

BRITISH COLUMBIA MINISTRY OF FORESTS: POST-WILDFIRE NATURAL HAZARD RISK ANALYSIS

LEVEL 2 RECONNAISSANCE REPORT – C40983 PEAR LAKE FIRE

NOTE: The results given on this form are reconnaissance in nature and are intended to be a warning of potential hazards and risks. It is not a detailed risk analysis, and further work may alter the conclusions. Please read the appendix of this report for important limitations. Contact the author for more information.

FIRE NUMBER/STATUS: C40983 Pear Lake Fire classified as under control as of September 14, 2026		FIRE YEAR: 2026	DATE OF FIELD REVIEWS: n/a DATE OF REPORT: October 8, 2026
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REPORT PREPARED FOR: Cariboo Fire Centre			
Fire Size: 165,909 ha (1659 km ²)	Location: Clinton area	Land Ownership: Private and public land, including several provincial parks and a portion of Stswecem'c Xget'tem First Nation reserve lands at Canoe Creek 2 and Spilmouse 4 and Whispering Pines/Clinton Indian Band reserve lands at Clinton 1	
POTENTIAL ELEMENTS AT RISK: 1. Residential structures on private properties 2. Stswecem'c Xget'tem First Nation reserve lands at Canoe Creek 2 and Spilmouse 4, Whispering Pines/Clinton Indian Band reserve lands at Clinton 1, St'uxwtéws (Bonaparte First Nation) reserve lands at Lower Hat Creek 2 3. Highway 97, Highway 99 and secondary public roads 4. Marble Range, Big Bar Lake, Downing and Chasm Provincial Parks 5. CN railway 6. BC Hydro transmission line and substation 7. Water resources and infrastructure in the Clinton Community Watershed 8. Other water licences and points of diversion within or downslope of the fire perimeter			
WATERSHEDS AFFECTED:	TOTAL AREA (ha)	WATERSHED AREA BURNED	AGGREGATE BURNED AT MODERATE AND HIGH SEVERITY
Allen Creek	2392	51% (1222 ha)	40% (947 ha)
Maiden Creek	5955	41% (2451 ha)	30% (1797 ha)
Clinton Creek	6663	86% (5697 ha)	76% (5052 ha)
Soues Creek	301	97% (292 ha)	86% (260 ha)
Juan Creek	1250	97% (1208 ha)	92% (1150 ha)
Fortytwo Creek	1203	91% (1094 ha)	80% (966 ha)
Bowden Creek	270	99% (267 ha)	86% (232 ha)
Gabriel Creek	601	90% (543 ha)	71% (429 ha)
Minch Creek	3343	97% (3251 ha)	94% (3137 ha)
Hambrook Creek	571	95% (542 ha)	87% (496 ha)

Two Mile Creek	707	8% (54 ha)	5% (34 ha)
Porcupine Creek	2382	6% (142 ha)	5% (124 ha)
Gillon Creek	3693	37% (1369 ha)	27% (1009 ha)
Milkbranch Creek	1751	39% (676 ha)	32% (563 ha)
Pavilion Creek	4482	60% (2703 ha)	51% (2292 ha)
Robertson Creek	4695	7% (311 ha)	6% (265 ha)
Timian (H5) Creek	2398	13% (310 ha)	10% (245 ha)
Fiftyone Creek	4166	95% (3967 ha)	79% (3284 ha)
Fiftyseven Creek	11,034	69% (7609 ha)	58% (6385 ha)
Fiftynine Creek	17,590	80% (14,025 ha)	61% (10,778 ha)
Sixtyone Creek	3737	93% (3466 ha)	71% (2661 ha)
Fly Creek	13,809	29% (4033 ha)	23% (3232 ha)
Eightythree Creek	99,260	11% (10,506 ha)	9% (8511 ha)
Big Bar Creek	45,156	50% (22435 ha)	42% (18,838 ha)
Knox Creek	2035	86% (1756 ha)	66% (1344 ha)
Stable Creek	4810	36% (1754 ha)	28% (1354 ha)
Jesmond Creek	3327	57% (1884 ha)	42% (1398 ha)
Tributary to Canoe Creek	38,419	40% (15355 ha)	30% (11,446 ha)

OVERVIEW:

The Pear Lake Fire has burned 165,909 ha of the southwestern portion of the Cariboo Plateau. The fire is classified as under control and is not expected to grow. The Pear Lake Fire area extends from the Fraser River valley and Marble Range in the west to the Bonaparte Plateau and Loon Lake area in the east, and from the Highway 97 corridor near Clinton northward to Big Bar Creek. It is primarily located within the Thompson Nicola Regional District (TNRD), though the southwest corner of the fire has affected a portion of the Squamish Lillooet Regional District (SLRD).

Aerial reconnaissance was conducted by Gareth Wells (Ministry of Forests) on August 19, 2026; however, no ground-based field assessment was undertaken. This report was prepared on an expedited basis to support the timely initiation of a Level 4 Detailed Assessment. It therefore relied primarily on aerial observations, terrain interpretation, satellite imagery, lidar data, and available geospatial data. Accordingly, the hazard and risk ratings presented herein are preliminary and may be refined through detailed field investigations undertaken as part of a subsequent Level 4 Detailed Assessment.

The burned area encompasses significant transportation infrastructure, including Highway 97, Highway 99, secondary public roads, and the CN Rail corridor. Many parcels of private land may also potentially be affected by post-wildfire flooding or landslides. For the purposes of this assessment, the evaluation of risk to private property focused on residences and structures appearing to be residential. Satellite imagery and local government address-point data were used to identify the approximate locations of residences within private parcels. Additional values at risk include a major BC Hydro transmission line and substation, water resources and associated infrastructure within the Clinton Creek Community Watershed, and other licensed water users and points of diversion located within or downstream of the fire perimeter.

BC Hydro transmission line poles are generally located on high ground and are therefore not considered elements at risk in this assessment; however, the associated substation is included due to its importance and location. The CN Rail corridor traverses a large portion of the Pear Lake Fire area and may be susceptible to a range of post-wildfire hazards. However, this report is not intended to provide a comprehensive assessment of railway infrastructure. The railway is considered only where it coincides with drainages or hazard areas otherwise evaluated in this study.

SUMMARY OF TERRAIN CONDITIONS, THE EFFECTS OF THE FIRE, AND PREVIOUS FIRE AND POST-WILDFIRE GEOHAZARD ACTIVITY IN THE SURROUNDING AREA:

The northern portion of the fire is primarily composed of low-relief, glacially modified uplands dotted with numerous lakes and marshes. The western portion of the fire extends into the Marble Range, a prominent carbonate mountain range that separates the Cariboo Plateau from the deeply incised Fraser River valley. The Marble Range is characterized by steep relief (up to 2100 m) and extensive karst topography. The southeastern portion of the fire encompasses Chasm Provincial Park and the Bonaparte River valley, where gently rolling volcanic uplands are dissected by the deeply incised valleys of Chasm Creek and the Bonaparte River, forming steep canyons, escarpments and broad valley bottoms.

The Pear Lake Fire is surrounded by several recent fires, including Kelly Creek Fire (2009) to the west, McKay Creek Fire (2021) to the southwest, Flat Lake Fire to the north (2021) and Elephant Hill Fire (2017) to the east. The Pear Lake Fire reburned around 100 km² of the Elephant Hill Fire area southeast of Highway 97 and Clinton.

Much of the Pear Lake Fire burned at moderate to high severity. High burn severity patches are widespread and commonly concentrated within forested upland and headwater areas, with the largest contiguous areas occurring in the southern and central portions of the burned area. In contrast, the southeastern portion of the fire, which reburned areas affected by the Elephant Hill Fire, burned predominantly at moderate severity. The low-relief terrain in the northern portion of the fire contains fewer extensive high-severity patches, likely reflecting the influence of wetlands, marshes, and other moisture-retaining landforms. The predominance of moderate and high burn severity across the fire area is expected to increase post-wildfire runoff in many affected watersheds.

Unless otherwise specified, all references to burn severity in this report refer to vegetation burn severity. Vegetation burn severity is derived from satellite imagery and reflectance data, whereas soil burn severity reflects field-observed changes in ground cover, soil structure, and water repellency. No field assessment has been completed to evaluate soil burn severity within the study area; therefore, the degree to which soil burn severity differs from mapped vegetation burn severity is currently unknown. Burn severity values presented in this report should be considered preliminary and may not fully reflect field conditions.

The area surrounding Clinton has a well-documented susceptibility to runoff-generated hazards following wildfire. After the Kelly Lake Fire, several debris flows were triggered above Pear Lake on August 2, 2010, by an intense, localized thunderstorm, depositing sediment adjacent to the lake. More widespread impacts occurred following the Elephant Hill Fire, when post-fire flooding and debris flow activity affected numerous watersheds in 2018, particularly those along the Highway 97 corridor to the south of Clinton. In total, at least 88 post-wildfire sediment-laden flood or debris flow events were documented across the Elephant Hill Fire in 2018, less than a year after the fire (Jordan, 2018).

Within the portion of the Elephant Hill burn area later reburned by the Pear Lake Fire, approximately 13 debris flood and debris flow events were documented along Loon Lake Road in 2018. These events primarily originated from small, steep burned catchments, with one event causing damage to a residence situated on an alluvial fan. Significant flooding also occurred in the larger Maiden Creek watershed south of Clinton along Highway 97, where extensive gravel deposition affected adjacent agricultural lands. In addition, more than

20 debris flood and debris flow events were reported along Highway 97 between Loon Lake Road and Clinton, largely originating from steep, southwest-facing gullies affected by moderate to high burn severity. Most of the Elephant Hill post-wildfire events were triggered by an exceptionally intense rainstorm on August 11, 2018, although flooding in larger watersheds such as Maiden Creek are thought to have occurred during spring runoff and other summer storm events.

Post-wildfire sediment-laden floods and debris flows have already occurred following the Pear Lake fire along Pavilion-Clinton Road and in the area around Jesmond. These events are described in more detail below. Collectively, these events demonstrate the elevated risk of post-fire flooding, sediment transport, and debris flow initiation in the broader Clinton area following wildfire.

IMPACTED WATERSHED SUMMARY:

Watershed morphometrics were evaluated to provide a first-order assessment of the hydrogeomorphic processes most likely to affect each watershed. The analysis considered watershed area, relief, stream length, and the Melton ratio (watershed relief divided by the square root of watershed area), which are commonly used to distinguish between flood, debris flood, and debris flow-prone watersheds. Because hydrogeomorphic processes occur along a continuum, a single watershed may experience multiple types of events, and the boundaries between process types are transitional. Given the reconnaissance nature of this report, process interpretation for this initial assessment was based primarily on watershed morphometrics; however, more detailed assessment, particularly field investigation, may refine the interpretation of the dominant hydrogeomorphic process and expected watershed response.

