

GLOSSARY

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Abiotic: A nonliving physical or chemical attribute of a system, *e.g.*, light, temperature, wind patterns, rocks, soil, pH, pressure, *etc.*

Aboriginal traditional knowledge (ATK): Knowledge that is held by, and unique to, Aboriginal peoples. It is a living bit of knowledge that is cumulative and dynamic and adapted over time to reflect changes in the social, economic, environmental, spiritual and political spheres of the Aboriginal knowledge holders. It often includes knowledge about the land and its resources, spiritual beliefs, language, mythology, culture, laws, customs and medicines (Canadian Environmental Assessment Agency).

Above sea level (ASL) elevation: Elevations are referenced to Geodetic Survey of Canada, Canadian Geodetic Vertical Datum 1928, GSofC, CGVD28, 1929 Adjustment.

Acoustic-transmitter: A transmitter that emits signals detected by stationary or mobile acoustic receivers; used to track movements of fish when surgically implanted in the abdomen.

Acute toxicity: The ability of a substance to cause severe biological harm or death soon after a single exposure or dose. Also, any poisonous effect resulting from a single short-term exposure to a toxic substance.

Adaptive management: Involves the implementation of new or modified mitigation measures over the life of a project to address its unanticipated environmental effects (*Canadian Environmental Assessment Act*).

Adult sturgeon: Lake sturgeon 834 mm long or greater (fork length) were assumed to be adults where sexually maturity was not evident at the time of sampling. This benchmark was based on sexual maturity data collected during the spawning season from a well-studied lake sturgeon population on the Lower Nelson River.

Advect: A horizontal movement of a mass of fluid, such as ocean or air currents; can also refer to the horizontal transport of something such as sediment.

Agreement-in-Principle (AIP): The agreement in principle made between Manitoba Hydro and TCN dated October 17, 2000. WLFN signed the AIP in July 2003.

Algae (a; al): A group of simple plant-like aquatic organisms possessing chlorophyll and capable of photosynthesis; they may be attached to surfaces or free-floating; most freshwater species are very small.

Allocation: For the purposes of the EIS, a parcel of land assigned to an outfitter or lodge operator to carry out their guiding services.

Alluvial: Pertaining to or composed of alluvium; clay, silt, sand, gravel, or similar detrital material deposited by running water.

Alpha diversity: The diversity within a particular area or ecosystem, and is usually expressed by the number of species (*i.e.*, species richness) in that ecosystem.

Alternating current (AC): An electric current that reverses its direction (positive/negative values) at regular intervals. See direct current.

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

Amphipod: A shrimp-like crustacean most often found in marine or fresh water environments, but also represented by terrestrial species (sand fleas).

Analytical detection limit: The lowest concentration of a substance that can be confidently measured using a particular analytical procedure.

Anchor ice: Ice that forms below the surface of a body of water that attaches either to a submerged object or to the bed of the waterbody.

Annelid: Segmented worms, such as earthworms and leeches, found in most wet environments.

Anoxic: Absence of oxygen.

Apprentice: A person who is learning a trade from a skilled employer, having agreed to work for a fixed period at low wages.

Apprenticeship: A system of training and certification in established trades — a way for people to obtain the credentials required for work in many important skilled trades. Apprenticeship is also a training model that combines on-the-job learning with the learning of theory.

Aquatic: Living or found in or near water.

Aquatic environment: All organic and inorganic matter and living organisms and their habitats that are related to or are located in or on the water, beds, or shores of a water body.

Aquatic peatland: Peatland that borders a water body or waterway. The portion adjacent to the water is usually floating.

Aquifer: An underground bed or layer of earth, gravel or porous stone that yields water.

Arboreal: Of or relating to trees.

Archaeology: The science and/or methods concerned with the recovery, description, analysis and explanation of the physical remains of past human cultures.

Area of special interest: An official designation of the Province of Manitoba that identifies “candidate sites” which have not been protected in any formal manner but have a high potential to protect groupings of enduring features and associated natural and cultural values.

Arthropod: The largest group within the animal kingdom, containing several million species; characterised by a rigid external skeleton and paired jointed legs.

Assimilation: The process of absorbing nutrients into the body after digestion.

Autotroph: An organism capable of synthesizing its own nutritional organic substances from inorganic compounds, such as CO₂, green plants, algae, and certain bacteria..

Availability (economic context): For those who are interested in work on the construction site, there are factors which may limit their availability to take advantage of these opportunities. These could include the extent to which a candidate maintains their status in the job referral system (there is a need to renew status every 6 months or the profile is considered dormant), the ability of the contractor to contact a referred candidate, a candidate's interest in the specific job opportunity once contacted, and the ability of the candidate to make arrangements to get to the job site.

Backbay: Area in a river or stream isolated from the main flow where water velocities are typically low or nonexistent.

Backflooding: Intentionally flooding the work area behind a cofferdam to minimize erosion during cofferdam removal.

Backwater effect: In hydrologic terms, the effect that a dam or other obstruction has in raising the surface of the water upstream from it.

Bank recession: Rate at which the bank erodes inland.

Bankfull: Water surface elevation at which a stream first overflows its natural banks.

Base-loaded mode: A generating station mode of operation based on a constant forebay elevation and gradual flow changes in response to changing inflows.

Base metal: A metal that is common and not considered precious (*e.g.*, iron, nickel, lead, zinc).

Basin: A distinct section of a lake, separated from the remainder of the lake by a constriction.

Batch plant: A plant used to manufacture concrete by mixing cement, sand, aggregate and water. The aggregate may be either crushed rock or gravel.

Bathymetry: Measurements of water depth of a lake or river.

Bayline: Refers to communities along the Hudson Bay railroad from Thompson to Churchill.

Bed load: Sediment or other material that slides, rolls, or bounces along the streambed or channel bed of flowing water.

Bed material: Soil material that makes up the bed of the river or lake.

Bed material transport: Sediment particles transported on or near the streambed by rolling, sliding or bouncing.

Bedrock: A general term for any solid rock, not exhibiting soil-like properties, that underlies soil or other surficial materials.

Bench Mark (BM): A point of known or assumed elevation used as a reference in determining other elevations.

Benthic: Relating to the bottom of a waterbody (*e.g.*, lake).

Benthic invertebrate: An animal lacking a backbone that lives on or in the bottom sediments of a waterbody (*e.g.*, mayfly, clam, aquatic earthworm, crayfish).

Benthivore: An animal that feeds on organisms that live on the lake or river bottom (*e.g.*, aquatic insects, molluscs, crustaceans and worms).

