

**HARDROCK PROJECT
Final Environmental Impact
Statement / Environmental
Assessment Amendment**

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Note to Readers

Please note that additional and clarified information has been added to chapter 3, 5, 10, 19 and 24 since its original submission in June 2017, in accordance with Condition 27 of the Provincial Environmental Assessment approval, dated March 12, 2019. Additionally, Appendices C11, F13, F14, F15 and G12 have been added to provide further supporting information.

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Abbreviations

Abbreviations	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AAQC	ambient air quality criteria
ABA	acid base accounting
ADD	average daily dose
ADCP	Acoustic Doppler current profilers
ADMGO	Air Dispersion Modeling Guideline for Ontario
AET	actual evapotranspiration
AF	absorption factor
AFN	Aroland First Nation
AHRMP	Archaeology and Heritage Resource Management Plan
a.k.a.	also known as
ALS	ALS Environmental Laboratories
AMD	acid mine drainage
AMECFW	Amec Foster Wheeler
AMMP	Aquatic Management and Monitoring Plan
ANCOVA	Analysis of Covariance
ANSI	Area of Natural and Scientific Interest
AP-42	United States Environmental Protection Agency Compilation of Air Pollution Emission Estimation Factors Document
APS	Anishinaabek Police Service
AQMMP	Air Quality Management and Monitoring Plan
APV	aquatic protection value
AQSA	air quality study area

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Abbreviations	Definition
ARD	acid rock drainage
ART	Aboriginal review team
ATSDR	Agency for Toxic Substance and Disease Registry
ATV	all-terrain vehicle
AZA	Animbiigoo Zaagi'igan Anishinaabek
BCE	before common era
BEAHR	Building Environmental Aboriginal Human Resources
BFI	baseflow index
BGS	below ground surface
BHCHL	Built Heritage and Cultural Heritage Landscape
BIF	banded iron formation
BMA	Bear Management Area
BMMP	Biodiversity Management and Monitoring Plan
BMP	Best Management Practices
BNA	Bingwi Neyaashi Anishinaabek
BOD	biochemical oxygen demand
BZA	Biinjitiwaabik Zaaging Anishinaabek
BW	body weight
CAAQS	Canadian Ambient Air Quality Standards
CAC	criteria air contaminant
CAPEX	capital expenditures
CAS	Chemical Abstracts Service
CAZ	contaminant attenuation zone
CC	coefficient of conservatism
CCEM	Community Coordinator/Environmental Monitor

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Abbreviations	Definition
CCME	Canadian Council of Ministers of the Environment
CDA	Canadian Dam Association
CDWQG	Canadian Drinking Water Quality Guidelines
CEA	cumulative effects assessment
CEA Agency	Canadian Environmental Assessment Agency
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
Centerra	Centerra Gold Inc.
CHER	Cultural Heritage Evaluation Report
CHR	cultural heritage resource
CHVI	cultural heritage value or interest
CIA	Cultural Impact Assessment
CIE	Commission Internationale de L'Éclairage or International Commission on Illumination
CIEEDAC	Canadian Industrial Energy End-use Data and Analysis Centre
CIL	carbon-in-leach
CIP	carbon-in-pulp
CL construction	centerline construction
CLFN	Constance Lake First Nation
COPC	chemical of potential concern
CORMIX	Cornell Mixing Zone Expert System
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COSSARO	Committee on the Status of Species at Risk in Ontario
CPR	Canadian Pacific Railway
CPUE	catch per unit effort
CR	concentration ratio

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Abbreviations	Definition
CRA fishery	commercial, recreational or Aboriginal fishery
CSM	conceptual site model
CWQG-FAL	<i>Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life</i>
CWS	Canada Wide Standards
DDH	diamond drill hole
DEM	digital elevation model
DFO	Fisheries and Oceans Canada
DQO	data quality objectives
DQRA _{CHEM}	Detailed Quantitative Risk Assessment for chemicals
DS construction	downstream construction
EA	environmental assessment
EAA	<i>Environmental Assessment Act, 1990</i>
EBMP	Explosives and Blasting Management Plan
EC	Environment Canada
ECA	Environmental Compliance Approval
ECCC	Environment and Climate Change Canada (formerly Environment Canada)
EDF	Environmental Design Flood
EDP	Electronic Data Processor
EEM	environmental effects monitoring
eFRL	enhanced Forest Resource Licence
EFN	Eabametoong First Nation
e.g.	<i>exempli gratia</i> (for example)
EIS	environmental impact statement
EMP	environmental management plan

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Abbreviations	Definition
EMMP	environmental management and monitoring plan
EPA	<i>Environmental Protection Act, 1990</i>
EPC	exposure point concentration
EPM	equivalent porous media
ERA	Ecological Risk Assessment
ERP	Emergency Response Plan
ESA	<i>Endangered Species Act, 2007</i>
ESC	erosion and sediment control
ESCP	Erosion and Sediment Control Plan
ESSB	Explosives Safety and Security Branch of Natural Resources Canada
ET	evapotranspiration
ETP	effluent treatment plant
FDC	flow duration curve
FDP	final discharge point
FRI	forest resource inventory
FMU	forest management unit
FMZ	fisheries management zone
FTA	United States Federal Transit Administration
FWCA	<i>Fish and Wildlife Conservation Act</i>
G Mining	G Mining Services Inc.
GANRAC	Geraldton Area Natural Resources Advisory Committee
GDP	gross domestic product
GEDC	Greenstone Economic Development Corporation
GGM	Greenstone Gold Mines GP Inc.

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GHG	greenhouse gas
GHGMMP	Greenhouse Gas Management and Monitoring Plan
GFN	Ginoogaming First Nation
GIS	geographic information system
GLC	ground-level concentrations
GOC	Government of Canada
GPS	global positioning system
GRSC	Greenstone Regional Skills Centre
GRT	government review team
GSC	Geological Survey of Canada
GUDI	Groundwater Under the Direct Influence of surface water
HAP	hazardous air pollutants
HDD	horizontal directional drilling
HDPE	high density polyethylene
HHERA	Human Health and Ecological Risk Assessment
HHRA	Human Health Risk Assessment
HPC	Hazard Potential Classification
HPGR	high pressure grinding rolls
HQ	hazard quotient
HAS	hollow stem augers
Hydro One	Hydro One Networks Inc.
ID	identification
IDF	intensity duration frequency
IF	intake factor
ILCR	incremental lifetime cancer risk