Watershed	Area (km ²)	Min elevation (m)	Max elevation (m)	Stream length (km)	Melton ratio	Anticipated hydrogeomorphic events
Allen Creek	23.9	780	1900	7.9	0.23	Debris flood
Maiden Creek	59.6	700	1980	16.8	0.17	Flood
Clinton Creek	66.6	960	2020	20.2	0.13	Flood
Soues Creek	3.0	920	1420	8.1	0.29	Debris flood
Juan Creek	12.5	980	2000	8.8	0.29	Debris flood
Fortytwo Creek	12.0	1060	2160	5.7	0.32	Debris flood
Bowden Creek	2.7	1040	2000	3.0	0.58	Debris flow
Gabriel Creek	6.0	1100	2160	4.6	0.43	Debris flood
Minch Creek	33.4	1040	2080	8.9	0.18	Flood
Hambrook Creek	5.7	1080	1980	5.0	0.38	Debris flood
Two Mile Creek	7.1	1200	2160	4.5	0.36	Debris flood
Porcupine Creek	23.8	1320	2260	7.2	0.19	Flood
Gillon Creek	36.9	820	2000	13.7	0.19	Flood
Milkbranch Creek	17.5	820	2000	13.7	0.26	Debris flood
Pavilion Creek	44.8	820	2080	13.7	0.19	Flood
Robertson Creek	47.0	740	1980	15.4	0.18	Flood
Timian (H5) Creek	24.0	700	1740	9.5	0.21	Debris flood
Fiftyone Creek	41.7	900	1480	16.5	0.09	Flood
Fiftyseven Creek	110.3	1100	2280	36.3	0.11	Flood
Fiftynine Creek	175.9	920	2160	NA	NA	Flood

Sixtyone Creek	37.4	920	1140	NA	NA	Flood
Fly Creek	138.1	840	1140	NA	NA	Flood
Eightythree Creek	992.6	1040	1140	NA	NA	Flood
Big Bar Creek	451.6	300	2240	55.1	0.09	Flood
Knox Creek	20.3	1120	1960	7.1	0.19	Flood
Stable Creek	48.1	820	2240	16.0	0.20	Debris flood
Jesmond Creek	33.3	920	2160	11.4	0.21	Debris flood
Tributary to Canoe Creek	384.2	920	1400	24.9	0.02	Flood

SUMMARY OF POST-FIRE HAZARD AND RISK

1. Hazard = $P(H)$, the probability of occurrence of a hazardous event
2. Probability of spatial impact, $P(S:H)$, the probability of a hazard reaching or affecting an element at risk
3. Partial Risk, the probability of a hazard occurring and affecting an element at risk = $P(H) \times P(S:H)$
4. Location with the highest risk rating given; at other locations the risk may be lower

The following section describes the impacted watersheds and presents partial risk summary tables for the identified elements at risk, along with a brief rationale for the assigned ratings. The most relevant post-fire hazards are described for each watershed, though other fire-related hazards may exist, which have not been directly addressed at this level of assessment, and are generally considered to pose less risk. For assessment purposes, the fire area has been divided into the following geographic areas:

1. Highway 97 corridor from Maiden Creek north to Clinton
2. Bonaparte River valley along Loon Lake Road
3. Clinton area
4. Pavilion-Clinton Road corridor from Clinton to Kelly Lake
5. Southern Jesmond Road
6. Highway 99 corridor
7. Highway 97 corridor north of Clinton
8. Big Bar Creek watershed
9. Canoe Creek watershed

Highway 97 corridor from Maiden Creek north to Clinton (Map 1)

Northwest of the Bonaparte River valley, Highway 97 follows the valleys of Maiden Creek and Allen Creek, and the internally draining Alkali Lakes valley. Land use within the valley is dominated by private property, including ranch lands and scattered rural residences.

Maiden Creek drains the terrain southeast of Pavilion Mountain and Tsilsalt Ridge. Terrain in the upper watershed consists of open forest, grassland, and rolling uplands with shallow drainage depressions, while the downstream reach becomes increasingly confined within an incised valley. Where Maiden Creek emerges onto the valley floor, it has formed a broad alluvial fan that is intersected by Highway 97 and adjacent agricultural lands. The watershed's morphometric characteristics indicate that flooding is the dominant hydrogeomorphic process. Although only a small portion of the watershed was burned during the Elephant Hill Fire, Maiden Creek produced a notable post-wildfire flood response. In 2018, a significant flood deposited extensive gravel on agricultural land near the Loon Lake Road crossing, and field evidence suggests a second

flood may have occurred during subsequent summer rainstorms. This response is notable given the large size of the watershed and the limited extent of burning, suggesting that post-wildfire events remain a credible hazard despite relatively modest burn coverage. Approximately 40% of the watershed burned during the Pear Lake Fire mostly at moderate and high severity. The watershed area and burn severity values in this report are based only on the portion of the watershed upstream of where it enters the Highway 97 valley.

Allen Creek is located north of Maiden Creek and drains the eastern slopes of Tsilsalt Ridge south of Clinton. The watershed is characterized by open forest, grassland, and rolling upland terrain that transitions into a progressively steeper and more confined valley downstream. A broad alluvial fan has formed where Allen Creek emerges onto the valley floor. The fan surface is primarily used for agriculture, with Highway 97 located along its outer margin. Watershed morphometrics indicate that debris floods are the dominant hydrogeomorphic process. Approximately 50% of the watershed was burned, including roughly 40% at moderate or high burn severity.

North of Allen Creek, several draws on the west side of Highway 97 drain mountainous terrain of moderate relief that transitions downslope to a gently sloping plateau before descending a steeper hillslope and emerging onto a series of small alluvial fans adjacent to the highway. Burn severity is predominantly high, with isolated pockets of moderate and low severity. These draws are morphologically similar to channels that produced post-wildfire sediment-laden floods following the Elephant Hill Fire. Kay Creek is the largest drainage in this area and terminates on an alluvial fan also occupied by agricultural land.

The east side of the valley was burned during the Elephant Hill Fire in 2017 and has since reburned during the Pear Lake Fire. Small, steep draws on the southwest-facing slopes drain a portion of the plateau above. At least 20 debris flow and flood events were documented in this area following the Elephant Hill Fire. North of 6 Mile Lake, both the slope and plateau reburned, predominantly at moderate severity, whereas south of the lake only the plateau above the draws reburned, also predominantly at moderate severity.

Drainages along Alkali Lakes East (east of Highway 97, from Clinton south to Six Mile Lake) – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 97	Moderate	High	High
Private property (Residences)	Moderate	Moderate	Moderate

Due to the prevalence of moderate burn severity, and due to terrain characteristics, there is a moderate likelihood of post-wildfire debris flows or sediment-laden floods initiating in burned draws on the hillslope east of the highway between Clinton and Six Mile Lake. Several debris flows or floods occurred along this slope after the Elephant Hill Fire, indicating that this terrain is susceptible to post-wildfire natural hazard events.

The likelihood of impacts to private residences east of Highway 97 is rated as moderate, as most structures appear to be located away from fan apexes. In contrast, the likelihood of impacts to Highway 97 is rated as high where the highway runs directly along the toe of the slope below steep draws. A more detailed assessment, including field investigation, is required to refine the hazard likelihood ratings and likelihood of spatial impact for individual elements at risk.

Drainages along Alkali Lakes West (west of Highway 97, from Clinton south to Allen Creek) – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 97	High	Moderate - High	High - Very High
Private property (Residences)	High	Moderate - High	High - Very High

Owing to the combination of high burn severity and steep, dissected terrain, there is a high likelihood of debris flows and sediment-laden floods originating from burned draws on the hillslope west of Highway 97 between Clinton and Allen Creek. This hillslope exhibits terrain characteristics similar to those of the east side of the valley, where post-wildfire debris flows occurred in 2018, and is therefore considered similarly susceptible to post-wildfire natural hazards.

The likelihood of spatial impact to private residences west of Highway 97 is generally rated as moderate, as most structures appear to be located away from fan apexes. However, several residences occupy locations where the likelihood of spatial impact is greater. A more detailed assessment, including field investigation, will help refine partial risk ratings for individual properties and other elements at risk. The likelihood of impact to Highway 97 is rated moderate to high, as the highway traverses the valley bottom. In some locations it is situated at the toe of the hillslope, while elsewhere it is set back by more than 100 m.

Allen Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 97	High	Low	Moderate
Private property (Residences)	High	Moderate	High

Forty percent of the Allen Creek watershed was burned at moderate and high burn severity, and as such the likelihood of a post-wildfire debris flood is rated as high. The nearby Maiden Creek watershed experienced a significant flood following the 2017 Elephant Hill Fire despite relatively limited wildfire impacts. Although Maiden Creek is larger than Allen Creek, the two watersheds exhibit similar morphometric characteristics, suggesting that Allen Creek may experience a comparable hydrologic response following wildfire disturbance.

The Allen Creek fan is used primarily for agriculture; however, several structures are visible on satellite imagery, and multiple address points are identified on the fan by the Thompson-Nicola Regional District (TNRD) spatial data available on their website. Most structures appear to be located midway down the fan rather than near the fan apex and are therefore assigned a moderate likelihood of spatial impact. Highway

97 is situated along the distal margin of the fan and is assigned a low likelihood of spatial impact, as any debris flood event may attenuate across the fan surface before reaching the highway.

Maiden Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 97	High	Low	Moderate
Private property (Residences)	High	Low	Moderate

Burn severity in the headwaters of Maiden Creek is characterized by a mosaic of unburned, low, moderate, and high burn severity areas. Despite this variable burn pattern, approximately 41% of the watershed was affected by wildfire. Given the documented flood response on Maiden Creek following the 2017 Elephant Hill Fire, the likelihood of a post-wildfire flood is rated as high.

The Maiden Creek fan is used primarily for agriculture. Residential structures are located more than 500 m east of the fan apex and approximately 200 m north of the channel. Highway 97 is situated along the distal margin of the fan on the east side of the valley bottom. Accordingly, the likelihood of spatial impact to these residences and the highway is rated as low. However, sediment deposition and flooding associated with the 2018 event extended downstream to the Loon Lake Road intersection where Maiden Creek joins the Bonaparte River, indicating that flood related impacts may extend beyond the fan and affect downstream areas.

Drainages along Allen Creek East (east of Highway 97 from 6 Mile Lake south to Maiden Creek) – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 97	Low	High	Moderate

The draws along this hillslope are susceptible to post-wildfire natural hazard events, as multiple debris flow and flood events occurred following the Elephant Hill Fire in 2018. During the Pear Lake Fire, only the plateau area above the draws reburned at moderate severity. Given the limited extent of burning within the draws themselves and the generally moderate burn severity, the likelihood of post-wildfire events originating from these drainages is rated as low.

Highway 97 is located directly at the base of the slope and is therefore highly susceptible to any events that originate from these drainages. Consequently, the likelihood of spatial impact to Highway 97 is rated as high.

Bonaparte River valley along Loon Lake Road (Map 1)

This area was heavily impacted by the Elephant Hill Fire, with at least 13 debris flow and debris flood events documented in the year following the fire. Most originated from small, steep draws that were burned at low

to moderate severity. The sparsely forested and grassland plateau west of Loon Lake Road has now been reburned by the Pear Lake Fire. The two largest drainages along this slope (L2 and L3 Creeks on Map 1) were burned mostly at moderate severity, while the headwater areas of the remaining draws burned at mostly moderate severity.

Drainages along Loon Lake Road – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Loon Lake Road	Moderate	High	High
Private property (residences)	Moderate	Moderate - High	Moderate - High

The documented post-wildfire events following the Elephant Hill Fire indicate that these draws are susceptible to debris flows and sediment-laden floods. Given the extent and severity of the fire impacts on the plateau above Loon Lake Road, the likelihood of post-wildfire debris flows and sediment-laden floods originating from these drainages is rated as moderate.

