Appendix 3

Glossary and Acronyms

ABBREVIATIONS AND ACRONYMS

-	Minus
#	Number
%	Percent
%EPT	Percentage of all individuals made up of the orders Ephemeroptera, Trichoptera, and Placoptera
<	Less than
>	More than
∑	Sum
≈	Almost equal to
≤	Less than or equal to
≥	More than or equal to
°	Degree
µg	micrograms
µg/m^3	microgram per cubic metre
µm	Micrometres (microns)
µS/cm	MicroSiemens per centimetre
AAC	Annual Allowable Cut
AADT	Average annual daily traffic
AAQO	Ambient Air Quality Objectives
ACC	Alberta Caribou Committee
ACCS	Alberta Culture and Community Spirit
ACGIH	American Conference of Governmental Industrial Hygienists
ADAG	Alberta Acid Deposition Assessment Group
AENV	Alberta Environment
AENV	Alberta Environment
AGRASID	Agriculture Region of Alberta Soil Inventory Database
AHW	Alberta Health and Wellness
Al-Pac	Alberta Pacific Forest Industries Inc.
Altagas	Altagas Ltd.

ANHIC	Alberta Natural Heritage Information Centre
ANPC	Alberta Native Plant Council
AOA	Area Operating Agreement
AOSA	Athabasca Oilsands Area
AOSERP	Alberta Oil Sands Environmental Research Program
API	American Petroleum Institute
AQLSA	Air quality local study area
AQRSA	Air quality regional study area
ARSEIM	Alberta Regional Social and Economic Infrastructure Model
ASL	Ambient sound level
ASL	Above sea level
ASRD	Alberta Sustainable Resource Development
ATC	Athabasca Tribal Council
Atco	Atco Electric Ltd
Atm-m^3/mol	Henry's Law constant
ATSDR	Agency for Toxic Substances and Disease Registry
ATV	All terrain vehicle
AUC	Alberta Utilities Commission
avg.	Average
AVI	Alberta Vegetation Inventory
AWI	Alberta Wetland Inventory
AWIS	Alberta Wetland Inventory Standards
b/d **bpd**	Barrels per day
bbl	Barrel
bbls/d	Barrels per day
BFW	Boiler Feed Water
BM	Boreal Mixedwood Ecological Area
BMD	Benchmark doses
BOD	Board of Directors

BOD	Biological oxygen demand
bpd	Barrels per day
BS&W	Basic sediment and water
C	Centigrade or Celsius (metric measures of temperature)
C&R	Conservation and reclamation
C:N	Carbon to Nitrogen ratio
$Ca(OH^2)$	Hydrated lime
CAC	Criteria air contaminants
CAPP	Canadian Association of Petroleum Producers
CASA	Clean Air Strategic Alliance
CCME	Canadian Council for Ministers of the Environment
CEA	Cumulative Effects Assessment
CEA Agency	Canadian Environmental Assessment Agency
CEAA	Canadian Environmental Assessment Act
CEMA	Cumulative Environmental Management Association
CH_4	Methane
CL	Critical load
cm	Centimetre
CMA	Census metropolitan area
CNRL	Canadian Natural Resources Limited
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2E	Carbon dioxide equivalents
Cogen	Cogeneration power plant
COGL	Connacher Oil and Gas Limited
Connacher	Connacher Oil and Gas Limited
COPC	Chemicals of Potential Concern
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
cP	CentiPoises
CPDFN	Chipewyan Prairie Dene First Nation

CPF	Central Processing Facility
CR	Consultant Report
CRB	Capital region board
CRISP	Compliance Regional Infrastructure Sustainability Plan
CSS	Cyclic Steam Stimulation
CWE	Cold water equivalent
CWQG	Canadian Water Quality Guidelines
CWS	Canada-Wide Standards
d	Day
Daytime	Defined as the hours from 07:00 to 22:00
dB	Decibel
dBA	Decibel A-weighted sound level
dBC	Decibel C-weighted sound level
DCS	Distributed control system
DEM	Digital elevation models
Devon	Devon Canada Corporation
DGF	Dissolved gas flotation
dil-bit	Diluted Bitumen
DOC	Dissolved organic carbon
DOW	Dangerous oilfield waste
DRS	Disposition Reservations
DWD	Drilling waste disposal
EA	Environmental Assessment
EARP	Environmental assessment and review process
EC	Environment Canada
EC20	Effective concentration were 20% of the population is effected)
Eco-SSL	Ecological soil screening level
EIA	Environmental Impact Assessment
ELC	Ecological land classification
EPA	Environmental Protection Agency

EPEA	Environmental Protection and Enhancement Act
EPS	Edmonton Police Service
ERA	Ecological risk assessment
ERCB	Energy Resources Conservation Board
ERP	Emergency response plan
ESAR	East Side of the Athabasca Caribou Range
ESDV	Emergency Shutdown Valves
ET-DSP	Electro-Thermal Dynamic Stripping Process
EZE	Easements
F	Fair
FEARO	Federal Environmental Assessment Review Office
Fido	Fido Solutions Inc.
FMA	Forest Management Area
FMFN	Fort McMurray #468 First Nation
FN	First Nation
FTOR	Final terms of reference
FWKO	Free water knock out
FWMIS	Fish and Wildlife Management Information System
g	Gram
g/GJ	Grams per Gigajoule
g/m²/d	Grams per square meter per day
g/mol	Grams per mol (molecular weight)
g/s	Gram per second
GCM	Global climate models
GDC	Geographic Dynamic Corporation
GDEP	Great Divide SAGD Expansion Project
GDOC	Great Divide Oil Corporation
GDP	Gross domestic product
GHG	Greenhouse gas
GIS	Geographic Information System

