

## **Glossary**

**AADT:** is the average annual daily traffic, and is a measure used primarily in transportation planning and transportation engineering. It is the total volume of vehicle traffic of a highway or road for a year divided by 365 days. AADT is a useful and simple measurement of how busy the road is.

**Aboriginal:** Aboriginal peoples in Canada Comprise the First Nations, Inuit and Métis. They are three distinctive groups of North America indigenous peoples recognised in the Canadian Constitution Act, 1982, sections 25 and 35.

**Aboriginal Community:** a community where most of the residents are Aboriginal and has a separate form of government, provides some level of service to its residents and has clear community boundaries.

**Abutment:** An abutment is an end support of a bridge superstructure.

**Accord:** established as part of the process to secure both self-management and protection for traditional lands of Aboriginal peoples.

**Acoustic environment:** The noise environment.

**Adaptive management (AM):** is a structured, iterative process of optimal decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. In this way, decision making simultaneously maximizes one or more resource objectives and, either passively or actively, accrues information needed to improve future management. AM is often characterized as "learning by doing."

**Adverse Effects:** negative effects on the environment and people that may result from a proposed project and its activities.

**All-season road:** A road that is motorable all year by the prevailing means of rural transport.

**Alternative means of carrying out a project:** The various technically and economically feasible ways, other than the proposed way, for a project to be implemented or carried out. Examples include other project locations, different routes and methods of development, and alternative methods of project implementation or mitigation.

**Alternatives to a project:** The functionally different ways, other than a proposed project, to meet the project need and achieve the intended purpose. For example, if a need for greater power generation has been identified, a proposed project might be to build a new power generation facility. An alternative to that project might be to increase the generation capacity of an existing facility.

**All-weather road:** Unpaved road that is constructed of a material that does not create mud during rainfall. All references made regarding all-weather road are derived from the reports from Dillon Consulting Ltd. or UMA reports.

**Amphibian:** Cold-blooded animal of the Class Amphibia that typically lives on land but breeds in water (e.g., frogs, toads, salamanders)

**Aquatic:** relating to water; living in or near water, taking place in water.

**Aquatic environment:** The components related to, living in, or located in or on water or the beds or shores of a water body, including but not limited to all organic and inorganic matter, and living organisms and their habitat, including fish habitat, and their interacting natural systems.

**Aquatic peatland:** is a peatland bordering on a water body or waterway. The peat adjacent to the water's edge is usually floating.

**Aquifer:** is a subsurface zone of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt, or clay).

**Archaeology:** is the science that studies human cultures through the recovery, documentation, analysis, and interpretation of material culture and environmental data, including architecture, artefacts, and landscapes, and biofacts.

**Archaeological site:** is a place (or group of physical sites) in which evidence of past activity is preserved (either prehistoric or historic or contemporary), and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record.

**ARCVIEW GIS:** Is a geographic information system software product produced by ESRI.

**Arterial highway:** Provincial roads within a municipality.

**Backhaul:** is the return movement of a truck from its original destination to its original point of origin, especially when carrying goods back over all or part of the same route.

**Backwater:** A body of water that was created by a flood or tide or by being held or forced back by a dam.

**Bailey bridge:** is a portable pre-fabricated truss bridge. It requires no special tools or heavy equipment for construction, the bridge elements are small enough to be carried in trucks, and the bridge is strong enough to carry tanks.

**Barricades:** is any object or structure that creates a barrier or obstacle to control, block passage or force the flow of traffic in the desired direction.

**Baseline environment:** A description of the existing environment conditions prior to a specific development.

**Bedrock:** is the native consolidated rock underlying the surficial unconsolidated soils and rock.

**Berm:** is a level space, shelf, or raised barrier separating two areas.

**Biodiversity:** the existence of a wide range of different species in a given area or during a specified period of time.

**Biophysical:** refers to a hierarchical land classification system with units characterized by distinct biotic and abiotic elements.

**Bioremediation,** The use of bacteria and other small organisms (such as single-celled and multicellular microbes and fungi) to reduce or eliminate concentrations of certain substances, also known as biotreatment.

**Bog:** wetland ecosystem characterized by an accumulation of peat, acidic conditions and a plant community dominated by Sphagnum moss.

**Boreal forest:** Needle-leaved evergreen or coniferous forest bordering sub-polar regions.

**Borrow areas:** or borrow 'sites' or 'pits' are areas where materials (e.g. gravel, sand, silt, and clay) are excavated for use.

**Borrow pit:** The area left by the removal of material (usually sand or gravel) for construction purposes.

**Box culverts:** are high quality, low maintenance concrete structures that allows the passage of water. They have a large number of applications including storm sewers, service tunnels, or small bridges for stream crossings.

**Broad Area Plan:** Plan was initiated recognizing the need for sustainable planning recognizing the uniqueness of the east side of Lake Winnipeg , the importance and abundance of natural resources in the Area, and to follow-up on conclusions of the Climate Change Task Force Report which recognized there are many communities in the Area that do not have access to the transportation networks and economic opportunities that most Manitobans take for granted. It also identified some of the dramatic effects of climate change on winter road and food distribution systems historically relied upon by the remote communities in the Area.

**Brood:** the young of an animal produced at one hatching or birth.

**Brush fire:** is any uncontrolled, non-structural fire that occurs in the wilderness, wildland, or bush.

**Calving:** Giving birth to a calf as applied to moose and or caribou in the project study area.

**Canada-Manitoba Agreement:** Agreement for Environmental Assessment Cooperation which ensures coordination and harmonization between the Federal and Provincial EA processes i.e. the Canadian Environmental Assessment Act and Manitoba Environment Act, respectively. This removes the need to prepare separate and parallel EAs for each level of government independently.

