a number of great than 1 and in this case 10
1E-01		scientific notation – negative power indicates a number less than 1 and in this case 0.1
Aboriginal Review Group (ARG)		Group of representatives form First Nations and Métis communities potentially affected by the Expansion Project. The ARG was established to facilitate dialogue between the various Aboriginal groups and JACOS and establish a address any issues related to the Expansion Project.
Acidification, soil		A gradual increase in the acidity of a soil due to deposition processes. Acidification is caused by acid depositions which originate from anthropogenic emissions of the three main pollutants sulphur dioxide (SO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ), and ammonia (NH <sub>3</sub> ).
Acute		The development of adverse effects after a <u>brief</u> exposure to a given substance. In aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.
Acute exposure limit		The amount or dose of a chemical that can be tolerated by humans without evidence of adverse health risks on a short-term basis.
Additive interaction		Additive interactions apply to chemicals that are structurally similar, act toxicologically through similar mechanisms or affect the same target tissue in the body (i.e., share common health endpoint).
Adenomas		Refers to benign tumours of glandular structure.
Admixing		Mixing topsoil with subsoil. It is of particular concern when the subsoil is of poorer quality than the topsoil.
Adolescent		12 years – 19 years old.

Adult	20 years and older.
Adverse Effect	An undesirable or harmful effect on an organism (human or animal), resulting in outcomes such as mortality, altered food consumption, altered body and organ weights, altered enzyme concentrations or visible pathological changes.
Aggregate	Sand, gravel or crushed stone. More informally, aggregate means any granular material used for any number of construction and other industrial purposes.
Agronomic	Of or relating to or promoting plant or soil sciences related to agriculture.
Air contaminant emissions	For stationary sources, the release or discharge of a contaminant from a facility or operation into the ambient air either by means of a stack or as a fugitive dust, mist or vapour.
Alkalinity	A measure of the buffering capacity of a watercourse or waterbody, and provides an indication of sensitivity to acid deposition. It is expressed in terms of calcium carbonate (CaCO <sub>3</sub> ) and mainly reflects the presence of carbonates, bicarbonates and hydroxides.
Allometric model	Relationship between a certain parameter and size (e.g., example body mass and toxicity).
Ambient Sound Level (ASL)	The ASL consists of all noise in the area that is not related to ERCB-regulated facilities (e.g., transportation sources, animals and nature). The ASL does not include any energy-related industrial component and must be measured without it. The ASL must be measured under representative conditions. Representative conditions do not constitute absolute worst-case conditions (i.e., the quietest day in this case) but, instead, portray conditions that are typical for the area.
Anion	A negatively charged ion.
Anthropogenic	Human-made or caused.
Application Case	The Environmental Impact Assessment (EIA) case that includes the project that is the subject of the application, and existing and approved projects or activities.
Aquifer	A saturated, permeable geologic unit of sediment or rock that can transmit significant quantities of water under hydraulic gradients.

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Aquitard	A soil or bedrock horizon with limited permeability that restricts the movement of water and will not yield significant quantities of water
Archaeological resource	A work of humans that is primarily of scientific value for its prehistoric, historic, cultural or scientific significance, and is or was buried or partially buried.
Avian	Pertaining to or derived from birds.
Background	An area not influenced by the site under evaluation.
Background Sound Level (i.e., Baseline) (BSL)	Background Sound includes noise from all sources other than the sound that is being measured (e.g., sound from other industrial noise not being measured, transportation sources, animals, and nature's sound).
Bands (octave, 1/3 octave)	A series of electronic filters separate sound into discrete frequency bands, making it possible to know how sound energy is distributed as a function of frequency. Each octave band has a centre frequency that is double the centre frequency of the octave band preceding it.
Baseline	Conditions at a reference point in time with which later conditions are compared to assess the degree and character of change.
Baseline Case	Assessment case that considers effects of all existing and approved activities.
Basic Sound Level (BSL)	The BSL is the A-weighted $L_{eq}$ sound level commonly observed to occur in the designated land-use categories with industrial presence. The BSL is assumed to be 5 dBA above the ASL and is set out in Table 1 of Directive 038.
Bedrock	Solid rock either exposed at the surface or found underlying soil or any other unconsolidated surficial cover.
Benchmark	A regulatory agency target against which predictions of risks are assessed. For example, ILCR were assessed by comparing the calculated ILCR values with a regulatory benchmark of 1 in a hundred thousand (or $10^{-5}$ ).
Benthic	All organisms living in or on the bottom of a body of water.
Bio-accumulation	A term used to describe the process by which chemicals are accumulated in an organism directly from exposure to water or soil.

Bioavailability	The amount of an exposure dose that reaches the circulatory system.
Biodiversity	Abundance and variety of plants, animals and ecosystems within a given area.
Biomagnification	The term generally refers to the sequence of processes that result in higher concentrations of chemicals in organisms at higher levels in the food chain (at higher trophic levels). These processes result in an organism having higher concentrations of a chemical than is present in the organism's food.
Biota	The organisms, including animals, plants, fungi, and micro-organisms, found in a given area.
Bitumen	Extra heavy crude oil, generally more dense than 14°API.
Bog	Mineral poor, acidic and peat-forming wetlands that receive water only from precipitation.
Borden Block	Analytical units used in the Historical Resources assessment to organize Canadian archaeological sites.(based on subdivisions of latitude and longitude). Borden Blocks are represented by four letters within which archaeological sites are individually numbered.
Boreal Forest	The northern hemisphere, circumpolar, taiga forest type consisting primarily of black spruce and white spruce with balsam fir, birch and aspen.
Borrow pit	An excavated area from which earthy material has been removed for construction purposes.
Brown water	Waters with elevated amounts of humic material and dissolved organic carbon concentrations which naturally colour the water a yellow-brown colour.
Brunisols	Upland forest soils that have a thin leaf litter layer overlying reddish brown, sandy materials. They generally are prone to drought due to coarse texture and have low fertility levels.
Bryophyte	Non-vascular plants from the Bryophyta phylum (a division of the plant kingdom). Plants within this phylum include mosses, liverworts and hornworts.

