

**Nepopekum Creek Trail Assessment
E.C. Manning and Skagit Valley
Provincial Park**

**prkservices
North Vancouver, BC
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Submitted to:
Skagit Environmental Endowment Commission
North Vancouver, BC

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1. Introduction

In 1914, the Department of Lands published a map (Figure 1) of the southwest portion of British Columbia. On that map, and again on a map in the 1938 Minister of Mines' *Annual Report*, a trail was depicted along Nepopekum Creek, a tributary of the Skagit River. This historic trail was the most southerly, Canadian connector between Hope and Princeton, generally paralleling the more-northern Dewdney and Hope Pass Trails.

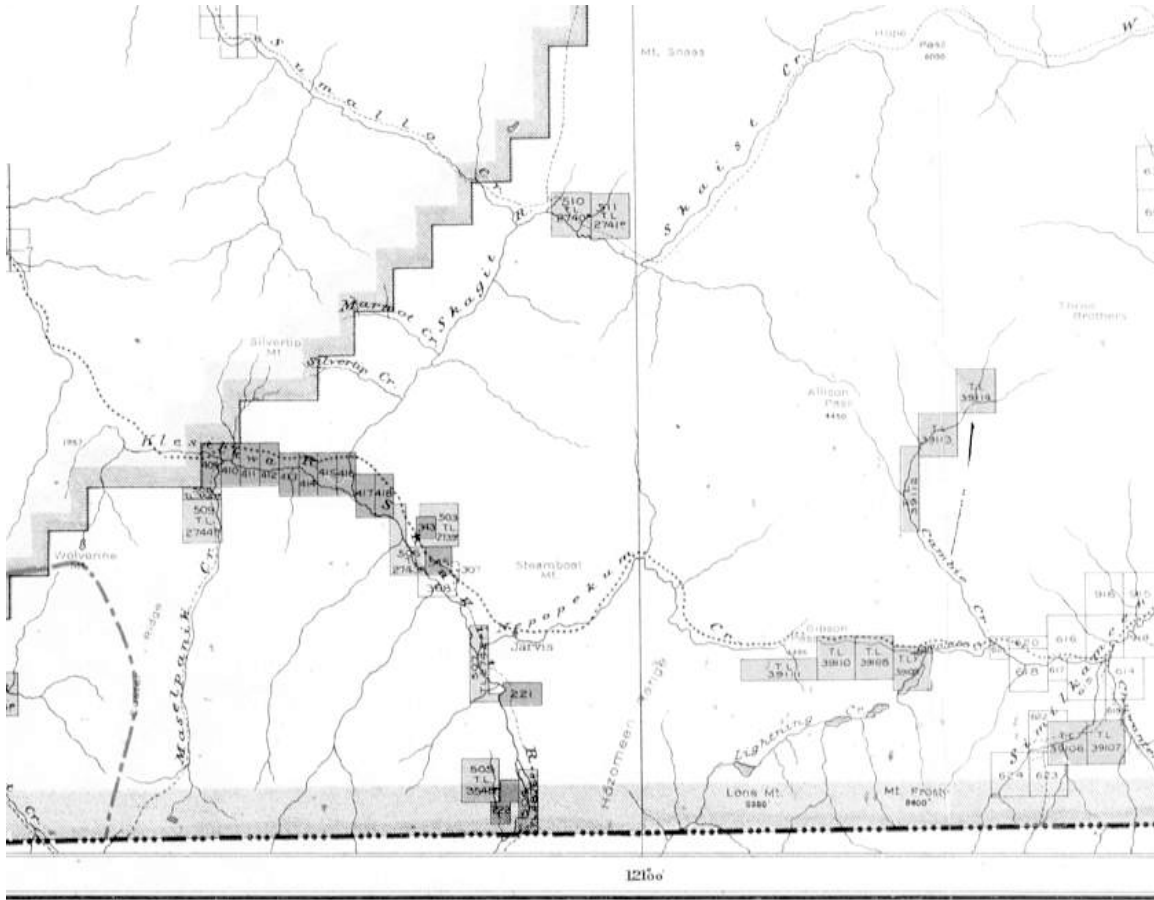


FIGURE 1. 1914 Department of Lands map

Nepopekum Creek lies entirely within E.C. Manning Park and Skagit Valley Park, provincial protected areas established in 1941 and 1984 respectively. During the development of the management plans for both parks in the 1970's and again in 1990's, all of the historic trails within the two parks and the Cascade Provincial Recreation Area, including the Dewdney, Whatcom, Skagit River, Hope Pass and Galene Lakes, as well as the Centennial, were inventoried and assessed for their heritage significance and their potential contribution to developed recreation opportunity in the parks. All of these trails were subsequently designated as park trails and, with the exception of the Galene Lakes Trail and the Whatcom Trail, all of the trails were also designated as horse trails in

keeping with their historic use. Lack of planning time did not allow for the assessment of the Nepopekum Creek Trail at that time: however, the desire to link the horse trails of the two parks and the potential historic significance of the Trail was recognized in the *Skagit Valley Park Management Plan* and a recommendation to “study the potential for a horse trail along Nepopekum Creek that will connect the Centennial Trail with E.C.Manning Park.” was approved as part of the overall management plan approval.

In 2008, the Skagit Environmental Endowment Commission expressed an interest to consider funding this trail assessment as part of their mandate to encourage the development of recreation opportunities in the Skagit River watershed, a substantial part of which is designated as E.C. Manning Park and Skagit Valley Park in Canada and managed by BC Parks.