**Canyon:** or gorge, is a deep valley between cliffs often carved from the landscape by a river. Most canyons were formed by a process of erosion from a plateau level.

**Capacity-building:** A managed process of (a) skill upgrading, both general and specific; (b) procedural improvement; and (c) organizational strengthening. Capacity building aims to develop the ability of individuals, groups, institutions, and organizations to identify and solve development problems.

**Capital Cost:** the total cost needed to bring a project to a commercially operable status.

**Channel capacity:** The maximum volume of water that can be accommodated in a water channel.

**Clear-Span Bridge:** Small-scale bridge structure that completely spans a watercourse without altering the stream bed or bank built above the ordinary high water mark.

**Cofferdams:** A temporary dam constructed of earth, sheet piling or other material to enclose a work area and permit the control or removal of water.

**Colonial bird-nesting:** In many species, including herons, swallows, and most seabirds, individual birds come together each year to build nests near the nests of many others of the species. The resulting aggregations are called nesting colonies.

**Control points:** Exact positions of often-surveyed geographic features used to register map sheets and transform coordinates.

**Commercial:** Adjective used to signify a business activity, regardless of whether that activity has been undertaken by an individual or business.

**Commercial fishery/trapping:** Where the catch is sold.

**Community:** In biological terms, a community is a group of interacting organisms sharing an environment. In human terms, it is defined as a group of interacting people living in a shared geographical location, generally in social units larger than a household.

**Community Engagement Program (CEP):** Refers to the process by which community benefit organizations and individuals build ongoing, permanent relationships for the purpose of applying a collective vision for the benefit of a community.

**Community and Public Engagement Program (CPEP):** A term used in the Dillon Consulting Ltd. Reports, to define community and public involvement throughout their project.

**Construction:** is a process that consists of the building or assembling of infrastructure that usually involves the translation of paper or computer based designs into reality. Construction footprint: Extent of area affected by construction activities.

**Construction phase:** The period associated with the construction.

**Constructability:** a method for achieving optimum integration of construction knowledge and experience in planning, engineering, procurement and field operations in the construction process and balancing the various project and environmental constraints to achieve overall objectives.

**Construction drawing:** Engineering design with keyed notes detailing the work required and types of materials to be used in constructing the required works (e.g. road bridge, drainage structures, etc.)

**Corridor:** A designated strip of land between two locations used for infrastructure purposes (e.g. road, transmission line etc.)

**CSP culverts:** Culverts made from Corrugated Steel Pipes.

**Cultural Environment:** The environment which has developed as a result of human economic and life activity and retains vestiges of such activity (material articles, cultural values and spiritual values).

**Culvert:** A metal, concrete, or plastic pipe through which water is carried.

**Cumulative Effects:** the combined effects of several projects on the environment.

**Cumulative Impact:** the impact on the environment which results from the effects of a project when combined with those of other past, existing and imminent projects and activities.

**Decommissioning:** removed from service (e.g. camps, access roads, etc.)

**Deleterious substances:** Any substance that, if introduced to the environment, would cause adverse effects.

**Demobilization:** The process of withdrawal of resources from a project.

**Deposit:** Deposition is the geological process by which material is added to a landform or land mass.

**Design Speed:** is the maximum speed at which a vehicle can be operated safely on road in perfect conditions.

**Direct effect:** An environmental effect that is a change that a project may cause in the environment; or change that the environment may cause to a project. A direct effect is a consequence of a cause effect relationship between a project and a specific environmental component.

**Dirigible:** Lighter-than-air aircraft that can be steered and propelled through the air using rudders and propellers or other thrust.

**Disposal:** Final placement of unwanted materials or substances (e.g. destruction of toxic, radioactive or other wastes; surplus or banned pesticides or other chemicals; polluted soils; and drums containing hazardous materials).

**Diversion ditch:** A channel that acts to intercept and transport water from one location to another.

**Domestic fishing:** is fishing for food by Aboriginals with Constitutionally protected rights and other individuals who legitimately require access to the fisheries resource to meet basic subsistence requirements.

**Domestic harvest:** The harvest of natural resources for personal use or consumption (i.e., not sold).

**Downstream:** In the direction of a stream's current.

**Dredging:** Is an excavation activity or operation usually carried out at least partly underwater, in shallow seas or fresh water areas with the purpose of gathering up bottom sediments and disposing of them at a different location.

**Dust Control Plan:** Procedures and design measures for the control of dust during construction and operation.

**Dyke:** an embankment, usually constructed to prevent flooding of low lying areas and thus limit the extent of flooding.

**Environment:** The components of the Earth and includes: a) land, water and air , including all layers of the atmosphere, b) all organic and inorganic matter and living organisms, and c) the interacting natural systems that include components referred to in a) and b) (Canadian Environmental Assessment Act).

**Environmental Assessment (EA):** Process for identifying project and environment interactions, predicting environmental effects, identifying mitigation measures, evaluating significance, reporting and following-up to verify accuracy and effectiveness leading to the production of an Environmental Assessment report. EA is used as a planning tool to help guide decision making, as well as project design and implementation.

**Environmental component:** Fundamental element of the physical, biological or socio-economic environment, including the air, water, soil, terrain, vegetation, wildlife, fish,



birds and land use that maybe affected by a proposed project, and may be individually assessed in the environment.