GJ	Gigajoule (109 Joules)
GJ/d	Gigajoule per day
GJ/d/MW	Gigajoule per day per Megawatt
GJ/h	Gigajoules Per Hour
GJ/m^3	Gigajoule per cubic meter
GLJ	GLJ Petroleum Consultants Ltd.
GOA	Government of Alberta
GoA	Government of Alberta
GPS	Global Positioning System
GST	Goods and Services Tax
GTG	Gas Turbined Generator
GWP	Global Warming Potential
h or hr	hour
H+	Hydrogen ion
H_20	Water
H_2S	Hydrogen sulphide
ha	Hectare
HCI	Hydrochloric acid
HHRA	Human Health Risk Assessment
HHV	Higher heating value
HLFN	Heart Lake First Nation
HNO_3	Nitric acid
HQ	Hazard quotient
HRIA	Historical Resource Impact Assessment
HRSG	Heat recovery steam generator
HRV	Historical Resources Value
HSI	Habitat suitability index
HSPF	Hydrologic Simulation Program-FORTRAN
Hwy	Highway
Hz	Hertz

IFN	In-stream flow needs
IGF	induced gas floatation
ILCR	Incremental Lifetime Cancer Risk
IPCS	International Program of Chemical Safety
IRC	Industry Relations Corporations
IRP	Integrated resource plan
ISQG	Interim Sediment Quality Guideline
Iteration	Iteration Energy Inc
JACOS	Japan Canada Oil Sands Ltd.
K	Calvin
KB	Kilobyte
keq	Kiloequivalent – Equal to 1 kmol of hydrogen ion (H+).
Keq H+/ha/yr	Kiloequivalent of Hydrogen ions per hectare per year
keq/ha/yr	Kiloequivalent per hectares per year.
kg	Kilogram
Kg CO2/bbl bitumen	Kilogram of CO2 per barrel of bitumen
kg N/ha/y	Kilogram of Nitrogen per hectare per year
kg/ha/yr	Kilogram per hectare per year
kg/m^3	Kilogram per cubic meter
KH	Hydraulic conductivity
kHz	Kilohertz
kJ/kg	Kilojoule per kiologram
Kl/year	Kilolitre
km	Kilometre
km/km^2	Kilometre per square kilometre
km/night	Kilometres per night
km^2	Square kilometre
kPa	Kilopascals
kPag	Kilopascal gauge

kV	Kilovolt
L or l	Litre
LACT	Liquid Accounting and Custody Transfer
LARP	Lower Athabasca Regional Plan
LC	Lethal Concentration
LC50	Lethal Concentration
LCC	Land Capability Classification. A system by which the ability of a soil is capable of sustaining a commercial forest.
LCCS	Land Capability Classification System
LEL	Lower Explosive Limit
Leq	Energy Equivalent Sound Level
Leq	Equivalent sound level
Leq24	24 hour period
LeqDay	07:00 to 22:00
LeqNight	22:00 to 07:00
LFH	Leaf-Fibre-Humic Substances. A soil horizon.
LIDAR	Light detections and ranging
LIS	Low impact seismic
LM	Landscape models
L-MPOI	Local maximum point of impingement
LOAEL	Lowest observed adverse effect level
LOC	Licence of Occupation
LOEL	Lowest Observed Effect Level
LSA	Local Study Area
LSD	Location Service Daemon
m	Metre
m/ha	Meters per hectare
m/s	Metres per second
m^2	Square metre
m^2 /d	Square metre per day

m^3	Cubic metre
m^3 /d	Cubic metres per day
m^3/hr	Cubic meters per hour
m^3/s	Cubic metres per second
m^3/year	Cubic meters per year
m^3/yr	Cubic meters per year
MARP	Measurement Accounting and Reporting Plan
masl	Metres Above Sea Level
mbbls	Million barrels
MBC	Mix bury cover
md	Millidarcy
MEMS	Millennium EMS Solutions Limited
mg	Milligrams
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per litre
Mg2+	Magnesium base cation (particle)
MJ/m^3	Megajoules per cubic meter
MLL	Miscellaneous Lease
mm	Millimetre
Mm^3	Million cubic metres
MMbbls	Million barrels
MMBtu/hr	Million Btu per hour
MMcf	Million cubic feet
mmHg	Millimetres of mercury (vapour pressure)
MMscfpd	Million square cubic foot per day
MPOI	Maximum point of impingement
MSI	Municipal sustainability initiative
MSL	Mineral Surface Leases
Mt CO2/ year	Metric tonnes of CO2 per year
Mt/yr	Metric tonnes per year