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Abbreviations	Definition
IMAC	interim maximum allowable concentration
INAC	Indigenous and Northern Affairs Canada
IPCC	Intergovernmental Panel on Climate Change
ITRB	Independent Tailings Review Board
IR	ingestion rate
IRIS	Integrated Risk Information System
IRRP	Integrated Regional Resource Plan
ISO	International Organization for Standardization
ISQG	Interim Sediment Quality Guideline
JSL	Jurisdictional Screening Level
KI	Key Indicator
LAA	local assessment area
LADC	lifetime average daily concentration
LADD	lifetime average daily dose
LCR	Lifetime Cancer Risk
L _{dn}	day-night sound level
L _{eq}	energy equivalent sound level
LEED	Leadership in Energy and Environmental Design
LEL	lowest effect level
LHIN	Local Health Integration Network
LIDAR	Light Detection and Ranging
LIO	Land Information Ontario
LLFN	Long Lake #58 First Nation
LNAPL	light non-aqueous phase liquids
LNG	liquefied natural gas

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Abbreviations	Definition
LOAEL	lowest observed adverse effect level
LOM	life of mine
LOS	level of service
LRIA	<i>Lakes and Rivers Improvement Act, 1990</i>
LRU	Land and Resource Use
LUP	Land Use Permit
MAA	multiple accounts analysis
MDL	method detection limits
MFFN	Marten Falls First Nation
MiHR Council	Mining Industry Human Resources Council
ML	metal leaching
MMAH	Ministry of Municipal Affairs and Housing
MMER	<i>Metal Mining Effluent Regulations under the Fisheries Act</i>
MMF	monthly mean flow
MMP	marsh monitoring program
MNDM	Ministry of Northern Development and Mines
MNO	Métis Nation of Ontario (Region 2, including the Regional Councils for Greenstone and Thunder Bay)
MNR	Ministry of Natural Resources
MNRF	Ministry of Natural Resources and Forestry (formerly the Ministry of Natural Resources)
MOE	Ministry of the Environment
MOEE	Ministry of the Environment and Energy
MOECC	Ministry of the Environment and Climate Change (formerly the Ministry of the Environment)
MOH	medical officer of health

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Abbreviations	Definition
MPA	maximum potential acidity
MTCS	Ministry of Tourism, Culture and Sport
MTO	Ontario Ministry of Transportation
Municipality	Municipality of Greenstone
MUSLE	Modified Universal Soil Loss Equation
MW	monitoring well
N/A	not applicable
NAAQO	National Ambient Air Quality Objectives
NAG	non-acid generating
NAPS	National Air Pollution Surveillance
NBS	Northern Bioscience
NHIC	Natural Heritage Information Centre
NHS	National Household Survey
NOAEL	no observed adverse effect level
NOSTA	North of Superior Tourism Association
NP	neutralizing potential
NP/MPA	neutralizing potential/maximum potential acidity
NPA	<i>Navigation Protection Act</i>
NPC-103	<i>Procedures, Model Municipal Noise Control By-Law</i>
NPC-115	<i>Construction Equipment, Model Municipal Noise Control By-Law</i>
NPC-119	<i>Blasting, Model Municipal Noise Control By-Law</i>
NPC-300	<i>Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning</i>
NPI	National Pollutant Inventory
NPR	neutralization potential ratio

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Abbreviations	Definition
NPRI	National Pollutant Release Inventory
NRCan	Natural Resources Canada
NRRRI	Northern and Rural Recruitment and Retention Initiative
NVMMP	Noise and Vibration Management and Monitoring Plan
ODWQS	<i>Ontario Drinking Water Quality Standards under the Safe Drinking Water Act</i>
OFATIII	Ontario Flow Assessment Tool, version III
OG	operational guideline
OGS	Ontario Geological Survey
OHA	<i>Ontario Heritage Act, 1990</i>
OHRRN	Ontario Health Human Resources Research Network
OMS	operation, maintenance and surveillance
OPEX	operating expenditures
OPP	Ontario Provincial Police
OPS	Operational Policy Statement
O. Reg.	Ontario Regulation
OWES	Ontario Wetland Evaluation System
OWRA	<i>Ontario Water Resources Act, 1990</i>
PAG	potentially acid generating
PAH	polycyclic aromatic hydrocarbon
PBL	Planetary Boundary Layer
PCB	polychlorinated biphenyl
PDA	Project development area
PDR	preliminary design report
PEA	preliminary economic assessment

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Abbreviations	Definition
PEI	Parks Environmental Inc.
PEL	probable effects level
Percent HA	percent highly annoyed
PET	potential evapotranspiration
PIC	Public Information Centre
PIEVC	Public Infrastructure Engineering Vulnerability Committee
PMF	Probable Maximum Flood
POC	parameter of concern
PoI	Point of Interest
POI	point of impingement
PoPC	parameters of potential concern
PoR	Point of Reception
PPFN	Pays Plat First Nation
PPS	Provincial Policy Statement
PPV	peak particle velocity
Premier	Premier Gold Mines Limited
Project	Hardrock Project
PSQG	Provincial Sediment Quality Guideline
PSW	Provincially Significant Wetland
PTTW	Permit to Take Water
PWL	sound power level
PWQO	Provincial Water Quality Objectives
PY	person-year
RAA	Regional Assessment Area
RD	runoff distribution factor

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Abbreviations	Definition
RDL	reportable detection limits
REV	representative elementary volume
RIVM	Rijksinstituut Voor Volksgezondheid En Milieu – The Netherlands National Institute for Public Health and the Environment
RMS	root mean square
RoC	Record of Consultation
RoM	Run of Mine
ROW	right-of-way
RPD	relative percent difference
RQ	risk quotient
RQD	rock quality designation
RSMIN	Red Sky Métis Independent Nation
RTP	relative toxic potential
RUC	reasonable use criteria
RUSLEFAC	Revised Universal Soil Loss Equation for Application in Canada
SAR	species at risk
SARA	<i>Species at Risk Act, 2002</i>
SARO	Species at Risk in Ontario
SCIPIOM	Statistics Canada Interprovincial Input-Output Model
SCS	Site Condition Standard
SEL	severe effect level
SF	slope factor
SFE	Shake Flask Extraction
SMP	Soil Management Plan
SOCC	Species of Conservation Concern

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Abbreviations	Definition
SOP	standard operating procedures
Soutex	Soutex Inc.
SPL	sound pressure level
SPRP	Spill Prevention and Response Plan
SPT	standard penetration test
SR	screening ratio
SRO	surface right owner
Stantec	Stantec Consulting Ltd.
std. dev.	standard deviation
STC	sound transmission class
STP	sewage treatment plant
SUV	sport utility vehicle
SWH	Significant Wildlife Habitat
SWHTG	<i>Significant Wildlife Habitat Technical Guide</i>
TBDSSAB	District of Thunder Bay Social Services Administration Board
TBTE	TBT Engineering Consulting Group
TC	Transport Canada
TCEQ	Texas Commission on Environmental Quality
TDI	tolerable daily intake
TDR	Technical Data Report
TDS	total dissolved solids
TEK	traditional ecological knowledge
TK	traditional knowledge
TLRU	traditional land and resource use
TMF	tailings management facility