**Environmental decision making:** Contemporary environmental decisions are made within the context of sustainability aimed at meeting integrated ecological, economic and social goals. Most involve a complex mix of actors and institutions - differing values and differing interests. Choices are difficult and often controversial, and decision-making processes and contexts provide crucial influences on outcomes.

**Environmental effect:** In respect of a project, a) 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, b) any effect of any change referred to in paragraph a) on i) health and socio-economic conditions, ii) physical and cultural heritage , iii )the current use of lands and resources for traditional purposes by Aboriginal persons, or iv. any structure , site or thing that is of historical , archaeological, paleontological or architectural significance or any change to the project that may be caused by the environment; whether any such change or effect occurs within or outside Canada (Canadian Environmental Assessment).

**Environmental Impact Assessment (EIA):** is an assessment of the possible impact—positive or negative—that a proposed project may have on the environment; considering natural, social and economic aspects, the purpose of the assessment is to ensure that decision makers consider the ensuing environmental impacts to decide whether to proceed with the project.

**Environmental Scoping Document:** Was prepared for the Project and submitted by the ESRA. Manitoba Conservation placed the Scoping Document in the Public Registry and on-line registry for comment in May 2009. The purpose of this Scoping Document was to provide information related to the scoping of the environmental assessment of a proposed all-season road from Provincial Road 304 to the Community of Berens River.

**Environmental policy:** Is any course of action deliberately taken (or not taken) to manage human activities with a view to prevent, reduce, or mitigate harmful effects on nature and

natural resources, and ensuring that man-made changes to the environment do not have harmful effects on humans.

**Environmental monitoring:** Periodic or continuous surveillance or testing, according to a predetermined schedule, of one or more environmental parameters. Monitoring is usually conducted to determine the level of compliance with stated requirements, or to observe the status and trends of a particular environmental component over time.

**Earthwork:** Earthworks are engineering works created through the moving of quantities of soil or unformed rock.

**East Side Round Table:** The East Side Round Table has been commissioned by the Conservation Minister to bring forward recommendations and a sustainable land use plan for the East Side of Lake Winnipeg.

**Ecodistrict:** A cartographical delineation of distinct ecological areas, identified by their geology, topography, soils, vegetation, climate conditions, living species, and water resources. An ecodistrict provides a useful approximation of ecosystem potentials.

**Ecology:** Is the interdisciplinary scientific study of the distribution and abundance of organisms and their interactions with their environment.

**Ecoregion:** A subdivision of ecozone, characterized by distinctive large order landforms or assemblages of regional landforms, small order macro-or mesoclimates, vegetation, soils, water, and regional human activity pattern/use.

**Ecosystem:** A functional unit including the living and the non-living things in an area, as well as the relationships between those living and non-living things. For example, a decaying log comprises the ecosystem for a microbe because the log provides everything that microbe needs to survive and reproduce.

**Ecotourism:** Tourism to ecosystems to observe wildlife or to help preserve nature.  
**Effluent:** Is the outflow of water from a natural body of water, or from a man-made structure.

**Embankment:** A long artificial mound of stone or earth; built to hold back water or to support a road or as protection.

**Emergency response plan:** A plan of actions to be implemented upon the realisation of an emergency situation.

**Endangered:** As defined by COSEWIC, a species facing imminent extirpation (no longer existing in the wild in Canada, but occurring elsewhere) or extinction (no longer exist)  
**Endangered Species Act (Manitoba)(MESA):** Enacted: 1) to ensure the protection and survival of endangered and threatened species in the province; 2) to enable the reintroduction of extirpated species into the province; and 3) to designate species as endangered, threatened, extinct, or extirpated. Additions or deletions to list of species under each designation are recommended by the Endangered Species Advisory Committee.

**Erosion:** Natural process by which the Earth's surface is worn away by the actions of water and wind.

**Entrainment:** fish (larval or adult) that are drawn into a current and cannot escape.

**Fauna:** Fauna is all of the animal life of any particular region or time.

**Fen:** A type of wetland fed by groundwater and runoff, containing peat below the waterline.

**Fill:** soil or loose rock used to raise a grade, can be manually or mechanically placed

**First Nation:** A term of ethnicity that refers to the Aboriginal peoples in Canada, who are neither Inuit nor Métis.

**First-order stream:** a small stream that has no larger tributaries

**Fish habitat:** Spawning, nursery, rearing, food supply and migration areas upon which fish depend (Fisheries Act).

**Fish Habitat Assessment:** The fish habitat assessment procedure considers sequentially: what species are present, their abundance, habitat conditions, limitations to production, and opportunities for habitat rehabilitation.

**Fish passage:** Fishways, most commonly called fish ladders but also known as fish passes.

**Fish salvage:** A fish salvage involves collecting fish from the isolated section where the ditch maintenance work is being done and relocating them upstream or downstream of this section.

**Flood:** is an overflow or accumulation of an expanse of water that submerges land.

**Floodplain:** is the flat or nearly flat land adjacent to a stream or river that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas covered by the flood, but which do not experience a strong current.

**Flora:** all plant life occurring in an area or time period, especially the naturally occurring or indigenous plant life.

**Flow:** Physical Motion characteristic of fluids (liquids or gases); any uninterrupted stream or discharge.

**Fragmentation:** The breaking up of contiguous blocks of habitat into increasingly smaller blocks as a result of direct loss and /or sensory disturbance.