A residence is located near the apex of the alluvial fan below L3 Creek, and several additional residential structures are situated at the base of the slope. Loon Lake Road is located directly along the slope toe and may be affected by events originating from multiple drainages. Consequently, the likelihood of spatial impact to residences is rated as moderate to high, while the likelihood of spatial impact to Loon Lake Road is rated as high.

Clinton area (Map 2)

Southeast of town, several residential structures are located below areas burned at low and moderate severity on the southeast side of the Clinton Creek valley. However, there are no well-defined creek channels, draws, or alluvial fans along this slope, suggesting a low potential for post-wildfire flooding or debris flows. Increased overland runoff may occur in this area following rainfall events.

The **Clinton Creek** watershed drains the eastern flank of the Marble Range and is characterized by steep headwater tributaries, broad wetland and meadow complexes, and extensive glaciofluvial channels that formed during deglaciation. Clinton Creek is the primary source of drinking water for the Village of Clinton, and a separate assessment has been completed to evaluate post-wildfire risks to the water supply system. Morphometric analysis indicates that flooding is the dominant hydrogeomorphic process. The burn severity in the headwaters is a patchy mosaic of high, moderate, and low severity, while areas below approximately 1500 m elevation were burned predominantly at high severity. Overall, the Pear Lake Fire affected 86% of the watershed, and 76% of the watershed was burned at moderate or high severity. A post-wildfire assessment for the Village of Clinton completed by SNT Geotechnical Ltd. in September 2026 identified increased runoff, sediment transport, and culvert blockage as the main concerns for the Village's water system following the Pear Lake Fire. However, the broad wetland and meadow complexes within the watershed, together with generally low channel gradients, are expected to attenuate streamflow and promote sediment deposition before runoff reaches the lower watershed. A key concern is the CN Rail

crossing on lower Clinton Creek, where potential blockage of the existing culvert could result in upstream impoundment and a potential outburst flood affecting the Village.

Soues Creek also occupies a broad glaciofluvial meltwater channel, similar to Clinton Creek, though the watershed only reaches 1400 m elevation and does not extend to the mountains of the Marble Range. The watershed is long and narrow, generally ranging from 200 to 400 m in width for much of its length. The channel was dry during a field review completed in August 2026 by SNT Geotechnical Ltd. for the Village of Clinton. A partially blocked culvert under the railway embankment was identified during this field review and no culvert outlet was located downslope. Morphometric characteristics suggest that debris flood is the dominant hydrogeomorphic process. However, the lack of a well-defined downstream channel suggests that surface flow is episodic rather than persistent. The channel gradient in the upper watershed averages 3-4%, which is sufficiently low to promote flow attenuation and limit the rapid concentration of runoff, but the channel steepens to 10% above the railway. Nearly the entire watershed was burned, with 86% affected by moderate or high burn severity, resulting in a high potential for increased post-wildfire runoff and sediment transport. Given the potential for increased post-wildfire runoff and sediment transport, the condition and capacity of the railway crossing should be assessed by CN Rail.

Juan Creek also occupies a broad glaciofluvial meltwater channel formed during deglaciation and exhibits watershed characteristics like Soues Creek, although it is wider and drains upland terrain reaching elevations of approximately 1980 m. Morphometric analysis suggests that debris floods are the dominant hydrogeomorphic process. Satellite imagery and lidar data indicate a defined channel downstream of the CN Rail embankment; however, there is little evidence of significant alluvial fan development, though portions of the valley bottom have been modified by human land use, which may have masked previous fan development. Similar to Soues Creek, nearly the entire Juan Creek watershed was burned, with 92% affected by moderate or high burn severity. Given the potential for increased post-wildfire runoff and sediment transport, the condition and capacity of the railway crossing should be assessed by CN Rail to determine its capacity and susceptibility to blockage and overtopping.

Clinton Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	Moderate	Low - Moderate	Low – Moderate
CN railway	Moderate	High	High
Highway 97	Moderate	Moderate	Moderate

While 86% of the Clinton Creek watershed was burned during the Pear Lake Fire, with much of the watershed affected by moderate to high burn severity, the broad wetland and meadow complexes within the watershed, together with generally low channel gradients, are expected to attenuate streamflow and promote sediment deposition before runoff reaches the lower watershed. Although increased runoff and sediment transport are anticipated following the wildfire, these natural storage features are expected to reduce downstream flood impacts and sediment transport. Consequently, the likelihood of post-wildfire flooding on Clinton Creek is rated as moderate.

The CN railway crossing on lower Clinton Creek was identified as the primary post-wildfire hazard concern in the SNT Geotechnical Ltd. assessment completed for the Village of Clinton. The existing 700 mm culvert may

be undersized for post-wildfire flows and susceptible to blockage by sediment and debris. Failure of the crossing could result in upstream impoundment and the potential for an outburst flood affecting downstream residences, Highway 97, and other infrastructure within the Village of Clinton. This hazard is not assessed further in this report, as it is being evaluated independently by the Village of Clinton and its consultant.

Given the position of the railway and its potentially undersized culvert, the likelihood of spatial impact to the railway crossing is rated as high, while the likelihood of spatial impact to downstream residences and Highway 97 is rated as moderate. In the case of an outburst flood due to an impoundment of water behind the railway embankment, the likelihood of spatial impact to the highway and residences would be high.

A private property parcel is located approximately 1 km upstream of the Village of Clinton within a broad reach of the Clinton Creek valley. Several residential structures appear to be set back from the creek channel; however, their precise location relative to the channel has not been confirmed through field investigation. The structures are situated within a broad meadow and low-gradient reach approximately 1 km in length, where streamflow attenuation and natural sediment deposition are anticipated to occur. Consequently, the likelihood of spatial impact to the residential structures on this property is rated as low.

Soues Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences) within the Village of Clinton	Moderate	Moderate	Moderate
CN railway	Moderate	High	High

Due to the high burn severity and extent of wildfire impacts within the Soues Creek watershed, an elevated post-fire runoff and erosion response is anticipated. Although Soues Creek was dry during the August 2026 field review by SNT Geotechnical Ltd. and no well-defined channel was identified, the partially blocked culvert beneath the CN Rail embankment indicates that intermittent surface flow reaching the railway does occur. Elevated runoff during spring freshet, intense short-duration rainfall, or prolonged rainfall events may therefore result in increased overland flow, sediment transport, and debris flood activity. Accordingly, the likelihood of a post-wildfire debris flood on Soues Creek is rated as moderate.

The CN railway crossing includes partially blocked drainage infrastructure that may contribute to localized ponding or impoundment during high-runoff events. The likelihood of spatial impact to the railway crossing is rated as high. Residential development within the Village of Clinton is located approximately 250 m downslope of the railway embankment; therefore, the likelihood of spatial impact to residences on private property is rated as moderate.

A more detailed assessment, including field investigation, is recommended to refine the hazard and spatial likelihood ratings at this site.

Juan Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	Moderate	Low	Low
Pavilion-Clinton Road	Moderate	Low	Low
CN railway	Moderate	High	High

Given the high burn severity and extent of wildfire impacts within the Juan Creek watershed, increased post-wildfire runoff is expected. The presence of a well-defined downstream channel suggests that Juan Creek supports more sustained flow than Soues Creek. However, the broad, low-gradient nature of much of the mid-watershed and the absence of a clearly defined alluvial fan on available LiDAR data suggest some uncertainty regarding the watershed response to intense or prolonged rainfall events. Consequently, the likelihood of a post-wildfire debris flood on Juan Creek is rated as moderate.

One residence is located upslope of the CN railway embankment, while several additional residences are situated downslope along Pavilion-Clinton Road. The upslope residence is adjacent to Juan Creek but appears to be set back from a more deeply incised section of the channel, while the downstream residences are located away from the valley margin. Consequently, the likelihood of spatial impact to residences on private property is rated as low. The likelihood of spatial impact to the CN Rail crossing is rated as high, as the railway crosses the channel where Juan Creek emerges onto the broad valley. Pavilion-Clinton Road is located farther downslope and is assigned a low likelihood of spatial impact.

A more detailed assessment, including field investigation, is recommended to refine the hazard and spatial likelihood ratings at this site.

Pavilion-Clinton Road corridor from Clinton to Kelly Lake (Maps 2 and 3)

West of Clinton, Pavilion-Clinton Road follows a broad valley floor through the Marble Range, with peaks exceeding 2,000 m to the north and south. Cutoff Valley Creek meanders eastward along the valley floor before joining Clinton Creek and then draining into the Bonaparte River. Numerous unnamed tributary streams descend from the surrounding mountain slopes and flow into Cutoff Valley Creek. Kelly Lake forms a drainage divide between the Bonaparte and Fraser River watersheds. West of the divide, Kelly Creek flows southwest from the lake to the Fraser River. The southern slopes along the Pavilion-Clinton Road corridor were burned predominantly at high burn severity, while the northern slopes have more patches of moderate and low burn severity.

On the north side of the valley, the headwater areas of **Fortytwo Creek, Bowden Creek and Gabriel Creek** originate from Marble Range Provincial Park. All three creeks have formed fans where they run out onto the broad valley bottom. Morphometric analysis indicates that the dominant hydrogeomorphic process on Fortytwo and Gabriel Creeks is likely to be debris floods, with Bowden more likely to generate debris flows. All three drainages were almost entirely burned, and the predominance of moderate and high burn severity (>70% in all three watersheds) is expected to increase post-wildfire runoff and sediment availability.

Minch Creek is the largest drainage on the south side of the valley. The watershed drains the eastern slopes of Pavilion Mountain. The morphometric analysis would suggest that the drainage is most susceptible to

floods. Minch Creek burned mainly at high burn severity (80% of the watershed), with small patches of low and moderate severity.

The deposits of two sediment-laden flood events were observed during the helicopter reconnaissance flight on August 19, originating from small drainages along Cutoff Creek Valley East (north of Minch Creek). Both drainages were burned almost entirely at high burn severity. Impacts from these events were limited to agricultural land and local resource roads. However, their occurrence demonstrates the susceptibility of similar drainages in the area to produce post-wildfire sediment-laden floods following high-intensity rainfall.

Hambrook Creek and an unnamed drainage to the north (P7 Creek) drain the northern slopes of Mount Carson before joining Kelly Creek immediately downstream of Kelly Lake. These two drainages are steep, with Melton ratios of approximately 0.4 and mainstem channel gradients exceeding 20%. The dominant hydrogeomorphic process in both watersheds is expected to be debris floods. Both watersheds burned primarily at moderate and high burn severity, affecting approximately 90% of each watershed's area.

Drainages along Cutoff Valley Creek West (between Juan Creek and Fortytwo Creek) – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	Low - Moderate	Moderate – High
Pavilion-Clinton Road	High	High	Very High
CN railway	High	High	Very High

The hillslope northwest of Pavilion-Clinton Road between Juan Creek and Fortytwo Creek transitions from a broad plateau landscape in the east, where drainage is dispersed among poorly defined draws, to the more rugged terrain of the Marble Range in the west, where drainages become increasingly well-defined and confined with alluvial fans along the base of the slope. Burn severity is generally high in the upper portions of the slope, decreasing to predominantly low severity along the lower slopes. Although drainage pathways are poorly defined in the eastern portion of the face unit, the extensive high burn severity across the upper slopes and the presence of increasingly steep and confined drainages toward the west are expected to increase post-wildfire runoff, sediment transport, and the potential for debris flow and sediment-laden flood activity. Accordingly, the likelihood of post-wildfire natural hazard events is rated as high. The high likelihood rating is further supported by reports of debris-flow deposits at the base of the unnamed drainage east of Fortytwo Creek in late September.

