

Hazards Classification Map Burwash Landing and Destruction Bay, Yukon (1:25 000 scale)

The qualitative approach used to produce this hazards classification map involved identifying and compiling the key contemporary and potential future geological, permafrost and hydrology-related hazards presenting a risk for future development in the map area. These elements were evaluated in the context of climate change projections for the coming decades.

In classifying polygons, a precautionary approach was used and a category of higher risk was applied where confidence in lower categories was lacking. However, every polygon will contain zones of lower and higher risk than the overall polygon classification. This has resulted in a projected risk ranking that will require geotechnical and/or engineering analyses to quantify. This map should serve only as an initial guide for planning purposes, and detailed site investigations should be carried out before development takes place. See the report 'Burwash Landing and Destruction Bay Landscape Hazards: Geological Mapping for Climate Change Adaptation Planning' for more details about hazards classification.

Hazards classification categories

- No risk of permafrost degradation, no risk of geologic hazards
- Moderate risk of permafrost degradation (i.e., moderate thaw settlement) or moderate risk of geologic hazards
- Moderate to high risk of permafrost degradation (i.e., moderate thaw settlement on flat terrain, poor drainage, slow mass movement on slopes due to high pore water pressure) and moderate risk of geologic hazards
- Moderate to high risk of permafrost degradation (i.e., high thaw settlement, water ponding, slow to rapid mass movement on slopes due to excess pore water pressure) and/or high risk of geologic hazards