**Fugitive dust:** generated from wind erosion caused by generated by roadway construction activities, such as rock quarrying and crushing, blasting, excavation, fill placement and road grading.

**Future projects:** Projects and activities included in a cumulative effects assessment for a proposed development. Future Projects have effects that overlap with those of the proposed development. Only projects and activities that are likely to proceed in the foreseeable future are considered to be future projects. Typically, these include projects and activities that have been approved, have been officially announced by the

proponent, are in a government approvals process, or are directly associated with the project. Uncertain or hypothetical projects are not usually included.

**Game:** Animal hunted for food or sport.

**Geology:** A science that deals with the history of the earth as recorded in rocks.

**Geotechnical investigation:** performed by geotechnical engineers or engineering geologists to obtain information on the physical properties of soil and rock around a site to design earthworks and foundations for proposed structures and for repair of distress to earthworks and structures caused by subsurface conditions.

**Geotextile:** permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain.

**GIS (Geographic Information System):** A computerized information system which uses geo-referenced spatial and tabular databases to capture, store, update, manipulate, analyze and display information.

**Government agency:** Is a permanent or semi-permanent organization in the machinery of government that is responsible for the oversight and administration of specific functions, such as an intelligence agency.

**Gravel:** Is a coarse sedimentary rock that is unconsolidated and of a specific particle size range. Specifically, it is any loose rock that is larger than two millimetres (2 mm/0.079 in) in its smallest dimension (about 1/12 of an inch) and no more than 64 mm (2.5 in).

**Gradient:** is the slope that describes the incline, steepness or grade between two points or locations.

**Grading:** is the process of ensuring a level (or possibly sloped to specific degree) base for a construction work such as a foundation or the base course for a road.

**Granite:** A common, coarse-grained, light coloured, hard igneous rock consisting chiefly of quartz, orthoclase or microcline and mica.

**Ground truthing:** Verification of existing ground conditions on a site.

**Groundwater:** Groundwater is water located beneath the ground surface in soil pore spaces and in the fractures of lithologic formations.

**Groundcover:** Groundcover refers to any plant that grows over an area of ground, used to provide protection from erosion and drought, and to improve its aesthetic appearance (by concealing bare earth).

**Habitat compensation:** The replacement of natural habitat, increase in the productivity of existing habitat, or maintenance of fish production by artificial means in circumstances dictated by social and economic conditions, where mitigation techniques and other measures are not adequate to maintain habitats for Canada's fisheries resources (Habitat Policy).

**Habitat fragmentation:** Occurs when natural topographic features (e.g., rivers) or human disturbances break up wildlife habitat into smaller, relatively ineffective fragments. Habitat fragmentation results in the loss or isolation of effective wildlife habitat and is widely recognized as a leading cause in the loss of biodiversity. Fragmentation occurs at two scales: Landscape (within home ranges of individual animals) and Regional (interbreeding populations are cut off from each other, forming smaller 'island' populations).

**Habitat Stewardship Program:** Supports the public's habitat protection and species at risk recovery initiatives.

**Hazardous materials:** Dangerous good in any solid, liquid, or gas form that can harm people, other living organisms, property, or the environment.

**Heavy equipment:** Engineering vehicles are heavy-duty vehicles, specially designed for executing civil engineering (construction) tasks.

**Heritage:** Heritage refers to the ideas, experiences, and customs of Canadians or groups of Canadians that are passed on to future generations, and to the means of their

preservation and recollection. Traditions cuisine, dress, religion, and language are examples of elements of heritage.

**Hierarchy:** is an arrangement of items (objects, names, values, categories, etc.), in which the items are represented as being "above," "below," or "at the same level as" one

**Hydraulic:** Of, involving, moved by, or operated by a fluid, especially water, under pressure.

**Hydraulic modeling:** The use of mathematical or physical techniques to simulate water systems and make projections relating to water levels, flows and velocities.

**Hydrocarbon spill:** An accidental release of hydrocarbons to the environment that may cause adverse impacts.

**Hydrometric station:** A station on a river, lake, estuary, or reservoir where water quantity and quality data are collected and recorded.

**Impact:** A positive or negative effect of a disturbance on the environment or a component of the environment.

**Indirect effect:** A secondary environmental effect that occurs as a result of a change that a project may cause in the environment. An indirect effect is at least one step removed from a project activity in terms of cause-effect linkages. For instance, a river diversion for the construction of a hydropower plant could directly result in the destruction of fish habitat causing a decline in fish population, a decline in fish population could result in closure of an outfitting operation causing loss of jobs, thus, the river diversion could indirectly cause the loss of jobs.

**Intellectual property:** Is a number of distinct types of legal monopolies over creations of the mind, both artistic and commercial, and the corresponding fields of law.

**Invasive:** Tending to spread and then dominate the new area, and to spread through, usually causing harm.

**Invasive species:** Any species that has been introduced to an environment where it is not native, and that has since become a nuisance through rapid spread and increase in numbers, often to the detriment of native species.

**Lacustrine:** A type of deposit that comes from lakes which previously occupied the area. They are fine-grained soils that have settled through the water and accumulated on the lake bottom, typically leaving them in a soft condition.

**Land cover:** The physical coverage of land, usually expressed in terms of vegetation cover, or lack thereof.

**Landfill:** waste disposal sites.

**Landforms:** Any geological feature, such as a mountain or valley, hills, etc.

**Landsat:** Any of several satellites used to gather data about the Earth's surface resources, satellite imagery.

**Land type:** An area (i.e., a patch) that has similar soils, surface water and groundwater.

**Land use:** Is the human modification of natural environment or wilderness into built environment such as fields, pastures, and settlements.