The CN railway embankment and Pavilion-Clinton Road are situated along the base of the slope; therefore, the likelihood of spatial impact to this infrastructure is rated as high. Private properties located downslope of the road are generally considered to have a low spatial likelihood of impact. Several residential structures are situated upslope of the road, closer to the toe of the slope and potential flow paths and are therefore assigned a moderate spatial likelihood rating. A more detailed assessment, including field investigation, is recommended to further refine these ratings.

Fortytwo Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	Low	Moderate
Pavilion-Clinton Road	High	Moderate	High
CN railway	High	Moderate	High

Ninety-one percent of the Fortytwo Creek watershed was burned and approximately 80% was affected by moderate or high burn severity, though patches of lower burn severity and unburned vegetation remain throughout the watershed. Given the extent of wildfire impacts within the watershed and its morphology, the likelihood of a post-wildfire debris flood is rated as high.

Much of the Fortytwo Creek fan is used for agriculture. The Pavilion-Clinton Road and the CN railway cross the Fortytwo Creek fan midway between the apex and distal margin, while several residential and agricultural structures are located close to its distal margin. The likelihood of spatial impact is rated as moderate for the road and railway, and low for private property due to its location on the lower portion of the fan.

P1 Creek (between Fortytwo Creek and Bowden Creek) – Debris flow

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Pavilion-Clinton Road	High	Low	Moderate
CN railway	High	Low	Moderate

Due to the large proportion of the P1 Creek watershed that burned at high and moderate burn severity (85%) and the steep, confined nature of the drainage, the likelihood of a post-wildfire debris flow is rated as high. Pavilion-Clinton Road and the CN railway cross the fan near its distal margin; accordingly, the likelihood of spatial impact to these features is rated as low.

Bowden Creek – Debris flow or debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	High	Very High
Pavilion-Clinton Road	High	Moderate	High
CN railway	High	Moderate	High

Given the proportion of moderate and high burn severity within the Bowden Creek watershed (86%), together with the steep watershed terrain and the presence of a well-defined alluvial fan, the likelihood of a post-wildfire debris flow or debris flood is rated as high.

One residential structure on private property is located on the upper half of the Bowden Creek fan; accordingly, the likelihood of spatial impact to this residence is rated as high, although this rating may be refined during future field investigation. Pavilion-Clinton Road and the CN railway cross the fan approximately midway downslope and, consequently, the likelihood of spatial impact to these features is rated as moderate.

P4 face unit between Bowden and Gabriel Creeks – Overland flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	Moderate	Moderate - High	Moderate – High
Pavilion-Clinton Road	Moderate	High	High
CN railway	Moderate	High	High

Although no well-defined stream channels are present, this face unit contains several poorly defined draws that may convey increased overland flow or a sediment-laden flood, which is most likely to occur during high-intensity rainfall events or spring snowmelt. Burn severity is generally low across the lower portion of the face unit, increasing to predominantly moderate severity with localized patches of high severity above approximately 1300 m elevation. Given the presence of potential flow paths and the distribution of burn severity across the slope, the likelihood of post-wildfire overland flow or sediment-laden flooding is rated as moderate.

Several residences are located at the base of the hillside on both sides of the CN railway and Pavilion-Clinton Road. The CN railway embankment and Pavilion-Clinton Road are situated directly downslope of the face unit and are therefore assigned a high likelihood of spatial impact. Several residences are also located near the slope toe and potential flow paths; accordingly, the likelihood of spatial impact to residences on private property is rated as moderate to high. A more detailed assessment, including field investigation, will help refine site-specific spatial likelihood ratings.

Gabriel Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Kelly Creek substation (BC Hydro)	Moderate	Moderate	Moderate
Pavilion-Clinton Road	Moderate	Moderate	Moderate
CN railway	Moderate	Low	Low

The extensive burned area in the headwaters of Gabriel Creek (71% of the watershed burned at moderate or high severity), together with the watershed morphology, suggests an elevated potential for post-wildfire runoff and sediment transport. However, the burn severity pattern is somewhat patchier than in neighbouring watersheds, which may moderate the magnitude and rate of a potential post-fire watershed response. Consequently, the likelihood of a post-wildfire debris flood is rated as moderate.

The Kelly Lake Substation is located on the western side of the Gabriel Creek fan approximately midway downslope; therefore, the likelihood of spatial impact to the substation is rated as moderate. Pavilion-Clinton Road is located more directly downstream of the fan apex, but slightly farther downslope than the substation, and is also assigned a moderate spatial likelihood rating. The CN railway is located near the distal portion of the fan and is assigned a low spatial likelihood rating.

Interpretation of lidar data and satellite imagery suggests that Gabriel Creek has been channelized across the alluvial fan, likely to convey flow away from the nearby BC Hydro substation. Given the potential for increased post-wildfire runoff, sediment transport, and debris delivery, BC Hydro may wish to evaluate whether additional mitigation measures are warranted to protect the substation. In particular, sediment or debris accumulation within the channel could reduce conveyance capacity, leading to channel blockage, overbank flow, or avulsion across the fan.

A small drainage immediately west of Gabriel Creek was also partially burned, predominantly at low burn severity with localized patches of moderate and high burn severity. This drainage also appears to have been modified to convey flow across the fan, and similar considerations regarding channel capacity, blockage, and flow diversion may apply.

Minch Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	Moderate	High

Given that **Minch Creek** burned almost entirely at high and moderate burn severity (94% of the watershed), the likelihood of post-wildfire flooding is rated as high. Several residential structures appear to be located adjacent to the channel near its confluence with Cutoff Valley Creek. No well-defined alluvial fan is evident on LiDAR data or satellite imagery, and the degree of channel confinement is unknown. Consequently, the likelihood of spatial impact is rated as moderate; however, this rating should be considered preliminary. A more detailed assessment, including field investigation, will help refine the spatial likelihood rating and more accurately identify potential flow paths.

Drainages along Cutoff Valley Creek South (between Minch Creek and Kelly Lake) – Debris flow or sediment-laden flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	Low - Moderate	Moderate - High

The north-facing slope between Minch Creek and Kelly Lake is dissected by a series of short, steep drainages and was burned almost entirely at high burn severity. Given the steep terrain and extensive high burn severity, the likelihood of post-wildfire debris flows and sediment-laden flooding is rated as high. Residential structures are located at the base of the slope below P5 and P6 Creeks. Most residences appear to be set back more than 150 m from the slope break and outside potential fan depositional areas identified from LiDAR data; accordingly, they are assigned a low likelihood of spatial impact. One structure is located closer to the base of the slope and is assigned a moderate likelihood of spatial impact. A more detailed assessment, including field investigation, will help refine these ratings and better identify potential flow paths.

P7 Creek (drainage north of Hambrook Creek) – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	High	Very High
Pavilion-Clinton Road	High	High	Very High
CN railway	High	Moderate	High
Pear Lake Road	High	Moderate	High

P7 Creek flows from a highly confined valley, crossing Pavilion-Clinton Road before passing through private property and crossing Pear Lake Road and the CN railway on its way to Kelly Creek. Given the steep, confined watershed morphology and the proportion of moderate and high burn severity (94% of the watershed), the likelihood of a post-wildfire debris flood is rated as high.

Several residential structures appear to be located adjacent to the creek channel near the fan apex; therefore, the likelihood of spatial impact to residences on private property is rated as high. However, this rating should be considered preliminary. A more detailed assessment, including field investigation, may refine the rating based on fan morphology, channel confinement, and potential flow paths.

The likelihood of spatial impact to Pavilion-Clinton Road is dependent on the configuration of the road crossing and should be investigated further. Given the road's proximity to the fan apex, a preliminary rating of high has been assigned. The CN railway and Pear Lake Road are located farther downslope and are both assigned a moderate likelihood of spatial impact.

Hambrook Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Private property (residences)	High	Moderate	High
CN railway	High	Moderate	High
Pear Lake Road	High	Moderate	High

Hambrook Creek has morphology similar to that of P7 Creek to the north, and the watershed was also burned almost entirely at moderate and high burn severity (87% of the watershed). Consequently, the likelihood of a post-wildfire debris flood is also rated as high.

The creek descends through a highly confined valley before crossing private property, the CN railway, and Pear Lake Road on its way to join Kelly Creek. Squamish-Lillooet Regional District mapping indicates an address point on the property; however, no associated structure could be confidently identified from available satellite imagery. Consequently, a preliminary moderate likelihood of spatial impact has been assigned to private property. A more detailed assessment, including field investigation, will help confirm the location of any structures and refine the spatial likelihood rating. The CN railway and Pear Lake Road are also assigned moderate likelihoods of spatial impact due to their location along the creek corridor downstream of the confined valley.

Southern Jesmond Road

At the southern end of Jesmond Road and north of the Pavilion-Clinton Road intersection, **Two Mile Creek** and **Porcupine Creek** drain the steep western slopes of Marble Range Provincial Park. Both drainages were extensively affected by the 2007 Kelly Creek Fire. Three houses are located on the Two Mile Creek alluvial fan, and watershed morphometrics indicate a susceptibility to debris floods; however, only a small portion of each watershed was burned by the Pear Lake Fire (8% of Two Mile Creek and 6% of Porcupine Creek). Consequently, post-fire downstream impacts in both watersheds are expected to be minimal. Given the limited burn extent, further assessment of these two watersheds is not undertaken in this report. South of Two Mile Creek, a slope dissected by several small draws was partially burned and is assessed further below.

South Jesmond (face unit slope of Two Mile Creek) – Debris flow or debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Jesmond Road	Low	High	Moderate
Private property (residences)	Low	Moderate	Low

The west-facing slope south of Two Mile Creek is drained by two short, steep draws that were partially burned by the Pear Lake Fire. Watershed morphometrics indicate susceptibility to either debris floods or debris flows. Burn severity is variable, with approximately equal proportions of low, moderate, and high severity, and available imagery and LiDAR data indicate small alluvial fans below both draws. Given the limited burn extent, variable burn severity, and watershed morphology, the likelihood of a post-wildfire debris flow or debris flood is rated as low.

Given its position immediately adjacent to the toe of the slope, the likelihood of spatial impact to Jesmond Road is rated as high. Several residences are located downslope of the northern draw below Jesmond Road. Although these residences are situated directly downslope of the drainage, the road corridor provides some separation from the slope and potential flow paths; consequently, the likelihood of spatial impact to residences on private property is rated as moderate.

Highway 99 corridor (Maps 3 and 4)

The headwaters of **Gillon Creek** and **Milkbranch Creek** drain forested, moderately rugged uplands on the south side of the Marble Range. Further downstream, the watersheds traverse a gently sloping plateau dissected by glaciofluvial meltwater channels before descending through a steep escarpment into the Pavilion Creek valley. The Gillon Creek watershed is 37% burned, with a mixture of low, moderate and high burn severity. The Milkbranch Creek watershed is 39% burned mostly at moderate and high burn severity. Watershed morphometrics indicate that flooding is the dominant hydrogeomorphic process on Gillon Creek, whereas debris floods are more likely on Milkbranch Creek.

Pavilion Creek drains the mountainous terrain south of Pavilion Mountain east of Milkbranch Creek before descending through a steep escarpment above the Highway 99 corridor. A prominent alluvial fan is visible on satellite imagery at the base of the escarpment. No residential development was identified on or adjacent to the fan, and Highway 99 is the only element at risk considered at this location. The dominant hydrogeomorphic process on this creek is expected to be floods, given the watershed morphometrics.

