PROJECT # 823-004-18 ILLUSTRATION # a28860w August 31, 2010

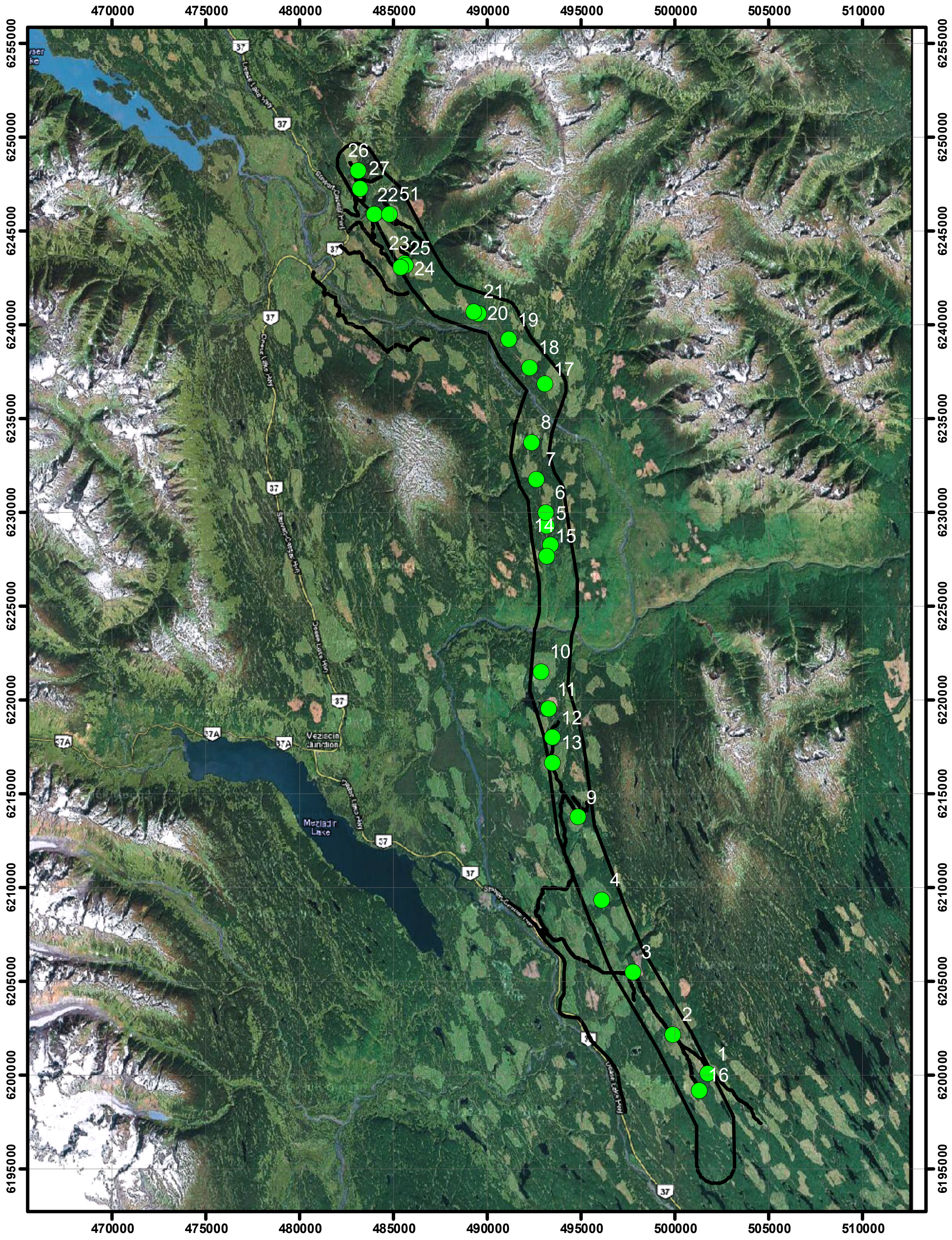


Figure 6.5-2

Soil Inspection Site Locations within the Bell-Irving Alternate Route Alignment Corridor

BC hydro

Rescan™ Engineers & Scientists

Land Use

The majority of the 24 inspection sites visited in the study area were forest ecosystems, which ranged from areas with signs of past logging activities (clear cut areas), to matured undisturbed forests. Four of the sites visited were classified as wetlands and typically occurred in seepage areas between ridges (Sites 9, 12, 14, and 20). The number of wetland sites visited generally reflects the distribution of the wetlands in the corridor. The organic soils found in these wetland ecosystems sites consisted of organic veneers over bedrock.

Surficial Materials

Northwestern British Columbia has been the site of multiple glaciations, which have had a substantial influence on the present topography and soil development. Surficial materials include colluvium, glacial till (morainal), glaciofluvial, recent fluvial, and organic deposits. These materials occur in varying thickness, depending on the topography in which they were deposited and the process by which they developed.