Hazard classifications for map area

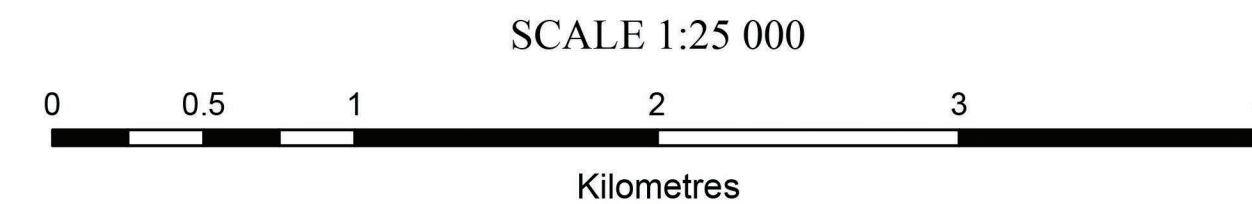
Polygon number	Surficial geology	Hazard ranking	Hazard description	Polygon number	Surficial geology	Hazard ranking	Hazard description
0	Colluvium	permafrost	permafrost	76	Eolian	flooding	flooding
1	Glaciofluvial	permafrost	permafrost	77	Fluvial Active	permafrost	permafrost
2	Morainal	permafrost	permafrost	78	Fluvial	permafrost	permafrost
3	Glaciofluvial	permafrost	permafrost	79	Morainal	permafrost	permafrost
4	Fluvial	permafrost	permafrost	80	Eolian	permafrost	permafrost
5	Organic	poor drainage; permafrost	poor drainage; permafrost	81	Organic	poor drainage; permafrost	poor drainage; permafrost
6	Fluvial	poor drainage; permafrost	poor drainage; permafrost	82	Eolian	permafrost	permafrost
7	Fluvial	permafrost	permafrost	83	Organic	poor drainage; permafrost	poor drainage; permafrost
8	Organic	poor drainage; permafrost	poor drainage; permafrost	84	Eolian	permafrost	permafrost
9	Fluvial	permafrost	permafrost	85	Eolian	permafrost	permafrost
10	Fluvial	poor drainage; permafrost	poor drainage; permafrost	86	Eolian	permafrost	permafrost
11	Eolian	flooding; erosion	flooding; erosion	87	Eolian	shallow water table; permafrost	shallow water table; permafrost
12	Fluvial Active	permafrost	permafrost	88	Organic	poor drainage; permafrost	poor drainage; permafrost
13	Morainal	permafrost	permafrost	89	Eolian	poor drainage; permafrost	poor drainage; permafrost
14	Fluvial	permafrost	permafrost	90	Eolian	permafrost	permafrost
15	Fluvial	permafrost	permafrost	91	Glaciofluvial	permafrost	permafrost
16	Eolian	poor drainage; permafrost	poor drainage; permafrost	92	Eolian	permafrost	permafrost
17	Morainal	poor drainage; permafrost	poor drainage; permafrost	93	Eolian	poor drainage; permafrost	poor drainage; permafrost
18	Eolian	permafrost	permafrost	94	Eolian	permafrost	permafrost
19	Eolian	poor drainage; permafrost	poor drainage; permafrost	95	Eolian	permafrost	permafrost
20	Morainal	permafrost	permafrost	96	Morainal	permafrost	permafrost
21	Fluvial	permafrost	permafrost	97	Morainal	permafrost	permafrost
22	Fluvial	permafrost	permafrost	98	Fluvial	poor drainage; permafrost	poor drainage; permafrost
23	Glaciofluvial	permafrost	permafrost	99	Lacustrine	permafrost	permafrost
24	Morainal	permafrost	permafrost	100	Morainal	permafrost	permafrost
25	Eolian	permafrost	permafrost	101	Eolian	shallow water table; permafrost	shallow water table; permafrost
26	Fluvial	poor drainage; permafrost	poor drainage; permafrost	102	Morainal	permafrost	permafrost
27	Fluvial	permafrost	permafrost	103	Organic	poor drainage; flooding; shallow water table	poor drainage; flooding; shallow water table
28	Lacustrine	permafrost	permafrost	104	Eolian	permafrost	permafrost
29	Colluvium	erosion	erosion	105	Organic	poor drainage; permafrost	poor drainage; permafrost
30	Eolian	permafrost	permafrost	106	Eolian	permafrost	permafrost
31	Glaciofluvial	permafrost	permafrost	107	Eolian	permafrost	permafrost
32	Eolian	permafrost	permafrost	108	Morainal	permafrost	permafrost
33	Fluvial	permafrost	permafrost	109	Eolian	permafrost	permafrost
34	Fluvial	poor drainage; permafrost	poor drainage; permafrost	110	Eolian	permafrost	permafrost
35	Eolian	permafrost	permafrost	111	Eolian	permafrost	permafrost
36	Fluvial	permafrost	permafrost	112	Eolian	permafrost	permafrost
37	Morainal	permafrost	permafrost	113	Morainal	permafrost	permafrost
38	Lacustrine	permafrost	permafrost	114	Fluvial	permafrost	permafrost
39	Fluvial	permafrost	permafrost	115	Organic	poor drainage; permafrost	poor drainage; permafrost
40	Fluvial Active	permafrost	permafrost	116	Morainal	permafrost	permafrost
41	Fluvial	permafrost	permafrost	117	Organic	poor drainage; permafrost	poor drainage; permafrost
42	Organic	poor drainage; permafrost	poor drainage; permafrost	118	Morainal	permafrost	permafrost
43	Fluvial	permafrost	permafrost	119	Fluvial Active	permafrost	permafrost
44	Morainal	permafrost	permafrost	120	Morainal	permafrost	permafrost
45	Eolian	permafrost	permafrost	121	Fluvial	permafrost	permafrost
46	Eolian	permafrost	permafrost	122	Morainal	permafrost	permafrost
47	Lacustrine	permafrost	permafrost	123	Organic	poor drainage; permafrost	poor drainage; permafrost
48	Fluvial Active	permafrost	permafrost	124	Organic	poor drainage; permafrost	poor drainage; permafrost
49	Fluvial	permafrost	permafrost	125	Morainal	permafrost	permafrost
50	Fluvial	permafrost	permafrost	126	Fluvial Active	permafrost	permafrost
51	Fluvial	permafrost	permafrost	127	Fluvial	permafrost	permafrost
52	Eolian	permafrost	permafrost	128	Eolian	permafrost	permafrost
53	Morainal	permafrost	permafrost	129	Organic	poor drainage; permafrost	poor drainage; permafrost
54	Colluvium	permafrost	permafrost	130	Morainal	permafrost	permafrost
55	Lacustrine	permafrost	permafrost	131	Eolian	permafrost	permafrost
56	Morainal	permafrost	permafrost	132	Organic	poor drainage; permafrost	poor drainage; permafrost
57	Eolian	permafrost	permafrost	133	Eolian	permafrost	permafrost
58	Eolian	permafrost	permafrost	134	Eolian	permafrost	permafrost
59	Fluvial	permafrost	permafrost	135	Morainal	permafrost	permafrost
60	Morainal	permafrost	permafrost	136	Morainal	permafrost	permafrost
61	Eolian	permafrost	permafrost	137	Organic	poor drainage; permafrost	poor drainage; permafrost
62	Eolian	permafrost	permafrost	138	Morainal	poor drainage; permafrost	poor drainage; permafrost
63	Fluvial Active	permafrost	permafrost	139	Morainal	permafrost	permafrost
64	Fluvial	permafrost	permafrost	140	Morainal	permafrost	permafrost
65	Fluvial Active	permafrost	permafrost	141	Morainal	permafrost	permafrost
66	Morainal	permafrost	permafrost	142	Fluvial	poor drainage; permafrost	poor drainage; permafrost
67	Eolian	permafrost	permafrost	143	Organic	poor drainage; flooding; permafrost	poor drainage; flooding; permafrost
68	Fluvial	permafrost	permafrost	144	Morainal	permafrost	permafrost
69	Fluvial	permafrost	permafrost	145	Morainal	permafrost	permafrost
70	Organic	poor drainage; permafrost	poor drainage; permafrost	146	Morainal	permafrost	permafrost
71	Fluvial Active	permafrost	permafrost	147	Morainal	permafrost	permafrost
72	Organic	poor drainage; permafrost	poor drainage; permafrost	148	Organic	poor drainage; flooding; shallow water table; permafrost	poor drainage; flooding; shallow water table; permafrost
73	Morainal	permafrost	permafrost	149	Eolian	shallow water table; permafrost	shallow water table; permafrost
74	Morainal	permafrost	permafrost				
75	Eolian	permafrost	permafrost				

*located in a forest fire disturbance area

Map reference: NAD 1983 - Universal Transverse Mercator (UTM) Zone 7N



HAZARDS CLASSIFICATION MAP BURWASH LANDING AND DESTRUCTION BAY YUKON



This map accompanies the following report:
Northern Climate Exchange, 2013. Burwash Landing and Destruction Bay Landscape Hazards: Geological Mapping for Climate Change Adaptation Planning. Yukon Research Centre, Yukon College, 117 p. and 2 maps.
The report and additional copies of this map can be obtained from the Northern Climate Exchange through the Yukon Research Centre website (www.yukoncollege.yk.ca/research).
This map was produced in April, 2013.