**Larvae:** The period of life immediately after hatching lasting until the yolk-sac has been absorbed.

**Larval:** The stage of being larvae.

**Legal and Institutional framework:** Describing the requirements of the Canadian Environmental Assessment Act (CEAA) and the Manitoba Environment Act (MEA); and an explanation of the Canada-Manitoba Agreement on the Environmental Assessment Cooperation.

**Life ring:** Also known as a "kisby ring" or "perry buoy", is a life saving buoy designed to be thrown to a person in the water, to provide buoyancy, to prevent drowning.



**Logging road:** A road within a timber harvesting area on Crown Land built solely for the extraction of timber and includes landings and other works associated with the harvesting operation.

**Lubricant:** A lubricant is a substance introduced between two moving surfaces to reduce the friction between them, improving efficiency and reducing wear. They may also have the function of dissolving or transporting foreign particles and of distributing heat.

**Mammal:** Are a class of vertebrate animals whose females are characterized by the possession of mammary glands while both males and females are characterized by sweat glands, hair, three middle ear bones used in hearing, and a necrotic region in the brain.

**Manitoba Clean Environment Commission (CEC):** The CEC is an arms-length provincial agency that encourages and facilitates public involvement in environmental matters and offers advice and recommendations to the Minister of Conservation with respect to environmental issues, project approvals and environmental licenses.

**Manitoba Conservation:** is a department of the Government of Manitoba. It oversees environmental stewardship, species at risk, forestry, and related matters. The department is overseen by the Minister of Conservation.

**Manitoba Infrastructure and Transportation (MIT):** is responsible for the development of transportation policy and legislation, and for the management of the province's vast infrastructure network.

**Marine:** A general term for things relating to the sea or ocean.

**Marsh:** A type of wetland that does not accumulate appreciable peat deposits and is dominated by herbaceous vegetation.

**Medicinal plants:** Plants used by humans for therapeutic purposes.

**Memorandum:** is a document or other communication that aids the memory by recording events or observations on a topic, such as may be used in a business office

**Merchantable:** A tree or a stand of trees that has maturity (rotation age and/or size) and is suitable and/or ready for harvest.

**Métis:** The Métis are a people of North American Indian and European ancestry who coalesced into a distinct nation in the northwest in the late 18th century. The Métis are one of three distinct Aboriginal peoples of Canada, recognized under section 35 in the 1982 Constitution. Fiercely independent, the Métis were instrumental in the development of western Canada.

The Métis people were born from the marriages of Cree, Ojibwa and Salteaux women, and the French and Scottish fur traders, beginning in the mid-1600s. Scandinavian, Irish and English stock was added to the mix as western Canada was explored. The word Métis comes from the Latin "miscere", to mix, and was used originally to describe the children of native women and French men. Other terms for these children were Country-born, Black Scots, and Half-breeds

**Métis Federation:** The Federation represents the Métis people of Manitoba, and is the vehicle through which the Métis people organize politically, and begin to once again manage their own affairs, and re-emerge as a dynamic force in Manitoba and Canada.

**Métis Nation:** The Métis are a people descended of marriages of Cree, Ojibway, Algonquin, Saulteaux, Menominee, Mi'kmaq, Maliseet, and other First Nations.

**Migration patterns:** A seasonal change of habitat, analogous to migration.

**Migratory Birds:** Refers to the regular seasonal journeys undertaken by many species of birds.

**Mitigate/mitigation:** Actions taken during the planning, design, construction and operation of works to reduce or avoid potential adverse effects.

**Mitigation measures:** developed to prevent or reduce adverse environmental and social effects to various stages of Project development.

**Mitigation monitoring:** A type of monitoring program that may be used to verify that mitigation measures were properly implemented and that such measures effectively mitigate the predicted adverse environmental effects.

**Model:** A tool used to help visualize something that cannot be directly observed.

**Model Forest:** A model forest is a place where the best sustainable forest management practices are developed, tested and shared across the country. It is an ideal laboratory for conducting research on sustainable forest management.

**Monitoring:** Continuing assessment of conditions at and surrounding an activity. This determines if effects occur as predicted or if operations remain within acceptable limits and if mitigation measures are as effective as predicted.

**Morphology:** The physical constitution, particularly the structural properties, of a soil profile as exhibited by the kinds, thickness, and arrangement of the horizons in the profile and by the texture, structure, consistence, and porosity of each horizon.

**Multi-disciplinary environmental impact assessment:** All valued ecological components (VECs) have been studied by qualified analysts throughout the study area, with the assistance and guidance of community members through community meetings and community traditional knowledge studies.

**Muskeg:** Muskeg is an acidic soil type common in Arctic and boreal areas, although it is found in other northern climates as well.

**Mustellid:** Commonly referred to as the weasel family, is a family of carnivorous mammals.

**National park:** An area of land set aside by an act of Congress because of its unique physical and/or cultural value to the nation as a whole; administered by the Department of Interior for public use.

**Natural resources:** (economically referred to as land or raw materials) occur naturally within environments that exist relatively undisturbed by mankind, in a natural form.

**Net or residual environmental effects:** Effects that remain after mitigation measures have been applied.

**Non-status First Nations:** A Non-Status Indian is a legal term referring to any First Nations individual who for whatever reason is not registered with the Federal government, and/or is not registered to a band which signed a Treaty with the Crown.