Within the Hat Creek watershed, wildfire impacts were limited in both **Robertson Creek** and **Timian Creek** (H5 Creek). Approximately 7% of the Robertson Creek watershed and 13% of the Timian Creek watershed were burned during the Pear Lake Fire. Based on the watershed morphometrics, Robertson Creek is expected to be susceptible mostly to floods, whereas Timian Creek is thought to be more susceptible to debris floods. A post-wildfire runoff event occurred in Timian Creek (H5) following the 2017 Elephant Hill Fire, resulting in a blocked culvert, flow overtopping the roadway, and impacts to a residential driveway on the lower portion of the fan.

Gillon Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 99	Low	Moderate	Low

Given the limited burn extent and patchy burn severity within the watershed, the likelihood of post-wildfire flooding on Gillon Creek is rated as low. Aside from agricultural land, Highway 99 is the only identified element at risk. The highway traverses the fan midway downslope and is assigned a moderate likelihood of spatial impact should an event occur.

Milkbranch Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 99	Low	Moderate	Low
Private property (residences)	Low	High	Moderate

The Pear Lake Fire resulted in moderate and high burn severity in the forested upland headwaters of Milkbranch Creek; however, only 39% of the watershed burned overall. The moderate burn extent, combined with a long low-gradient reach across the plateau that is expected to attenuate runoff and sediment transport, supports a low hazard rating for post-wildfire debris floods.

Several residential structures are located adjacent to the Milkbranch Creek channel along Highway 99. Although the likelihood of a post-wildfire debris flood is considered low, the close proximity of these residences to the channel results in a preliminary high likelihood of spatial impact should an event occur. A more detailed assessment, including field investigation, will help refine this rating. Highway 99 traverses the alluvial fan approximately midway downslope from the fan apex and is assigned a moderate likelihood of spatial impact.

Pavilion Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 99	Moderate	High	High

Pavilion Creek upslope of Highway 99 was partially burned by the Pear Lake Fire, with 51% of the watershed affected by moderate or high burn severity. Although the watershed morphology is indicative of flood-dominated processes, the channel traverses a long low-gradient plateau reach upstream of Highway 99 that is expected to attenuate runoff and promote sediment deposition. Given the extent and distribution of burning, together with these watershed characteristics, the likelihood of a post-wildfire flood is rated as moderate. Highway 99 is the only identified element at risk. As the highway traverses the alluvial fan, the likelihood of flooding impacting the highway is rated as high.

Robertson Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 99	Low	High	Moderate
Private property (residences)	Low	Low	Very Low

Given the limited extent of wildfire impacts within the Robertson Creek watershed (7% burned), the likelihood of post-wildfire flooding is rated as low. Highway 99 crosses Robertson Creek and is therefore assigned a high likelihood of spatial impact, although the type and capacity of the existing crossing are unknown. A private property lot containing several structures is located downstream of the highway crossing. The channel is incised through this reach, and the primary residence appears to be set back from the channel; therefore, the likelihood of spatial impact to the residence on this private lot is rated as low.

Timian (H5) Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Highway 99	Low	High	Moderate
Residences	Low	Low	Very Low

Given the limited extent of burned area within the Timian Creek watershed (13% burned, primarily at moderate severity), the likelihood of a post-wildfire debris flood is also rated as low. Highway 99 crosses Timian Creek near the fan apex; therefore, the likelihood of spatial impact is rated as high. Several residential structures are located on the Lower Hat Creek 2 reserve downslope of the highway, near the distal portion of the fan. Following the Elephant Hill Fire, a runoff event affected a driveway on the fan but did not impact the residence. Consequently, the likelihood of spatial impact to residences is rated as low.

Highway 97 corridor north of Clinton (Map 5)

The plateau area north of the Marble Range is characterized by a low-relief, glacially modified plateau landscape with abundant lakes, wetlands, and broad forested uplands. Drainage networks within the plateau are generally low gradient and poorly defined, with many watercourses flowing through wetlands and interconnected lake systems. In contrast, the headwater areas of the watersheds draining the adjacent Marble Range to the south and west are steeper, draining mountainous terrain and descending through incised glaciofluvial meltwater channels before emerging onto the plateau.

Fiftyone Creek occupies a broad glaciofluvial meltwater channel formed during deglaciation. Elements at risk include the CN railway and private property located downslope of the railway embankment. Upstream of the railway crossing, the channel gradient averages 3% over 4 km. Given the low channel gradient and watershed morphometrics, flooding is expected to be the dominant hydrogeomorphic process. Wildfire affected nearly the entire watershed (95%), with 79% burned at moderate or high severity, suggesting substantial potential for increased post-wildfire runoff.

Fiftyseven Creek and **Fiftynine Creek** are located north of Fiftyone Creek. Both drain the eastern slopes of the Marble Range through moderately incised channels before emerging onto a low-relief plateau characterized by numerous wetlands and poorly defined drainage pathways. Several residences are located near the points where the channels transition onto the plateau; however, channel gradients decrease to approximately 3 to 4% upstream of these elements at risk. Farther downstream, the watersheds cross Highway 97, although no distinct channel crossings are evident on available mapping or satellite imagery. The headwaters of both drainages remained unburned, while the forested mid-slopes were burned predominantly at moderate and high severity. In contrast, burn severity across the lower-elevation wetland and lake complexes was highly variable, with a patchy mosaic of unburned, low-, and moderate-severity areas. Although increased runoff and streamflow may occur following the Pear Lake Fire, the low gradients, broad downstream flow paths, and absence of significant fan development suggest a low potential for damaging post-wildfire geohazard events. Consequently, these watersheds are not assessed further in this report.

Sixtyone Creek, Fly Creek, and Eightythree Creek drain a low-relief landscape characterized by extensive wetlands and small lakes west of Highway 99. Fly Creek was burned predominantly at high severity, whereas

Eightythree Creek and Sixtyone Creek exhibit a more heterogeneous burn pattern, consisting of a mosaic of low, moderate, and high burn severity. Given the subdued terrain, low channel gradients, and limited connectivity to downstream elements at risk, the potential for post-wildfire floods, debris floods, or landslide hazards is considered negligible. As a result, these watersheds are not assessed further in this report.

Fiftyone Creek – Flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
CN railway	Moderate	Low	Low
Private property (residences)	Moderate	Low	Low

Although much of the Fiftyone Creek watershed was burned, with 79% affected by moderate and high burn severity, the broad, low-gradient channel reaches upstream of the identified elements at risk are expected to attenuate any potential enhanced post-wildfire runoff and promote sediment deposition. Consequently, the likelihood of post-wildfire flooding is rated as moderate.

Fiftyone Creek passes beneath the CN railway track, which appears to be elevated above the valley bottom before flowing through several privately owned parcels of land containing residential structures and ultimately crossing Highway 97. Residential structures identified through TNRD address mapping and satellite imagery appear to be set back from the creek channel; therefore, the likelihood of spatial impact to residences on private property is rated as low. The likelihood of spatial impact to the CN railway crossing is rated as low given its elevated position above the valley bottom. Highway 97 is located farther downstream, where the creek enters a wetland and pond complex adjacent to the highway. These features are expected to attenuate flows before they reach the roadway.

Big Bar Creek Watershed (Map 6)

The **Big Bar Creek** watershed drains the northern extent of the Marble Range, including the Big Bar Lake area and several steeper tributary drainages originating along the western flank of the range, before descending through a dry, bedrock-confined canyon to the Fraser River. Approximately half of the watershed was burned during the Pear Lake Fire, predominantly at moderate and high burn severity. Downstream of Big Bar Lake, Big Bar Creek flows through extensive wetlands and low-gradient terrain that are anticipated to provide substantial attenuation of runoff and sediment transport. Consequently, the potential for increased post-wildfire streamflow and sediment-related impacts along the main stem of Big Bar Creek is considered low. The steeper tributaries to Big Bar Creek (Knox Creek, Stable Creek, and Jesmond Creek) are discussed separately below.

Knox Creek drains the eastern slopes of the Marble Range before emerging onto the plateau and flowing through low-gradient terrain to Big Bar Lake. The creek passes through Big Bar Lake Provincial Park immediately upslope of the lake. Channel gradients decrease to approximately 1% for several kilometres upstream of the park and lake, substantially reducing the potential for damaging post-wildfire hazard activity. Although 86% of the watershed was burned, including 66% at moderate and high burn severity, the long flow path through low-gradient plateau terrain is expected to attenuate potential increases in post-

wildfire runoff and sediment transport. Consequently, post-wildfire hazards are considered very low and this watershed is not assessed further in this report.

Near the ranching community of Jesmond, **Stable Creek** and **Jesmond Creek** drain the western slopes of the Marble Range before joining Big Bar Creek upstream of its confluence with the Fraser River. Morphometric analysis indicates that debris floods are the dominant hydrogeomorphic process in both watersheds. Although their headwaters originate within steep mountainous terrain, channel gradients moderate substantially upstream of the identified elements at risk. In addition, only 36% of the Stable Creek watershed and 57% of the Jesmond Creek watershed were burned. Burn severity within both watersheds is characterized by a patchy mosaic of low, moderate, and high severity.

North of Jesmond Creek, several unnamed drainages descend from the northern flank of the Marble Range toward Big Bar Road. Similar to the drainages farther south, slope gradients moderate substantially downslope, decreasing to approximately 7-8% above Big Bar Road. The lower slopes exhibit a benched morphology, with broad slope breaks that interrupt downslope runoff and sediment transport. No defined stream channels are evident on satellite imagery. Consequently, the potential for post-wildfire impacts to private property and Big Bar Road is considered very low, and these unnamed drainages are not assessed further in this report.

Stable Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Jesmond Road	Low	Moderate	Low
Private property (residences)	Low	Low	Very Low

Given the limited burn extent (36% of the watershed) and patchy distribution of low, moderate, and high burn severity, the likelihood of a post-wildfire debris flood on Stable Creek is rated as low. Although the headwaters originate within steep mountainous terrain, channel gradients decrease substantially downstream and average approximately 3% over the two kilometres immediately upstream of Jesmond Road.

The likelihood of spatial impact to Jesmond Road is rated as moderate, as the creek passes beneath the road through a culvert. LiDAR data suggest that the channel is locally incised at the crossing, which may reduce the potential for overbank flow; however, the degree of channel confinement has not been confirmed through field investigation. The likelihood of spatial impact to adjacent residences along Jesmond Road is rated as low, as the structures appear to be set back from and elevated above the channel.

Jesmond Creek – Debris flood

<i>Element at Risk</i>	<i>Probability of Hazard P(H)¹</i>	<i>Probability of Spatial Impact P(S:H)²</i>	<i>Partial Risk³</i>
Jesmond Road	Moderate	Moderate	Moderate
Private property (residences)	Moderate	Low	Low

Given the moderate burn extent (57% of the watershed) and the patchy distribution of low, moderate, and high burn severity, the likelihood of a post-wildfire debris flood on Jesmond Creek is rated as moderate. Although the creek originates within steep mountainous terrain, channel gradients decrease downstream and average approximately 5% over the 1.2 km immediately upstream of Jesmond Road.

The likelihood of spatial impact to Jesmond Road is rated as moderate, as the creek passes beneath the road through a culvert. The likelihood of spatial impact to adjacent private properties is rated as low. Although the properties are located near the channel, LiDAR data suggest that the channel is locally incised through this reach, reducing the likelihood of overbank flooding. However, the degree of channel confinement has not been verified in the field.

Canoe Creek Watershed (Map 6)

A large tributary (38,419 ha) to **Canoe Creek** drains the plateau terrain at the northern extent of the Pear Lake Fire before joining Canoe Creek at Canoe Creek 2 Reserve. The watershed is characterized by rolling uplands, grasslands, wetlands, and broad valleys typical of the Cariboo Plateau. Numerous depressional wetlands and interior-draining lakes occur within the watershed, and surface water moves through a network of wetlands, shallow depressions, and intermittent channels. Approximately 40% of the watershed was burned, including 30% at moderate or high burn severity. Given the subdued topography, low channel gradients, and extensive wetland storage, the potential for elevated post-wildfire flooding, sediment transport, and other hydrogeomorphic hazards is considered very low. Consequently, this watershed is not assessed further in this report.

FURTHER ACTIONS:

- A (Level 4) site-specific partial risk assessment for the Pear Lake Fire is recommended. The results of that assessment will be made public and are anticipated to supersede the results of this assessment.
- MOTT may wish to undertake additional assessments examining the debris flow or debris flood hazards along creeks impacted by the fire, and if necessary, implement any mitigative measures they feel are required to meet with their risk tolerance.
- CN Rail should evaluate stream-crossing infrastructure along its rail corridor and account for increased runoff, sediment transport, and woody debris resulting from the wildfire. Particular attention should be given to the Clinton Creek culvert upstream of the Village of Clinton, which was identified as a concern in the September 2026 assessment by SNT Geotechnical Ltd. The high burn severity within the watershed may increase the likelihood of culvert blockage and the resultant flooding hazards could directly impact the Village. CN Rail should also consider the potential for

increased rockfall, overland flow, and post-wildfire landslides along sections of track that traverse steep terrain along the Pavilion-Clinton Road corridor, Kelly Creek valley, and Fraser River corridor.

- BC Hydro should assess the susceptibility of channelized drainages adjacent to the Kelly Lake Substation to post-wildfire sediment and debris accumulation and consider mitigation measures to maintain channel capacity and reduce the potential for overbank flow or avulsion across the fan.
- The Village of Clinton should continue to pursue the mitigation measures recommended in the post-wildfire assessment for Clinton Creek completed by SNT Geotechnical Ltd. These measures include enhanced sediment and debris management at the reservoirs, development of an early warning system, and evaluation of emergency access to critical water supply infrastructure.
- Water licensees should be aware of the potential impact of wildfire on water quality, including potential impacts to water intake structures from sediment and debris, and other water quality parameters associated with the wildfire.
- If any salvage logging is proposed within, or downslope of areas impacted by the Pear Lake Fire, site-specific post-wildfire natural hazard assessments that consider the cumulative impacts of harvesting and wildfire are recommended. Salvage operations within the fire perimeter (or downslope of fire-affected areas) should include rainfall shutdown criteria commensurate with the post-wildfire natural hazard present to protect worker safety.

SIGNATURE, SEAL, FIRM PRACTICE #:

S. Crookshanks
October 8, 2026



Sarah Crookshanks, P.Geo.

Ministry of Forests

Permit to Practice: 1003022

Reviewed by: Gareth Wells, P.Geo.

ATTACHMENTS:

1. References
2. C40983 Risk Assessment Overview Map, along with Maps 1, 2, 3, 4, 5 and 6.
3. C40983 Pear Lake Vegetation Burn Severity Map
4. Appendix A

REFERENCES

Chapman, B., Nicol, D., Teti, P., and Martin, P. (2009). *Kelly Creek Fire Post Wildfire Hazard Assessment and Partial Risk Analysis, 2009 Fire C40429 near Clinton*. Prepared for the British Columbia Ministry of Forests and Range. December 21, 2009.

Giles, T. (2021). *C41602 Flat Lake Fire Post-Wildfire Natural Hazard Risk Assessment: Reconnaissance Report*. Prepared for the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development and BC Wildfire Service. December 6, 2021.

Giles, T. (2022). *K71030 McKay Creek Fire Post-Wildfire Natural Hazard Risk Assessment: Reconnaissance Report*. Prepared for the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development and BC Wildfire Service. February 11, 2022.

Giles, T., Williams, R., and Nicol, D. (2026). *Clinton Creek Watershed Post-Wildfire Natural Hazard Assessment*. SNT Geotechnical Ltd. Prepared for TRUE Consulting Ltd. and the Village of Clinton. September 1, 2026.

Jordan, P., Nicol, D., Walsh, M., and Burnett, M. (2017). *Post-Wildfire Natural Hazards Risk Analysis, Elephant Hill Fire (K20637, 2017)*. Report No. 511.17.30. Prepared for the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. December 20, 2017.

Jordan, P. (2018). *Debris Flow and Flood Events of August 2018 in the Cache Creek-Clinton Area*. Report No. 511.18.35. Prepared for the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Thompson-Okanagan Region. December 10, 2018.



C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Overview Map

0 4 8 12 16 Kilometers

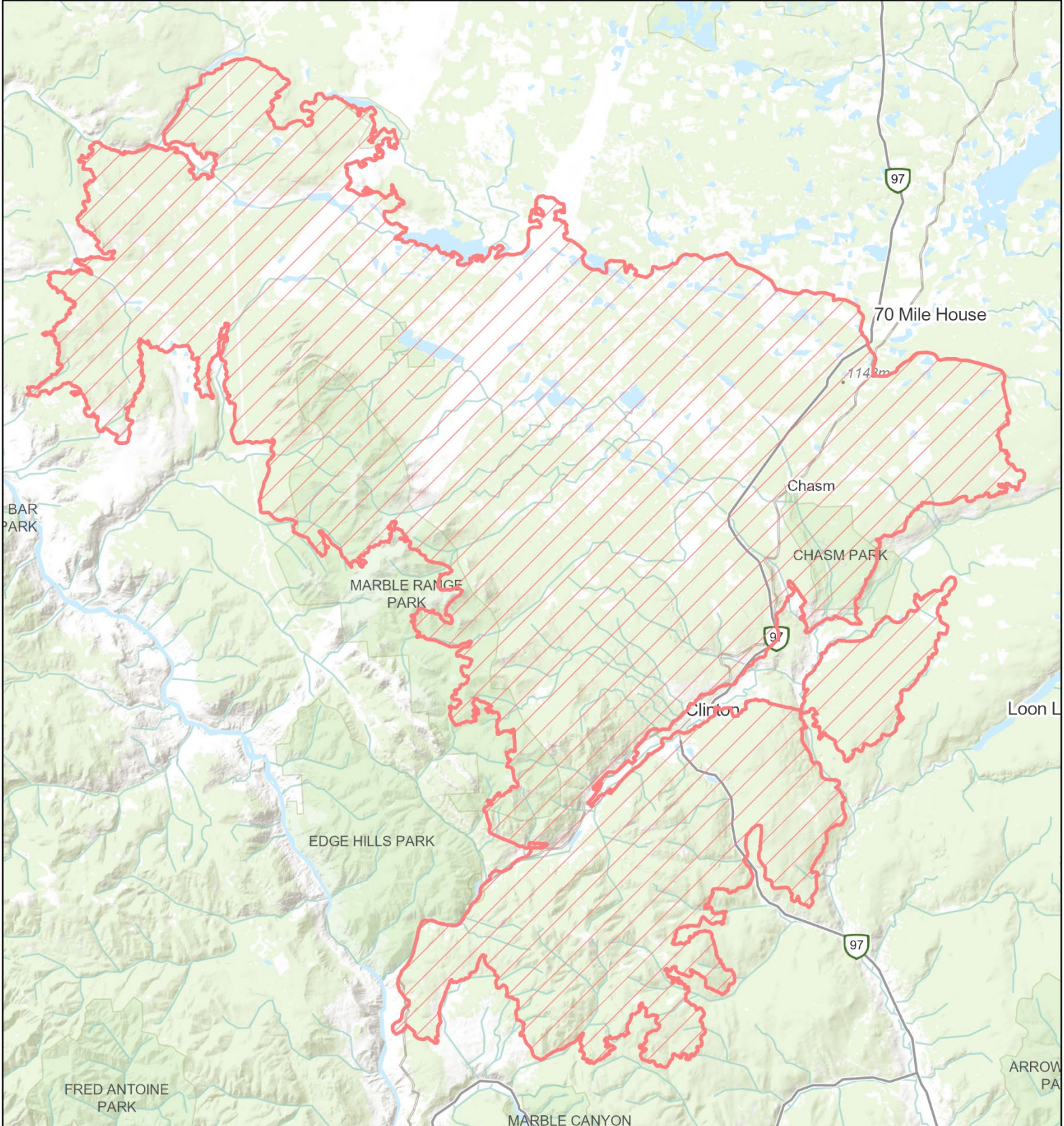
September 29, 2026 BC Environment Albers
World Hillshade: Sources: Esri, Vantor, Airbus DS, USGS, NGA,
NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA,

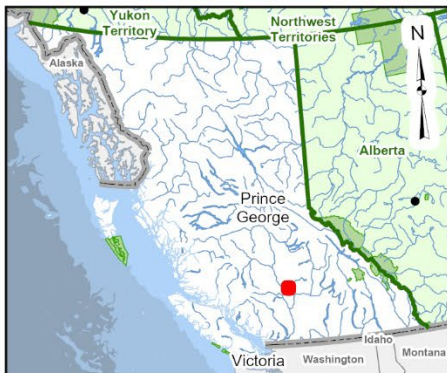
Legend



 Pear Lake fire perimeter

Scale: 1:320,000
Drawn by S. Crookshanks
September 24, 2026





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 1 Southeast

0 1 2 3 4 Kilometers

Scale: 1:90,000

Drawn by S. Crookshanks

September 29, 2026 BC Environment Albers
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO,
NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Legend



Burn Severity

- High
- Moderate
- Low
- Unburned

- Watersheds
- Highway
- Road
- Railway Track
- Railway Ties





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 2 Middle

0 1 2 3 4 Kilometers

Scale: 1:95,351

Drawn by S. Crookshanks

September 29, 2026

BC Environment Albers

World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Legend



Burn Severity

- High
- Moderate
- Low
- Unburned

- Watersheds
- Highway
- Road
- Railway Track
- Railway Ties





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 3 Southwest

0 1 2 3 4 Kilometers

Scale: 1:95,351

Drawn by S. Crookshanks

September 29, 2026 BC Environment Albers
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO,
NOAA, USGS, © OpenStreetMap contributors, and the GIS User