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Abbreviations	Definition
ToR	Terms of Reference
True Grit	True Grit Consulting Ltd.
TRV	toxicity reference value
TS	transformer station
TSP	total suspended particulate
TSS	total suspended solids
TRT	technical review team
TRV	toxicity reference value
UCLM	upper confidence limit of the mean
UNFCCC	United Nations Framework Convention on Climate Change
UP	uptake factor
UR	unit risk
URT	upper risk threshold
US construction	upstream construction
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UTM	universal transverse mercator
VC	Valued Component
VOC	volatile organic compound
WAD	weak acid dissociable
WC	watercourse
WESA	WESA Inc.
WMP	Waste Management Plan
WMMP	Water Management and Monitoring Plan
WMU	Wildlife Management Unit

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Abbreviations	Definition
WRMP	Waste Rock Management Plan
WRSA	waste rock storage area
WSC	Water Survey of Canada
WSP	WSP Parsons Brinckerhoff
WTP	water treatment plant
ww	wet weight
WWR	water well record
ZOI	Zone of Influence/Criteria Boundary

UNITS OF MEASUREMENT

Units	Definition
%	percent
°C	degrees Celsius
µg	microgram
µg/L	micrograms per litre
µm	micrometer
µs/L	microsiemens per centimetre
amsl	above mean sea level
cm	centimetre
cm/s	centimetres/second
d	day
dB	decibel
dBA	decibel, A-weighted
dw	dry weight
ft	feet/foot
g	gram
g Au/t	grams of gold per tonne of ore
GJ	gigajoule
h or hr	hour
Ha	hectare
Hz	hertz
K	hydraulic conductivity

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Units	Definition
km	kilometre
km ²	square kilometer
km/hr	kilometres per hour
Kt	kilotonnes / One thousand tonnes (metric)
kV	kilovolt
L	litre
L/s	litres per second
L/day or L/d	litres per day
M	million
m	metre
m ³	cubic metres
m ³ per second	cubic metres per second
MAF	mean annual flow
mag/arcsec ²	magnitudes per square arcsecond
mg	milligram
mm	millimeter
Mt	million tonnes
MW	megawatt
MWth	megawatt thermal
NTU	nephelometric turbidity units
Oz	ounces
ppb	parts per billion

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Units	Definition
ppm	parts per million
s	second
t	tonne (metric)
t/d or tpd	tonnes (metric) per day
tpy	tonnes (metric) per year
Wt%	weight percent
yr	year

CHEMICAL ELEMENTS AND COMPOUNDS

Element/Compound	Definition
Ag	silver
Al	aluminum
As	arsenic
Au	gold
B	boron
Be	beryllium
Ca	calcium
CaCO ₃	calcium carbonate
Cd	cadmium
CH ₄	methane
Cl ⁻	chloride
CN	cyanide
Co	cobalt
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
Cr	chromium
Cu	copper
DO	dissolved oxygen
DOC	dissolved organic carbon
F ⁻	fluoride

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Element/Compound	Definition
Fe	iron
Fe(OH) ₃	ferric hydroxide
Fe(SO ₄) ₃	ferric sulphate
HCN	hydrogen cyanide
Hg	mercury
K	potassium
Mo	molybdenum
Na	sodium
NH ₃	ammonia
NH ₄	ammonium
Ni	nickle
NO	nitric oxide
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO ₂ ⁻	nitrite
NO ₃ ⁻	nitrate
NO _x	nitrogen oxides
O ₂	oxygen
O ₃	ozone
P	phosphorous
Pb	lead
PM	particulate matter

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Element/Compound	Definition
PM _{2.5}	particulate matter with diameter of 2.5 micrometers or less (respirable particulate matter)
PM ₁₀	particulate matter with diameter of 10 micrometers or less (inhalable particulate matter)
Sb	antimony
Se	selenium
Si	silicon
SO ₂	sulphur dioxide
SO ₄ ²⁻	sulphate
SVS	Shared Value Solutions Ltd.
Tl	thallium
TOC	total organic carbon
TP	total phosphorous
U	uranium
V	vanadium
W	tungsten
Zn	zinc
Zr	zirconium

Glossary

Term	Definition
Aboriginal fishery	As per the <i>Fisheries Act</i> , an Aboriginal fishery is one where fish is harvested by an Aboriginal organization or any of its members for the purpose of using the fish as food, for social or ceremonial purposes or for purposes set out in a land claims agreement entered into with the Aboriginal organization.
Absorption Factor (AF)	The ratio between the amount of a given substance absorbed by an organism to the amount of the substance to which an organism is exposed (unitless).
Acid Rock Drainage (ARD)	The acidic water that is created when sulphide minerals are exposed to air and water and produce sulphuric acid.
Acute Effect	An adverse effect on an animal or human receptor with symptoms that develop quickly, due to a short-term exposure, often at relatively high concentrations. Toxicological responses for acute effects in animal receptors often include death, although relevant toxicological responses to (or symptoms of) acute exposure in human receptors would more typically be sub-lethal. In human receptors, symptoms are usually short-term in duration and subside after the exposure is terminated.
Air Contaminant Emissions	For stationary sources, the release or discharge of a pollutant from a facility or operation into the ambient air either by means of a stack, vent or as a fugitive dust, mist or vapour.
Alienation	An area of Crown land that has been withdrawn from staking or other use for surface rights, mining rights or both under various legislative authorities.
Alternative Methods	Different ways of carrying out the same activity, including different technologies, locations, designs and methods of operation.
Alternatives to	Functionally different ways of approaching or dealing with a problem or opportunity.
Aquatic Protection Values (APV)	Values developed by the Ministry of Environment and Climate Change to protect aquatic biota from migration of impacted groundwater to surface water.
Archaeological Resources	Any physical remnants recovered from the ground surface or below its surface which show evidence of manufacture, alteration or use by humans.