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Calibration	The procedure used for the adjustment and standardization of monitoring equipment/ meters using a reference source of a known value. Calibration is usually required before and after the measurements.
Calibrator (Acoustical)	A device which produces a known sound pressure on the microphone of a sound level measurement system, and is used to adjust the system to standard specifications.
Canopy	An overhanging cover, shelter or shade of vegetation. The tallest layer of vegetation in an area.
Carcinogen	A chemical directly involved in the promotion of cancer.
Carcinomas	Cancers of the epithelium. Is the most common type of cancer, found in body tissues that line or cover surfaces of organs, glands, or body structures.
Cardiomyopathy	Disease of the heart muscle.
Carnivorous	“Meat-eater”, feeds on animal tissue.
Category	A classification of a dwelling unit in relation to transportation routes used to arrive at a BSL.
Cation	A positively charged ion.
Child	5 years – 11 years old.
Chlorophyll <i>a</i>	A photosynthetic pigment found in green plants, enabling them to convert the sun’s energy to sugar. In water, its concentration is an indicator of algal concentrations.
Chronic	The development of adverse effects after extended exposure to a given substance. In chronic toxicity tests, the measurement of a chronic effect can include: reduced growth, reduced reproduction or other non-lethal effects, in addition to lethality.
Chronic Exposure	Exposure (e.g., to a chemical) over a relatively long time. Health Canada considers periods of human exposure greater than 3 months to be chronic while the corresponding U.S. EPA definition is more than 7 years).

Chronic exposure limit	Amount or dose of a chemical that people can be exposed to without experiencing ill health, even when exposure occurs continuously or regularly over extended periods (e.g., longer than a year).
Class A Adjustment	<p>This Noise term represents the adjustments that account for:</p> <ul style="list-style-type: none"><li>• the adjustment seasonal nature of the noise source,</li><li>• absence of both tonal and impulse/impact components, and</li><li>• ambient Sound Level in an area.</li></ul> <p>It cannot exceed +10 dBA.</p> <p>The Class A adjustment is added to the BSL, the daytime adjustment, and the Class B adjustment to arrive at a permissible sound level.</p>
Class B Adjustment	This Noise term represents the adjustments to account for the duration of a noisy activity. This recognizes that additional noise can be tolerated if it is known that the duration will be limited.
Clay	A mineral particle with a diameter less than 0.002 mm.
Colluvium	Unsorted sediment that has been transported by gravity and deposited or built up at the bottom slope or against a barrier on that slope,
Compaction	Increase in soil bulk density because of mechanical forces, involving the translocation and resorting of textural components in the soil (sand, silt, and clay particles), destruction of soil aggregates, and collapse of aeration pores. Compaction is assisted by high moisture contents. The effects of compaction and rutting are manifested by changes in water infiltration rates, soil heat flux, root penetration and oxygen supply in the soil. All of these conditions may influence soil quality and ultimately, soil productivity. The extent of the effect on the soils depends on soil wetness, applied stress, and number of passes with machinery.
Comprehensive Sound Level (CSL)	This Noise term represents the sound level that is a composite of different airborne sounds from many sources far away from and near the point of measurement. The CSL is used to determine whether a facility is complying with Directive 038.
Concentration	Quantifiable amount of a substance in environmental media.

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Conductivity (EC)	Conductivity is a measure of the ability of water to carry an electrical charge and is positively related to the concentration of dissolved substances. The major ions associated with EC are bicarbonate, carbonate, magnesium, calcium, sodium, chloride, potassium and sulphate.
Coniferous	Trees in the division Pinophyta of the plant kingdom. These are cone bearing trees with no true flower (e.g., white spruce, black spruce, balsam fir, jack pine and tamarack).
Conservation and Reclamation Plan	The desirable and practicable methods for designing and conducting a surface disturbance in a manner that minimizes the effect of the disturbance and enhances the reclamation potential of the disturbed lands.
Construction phase	The time during which the Project would be constructed and commissioned
Cretaceous	A period of the Mesozoic era thought to have extended from 144 million to 65 million years ago; also the corresponding sequence of bedrock.
Criteria Air Contaminant	A group of seven common air contaminants released into the air from various processes including industrial production and fuel combustion. They particulate matter less than 2.5 microns (PM <sub>2.5</sub> ), sulphur dioxide (SO <sub>2</sub> ), and nitrogen oxides (NO <sub>x</sub> , expressed as NO <sub>2</sub> ).
Critical load	The highest annual input of a pollutant that, at steady-state, does not cause unacceptable ecological [or human health] effects.
Crown Closure	Percent of the canopy overlying the forest floor; or the proportion of a stand covered by the crowns of live trees.
Cumulative Effect	Increase in overall effects due to additions of other activities that cause an effect.  Change to the environment caused by an action combined with other past, present, and future human actions.
Cumulative environmental effect	As defined in the Canadian Environmental Assessment Act (CEAA), the environmental effects that are likely to result from a project in combination with other projects or activities that have been or will be carried out.

Daytime	Defined as the hours from 07:00 to 22:00.
Daytime Adjustment	An adjustment of 10 dBA (Noise increase) because daytime sound levels are generally about 10 dBA higher than nighttime values.
dB - Decibel	The logarithmic units associated with sound pressure level, sound power level, or acceleration level. See sound pressure level, for example.
dBA - Decibel, A-Weighted	The sound pressure level that is representative of the subjective response of the human ear. A sound pressure signal has been filtered using a frequency weighting that mimics the response of the human ear to quiet sound levels.
dB(C) - Decibel, C-Weighted	A sound pressure level that mimics the response of the human ear to <u>loud</u> sound levels. C-weighted levels are often used in low-frequency noise analysis, as the filtering effect is nearly flat at lower frequencies.
Decibel Addition	<p>Due to the logarithmic nature of the decibel scale, the addition of two or more sound pressure levels (denoted as SPL1, SPL2 ... SPLn) is done as follows:</p> $SPL1 + SPL2 + \dots + SPLn = 10 \log (10^{(SPL1/10)} + 10^{(SPL2/10)} + \dots + 10^{(SPLn/10)})$ <p>As an example:</p> <p>0 dB + 0 dB = 3 dB</p> <p>50 dB + 50 dB = 53 dB</p> <p>50 dB + 47 dB = 52 dB</p> <p>50 dB + 40 dB = 50 dB</p>
Deciduous	Tree species that lose their leaves at the end of the growing season.
Decommissioning	Decommissioning, as part of post-closure activities, refers to the activities associated with the decommissioning and deconstruction of the Expansion Project and the restoration of the land to pre-development conditions or the chosen end-use.
Decommissioning Phase	The time after the Expansion Project would cease to operate. Activities are normally limited to decommissioning, post-closure monitoring and property maintenance.

