

Glossary of Water Management Terms



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Glossary of Water Management Terms

Technical words are often used when talking about water. *The Glossary of Water Management Terms* brings these words together and describes them using everyday language. You can use this as a reference tool during Water Licence Reviews or Environmental Assessments in your community. Keep it close by so you can quickly look up water terms.

The Glossary of Water Management Terms is produced by Indian and Northern Affairs Canada (INAC) and the Nunavut Water Board (NWB). INAC manages the waters of Nunavut and advises the Department's Minister on water materials. The NWB has responsibility for the regulation, use and management of water in Nunavut. Both INAC and the NWB work in partnership to promote sustainable development.

For more information, contact:

Indian and Northern Affairs Canada Water Resources Building 918, Box 100 Iqaluit, Nunavut X0A 0H0 tel: (867) 975-4550

fax: (867) 975-4585

e-mail: nunavutwaters@inac.gc.ca

Nunavut Water Board P.O. Box 119 Gjoa Haven, Nunavut X0B 1J0

tel: (867) 360-6338 fax: (867) 360-6369

e-mail: exec@nwb.nunavut.ca

Acid Drainage any drainage from mine workings, waste or

tailings, with a low (acidic) pH

 $(\dot{\rho} C_4 \sigma_{d\rho}) \gamma_{c} \quad \dot{\gamma}_{f} \nabla_{\rho} \sigma_{\rho} \gamma_{\rho})$

Acidity a measure of the capacity of a solution to

neutralize bases (>C^ca^co^cl)

Adit a horizontal entrance, or passage, in a mine

(ンP%し く)

Aeration process of blowing air (or another gas such

as carbon dioxide) through a liquid or solid

Aerobic any biological process that occurs in the

presence of oxygen; also applies to organisms that

Alkalinity a measure of the capacity of a solution to

neutralize acids

 $(\textbf{D}_{\sigma} \textbf{J} \textbf{J} \textbf{V} \textbf{V}_{\sigma} \textbf{C}_{c} \textbf{C}_{c} \textbf{L})$

Anaerobic any process that can occur without oxygen;

also applies to organisms that can survive

without oxygen

Analysis a close look at something to find out more

about it; can involve looking closely at the individual parts of something and describing

them

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Anthropogenic caused or produced as a result of human

activity

 $(\Delta \textbf{Q}^{\text{q}}\dot{\Gamma}^{\text{qb}}\text{CP}\text{d})$

Aquatic term used to describe any organism growing in,

living in, or frequenting water; some plants and animals that live in water are

called aquatic species

 $(\Delta L^{\varsigma}\Gamma \triangleright C\Delta^{\varsigma})$

Aquifer an underground layer of rock or soil that

contains water and can supply a large quantity of water to wells or springs

 $(\Delta L^{\varsigma_b}\dot{C}^{\varsigma} \Lambda^{b} L^{\varsigma_b})$

Assessment a written decision about the importance,

size or value of something; for example, an environmental assessment may describe the value of arctic char after a study of the char, the fishermen, the method of fishing

and the effect on the environment

 $(^{6}\Delta^{C}\Delta \Delta^{C}\Delta \Delta^{G})$

Assimilative Capacity the amount of pollutants that a water body

may absorb while continuing to meet water

quality standards

 $(\Delta\Gamma^{c} \cap \triangleleft \triangleleft \triangleleft \triangleright \triangleleft \Delta \subseteq \vdash L \vdash \triangleright \vdash \neg \neg \neg \vdash)$

Attenuate reduce in significance or concentration

 $(4^{c}\Pi_{\rho} + \dot{q}_{c} - \dot{q}_{\rho} + \dot{q}_{c} - \dot{q}_{\rho})$

Backfilling the return of wastes or other material

underground for disposal

(40166° 050 050)

Bedrock solid rock underlying soil, gravel or loose

boulders; the Canadian Shield is composed

of bedrock (~も ムーしら ユ b)

Best Management

Practices

management or construction practices designed to be effective and reduce the

Bioaccumulation occurs when plants or animals collect

contaminants in their tissues over time; when low amounts of contaminants are continually

absorbed, they build up and can cause

illness

(ΣΓ4σ Φ<<<-c-</r>

Biochemical Oxygen Demand (BOD) a laboratory test to measure the amount of oxygen consumed by microorganisms as they decompose organic matter; the test indicates the amount of organic material in

a water sample

 $(\text{$_{\circ}$}^{\circ}\text{$

Biodegradable material that will decompose under natural,

biological conditions and processes

 $(\triangledown_{\sigma} \gamma_{<} \subset \neg \gamma_{\sigma} \neg \gamma_{>})_{C})$