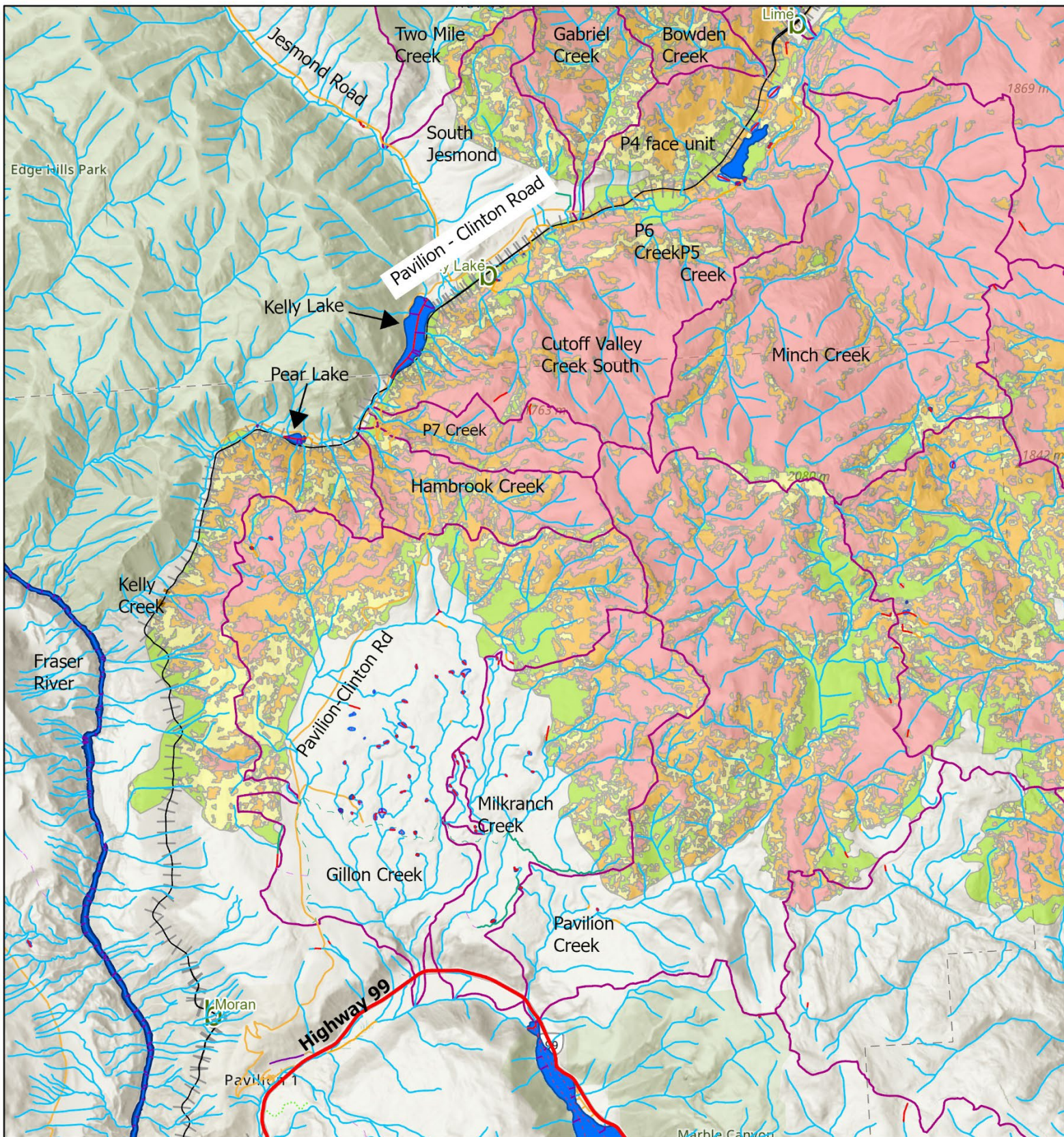
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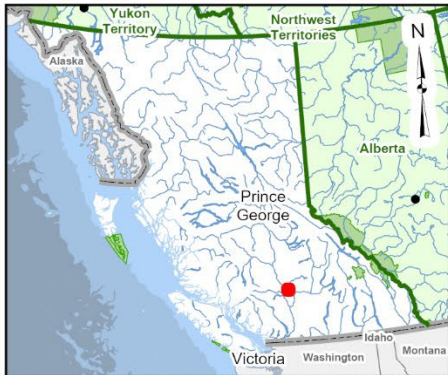


Burn Severity

- High
- Moderate
- Low
- Unburned

- Watersheds
- Highway
- Road
- Railway Track
- Railway Ties





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 4 South

0 0.85 1.7 2.55 3.4 Kilometers

Scale: 1:70,400

Drawn by S. Crookshanks

September 28, 2026 BC Environment Albers

World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

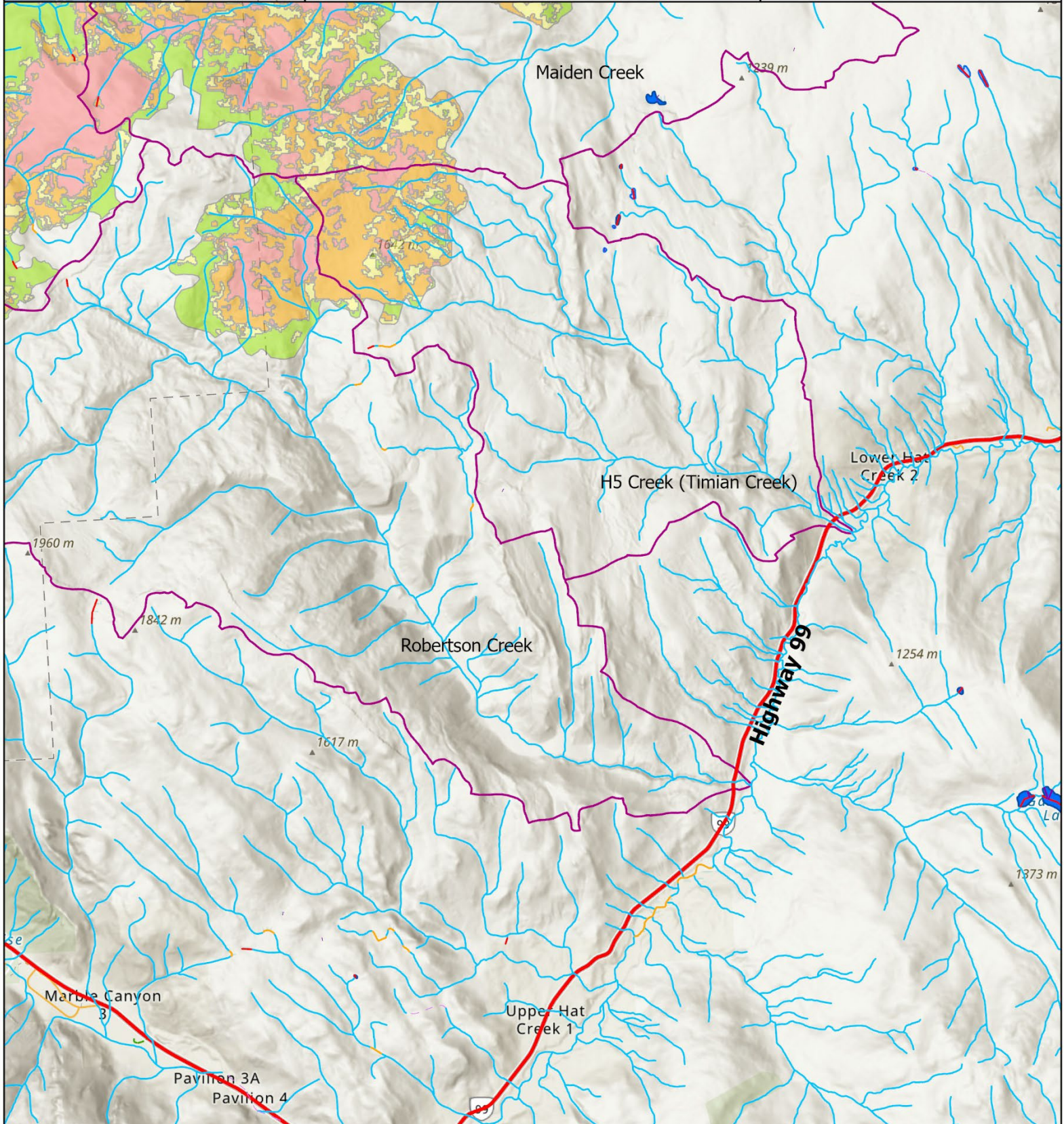
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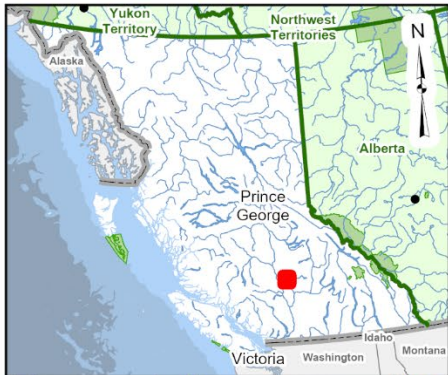


Burn Severity

- High
- Moderate
- Low
- Unburned

- Highway
- Watersheds
- Road





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 5 Northeast

0 2 4 6 8 Kilometers

Scale: 1:170,000

Drawn by S. Crookshanks

September 29, 2026

BC Environment Albers

World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

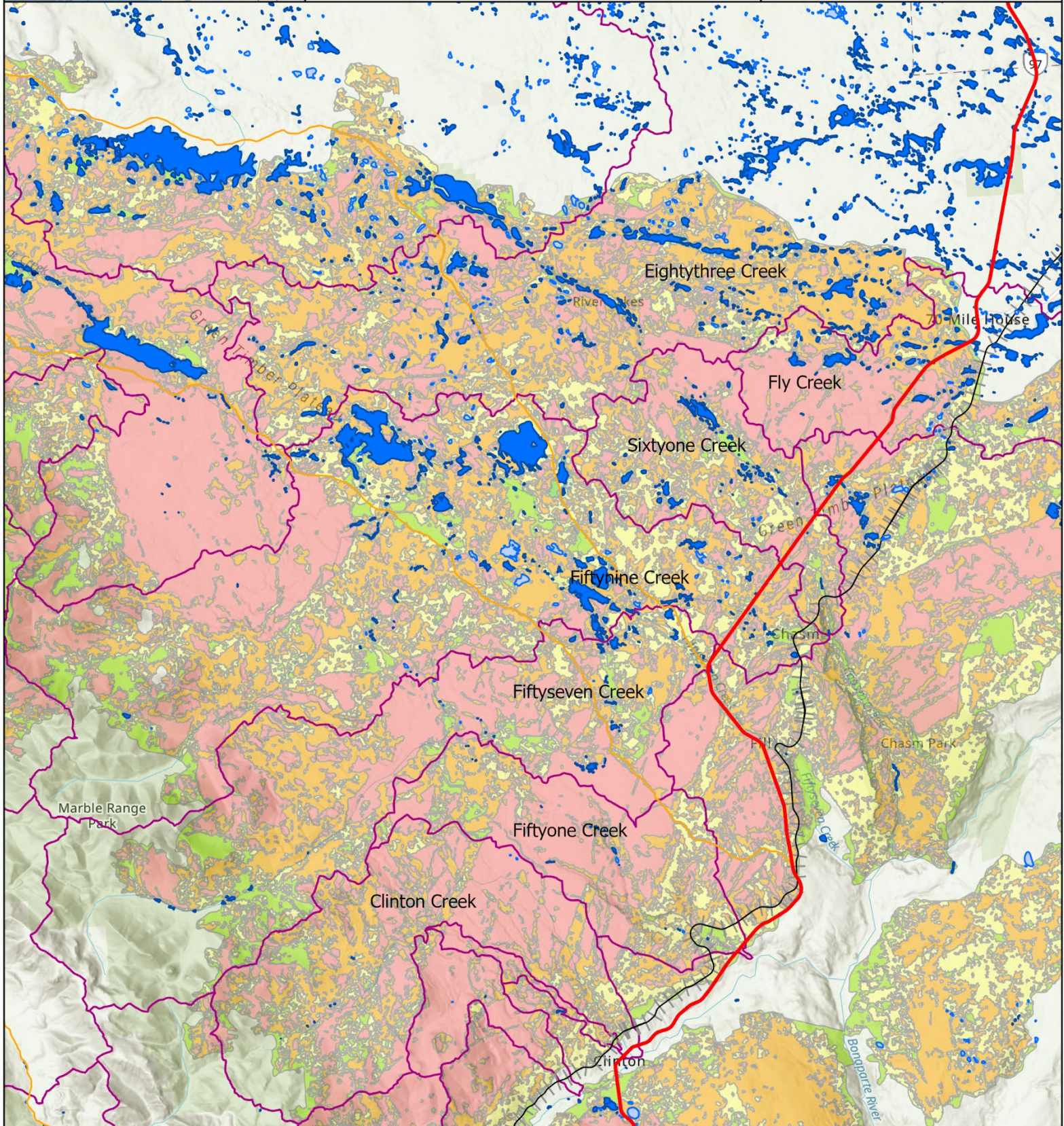
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Burn Severity