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DEM	A digital elevation model (DEM) is a digital representation of ground surface topography or terrain, consisting of terrain elevations for ground positions at regularly spaced horizontal intervals.
Deposit	An accumulation of earth materials resulting from naturally - occurring physical, chemical, or organic processes.
Detection Limit	The lowest concentration of a chemical that can be reliably measured and reported by an analytical laboratory with a specified confidence level. May be called reliable detection limit (RDL).
Devonian	A period of the Paleozoic era thought to have covered the span of time between 400 and 345 million years ago; also, the corresponding sequence of rocks.
Diameter at Breast Height (DBH)	The diameter of a tree 1.3 m above the ground surface.
Direct Employment	Employment created due to by the Project's construction and operation activities of a Project. It is typically measured in full-time equivalent (FTE) positions.
Dissolved organic carbon (DOC)	A measure of the dissolved compounds found in water derived from humic substances and partly degraded plant and animal materials.
Dissolved oxygen (DO)	The concentration of molecular oxygen dissolved in water, expressed as mg/L or as a percentage.
Disturbance	An event (e.g., fire, human activity) that causes a sudden change from the existing pattern, structure and/or composition in an ecological system or habitat.
Disturbed land	Area where vegetation, topsoil, or overburden is removed, or where topsoil, spoil, and processed waste are placed (as in mining).
Diversity	The variety of different plant and animal species and communities within an area.
Drainage	Refers to the rapidity and extent of water removal from the soil in relation to additions, especially by surface runoff and by percolation downwards through the soil.

Drainage pattern	The configuration of natural stream courses in an area. It is related to local geologic and geomorphologic features and history.
Drawdown	Lowering of water level caused by pumping. It is measured for a given quantity of water pumped during a specified period, or after the pumping level has become constant.
Dwelling	Refers to the location where a person or a group of persons resides or could reside. The term includes single detached homes, duplexes/row houses, condominiums, apartments and trailers, among others.
Dwelling Unit	Any permanently or seasonally occupied residence with the exception of an employee or worker residence, dormitory, or construction camp located within an industrial plant boundary. Units in trailer parks and campgrounds may qualify as dwelling units if it can be demonstrated that they are in regular and consistent use during the applicable season.
Dwelling Unit (most impacted)	The dwelling unit that is most impacted by any noise from the facility. The nearest dwelling unit may not necessarily be the one most adversely affected because of factors such as topography or man-made features. For example, the nearest dwelling unit to a facility may be located behind an intervening ridge, while a more distant dwelling unit may be in direct line of sight with the facility. Care must be taken in determining the most impacted dwelling unit.
Ecological Risk Assessment (ERA)	A scientific method used to examine the nature and magnitude of risks from the exposure of plants and animals to contaminants in the environment.
Ecosite	Ecological units that develop under similar environmental influences that broadly include climate, soil nutrients and soil moisture regime.
Ecosite Phase	A subdivision of ecosite based on the dominant tree species.
Ecosystem	An integrated and stable association of living organisms and the non-living physical and chemical factors of their environment, within a defined physical location.
Emergency	An unplanned event requiring immediate action to prevent loss of life or property. Events occurring more than four times a year are not considered unplanned.

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Emission factor	A representative value that relates the quantity of pollutant released to the atmosphere with an activity or input associated with the release of that pollutant.
Emissions	Technically, all solid, liquid, or gaseous discharges from a processing facility, but normally referring to gaseous and particulate air emissions (with solids referred to as residue and liquids as effluent).
Endangered	A species facing imminent extirpation or extinction.
Energy Equivalent Sound Level (L <sub>eq</sub> )	An energy-average sound level taken over a specified period of time. It represents the average sound pressure encountered for the period. The time period is often added as a suffix to the label (e.g., L <sub>eq</sub> (24) for the 24-hour equivalent sound level). L <sub>eq</sub> is usually A-weighted. An L <sub>eq</sub> value expressed in dBA is a good, single value descriptor of the annoyance of noise.
Environment	<p>As defined under CEAA, environment “<i>means the components of the Earth, and includes:</i></p> <ul style="list-style-type: none"><li>(a) <i>air, land and water, including all layers of the atmosphere;</i></li><li>(b) <i>all organic and inorganic matter and living organisms; and</i></li><li>(c) <i>the interacting natural systems that include components referred to in paragraphs (a) and (b).”</i></li></ul>
Environmental Assessment	A process to evaluate the potential environmental effects of proposed projects before they are carried out to meet the requirements of the federal <i>Canadian Environmental Assessment Act (CEAA)</i> . An environmental assessment (EA) identifies possible environmental effects, proposes measures to mitigate adverse environmental effects, predicts whether or not there will be significant adverse environmental effects after the mitigation is implemented, and considers the requirements for follow-up.

Environmental effect	<p>As defined under <i>CEAA</i>, in respect of a project:</p> <p>(a) <i>“any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act,</i></p> <p>(b) <i>any effect of any change referred to in paragraph (a) on</i></p> <ul style="list-style-type: none"><li><i>i). health and socio-economic conditions,</i></li><li><i>ii). physical and cultural heritage,</i></li><li><i>iii). the current use of lands and resources for traditional purposes by aboriginal persons, or</i></li><li><i>iv). any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or</i></li></ul> <p>(c) <i>any change to the project that may be caused by the environment whether any such change or effect occurs within or outside Canada.”</i></p>
Eolian	Surficial deposits whose constituents have been carried and laid down by wind.
Erodibility	The sensitivity of a material to the effects of wind and water on its structure.
Erosion	The process by which material, such as rock or soil, is worn away or removed by wind or water.
Erosion risk	An expression of the inherent erodibility of a soil or its maximum erosion potential. Infiltration capacity and structural stability are regarded as the most important factors in controlling water erosion. Soil erosion risk increases as fine sand or silt content increases. As organic matter depth and vegetation cover increases, erosion risk decreases.
Erosion, water	The process by which various forms of water movement erode soil particles. This can be by raindrops, stream movements, or surface runoff.
Erosion, wind	The process by which wind erodes, transports, and deposits materials also called eolian processes.

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Esker	A narrow, sinuous ridge of coarse sand and gravel, commonly horizontally bedded, trough crossbedded and rippled, commonly displaying lag deposits of gravel, irregularly stratified sand and normal or reverse faults. Formed by glacial meltwater rivers flowing within channels beneath glacial ice and mapped as glaciofluvial ridge deposits.
Eutrophic	A classification of the trophic state of a waterbody or watercourse characterized by high productivity and nutrient load. Particularly associated with total phosphorus levels. Excess phosphorus may cause increased algal growth and the eutrophication of water.
Exposure	The contact between a biological system or organism and a chemical.
Exposure limit	Maximum dose or amount of chemical that a person or ecological receptor can be exposed to for a specified period without experiencing an adverse health outcome.
Facility	Any operation used in exploration, processing, development, and transportation of energy resources.
Far Field	The far field is that area far enough away from the noise source that the noise emissions appear to be and can be treated as if they come from a single point or line source and the individual components of the noise source are not apparent as separate sources. This is typically at a distance of at least three to five times the major dimensions of the noise sources.
Fauna	Animal species.
Fen	A peat-forming wetland that is influenced by mineral-rich groundwater or surface water.
Filter	A device separating the components of an incoming signal by its frequencies.
Flood	The inundation by water of any area not normally covered with water, owing to a relatively rapid rise in the level of a river, generally due to an increase in rainfall or snowmelt.
Flora	Plant species.
Fluvial deposits	Sediments transported and deposited by streams and rivers, including floodplain deposits, river terraces and alluvial fans.