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Term	Definition
Architectural and/or Historical Resources	Any human-made standing structure or cultural landscape that provides information on a person, place, or event from the past or that may have intrinsic value due to some element of its design, construction, or use.
Arcsecond	The unit of measure for the brightness of the sky, including sky glow, is magnitudes per square arcsecond (mag/arcsec ²). Values for sky glow range from approximately 22 mag/arcsec ² in a rural environment where stars are abundant, to approximately 18 mag/arcsec ² in an urban environment where stars are barely visible. The unit is derived from astronomical convention, and magnitudes are inversely directed; that is, a large number is very dim, and a very low number is very bright.
Areas of Natural and Scientific Interest (ANSI)	An official designation by the Ontario Ministry of Natural Resources and Forestry applied to areas of land and water containing unique natural landscapes or features. These features have been scientifically identified as having life or earth science values related to protection, scientific study or education.
Attenuation	The reduction of sound intensity by various means (e.g., air, humidity and porous materials).
Average Daily Dose (ADD)	An estimate of the average amount of a given substance that a receptor may be exposed to on a daily basis, expressed as a mg of substance per kg body weight per day.
A-Weighting	The weighting network used to account for changes in level sensitivity as a function of frequency. The A-weighting network de-emphasizes the high (i.e., 6.3 kHz and above) and low (i.e., below 1 kHz) frequencies, and emphasizes the frequencies between 1 kHz and 6.3 kHz, in an effort to simulate the relative response of the human ear. See also frequency weighting.
Background Sound Level	All sound that is associated with a given environment, usually a composite of sounds from many near and far field sources. Background sound includes sound from all sources other than the source being assessed.
Barrier	In an acoustical sense, an obstacle composed of a berm, wall or fence that is free of gaps within or below of its extent and of sufficient mass to prevent transmission of sound through it.
Baseline Conditions	Pre-project environmental conditions.
Basic Industries (goods-producing)	Industries that export products from a region and bring in new wealth from outside.
Bedrock	Solid rock that underlies loose material such as soil, sand, clay or gravel.
Biological Oxygen Demand (BOD)	The amount of oxygen that would be consumed if all organic material in one litre of the effluent were oxidized.

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Term	Definition
Biological Oxygen Demand 5 (BOD ₅)	The amount of consumed oxygen during 5 days of incubation.
Brownfield	Properties where past industrial or commercial activities may have left contamination.
Canadian Council of Ministers of the Environment (CCME)	A council made up of environmental ministers from provincial and federal levels of government that proposes nationally consistent environmental standards and objectives to achieve high levels of environmental quality for waste management, air pollution, and toxic chemicals across Canada.
Canadian Environmental Assessment Act, 2012 (CEAA 2012)	Federal legislation respecting the environmental assessment of certain activities and the prevention of significant adverse environmental effects.
Carbon Monoxide (CO)	A colourless, odourless gas produced by incomplete fossil fuel combustion.
Catchment Area	The area of land which drains into a body of water.
Carcinogen	A substance directly involved in the promotion of cancer.
Chemical	Any organic or inorganic substance of a particular molecular identity, including any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature.
Chemicals of Potential Concern (COPC)	Project-related chemicals, elements and compounds that have the potential to elicit adverse human or ecological health effects.
Claims to Lease	Process of converting a mining claim into a lease. A mining claim grants its owner the exclusive rights to explore for minerals on a designated piece of land. The owner of a mining claim is not granted title or ownership to the land and cannot extract or sell any resources removed from the land. A mining claim can be converted into a lease. A lease grants its owner title and ownership to the land, permits the extracting and sale of extracted resources and removes the requirement to perform yearly assessment work (MNDM 2017).
Climate	The statistical average (mean and variability) of weather conditions over a substantial period of time (typically 30 years), accounting for the variability of weather during that period (Catto 2006).
Climate Change	An acknowledged change in climate that has been documented over two or more periods, each with a minimum of 30 years; a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.

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Term	Definition
Climate Normals	The long-term average value of a climate element for a certain area, averaged over a 30-year period. Elements can include, for example, temperature, precipitation, hours of reduced visibility.
Collection System	A series of constructed and maintained connected ditches and ponds that collect surface runoff and groundwater seepage that has come in contact with Project components.
Combustion	Burning, or rapid oxidation, accompanied by the release of energy in the form of heat and light.
Combustion Product	Substance produced during the burning or oxidation of a material.
Commercial Fishery	As per the <i>Fisheries Act</i> , a commercial fishery is one where fish is harvested under the authority of a licence for the purpose of sale, trade or barter.
Comminution	The process in which the particle size of ore is reduced until mineral can be separated.
Concentration Ratio (CR)	The ratio between the concentration of a substance in air or water and the concentration of the substance considered to be protective of human or ecological health.
Conductivity	A measure of water's ability to conduct electricity. Conductivity is related directly to total dissolved solids. Measuring conductivity provides an understanding of the ionic content in solution.
Conservative Approach	The assessment uses conservative assumptions and methods to increase the level of confidence.
Consultation	Two-way communication to share information and viewpoints, understand comments and interests, and address or resolve issues.
Contact Water	Water that comes into contact with mine activities (e.g., open pit, waste rock storage area runoff, ore milling and processing runoff, tailings management facility).
Contingency	A provision for an unforeseen event or circumstance.
Criteria Air Contaminant (CAC)	Substances that are identified by government agencies as being the primary chemicals of concern associated with combustion sources. They include total particulate matter (PM), particulate matter less than 10 microns (PM ₁₀), particulate matter less than 2.5 microns (PM _{2.5}), sulphur dioxide (SO ₂), nitrogen oxides (NO _x , expressed as NO ₂), and carbon monoxide (CO).
Criteria Boundary	Defines a boundary inside which project effects exceeds the limits defined for the noise or vibration effects and outside area comply with the limits.
Critical Habitat	Habitat which is vital to the survival of wildlife species. The habitat may include breeding sites, nursery areas or feeding grounds.

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Term	Definition
Crown land	Land belonging to the province of Ontario. It does not include: (a) land, the surface rights, mining rights or the mining and surface rights of which are under lease or licence of occupation from the Crown; (b) land in the actual use or occupation of the Crown, the Crown in right of Canada, or of a department of the Government of Canada or a ministry of the Government of Ontario; (c) land the use of which is withdrawn or set apart or appropriated for a public purpose; or (d) land held by a ministry of the Government of Ontario (“terre de la Couronne”).
Crown timber	Timber on public lands or timber that is the property of the Crown under the management of the Minister of Natural Resources on lands other than public lands.
Crusher	A machine used to break down aggregate into smaller pieces.
Cultural Impact Assessment (CIA)	Project-specific traditional land and resource use study.
Cumulative Effects	The environment effects that are likely to result from a project in combination with other physical activities that have or will be carried out.
Cyanidation	A technique for extracting gold from ore by converting the gold to a water-soluble complex.
Cyanide Detoxification	The process of removing cyanide from tailings using a sulphur dioxide/air oxidation process.
Cyclone Separation	A method of removing particulates from an air, gas, or liquid, without the use of filters, through vortex separation.
Day-night equivalent sound level	A 24-hour time-averaged energy equivalent sound level, adjusted by a 10 decibel penalty for sounds occurring during the night period (i.e., 23:00 and 07:00 local time).
Daytime	Defined as the hours from 07:00 to 23:00, according to Ministry of Transportation guideline Environmental Guide for Noise.
Decibel (dB)	A logarithmic measure of any measured physical quantity and commonly used in the measurement of sound. The decibel (dB) provides the possibility of representing a large span of signal levels in a simple manner. The difference between the sound pressure for silenced versus a loud sound is a factor of 1:1,000,000 or more, therefore it is less cumbersome to use a small range of equivalent values: 0 to 130 dB. A tenfold increase in sound power is equal to +10 dB; a tenfold increase in sound amplitude is equal to +20 dB.