Berm: A flat strip of land, raised bank, or terrace bordering a river or canal.

- a path or grass strip beside a road.
- an artificial ridge or embankment, such as one built as a defense against tanks: *berms of shovelled earth*
- a narrow space between a ditch and the base of a parapet.

Best gate: The wicket gate setting at which a hydraulic turbine operates most efficiently. The wicket gates are the main flow control to the turbine.

Bioaccumulate: The accumulation of substances, such as methylmercury, in an organism or part of an organism. Bioaccumulation occurs when a substance is absorbed by an organism at a greater rate than it is lost.

Bioavailability: The availability of substances to be accumulated by biota.

Biodiversity: The variability among living organisms from all sources, including, without limiting the generality of the foregoing, terrestrial and marine and other aquatic ecosystems and the ecological complexes of which they form a part and includes the diversity within and between species and of ecosystems (Canadian Environmental Assessment Agency).

Biological (biochemical) oxygen demand (BOD): A test used to measure the level of pollution in water by determining how much dissolved oxygen is consumed by microorganisms (*e.g.*, bacteria) as they break down organic matter (*e.g.*, plants).

Biomagnification: The increasing concentration of a substance, such as a toxic chemical, in the tissues of organisms at successively higher levels in a food chain.

Biomass: For the purposes of this EIS, the total mass of all living material in a specific area, habitat or region.

Biophysical land classification: A delineation of distinct areas on a map based on soil, surficial deposits, landforms, permafrost and water.

Biota: The animal (fauna) and plant (flora) life of a region.

Black-start: Is the process of restoring electricity to the generation and transmission system during a system wide blackout or outage where transmission lines are not energized and generating stations are not operating. Some generating stations require a source of power to restore it to operation without relying on an off-site source of power. A stand-by diesel generator is normally used to provide power to start up the stations generating units. The generating station then provides power to key transmission lines to provide power to start up other hydroelectric generating stations that do not have their own on-site source of back-up power.

Blanket peatland: Bog, fen or mixtures of these types with peat of intermediate thickness (*i.e.*, up to approximately 2 m thick) and a featureless surface that cover gentle slopes.

Bog: A type of peatland that receives nutrient inputs from precipitation and dryfall (particles deposited from the atmosphere) only. Sphagnum mosses are the dominant peat forming plants. Commonly acidic and nutrient poor.

Border ice: Ice that forms along the bank or shoreline where velocities are low (also referred to as shore ice).

Boreal: Of or relating to the cold, northern, circumpolar area just south of the tundra, dominated by coniferous trees such as spruce, fir, or pine. Also called taiga.

Borrow area: An area where earth material (clay, gravel or sand) is excavated for use at another location (also referred to as 'borrow sites' or 'borrow pits').

Boulder: The largest of rock particles, having a diameter greater than 256 mm.

Broad habitat type: The third coarsest level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type.

Buffer: An area surrounding a defined geographic area, usually created by locating a line a fixed distance around the area of interest.

Bulkhead gate: A fabricated steel unit that performs the same function as a number of stop logs when it is lowered into guides and seals against a frame to close a water passage in a dam or spillway.

Burntwood Nelson Agreement (BNA): The Burntwood Nelson Agreement (BNA) is the collective agreement between the Hydro Project Management Association (HPMA), representing Manitoba Hydro management, and the unions of the Allied Hydro Council (AHC), representing workers, that will be in effect during the construction of the Project. (See below for definition of collective agreement.)

Cache: A hiding place for concealing and preserving provisions.

Capacity factor: The ratio of average load of a plant or machine, to its maximum capacity rating.

Caribou calving and rearing habitat complex: A habitat mosaic that includes a cluster of islands on lakes or a cluster of islands in peatlands that are comprised mainly of raised peatland areas with black spruce trees surrounded by expansive wetlands or treeless areas. These mosaics or complexes are suitable habitats for summer resident caribou to calve, and/or to raise calves, between May and August. Water or wet habitats provide caribou with increased security and isolation from predators.

Cascade: A small waterfall or series of small waterfalls

Catch-per-unit-effort (CPUE): The number or weight of fish caught in a given time period with a specific equipment.

Chironomid: Non-biting midges that, in their larval form, are members of the benthic macroinvertebrate community.

Churchill River Diversion (CRD): The diversion of water from the Churchill River to the Nelson River via the Rat River and the impoundment of water in Southern Indian Lake as authorized by the CRD Licence.

Cladocerans: Small crustaceans that are members of the zooplankton community; commonly known as water fleas.

Clear-span bridge: Small-scale bridge structure that completely spans a watercourse without altering the stream bed or bank, and that are a maximum of two lanes wide. The bridge structure (including bridge approaches, abutments, footings, and armouring) is built entirely above the ordinary high water mark.

Climate scenario: A plausible and often simplified representation of the future climate, based on an internally consistent set of climatological relationships, that has been constructed for explicit use in investigating the potential consequences of anthropogenic climate change, often serving as input to impact models. Climate projections often serve as the raw material for constructing climate scenarios, but climate scenarios usually require additional information such as the observed current climate. A “climate change scenario” is the difference between a climate scenario and the current climate.

Climax: The culminating, self-replacing seral stage in plant succession that is relatively stable and persists for long periods relative to other **seral** stages.

Coarse habitat: The second coarsest level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type used for the terrestrial assessment.

Coarse habitat mosaic: Combination of habitat types for the purpose of analysis of data collected on mammal tracking transects.

Coarse habitat type: The second coarsest level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type used for the terrestrial assessment.

Cobble: Rocks larger than gravel but smaller than boulders, having a particle diameter between 64 and 256 mm.

Cofferdam: A temporary dam, usually made of rockfill and earth, constructed around a work site in the river, so the work site can be dewatered or the water level controlled during construction.

Commercial fishing: A fishery where the catch is sold.

Commercial trapping: The capture of furbearers for the sale of furs.

Community: In ecology, a community is an ecological unit composed of a group of organisms or a population of different species occupying a particular area, usually interacting with each other and their environment. For people, a community is a social group of any size, whose members reside in a specific locality.

Compensation agreement: An agreement between a resource developer and a party affected by their development to provide compensation for damages caused by the development.

Concentration: The density or amount of a material suspended or dissolved in a fluid (aqueous) or amount of material in a solid (*e.g.*, sediments, tissue).

Concrete aggregate: Crushed rock or gravel of varying size used in the production of concrete. Aggregate is mixed with sand, cement, and water and other additives to produce concrete.