Biodiversity the number of different plants and animals that

live in a specific area

 $(C^{6} + C^{2} + C^{4} + C^$

Bioindicators organisms that are used to detect changes in

environmental pollutant levels, such organisms are usually sensitive to changes in their surroundings

Biomagnification an increase in concentration of a substance at each

progressive link in the food chain (for example:

berries birds foxes bears; the concentration of a contaminant such as lead

would be highest in a large meat-eater)

 $(\text{PDJ-L}^{\text{b}}\text{Jo} \quad \text{C}^{\text{c}}\text{C}^{\text{b}}\text{J}^{\text{c}} \quad \text{D}^{\text{c}}\text{A}^{\text{c}}\text{C}^{\text{c}}\text{D}^{\text{c}})$

Bioremediation a process to reduce contaminant levels in soil or

Biota the animals, plants, and microorganisms that live

in a specific area

(pr4c)

Buffering Capacity the ability of a substance to resist an increase or

decrease in pH

Chlorination process of purifying/disinfecting water by adding

chlorine

Climate the average weather for a particular region and

time period

 $({\rm 7C})$

Coarse Rejects waste rock that is produced early in a mine's

processing stage; the rock is not further crushed or concentrated because it contains little or

nothing of economic value

 $(P + G^{\circ} \sigma + G^{\circ} C P + A \dot{\sigma}^{c} + G \dot{G}^{\circ} G^{\circ} G^{\circ})$

Concentrate a product containing a valuable mineral or metal

and from which most of the waste material has

been removed

 $(VD_{\sigma}L_{\sigma}P_{\rho}P_{\rho}TF4_{\rho})$

Concentration the process of separating a mineral from valueless

host rock in preparation for further processing; also the amount of a substance in a given weight

or volume of another material

 $(\Lambda \triangleright^{\omega} \Gamma^{\circ} \dot{\sigma} \dot{\sigma} \Delta \sigma^{\varsigma_b})$

Conductivity a measure of the ability of a liquid to transmit

electrical current or heat

 $(\nabla q \Gamma D < Q_{\ell} q \dot{\gamma}_{\ell} V D + \sigma_{\ell} \sigma_{\ell} \sigma_{\ell} U)$

Conservation protection, preservation, management, or

restoration of a resource

 $(4 \ ^{\circ} \sigma^{\varsigma_b}) \ ^{\varsigma_b}$

Consumptive Water Use when water is used and not returned to its source,

such as through evaporation or by including it in

a product

 $(\Delta L^{\varsigma_b} \quad \text{D}^{\varsigma_b} \text{CD}^{-\varsigma_b} \text{Lo}^{\varsigma} \quad \text{D}^{\varsigma_b} \text{JCD}^{\varsigma_b})$

Contaminant introduced species, substance or material which

was either not previously present or was present in

a lesser amount, and that may have a harmful

effect on the environment

 $(\Delta {\subset} b^L L^b)$

Cumulative Effects the combined environmental impacts that

accumulate over time and space as a result of a series of similar or related individual actions,

contaminants, or projects

Decommissioning the process of permanently closing a facility/site;

includes rehabilitation and plans for future maintenance of affected land and water

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Dewater the process of permanently closing a facility/site;

includes rehabilitation and plans for future maintenance of affected land and water

 $(\Delta L \Delta b \Delta \sigma^{\varsigma_b})$

Diamond Drill a piece of equipment used to drill through hard

rock, the drill has a diamond on the drill bit and can cut through hard rock better than a metal

drill bit

 $(C\nabla\Gamma_{\sigma}C_{\rho} \quad \nabla \dot{q}C_{d\rho})$

Dilution to decrease the concentration of a substance by

mixing it with another or by adding water

 $(\Delta \Gamma^{\varsigma_b} l_{\text{C}} \Gamma^{\varsigma_b} \cap \Gamma^{\varsigma_b})$

Disinfection to destroy or prevent the growth of micro

organisms

 $(^{\varsigma}d\Lambda^{\varsigma}P\Delta^{\varsigma}\Delta\sigma^{\varsigma_b})$

Disposal the relocation and/or containment, of unwanted

materials

 $(\dot{\omega} \cap \alpha \sigma^{\varsigma_b})$

 $(\mathsf{Q}^c \mathsf{D}^{\varsigma_b} \mathsf{D}^c \mathsf{D}^c \mathsf{C} \Delta \mathsf{C}^{-\sigma^{\varsigma_b}})$

Dissolution the process of dissolving a solid in a liquid

 $(\mathsf{IP}_{\mathsf{P}}\mathsf{UC}\mathsf{UC}_{\mathsf{C}}\mathsf{UC}_{\mathsf{C}})$