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Term	Definition
decibel, A-weighted (dBA)	A-weighted decibels (dBA). Most common units for expressing sound levels since they approximate the response of the human ear.
Detritus	Non-living, particulate organic material.
Dewatering	To remove groundwater or surface water from an area for construction purposes.
Direct Employment	Labour that is hired directly by the Project.
Director	Director of the Environmental Assessment and Approvals Branch of the Ministry of the Environment and Climate Change.
Disposition	An area of Crown land where the ownership status and permitted activities are granted by legal means (patent, lease, license of occupation).
Dissolved Oxygen (DO)	The amount of gaseous oxygen (O ₂) dissolved in an aqueous solution. Oxygen dissolves into water by diffusion from the surrounding air, by aeration and as a waste product of photosynthesis.
Do Nothing Alternative	An alternative included in the evaluation of alternatives that considers the implications of doing nothing to address the problem or opportunity.
Drawdown	The change in water level (between the static water level and the surface of the cone of depression) caused by water withdrawal.
Dust	Any airborne, finely divided solid or liquid material including particulate matter of all size ranges.
Easement	A right given to a person or entity to enter and/or use property without possessing it.
Ecological Risk Assessment (ERA)	A scientific method used to examine the nature and magnitude of risks from the exposure of plants and animals to contaminants in the environment.
Effluent	The wastewater discharged to a receiving water body.
Effluent Limit	A legally enforceable effluent requirement.
Effluent Treatment Plant (ETP)	A facility used to complete the treatment of contact water during operations.
enhanced Forest Resource Licence (eFRL)	A transitional Forest Resource Licence for First Nations seeking a longer term forest license (Four Rivers Matawa Environmental Services Group 2015) such as a Sustainable Forest License which allows for 20 years of tree harvesting.

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Term	Definition
Electrofishing	Use of electricity for the purpose of capturing fish. Electrofishing is a common scientific survey method used to sample fish populations to determine abundance, density, and species composition.
Emissions	Technically, all solid, liquid, or gaseous discharges from a processing facility, but normally referring to air emissions (with solids referred to as residue and liquids as effluent).
Emission Factor	A representative value that relates the quantity of pollutant release to the atmosphere with an activity or input associated with the release of that pollutant.
Emissions Trading	The creation of surplus emission reductions at certain stacks, vents or similar emissions sources and the use of this surplus to meet or redefine pollution requirements applicable to other emissions sources. This allows one source to increase emissions when another source reduces them, maintaining an overall constant emission level. Facilities that reduce emissions substantially may "bank" their "credits" or sell them to other facilities or industries.
Energy Equivalent Sound Level (Leq)	An energy-average sound level (Leq) over a specified period that would have the same sound energy as the actual (i.e., unsteady) sound over the same period. It represents the average sound pressure encountered for the period. The period is often added as a suffix to the label (i.e., Leq (24) for the 24 hour equivalent sound level).
Environment	The environment is broadly defined under the <i>Canadian Environmental Assessment Act, 2012</i> as the components of the Earth and includes: <ul style="list-style-type: none"> 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).
Environmental Assessment (EA)	Environmental assessment is a study, which assesses the potential environmental effects (positive or negative) of a proposal. Key components of an environmental assessment include consultation with government agencies and the public; consideration and evaluation of alternatives; and, the management of potential environmental effects. Conducting an environmental assessment promotes good environmental planning before decisions are made about proceeding with a proposal.
Environmental Assessment Act	An Ontario Act that provides for the protection, conservation and wise management in Ontario of the environment.

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Term	Definition
Environmental Assessment Report	A report submitted to be approved by the Ontario Ministry of the Environment and Climate Change in accordance with the Environmental Assessment Act that demonstrates consideration of the potential environmental effects of the Project.
Environmental Compliance Approval (ECA)	An approval issued by the Ontario Ministry of the Environment and Climate Change for a business that either: <ul style="list-style-type: none"> • releases pollutants into the air, land or water; or • stores, transports or disposes of waste.
Environmental Effects Monitoring (EEM)	Science-based performance measurement tool used to evaluate the adequacy of effluent regulation in protecting fish, fish habitats and the usability of fisheries resources conducted by industries to identify potential effects caused by effluents. It includes the examination of specific parameters after a Project has been implemented to verify the expected environmental effects and determine if additional impact management measures are required.
Environmental Impact Statement (EIS)	A report submitted to be approved by the Canadian Environmental Assessment Agency in accordance with the <i>Canadian Environmental Assessment Act</i> to facilitate an understanding of a project, the existing environment and potential environmental effects of a project by agencies, members of the public and Aboriginal communities.
Environmental Impact Statement (EIS) Guidelines	A document prepared by the Canadian Environmental Assessment Agency which identifies for the proponent of a designated project to be assessed pursuant to <i>the Canadian Environmental Assessment Act, 2012</i> the information requirements for the preparation of an Environmental Impact Statement.
<i>Environmental Protection Act</i> (EPA):	An Ontario Act to provide for the protection and conservation of the natural environment.
Environmentally Sensitive Areas	Environmentally sensitive areas include provincially or federally protected areas such as parks, protected areas, ecological reserves or conservation reserves and/or plant species at risk or species of conservation concern.
Ephemeral Watercourse	A watercourse that flows for days to weeks following spring snow melt or a major rain event (Irwin et al. 2013).
Epilimnion	The upper layer of water in a stratified lake.
Evapotranspiration (ET)	The process by which water is transferred from the land to the atmosphere by evaporation.

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Term	Definition
Exposure	Any condition which provides an opportunity for an external substance in the environmental media to enter the body of an organism, and is typically defined in terms of intensity (how much), frequency (how often), and duration (how long). Acute exposures are short-term and often to higher concentrations whereas chronic exposures are long term and usually to lower concentrations. Exposure can be continuous or intermittent.
Exposure Point Concentration (EPC)	The concentration of a given substance in a given medium to which human and ecological receptors may be exposed, either measured or calculated.
Extreme Weather Event	A severe weather event that is considered rare within its statistical reference distribution at a particular place.
Fault Current	An electric current that flows from one conductor to ground or to another conductor owing to an abnormal connection (including an arc) between the two. Fault currents may result from a lightning strike and could result in danger to personnel and damage to infrastructure, such as pipelines and coatings.
First Order Watercourse	A watercourse that does not have a tributary.
Fog	A ground-level cloud that consists of tiny water droplets which are suspended in the air and reduce visibility to less than one kilometre.
Follow-up and Monitoring Programs	A follow-up program is a requirement under Section 2(1) of the <i>Canadian Environmental Assessment Act, 2012</i> and is designed to verify the accuracy of the effects assessment and the effectiveness of mitigation measures to reduce or eliminate adverse effects of a designated Project. The goal of the monitoring is to determine the mitigation or compensation measures to minimize adverse effects are properly implemented.
Forest Management Unit (FMU)	Ontario's Crown forest is divided into geographic planning areas known as FMUs. Most of these units are managed by individual forest companies under a licence.
Fugitive Emissions	Emissions not caught by a capture system or due to leaks and other unintended or irregular releases (e.g., fugitive dust).
Glare	Intense, harsh or contrasting lighting conditions reduce the ability to see. The most common example of glare is oncoming high-beam headlights that provide ample light but result in poor visibility, potentially reaching hazardous conditions.
Glory Hole	A slope breakthrough at surface.

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Term	Definition
Greenhouse Effect	The warming of the Earth's atmosphere attributed to a build-up of carbon dioxide or other gases; some scientists think that this build up allows the sun's rays to heat the Earth, while making the infra-red radiation atmosphere opaque to infra-red radiation, thereby preventing a counterbalancing loss of heat.
Greenhouse Gases (GHG)	Gaseous compounds that inhibit the release of heat from the atmosphere (e.g., carbon dioxide, methane, and nitrous oxide).
Gross Domestic Product (GDP)	The monetary value of all goods and services produced within a country's borders in a specific time period.
Groundwater Recharge	The amount of precipitation that infiltrates into the ground to replenish the groundwater.
Grubbing	The removal and disposal of stumps and roots remaining after vegetation clearing.
Hazard	A substance or other condition which that has the potential to cause harm to human, ecological or environmental receptors.
Hazard Potential Classification (HPC)	A classification system defined by Ontario's Ministry of Natural Resources and Forestry that is used to determine the potential for flooding of dams.
Hazard Quotient (HQ)	The ratio between the predicted estimated daily averaged exposure to a substance in environmental media (e.g., food, soil, water) and the human health-based toxicity reference value as defined by agencies such as Health Canada.
High Water Berm	A ridge or embankment placed in flood-prone areas to protect against erosion, runoff and high water.
Horizontal Directional Drilling (HDD)	A method used for watercourse crossings which involves drilling a tunnel and pulling the pipe or cable through the tunnel from entry and exit points that lie outside the channel and riparian areas of a watercourse.
Human Health Risk Assessment (HHRA)	Estimates the nature and magnitude of potential adverse health risks in humans following exposure to Project-related chemical emissions.
Hurricane	Tropical cyclones with maximum sustained surface winds of at least 118 kilometers per hour.
Hydrophytic Vegetation	Vegetation which has a strong affinity to living in water; including aquatic plants, herbaceous shoreline plants, trees and shrubs.
Impulsive Sound	A single pressure pulse or a single burst of pressure pulses. Blasting is considered a source of impulsive sound. It is measured in A-weighted decibels, denoted dBA and is measured with a sound level meter set to impulse response.
Incremental Lifetime Cancer Risk (ILCR)	The estimated increased risk of cancer incidence associated with lifetime of exposure to a carcinogen.

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Term	Definition
Indirect Employment	Labour hired by companies that produce and provide goods and services needed for the Project.
Induced Employment	Labour hired by industries that produce and provide consumer items purchased by people who are directly or indirectly employed on the Project.
Inert Materials	Materials which are neither chemically or biologically reactive and will not decompose.
Inflow Design Flood (IDF)	The flood flow above which the incremental increase in water surface elevation due to failure of a dam or other water impounding structure is no longer considered to present an unacceptable threat to downstream life or property. The IDF of a dam is used to design a specific dam and its works; particularly for sizing the spillway and outlet works, and for evaluating maximum storage, height of dam, and freeboard requirements.
Intermittent Watercourse	A watercourse that flows for several weeks following snowmelt, during wet seasons and after a major rain event (Irwin et al. 2013).
Isolated Dam and Pump	A watercourse crossing method involving installing an upstream and a downstream dam to prevent water flow in the area to be trenched. A pump system is set up to move water from upstream of the dam to the downstream side of the dam.
Landslide	A landslide is any type of slope failure or downward movement of rock and/or sediment.
Lease	A type of Crown land tenure with the following conditions: <ul style="list-style-type: none"> • gives the exclusive right to use the land for the time the lease is active, but does not give ownership of the land • the term is negotiable — usually 20 years, but may be longer • extensive and/or valuable improvements to the land are planned • land can be used for loan security or collateral • no future financial or environmental liability is anticipated as a result of the intended land and resource use • rights granted are transferable, with ministry consent, and a right of renewal may be negotiated • survey required: registered on title in local Land Registry Office.

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Term	Definition
Licence of occupation	<p>A licence given by the Crown to occupy a specific area of Crown land with the following conditions:</p> <ul style="list-style-type: none"> • gives the right to use the land for up to 20 years, but does not give ownership of the land • no extensive and/or valuable improvements to the land are planned • may be used for loan security or collateral, with ministry consent • no future financial or environmental liability is anticipated as a result of the intended land and resource use • rights granted are transferable, with ministry consent, but there is no right of renewal • Crown land plan of survey or registerable description may be required.
Light Trespass	The transmission of light from fixtures within a facility to the environment and receptors outside the facility. Also known as light spill.
Liquefied Natural Gas (LNG)	Natural gas that has been converted to liquid form by cooling.
Loading	A measurement of the mass of a parameter deposited into a water body during a period of time, typically presented in kilograms/day.
Local Assessment Area (LAA)	Encompasses the area in which both: a) there is a potential for Project-related environmental effects (direct or indirect); and b) there is a reasonable expectation that those potential effects in the local assessment area (LAA) will be a concern. The LAA encompasses the PDA and is VC-specific.
Local Health Integration Network (LHIN)	Healthy authority responsible for regional administration of public healthcare services.
Long-term Effect	A residual effect that extends into post-closure
Lowest Effect Level (LEL)	Indicating a level of sediment contamination that can be tolerated by the majority of benthic organisms.
Lux	The unit of measure for light incidence either in or outside the facility is a lux. A lux is equal to 1 lumen per square meter (lumen/m ²) where a lumen is a measure of total quantity of visible light emitted by a source, weighted according to the human eye. As an example, the light output in lumens of a 100 watt incandescent (non-halogen) light bulb is 1,600 lumens.
Metal Leaching	The process when metals are dissolved into a liquid solution (e.g. water).