Conductivity: A measure of the ability of a solution to conduct electrical flow; units are microSiemens per centimetre.

Construction power: The electrical requirements during the construction of the project, required for the camp, batch plants, cranes, heaters and other equipment.

Converter station: A facility, which converts electricity, either from direct current (DC) to alternating current (AC) or from AC to DC.

Copepods: Small crustaceans that are members of the zooplankton community.

Country food: Traditional diet of Aboriginal people, particularly those living in northern regions, includes various forms of meat, fish, waterfowl and berries that can be hunted, fished and gathered from the land.

Crest: The top surface of a dam or roadway, or the high point of the spillway overflow section, or the highpoint of a landform.

Cryosol: A soil order in the Canadian System of Soil Classification that includes soils having permafrost within 1 m of the surface or within 2 m if the pedon (the smallest unit or volume of soil that contains all the soil horizons of a particular soil type) has been strongly cryoturbated (disturbed as a result of freeze–thaw processes) laterally within the active layer, as indicated by disrupted, mixed, or broken horizons. Cryosols have a mean annual temperature $<0^{\circ}\text{C}$.

Cumulative effect (impact): The effect on the environment, which results when the effects of a project combine with those of the past, existing, and future projects and activities; the incremental effects of an action on the environment when the effects are combined with those from other past, existing and future actions.

Dabbling duck: Various species of ducks that feed in shallow water, such as mallards, teals and northern shovelers.

Debris: Any material, including floating or submerged items (*e.g.*, driftwood, plants), suspended sediment or bed load, moved by flowing water.

Decommissioning: Planned shutdown, dismantling and removal of a building, equipment, plant and/or other facilities from operation or usage and may include site cleanup and restoration.

Deleterious: Harmful.

Dependable energy: The energy that can be generated by a generating station during the lowest flow conditions on record for a given length of time (*i.e.*, week, month, and year).

Deposition: Deposition is the process of settling of sediment particles from a state of suspension in water column as a result of reduction in flow velocity or increase in sediment concentration without corresponding increase to the discharge.

Designated trade: Occupations that have formal apprenticeship programs that provide supervised training leading to certification as a fully-qualified journeyman in the trade. Apprenticeships in the designated trades typically entail four or more years of in-class technical training and on-the-job work experience. Carpenters and electricians are examples of occupations in the designated trades.

Detritivore: An organism that feeds upon decomposing organic matter.

Dewater: Removing the water from or draining an area behind a cofferdam so that construction activities can be undertaken.

Direct negotiated contract (DNC): A type of contract that is non-tendered and directly negotiated between parties.

Dispersal: The spread of animals, plants, or seeds to new areas.

Dissolved oxygen (DO): Oxygen molecules (O_2) dissolved in water.

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

Draft tube: The part of the water passage immediately downstream of a turbine runner, through which the water is directed into the tailrace.

Driver: Any natural or human-induced factor that directly or indirectly causes a change in the environment.

Driving factor: Any natural or human-induced factor that directly or indirectly causes a change in the environment.

Dyke: An earth embankment constructed to contain the water in the reservoir and limit the extent of flooding.

Ecological reserves: Established under the *Ecological Reserve Act* of Manitoba, ecological reserves are areas created to preserve unique and rare examples of plants, animals and geological features.

Ecosite type: A classification of site conditions that have important influences on ecosystem patterns and processes. Site attributes that were directly or indirectly used for habitat classification included moisture regime, drainage regime, nutrient regime, surface organic layer thickness, organic deposit type, mineral soil conditions and permafrost conditions.

Ecosystem: A dynamic complex of plant, animal and micro-organism communities and their non-living components of the environment interacting as a functional unit (Canadian Environmental Assessment Agency).

Eco-tourism: Viewing or studying fish, wildlife or a natural area; recreational or adventure activities such as canoeing, hiking and horseback riding that take place in a natural area.

Ecozone: A classification system that defines different parts of the environment with similar land features (geology and geography), climate (precipitation, temperature, and latitude), and organisms.

Edge effect: The effect that an abrupt transition between two different adjoining ecological communities has on organisms and environmental conditions in the transition between communities, as well as the effects on organisms and environmental conditions adjacent to the abrupt transition.

Effect: Any change that the Project may cause in the environment. More specifically, a direct or indirect consequence of a particular Project impact [ref]. The impact-effect terminology is a statement of a cause-effect relationship. A terrestrial habitat example would be 10 ha of vegetation clearing (*i.e.*, the impact) leads to habitat loss, permafrost melting, soil conversion, edge effects, *etc.* (*i.e.*, the direct and indirect effects).

Effective habitat: Habitat that is available to support individuals within a wildlife population after subtracting habitat alienated by human influences (*e.g.*, sensory disturbances). Human influences do not include physical habitat losses.

Emigration: Movements of an organism away from their natural environment into another geographical area.

Empirical: Pertaining to, or founded upon, experiment or experience; depending upon the observation of phenomena.

Employment rate: The percentage of the total population 15 years of age and over that was employed in the week (Sunday to Saturday) prior to Census Day (June 4, 1991; May 15, 2001; May 16, 2006).

Endangered: A species facing imminent extirpation or extinction (COSEWIC).

Entrainment: 1) A process by which sediment from a surface is incorporated into a fluid flow (such as water) as part of the operation of erosion; and 2) Fish (larval or adult) that are drawn into a current and cannot escape.

Environment: The components of the Earth, including 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 Agency).

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 (Canadian Environmental Assessment Agency).

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 may be affected by a proposed project, and may be individually assessed in the environmental assessment (Canadian Environmental Assessment Agency).”

Environmental impact assessment (EIA): See *Environmental Assessment*.

Environmental officer: The person doing environmental inspections of the Keeyask site on behalf of the KHLP, pursuant to the EnvPPs.

Environmental protection plan (EnvPP): A practical tool that describes the actions required to minimize environmental effects before, during and after Project implementation. The plan may include details about the implementation of the mitigation measures identified in the environmental assessment, such as who is responsible for implementation, where the measures are intended to be implemented, and within what timeframe (Canadian Environmental Assessment Agency); description of what will be done to minimize the

effects before, during and after project construction and operation. This includes protection of the environment and mitigation of effects from project activities.

Erodibility coefficients: A numerical parameter that represents the susceptibility of mineral soils to wave erosion. It is usually determined empirically as the gradient of the linear relationship between effective wave energy and volumetric erosion rate at sites where historical erosion has been monitored.

Erosion: A natural process, which is either naturally occurring or anthropogenic in origin, by which the Earth's surface is worn away by the actions of water and wind.

