

Development of an illustrated plain-language version of the *Glossary of Permafrost and Related Ground-Ice Terms*

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By the numbers...

- **104** terms are under review for the Illustrated plain-language version of the *Glossary*.
- **400** terms in the existing *Glossary* are being reviewed and updated.
- **100** additional terms are under consideration for inclusion in the revised version of the *Glossary*.

Who are we?

- We are the 12 members of the Canadian Permafrost Association's Permafrost Terminology Action Group (PTAG).
- We include members at all career stages and are based in universities, government and industry.

What are we doing?

- We are revising and updating the *Glossary of permafrost and related ground-ice terms*.
- We are creating an illustrated plain-language version of the most commonly-used terms for education and outreach.
- We hope to obtain the support needed to translate the list of plain-language terms into Indigenous languages used in the permafrost regions of Canada.

Why now?

- There is an urgent need for clear communication about permafrost and permafrost change and that starts with good definitions.
- The *Glossary* has not been substantially revised since its initial publication in 1988. New terms need to be incorporated and old ones need to be checked for current usage.
- A plain-language illustrated version is needed for education and outreach to northerners, the media and non-specialists.

What will the plain-language version look like?

- Newly written plain-language definitions.
- Photos and diagrams for all entries that can use them.
- "Did you know?" text for most entries that provides an engaging context for the term.

What's next?

- We plan to complete a draft of the illustrated plain-language version by the end of 2022.
- Comments on the draft will then be solicited from the CPA membership and other interested groups and individuals.

Terms under discussion for the illustrated plain-language version

Existing entries in the *Glossary*

Active layer	Frost jacking	Permafrost table
Active-layer failure	Frost sorting	Permafrost thickness
Active-layer thickness	Frost-stable soil	Permafrost zone
Adfreeze/adfreezing	Frost-susceptible soil	Pingo
Beaded stream	Frozen ground	Polygonal peat plateau
Buried ice	Geocryology	Pore ice
Continuous permafrost	Geothermal gradient	Relict permafrost
Continuous permafrost zone	Ground ice	Retrogressive thaw slump
Creep of frozen ground	Hydraulic thawing	Rock glacier
Cryoplanation terrace	Ice-cored topography	Salinity
Cryosphere	Ice lens	Sand wedge
Cryostructure	Ice-rich permafrost	Seasonal frost
Debris flow	Ice vein	Seasonally frozen ground
Detachment failure	Ice wedge	Segregated ice
Depth of thaw	Ice-wedge polygon	Solifluction lobe
Discontinuous permafrost	Icing	Sporadic discontinuous permafrost zone
Discontinuous permafrost zone	Isolated patches of permafrost zone	Subpermafrost water
Disequilibrium permafrost	Massive ice	Talik
Drunken forest	Mountain permafrost	Thaw-sensitive permafrost
Earth hummock	Palsa	Thaw settlement
Excess ice	Patterned ground	Thaw slumping
Freezeback	Peat	Thaw-stable permafrost
Freezing (of ground)	Peatland	Thermal erosion
Freeze-thaw cycle	Peat plateau	Thermokarst
Frost action	Permafrost	Thermokarst lake
Frost blister	Permafrost aggradation	Thermosyphon
Frost bulb	Permafrost base	
Frost heaving	Permafrost degradation	

New entries being considered

Adfreeze pile	Ice cellar	Radiator
Air-cooled embankment	Ice-poor permafrost	Seasonal frost mound
Cryostratigraphy	Isotherm	Space-frame foundation
Electrical resistivity tomography	Lithalsa	Thermokarst landforms
Evaporator	Mean annual air temperature	Thermokarst processes
Excess ice content	Near-surface permafrost	Trumpet curve
Frost-tube	Permafrost carbon	Yedoma
Hummock	Permafrost carbon-climate feedback	

We hope to hear from you:

If you have comments or suggestions for additions or revisions to the *Glossary*, please contact any member of PTAG during the Dawson Meeting or email the PTAG Chair at: alewkowi@uottawa.ca

Background photo: Thermosyphons installed to maintain permafrost along the Alaska Highway at Dry Creek, Yukon. The draft entry in the illustrated plain-language glossary is: *Thermosyphon* - a system of pressurized pipes that naturally extract heat from the ground without additional energy.