Ecosystem a community of plants, animals, and non-living

things that exist in the same place

 $(\sigma 4 \Gamma_{\ell} \rho_{\ell} \nabla \rho 4_{\ell} \rho)$

Effluent treated or untreated liquid waste material that is

discharged into the environment from a structure

such as a settling pond or treatment plant

 $(\Delta L^{\varsigma} \rightarrow {}^{\circ}\Gamma^{\circ}\dot{\iota}^{\varsigma}\sigma d)$

Environmental Impact
Statement (EIS)

a report submitted by a company to describe a project or development, the possible positive or negative impacts of its actions, and its plans to reduce, mitigate or avoid these impacts; the information in the report is based on studies that have been carried out; the report is reviewed by the Nunavut Water Board, Nunavut Impact Review Board, appropriate government agencies and the public

Erosion

Evaporation

the process by which water is converted to vapour (e.g. the heat of the sun converts puddles of rain water into vapour)

$$(U_{\Gamma} f_{\ell} \Phi_{\ell P})$$

Fecal Coliform

bacteria that come from the intestinal tracts of mammals and are released in faeces (${}^{\varsigma}d\Lambda {}^{\varsigma}P \triangleleft {}^{\varsigma}d\Delta {}^{c} \square {}^{\varsigma}bCP \triangleleft {}^{c}$)

Filtration

the process of separating liquids from solids by passing the liquids through a porous barrier (filter) $(C^{\circ}\dot{\Gamma}\flat\Delta\sigma^{\circ})$

Flocculent

a chemical added to water that attaches to small particles and helps them sink; the material that settles on the bottom can be removed to improve the clarity of the water

$$(P_cQ\Gamma \nabla_{\Gamma}CU_cU_p + C)$$

Freeboard the vertical space remaining in a containment

structure; the vertical distance between the surface

of the water and the top of a dam or dyke

 $(\Delta^{L}\Gamma^{b}b^{\alpha}\sigma^{2}{}^{\alpha}\alpha^{\varsigma}\sigma^{\varsigma}U)$

Glacier a huge mass of ice, formed on land by the

compaction and re-crystallization of snow, that moves very slowly downslope or outward due to

its own weight

(۲^۲۲۲)

Greywater liquid wastes from showers, baths, sinks, kitchens

and domestic washing facilities; does not include

toilet wastes

 $(\Delta L^{\varsigma} _{b})$

Groundwater the water found beneath the Earth's surface that

supplies wells and springs

(>c>Lσ⁽Γ ΔL^(b))

Grab Sample a single water or wastewater sample taken at a

single point in time and location

 $(^{\varsigma}bb45b^{\delta}b)$

Habitat the specific area in which a particular type of

plant or animal lives

(PL4c @46%L)

Hazardous Waste a waste that contains any substance (solid, liquid,

or gaseous) that is harmful or potentially harmful to life or the environment; this type of waste includes toxic flammable, corrosive and oxidizing substances and is subject to special handling, shipping, storage, and disposal requirements

any substance containing carbon and hydrogen in Hydrocarbons

various combinations (e.g. gasoline and oil)

 $(\triangleright^{\varsigma_b} \angle^{} \triangleleft \supset^{\flat} \vdash^{} \Delta^c)$

the study of groundwater, with particular Hydrogeology

emphasis on the chemistry and movement of

water

(>c>Ldσb ΔLc~σfb)

the circulation of the Earth's waters from ocean to Hydrologic cycle

atmosphere to land and back to ocean

 $(\Delta L D^{\varsigma} D \cap G D + G \cup G D)$

the science that deals with water, its properties, Hydrology

distribution and circulation over the Earth's

surface

 $(\Delta L \subset \Lambda \sigma^{5b})$

Impoundment a structure or location used for confined storage,

such as a pond, lake or reservoir

 $(4 \wedge \Omega^{2})$

Impurity an unwanted chemical substance that is present

within another substance or mixture

Intermittent Stream a watercourse that does not flow continuously, or

flows during spring and summer only

(d²J⊂Dbb<<b)

Inuit-Owned

lands owned by a Designated Inuit Organization in accordance with section 19.3.1 of the Nunavut Land (IOL)

Land Claims Agreement

 $(\nabla \nabla \nabla_{c} \nabla \nabla \nabla \nabla_{c})$

Kimberlite a type of rock (produced by volcanic activity) that

can contain diamonds (CΔL^a ΔσΓL^bC)