Esker: A narrow ridge of sand or gravel, usually deposited by a stream flowing in or under glacial ice.

Eutrophic: Having waters or soils rich in phosphates, nitrates and organic nutrients that promote a proliferation of plant life, including algae.

Evapotranspiration: The process by which water is transferred to the atmosphere through evaporation, such as plants emitting water vapour from their leaves.

Existing environment: The present condition of a particular area; generally included in the assessment of a project or activity prior to the construction of a proposed project or activity.

Fecal coliform bacteria: Include genera such as *Escherichia* and *Klebsiella*, are indicators of organisms from the intestinal tracts of humans and other animals, used to represent the potential presence of pathogens.

Fen: Peatland in which the plants receive nutrients from mineral enriched ground and/or surface water. Water chemistry is neutral to alkaline. Sedges, brown mosses and/or Sphagnum mosses are usually the dominant peat forming vegetation.

Fetch: Length of water surface exposed to wind during generation of waves.

Fine habitat: The most detailed level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type.

Fingerlings: A young fish that has finished absorbing its yolk sac and is approximately three to four months old.

Fire regime: The frequency, size, intensity, severity, patchiness, seasonality and type (*e.g.*, ground versus canopy) of fires in the Fire Regime Area.

Footprint: The surface area occupied by a structure or activity; the land or water area covered by a project. This includes direct physical coverage (*i.e.*, the area on which the project physically stands) and direct effects (*i.e.*, the disturbances that may directly emanate from the project, such as noise).

Forage fish: Small, schooling fish that are typically eaten by larger fish. Typically less than 150 mm as adults (*e.g.*, minnows, darters, sculpins, stickleback).

Forage(ing): To locate, capture, and eat food.

Forebay: Impoundment area immediately upstream from a dam or hydroelectric plant intake structure that forms the downstream portion of the reservoir.

Fragmentation: 1) Refers to the extent to which an area is broken up into smaller areas by human features and how easy it is for animals, plant propagules and other ecological flows such as surface water to move from one area to another. Fragmentation can isolate habitat and create edges, which reduces habitat for interior species and may reduce habitat effectiveness for other species. 2) The breaking up of contiguous blocks of habitat into increasingly smaller blocks as a result of direct loss and/or sensory disturbance (*i.e.*, habitat alienation). Eventually, remaining blocks may be too small to provide usable or effective habitat for a species. (Cumulative Effects Assessment).

Frazil ice: Fine, small, needle-like structures of thin, flat circular plates of ice formed in super-cooled, turbulent water.

Freshet: The flood of a river from heavy rain or melted snow.

Full supply level (FSL): The normal maximum controlled level of the forebay (reservoir).

Furbearer: Refers to those mammal species that are trapped (*e.g.*, marten, fox, *etc.*) for the useful or economic value of their fur.

Gathering: Collecting plants for medicinal and dietary purposes and other natural products such as firewood, driftwood or feathers for cultural purposes.

Generator: Machine that converts mechanical energy into electrical energy.

Geological overburden: Material overlying a useful mineral deposit or desired bedrock anchor.

Glacial till: An unsorted, unstratified mixture of fine and coarse rock debris deposited by a glacier.

Glaciofluvial: Pertaining to streams fed by melting glaciers, or to the deposits and landforms produced by such streams.

Glaciolacustrine: Pertaining to lakes fed by melting glaciers, or to the deposits forming therein

Gradient: The rate at which a water level increases or decreases over a specific distance.

Granular: Composed of granules or grains of sand or gravel.

Granular fill: Fill material including sand and gravel.

Greenhouse gas (GHG): Gases emitted from a variety of sources and processes, said to contribute to global warming by trapping heat between the earth and the atmosphere;
(a) carbon dioxide, (b) methane, (c) nitrous oxide, (d) hydrofluorocarbons,
(e) perfluorocarbons, (f) sulphur hexafluoride, (g) any other gas prescribed by regulation.

Groin: A rock fill structure extending out into a river or lake from the bank or shore. Used to protect the bank from erosion.

Gross Domestic Product: The gross national product excluding the value of net income earned abroad.

Groundwater: The portion of sub-surface water that is below the water table, in the zone of saturation.

Grouting: Filling cracks and crevices with a slurry composed of a cement and sand mixture or other material to prevent or reduce flow through them.

Habitat: The place where a plant or animal lives; often related to a function such as breeding, spawning, feeding, *etc.*

Habitat alteration: Changes in one or more terrestrial habitat attributes that are large enough to convert a habitat patch to a different fine habitat type.

Habitat disturbance: Changes in one or more terrestrial habitat attributes that are too small to convert a habitat patch to a different fine habitat type (*e.g.*, a machine trail through a habitat patch).

Habitat loss: Conversion of terrestrial habitat into a human feature or an aquatic area.

Habitat suitability index (HSI): A numerical index ranging from zero to 1.0 representing the capacity of a given habitat to support a selected species. A value of 1.0 represents optimal conditions for that species while a value of zero represents unsuitable conditions. HSI models are based on hypothesized species-habitat relationships rather than statements of proven cause and effect relationships. Such models serve as a basis for improved decision making and increased understanding of species-habitat relationships.

Hanging ice dam: A deposit of ice, typically at the downstream end of rapids that builds up through the winter by accumulating frazil ice, which then partially blocks the flow of water and causes water levels upstream to rise.

Hard water: Water that contains calcium carbonate at a concentration of 121 mg/L or higher. Water with a calcium carbonate concentration of 61-120 mg/L is considered moderately hard/soft.

Head: Refers to the hydraulic elevation head at a generating station which is calculated as the difference between the water level upstream of the station (forebay level) and the water level downstream (tailrace level) measured in meters. The amount of hydraulic head results in a specific amount of pressure that would be applied to the turbines to generate power due to the weight of the water.

Herbivore: An animal that feeds predominantly on plants.

Hibernaculum (plural hibernacula): For the purposes of the EIS, shelter occupied in the winter by a dormant animal.

Host animal / host plant: An animal or plant that nourishes and supports a parasite; the host does not benefit and is often harmed by the association.

Hydraulic: 1) of or relating to liquid in motion; and, 2) of or relating to the pressure created by forcing a liquid through a relatively small orifice, pipe, or other small channel.

Hydraulic model: Refers to the use of mathematical or physical techniques to simulate existing hydraulic systems and make projections related to hydraulic variables (*i.e.*, water levels, flows and velocities).