Footprint	The proposed development area that directly affects the soil and vegetation components of the landscape.
Forb	A broad-leaved herb that is not a graminoid.
Fossil	Any evidence of past multicellular life, including body fossils (e.g., bones, shells, plant stems), impressions (e.g., leaf imprints) and trace fossils (e.g., dinosaur trackways). Also known as palaeontological resources, they are thousands to hundreds of millions of years old and are often the remains of extinct species.
Fossiliferous	A stratum that contains fossils.
Free Sound Field (Free Field)	A sound field in which the effects of obstacles or boundaries on sound propagated in that field are negligible.
Frequency	The number of times per second that the sine wave of sound or of a vibrating object repeats itself (now expressed in Hertz (Hz), formerly in cycles per second (cps)).
Frequent Aircraft Flyovers	Used in the assessment of categories as part of a site specific analysis for dwellings that lie within a contour area with a noise exposure forecast (NEF) 25 or greater, as designated by Transport Canada. In the absence of any NEF contours for local airport, Transport Canada is to be contacted for current air traffic statistics. In this case, to qualify for the BSL adjustment, a dwelling must be within 5 km of an airport that has a minimum of nine aircraft takeoffs or landings over the nighttime period.
Fugitive emission	Result from small leaks that while individually very small, can collectively be substantial for large, complex facilities.
Geotechnical	Pertaining to the engineering behavior of earth materials.
Glacial	(i) Of or relating to the presence and activities of ice or glaciers, such as glacial erosion.  (ii) Pertaining to distinctive features and materials produced by or derived from glaciers and ice sheets, such as glacial lakes. (iii) Pertaining to an ice age or region of glaciation. (Gary et al. 1972)
Glacial Till	Unsorted material deposited by glacial ice. Landforms formed from this process are moraines.

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Glaciofluvial	Sediments deposited by glacier melt waters. Typically these sediments are stratified layers of sand, gravels and other fine materials. Landforms formed from this process are plains, eskers, kames and deltas.
Glaciofluvial Deposits	Sediments formed by meltwater issuing from, or within, a glacier. The deposits are stratified and may occur in the form of outwash plains, deltas, kame terraces, and eskers.
Glaciolacustrine Deposits	Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes by water originating mainly from the melting of glacial ice. Many are bedded or laminated with varves or rhythmites.
Gleysols	Mineral soils formed in wet areas with a water table within 1 m of the surface and exhibiting characteristics caused by chemical reducing conditions. These soils tend to be too wet for good tree growth.
Gradient	The gradient or slope is commonly used to describe the measurement of the steepness, incline, or grade of a straight line.
Graminoid	Grasses and grass-like plants such as sedges and rushes.
Gravel	An accumulation of rounded pebbles that includes at least two size classes represented by pebbles, cobbles and boulders; may include interstitial sand.
Gravelly	Containing appreciable amounts of rounded or subrounded rock or mineral fragments 0.002 m to 0.08 m in diameter. Angular gravelly refers to fragments that are less rounded.
Gross Domestic Product	The total market value of all final goods and services produced in an economy in a given year.
Groundtruth	To visit locations in the field to confirm or correct information produced from remote sources such as interpreted aerial photographs or classified satellite imagery.
Groundwater	Water beneath the water table that occupies pores, cavities, cracks and other spaces in unconsolidated sediments and soils.
Habitat	The part of the physical environment in which a plant or animal lives.
Haematological toxicant	Blood toxicant.

Hardness (water)	Hardness is a measure of the concentrations of positively charged particles, which predominately include calcium ( $\text{Ca}^{2+}$ ) and magnesium ( $\text{Mg}^{2+}$ ). Hardness influences the toxicity of many metals and is, therefore, a factor in determining water quality guidelines for the protection of aquatic life.
Heavily Travelled Road	Generally includes highways and any other road where the average traffic count is at least 10 vehicles per hour over the nighttime period. It is acknowledged that highways are sometimes lightly travelled during the nighttime period, which is usually the period of greatest concern. The ERCB uses the 10 vehicle per hour criterion to determine whether highways qualify as heavily travelled during the nighttime period.
Heavy Truck	Any truck having a gross vehicle weight of 12 000 kg or more and having three or more axles.
Hemangioma	A benign tumour developed from blood vessels.
Hemangiosarcomas	Rare, rapidly growing, highly invasive form of cancer.
Heptatoxicant	Liver toxicant.
Herb	A vascular plant (forb or graminoid) without a woody stem.
Herbaceous	Pertaining to an herb; leaf-like in color or texture
Herbivore	An organism that eats only plants.
Heritage value	Perceived value assigned to a historical resources site that is based on the material remains observed and recovered during field studies as well as the context of those remains at both a site and regional level.
Hertz (Hz)	Unit of measurement of frequency, numerically equal to cycles per second.
Historic period site	Sites that date from the time of European contact until 1960; historic period sites can be either Aboriginal or non-Aboriginal. Historic period sites can include structures (e.g., homesteads, cabins and forts), artifacts (e.g., industrial and folk-manufactured items made of metal, glass, ceramic, stone and other materials) or features (e.g., trails, foundations and camp sites).

**Historic resource** Any work of nature or of humans that is primarily of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including but not limited to, a palaeontological, archaeological, prehistoric, historic or natural site, structure or object

**Human Perception of Sound** The human perception of noise impact is an important consideration in qualifying the noise effects caused by projects. Table 1 presents a general guideline.

**Table 1 Human Perception of Sound**

<b>Increase in Noise Level (dBA)</b>	<b>Perception</b>
1 to 3	Not significant due to imperceptibility
4 to 5	Just noticeable difference
6 to 9	Marginally significant
10 or more	Significant, perceived as a doubling of sound exposure

**Hummocky** Irregular hillocks and hollows with slopes generally steeper than 18%.

**Hydrogeology** The science that relates to groundwater.

**Hydrology** The scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere.

**Hygric** Soil moisture conditions where water is removed slowly enough to keep the soil wet for most of the growing season. Permanent seepage and mottling are present and possibly weak gleying (see also Gleysols).

**Hypereutrophic** A classification of the trophic state of a waterbody or watercourse characterized by very high productivity and nutrient load. Particularly associated with total phosphorus levels.