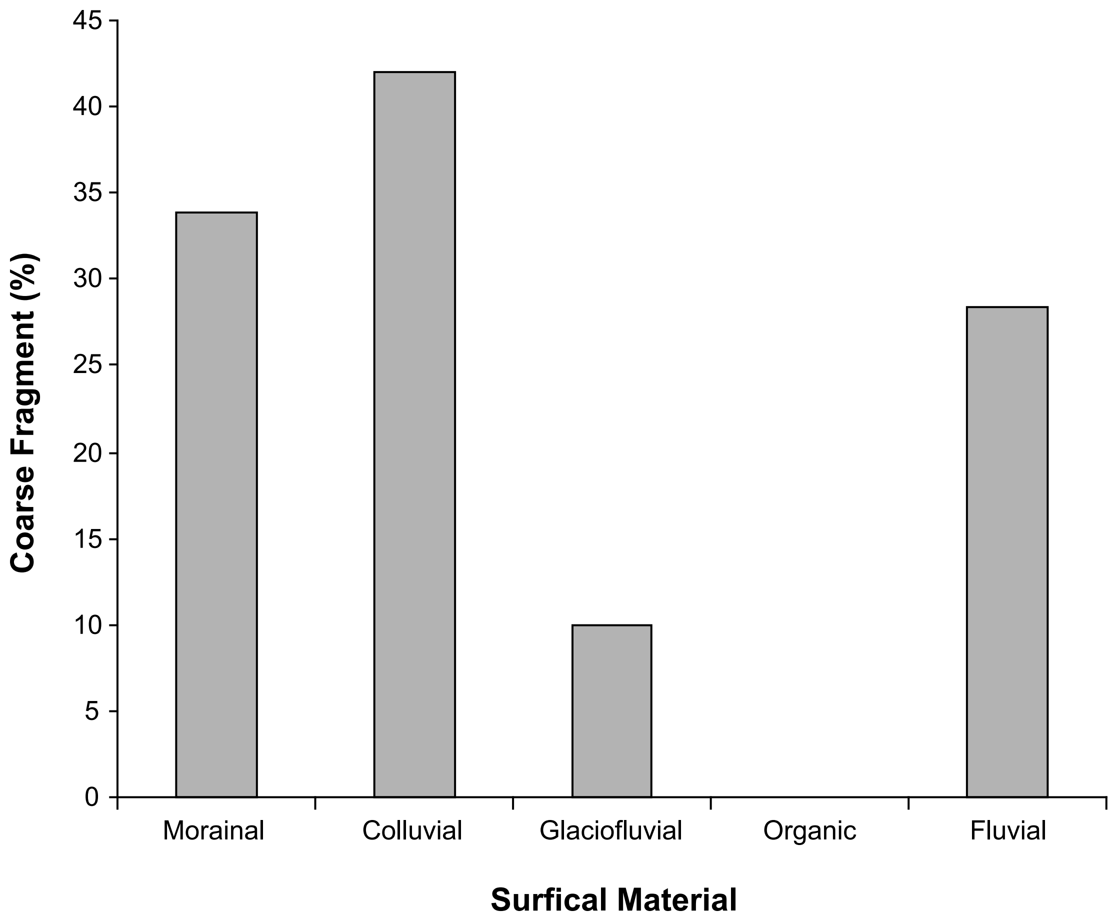
The assessment area is mountainous, with the route following a series of river valleys. Approximately 70% of the study area occurs on morainal materials (Table 6.5-1). Morainal soils are typically medium to coarse textured (Table 6.5-2), and include sands with a varying content of silt and fine sand. They generally occur on the moderately sloping topography in the study area. Coarse fragment content of morainal soils surveyed averaged approximately 35% (Figure 6.5-3). Approximately 13% of the study area occurs on colluvial material. These materials generally occur on the steeper slopes and higher elevations. They are often very coarse-textured and have a high coarse fragment content (Figure 6.5-3).

Table 6.5-1. Summary of Areal Extent of Surficial Materials in the Proposed Bell-Irving Route

Surficial Material	Area (ha)	Area (%)
Morainal	8,579.6	69.6
Colluvial	1,622.5	13.2
Fluvial	807.3	6.5
Organic	506.5	4.1
Glaciofluvial	323.5	2.6
Bedrock	284.0	2.3
Undifferentiated	161.9	1.3
Water	40.9	<1
Total	12,326.1	100.0

Fluvial material occurs in about 6.5% of the study area (Table 6.5-1), much of it on level to very gently sloping floodplains. Approximately 2% of the study area crosses bedrock, 4% crosses organic deposits, and 2.6% crosses glaciofluvial deposits (Table 6.5-1). Organic deposits are generally developed in wet, depressional areas, which are frequently associated with rivers and creeks. Organic soils, by their nature, have no coarse fragment (Figure 6.5-3).

Some of the surficial materials within the study area are mapped as veneers. The veneer phase is associated with surface parent materials that are too thin to mask the form of the underlying material, including bedrock. A veneer is defined as ranging in thickness from 0.1 m to less than 1 m. It is commonly associated with thin colluvial or morainal soils on steep terrain and wet, organic capped soil in level to depressional topography overlying bedrock and weathered bedrock.



Average Coarse Fragment Content of Soils at Inspection Sites by Surficial Material Type in upper 70cm of Soils

Figure 6.5-3

Table 6.5-2. General Characteristics of Surficial Materials along the Bell-Irving Route

Surficial Material	Typical Topographic Landscape	Coarse Fraction (>2 mm)	Fine Fraction (<2 mm)
Morainal	Simple to complex slopes; gentle to moderately steep; rolling, ridged to hummocky	Rounded to subangular; high to moderate content	Typically medium to coarse; includes sands and varying content of silts and fine sands
Colluvial	Simple to complex slopes; steep to moderately steep; ridges, few fans and cones	Angular fragments, rubble to blocks; high content	Typically coarse; may include sands to silts
Fluvial	Near level floodplains, low terraces and fans; undulating	Rounded to subrounded; high content to none	Sands to silts
Glaciofluvial	Terraces; hummocky, rolling	Rounded; typically high content though variable	Sands to silts
Organic	Depressional to flat or very gently sloping; high water table	None	Varying degree of decomposition
Undifferentiated	Steep (flat in areas of anthropogenic disturbance)	Variable	Variable
Bedrock	Steep, rolling (includes near level to hummocky lava flows)	Not applicable	Not applicable