Hydraulic zone of influence (HZI): Reach of river over which water levels and water level fluctuations caused by the operation of a particular project are measurable within the accuracy required for operation and license compliance.

Hydroelectric: Electricity produced by converting the energy of falling water into electrical energy (*i.e.*, at a hydro generating station).

Hypoxic: A deficiency of oxygen.

Ice boom: A floating structure, anchored at opposite shorelines and/or the river bottom, designed to help form and hold an ice cover in place.

Ice pans: Free-floating sheets of ice.

Ice regime: A description of ice on a water body (*i.e.*, lake or river) with respect to formation, movement, scouring, melting, daily fluctuations, seasonal variations, *etc.*

Impermeable: Relating to a material through which substances, such as liquids or gases, cannot pass.

Impervious core: A zone of low permeability material (usually glacial till) in an earth dam, used to reduce leakage through the dam.

Impingement: Trapping of fish against the trash racks at the water intakes.

Impoundment: The containment of a body of water by a dam, dyke, powerhouse, spillway or other artificial barrier.

In situ: In place; undisturbed. An *in situ* environmental measurement is one that is taken in the field, without removal of a sample to the laboratory.

Incidental take: The accidental harming or destruction of a wildlife species or its habitat by humans (*e.g.*, the inadvertent destruction of a nest).

Inflow: The water flowing into a water body (lake, reservoir, *etc.*)

Inland peatland: A peatland that is beyond the direct influence of a water body's water regime and ice regime.

Intermediate head: A generating station design that has an intermediate forebay elevation compared to other options (usually low or high head).

Intermittently-exposed zone (IEZ): The zone that is routinely dewatered downstream of a generating station (*i.e.*, within the 5th and 95th percentile flows).

Invertebrates: Organisms lacking a backbone or vertebral column.

Invertivore: A species that feeds on invertebrates.

Joint Keeyask Development Agreement (JKDA): An agreement between Tataskweyak Cree Nation and War Lake First Nation operating as Cree Nation Partners, and York Factory First Nation, and Fox Lake Cree Nation, and the Manitoba Hydro-Electric Board regarding the partnership, ownership, development and operation of the Keeyask Project.

Journey person: Someone who has completed an apprenticeship and is fully certified in a trade or craft, but not yet a master.

Keeyask Environmental and Regulatory Protocol (the Protocol): The environmental and regulatory protocol for the finalization of the Environmental Impact Assessment and the EIS and the submission of the EIS to Regulatory Authorities, substantially in the form attached as Schedule 3-1 to the JKDA.

Key person interview (KPI): Interview with an individual whose knowledge, creativity, inspiration, reputation, and/or skills are critical to the credibility of a study.

Labour force: The employed are persons having a job or business, whereas the unemployed are without work, are available for work, and are actively seeking work. Together the unemployed and the employed constitute the labour force. Persons not in the labour force are those who, during the reference week, were unwilling or unable to offer or supply labour services under conditions existing in their labour markets (this includes persons who were full-time students currently attending school).

Lacustrine: Of or having to do with lakes, and also used in reference to soils deposited as sediments in a lake.

Lake Winnipeg Regulation (LWR): The LWR project was constructed by Manitoba Hydro in the 1970s to regulate the outflow from Lake Winnipeg to the Nelson River and store water in the lake as authorized by the LWR Licence. The project includes three excavated channels, the Jenpeg generating station and control structure and a dam at Kiskitto Lake. Lake Winnipeg is regulated for hydropower generation and flood control.

Land cover: The most general level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type.

Landscape: The ecological landscape as consisting of a mosaic of natural communities; associations of plants and animals and their related processes and interactions.

Larva (ae; al): The young, immature form of an insect or animal.

Lentic: Pertaining to very slow moving or standing water, as in lakes or ponds.

Life history stages: For the purposes of the EIS, the different developmental phases in a fish's life including: egg, larva, young-of-the-year, sub-adult and adult.

Life stage (of animals): One of the stages of life beginning with birth and progressing through larval or juvenile phases to sub-adult and adult phases.

Littoral zone: Area on or near the shore of a body of water.

Lodge: An accommodation facility of a permanent or semi-permanent nature that accommodates nine or more persons. In general ecological usage, this term can refer to the den of certain animals, such as the dome-shaped structure built by beavers.

Lotic: Pertaining to rapidly moving fresh water.

Macroinvertebrate: Small animals without backbones living on or in the substrata of lakes and rivers that are retained by a 500 µm mesh size. Macroinvertebrates retained on 500 µm sieves are important food items to vertebrates (particularly fish) and useful bioindicators of environmental change.

Macrophyte(s): Multi-celled aquatic and terrestrial plants.

Mainstem: The unimpeded, main channel of a river.

Mark-recapture studies: Fish are captured, marked a Floy® tag, and then subsequent rounds of fishing are conducted to recapture the marked fish. Data are used to determine species population size and movements.

Mass wasting: A general term of the dislodgement and downslope transport of soil and rock material under the direct application of gravitational body stresses. Includes slow displacements, such as creep and rotational slump failures, and rapid movements, such as rock and soil falls, rock slides, and debris flows.

Member: For the purposes of the EIS, means a person who is a “member of a band” as defined in subsection 2(1) of the *Indian Act* (Canada).

Mesoeutrophic: Moderately eutrophic (see eutrophic).

Mesotrophic: Description of a waterbody, typically a lake, characterized by moderate concentrations of nutrients (*i.e.*, nitrogen and phosphorus) and resulting significant productivity.

Metalloids: An element with the properties of metals and non-metals.

Methylmercury: An organic form of mercury that is able to concentrate in animal tissue.

Migration: The movement of an individual or group of individuals from one area to another.

Mineral erosion: Wearing away of minerals due to wind and water processes.

Mineral soil: Naturally occurring, unconsolidated material that has undergone some form of soil development as evidenced by the presence of one or more horizons and is at least 10 cm thick. If a surface organic layer (*i.e.*, contains more than 30% organic material or 17% organic carbon by weight) is present, it is less than 20 cm thick.

Mitigation: A means of reducing adverse Project effects. Under the *Canadian Environmental Assessment Act* and in relation to a project, mitigation is "the elimination, reduction or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means."

Monitoring: Measurement or collection of data to determine whether change is occurring in something of interest. The primary goal of long term monitoring of lakes and rivers is to understand how aquatic communities and habitats respond to natural processes and to be able to distinguish differences between human-induced disturbance effects to aquatic ecosystems and those caused by natural processes; continuing assessment of conditions at and surrounding the action. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted.