This report provides an assessment of the 25 kilometre historic trail from the west end of the 3 Falls Trail in E.C.Manning Park to the Nepopekum Bar Trailhead in Skagit Valley Park and the potential of its restoration as a hiking and riding¹ trail that would meet BC Parks’ trail standards as a Type II horse trail.

2. BC Parks’ Trail Standards

The assessment is based on the potential (re)establishment of a horse/hiker trail along the general route of the historic trail along Nepopekum Creek. The trail would meet BC Parks’ trail standards as a Type II horse trail. Type II horse trails range in length from 5 to 30 kilometres and are suitable for day use or overnight trips. Uniform grades, generally less than 10%, are sought; sustained grades of 15% are avoided and existing soils form the trail base. The trail tread is 1 metre in width with a 2.5 metre clearing width and a 3 metre clearing height.

A Type IV or V hiking trail, the standard for overnight wilderness trips, would fit within the standards for a Type II horse trail.

3. Historic Trail Description

Although depicted on both the 1914 and 1938 government maps, little evidence of the trail, or any trail, remains today. After traversing the route, the reasons become obvious.

Firstly, despite offering the lowest elevation pass in the Cascade Mountains between the Coast and the Southern Interior at Gibson Pass, the Nepopekum Creek route is a difficult combination of terrain and vegetation and, unless constantly used and maintained, the vegetation and windfalls would obscure and reclaim any trail. Use of this route would have been quickly abandoned when the Dewdney Trail and then the Hope Pass Trail were

¹ For recreation opportunity and regulation purposes, BC Parks refers to a horse trail as a riding trail.

designated and developed as official government trails linking the Coast with the Southern Interior.

Based on the traverse, evidence of the trail was only observed at three locations: at the very eastern end of the route leading off the 3 Falls Trail, at the confluence of Poland and Nepopekum Creeks and at Nepopekum Creek's most northerly point, prior to it turning southwest to meet the Skagit River (see Figure 4). Even these sightings could not be confirmed as extant portions of the historic trail, although topographically, and from the map depictions, the location was convincing. Each of these observed locations, running less than 100 metres in length, quickly became obscured by windfall, talus and dense undergrowth.