Slopes

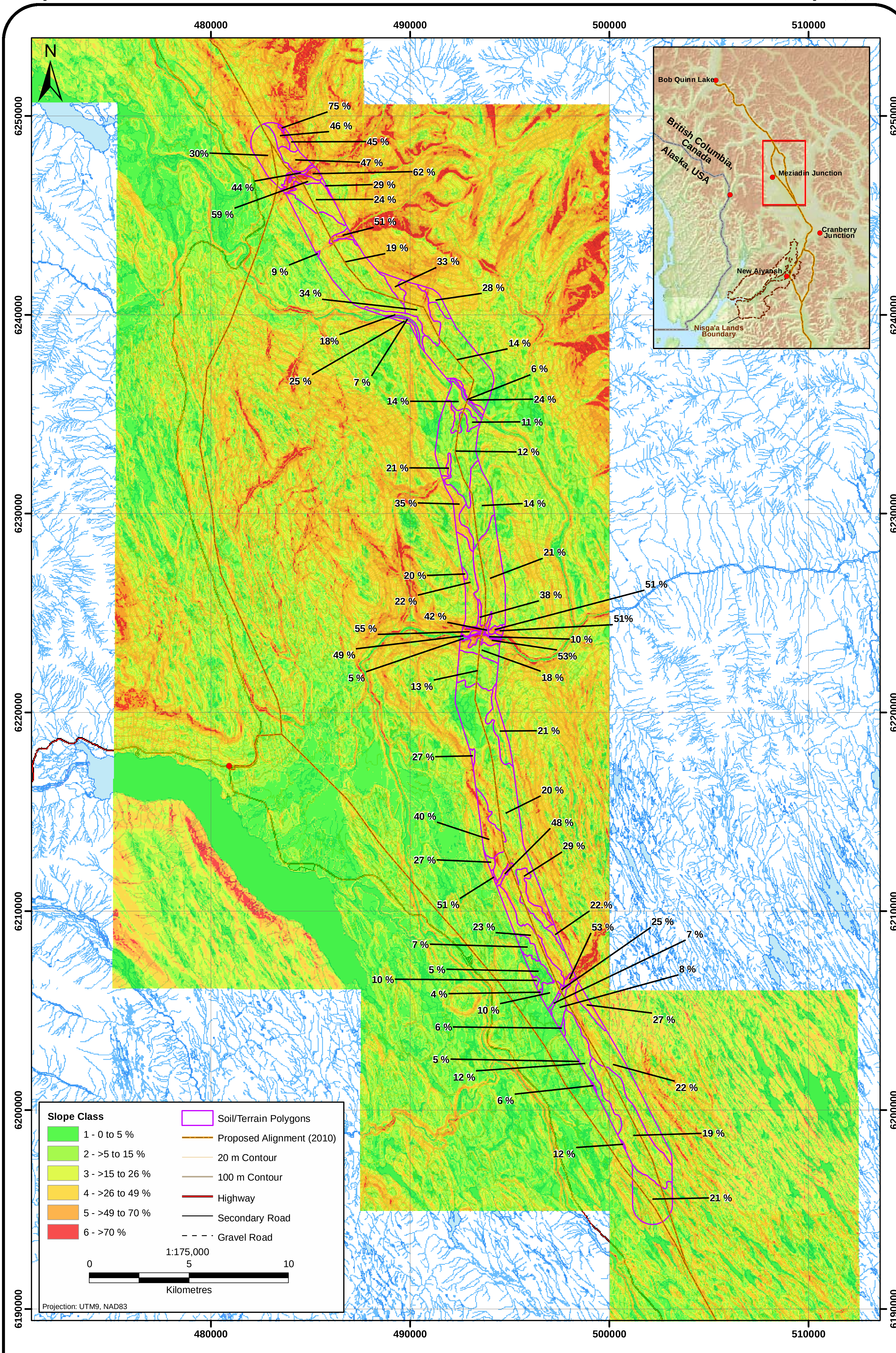
Table 6.5-3 shows the areal extent of slope classes in the Bell-Irving route. The potential for soil erosion occurs with increasing steepness of the slopes in conjunction with soils with a high component of fines. Moderately steep to steep slopes (Slope Classes 5 and 6) occur in less than 3% of the study area (Figure 6.5-4). The majority (57.5%) of the terrain in the study area is moderately gently sloping (Slope Class 3). Close to 26% of the study area occurs on gently sloping topography (Slope Class 2), and approximately 14% of the study area occurs on moderately steep slopes (Slope Class 4). The slope classification of the terrain polygons also reveal that less than 1% of the study area occurs on level terrain (Slope Class 1).

Table 6.5-3. Areal Extent of Slope Classes in the Bell-Irving Route

Slope Classes	% Slope	Area (ha)	Area (%)
Class 1: level	0 to 5%	4.2	<1
Class 2: gentle	>5 to 15%	3,187.0	25.9
Class 3: moderately gentle	>15 to 26%	7,082.9	57.5
Class 4: moderate	>26 to 49%	1,740.7	14.1
Class 5: moderately steep	>49 to 70%	311.3	2.5
Class 6: steep	>70%	0	0
Total		**12,326.1**	**100.0**

Soils

Soil development is strongly related to drainage conditions and soil parent material characteristics. Soil drainage conditions are strongly influenced by their relative position in the landscape. Soils on the steeper slopes are generally well to rapidly drained. Some of the flattest terrain, especially in the bottoms of narrow valleys, contains a high percentage of wet soils. Seepage at the toe and lower slope positions may occur, resulting in imperfectly and poorly drained soil conditions.