Movement: For the purposes of the EIS, the act of individual or populations of animals moving from one habitat to another for spawning, foraging, overwintering, escape from predation, *etc.*

Nearshore: Aquatic habitat occurring at the interface between a lake or stream and adjacent terrestrial habitat; usually includes aquatic habitat up to 3 m in depth; shallow underwater slope near to shore.

Non-designated trade: Jobs that are directly involved with the construction of the Project, but do not have formal apprenticeship programs leading to a Journeyperson certification. Examples of non-designated trades are labourers, heavy equipment operators, vehicle drivers (teamsters), rebar workers and cement masons. Training and work experience requirements can range from basic on-the-job training for entry level positions to more than 3 years of formal training and professional experience to be fully qualified for the most highly-skilled positions.

Northern Aboriginal residents: Is a defined term in the Burntwood Nelson Agreement (BNA) generally referring to status Indians, Métis, non-status Indians and Inuit who qualify as **Northern Residents**. Northern Residents are defined as a person who has resided in northern Manitoba (north of the boundary set out in Schedule 12-5 to the BNA for (a) a period of five years accumulatively or more; and (b) a period of six consecutive months or more, immediately prior to being referred to employment or re-employment.

Northern Flood Agreement (NFA): An agreement signed in 1977 by Manitoba Hydro, the governments of Canada and Manitoba, and the Northern Flood Committee on behalf of five affected Cree Nations regarding the effects of the Churchill River Diversion and Lake Winnipeg Regulation.

Offshore: Aquatic habitat not adjacent to terrestrial habitat; usually includes aquatic habitat greater than 3 m in depth.

Off-system: Water body or waterway outside of the Nelson River hydraulic zone of influence.

Oligotrophic: Description of a waterbody, typically a lake, or terrestrial site characterized by extremely low concentrations of nutrients (*i.e.*, nitrogen and phosphorus) which typically leads to low primary productivity.

Organic: The compounds formed by living organisms.

Organism: An individual living thing.

Outflow: The water flowing out of a water body (lake, reservoir, *etc.*).

Overburden: Soil (including organic material) or loose material overlaying bedrock.

Overtopping: When the water level rises above the top of a barrier (*e.g.*, a cofferdam) allowing water to flow over the barrier.

Overwinter(ing): The survival of fish through the winter beneath ice cover.

Palatability: A substance (*e.g.*, water or fish flesh) that is agreeable to the palate or taste.

Parameter: Characteristics or factor; aspect; element; a variable given a specific value.

Park reserve: A temporary designation under the *Manitoba Provincial Parks Act* to ensure that the lands under consideration for Provincial Park status are not otherwise allocated or used while planning and consultation is taking place.

Participation rate: For the purposes of the EIS, the percentage of the potential labour force that was in the labour force in the week (Sunday to Saturday) prior to Census Day (June 4, 1991; May 15, 2001; May 16, 2006).

Parturition: The process of giving birth.

Pathway diagram: A simple diagrammatic representation of a potential cause-effect relationship between two related states or actions that illustrates an impact model. Pathway diagrams take network diagrams one-step further by evaluating each linkage and assessing the cause-effect relationship in the context of a scientific hypothesis.

Peaking: For the purposes of the EIS, the mode of operation that begins with reducing the flow through the generating station during off-peak periods, thereby storing some water in the reservoir, and then increasing the flow and using the stored water to generate extra energy during on-peak periods.

Peat: Material consisting of non-decomposed and/or partially decomposed organic matter, originating predominantly from plants.

Peat plateau bog: Ice-cored bog with a relatively flat surface that is elevated from the surroundings and has distinct banks.

Peat resurfacing: Process whereby all or portions of a peat mat that was submerged by flooding detaches and floats to the water surface.

Peatland: Wetland where organic material has accumulated because dead plant material production exceeds decomposition.

Peatland disintegration: Processes related to flooded peat resurfacing; breakdown of non-flooded and resurfaced peatlands and peat mats; and peat formation on peatlands and peat mats that have hydrological connections to a regulated area.

Percentage point: The unit for the arithmetic difference of two percentages (*i.e.*, there is a 5 percentage point difference between 5% and 10%).

Percentile: Part of the “ile” family that signposts positions on a scale of numbers. The top percentile on, say, the distribution of income, is the richest 1% of the population.

Periphyton: Assemblage of microorganisms, including algae, that grow on submerged surfaces.

Permafrost: Ground where the temperature remains below 0°C for two or more consecutive years.

Permeability: The degree to which fluids or gases can pass through a barrier or material.

Person-years: A measure of the amount of work that could be available during a specific time period or for a specific type of work. One person-year approximates the amount of work that one worker could complete during twelve months of full-time employment.

pH: Method of expressing acidity or basicity of a solution. pH is the logarithm of the reciprocal of the hydrogen ion concentration, with a pH of 7.0 indicating neutral conditions. Ph values of less than seven are acidic.

Phyla: Taxonomic rank below the group known as a “Kingdom” and above that of a “Class”; a group of organisms with a certain degree of morphological or developmental similarity and/or with a certain degree of evolutionary relatedness.

Physiography: Physical geography, *i.e.*, the study of physical features of the surface of the Earth.

Phytoplankton: Algae suspended in the water column.

Piscivorous: An organism that feeds predominantly upon fish, including many species of birds, mammals and other fish.

Pollution: 1) Any human alteration of the natural environment producing a condition that is harmful to living organisms. 2) Any solid, liquid, gas, smoke, waste, odour, heat, sound, vibration, radiation, or a combination of any of them that is foreign to or in excess of the natural constituents of the environment, and (a) affects the natural, physical, chemical, or biological quality of the environment, or (b) is or is likely to be injurious to the health or safety of persons, or injurious or damaging to property or to plant or animal life, or (c) interferes with or is likely to interfere with the comfort, well being, livelihood or enjoyment of life by a person.

Population: For the purposes of the EIS, a group of interbreeding organisms of the same species that occupy a particular area or space.

Post-project: The actual or anticipated environmental conditions that exist once the construction of a project has commenced.

Potential labour force: In general, the number of individuals in a population 15 years of age and older.

Power: The instantaneous amount of electrical energy generated at a hydroelectric generating station, usually expressed in megawatts.

Powerhouse: Structure that houses turbines, generators, and associated control equipment, including the intake, scroll case and draft tube.

Precambrian shield: Bedrock formed in the Precambrian Era, which began with the consolidation of the earth's crust and ended approximately 4 billion years ago.

Primary habitat: For purposes of the EIS, the preferred habitat of a particular species.