MW	Megawatt
MWD	Measurement While Drilling
N	Nitrogen
$N0_2$	Nitrogen dioxide
N_20	Nitrous oxide
NAABA	The Northeast Alberta Aboriginal Business Association
NaCl	Sodium chloride
NAD	North American Datum
NAOH	Caustic Soda
NE	northeast
NH_4	Ammonia (particle)
NIA	Noise impact assessment
Nighttime	Defined as the hours from 22:00 to 07:00.
NO	Nitric oxide (gas)
No.	Number
NO_2	Nitrogen dioxide
NO_3	Nitrate
NOAEL	No-observed-adverse-effect level
NOEL	No-observed-effect level
NOx	Nitrogen oxides
NTDB	National Topographic Data Base
NTP	National Toxicity Program
NTS	National Topographic Series
NWF	Flooded areas
NWL	Ponds and lakes
O.D.	Outside diameter
O_3	Ozone
OBIP	Original bitumen in place
Observation Well	A constructed controlled point of access to an aquifer which allows groundwater observations. Small diameter observation wells are often called piezometers.

ºC	Degrees Celsius
OEHHA	Office of Environmental Health Hazard Assessment
OH&S	Occupational Health and Safety
OLM	Ozone Limiting Method
OMOE	Ontario Ministry of the Environment
OOIP	Original Oil in Place
ORF	Oil removal filter
OSCA	Oil Sands Conservation Act
OSDG	Oil Sands Development Group
OSL	Oil sands lease
OSLI	Oil Sands Leadership Initiative
OSSDS	Oil Sands Sustainable Development Secretariat
OSVRC	Oil Sands Vegetation Reclamation Committee
OTSG	Once through steam generator
Pa	Pascal
PAH	Polycyclic aromatic hydrocarbon
PAI	Potential acid input
PARC	Prairie Adaptation Research Collaborative
PDC	Planned Development Case
PDD	Public Disclosure Document
PDD	Public Disclosure Document
PF	Project Footprint
pH	Power of hydrogen
PHC	Petroleum hydrocarbon
PI	Potential Input
PIL	Pipeline Installation Lease
PLA	Pipeline Agreements
PM	Parent material
PM	Particulate matter

PM_{10}	Particulate matter less than 10 mm
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
PNG	Petroleum and natural gas
PNT	Protective notations
Pods	Distinct sub areas
ppb	Parts per billion
ppm	Parts per million
PQRA	Preliminary quantitative risk assessment
Project	Great Divide SAGD Expansion Project
PSL	Permissible sound level
pToR	Proposed terms of reference
QA/QC	Quality assurance / quality control
RAMP	Regional Aquatics Monitoring Program
RCMP	Royal Canadian Mounted Police
RD	Rural District
RFC	Reference concentration
RFD	Reference dose
Rge	Range
RIVM	National Institute for Public Health and the Environment
RM	Regional Municipality
RMWB	Regional Municipality of Wood Buffalo
RoW	Right-of-way
RQ	Risk quotient
RSA	Regional Study Area
RsC	Risk-specific concentration
RsD	Risk-specific does
s	second
S	Species Richness
$S0_2$	Sulphur dioxide
SA	Study Area

SAC	Strong Acid Cation
SAGD	Steam Assisted Gravity Drainage
SAGD	Steam-assisted gravity drainage
SARA	Species At Risk Act
SAS	Statistical analysis software
SC	Stream channel
SCA	Soil correlation area
SCADA	Supervisory control data acquisition system
SCO	Synthetic crude oil
SCRAM	Support Centre for Regulatory Air Models
SCWG	Soil Classification Working Group
Sd	Standard deviation
SEIA	Socio-Economic Impact Assessment
SEWG	Sustainable Ecosystems Working Group
SF	Slope factors
SFNN	Forested swamps
SIL	Survey intensity level
SIR	Supplementary information request
SLM	Soil Landscape Model
SLWRA	Screening Level Wildlife Risk Assessment
SME	Surface Material Exploration
SML	Surface Material Lease
SMR	Soil moisture regime
SNR	Soil nutrient regime
SO_2	Sulphur dioxide
SO_4	Sulfate
SONS	Deciduous swamps
SOPs	Standard Operating Procedures
SOR	Steam to Oil Ratio
SO_x	Sulphur oxides

SQCWG	Soil Quality Criteria Working Group
SQG	Soil quality guidelines
SRD	Sustainable Resource Development
SRTM	Shuttle Radar Topography Mission
STNN	Wooded swamps
SW	southwest
SWQG	Surface Water Quality Guidelines
t	Tonne
t/d	Tonnes per day
TCEQ	Texas Commission on Environmental Quality
TCPL	Trans Canada Pipelines
TCU	Total Carbon units
TDS	Total dissolved solids
TEK	Traditional Environmental Knowledge
THAI	Toe to Heel Air Injection
THC	Total hydrocarbons
TLU	Traditional Land Use
TLUS	Traditional Land Use Studies
TOC	Total Organic Carbon
Ton	Two thousand pounds (short or U.S. ton)
Tonne	Metric ton (1 000 kg)
ToR	Terms of Reference
TOXLINE	Toxicology Literature Online
TPA	Trapping Area
TPR	Timber Productivity Rating
TRS	Total reduced sulphur
TRV	Toxicological Reference Values
TS	Topsoil
TSP	Total suspended particulates
TSS	Total suspended solids