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Mineral Wetland	Wetlands found in areas where an excess of water collects on the surface and which produce little or no organic matter or peat. Gleysolic soils or peatyphases of these soils are characteristics of these wetlands (National Wetlands Working Group 1997).
Mining Claim	A parcel of land, including land under water, that has been staked and recorded in accordance with the <i>Mining Act, 1990</i> and the regulations.
Mining Rights	The rights to minerals located in, on or under the land. Also referred to as mineral rights.
Mitigation	Measures taken to reduce, eliminate, or control effects on the environment.
Mixing Zone	An area of water contiguous to a point source or definable diffuse source where the water quality does not comply with one or more of the Provincial Water Quality Objectives.
Modelled Property Boundary	Delineates an area encompassing the Project development area and is based on areas owned or leased by GGM or for which GGM has rights to.
Monitoring	Periodic or continuous surveillance or testing to determine the characteristics of a substance or the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals.
Morphometrics	Measurements which characterize the form, size, shape and appearance of an animal or plant.
National Pollutant Release Inventory (NPRI)	The only legislated, nation-wide, publicly accessible inventory of information on annual releases to air, water, land, and disposal or recycling from all sectors in Canada
Night-time	Defined as the hours from 23:00 to 07:00 according to Ministry of Transportation guideline, <i>Environmental Guide for Noise</i> .
Noise Level	Same as sound level for the purpose of this report.
Non-basic (Service) Industries	Industries that provide services and recycle wealth within a region.
Non-resident	For the purposes of Ontario hunting and fishing licences, a non-resident is an individual whose primary residence is not in Ontario or has not lived in the province for at least six consecutive months of the immediately preceding twelve months
<i>Ontario Heritage Act (OHA)</i>	An Ontario Act that's purpose is to give municipalities and the provincial government powers to preserve the heritage of Ontario by protecting heritage properties and archaeological sites.

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Term	Definition
Open Cut	A method of watercourse crossing which involves direct trenching through a watercourse without any diversion of flow; often used at smaller dry or frozen watercourses that are not fish-bearing.
Operational Policy Statement (OPS)	Sets out general requirements and approach to consider cumulative environmental effects of designated projects under the <i>Canadian Environmental Assessment Act</i> .
Outdoors Card	Identification card issued by the MNRF to accompany Ontario hunting and fishing licences and tags. The Outdoors Card provides proof of eligibility to purchase hunting and fishing licences.
Overburden	The natural unconsolidated sediments and organic soils that overlie bedrock.
Overprinting	The covering of an existing area by the construction of a Project component.
Paleontological resources	Works of nature consisting of or containing any remains, trace, or imprint of a multi-cellular plant, animal, or bacteria preserved in the Earth's crust dating to any geological time period.
Particulate Matter (PM)	A particle in solid or liquid phase that is suspended in air.
Patent	A grant from the Crown in fee simple or for a less estate made under the Great Seal, and includes leasehold patents and freehold patents
Pathway	The route by which a receptor can be exposed to a hazard.
Peak Particle Velocity (PPV)	The maximum instantaneous positive or negative peak of the vibration signal.
Permit to Take Water (PTTW)	An Ontario Permit issued by the Ministry of the Environment and Climate Change under Section 34 of the OWRA for any removal of groundwater that exceeds a rate of 50,000 litres per day. A PTTW will be required for the Project to allow dewatering of the open pit and potential dewatering during construction activities.
Person-year (PY)	A person-year is equivalent to 2,080 hours in one year and can consist of one person working full-time or many people working part-time. One person-year is also equivalent to one full-time equivalent job.
pH	A measure of the hydronium ion concentration ions relative to hydroxide, also referred to as the acidity or basicity of an aqueous solution.
Point of Impingement (POI)	A defined point or points set at a defined distance from a facility (usually between the facility and special community receptors) at which a specific limit for air pollutants must be met.

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Term	Definition
Point of Interest (PoI)	A representative point for area(s) considered to be of interest to Aboriginal communities and location that does not otherwise fall into Ministry of the Environment and Climate Change's criteria for Point of Reception.
Point of Reception (PoR)	A representative point considered for the purpose of assessment within noise-sensitive areas such as a residence, campground, daycare, school, church, or hospital.
Pollutant	Generally, any substance introduced into the environment that can adversely affect the usefulness of a resource or the health of humans, animals, or ecosystems.
Pollution	Generally, the presence of a substance in the environment that because of its chemical composition or quantity can prevent the functioning of natural processes and produce undesirable environmental and health effects.
Potable water	Water suitable for drinking.
Predictable Worst-case Noise Impact	The noise impact associated with a planned and predictable mode of operation for stationary source(s), during the hour when the noise emissions from the stationary sources(s) have the greatest effect at a point of reception, relative to the applicable limit. The acoustic assessment of stationary source noise impacts at a point of reception must address the predictable worst-case noise impact.
Probable Maximum Flood (PMF)	The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the drainage basin. This is the upper limit for determining the IDF.
Progressive Rehabilitation	Rehabilitation done continually and sequentially during the entire period that a project or mine hazard exists.
Project Development Area (PDA)	The combined Project footprint of all facility components, as well as the anticipated area of physical disturbance associated with all phases of the Project.
Project Emissions	Project emissions include substances releases into the terrestrial, aquatic, and atmospheric environment.
Provincial Water Quality Objectives (PWQO)	Document published by the Ontario Ministry of Environment and Energy that establishes permitted levels of contaminants/ parameters in water in order to protect aquatic life and recreation.
Provincially Significant Wetland (PSW)	Wetland areas identified as a Significant wetland by the Province using the Ontario Wetland Evaluation System.

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Term	Definition
Reach	A length of stream with generally similar habitat characteristics, especially with respect to major habitat descriptors including stream order, channel morphology, gradient and riparian vegetation.
Reasonable Use Criteria (RUC)	Criteria used under the <i>Guideline B7: Reasonable Use</i> to assess potential effects of a project component on a receptor.
Receptor	A human, plant, bird or animal, or environmental component that could come to harm when exposed to a hazard.
Recreational fishery	As per the <i>Fisheries Act</i> , a recreational fishery is one where fish is harvested under the authority of a licence for personal use of the fish or for sport.
Regional Assessment Area (RAA)	Provides the broad contextual boundary within which project-specific effects were characterized. It includes land that may be relevant to the assessment of any wider-spread direct and indirect effects of the Project. It is also the area within which there is a potential for cumulative and socio-economic effects. The RAA encompasses the PDA and the LAA, and is VC-specific.
Residual Environmental Effects	Environmental effects occurring from the Project remaining after mitigation.
Residual Risk	The risk that remains after controls and safety measures are taken into account (the net risk or risk after controls).
Riparian Area	Riparian area or buffer is a vegetated area next to water resources. These areas generally consist of grasses, shrubs and trees all of which provide habitat for aquatic and terrestrial organisms, provide bank stability and protect water resources from nonpoint source pollution.
Risk Quotient (RQ)	For ecological receptors, the ratio between the estimated exposure to a substance (expressed as a concentration or dose) and the health-based limit or relevant toxicity reference value.
Sampling Area	Large areas where sampling of fish, benthic macroinvertebrates, sediment and water quality have taken place.
Sampling Location	A particular point in a sampling area selected for sample collection and is representative of the sampling area.
Sampling Station	See sampling location.
Seismic	Of or having to do with earthquakes.
Severe Effect Level (SEL)	Indicating the level at which pronounced disturbance of the sediment dwelling community can be expected. This is the sediment concentration of a compound that would be detrimental to the majority of benthic species.