FIGURE 2 Possible extant portion of Nepopekum Trail east of NS Creek

No historical research was conducted as part of this assessment to determine if government monies had ever been expended on the historic trail or why it was not chosen over the Dewdney or Hope Pass Trails as the preferred route linking the Coast with the Southern Interior. Often, expenditures and the resulting trail development, such as both the Dewdney Trail and Hope Pass Trail, left a more-lasting imprint on the landscape.

There was occasional evidence of the recent workings of fire crews along the route as camp debris had been left and some trail had been cut through the windfalls. This was most recognizable at the western end of the route and likely the result of the fire southeast of Shawatum Mountain.

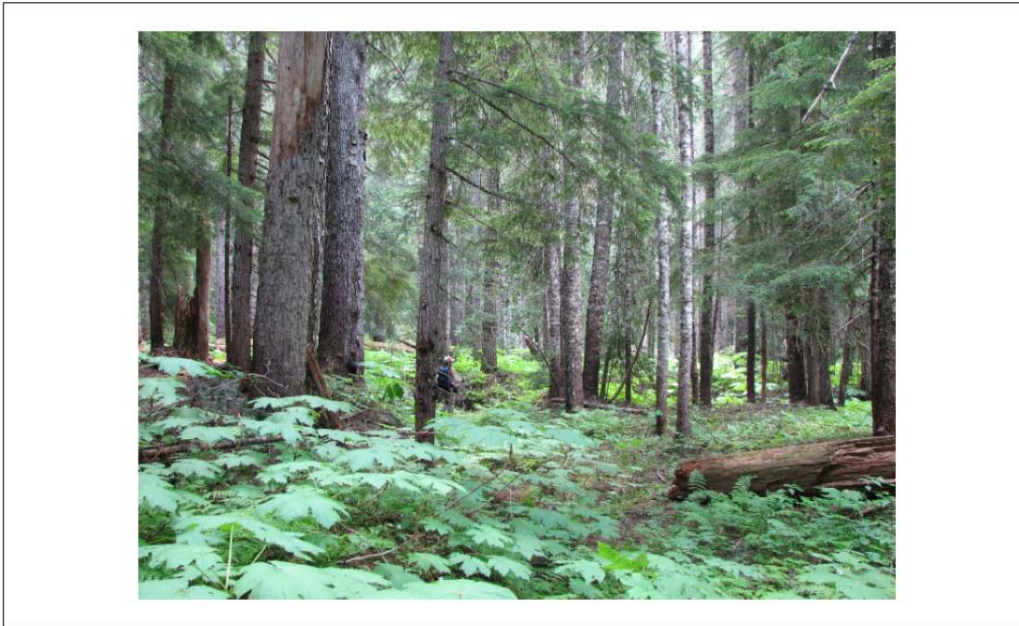


FIGURE 3 Cut trail likely from fire crews

Based on the 1914 and 1938 maps, there is no doubt that Nepopekum Creek served as one of few routes in Canada linking the Coast with the Southern Interior and was likely used for trading purposes by First Nations. However, any defined path and markings have become generally obscured over time and from lack of use, and have been reclaimed by nature.

4. Horse Trail Route Description

Part of the assessment was to locate extant portions of the historic trail along Nepopekum Creek as depicted on the earlier maps. Where the trail could not be located, as was previously noted, the assessment was to describe physical conditions along the route where a horse trail could potentially be constructed.

The route, considered for construction as a Type II horse trail, would generally parallel the right side of Nepopekum Creek for its entire length in an effort to eliminate bridging. The western half of the route (Segments 2 and 3) is subject to significant and extreme flooding conditions caused by the narrowness of the valley in these segments, melt and constant stream blockages by trees. Bridges would be difficult to locate, construct and maintain.

The route from the western end of the 3 Falls Trail to the Nepopekum Bar Trailhead has four distinct segments, primarily identified by topography and vegetation of the enclosed Nepopekum Creek valley and characterized by Nepopekum Creek's riverine

environments. Figure 4 shows the proposed trail segments as well as the historic route shown on the 1914 Department of Lands map and the 1938 Ministry of Mines map.