TSX	Toronto Stock Exchange
TUC	Chronic Toxicity Unit
Twp.	Township
UC	Utility Corridor
ug/m^3	Microgram per cubic metre
UPS	uninterruptible power supplies
UR	Unit Risks
US	upper subsoil
USD	United States dollar
USEPA	United States Environmental Protection Agency
UTM	Universal transverse mercator
V	volt
VAC	Volts in an alternating current
VCE	Vegetation Control Easements
VDC	Voltage in a direct current
VEC	Valued Environmental Component
VOC	Volatile organic compounds
VRU	Vapour recovery unit
W4M	West of the 4th Meridian
WAC	Weak acid cation
WBEA	Wood Buffalo Environmental Association
WDW	Water Disposal Wells
WHO	World Health Organization
WLML	Willow Lake Metis Local 780
WLS	Warm lime softening
WP	Well Pads
WSC	Water Survey Canada
WSW	Water Source Wells
wt	Weight
wt%	Weight percentage

WTI	West Texas Intermediate
ZN_Top	Zone top
ZOI	Zone of influence

GLOSSARY

7-Q-10	Discharge The minimum average discharge over a period of seven days duration which has a return period of 10 years; i.e., the probability that the minimum 7-day duration discharge will be equal to or less than the stated value is 10%.
Acidification	The decrease of acid neutralizing capacity in water, or base saturation in soil, caused by natural or anthropogenic processes. Acidification is exhibited as the lowering of pH, which can adversely affect aquatic life.
Acre	A unit of area in the U.S. Customary System, used in land and sea floor measurement and equal to 160 square rods, 4,840 square yards, or 43,560 square feet. 1 acre = 0. 40469 ha
Adverse Effect	An undesirable or harmful effect to an organism (human, animal or plant), indicated by some result such as mortality, growth inhibition, reproductive abnormalities, altered food consumption, altered body and organ weights, altered enzyme concentrations, visible pathological changes or carcinogenic effects.
Airshed	Describes the geographic area requiring unified management for achieving air pollution control.
Alkalinity	A measure of water's capacity to neutralize an acid. It indicates the presence of carbonates, bicarbonates and hydroxides, and less significantly, borates, silicates, phosphates and organic substances. It is expressed as an equivalent of calcium carbonate. The composition of alkalinity is affected by pH, mineral composition, temperature and ionic strength. However, alkalinity is normally interpreted as a function of carbonates, bicarbonates and hydroxides. The sum of these three components is called total alkalinity.
Ambient	The conditions surrounding an organism or area.
Ambient Air	The air in the surrounding area.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Ambient Sound Level	All noises that exist in an area and are not related to a facility covered by Directive 38. Ambient noise includes sound from other industrial noise not subject to this directive, transportation sources, animals and nature.
Anion	A negatively charged ion.
Aquifer	A body of rock or soil that contains sufficient amounts of saturated permeable material to yield economic quantities of water to wells or springs.

Archaeology	The scientific discipline responsible for studying the unwritten portion of man's historic and prehistoric past.
Artifact	Any portable object modified or manufactured by man.
Aspect	Compass orientation of a slope as an inclined element of the ground surface.
Attenuation	A reduction in sound level that occurs with sound propagation over distance by means of physical dissipation or absorption mechanisms, or a reduction in sound level that occurs by means of noise control measures applied to a sound source.
Available Drawdown	The vertical distance that the equipotential surface of an aquifer can be lowered; in confined aquifers, this is to the top of the aquifer; in unconfined aquifers, this is to the bottom of the aquifer.
A-weighted sound level	The sound level as measured on a sound level meter using a setting that emphasizes the middle frequency components similar to the frequency response of the human ear.
Base Cation	An alkali or alkaline earth metal cation (Ca^{2+}, Mg^{2+}, K^{+}, Na^{+}).
Baseline	A surveyed or predicted condition that serves as a reference point on which later surveys are coordinated or correlated.
Basic Sound Level	The allowable sound level at a residential location, as defined by the ERCB Directive 38, with the inclusion of industrial presence based upon dwelling unit density and proximity to transportation noise sources.
Bedrock	The body of rock which underlies gravel, soil or other superficial material.
Benthic Invertebrates	Invertebrate organisms living at, in or in association with the bottom (benthic) substrate of lakes, ponds and streams. Examples of benthic invertebrates include some aquatic insect species (such as caddisfly larvae) that spend at least part of their lifestages dwelling on bottom sediments in the river. These organisms play several important roles in the aquatic community. They are involved in the mineralization and recycling of organic matter produced in the open water above, or brought in from external sources, and they are important second and third links in the trophic sequence of aquatic communities. Many benthic invertebrates are major food sources for fish.
Benzene	A colourless, liquid, flammable, aromatic hydrocarbon that boils at 80.1°C and freezes at 5.4-5.5°C.
Biodiversity	The variety of organisms and ecosystems that comprise both the communities of organisms within particular habitats and the physical conditions under which they live.