**Northern Affairs communities:** The NAC is a “political” organization of the communities under the legal administration of the Manitoba Department of Aboriginal and Northern Affairs. These communities are legal communities and may or may not be Metis. When the Métis community is referenced, it is in the broader social community context of Métis people within the geographic area who may or may not live within the political boundaries.

**Oclansorb Peat Moss:** Is a commercially marketed form of peat moss used to absorb spills of oil and other fuels at bulk fuel stations and on highways.

**Off-reserve:** A term used to describe people, services or objects that are not part of a reserve, but relate to First Nations.

**On-site mitigation:** A mitigation project at or near the adversely affected site.

**Open [Zone]:** A classification within the Manitoba Forest Resources Inventory. Crown land open to harvest.

**Operations phase:** Refers to the point at which construction of the ASR is complete and it begins to function as an ASR providing the transportation link intended transportation link.

**Organic:** containing plant and animal residues at various stages of decomposition (i.e., organic soil contains decomposing plant fibres).

**Ortho-corrected photos:** A rectified copy of a photograph (typically an aerial photograph), showing image features corrected for variations in scale and height displacements. An orthophoto will have its features registered to either a Digital

Elevation Model (DEM) or Digital Terrain Model (DTM) to allow accurate measurements of features and relationships between features directly from the photograph.

**Outcrop:** The part of a rock formation that appears above the surface of the surrounding land.

**Overburden:** The soil (including organic material) or loose material that overlies bedrock.

**Palaeontology:** is the study of prehistoric life, including organisms' evolution and interactions with each other and their environments (their paleoecology).

**Parameters:** Any set of physical, chemical or biological properties whose values determine the characteristics or behaviour of a system.

**Passing Sight Distance:** The length of roadway ahead required to pass another vehicle without meeting an oncoming vehicle.

**Peatland:** A peatland is a wetland where organic material has accumulated because dead plant material production exceeds decomposition.

**Per Capita:** is a term adapted from Latin phrase pro capite meaning "per (each) head".

**Pesticides:** is any substance or mixture of substance intended for: - preventing, destroying, repelling or mitigating any pest.

**pH:** method of expressing acidity or alkalinity of a solution. pH is the logarithm of the reciprocal of the hydrogen ion concentration, with pH 7.0 indicating neutral conditions.

**Physical environment:** refers to the terrain, geology, hydrogeology, hydrology, air, water of the Project area.

**Posted Speed:** Maximum speed permitted at a specific location on a transport corridor.

**Potentially salvageable timber:** Timber that is of sufficient size (stem diameter and length) to be useable for commercial or non-commercial purposes, exclusive of economic and logistical considerations.

**Power point presentations:** It is a presentation program developed by Microsoft. It is part of the Microsoft Office suite, and runs on Microsoft Windows and Apple's Mac OS X computer operating systems.

**Prairie:** is considered part of the temperate grasslands, savannas, and shrublands biome by ecologists, based on similar temperate climates, moderate rainfall, and grasses, herbs, and shrubs, rather than trees, as the dominant vegetation type.

**Precipitation:** The amount of rainfall and snow generated.

**Pristine:** A completely natural state, and free from dirt or contamination.

**Project Footprint:** The extent of the physical works and associated activities where direct environmental effects are expected to occur as well as incidental physical disturbance in adjacent areas and indirect effects on habitat. For the Project, this includes the proposed road, quarries, camp areas, construction access roads, associated infrastructure, and a 150-m buffer surrounding these areas.

**Project life cycle:** The project life cycle (PLC) encompasses all the activities of the project, while the systems development life cycle focuses on realizing the product requirements.

**Protocol:** is a predefined written procedural method in the design and implementation of experiments.

**Provincial Crown Corporation:** State-owned enterprises within either the federal or provincial and territorial jurisdictions of Canada.

**Public consultation:** is a regulatory process by which the public's input on matters affecting them is sought. Its main goals are in improving the efficiency, transparency and public involvement in large-scale projects or laws and policies.

**Public hearings:** A Public Hearing is a process in which interested parties and any other persons who may be affected by the result have the opportunity to make submissions, ask questions or register objections to a development application or other matter under through an identified Federal or Provincial approval process.

**Quarry:** is an open-pit operation from which rock is extracted, and is generally used for extracting building materials, such as dimension stone, construction aggregate, riprap, sand, and gravel, etc.

**Radius:** In classical geometry, a radius of a circle or sphere is any line segment from its center to its perimeter.

**Rapid:** A rapid is a section of a river where the river bed has a relatively steep gradient causing an increase in water velocity and turbulence.

**Residual or “net” environmental effects:** An environmental effect that remains, or is predicted to remain, even after mitigation measures have been applied.

**Responsible Authority:** Responsible for issuing the approval or authorization.

**Right-of-way (ROW):** Area of land controlled or maintained for the development of a road, pipeline or transmission line.

**Riparian vegetation:** A riparian zone or riparian area is the interface between land and a stream. Plant communities along the river margins are called riparian vegetation, characterized by hydrophilic plants.

**Roadbed:** The base over which a road's paving is installed. The roadbed is usually topped with graded crushed stone.

**Roadbed Width:** refers to the total distance of both the travelled lanes of the road, and the road shoulder.

**Roadway Fill Slope:** refers to the slopes created by the placement of road base materials required to establish the road bed. Design criteria specify a maximum slope of finished or graded slopes to be 4 H (horizontal ): 1V (vertical).