FIGURE 4 Trail segments for proposed route

4.1 Segment 1

The first segment of the route begins at the western end of the 3 Falls Trail² and ends at the confluence of “NS Creek” and Nepopekum Creek. Some 11.6 kilometres in length and dropping some 340 meters in elevation, this segment is characterized by a distinct, relatively-consistent, forested terrace on the right side of Nepopekum Creek. Rising some 3-7 metres above the creek, which at the eastern end of this segment flows underground late in the season, the terrace provides a combination of gravel and alluvial soils adequate for the construction of a horse trail. Clearing of vegetation, representative of medium-elevation coastal and interior forests, and windfalls would dominate trail construction.

This segment also includes special features including red cedar and Douglas-fir old growth specimens as well as extensive devil’s club groves.

² The 3 Falls Trail is a hiking trail and would need to be designated as a horse trail and upgraded to horse trail standard in order to connect with the designated horse trails in EC Manning Park



FIGURE 5 Talus slope at end of 3 Falls Trail and beginning of Segment 1

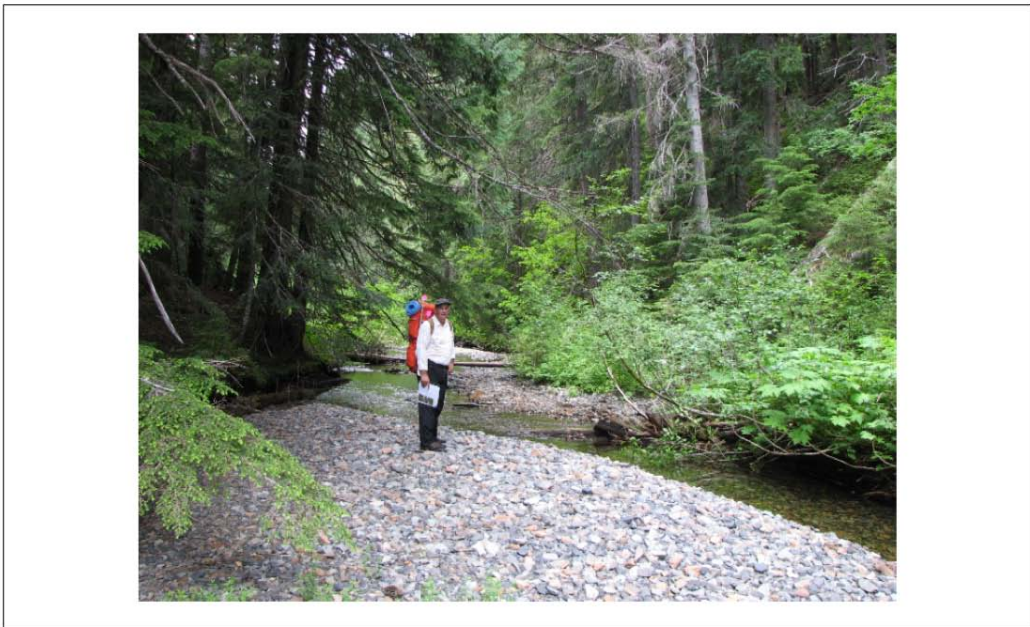


FIGURE 6 Nepopekum Creek emerging from seasonal underground at eastern end of Segment 1

There are only six obstacles to trail construction along this segment: one talus slope at the beginning of the segment, one avalanche chute, two slides and two debris slopes. With the exception of the initial talus slope, none of the obstacles present significant construction difficulties, as the trail location would move towards the creek where adequate beaches have formed.

4.2 Segment 2

The second segment of the route begins at the western end of Segment 1 and ends at the Nepopekum Creek canyon entrance, northwest of Nepopekum Mountain.

This 4.7 kilometre segment drops some 160 metres in elevation and the valley bottom narrows considerably from Segment 1. The creek, now rushing with the elevation change, is filled with debris and the riverine environment is characterized by coastal vegetation of slide alder, vine maple and devil's club thickets. Only intermittent, forested terraces, some 3 meters above the creek bottom and subject to occasional flooding, interrupt the steeply sloped valley walls and the narrow creek bottom.