Kimberlite Pipe

an occurrence of kimberlite, so named because it is narrow and vertical in shape and resembles a

pipe

 $(P \subset L^{d_b} \supset Q \cap Cq_b \supset Q)$

Leachate water or other liquid that has washed (leached)

from a solid material, such as a layer of soil or waste; leachate may contain contaminants

 $(P\sigma \wedge \sigma d)$

Leaching occurs when a liquid (e.g. water) passes through a

substance, picking up some of the material and carrying it to other places; this can happen under ground in solid rock, or above ground through

piles of material

 $(P\sigma \Lambda \sigma^{5b})$

Licensee the individual or organization to whom a licence

is issued or assigned

 $(\vee \mathcal{A}_{\sigma} \sigma \triangleright \mathsf{U}_{\dot{\mathsf{C}}^{\ell \rho}} \mathsf{U}_{\mathsf{C}} \triangleright \mathsf{L}_{\mathsf{L}^{\rho}})$

Metal a group of elements possessing certain qualities

including metallic luster, malleability, ductility, high specific gravity and good conductivity of heat and electricity; metals are mined from the

Earth

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Base metal a general term applied to relatively inexpensive

metals, such as copper, zinc, lead

(APPC)656 505656)

Heavy metal a general term applied to base metals that

commonly occur in urban and industrial

pollution

(58950 Danda 9629)

Precious metal a general term applied to relatively expensive

metals such as gold, silver, and platinum

(4P) 2676 18676)

Milling Process process by which the valuable components of the

ore are separated from waste material. Water is

used and the waste is called tailings

 $(\text{IND}\Delta\sigma^{\varsigma_b})$

Minewater water that is pumped or flows out of any under

ground working or open pit

 $(P + G^{\circ} \sigma + G^{\circ} A) > \Delta L^{\circ} U)$

Mitigation actions taken for the purpose of reducing the

negative impacts on the environment of a

particular land use or activity

(<<\cre>\chi^c\chi^c\chi^c\chi^c\chi^c\chi^c\chi\chi^c

Neutralization raising the pH of an acidic material or lowering

the pH of an alkaline material to a nearly neutral

pH level (7)

Nunavut Land Claims Agreement (NLCA) the "Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada," including its preamble and schedules, and any amendments to that agreement made pursuant to it

(Da >L Da C's of 10 dollars)

Ore a mineral or solid material containing a precious

or useful substance in a quantity and form that

makes its extraction/mining profitable

(467467)

Overburden material that must be removed to gain access to

an ore, particularly at a surface (open pit) mine

 $(Q_6VQ_{dP}QU)$

Oxidation occurs when a substance is exposed to air

 $(4\sigma^{\varsigma}\sigma^{b}+C^{\varsigma b}+\sigma^{\varsigma b})$

Particulate Matter very small, separate particles

 $(\mathsf{Lbc}\mathsf{j}\mathsf{Ur}\mathsf{F}\varphi_{\mathsf{c}} \quad \nabla_{\mathsf{r}}\mathsf{Lp}\varphi_{\mathsf{c}}\mathsf{N}\mathsf{f}_{\mathsf{c}})$

Permafrost soil or rock which remains below freezing point

throughout the year, as in polar and alpine regions

(dab, das)

pH a measure of the acidity or alkalinity of a solution;

the pH scale ranges from 0-14, with 7

representing neutral solutions; a solution with a pH greater than seven is described as alkaline, and

one with a pH below seven is called acidic;

vinegar is an example of an acid, while household

bleach is an alkaline solution

(DG7C4Q PC40)

Pollutant a contaminant that negatively impacts the

physical, chemical, or biological properties of the

environment (ᠰᢇᡳᠲᠫᠲ)

Portal the ground level entrance or opening to an under

ground mine

(**<**)

Potable Water water safe for human consumption

 $(\Delta \Gamma U^b S^{5b})$

Processed Kimberlite the portion of washed or milled kimberlite that is

regarded as too poor to be treated further; this

Process Water water that is used in an industrial process and is

not intended for human consumption

(46.74074709749)

Reclamation the process of returning a site to its natural state,

or a state that prevents environmental impacts or

threats to human health and safety

 $(\Delta\sigma)^\varsigma b^\varsigma l _{-} c \quad \triangleright \cap ^{\varsigma_b} \cap ^\varsigma \cap \sigma ^{\varsigma_b})$

Restoration the renewing or repairing of a natural system so

that its functions and qualities are comparable to

those of its original, unaltered state

 $(\Delta \Lambda^{\varsigma_b} \cap^\varsigma \cap \sigma^{\varsigma_b})$

Runoff water that is not absorbed by soil, and drains off

the land into bodies of water. Can be caused by

either rain or melt water

 $(\Delta^{L}L^{b}\cap^{<}<^{c}\subset \triangleleft\sigma^{\varsigma_{b}})$

Sediment the solid material that settles from a liquid; for

example mud will sink and settle at the bottom of a river or stream because it is heavier than water