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Term	Definition
Significance (determination of)	A conclusion as to whether the designated project is likely to cause significant adverse environmental effects taking into account the implementation of appropriate mitigation measures.
Sky Glow	Refers to the illumination of the sky and/or clouds by light sources on the surface of the earth such as street lighting, and haze in the atmosphere that replaces the natural night-time sky with a translucent to opaque lighted dome.
Soil Cover	A soil cover is a simple granular soil cover of sufficient thickness and nutrient availability to support the development of vegetative ground cover with locally available species. Ground cover may initially be established using fast growing, non-invasive plant species which are to be succeeded by native grass and shrub species.
Sound	A wave motion in air, water, or other media. It is the rapid oscillatory compression changes in a medium that propagate to distant points. It is characterized by changes in density, pressure, motion, and temperature as well as other physical properties. Not all rapid changes in the medium are due to sound (e.g., wind distortion on a microphone diaphragm).
Sound Level	Generally, sound level refers to the weighted sound pressure level obtained by frequency weighting, usually A- or C-weighted, and expressed in decibels. Also identified as noise level in this report.
Sound Pressure	The root mean square of the instantaneous sound pressures during a specified time interval in a stated frequency band.
Sound Pressure Level	Logarithmic ratio of the root mean square sound pressure to the sound pressure at the threshold of human hearing (i.e., 20 micropascals).
Sound Power Level	The total sound energy radiated by a source per unit time. The unit of measurement is Watt. The acoustic power radiated from a given sound source as related to a reference power level (i.e., typically 1E- 12 watts, or 1 picowatt) is expressed as decibels. A sound power level of 1 Watt = 120 decibels relative to a reference level of 1 picowatt.
Sound Transmission Class (STC)	An integer rating of how well a building partition attenuates sound.
<i>Species at Risk Act</i>	Federal legislation to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened.

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Term	Definition
Species Richness	The number of different species represented in an ecological community. For this study, fish species richness is the number of different fish species collected within each Sampling Area. Benthic species richness is expressed per sample (as a mean of five replicates) and per sampling station (as the total of five replicates).
Spillway	A gated or ungated hydraulic structure used to discharge water from a reservoir. An emergency spillway is a spillway that is designed to provide additional protection against overtopping of dams and is intended for use under extreme flood conditions or malfunction of the service spillway.
Stack	A chimney, smokestack, or vertical pipe that discharges flue gas or used air.
Stopes	The open spaces left behind following the process of extracting ore from an underground mine.
Surface Rights	Every right to land other than the mining rights.
Surface Rights Reservation	Where a mining claim includes land covered with water or bordering on water, the surface rights over a width of no more than 120 metres from the high water mark may be reserved for the Crown.
Tailings	Crushed or ground rock and process effluents that are generated in a mine processing plant.
Tailings Management Facility (TMF)	An engineered facility to store mine waste in the form of tailings from the ore milling and processing plant.
Terms of Reference (ToR)	A provincial document that is prepared in accordance with the <i>Environmental Assessment Act</i> that provides a framework for the preparation of the Environmental Assessment.
Till	Material that is composed of a gravel and clay mixture.
Toe Seepage	The portion of the precipitation that infiltrates into the waste rock storage areas (WRSAs) that travels laterally inside the WRSA (i.e., that does not infiltrate into the soils underlying the WRSAs).
Total Organic Carbon (TOC)	The amount of carbon found in an organic compound.
Total Suspended Particulate (TSP)	Airborne particles that are less than 100 micrometers in size. They are used as a parameter to assess air quality.
Total Suspended Solids (TSS)	Solid materials, including organic and inorganic, that are suspended in the water. They are used as a parameter to assess water quality.

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Term	Definition
Tourism Operator	A person or business that combines two or more travel services (e.g. transport, accommodation, entertainment) and sells them as a single product. For purposes of this project, Tourist Operators generally includes five categories: fishing, hunting, outdoors, touring and winter activities.
Toxicity Reference Value (TRV)	A toxicological index (typically expressed as a dose, concentration, or slope factor) that is not expected to cause an unacceptable level of effect in a receptor. The TRV is compared to exposure to qualify or quantify the health risk to a receptor.
Traditional knowledge (TK)	Encompasses both traditional ecological knowledge and traditional land and resource use knowledge.
Traditional Land and Resource Use (TLRU)	Aboriginal community's use of land, water and resources, within a traditional territory, lands or occupancy area.
Transformer Station (TS)	Part of an electricity generation, transmission and distribution system where voltage is transformed from high to low using transformers.
Trenchless Bottom Lay	A method of watercourse crossing which involves laying the pipe or cable along the bottom of a large river or lake.
Upper Risk Threshold (URT)	A threshold set out for an air contaminant that has been established by the Ontario Ministry of the Environment and Climate Change to ensure that incremental risks to members of the community associated with altering a standard, remain within a range of acceptable risk thresholds.
Valued Component	Components or attributes of the biophysical and socio-economic environment that are important for ecological, scientific, social, cultural, economic, historical, archaeological or aesthetic reasons.
Vegetated Naturalized Habitat	A community existing or regenerating comprised of native species supported from local seed sources
Waste Materials	Items that cannot be recycled, recovered or otherwise re-used.
Watercourse	Any flowing water including rivers, streams and overland flow paths.
Watershed	A catchment basin or area including all of the land that is drained by a watercourse and its tributaries. Watershed boundaries are defined by heights of land. Boundaries are set where a height of land causes water to flow away from the watercourse.
Wetted Width	The width of a watercourse from water's edge to water's edge measured perpendicular to flow. It gives an indication of flow conditions at the time of sampling.

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Term	Definition
Wildlife	In keeping with Environment and Climate Change Canada, the term is generally applied to birds and mammals, and sometimes defined to include reptiles and amphibians. Generally it excludes fish, invertebrates and plants.
Wildlife Management Unit (WMU)	An area identified by the Ontario Ministry of Natural Resources and Forestry that designates customized hunting regulations. There are 95 WMUs in Ontario.
Zero Discharge Facility	An industrial plant that does not discharge any wastewater.
Zone of Influence	The area of land within or adjacent to a construction site that potentially may be affected by vibrations emanating from a construction activity where the peak particle velocity measured at the point of reception is equal to or greater than 5 mm/sec at any frequency.

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