No evidence of the historic trail was found in this segment.



FIGURE 7 Debris in Nepopekum Creek (typical)

In this segment, the trail would be routed and cut along the north valley wall, generally some 15 metres above the creek, except on the intermittent terraces.



FIGURE 8 Intermittent terrace adjacent to Nepopekum Creek

There are several significant obstacles in this segment, including a boulder talus at the eastern end, a 200 metre-wide avalanche chute complete with, likely-permanent, snow and two prominent tributary creeks, including one with a beaver meadow. All of these obstacles are passable immediately adjacent to Nepopekum Creek but switchbacks will need to be constructed to get down to the creek from the routing along the valley wall.

The historic trail shown on the 1914 Department of Lands map was drawn on the north side of the creek however there was no evidence of it in this segment. Given the extensive slide alder/vine maple/red osier dogwood tangles between the creek and the valley walls, any remnant trail would be quickly reclaimed unless in constant use.



FIGURE 9 Boulder talus into Nepopekum Creek



FIGURE 10 Avalanche chute into Nepopekum Creek

4.3 Segment 3

The third segment of the route begins at the west end of Segment 2 and ends at the Centennial Trail Bridge crossing of Nepopekum Creek. This 6.6 kilometre section drops 200 metres in elevation through the canyon. There are 2 significant rock bluff areas where the creek abuts the canyon walls and rockwork would be required to establish the trail. Beyond these bluffs, the trail would need to be cut into the canyon wall some 5 metres above the creek flood line for some 5 kilometres.

The remainder of this segment includes a series of minor alluvial terraces which would accommodate the trail.