BC hydro

Proposed Northwest Transmission Line
Bell-Irving Route - Slope Mean Map

FIGURE 6.5-4

Rescan

Podzols and Brunisols are the predominant soil order occurring in the study area, representing approximately 39% and 32% respectively, of the soils classified (Table 6.5-4). These soils are weathered, well-developed, and well to rapidly drained. Other soil orders within the study area include Regosols, Gleysols, and Organic soils. Brunisols are less developed than Podzols. As Podzols and Brunisols generally develop on well drained soils (Figure 6.5-5), they frequently occur on sloping topography along the route. Regosols are young soils with little, if any, development. Regosolic soils are generally found in active fluvial beds and in inactive fluvial flood plains in the form of fans and blankets (deposits thicker than 1 m). They are generally rapidly to well-drained (Figure 6.5-5). Gleysols occur in seepage or depressional areas of the study area and are typically imperfectly to poorly drained (Figure 6.5-5). Organic soils are indicative of wet conditions, and, therefore, generally occur in close proximity to lakes, creeks, and in depressional areas, and are generally poorly drained (Figure 6.5-5).

Table 6.5-4. Soils in the Bell-Irving Route by Sites

Soil Classification	Number of Sites	% of Total Number of Sites
Brunisols	9	32
Gleysols	2	7
Organic	3	11
Podzols	11	39
Regosols	3	11
Total	28	100

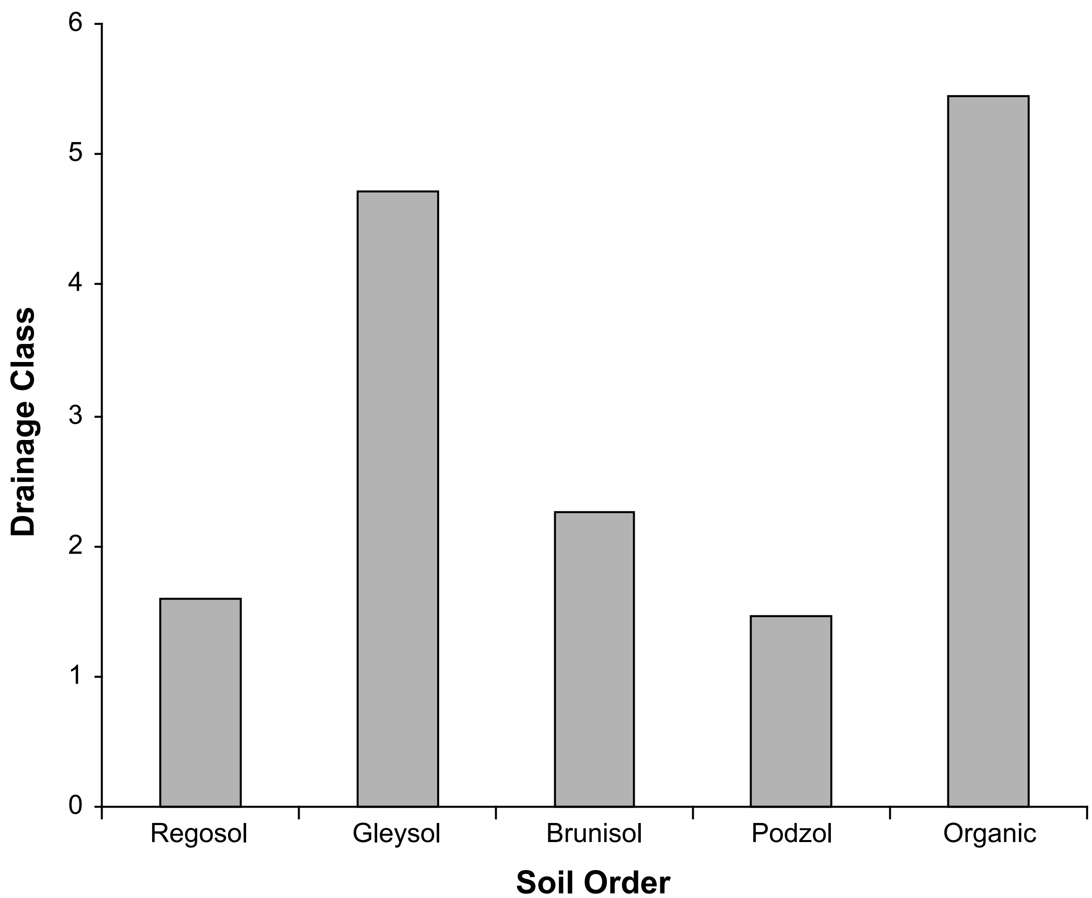
Morainal Soils

The morainal materials within the study area occur on simple to complex slopes that are gentle to moderately steep, and on rolling, ridged to hummocky topography (Plate 6.5-1 in Appendix 6.5-2). The majority of the morainal materials are predominantly coarse to medium textured, rapidly to moderately well drained, and subject to intense weathering and leaching in this wet environment. Podzols (Plate 6.5-2 in Appendix 6.5-2) have developed in these conditions (Orthic Humo-Ferric Podzols; Soil Classification Working Group 1998). These soils are characterized by a distinct reddish brown to yellow subsoil horizon with an acidic reaction (Plate 6.5-2 in Appendix 6.5-2). Brunisols are also common on morainal materials. Gleysols (imperfectly drained soils) develop on morainal materials in seepage areas.

Colluvial Soils

Colluvial soils frequently occur on higher elevations and on moderately steep to steep sloping terrain that are rapidly to well drained (Plate 6.5-3 in Appendix 6.5-2). They generally have a thin to thick (2 cm to 16 cm) humus layer, moderately deep profile development with a strongly coloured subsurface horizon, and transition horizons extending to 40 cm or more.

The colluvial soils in the study area include well-drained Podzols and Brunisols, with pockets of imperfectly to poorly drained Gleyed Eutric Brunisols (Plate 6.5-4 in Appendix 6.5-2), occurring in areas where the bedrock formation limits drainage and water movement downslope. They exhibit a characteristic light grey mineral surface horizon overlying a modified transition layer above the unweathered parent material (C horizon).



Note: Class 1: very rapidly
Class 2: well drained
Class 3: moderately
Class 4: imperfectly
Class 5: poorly drained
Class 6: very poorly drained.

Figure 6.5-5

Average Drainage Classes of Soils at Inspection Sites by Soil Order

Fluvial Soils

Fluvial soils encountered in the study area occur in level to gently sloping terrain (Plate 6.5-5 in Appendix 6.5-2). They consist of mostly medium to coarse textured Regosols (Plate 6.5-6 in Appendix 6.5-2). Soil drainage ranges from moderately well drained to imperfectly drained. There is a great range in soil development in fluvial soils resulting from their relative age and drainage conditions. Although Regosols were the most commonly observed, Gleysols, Brunisols, and Podzols all occur in the fluvial landscape. Podzols occur on older, well drained, forested, upper terraces and on some of the older fans. Orthic Humic Regosols (Plate 6.5-6 in Appendix 6.5-2) were found in fluvial fans and blankets, in inactive flood plains that showed signs of intermittent flooding and fluvial material deposition.

Organic Soils

Organic soils in the study area occur in the pockets of wetlands in seepage areas between ridges (Plate 6.5-7 in Appendix 6.5-2). These soils are poorly drained often due to restriction to water movement and drainage imposed by the underlying bedrock. They frequently have a water table near the surface (Plate 6.5-8 in Appendix 6.5-2). They are classified based on their degree of decomposition and range from poorly decomposed Fibrisols to moderately decomposed Mesisols and highly decomposed Humisols.

Glaciofluvial Soils

Soils developed on glaciofluvial deposits occur in lower elevations of the larger river valleys. Unlike fluvial soils, the glaciofluvial soils are above the active floodplain and often occur as terraces and benches (Plate 6.5-9 in Appendix 6.5-2). These soils occur as blankets of Podzols and Brunisols. They are coarse textured generally with a high content of rounded and subrounded, coarse fragments. Most glaciofluvial soils are well drained.

6.5.2 Spatial and Temporal Boundaries

The effects assessment focuses on the proposed ROW within the study area and any proposed new temporary or permanent roads. However, because of the distribution of the soil inspection sites within the study area, it is possible to extrapolate the data to areas outside the ROW and within the route corridor, in order to account for potential minor changes in the ROW alignment. This assessment considers two phases of development: (1) construction and restoration, and (2) operations and maintenance. Detailed rational for the spatial and temporal boundaries is presented in Section 7.4.2 of the EAC Application.

6.5.3 Issues Scoping

The principal issues for terrain, soils, and surficial materials are: land cover alteration, access, and site contamination. Detailed rationale for the selection of the principal issues is presented in Section 7.4.3 of the EAC Application.

6.5.4 Valued Environmental Components

Soil sensitivity (to erosion and structural degradation) and soil quality are identified as VECs along the proposed Bell-Irving route. Detailed rationale for the selection of the VECs are presented in Section 7.4.4 of the EAC Application.

6.5.5 Identification of Potential Effects and Mitigation

The potential for soil disturbance associated with the Project will occur primarily during the construction phase. Soil disturbance is anticipated to result from soil loss (erosion, burial, or removal), compaction, and contamination, as described below.

6.5.5.1 Phase 1: Construction and Restoration Phase

Soil Loss

As a result of burial or removal, the soils may no longer be capable of supporting vegetation or other soil functions, such as, moderating water infiltration and water quality. Areas where soil loss may occur include line structure foundations and access roads.

Line structure foundations will be permanent, although the amount of soils lost will be low, as the line structures will have a small footprint (generally less than 1 m^2). Soil loss from structure foundations and permanent access roads cannot be mitigated. However, where practical the Project alignment, including the Bell-Irving route, will be designed to utilize existing forest service roads (FSRs), public roads, and private roads for access and maintenance of the transmission line ROW. Soil loss from temporary access roads can be mitigated upon deactivation following use. This will require salvaging and storing the topsoil as the initial step during construction. Deactivation will require removal of culverts to restore natural drainage, site preparation to reduce surface compaction, the re-application of soils, and revegetation with a rapidly establishing, erosion control seed mix, using native seed and shrubs, where practical. Additional mitigation measures are described in the Site Restoration Plan (Chapter 11 of the EAC Application). Despite mitigation residual adverse effects are likely.

