

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S10	N1-Soils-152	Permafrost	Site: 173 to 174	E-725210 N-6274166	E-725152 N-6274121	14N	74 m
N1-S10	N1-Soils-153	Permafrost	Site: 175 to 176	E-724597 N-6273690	E-724176 N-6273363	14N	533 m
N1-S11	N1-Soils-154	Permafrost	Site: 177 to 178	E-722914 N-6272435	E-722426 N-6272144	14N	568 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan



ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S11	N1-Soils-154	Permafrost	Site: 177 to 178	E-722914 N-6272435	E-722426 N-6272144	14N	568 m
N1-S11	N1-Soils-155	Permafrost	Site: 179 to 180	E-720753 N-6271149	E-720627 N-6271074	14N	146 m
N1-S11	N1-Soils-156	Permafrost	Site: 181 to 182	E-720538 N-6271021	E-720448 N-6270967	14N	104 m
N1-S11	N1-Soils-156	Permafrost	Site: 183 to 184	E-720379 N-6270926	E-720329 N-6270897	14N	57 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan



ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S11	N1-Soils-157	Permafrost	Site: 185 to 186	E-718814 N-6269995	E-718701 N-6269928	14N	131 m
N1-S11	N1-Soils-157	Permafrost	Site: 187 to 188	E-718179 N-6269617	E-717541 N-6269238	14N	741 m
N1-S11	N1-Soils-158	Permafrost	Site: 189 to 190	E-717435 N-6269175	E-717225 N-6269049	14N	245 m
N1-S11	N1-Soils-158	Permafrost	Site: 191 to 192	E-717146 N-6269003	E-717069 N-6268957	14N	89 m
N1-S11	N1-Soils-158	Permafrost	Site: 193 to 194	E-716946 N-6268884	E-716904 N-6268858	14N	49 m
N1-S11	N1-Soils-159	Permafrost	Site: 195 to 196	E-716705 N-6268740	E-716498 N-6268617	14N	241 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan



ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S12	N1-Hert-107	North Moswakot River	714735	6267846	14N

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental • Inspector
- Implement additional mitigation from site investigation

ESS Group : Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S13	N1-Aqua- 131	North Moswakot River	714738	6267847	14N	8.9m	N/A	Low	Important

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes ٠
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice ٠ Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from September 1 July 15

ESS Group : Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S13	N1- Aqua- 132	Unnamed tributary of South Moswakot River	713755	6264884	14N	50m	110m	Moderate	Marginal

Potential Effects:

Habitat loss & contamination from structure foundations & installations: increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement; rutting of floodplain

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within • these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing •
- ٠ Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 – July 15

ESS Group : Birds and Habitat

Sec- Seg I D	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S12	N1- Wild- 104	North Moswakot River crossing; movement route for raptors and waterfowl	Site: L7 to L8	E- 714741 N- 6267848	E- 714726 N- 6267843	14N	15 m

Potential Effects:

Higher risk of wire collision, risk of wire collision is localized to the right-of-way

Specific Mitigation:

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain setback during timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice

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ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S12	N1-Soils-160	Permafrost	Site: 197 to 198	E-715315 N-6268038	E-715236 N-6268012	14N	82 m
N1-S13	N1-Soils-161	Permafrost	Site: 199 to 200	E-713502 N-6267167	E-713600 N-6266287	14N	885 m
N1-S13	N1-Soils-162	Permafrost	Site: 201 to 202	E-713746 N-6264967	E-713760 N-6264839	14N	885 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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ESS Group : Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S13	N1- Aqua- 132	Unnamed tributary of South Moswakot River	713755	6264884	14N	50m	110m	Moderate	Marginal
N1-S13	N1- Aqua- 133	Unnamed tributary of South Moswakot River	713966	6262984	14N	16m	N/A	Moderate	Important

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion •
- Use existing trails, roads or cut lines whenever possible as access routes ٠
- Identify and flag buffer areas prior to start of work ٠
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within ٠ these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing •
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice ٠ Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 July 15

ESS Group : Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S13	N1- Aqua- 134	South Moswakot River	714113	6261652	14N	11m	11m	Moderate	Important

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg **Clearance Requirements**
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from September 1 July 15

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S13	N1-Soils-162	Permafrost	Site: 201 to 202	E-713746 N-6264967	E-713760 N-6264839	14N	885 m
N1-S13	N1-Soils-163	Permafrost	Site: 210 to 211	E-714101 N-6261763	E-714112 N-6261657	14N	106 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible •
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan



ESS Group : Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S14	N1- Aqua- 135	Unnamed tributary of South Moswakot River	713868	6259787	14N	6m	N/A	Moderate	Marginal
N1-S14	N1- Aqua- 136	Unnamed tributary of South Moswakot River	712815	6258295	14N	N/A	N/A	Moderate	Marginal

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement; rutting of floodplain

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes •
- Identify and flag buffer areas prior to start of work ٠
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within • these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing ٠
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice ٠ Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 July 15 ٠

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S14	N1-Soils-164	Permafrost	Site: 212 to 213	E-714183 N-6260232	E-714068 N-6260069	14N	199 m
N1-S14	N1-Soils-164	Permafrost	Site: 214 to 215	E-714032 N-6260018	E-713945 N-6259895	14N	150 m
N1-S14	N1-Soils-164	Permafrost	Site: 216 to 217	E-713885 N-6259810	E-713766 N-6259642	14N	205 m
N1-S14	N1-Soils-165	Permafrost	Site: 218 to 219	E-713335 N-6259031	E-713277 N-6258949	14N	100 m
N1-S14	N1-Soils-166	Permafrost	Site: 220 to 221	E-712982 N-6258531	E-712825 N-6258309	14N	271 m
N1-S14	N1-Soils-166	Permafrost	Site: 222 to 223	E-712796 N-6258268	E-712307 N-6257576	14N	847 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible • Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan



ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S14	N1-Soils-167	Permafrost	Site: 224 to 225	E-712197 N-6257419	E-712170 N-6257381	14N	46 m
N1-S14	N1-Soils-167	Permafrost	Site: 226 to 227	E-712150 N-6257353	E-712132 N-6257327	14N	31 m
N1-S14	N1-Soils-167	Permafrost	Site: 228 to 229	E-712084 N-6257260	E-711959 N-6257082	14N	217 m
N1-S14	N1-Soils-167	Permafrost	Site: 230 to 230a	E-711903 N-6257004	E-711282 N-6256124	14N	1078 m
N1-S15	N1-Soils-167	Permafrost	Site: 230b to 231	E-711282 N-6256124	E-711282 N-6256124	14N	2718 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan