

Table A1. Key features of the Research Areas to be used during ABoVE

Research Area	Ecoregion/CAVM Subzone	Permafrost Conditions	Major Ecosystems	Major Disturbances	Research Activities*
A	Boreal Plain	None	Boreal Forest, Peatlands, Lakes/Ponds	Biotic Agents, Fire, Oil/Gas Exploration/Extraction, Forestry	a,b,e,f
B	Taiga Plain	Sporadic/Isolated, Low Ice Content	Boreal Forest, Peatlands, Lakes/Ponds	Fire, Thermokarst, Oil/Gas Exploration/Extraction, Forestry	a,b,f
C	Taiga Shield	Discontinuous, Medium Ice Content	Boreal Forest, Peatlands, Lakes/Ponds	Fire, Thermokarst, Mineral Extraction	a,d,e,f
D	E - Low Shrub	Continuous, Low Ice Content	Tundra, Lakes/Ponds	Mineral Extraction	a,e,f
E	C - Hemi-prostrate Low Shrub, D - Erect Low Shrub	Continuous, High Ice Content	Tundra	Thermokarst	a,b,e,f
F	Taiga Shield	Discontinuous, Low to Medium Ice Content	Boreal Forest, Peatlands, Lakes/Ponds	Fire, Thermokarst, Oil/Gas Exploration/Extraction, Forestry	a,b,d,e,f
G	Taiga Shield	Continuous, Medium to High Ice Content	Boreal Forest, Peatlands, Lakes/Ponds	Fire, Thermokarst, Thaw Slumps	a,b
H	Taiga Shield, E - Low Shrub	Discontinuous, Medium to High Ice Content	Boreal Forest, Tundra, Lakes/Ponds, Wetlands	Fire, Thermokarst, Thaw Slumps	a,b,d,e,f
I	Boreal Cordillera	Sporadic/Isolated, Low Ice Content	Boreal Forest, Alpine Tundra	Fire, Biotic Disturbances	a,b,d,e,f
J	Boreal Cordillera	Discontinuous, Low Ice Content	Boreal Forest, Alpine Tundra	Fire, Biotic Disturbances	a,b,c,e,f
K	Alaska Boreal Interior	Discontinuous, Low to Medium Ice Content	Boreal Forest, Alpine Tundra, Lakes/Ponds, Wetlands	Fire, Biotic Disturbances, Thermokarst, Thaw Slumps	a,b,c,d,e,f

L	E - Low Shrub	Continuous, Low Ice Content	Tundra, Lakes/Ponds	Fire, Thermokarst, Oil/Gas Exploration/ Extraction	a,b,c,d,e,f
M	C - Hemi-prostrate Low Shrub, D - Erect Low Shrub	Continuous, High Ice Content	Tundra, Lakes/Ponds	Thermokarst, Oil/Gas Exploration/ Extraction	a,b,c,d,e,f
N	E - Low Shrub	Sporadic/Isolated, Low Ice Content	Tundra, Lakes/Ponds, Wetlands	Thermokarst	a
O	E - Low Shrub	Discontinuous, Medium Ice Content	Tundra	Thermokarst, Fire	a, f

*Level of previous, ongoing, and planned research activities within the Primary Study Area

- a. Has research sponsored by an ABoVE Partner, including the Canadian High Arctic Research Network, the Department of Energy Next Generation Ecosystem Experiment – Arctic, Department of Interior Landscape Conservation Cooperatives, and Natural Resources Canada.
- b. Has sites associated with monitoring networks such as NEON, Ameriflux, Circumpolar Active Layer Monitoring network, Thermal State of Permafrost Monitoring Network.
- c. Has research carried out at part of long-term research projects (LTER, NGEE, etc.).
- d. Has well-instrumented watershed studies, including Water, Ecosystem, Cryosphere and Climate (WECC) Observatories that are part of the Changing Cold Regions Network (<http://www.ccrnetwork.ca/>).
- e. Has research stations or organizations/facilities dedicated to research support.
- f. Has a significant number of PI-led research activities, both past and present.