**Rockfall:** Refers to quantities of rock falling freely from a cliff face.

**Rocky shoreline:** composed of solid bedrock with very little sediment, and are often exposed to tremendous forces of waves and currents.

**Runoff:** is the water flow which occurs when soil is infiltrated to full capacity and excess water, from rain, snowmelt, or other sources flows over the land.

**Satellite imagery:** consists of photographs of Earth or other planets made by means of artificial satellites.

**Satellite telephone:** is a type of mobile phone that connects to orbiting satellites instead of terrestrial cell sites.

**Sediment:** Sediment is any particulate matter that can be transported by fluid flow, and which eventually is deposited.

**Sediment transport:** is used to describe the movement of solid particles (sediment) and the processes that govern their motion.

**Seismograph:** Measuring instrument for detecting and measuring the intensity and direction and duration of movements of the ground (as an earthquake) Peak ground.

**Shoreline:** Shoreline zone is the area that is seasonally flooded. Starting approximately at the water's edge, this zone extends up the shore and includes an area under water during the spring floods and after major rain events. Plants in this zone tolerate 'wet feet' for short periods of time.

**Shoulder Edge Treatment:** is the distance allocated for the treatment of the shoulder of the road with tackifiers or emulsions that will provide a measure of erosion protection along the shoulder or edge of the shoulder.

**Side slope:** is the gradient of the face of the slope of the road.

**Silt:** is soil or rock derived granular material of a grain size between sand and clay.

**Slope Failure:** The movement of material on an unstable slope.

**Slope stabilization:** Design of earth slopes as it relates to road construction, and concerns slope stability and slopes that could be used under average conditions in cuts and embankments.



**Social impacts:** Relate to the production and maintenance of community history, culture, identity, traditions and institutions. Social impacts inform ways in which the company's presence changes the community and its capacity to adopt to change.

**Social well-being:** A contented state of being happy and healthy and prosperous.

**Socio-economic:** Is the study of the relationship between economic activity and social life.

**Socio-Economic Impact Assessment (SEIA):** Provides detailed information about effects, both positive and negative, that a proposed project may have on people, their lifestyles and their communities. In particular, effects that flow from biophysical effects are included. An SEIA also provides ways to address effects that are likely to be adverse, from the point of view of an affected population, and to enhance those effects perceived to be positive. Residual effects, cumulative effects and monitoring are also included. An SEIA is often part of the environment impact assessment (EIA) for a proposed project.

**Sorbent:** is a material used to absorb liquids or gases.

**Span:** Span is a section between two intermediate supports, e.g. of a beam or a bridge  
**Spawning:** is the production or depositing of large quantities of eggs in water. The process is done by aquatic animals such as amphibians and fish.

**Species:** In biology, a species is: \* a taxonomic rank (the basic rank of biological classification) or \* a unit at that rank. In addition a group of plants or animals having similar appearance; a rank in the classification of organisms.

**Species assessment process:** Could provide consistent, scientific evaluations of conservation status across all species, and identify areas most important to the conservation of each species.

**Species at risk:** Means an extirpated, endangered or threatened species or a species of special concern (Species at Risk Act).

**Species at Risk Act (SARA):** The federal Act which provides for the legal protection for wildlife species listed under 'Schedule 1' of the Act.

**Staging areas:** is a predesignated temporary location established where personnel, supplies, and equipment can be temporarily housed or parked while awaiting operational assignment. Staging Areas may include temporary storage, feeding, fuelling, and sanitation services.

**Stockpile:** is a pile or storage location for bulk materials, forming part of the bulk materials handling process.

**Streambed:** A stream bed is the channel bottom of a stream, river or creek; the physical confine of the normal water flow.

**Streamflows:** or channel runoff, is the flow of water in streams, rivers, and other channels, and is a major element of the water cycle.

**Stream gauge:** refers to a site along a stream where measurements of volumetric discharge (flow) are made.

**Storyboard:** are graphic organizers such as a series of illustrations or images displayed in sequence for the purpose of pre-visualizing a motion.

**Stopping Sight Distance:** is the distance along a highway for which a vehicle, or other object, is continuously visible in daylight under normal atmospheric conditions.

**Subcontractor:** is an individual or in many cases a business that signs a contract to perform part or all of the obligations of another's main contract.

**Subgrade:** is the base for a construction work such as a foundation or the base course for a road. The earthworks created for such a purpose are often called the sub-grade.

**Subsistence fishing:** Fishing for food (consumed by the local group of people who do the fishing), not for commercial sale.

**Suitable subgrade:** Geotechnically competent soils comprised of gravel, clay, granular  
Surface drainage system: The use of open ditches that provide predominately surface drainage.

**Surface water:** is water collecting on the ground or in a stream, river, lake, wetland, or ocean; it is related to water collecting as groundwater or atmospheric water.

**Surficial geology map:** A surficial geology map shows the areal distribution of all the loose materials such as till (commonly called hardpan), sand and gravel, or clay, which overlie solid ledge (bedrock).

**Surveys:** a process for gathering information via various means e.g. telephone interview, questionnaire etc., without detailed verification, on the activity being examined.

**Sustainability:** Capacity of a thing, action, activity or process to be maintained indefinitely in a manner consistent with the spirit of Manitoba's Principles and Guidelines of Sustainable Development.

**Sustainable development:** is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations.

**Sustainable development (SD) (Canada):** Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs (Canadian Environmental Assessment Act).

**Sustainable Development Code of Practice:** Was established to assist the integration of sustainable development into provincial decisions, actions and operations of provincial public sector organizations.