(বণ্চ৮)

Settling Pond a natural or artificial water body used to contain

wastewater in order to enable solids to be

removed from it before it is released to the natural

environment

 $(C \wedge^{\mathsf{G}} \wedge \nabla \wedge^{\mathsf{G}} \wedge^{$

Sewage toilet wastes and greywater

 $(P\dot{a}\Delta^{c})$

Sewage Disposal

Facilities

the area and structures designed to contain

and treat sewage

 $(P\dot{\sigma} \neg C \neg C \wedge \dot{V}^{C})$

Silt individual mineral particles of sand and clay that

can be picked up by the air or water and

deposited as sediment

 $(\Delta \mathcal{A}^\varsigma \mathcal{L}^{\varsigma b} \mathsf{d}^\varsigma)$

Siltation the deposition, in a water body, of sediments (e.g.

sand and clay) that appear as tiny suspended

particles

 $(\Delta \mathcal{A}^{5b} \mathcal{A} \mathcal{A} \mathcal{L} \mathcal{A}^{5b})$

Solid Waste Disposal

Facilities

the area and associated structures designed to

contain solid wastes

 $(d_{\rho}Cq^{-} C_{\phi} C_{\phi} C_{\phi})$

Solubility the quantity of material that dissolves in a given

volume of water

 $(\mathsf{PPPUCP4_{c}^{2}\sigma_{c}^{2}})$

Sump an excavation for the purpose of catching or

storing liquids such as greywater; the water drains

into the soil

Suspended Solids organic and inorganic particles, such as solids

from wastewater, sand, and clay, that are

suspended and carried in water $(C^{\circ}\Gamma \dot{\leftarrow}^{\circ} \Delta L^{\circ}\Gamma^{\circ} \Delta \Lambda^{\circ} \cap C^{\circ} \Delta \Delta^{\circ})$

Tailings portions of washed or milled ore that are regarded

as too poor to be treated further, as distinguished

from concentrates, or material of value

 $(\Delta L \Delta_{\rho} q_{c} \neg q V + c)$

Toxic poisonous, or otherwise directly harmful to life

 $(2^{6}C^{6}C^{6}C^{6}C)$

Turbidity particles, suspended in water or wastewater, that

interfere with the passage of light; high turbidity makes water appear unclear or cloudy and is

harmful to organisms such as fish

 $(\Delta C^{Gb} \supset Gb)$

Waste a substance that is useless to the organism or

system that produces it and requires disposal

 $(4)^{\circ}$

Waste Disposal facilities designated for the disposal of liquid or

Facilities solid wastes

 $(\text{Perch}_{\varsigma}) \leftarrow \text{Perch}_{\varsigma} (\text{Perch}_{\varsigma})$

Waste Rock all rock materials, except ore and tailings, that are

produced as a result of mining operations

Water Quality the physical, chemical, and biological

characteristics of water (ΔLD< % β Δ Δ C Ö σ % l)

Water Quality Standards fixed limits of certain chemical, physical, and biological parameters in a water body; water quality standards are established for various uses

of water (e.g. drinking)

 $(\Delta L D^{\varsigma} \Lambda D \sigma \Lambda^{\flat} \Lambda^{\varsigma} b^{\varsigma} C^{\circ} \Gamma^{\varsigma})$

Water Table the level below where the ground is saturated with

water

(>c>LσΥ ΔL⁴⁶)σσ()

Water Use whenever water is used by an activity or organism,

either in the place it is found or by withdrawing it

 $(\Delta L D^{<} d)^{\varsigma_b} C D^{-\varsigma_b} U$

Watershed the area of land from which rainfall (and/or snow

melt) drains to a single point. Ridges of higher ground generally form the boundaries between watersheds, and at these boundaries, rain falling on one side flows toward the low point of one watershed, while rain falling on the other side

flows toward the low point of a different watershed

 $(\dot{\mathsf{J}}^{\mathsf{L}} \wedge \mathsf{P} \wedge \mathsf{P}^{\mathsf{L}})$

Weathering the process by which particles, rocks and minerals

are altered upon exposure to surface temperatures and pressure, air, water, wind and biological

activity

(۲۵۱ ۵۲۶۲۹ مره)

Wetland

land that is saturated with water or submerged, at least during most of the growing season; wetlands generally include swamps, marshes and bogs $(\Delta^{L}L^{b}\cap L\dot{\sigma}^{c})$