**Hyperpigmentation** Excessive pigmentation of the skin.

**Hyperplasia** Excessive growth of normal cells of an organ or tissue.

Income Effects	The total effects associated with direct project expenditures and associated indirect and induced effects that ripple through the economy. The effect is measured both in terms of contribution to an economy's gross domestic product as well as household incomes.
Indirect Employment	Employment created in companies that supply goods and services as required by direct employment activities. It is typically measured in full-time equivalent positions.
Induced Employment	Employment created by the household spending linked to direct and indirect employment created by a project. Induced employment is broadly distributed in the general economy and is typically measured in full-time equivalent positions.
Infant	0 months – 6 months old.
Infiltration	The process by which water enters into a soil or porous substrate in a downward direction from the surface by means of its pores or small openings.
Input-Output Model	An economic model which captures the value of the flow of goods and services between inter-dependent sectors of the economy. It estimates employment, labour income and gross domestic product impacts associated with investment in the economy.
Insertion Loss (IL)	The arithmetic difference between the sound level from a source before and after the installation of a noise mitigation measure, at the same location. Insertion loss is typically presented as a positive number, i.e., the post-mitigation sound level is lower than the pre-mitigation level. Insertion loss is expressed in dB and is usually specified per 1/1 octave band, per 1/3 octave band, or overall.
Invasive Species	A species with the ability to become established and spread in an ecosystem, potentially to the extent that it alters the original structure of the community.
Invertebrates	Animals lacking a backbone or spinal column.
Keratosis	A growth on the skin due to overproduction of Keratin.
Kettle	Steep-sided depressions formed by ice melt beneath sediments (most commonly beneath glaciofluvial sediments). A kettle with water in it is a kettle lake.

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$K_{ow}$	The octanol-water partition coefficient. The ratio of the concentration of a chemical in octanol and in water at equilibrium and at a specified temperature.
ks	A soil loss term, accounting for the loss of COPC by several mechanisms, including leaching, erosion, runoff, degradation (biotic and abiotic), and volatilization.
Lacustrine	A surficial geologic formation produced in a lake depositional environment
Lacustro-till deposits	Sediments consisting of fine textured, stratified materials of varying thickness that contain some stones and often resemble till
Landform	Any physical, recognizable form or feature of the earth's surface, having a characteristic shape and produced by natural processes.
Landscape	A heterogeneous land area with interacting ecosystems that are repeated in similar form throughout.
$LC_{50}$	Median lethal concentration of a toxic substance or radiation. The concentration required to kill half the members of a tested population.
$LD_{50}$	Median lethal dose of a toxic substance or radiation. The dose required to kill half the members of a tested population.
Level	A flat or very gently sloping unidirectional surface with a generally constant slope not broken by marked elevations and depressions.
Lichen	Any complex organism of the group Lichenes, composed of a fungus in symbiotic union with an alga and having a greenish, grey, yellow, brown, or blackish thallus that grows in leaf like, crust like, or branching forms on rocks, trees and other surfaces.
Low Frequency Noise (LFN)	Noise in the low frequency range, from infrasonic sounds (<20 Hz) up to 100 Hz. Also noise where a clear tone is present below and including 250 Hz and the difference between the overall C-weighted sound level and the overall A-weighted sound level exceeds 20 dB.
Lowest Observed Adverse Effect Level (LOAEL)	The lowest dose in a toxicity study resulting in adverse health effects.

Luvisols	Upland forest soils with a leaf litter layer over a gray washed-out layer, 15 to 20 cm thick, over grayish brown clayey subsoil. These are normal soils with respect to moisture and nutrient supply.
Lymphocyte	A white blood cell.
Marsh	Non-peat-forming, nutrient-rich wetlands characterized by frequent flooding and fluctuating water levels.
Masking	a) The process by which the threshold of audibility for a sound is raised by the presence of another (masking) sound, or b) The amount by which the threshold of audibility of a sound is raised by the presence of another (masking) sound.
Measured Baseline	Measured concentrations of COPC in the LSA were used to predict existing potential risk to humans and the environment.
Merchantable Timber	A forest area with potential to be harvested for production of lumber/timber or wood pulp. Forests with a timber productivity rating of moderate to good.
Mesic	A moderate soil moisture regime value whereby water is removed somewhat slowly in relation to supply. Available soil water reflects climatic inputs.
Mesotrophic	A classification of the trophic state of a waterbody or watercourse characterized by moderate productivity and nutrient load. Particularly associated with total phosphorus levels.
Metaplasia	A condition in which one type of cell transforms into another type of cell ( <i>i.e.</i> , from normal to abnormal).
Microsite	A pocket within an environment with unique features, conditions or characteristics. Classifying different microsites may depend on temperature, humidity, sunlight, nutrient availability, soil physical characteristics, vegetation cover, etc
Mineral soil	A soil consisting predominantly of, and having its properties determined predominately by, mineral matter. Usually contains less than 30% organic matter, but may contain an organic surface layer up to 0.4 m thick.

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Mitigation	Measures taken to reduce, remove, or control impacts on the environment.
Mixedwood	A terrestrial forest type that is an assemblage of both deciduous and coniferous tree species.
Modelling	A simplified representation of a relationship or system of relationships. Modelling involves calculation techniques used to make quantitative estimates of an output parameter based on its relationship to input parameters. The input parameters influence the value of the output parameters.
Moisture Regime	The supply of moisture available for plant growth over time at a site.
Monitoring	Follow up activity that involves the measurement of data and its comparison to pre-defined levels.
Morainal	Of or pertaining to a moraine.
Moraine	An accumulation of earth, generally with stones, carried and finally deposited by a glacier.
Moraine (till) deposits	Compacted and non-stratified material consisting of sand, silt and clay with angular blocks of rock, boulders and pebbles that have been transported and deposited by a glacier
Native Plant	A plant species that occurs naturally in a given area.
Natural Region	The highest level in Alberta's ecological classification hierarchy; defined broadly on the basis of climate, topography, landforms and soil.
Natural Subregion	A division of the natural regions of Alberta. Areas within a natural subregion have a similar climatic regime, which is characterized by modal vegetation distinct for that subregion.
Near Field	The region or sound field very near to a source of noise. Usually this region is located within a few wavelengths of the source and is also controlled by the dimension of the source.
Nephrotoxicity	Toxic to the kidney.
Neurotoxicant	Toxic to the nervous system.
Nighttime	Defined as the hours from 22:00 to 07:00.