Soil Erosion

Soil erosion associated with the Project may occur where soils are exposed on sloping topography, especially in the case of road cuts and fill, during construction or upgrading of the roads and, to a lesser extent, during line structure and guy-wire installation.

The type of surficial material present, in combination with the steepness of slopes, and the ground cover, affects the susceptibility of a particular area to erosion. Soil texture is often a function of surficial material and, thus, were both considered in determining susceptibility of soils to erosion. Exposed, coarse textured soils and soils high in silt have a low cohesiveness, which makes them particularly susceptible to erosion on steeper slopes. The morainal soils along the Bell-Irving route are mostly medium to coarse textured with a high component of sand. Colluvial soils are generally coarse textured and generally have a high component of coarse fragments. Fluvial and glaciofluvial materials are generally coarse textured. Thus, the terrain along the route has been grouped into the following three classes for erosion potential based on slope, surficial material, and texture:

- Class 1 : Low potential for soil erosion
- Class 2: Moderate potential for soil erosion
- Class 3: High potential for soil erosion

A review of the surficial materials occurring along the proposed Bell-Irving route indicates that most of the surficial materials have a lower potential for erosion based on the low occurrence of steeper terrain with slopes in excess of 50% (Table 6.5-3). Approximately 57% of the soil sites surveyed had a low potential for accelerated erosion from the Project, based on the factors of slope, surficial material, and texture (Table 6.5-5). Approximately 11% of the sites had a moderate potential for accelerated erosion from the Project and 32% had a high potential for accelerated erosion (Table 6.5-5). The fluvial soils along creeks and rivers may have short, steep banks but may be highly erodible by water because of their non-cohesive nature. This could result in sediment delivery at road crossings.

Table 6.5-5. Potential for Soil Erosion of Surfical Materials Based Along the Bell-Irving Route

Class	Erosion Potential	Number of Sites
1	Low	16
2	Moderate	3
3	High	9
Total		28

The potential for soil erosion would be mitigated following the plan presented in Section 7.4.5 and Chapter 11 of the EAC Application. With mitigation, no residual effects are likely.

Soil Degradation

Some soils are particularly sensitive to compaction and profile disturbance, such as, soils with a high silt and clay content. Soil compaction can cause decreased root penetration, decreased soil aeration, and altered site hydrology (reduced infiltration and saturated and unsaturated conductivity), which could have detrimental effects to site productivity. Most of these high risk areas for soil degradation occurred in wetland areas or in coarse textured soils with poor ground cover. The effect of soil compaction may occur around the structure bases and in the areas where high frequency traffic or heavy equipment is being used during construction. The potential for soil degradation will be mitigated following the mitigation presented in Section 7.4.5 and Chapter 11 of the EAC Application. With mitigation, no residual adverse effects are likely.

Soil Contamination

The concrete foundations for the line structures may be poured on-site, or pre-cast foundations may be used. Concrete spills and washings could cause minor, localized soil degradation. In addition, spills of fuel or lubricants from vehicles can contaminate surrounding soil and potentially contaminate groundwater and surface water. The potential for soil contamination will be mitigated following the mitigation presented in Section 7.4.5 and Chapter 11 of the EAC Application. With mitigation, no residual adverse effects are likely.

6.5.5.2 Phase 2: Operations and Maintenance

Based on BC Hydro's vegetation management program, the vegetation management on the transmission line ROW will occur generally at a frequency of between five and seven years and will, therefore, result in a minimal amount of vehicle traffic. During operations and maintenance, permanent roads will be maintained, such that significant adverse residual effects from soil erosion and degradation are mitigated such that their likelihood of occurrence is low.

Vegetation management in the ROW could include the use of herbicides. However, their application will follow approved procedures and rates. As the herbicides that will be used are regulated and approved in Canada, and in consideration of the common practice of treating the ROW every seven years, with good management and limited application of herbicides, no residual adverse effects are likely.

The potential for soil contamination from fuel or lubricants during road and ROW maintenance will be mitigated following the practices presented in Section 7.4.5 and Chapter 11 of the EAC Application. With mitigation, no residual adverse effects are likely.

6.5.6 Potential Residual Effects and Significance

Soil loss from line structure foundations and permanent access roads cannot be mitigated and residual effects are likely.

The structure footprints will likely have a high magnitude and a local extent, with a duration of far future. The frequency would be one time. The effect will likely be irreversible with low resilience. The likelihood of the effect is high and the confidence level is high. Not all structure foundations will be constructed on soil. There will likely be a portion of sites constructed on bedrock or sites with a thin soil veneer over bedrock, or in forest cutblocks where the soil has been previously disturbed through prior industrial activity. Overall, the amount of soil occupied by the structure bases is small in relation to the amount of soil occurring in the study area. This residual effect is not likely significant.

The potential adverse effect of soil loss from constructing permanent access roads will also likely have a residual effect. The potential effect of soil loss from constructing new permanent access roads will likely have a high magnitude, a regional extent, and a duration of far future. The frequency will be one time. The effect will likely be irreversible with low resilience. The likelihood of the effect is high and the confidence level is high. However, the effect is not likely significant, as the amount of soil loss is predicted to be low relative to the surface area of the route.

6.6 ECOSYSTEMS AND VEGETATION

6.6.1 Environmental Setting

Baseline mapping and field studies were conducted in 2010 to describe the current extent, location, and characteristics of vegetation and terrestrial ecosystems along the proposed Bell-Irving route. This chapter describes the results of those vegetation baseline studies and the potential project effects on ecosystems and vegetation along the proposed Bell-Irving route. In addition, this report includes the results of surveys for British Columbia Conservation Data Centre (BC CDC) listed and sensitive ecosystems and plants and ecosystems and plants identified by regulators, First Nation groups and the public as socially, economically or ecologically important.