Bitumen	A highly viscous, tarry, black hydrocarbon material having an API gravity of about 9° (specific gravity about 1.0). It is a complex mixture of organic compounds. Carbon accounts for 80 to 85% of the elemental composition of bitumen, hydrogen - 10%, sulphur - 5%, and nitrogen, oxygen and trace elements the remainder.
CALMET	California Meteorological Model. Used to process meteorological data for input into the CALPUFF model.
CALPUFF	California Puff model, used to estimate ambient concentrations of substances in air, and deposition of those substances (e.g., acid deposition).
Carcinogen	An agent that is reactive or toxic enough to act directly to cause cancer.
Carrying Capacity	The maximum population size that can be supported by the available resources.
Catchment	A structure in which water is collected.
Cation	A positively charged ion.
CEMA	Cumulative Environmental Management Association – An association of oil sands industry, other industry, regional community representatives, regulatory agencies and other stakeholders designed to develop systems to manage cumulative effects associated with developments in the Oil Sands Region.
Chert	A fine-grained siliceous rock. Impure variety of chalcedony that is generally light-coloured.
Closure	The point after shutdown of operations when regulatory certification is received and the area is returned to the Crown.
Community	Pertaining to plant or animal species living in close association or interacting as a unit.
Concentration	Quantifiable amount of a chemical in environmental media.
Confined Aquifer	An aquifer in which the potentiometric surface is above the top of the aquifer.
Conifers/Coniferous	White and black spruce, balsam fir, jack pine and tamarack.
Conservative Approach	Approach taken to incorporate protective assumptions to ensure that risk will not be underestimated.
Consolidation	The gradual reduction in volume of a soil or semi-solid mass.

Contaminants	A general term referring to any chemical compound added to a receiving environment in excess of natural concentrations. The term includes chemicals or effects not generally regarded as "toxic," such as nutrients, colour and salts.
Daytime	Defined as the hours from 07:00 to 22:00.
dB (decibel)	A unit of measure of sound pressure that compresses a large range of numbers into a more meaningful scale.
DBA	The decibel (dB) sound pressure level filtered through the A filtering network to approximate human hearing response. See dB and A-weighted sound level.
dBA (decibel A)	Unit used for 'A-weighted' sound pressure levels. A-weighting is an adjustment made to sound-level measurement to approximate the response of the human ear.
DEM (Digital Elevation Model)	A three-dimensional grid representing the height of a landscape above a given datum.
Deposit	Material left in a new position by a natural transporting agent such as water, wind, ice or gravity, or by the activity of man.
Detection Limit (DL)	The lowest concentration at which individual measurement results for a specific analyte are statistically different from a blank (that may be zero) with a specified confidence level for a given method and representative matrix.
Discharge	In a stream or river, the volume of water that flows past a given point in a unit of time (i.e., m3/s).
Diversity	The variety, distribution and abundance of different plant and animal communities and species within an area.
Drainage Basin	The total area that contributes water to a stream.
Drawdown	Lowering of water level caused by pumping. It is measured for a given quantity of water pumped during a specified period, or after the pumping level has become constant.
Ecodistricts	Landscape units that represent similar geology, landform and vegetation characteristics that best reflect overall patterns of landscape features.
Ecological Land Classification	A means of classifying landscapes by integrating landforms, soils and vegetation components in a hierarchical manner.
Ecoregion	Ecological regions that have broad similarities with respect to soil, terrain and dominant vegetation.

Ecosection	Clearly recognizable landforms such as river valleys and wetlands at a broad level of generalization.
Ecosite	Ecological units that develop under similar environmental influences (climate, moisture and nutrient regime). Ecosites are groups of one or more ecosite phases that occur within the same portion of the moisture/nutrient grid. Ecosite is a functional unit defined by the moisture and nutrient regime. It is not tied to specific landforms or plant communities, but is based on the combined interaction of biophysical factors that together dictate the availability of moisture and nutrients for plant growth.
Ecosite Phase	A subdivision of the ecosite based on the dominant tree species in the canopy. On some sites where the tree canopy is lacking, the tallest structural vegetation layer determines the ecosite phase.
Ecosystem	An integrated and stable association of living and non-living resources functioning within a defined physical location.
Edaphic	Referring to the soil. The influence of the soil on plant growth is referred to as an edaphic factor.
Effluent	Stream of water discharging from a source.
ELC	Ecological Land Classification. A system of mapping an area on the basis of vegetation composition and soil type.
Energy equivalent sound level (L_{eq})	The L_{eq} is a single-number average, A-weighted sound level that represents cumulative acoustical energy as measured over a specified time interval. This interval should be specified in brackets following the L_{eq} (e.g.: L_{eq} (9) is a nine-hour L_{eq}).
Ephemeral	A phenomenon or feature that last only a short time (i.e., an ephemeral stream is only present for short periods during the year).
Equivalent land capability	Means that the ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical.
Erosion	The process by which material, such as rock or soil, is worn away or removed by wind or water.
Escarpment	A cliff or steep slope at the edge of an upland area. The steep face of a river valley.
Evaporation	Evaporation is the process by which water is transferred from open water surfaces to the atmosphere.
Evapotranspiration	Evapotranspiration is the combined losses of water from the earth's surface to the atmosphere through evaporation and transpiration.