**Swamp:** is a wetland featuring temporary or permanent inundation of large areas of land by shallow bodies of water.

**Taxonomy:** is the practice and science of classification of organisms (now sometimes known as alpha taxonomy) or a particular classification of organisms.

**Terrain:** or relief refers to the lay of the land; and is usually expressed in terms of the elevation, slope, and orientation of terrain features. Terrain affects surface water flow and distribution.

**Terrestrial:** Pertaining to organisms living habitually on the land or ground surface.

**Terrestrial environment:** is the environment living on the ground.

**Threatened:** A species likely to become endangered if limiting factors are not reversed. (COSEWIC)

**Threshold:** A limit or level which if exceeded likely results in a noticeable, detectable or measurable change or environmental effect that may be significant. Example thresholds include water-quality guidelines, acute toxicity levels, critical population levels and wilderness criteria.

**Topography:** is the description of such surface shapes and features, and is concerned with local detail in general, including not only relief but also vegetative and human-made features, and even local history and culture.

**Topsoil:** Topsoil is the upper, outermost layer of soil, usually the top to 2 inches (5.1 cm) to 8 inches (20 cm). It has the highest concentration of organic matter and microorganisms and is where most of the biological soil activity occurs.

**Tourism:** is travel for recreational, leisure or business purposes.

**Toxic substances:** A chemical or mixture that may present an unreasonable risk of injury to health or the environment.

**Trade-off:** is the process of evaluating various options to a project or its components.

**Traditional Knowledge (TK):** Traditional Knowledge is considered to be:

- The observation and experience of the land.
- Aboriginal law regarding how the environment works.
- The understanding of place in the world – how things are connected, including spiritually; the relationship to the land;

- The goals and aspirations;
- The outlook on the proposed projects – concerns; acceptability;
- Identity and culture;
- The stewardship of the land; and
- A base for natural resource management.

Traditional Knowledge, both traditional and modern, from Elders is passed on to others.

**Transportation modes:** Including vehicles, rail, dirigibles, hovercraft and ferries.

Treaty rights: Special rights to lands and entitlements that Indian people legally have as a result of treaties; rights protected under section 35 of the Constitution Act, 1982.

**Turbidity:** is the concentration of undissolved, suspended particles present in a liquid phase.

**Turbidity curtains:** is a non-permeable geotextile cloth curtain that floats in a water column, and has flotation at the top and anchoring at the bottom to keep it vertical in a water body, enabling turbid waters to be retained behind the curtain body.

**Two-way radio:** is a radio that can both transmit and receive (a transceiver), unlike a broadcast receiver which only receives content.

**UNESCO World Heritage Site designation:** To encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.

**Upstream:** in the direction against a stream's current.

**UTM Coordinates:** Universal Transverse Mercator (UTM) coordinate system is a grid-based method of specifying locations on the surface of the Earth that is a practical application of a 2-dimensional Cartesian coordinate system. It is used to identify locations, however it differs from the traditional method of latitude and longitude.

**Vessel:** A floating structure designed for the transport of cargo and/or passengers.

Virgin timber: Timber taken from an uncultivated forest.

**Washout:** is the sudden erosion of soft soil or other support surfaces by a gush of water and sediments, usually occurring during or after a heavy downpour of rain (a flash flood) or other stream flooding.

**Waste disposal:** Processing and or removal of wastes to final place of deposition or transfer to a place for re-use or recovery.

**Waste management:** is the collection, transport, processing, recycling or disposal, and monitoring of waste materials.

**Wastewater:** comprises liquid waste discharged by domestic residences, commercial properties, industry, and/or agriculture and can encompass a wide range of potential contaminants and concentrations. In the most common usage, it refers to the municipal wastewater that contains a broad spectrum of contaminants resulting from the mixing of wastewaters from different sources.

**Water bodies:** is any significant accumulation of water, such as oceans, seas, and lakes, and smaller pools of water such as ponds, puddles or wetlands.

**Watercourse:** is any flowing body of water, that include rivers, streams, brooks, creeks.

**Water Crossing:** structure used for traversing between right and left banks of a water courses.

**Waterfall:** is a place where flowing water rapidly drops in elevation as it flows over a steep region or a cliff.

**Waterfowl:** game birds that frequent water, e.g. ducks, geese and swans.

**Water levels:** Water open to the atmosphere including lakes, ponds, rivers, springs.

**Watershed:** is an extent of land where water drains downhill into a body of water, such as a river, lake, reservoir, estuary, wetland, sea or ocean.

**Water supply:** is the process of self-provision or provision by third parties in the water industry, commonly a public utility, of water resources of various qualities to different users.

**Water table:** is the level at which the groundwater pressure is equal to atmospheric pressure, visualized as the 'surface' of the groundwater at given vicinity.

**Waterway:** is any navigable body of water that include rivers, lakes, seas, oceans, and canals.

**Wetland:** A land ecosystem where periodic or prolonged water saturation at or near the soil surface is the dominant factor shaping soil attributes and vegetation composition and distribution.

**Winter roads:** are temporary roads made of compacted and graded snow and ice that facilitates transport to and from communities without permanent roads.

**Woodland:** is an area covered in trees, usually at low density, forming an open habitat, allowing sunlight to penetrate between the trees, and limiting shade.

**World Heritage Site:** is a site (such as a forest, mountain, lake, desert, monument, building, complex, or city) that is on the list that is maintained by the international World Heritage Programme administered by the UNESCO World Heritage Committee.