Ecosystem mapping involved the identification of ecosystems using a combination of aerial photographs and digital orthophotographs within a study area extending 1 km wide on either side of the proposed Bell-Irving route ROW. Ecologically, the area is represented by the Interior Cedar Hemlock Very Wet Cold subzone (ICHvc), Interior Cedar Hemlock Moist Cold subzone-Nass variant (ICHmc1) and Engelmann Spruce Subalpine Fir Wet Very Cold subzone (ESSFwv) Biogeoclimatic Ecosystem Classification (BEC) units. The study area is predominantly characterized by mesic mature forest, although the area is a mosaic of structural stages ranging primarily from 3 (shrub) to 6 (mature forest). The area has been developed for forestry and hydro electricity, and so contains numerous associated cutblocks and roads.

Field studies were conducted in August 2010 to refine the ecosystem mapping. A total of 28 sample plots were established. Two blue-listed ecosystems were identified in the field and during ecosystem mapping: ICHmc1 02 and ICHvc 52. The ICHmc1 02 ecosystem (288 ha) was located at the south end of the route in a cutblock with a range of structural stage classes, the majority of which were structural stage 3 (140 ha). A large portion of the ICHmc1 02 mapped area was located along the Nass River. The ICHvc 52 ecosystem (20 ha), was located north of the Bell-Irving crossing. It was also identified as structural stage 3, which is the climax stage for this ecosystem. The combined total extent of these listed ecosystems within the study area is 308 ha. Four sensitive ecosystem types were identified through the combination of field surveys and mapping and include riparian areas (3,569), floodplain forests (4 ha), wetlands (147 ha) and old forests (170 ha).

One hundred and three plant species, including those identified to genus level only, representing 41 different families, were identified within the Project corridor (Appendix 6.6-2). Forb species were the most abundant, with 29 different species documented overall. No plant species of conservation concern listed by the BC CDC or the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) were identified within the study area. One invasive species, common horsetail (Equisetum arvense), was located in 7 plots during field surveys. This native plant species provides good wildlife forage and is not considered a threat.

6.6.1.1 Thematic Ecosystem Mapping (TEM) Methodology

General ecosystem mapping procedures are provided in the EAC Application. For the proposed Bell-Irving route, a combination of ecosystem mapping methodologies were used. Ecosystems were delineated on black and white, 1:30,000 air photos obtained by the BC government for the majority of the study area. The remaining areas were mapped in ArcView version 9.3 using black and white digital orthophotos acquired in 1995 by the BC government. Additional spatial data were incorporated into the analysis and for navigation purposes, including Terrain Resource Information Management (TRIM; contour, forestry, and water features), and BC government Terrain maps.

Mapping used the principles outlined in the Terrestrial Ecosystem Mapping Standards where possible. Stand structural stage and crown closure were mapped according to legends presented in Rescan (2008). Field survey data were used to revise preliminary mapping and to provide a quality assurance check of the map. The field survey data and ecosystem map are illustrated in Figure 6.6-1 and the results are included in the Appendices (Appendix 6.6-1 Field Survey Data and Appendix 6.6-4 Field Plants). The associated legend is presented in Appendix 7.8-1 of the EAC Application.

6.6.1.2 Description of Bell-Irving Route

The area along the proposed Bell-Irving route is represented by interior ecosystems (Figure 6.6-2). The study area consists of a 1 km strip on each side of the proposed ROW and encompasses 11,142 ha and contains the following three Biogeoclimatic Zone (BEC) units:

1. Interior Cedar Hemlock Moist Cold Subzone-Nass Variant (ICHmc1), covering 7,457 ha;
2. Interior Cedar Hemlock Very Wet Cold Subzone (ICHvc), covering 2,577 ha; and
3. Engelmann Spruce-Sub Alpine Fir Wet Very Cold Subzone (ESSFwv), covering 1,108 ha.

Each BEC unit is described in detail in the Section 7.8 of the EAC Application.

<u>General Ecosystem Types</u>

Ecosystem units (including site series) identified through TEM mapping were grouped into general ecosystem types based primarily on moisture regime in order to simplify the presentation of results. The methods are described in Section 7.8 of the EAC Application and Appendix 7.8-1 EAC Application. Approximately 93% of the proposed Bell-Irving route is classified as forest with variable structural stages (Table 6.6-1). The majority of the area is mesic forest (71%), followed by moist forest (16%) and dry forest (4%).

Table 6.6-1. General Ecosystem Types in the Study Area

General Ecosystem Types		Area (ha)	Proportion of Study Area (%)
Forested	Dry Forest	453.8	4.1
	Floodplain Forest	3.9	0.0
	Mesic Forest	7,963.2	71.5
	Moist Forest	1,778.1	16.0
	Wet Forest	217.0	1.9
Forested Total		**10,416.0**	**93.5**
Unforested	Moist Shrub	399.0	3.6
	Wet Shrub	20.6	0.2
	Wetland Shrub/Herb	147.1	1.3
	Sparse/Unvegetated	20.0	0.2
	Water	139.6	1.3
Unforested Total		**726.2**	**6.5**
Total		**11,142.2**	**100.0**

Crown Closure and Structural Stage

The majority of the forested area consists of crown closures between 60% and 100% in each of the subzone/variants. Forest stands were predominantly coniferous, although mixed stands were present, particularly north of the Nass River.