Exceedance	An emission or ambient concentration whose measured value is more than that allowed by government regulations.
Exposure	The contact between a chemical and a biological system, or organism.
Exposure Concentration	The concentration of a chemical in its transport or carrier medium at the point of contact.
Facies	The overall characteristics of a rock unit that reflect its origin and differentiate the unit from others around it
Fauna	An association of animals living in a particular place or at a particular time.
Flare	A device for disposing of combustible gases from refining or chemical processes by burning in the open.
Floodplain	Land near rivers and lakes that may be inundated during seasonally high water levels (i.e., floods).
Fluvial	Relating to a stream or river.
Fluvial Processes	Natural processes involving the formation and evolution of stream and river channels and their floodplains.
Forage Area	The area used by an organism for hunting or gathering food.
Forage Fish	Small fish that provide food for larger fish (e.g., pearl dace, fathead minnow).
Forb	Broad-leaved herb, as distinguished from grasses.
Forest	A collection of stands of trees that occur in similar space and time.
Forest Fragmentation	The change in the forest landscape, from extensive and continuous forests.
Forest Landscape	Forested or formerly forested land not currently developed for nonforest use.
Forest Succession	The orderly process of change in a forest as one plant community or stand condition is replaced by another, evolving toward the climax type of vegetation.
Fragmentation	Fragmentation is the breaking up of contiguous natural areas by areas of human disturbance into smaller and more distinct or isolated patches.

Fugitive Emissions	Substances emitted from any source except those from stacks and vents. Typical sources include gaseous leakage from valves, flanges, drains, volatilization from ponds and lagoons, and open doors and windows. Typical particulate sources include bulk storage areas, open conveyors, construction areas or plant roads.
GIS	Geographic Information System. Pertains to a type of computer software that is designed to develop, manage, analyze and display spatially referenced data.
Glacial Till	Unsorted and unstratified glacial drift (generally unconsolidated) deposited directly by a glacier without subsequent reworking by water from the glacier. Consisting of a heterogeneous mixture of clay, silt, sand, gravel and boulders (i.e., drift) varying widely in size and shape.
Glaciofluvial	Sediments or land-forms produced by meltwaters originating from glacier/ice sheet.
Glaciolacustrine (or Glacio-Lacustrine)	Relating to the lakes that formed at the edge of glaciers as the glaciers receded. Glaciolacustrine sediments are commonly laminar deposits of fine sand, silt and clay.
Habitat	The place where an animal or plant naturally or normally lives and grows, for example, a stream habitat or a forest habitat.
Habitat Alienation	The loss of habitat effectiveness as a result of sensory disturbances from human activities at disturbed sites.
Habitat Effectiveness	Including the physical characteristics associated with the suitability of a habitat, the ability of a habitat to be used by wildlife. The effectiveness of a habitat can be decreased through visual, auditory, or olfactory disturbance even though the physical characteristics of the habitat remain unchanged.
Habitat Fragmentation	Occurs when extensive, continuous tracts of habitat are reduced by habitat loss to dispersed and usually smaller patches of habitat. Generally reduces the total amount of available habitat and reduces remaining habitat into smaller, more isolated patches
Habitat Generalist	Wildlife species that can survive and reproduce in a variety of habitat types (e.g., red-backed vole).
Habitat Specialist	Wildlife species that is dependent on a few habitat types for survival and reproduction (e.g., Cape May warbler).
Habitat Suitability Index (HSI) Model	Analytical tools for determining the relative potential of an area to support individuals or populations of a wildlife species. They are frequently used to quantify potential habitat losses and gains for wildlife as a result of various land use activities.

Habitat Unit (HU)	Generally, used in HSI models. A habitat is ranked in regards to its suitability for a particular wildlife species. This ranking is then multiplied by the area (ha) of the particular habitat type to give the number of habitat units available to the wildlife species in question.
Head	The energy, either kinetic or potential, possessed by each unit weight of a liquid; expressed as the vertical height through which a unit weight would have to fall to release the average energy possessed. It is used in various compound terms such as pressure head, velocity head and loss of head.
hectare	An area measuring the equivalent of 100 m by 100 m or 10,000m^2 , one hectare = 2.4711 acres
Historic Site	Any location with detectable evidence of past human activity.
Historical Resources	Works of nature or by humans valued for their palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest.
Hydraulic Conductivity	The permeability of soil or rock to water.
Hydraulic Gradient	A measure of the force of moving groundwater through soil or rock. It is measured as the rate of change in total head per unit distance of flow in a given direction. Hydraulic gradient is commonly shown as being dimensionless, since its units are metres/meter.
Hydraulic Head	The elevation, with respect to a specified reference level, at which water stands in a piezometer connected to the point in question in the soil. Its definition can be extended to soil above the water table if the piezometer is replaced by a tensiometer. The hydraulic head in systems under atmospheric pressure may be identified with a potential expressed in terms of the height of a water column. More specifically, it can be identified with the sum of gravitational and capillary potentials, and may be termed the hydraulic potential.
Hydraulic Structure	Any structure designed to handle water in any way. This includes retention, conveyance, control, regulation and dissipation of the energy of water.
Hydrogeology	The study of the factors that deal with subsurface water (groundwater), and the related geologic aspects of surface water.
In Situ	Also known as “in place”, refers to methods of extracting deep deposits of oil sands without removing the groundcover. The in-situ technology in oil sands uses underground wells to recover the resources with less impact to the land, air and water than the traditional oil sands methods.