Primary producers: A group of organisms that possess chlorophyll and conduct photosynthesis to meet their energy requirements for survival, growth and reproduction. They form the base of the food chain.

Priority habitat: A native broad habitat type that is regionally rare or uncommon, highly diverse (*i.e.*, species rich and/or structurally complex), highly sensitive to disturbance, highly valued by people and/or has high potential to support rare plant species.

Priority mammal / priority species: A species or group of species that is particularly important for ecological/social reasons.

Probable maximum flood: The flood that would result from the most severe combination of hydrologic and meteorological conditions that could reasonably occur. It is based on analyses of precipitation, snowmelt and other factors conducive to producing maximum flows.

Productivity: Rate of formation of organic matter over a defined period; this can include the production of offspring.

Project footprint: The maximum potential spatial extent of clearing, flooding and physical disturbances due to construction activities and operation of the Project, including areas unlikely to be used.

Protected area: As defined by the World Conservation Union, a protected area is an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

Provincial park: Crown lands designated under the *Manitoba Provincial Parks Act*.

Push-up: A dome-shaped resting and feeding station built by muskrats by pushing vegetation and mud above holes in ice.

Quarry: An open pit where rock is mined for use as a building material at the construction site.

Quarterly employment: employment occurring during a quarterly time period within a year (*e.g.*, first quarter from January through March; second quarter from April through June; third quarter from July through September; fourth quarter from October through December).

Rapids: A section of shallow, fast moving water in a stream made turbulent by totally or partially submerged rocks.

Raptor: Any of the group known as “birds of prey,” including eagles, hawks, owls, vultures and falcons.

Reach: A section, portion or length of stream or river.

Rearing: The raising of young.

Recreational fishing: Fishing activity where the primary intent is enjoyment; angling

Recruitment: The number of new juvenile fish reaching a size/age where they represent a viable target for the commercial, subsistence or sport fishery for a given species.

Regime: The frequency, size, intensity, severity, patchiness, seasonality and sub-type of a periodic event or continual fluctuation.

Rehabilitation: To restore a disturbed structure, site or land area to good condition, useful operation or productive capacity.

Relief: Variation in elevation on the surface of the earth.

Reptile: Cold-blooded animal of the Class Reptilia that includes tortoises, turtles, snakes, lizards, alligators and crocodiles.

Reservoir: A body of water impounded by a dam and in which water can be stored for later use. The reservoir includes the forebay.

Resident: For the purposes of the EIS, 1) Person living in Manitoba for the last consecutive six months; 2) With respect to wildlife, resident refers to a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating (Canadian Environmental Assessment Agency).

Residual effect: An actual or anticipated Project effect that remains after considering mitigation and the combined effects of other past and existing developments and activities.

Resource use: Subsistence and economic activities that make use of the resources derived from the natural environment.

Riparian: Along the banks of rivers and streams.

Riverine: Relating to, formed by, or resembling a river including tributaries, streams, brooks, *etc.*

Rockfill: Fill material typically consisting of excavated and crushed rock or blast rock that is used to provide mass to a structure while protecting it from erosion.

Rollway: The concrete portion of the spillway that water flows over when the spillway is in operation.

Scroll case: A reinforced concrete semi-spiral part of the turbine water passage, located between the intake and the turbine runner, with a gradually contracting cross-section (much like a snail shell), designed to distribute the water evenly over the turbine runner.

Secondary habitat: Useable or alternative habitat for a given species, typically lower in quality than primary habitat.

Sediment(s): Material, usually soil or organic detritus, which is deposited in the bottom of a waterbody.

Sedimentation: A combination of processes, including erosion, entrainment, transportation, deposition and the compaction of sediment.

Sediment budget: An accounting of the erosion, storage and transport processes of soil and sediment in drainage basins or smaller landscape units.

Sediment oxygen demand (SOD): The dissolved oxygen demand from the sediments or substrate of lakes and rivers.

Seral: Referring to the series of plant communities that succeed one another before a stable, or climax, plant community, is reached.

Service bay: An open area of the powerhouse where turbines and generator equipment are assembled during construction, and later, where maintenance and repairs are done to major generating components.

Service gate: Gates that are used to dewater a unit to allow inspections, maintenance and repairs to occur within the water passage.

Severance line: Under the *Water Power Act*, severance line describes the land and the works within it that are associated with a project licensed under this Act. This means that everything within these boundaries may be taken over by the Province of Manitoba in the event that the license should be terminated. The Crown also has an obligation to ensure that any additional rights granted on these lands do not prejudicially interfere with Manitoba Hydro's ability to operate and maintain its license.

Shear stress: Stress caused by forces operating parallel to one another but in opposite directions.

Shore zone: Areas along the shoreline of a waterbody including the shallow water, beach, bank and immediately adjacent inland area that is affected by the water body.

Significance: For the purposes of the assessment for regulators in the EIS of residual effects of the Project on VECs, a measure of how adverse or beneficial a residual effect is expected to be; significant adverse environmental effects are those residual effects that are predicted to cause significant adverse environmental effects as defined under the *Canadian Environmental Assessment Act*; significant positive effects are those residual effects that would cause a beneficial change that is measureable or obvious.

Silt: A very small rock fragment or mineral particle, smaller than a very fine grain of sand and larger than coarse clay; usually having a diameter of 0.002 to 0.06 mm; the smallest soil material that can be seen with the naked eye.

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. Often, effects that flow from other aspects of a project (*e.g.*, employment and business opportunities) are also discussed. 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. A SEIA is often part of the environmental impact assessment (EIA) for a proposed project.

Soft water: Water that contains calcium carbonate at a concentration of 60 mg/L or less. Water with a calcium carbonate concentration of 61-120 mg/L is considered moderately hard/soft.

Specific conductance: Conductivity expressed at a standard temperature of 25°C.

Spillway: A concrete structure that is used to pass excess flow so that the dam, dykes, and the powerhouse are protected from overtopping and failure when inflows exceed the discharge capacity of the powerhouse.

Sporadic (ally): For the purposes of the EIS, the occurrence of isolated patches, 10–35% of a geographic region.

Staging: The tendency of migratory organisms to stop temporarily (stage) at a site during migration; staging areas are stop-over sites where, for example, fish will rest and occasionally forage in preparation for imminent spawning or migratory birds will rest, forage, and/or moult along the course of a migration route.

Stand level habitat type: A relatively uniform area in terms of vegetation, vegetation age, soils and topography that ranges from approximately one to one hundred hectares in size.