Structural stage 6 (mature forest) is the most common structural stage (45%), while stage 3 (shrub) covers approximately 35%, primarily due to forestry operations. Evidence of forest fire is present in the area, particularly north of the Nass River, resulting in young forest structure (structural stage 4 and 5).

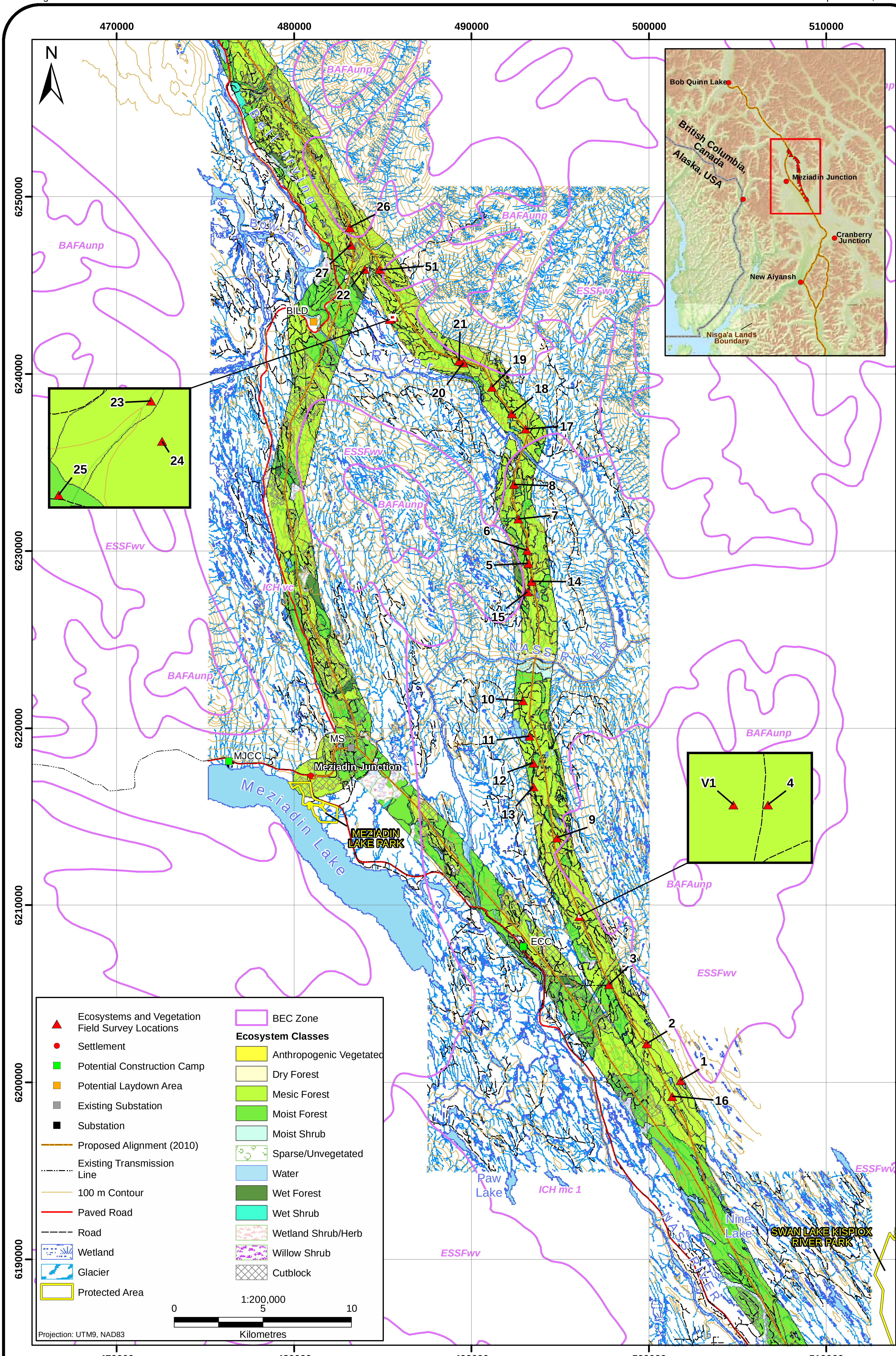
6.6.1.3 Listed Ecosystems and Plants

The BC CDC currently tracks 364 ecosystems in the Kalum Forest District (Appendix 6.6-3). Twelve of these ecosystems have the potential to be located within the study area based on the BEC units identified during TEM mapping.

One blue-listed ecosystem was identified during the field survey conducted in August 2010 (ICHmc1 02), and an additional blue-listed ecosystem was identified during TEM mapping (ICHvc 52) (Figure 6.6-3, Table 6.6-2 and Table 6.6-3). A total of 309 ha of rare ecosystems occur within the study area.

Table 6.6-2. Mapped Extent of Listed Ecosystems

Listed Ecosystem	BEC Unit	Ecosystem Type	BC CDC Classification	Study Area Extent (ha)	Plot Number
western hemlock/ kinnikinnick/ clad lichens	ICHmc1 02	Dry forest	Blue-listed	288.1	1
Mountain alder/ red-osier dogwood/ lady fern	ICHvc 52	Wet Shrub	Blue-listed	20.6	Not found



Proposed Northwest Transmission Line Ecosystems and Vegetation Field Survey Locations Bell-Irving Route

FIGURE 6.6-1