Infiltration	The flow or movement of precipitation or surface water through the ground surface into the ground. Infiltration is the main factor in recharge of groundwater reserves.
Injection well	A well used for injecting fluids (air, steam, water, natural gas, gas liquids, surfactants, alkalines, polymers, etc.) into an underground formation for the purpose of increasing recovery efficiency.
Inorganics	Pertaining to a compound that contains no carbon.
L/min	Litres per minute
Land capability	Means the ability of land to support a given land use, based on an evaluation of the physical, chemical and biological characteristics of the land, including topography, drainage, hydrology, soils and vegetation.
Landform	General term for the configuration of the ground surface as a factor in soil formation; it includes slope steepness and aspect as well as relief. Also, configurations of land surfaces taking distinctive forms and produced by natural processes (e.g., hill, valley, plateau).
Landscape	A heterogeneous land area with interacting ecosystems.
Landscape Diversity	The size, shape and connectivity of different ecosystems across a large area.
Leaching	The removal, by water, of soluble matter from regolith or bedrock.
Linear Corridor	Roads, seismic lines, pipelines and electrical transmission lines, or other long, narrow disturbances.
Littoral Zone	The zone in a lake that is closest to the shore. It includes the part of the lake bottom, and its overlying water, between the highest water level and the depth where there is enough light (about 1% of the surface light) for rooted aquatic plants and algae to colonize the bottom sediments.
m^3/d	Cubic metres per day.
m^3/s	Cubic metres per second.
Merchantable Forest	A forest area with potential to be harvested for protection of lumber/timber or wood pulp. Forests with a timber productivity rating of moderate to good.
Mineral Soil	Soils containing low levels of organic matter. Soils that have evolved on fluvial, glaciofluvial, lacustrine and morainal parent material.
Mixing Height	The depth of surface layer in which atmospheric mixing of emissions occurs.
Model Domain	The region of interest for a numerical model.

Movement Corridor	Travel way used by wildlife for daily, seasonal, annual and/or dispersal movements from one area or habitat to another.
Nighttime	Defined as the hours from 22:00 to 07:00.
NOx	A measure of the oxides of nitrogen comprised of nitric oxide (NO) and nitrogen dioxide (NO_2).
Observation Well	A constructed controlled point of access to an aquifer which allows groundwater observations. Small diameter observation wells are often called piezometers.
Old Growth Forest	Old growth forests are those forested areas where the annual growth equals annual losses, or where mean annual increment of timber volume equals zero. They can also be defined as those stands that are self-regenerating (i.e., having a specific structure that is maintained).
Organic Soil	Soils containing high percentages of organic matter (fibric and humic inclusions).
Overburden	The soil, sand, silt or clay that overlies bedrock.
Overwintering Habitat	Habitat used during the winter as a refuge and for feeding.
PAH(s)	Polycyclic Aromatic Hydrocarbon. A chemical byproduct of petroleum-related industry. Aromatics are considered to be highly toxic components of petroleum products. PAHs, many of which are potential carcinogens, are composed of at least two fused benzene rings. Toxicity increases along with molecular size and degree of alkylation of the aromatic nucleus.
PAI	The Potential Acid Input is a composite measure of acidification determined from the relative quantities of deposition from background and industrial emissions of sulphur, nitrogen and base cations.
Paleozoic	An era of geologic time, from the end of the Precambrian to the beginning of the Mesozoic, or from about 570 to about 225 million years ago.
Peat	A material composed almost entirely of organic matter from the partial decomposition of plants growing in wet conditions.
Permissible Sound	The allowable overall A-weighted sound level of noise from energy industry level sources, as specified by the ERCB Noise Control Directive, which may contribute to the sound environment of a residential location.
Permissible Sound Level (PSL)	The maximum sound level that a facility should not exceed at a point 15m from the nearest or most impacted dwelling unit.

pH	The negative logarithm of hydrogen ion concentration. The pH scale is generally presented from 1 (most acidic) to 14 (most alkaline). A difference of one pH unit represents a ten-fold change in hydrogen ion concentration.
Piezometer	A pipe in the ground in which the elevation of water levels can be measured.
Piezometric Surface	If water level elevations in wells completed in an aquifer are plotted on a map and contoured, the resulting surface described by the contours is known as a potentiometric or piezometric surface.
PM	Particulate matter. May be relatively large and derived from crustal sources such as road dust (>10µm), or be relatively small and derived from combustion sources both natural and anthropogenic sources (2.5 to 10µm), or be derived through reactions in the atmosphere (secondary particulates; <2.5µm)
PM_{10}	Airborne particulate matter with mean diameter less than 10 µm (microns) in diameter. This represents the fraction of airborne particles that can be inhaled into the upper respiratory tract.
$PM_{2.5}$	Airborne particulate matter with mean diameter less than 2.5 µm (microns) in diameter. This represents the fraction of airborne particles that can be inhaled deeply into the pulmonary tissue.
Productive Forest	Forests on lands with a capability rating of equal to or greater than 3, and stocked with trees to meet the stocking standards of a merchantable forest.
QA/QC	Quality Assurance/Quality Control refers to a set of practices that ensure the quality of a product or a result.
Receptor	The person or organism subjected to exposure to chemicals or physical agents.
Recharge/Discharge Area	Recharge/Discharge Area are areas that either contribute (recharge) or take away (discharge) to/from the overall volume of groundwater in an aquifer.
Reclamation	The restoration of disturbed or wasteland to a state of useful capability. Reclamation is the initiation of the process that leads to a sustainable landscape (see definition), including the construction of stable landforms, drainage systems, wetlands, soil reconstruction, addition of nutrients and revegetation. This provides the basis for natural succession to mature ecosystems suitable for a variety of end uses.
Reclamation Certificate	A certificate issued by a Conservation, and Reclamation Inspector, signifying that the terms and conditions of a conservation and reclamation approval have been complied with.