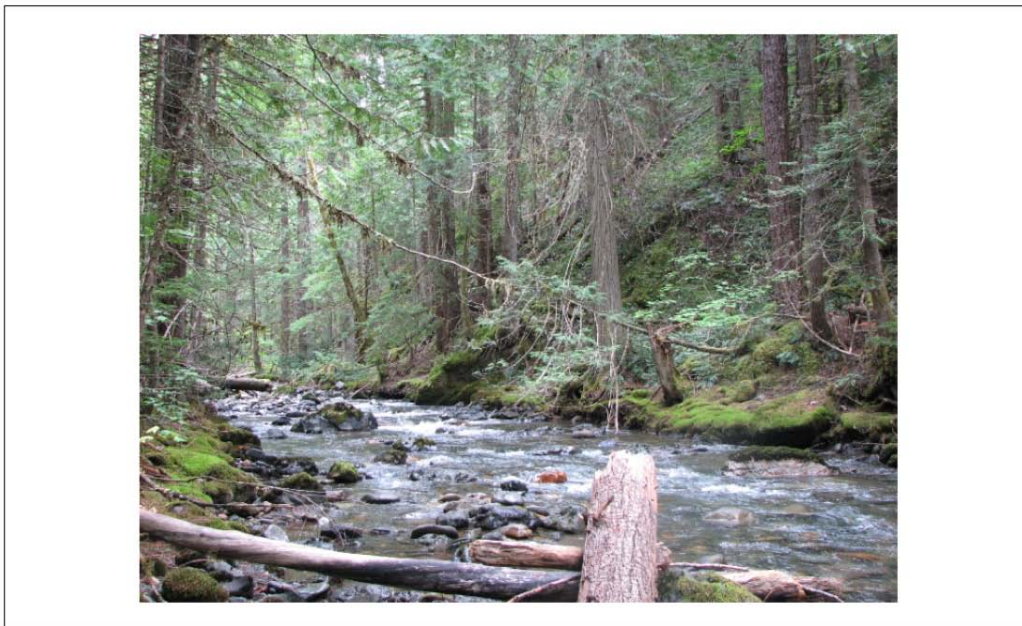
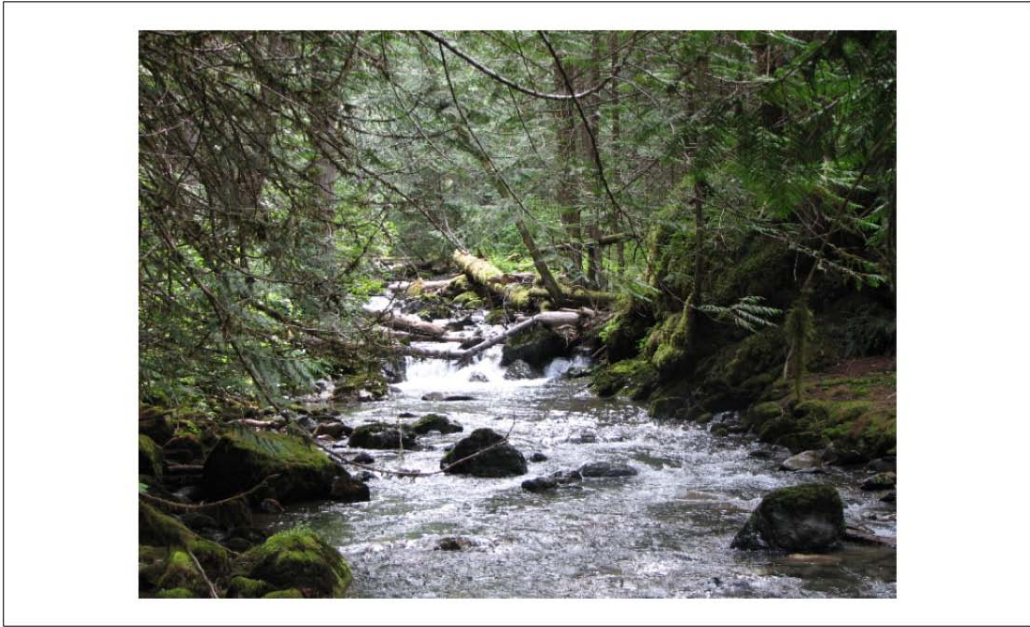


FIGURE 11 Canyon walls restricting Nepopekum Creek

This segment poses the most difficult terrain for the trail's establishment. The segment also includes significant old growth Douglas-fir and red cedar as well as presenting a pleasant coastal creek environment of mossy canyon walls and fast water.

The historic route was mapped on the south side of the creek but that location is unlikely due to the terrain. Any trail route would be on the north (right) side. Some evidence of trail and a blaze was evident on the north side but it is inconclusive if it represented the historic route.



FIGURES 12 and 13 Creek environment at the canyon's western exit and debris and flooding extent in the main part of the canyon

4.4 Segment 4

The fourth and final segment of the route commences at the Centennial Trail Bridge and concludes at the Nepopekum Bar Trailhead.

This 2.7 kilometre segment is substantially constructed to horse trail standard as a 2005 Skagit Environmental Endowment Commission trail crew constructed a two kilometre hiking trail from the Silver-Skagit Road to join the Centennial Trail where it crosses Nepopekum Creek. Only minor vegetation clearing to accommodate a horse trail would be required. If the decision to use Nepopekum Bar Trailhead as the trailhead for the proposed Nepopekum Creek Trail was approved, a short, 500 metre connector trail, west of the Silver-Skagit Road, could be constructed from the recently constructed trail.



FIGURE 14 2005 SEEC Centennial Trail Connector

However, it is likely that the Whitworth Meadow Horse Camp provides a better trailhead option.

The use of the existing horse camp as the designated trailhead for the proposed Nepopekum Trail (see Figure 4) would entail using the existing Centennial Trail, a designated horse trail, south to Whitworth Meadow (Forest) horse camp. There are several advantages to this option including the horse trail/staging facilities are in place, no new trail would be required and the horses would not need to be led across Nepopekum Creek Bridge on the Silver-Skagit Road.