No Observed Adverse Effect Level (NOAEL)	The highest tested dose of a substance that has been reported to have no adverse health effects on laboratory animals.
Noise	Unwanted sound.
Noise Impact Assessment (NIA)	An NIA identifies the expected sound level emanating from a facility as measured 15 m from the nearest or most impacted permanently or seasonally occupied dwelling. It also identifies what the permissible sound level is and how it was calculated.
Noise Level	Same as Sound Level, except applied to unwanted sounds.
Non-carcinogen	A chemical that does not cause cancer.
Non-Native Plant	A plant that has been introduced from another country, province or area and has established itself within its new environment. Because non-native plants have not evolved within that environment they may be able to outcompete native species, in which case they become invasive and detrimental to native plant communities.
Non-Vascular Plants	Plants that do not possess conductive tissues for the transport of water and food.
Nutrient Regime	The relative supply of nutrients available for plant growth at a given site.
Nutrients	Environmental substances, such as nitrogen or phosphorus, that are necessary for the growth and development of plants and animals.
Old Growth Forest	Late successional forests with unique structural attributes and ecological processes.
Oligotrophic	A classification of the trophic state of a waterbody or watercourse characterized by low productivity and nutrient load. Particularly associated with total phosphorus levels.
Omnivorous	Feeding on both meat (animal) and plant tissues.
Operation Phase	The time after the Construction Period during which the Expansion Project would be operated, expected to be approximately 25 years. As a conservative estimate, the HHERA is based on a lifetime of 30 years.
Order of magnitude	The expression “an order of magnitude” refers to a value that is roughly ten times greater than the value against which it is being compared.

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Organic compounds	Compounds that contain carbon, with the exception of carbon dioxide and carbonates, and include hydrocarbons, polycyclic aromatic hydrocarbons (PAHs) and naphthenic acids. Organic compounds may come from natural sources, for example the leaching from natural oil sands deposits, or anthropogenic sources, such as wastewater discharges.
Organic matter, soil	The organic fraction of the soil; included are plant and animal residues as various stages of decomposition, cells and tissues of soil organisms and substances synthesized by the soil organism population.
Organic Soil	Soils with peat accumulations of 40 cm or more, found in bogs, fens and swamps. Water tables are commonly shallow or at the surface.
Palaeontological potential	The likelihood of a stratum containing palaeontological resources of high heritage value.
Palaeontological resource	Any evidence of past multicellular life, including body fossils (e.g., bones, shells, plant stems), impressions (e.g., leaf imprints) and trace fossils (e.g., dinosaur trackways). Also known as fossils, they are thousands to hundreds of millions of years old and are often the remains of extinct species.
Palaeontology	A scientific discipline that studies fossil remains (palaeontological resources).
Parent material	The unconsolidated and more or less chemically unweathered mineral or organic matter from which the solum of a soil has developed by pedogenic processes.
Peat	Unconsolidated soil material consisting largely of undecomposed, or slightly decomposed, organic matter accumulated under conditions of excessive moisture.
Permafrost	Permanently frozen soil or subsoil, occurring throughout the polar regions and locally in perennially frigid areas.
Permanent Facility	Any existing or proposed facility that will be at a location longer than two months.
Permanently Occupied Dwelling	A fixed residence occupied on a full-time basis.

Permissible Sound Level (PSL)	The maximum sound level that a facility should not exceed at a point 15 m from the nearest or most impacted dwelling unit. The PSL is the sum of the BSL, daytime adjustment, Class A adjustment, and Class B adjustment.
Person-Year	A unit of measurement of employment input. It represents one entire year worked by a person working full time (based on industry average). Person-year is a defined measure of employment input, as compared to "job," which can be full-time or part time.
pH	The degree of acidity (or alkalinity) of a soil or solution. The pH scale ranges from 1 (most acidic) to 14 (most alkaline). A difference of one pH unit represents a ten-fold change in hydrogen ion concentration.
Phosphorus	The key nutrient influencing plant growth in lakes; total phosphorus includes the amount of phosphorus in solution (reactive) and in particulate form.
Phytotoxicity	Refers to toxic effects on plants.
Plain	A comparatively flat, level or slightly undulating tract of land, bedrock features commonly are masked by overlying sediments.
Planned Development Case	Assessment case that includes all elements of the Baseline and Application Cases, as well as future approved and likely projects.
Plant Community	A group of interacting plant species that exist within a defined space and time.
Polycyclic Aromatic Hydrocarbon (PAH)	A chemical by-product of the petroleum-related industry and considered highly toxic to aquatic life. Toxicity increases with molecular size and degree of alkylation.
Poor fen	An ecosite that is transitional between fen and bog. A poor fen is intermediate in nutrient regime and is similar floristically to the fen and bog. Sedges and peat moss, as well as golden and brown mosses compose the majority of the organic matter content.
Potential Acid Input (PAI)	A composite measure of acidification determined from the relative quantities of deposition from background and industrial emissions of sulphur, nitrogen and base cations that can contribute to soil or water acidification.

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Precontact archaeological site	Precontact archaeological sites include debris (e.g., stone tools, butchered bones and fire-cracked rock) resulting from the occupation of Alberta by Aboriginal people before contact with European traders in the late 1700s and 1800s.
Precontact campsite	A precontact archaeological site that contains evidence of a fireplace or hearth and at least one other culturally modified material such as lithics, faunal remains, ceramics or structural remains.
Precontact isolated find	A precontact archaeological site that contains a single cultural item only.
Precontact lithic scatter	A precontact archaeological site in which archaeological specimens are located on the ground surface or in subsurface deposits with no apparent special patterning.
Precontact lithic workshop	A precontact archaeological site in which lithic reduction has occurred with no other indications of cultural activity or habitations (eg. chipping stations).
Pristine Area	A pure, natural area that might have a residence but no industrial presence, including energy, agricultural, forestry, manufacturing, recreational, or other industries that could make noise generation a consideration.
Project	As defined under <i>CEAA</i> , means in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work.
Project Alone Scenario	The evaluation of the Project-related environmental effects in isolation.
Rare Plant	A native plant species found in restricted areas, at the edge of its range or in low numbers within a province, state, territory or country.
Receptor	The person or wildlife species that may be affected due to exposure to a contaminant.
Reclamation	The process of stabilizing and returning disturbed land to a state of equivalent or better capability, compared to pre-disturbance conditions.
Registered Fur Management Area (RFMA)	Parcels of public land allocated to holders of a Registered Fur Management License by ASRD.

Regosols	Young soils with minimal soil formation and weakly developed horizons or layers.
Relief	The topographical difference in elevation between the high and low points in a landscape.
Renal toxicant	A renal toxicant is a chemical that results in toxic effects on the kidney.
Representative Conditions	Those conditions typical for an area. For ASLs, these are conditions that portray the typical activities for the area, not the quietest time. For CSLs, these do not constitute absolute worst-case conditions or the exact conditions the complainant has highlighted if those conditions are not easily duplicated. Sound levels must be taken only when representative conditions exist; this may necessitate a survey of extensive duration (two or more consecutive nights).
Rhinitis	Inflammation of the nasal passages.
Richness	The number of species in a biological community, or the number of communities within a given landscape.
Riparian	Of, relating to, or located on the banks of a river or stream.
Risk	The likelihood or probability that the effects associated with a chemical will be produced in populations of individuals under their actual conditions of exposure. Risk is usually expressed as the probability of occurrence of an adverse effect, i.e., the expected ratio between the number of individuals that would experience an adverse effect at a given time and the total number of individuals exposed to the factor. Risk is expressed as a fraction without units, and takes values from 0 (absolute certainty that there is not risk, which can never be shown) to 1.0, where there is absolute certainty that a risk will occur.
Runoff	The water leaving a drainage area.
Salinity, soil	The amount of soluble salts in a soil expressed as electrical conductivity in dS/m and measured by the saturated paste method or equal.
Salvage	To save a material (topsoil) to be used in the reclamation phase of the Project.
Sand	A mineral particle with a diameter in the range of 0.05 to 2 mm.