Regeneration	The natural or artificial process of establishing young trees.
Riparian Area	A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affects it.
Runoff	The portion of water from rain and snow that flows over land to streams, ponds or other surface waterbodies. It is the portion of water from precipitation that does not infiltrate into the ground, or evaporate.
SAGD	Steam Assisted Gravity Drainage is an in-situ oil sands recovery technique that involves drilling two horizontal wells, one to inject steam and a second to produce the bitumen.
Sediment Sampling	A field procedure relating to a method for determining the configuration of sediments.
Sedimentation	The process of subsidence and deposition of suspended matter carried by water, wastewater or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.
Sensory Disturbance	Visual, auditory, or olfactory stimulus that creates a negative response in wildlife species.
Sodium Adsorption Ratio (SAR)	Concentrations of sodium, calcium and magnesium ions in a solution.
Soil Inventory Level (SIL)	The intensity of sampling required in areas to be developed (SIL1; 1 sample per 1 to 5 ha), near developing areas (SIL2; 1 sample per 2 to 30 ha) and in areas distant from the development but within the LSA (SIL3; 1 sample per 30 ha or more).
Sound Level	The contribution of noise from one or more sources to the overall sound level Contribution from all sources affecting a particular location.
Sound power level	The acoustic power radiated from a given sound source related to a reference power level (typically 10^{-12} watts) expressed in decibels.
Sound pressure level	The ratio, expressed in decibels, of sound pressure to a reference pressure equal to the human threshold of hearing.
Sport/Game Fish	Large fish caught for food or sport (e.g., northern pike, Arctic grayling).
Stakeholder	People or organizations with an interest or share in an undertaking, such as a commercial venture.
Storativity	Storativity is the volume of water an aquifer releases from or takes into storage due to pressure change.

Stratigraphy	The succession and age of strata of rock and unconsolidated material. Also concerns the form, distribution, lithologic composition, fossil content and other properties of the strata.
Succession	A series of dynamic changes by which one group of organisms succeeds another through stages leading to a climax community.
Successional Stage	A stage or recognizable condition of a forest community that occurs during its development from bare ground to climax.
Surficial Aquifer	A surficial deposit containing water considered an aquifer.
Surficial Deposit	A geologic deposit (clay, silt or sand) that has been placed above bedrock. (See also "Overburden")
Suspended Sediments	Particles of matter suspended in the water. Measured as the oven dry weight of the solids, in mg/L, after filtration through a standard filter paper. Less than 25 mg/L would be considered clean water, while an extremely muddy river might have 200 mg/L of suspended sediments.
Thalweg	The (imaginary) line connecting the lowest points along a streambed or valley. Within rivers, the deep channel area.
Till	Sediments laid down by glaciers.
Total Dissolved Solids (TDS)	The total concentration of all dissolved compounds solids found in a water sample.
Traditional Land Use	Activities involving the harvest of traditional resources such as hunting and trapping, fishing, gathering medicinal plants and traveling to engage in these activities.
Understory	Those trees or other vegetation in a forest stand below the main canopy level.
Uptake	The process by which a chemical crosses an absorption barrier and is absorbed into the body.
VOC	Volatile Organic Compounds include aldehydes and all of the hydrocarbons except for ethane and methane. VOCs represent the airborne organic compounds likely to undergo or have a role in the chemical transformation of pollutants in the atmosphere.
Water Table	The shallowest saturated ground below ground level - technically, that surface of a body of unconfined groundwater in which the pressure is equal to atmospheric pressure.
Watershed	The entire surface drainage area that contributes water to a lake or river.

Wellpad	An area associated with SAGD operations on which pairs of wells are drilled. The pairs of wells include a steam injection well and a production well.
Worst-Case	A semi-quantitative term referring to the maximum possible exposure, dose or risk, that can conceivably occur, whether or not this exposure, dose, or risk actually occurs is observed in a specific population. It should refer to a hypothetical situation in which everything that can plausibly happen to maximize exposure, dose, or risk does happen. The worst-case may occur in a given population, but since it is usually a very unlikely set of circumstances in most cases, a worst-case estimate will be somewhat higher than what occurs in a specific population.
Xeric	Referring to habitats in which plant production is limited by availability of water.