FIGURE 15 Whitworth Meadow (Forest) Horse Camp (typical site)

The horse camp has 20 designated, pull-through campsites, water, sanitary and information facilities as well as individual corrals for the horses and currently acts as the southern trailhead for both the Centennial Trail and the Skyline II Trail.

5. Trail Costs³

The costs reflect the construction of a Type II horse trail from the Strawberry Flats⁴ Trailhead in E.C. Manning Park to the Nepopekum Bar Trailhead in Skagit Valley Park.

TRAIL SEGMENT	PROJECT MANAGEMENT	LABOUR	EQUIPMENT & MATERIALS	TRANSPORTATION
	4 days/month \$1000/day all found	4 person crew \$850/day all-found 35 hour week 10 days in/4 out	<ul style="list-style-type: none"> • Camp/Phone • Signage • Clearing tools/Fuel 	<ul style="list-style-type: none"> • Helicopter \$1800 • Truck rental
1 11.6Km 100m/day	24,000	104,000	10,000	30,000
2 4.7Km 35m/day	24,000	114,000	9,000	47,000
3 6.6Km 30m/day	44,000	187,000	9,000	5,000
4 2.7Km 400m/day	2,000	6,000	Included in Segment 3	1000
5 Strawberry Flats to Derek Falls Upgrade 2.4Km 150m/day	3,000	14,000	Included in Segment 1	1,000
TOTAL \$624,000	97,000	425,000	18,000	84,000

³ Costs are derived from 2009 Ministry of Forests Protection Branch's all-found costs for remote fire crews on auxiliary status.

⁴ The costs include upgrading the 3 Falls Trail to a Type II horse trail in order to allow a connector from the proposed Nepopekum Creek Trail to the designated Gibson horse trail at Strawberry Flats.

In total, the construction for a Type II horse trail would take one, four person crew some 450 days based at two remote stations in the Nepopekum Creek Valley serviced from Hope, as well as the Skagit Valley for Segment 4, and E.C. Manning Park for Segment 5. If only one crew completed the project, some 3 years, materials and equipment costs would be reduced to one-time costs except for fuel and equipment replacement.

Support from BC Parks would include receiving daily check-in/check out and trailhead pickup/drop off for Segment 1, 4 and 5.

6. Conclusions and Recommendations

The planning action referenced in the *Skagit Valley Management Plan* was intended to determine if the historic route along Nepopekum Creek was first extant and secondly, suitable for the establishment of a horse trail connecting the Skagit Valley with Gibson Pass in E.C. Manning Park and that park's associated horse trails. Although the trail assessment revealed some physical evidence of the historic trail, it is unlikely that horses were used on the route, unlike the Dewdney and Hope Pass Trails, primarily because of the difficult terrain and vegetation, the lack of a developed trail and lack of feed.

Nepopekum Creek's cultural significance, for both parks, is as a historic trading route between First Nations. Given the significant costs associated with the construction of a horse trail and other park priorities outlined in the two management plans, the route should not be considered further for the construction and designation of a horse trail until trail alternatives that can achieve the same purpose of connecting horse trails in the two parks are reviewed as part of future management planning processes.

If the Nepopekum Creek route is not developed as a horse trail, the concept to join the designated horse trails in both parks, including the Dewdney, Hope Pass, Shawatum, Poland Lake, Gibson and Skyline II, would remain and alternatives to the Nepopekum Creek route, including joining the Poland Lake Trail with the Shawatum Trail-both designated horse trails-or upgrading the remainder of Skyline II to a horse trail standard, should be considered as part of future management planning review processes.

Notwithstanding the future management planning processes, Nepopekum Creek's significance as a historic route remains and consideration could be given, also as part of the management planning review processes, to upgrading the route to its likely historic use as a trail route (Type V) with minimal clearing and significantly lower costs than a horse trail or simply leaving it as a known historic route, interpreted through signage and park information.