Steady-state: A stable condition that does not change over time or in which change in one direction is continually balanced by change in another.

Stewardship: Refers to general environmental care and protection.

Stocking program: Fish that are raised in captivity (generally from eggs and sperm collected from wild fish [brood stock]) are released into a designated water body to meet one or more specific management objectives. These management objectives can include population restoration, population enhancement, and/or establishment of a fishery.

Stratification: Arrangement of a body of water into two or more horizontal layers of differing characteristics (*e.g.*, temperature, pH, dissolved oxygen).

Stratigraphy: Scientific study of rock strata, especially the distribution, deposition, correlation and age of sedimentary rocks. Also can refer to the layering of materials or soil horizons at a location.

Study area: The geographic limits within which effects on a VEC (valued environmental component) or key topic is assessed.

Sub-adult: For purposes of the EIS, a fish that is older than one year but has not reached sexual maturity. Lake sturgeon sub-adults measured between 200 and 833 mm long (fork length) based on sexual maturity data collected during the spawning season from a well-studied lake sturgeon population on the lower Nelson River.

Substrate(s)/Substrata: The material forming the streambed; also solid material upon which an organism lives or to which it is attached. See also bed material.

Supporting topic: A key topic that has a lower degree of concern than the Valued Environmental Components and improves the reliability of the assessment.

Surcharge: A condition in a forebay or reservoir in which the water level rises above the full supply level.

Surface permafrost: Permafrost that occurs within the top 2 m of the surface materials.

Suspended sediment concentration: Measure of the amount of sediment in a unit of water usually expressed in terms of milligrams of dry sediment measured down to approximately 1micron (0.001 mm) in a litre of water.

Switching station: An area that typically contains electrical equipment that is used in the transmission of electricity.

Tailrace: A channel immediately downstream from a powerhouse that directs the water away from the turbine and into the river channel.

Tailwater: The water in the tailrace, or the level of the water in the tailrace.

Taxa: Plural of taxon.

Taxon: A group of organisms that are treated as a classification unit. Usually a taxon is given a name and a rank, although neither is a requirement.

Taxonomy: The classification of organisms in a hierarchical system or in taxonomic ranks (*e.g.*, order, family, genus, species) based on shared characteristics or relationships inferred from the fossil record or established by genetic analysis.

Telemetry: Automatic transmission and measurement of data from remote sources by wire or radio or other means.

Terrestrial habitat: The land areas where plants and animals live. The terrestrial habitat section classifies and maps habitat based on plants, standing and fallen dead trees, soils, ground ice, groundwater, surface water, topography and disturbance (*e.g.*, fire) conditions.

Thalweg: The deepest part of the channel of a river or stream.

Thermal ice cover: An ice cover that forms where velocities are low.

Topography: General configuration of a land surface, including its relief and the position of its natural and manmade features.

Total dissolved solids (TDS): Measure of the amount of material dissolved in water (primarily inorganic salts).

Total Kjeldahl nitrogen (TKN): Total concentration of nitrogen in the form of ammonia and organic nitrogen. As determined by the Kjeldahl test.

Total sediment load: Measure of the total sediment being transported in suspension and on the bed.

Total suspended solids (TSS): Solids present in water that can be removed by filtration consisting of suspended sediments, phytoplankton and zooplankton.

Transition structure: A concrete structure that connects an earth structure such as a dyke or dam to a concrete structure such as the powerhouse or spillway.

Transmission: The electrical system used to transmit power from the generating station to customers.

Transmission line: A conductor or series of conductors used to transmit electricity from the generating station to a substation or between substations.

Trap-nights: The number of traps in a small mammal trapping block or trap set multiplied by the number of nights the traps were set at that location; *e.g.*, 100 traps x 3 nights = 300 trap nights.

Trash rack: A grid of metal bars placed in front of the intake to prevent larger objects from entering the turbine and damaging the units.

Trophic: In ecology, **trophic level** describes an organism's position in the food chain.

Tundra: Treeless plain characteristic of arctic and subarctic regions, with permanently frozen subsoil and dominant vegetation of mosses, lichens, herbs, and dwarf shrubs.

Turbine: A machine for converting the power of flowing water to rotary mechanical power that is then transferred by a large metal shaft to the generator for conversion to electric power.

Uncertainty: For the purpose of the EIS, the lack of certainty or a state of having limited knowledge where it is difficult or impossible to exactly describe an existing state or a future outcome, or there is more than one possible outcome. In environmental assessment, uncertainty is not knowing, with high confidence, the nature and magnitude of environmental effects or the degree to which mitigation measures would prevent or reduce adverse effects.

Unconsolidated: Not compact or dense in structure or arrangement; *i.e.*, "loose gravel."

Unemployment rate: The percentage of the labour force in the week (Sunday to Saturday) prior to Census Day (June 4, 1991; May 15, 2001; May 16, 2006) that was unemployed.

Upland: Any area that does not qualify as a wetland because the associated water regime is not wet enough to be associated with wetlands. For the purposes of this document, upland is ground elevation at a distance from a waterbody or watercourse.

Valued Environmental Component (VEC): Is an element of the environment identified as having scientific, social, cultural, economic, historical, archaeological or aesthetic importance. The value may be determined on the basis of cultural ideals or scientific concern (adapted from CEAA).

Velocity: A measurement of speed of flow.

Veneer bog: Bog with thin surface peat (*i.e.*, less than 1.5 thick) that generally occurs on gentle slopes and contain discontinuous permafrost.

Wage economy: Portion of the economy dominated by the monetary flows and the exchange of money for labour and good and services.

Water quality: Measures of substances in the water such as nitrogen, phosphorus, oxygen and carbon.

Water regime: A description of water body (*i.e.*, lake or river) with respect to water levels, flow rate, velocity, daily fluctuations, seasonal variations, *etc.*

Water surface profile: A two-dimensional section view of a reach of the river that shows the elevation of the water surface along that reach.

Water table: The level below the surface where the soil is saturated by groundwater.

Watershed: A geographic region bounded by ridges, crest lines and other high points of land in which all surface water drains into a river, river system or other body of water.

Wetland: Land that is wet for all or part of the year, including areas where the water is up to 2 m deep. Water saturation is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Marshes and peatlands are types of wetlands.

Wildlife management area (WMA): Crown lands set aside for the better management, conservation and enhancement of the wildlife resources of the province.

Yearlings: In regards to fish that are one year old and less than two years old.

Young-of-the-year (YOY): Fish less than one year of age.

Zooplankton: Floating or swimming invertebrates that live in the water column.