Seasonally Occupied Dwelling	A fixed residence that, while not being occupied on a full-time basis, is occupied on a regular basis. A regular basis does not imply a scheduled occupancy but implies use of six weeks per year or more. The residence must not be mobile and should have some sort of foundation or features of permanence (e.g., electrical power, domestic water supply, septic system) associated with it. Summer cottages or mobile homes are examples of seasonally occupied dwellings, while a holiday trailer simply pulled onto a site is not.
Sedge	Any plant of the genus <i>Carex</i> , perennial herbs, often growing in dense tufts in marshy places. They have triangular jointless stems, a spiked inflorescence and long grass-like leaves which are usually rough on the margins and midrib. There are several hundred species.
Sediment	Solid particles of material that have been derived from rock or unconsolidated material weathering. They are transported and deposited from water, ice, or air as layers at the earth's surface.
Sedimentation	The formation in water of sedimentary rocks or unconsolidated deposits, commonly forming beds.
Selenosis	Selenium poisoning.
Silt	A mineral particle with a diameter in the range of 0.002 to 0.05 mm.
Slope	An inclined surface, the gradient of which is determined by the amount of inclination from horizontal.
Slope stability	Pertains to the susceptibility of slope to landslides and the likelihood of slope failure.
Slump	The downward slipping of a mass of rock or unconsolidated material of any size, moving as a unit or as several subsidiary units, usually with backward rotation on a more or less horizontal axis parallel to the cliff or slope from which it descends.
Snag	A naturally occurring, standing dead or dying tree often missing a top or most of the smaller branches. Snags provide habitat for a variety of forest-dwelling wildlife species as well as epiphytic lichens.

Soil	The naturally occurring, unconsolidated mineral or organic material at least 0.1 m thick that occurs at the earth's surface and is capable of supporting plant growth. Soil extends from the earth's surface through the genetic horizons, if present, into the underlying material to the depth of the control section (normally about 1 to 2 m). Soil development involves climatic factors and organisms, conditioned by relief and water regime, acting through time on geological materials, and thus modifying the properties of the parent material (Expert Committee on Soil Survey 1987).
Soil half-life	The length of time required for the concentration of a compound to decrease to half of its initial value in soil.
Soil map	A map showing the distribution of soil types, classes or other soil mapping units in relation to the prominent physical and cultural features of the earth's surface.
Soil profile	A vertical section of the soil through all its horizons and extending into the parent material.
Soil series	A category (or level) in the Canadian system of soil classification. A subdivision of soil subgroup classification level, this is the basic unit of soil classification, and consists of soils that are essentially alike in all major profile characteristics and occur in a particular ecoclimatic region.
Sound	A dynamic (fluctuating) pressure.
Sound Level (SL)	The A-weighted Sound Pressure Level expressed in dBA.
Sound Level Meter	An instrument comprised of a microphone, amplifier, output meter, and frequency-weighting networks which is used for the measurement of noise and sound levels.
Sound Power Level (PWL)	<p>The logarithmic ratio of the instantaneous sound power (energy) of a noise source to that of an international standard reference power. The sound power level is defined by equation (2) where <math>W</math> is the sound power of the source in watts, and <math>W_0</math> is the reference power of <math>10^{-12}</math> watts.</p> $PWL \text{ (dB)} = 10 \log(W/W_0)$ <p>Inter-relationships between sound pressure level (SPL) and sound power level (PWL) depend on the location and type of source.</p>

Sound Pressure Level (SPL)	<p>The logarithmic ratio of the RMS sound pressure to the sound pressure at the threshold of hearing. The sound pressure level is defined by equation (1) where P is the RMS pressure due to a sound and P<sub>0</sub> is the reference pressure. P<sub>0</sub> is usually taken as 2.0 × 10<sup>-5</sup> Pascals.</p> $\text{SPL (dB)} = 20 \log(P_{\text{RMS}}/P_0)$
Species	<p>A taxonomic grouping of genetically and morphologically similar individuals. The category below genus.</p>
Species at Risk	<p>Species at Risk include species that are listed under Schedule 1 of the <i>Species at Risk Act (SARA)</i> as “extirpated”, “endangered” or “threatened”</p>
Species Diversity	<p>A description of a biological community that includes both the number of different species and their relative abundance. Provides a measure of the variation in number of species in a region. This variation depends partly on the variety of habitats and the variety of resources within habitats and, in part, on the degree of specialization to particular habitats and resources.</p>
Species of Conservation Concern	<p>Species of conservation concern includes those listed species that are not currently under the protection of <i>SARA</i> (<i>i.e.</i>, are listed as “special concern” in Schedule 1 of <i>SARA</i>; listed in Schedule 2 or 3 of <i>SARA</i>)</p>
Species Richness	<p>The number of different species occupying a given area.</p>
Spectrum	<p>The description of a sound wave's resolution into its components of frequency and amplitude.</p>
Spill	<p>An accidental chemical discharge.</p>
Stand	<p>A group of trees occupying a specific area and sufficiently uniform in composition, age, arrangement and condition so that it is distinguished from trees in adjoining areas.</p>
Steep	<p>A type of surface expression of mineral landforms, consisting of erosional slopes, greater than 70% (35°) and occurring on consolidated and unconsolidated materials.</p>

Structural Stage	Describes the existing dominant stand appearance or physiognomy for a land area. Factors such as disturbance history, stand age, species composition and chance all influence structural stage. Structural stages range from non-vegetation to old forests.
Sub-chronic	Intermediate between acute and chronic (i.e., less than 6 months).
Subgroup, soil	A category in the Canadian system of soil classification. These soils are subdivisions of the great groups and, therefore are defined more specifically.
Subhygric	Soil moisture conditions where water is removed slowly enough to keep the soil wet for a significant part of the growing season. There is some temporary seepage and possible mottling below the 20 cm depth.
Sub-lethal	Long-term growth or survival effects.
Submesic	Soil moisture conditions where water is removed readily in relation to supply. Water is available for moderately short periods following precipitation.
Subsidence	A lowering of the earth's surface due to gradual settling of the ground, caused by dissolution of soluble rocks beneath the surface as in karst settings, from the extraction of mineral deposits beneath the surface or from large scale structural readjustments of the earth's crust such as basin downwarping.
Subsoil	The B horizon of soils with distinct profiles. In soils with weak profile development, the subsoil can be defined as the soil below the plowed soil (or its equal of surface soil) in which roots normally grow.
Subxeric	Soil moisture conditions where water is removed rapidly in relation to supply. Soil is moist for short periods following precipitation.
Succession	The gradual change in the structure and species composition of a forest over time.
Successional Stage	A particular phase of the forest succession continuum with its own characteristic age, structure and composition of species. Stages may include the following: pioneer, young seral, maturing seral, old seral, young edaphic, mature edaphic, young climatic, mature climatic and disclimax.

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Surficial deposit	Unconsolidated sediments overlying bedrock at or near the earth's surface.
Surficial geology	Surficial geology is concerned with the description of the types and distributions of unconsolidated sediments across the landscape.
Swamp	Land having soils that are saturated with water for at least part of the year and which usually occur next to waterbodies or in areas in association with fluctuating water levels such as along peatland margins.
Terrain	The physical characteristics of the natural features of an area, e.g. its landforms (see also geomorphology); the surface or the physical features of an area of land, including surficial materials, landforms and topography.
Terrain Integrity	The stability of the landscape over time with respect to such factors as mass wasting (including erosion), settlement, seismic motion, tsunami activity and acid rock drainage; the capacity of the soils, surficial materials and bedrock to resist potential failure along a slope.
Terrestrial	Of or relating to land
Texture	Pertains to the grain sizes, shape and arrangement of particles in a sedimentary unit.
Threatened	A wildlife species that is likely to become an endangered species if nothing is done to reverse the factors leading to its extirpation or extinction.
Till	Poorly sorted diamicton deposited by directly from glacier ice.
Till, glacial	Unsorted sedimentary material deposited directly by, and underneath, a glacier, consisting of a mixture of clay, silt, sand, gravel and boulders. Also known as till.
Timber Productivity Rating (TPR)	The potential timber productivity of a stand based on height and age of dominant and co-dominant trees of the leading species.
Toddler	7 months to 4 years old.

Tonal Components	<p>Most energy industrial facilities typically exhibit a tonal component. Examples of tonal components are transformer hum, sirens, and piping noise. Directive 038 specifies that the test for the presence of tonal components consists of two parts.</p> <p>The first part must demonstrate that the sound pressure level of any one of the slow-response, A-weighted, 1/3-octave bands between 20 and 16 kHz, is 10 dBA or more than the sound pressure level of at least one of the adjacent bands within two 1/3-octave bandwidths. In addition, there must be a minimum of a 5 dBA drop from the band containing the tone within 2 bandwidths on the opposite side.</p> <p>The second part is that the tonal component must be a pronounced peak clearly obvious within the spectrum</p>
Topography	<p>The surface features of the earth's surface, including the relief and the terrain.</p>
Topsoil	<ul style="list-style-type: none"><li>(i) The layer of soil moved in civilization.</li><li>(ii) The A horizon.</li><li>(iii) The Ah or Ap horizon.</li><li>(iv) Presumably fertile soil material used to topdress road banks, gardens and lawns.</li></ul>
Total dissolved solids (TDS)	<p>A measure of the amount of dissolved substances found in a water sample. TDS is reflective of the amount of ions (i.e., calcium, magnesium, sodium, potassium, bicarbonate, chloride and sulphate) in the water.</p>
Total organic carbon (TOC)	<p>A measure of both dissolved and particulate organic carbon in water, and varies with the composition of organic matter present in the water. Organic matter in soils, aquatic vegetation and aquatic organisms are major sources of organic carbon.</p>
Total suspended solids (TSS)	<p>Measures the amount of suspended particles in the water column.</p>
Toxicity reference values (TRV)	<p>Toxicological value used as a regulatory acceptable exposure for a contaminant. TRVs used in the human health risk assessment are all health-based values, while those used in the ecological risk assessment are based on endpoints that protect ecological health.</p>

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Traditional Environmental Knowledge (TEK)	Focuses on Aboriginal peoples' understanding of and relationship with traditional lands subject to potential effect by proposed projects.
TEK/TLU Studies	Gathers information about TEK and TLU and the possible effects of a proposed development on Aboriginal peoples' traditional lands, land-based activity and rights.
Traditional Land Use	Focuses on information about locations of cultural significance in relation to a proposed project (e.g. settlement locations, resource gathering sites, trails and ceremonial areas), and patterns of use, with specific reference to harvesting areas.
Traditional Land Use and Occupancy Studies (TLUOS)	Used to gather knowledge of a community's traditional and contemporary land uses and document it for present and future use.
Transmission Loss	<p>A measure of the reduction in sound energy resulting from incident sound waves striking a wall, partition or enclosure, and radiating through to the other side. Mathematically, the transmission coefficient <math>t</math> is the ratio of transmitted acoustic power to the incident acoustic power, and in decibels, the Transmission Loss (TL) of the wall is:</p> $TL = 10 \log (1 / t)$ <p>The TL of a wall varies by frequency. The associated noise reduction (NR) due to the TL of the wall is a function of the TL and the acoustical parameters of the receiving space. For noise radiating from an enclosure into the outdoors, <math>NR \approx (TL + 6)</math>.</p>
Treaty 8	Treaty signed on June 21, 1899 between the Indians of North America and the Queen of England. The Treaty encompasses an area of about 840 000 square kilometers. The Treaty covers northern Alberta (north of Edmonton), as well as parts of NW Saskatchewan, NE British Columbia and SW Northwest Territories.
Understorey	Trees or other vegetation in a forest that exist below the main canopy level.
Undulating	A very regular sequence of gentle slopes that extend from rounded, sometimes confined concavities to broad, rounded convexities producing a wave like pattern of local relief.
Upland	An informal, general term for the higher ground of a region, in contrast with a low-lying, adjacent land such as a valley or plain.

Vascular Plant	Plants that possess conductive tissues for the transport of water and food.
Vegetation Type	A broad term used to describe the vegetation units defined within different classification systems. It includes those units defined as ecosite phases, wetlands types and miscellaneous vegetation types.
Volatile Organic Compounds (VOC)	Include aldehydes and all hydrocarbons except for ethane and methane.
Water holding	The percentage of water remaining in the soil after having been saturated and after capacity drainage of free water as practically ceased.
Weed	Native and non-native invasive plant species; plant species so defined under legislation (e.g., the <i>Weed Control Act</i> ).
Wetlands	Land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands," and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.
Windscreen	A specialized piece of porous sponge that fits over the microphone in order to reduce the noise generated by the wind blowing around the microphone. Useful in moderately low wind speeds. Generally, outdoor measurements are not recommended when wind speeds exceed 15 km/h, as the wind-induced noise on the microphone becomes of the same magnitude as the levels being measured.