- High
- Moderate
- Low
- Unburned

- Watersheds
- Highway
- Road
- Railway Track
- Railway Ties





C40983 Pear Lake Fire Post Wildfire Natural Hazard Risk Assessment Map 6 Northwest



Scale: 1:156,097

Drawn by S. Crookshanks

October 08, 2026 BC Environment Albers
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO,
NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Legend



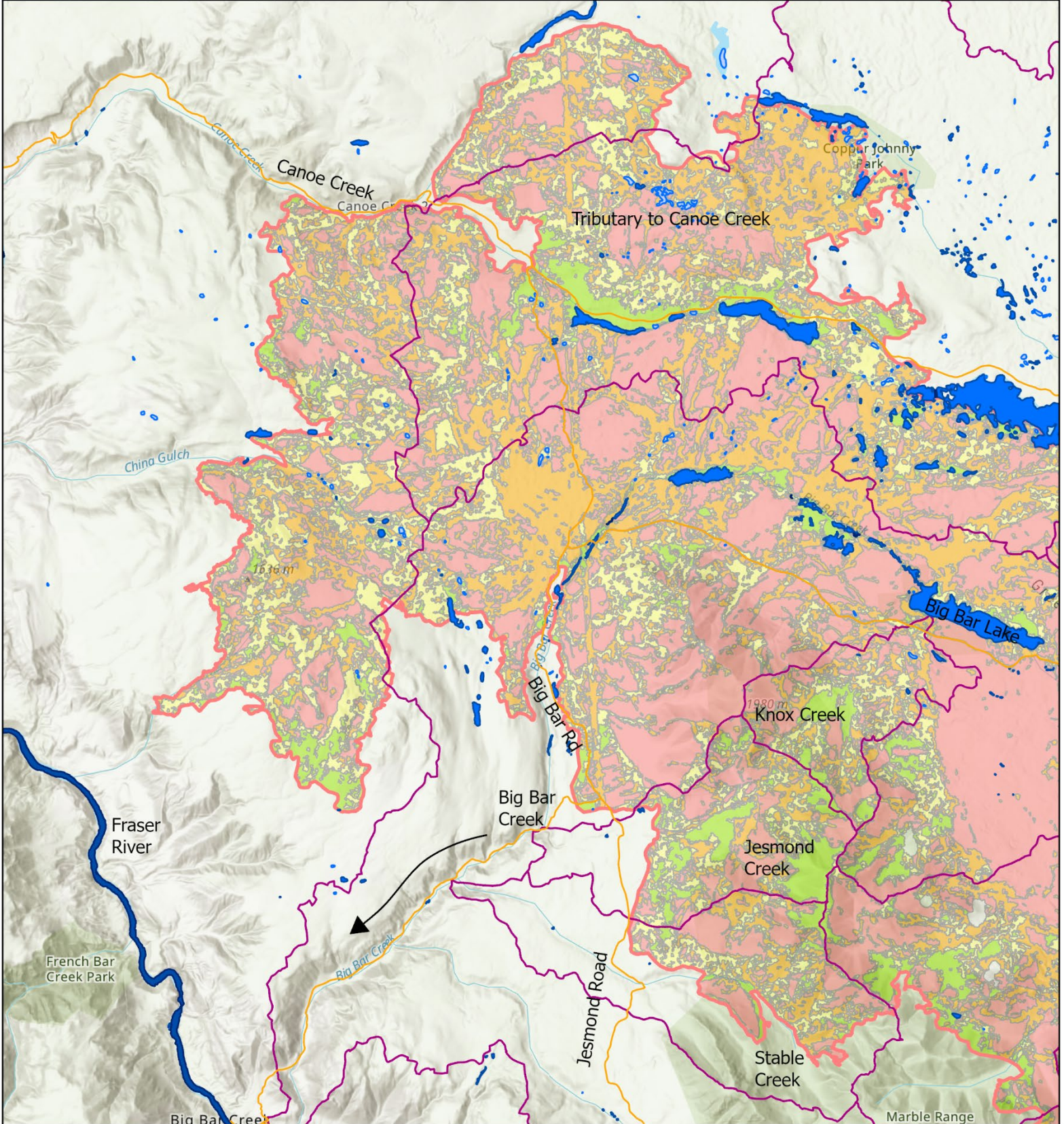
Burn Severity

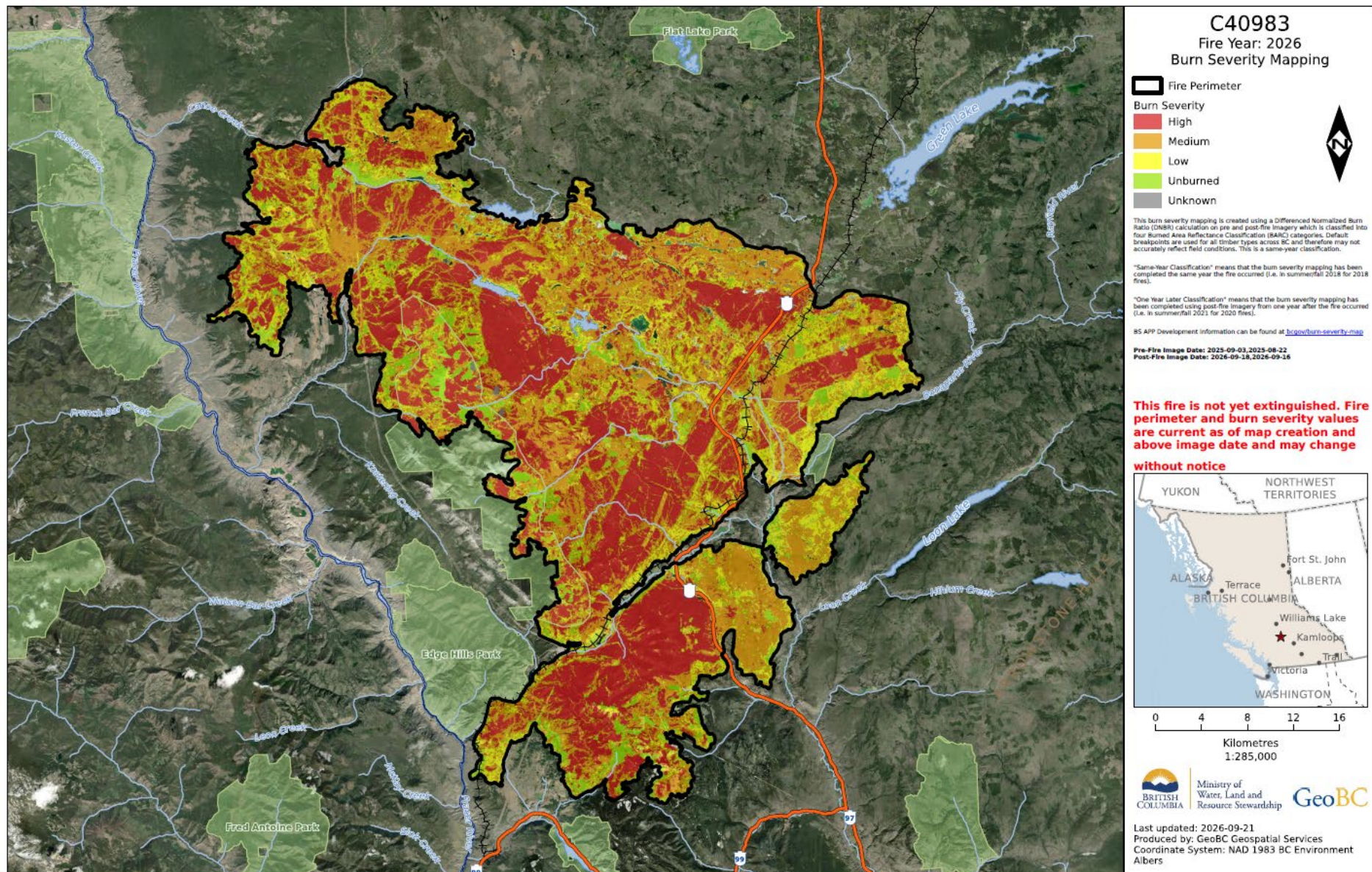
- High
- Moderate
- Low
- Unburned

Watersheds

Highway

Road





Appendix A to PWNHRA Reconnaissance Level 2 Reports

Scope of Level 2 Reports

Reconnaissance (Level 2) reports are primarily intended to identify whether post-wildfire hazards are likely to occur and need detailed investigation to protect identified elements at risk. Identified elements at risk are generally limited to public safety and infrastructure. Reconnaissance reports may also be used to assess safety conditions for wildfire fighters. In some cases, the MOF District Manager or other MOF personnel may request assessments for non-standard elements at risk or for other reasons.

Definitions of Hazard and Risk

Wildfire may produce conditions conducive to a suite of hazards. Debris flows, debris floods, and floods are often the most important hazards, but other types of landslide hazards including rockfall, debris slides and earthflows can also occur in response to wildfire. Wildfire can also cause snow avalanches and may affect water quality, cause erosion and result in sedimentation. Terrain, watershed, and channel conditions that produce post-wildfire hazards may also produce similar hazards in unburned conditions; these hazards may be mentioned but are not evaluated in this report.

P(H), P(S:H) and partial risk are presented for each identified element at risk. Multiple types of channel hazards (debris flows, debris floods, floods) may affect an element at risk. These hazards are ranked by severity, with debris flow as the most damaging and destructive and flood as the least damaging and dangerous, and ratings are given for the highest rating hazard that may affect an element at risk. For example, where a channel has the potential for a debris flow and an element at risk may be affected, the lower ranking debris flood and flood hazards are not rated, since discharge and velocity are likely to be less than for a debris flow. These processes may cause erosion or sedimentation that affects the element at risk. Hazards that are unlikely to affect an identified element at risk are not discussed.

Table A1 shows the annual probability ranges for qualitative definitions of P(H). The probability of the hazard occurrence is for the post-wildfire period of elevated hazard, which in many cases may be less than five years, but in some cases may extend for several more years.

Table A1. Qualitative descriptions of post-wildfire hazard likelihood, hazard criteria, and related quantitative probabilities.

Hazard Likelihood Rating [P(H)]	Description	Annual Probability Range (Return Frequency)
Very High	An event is expected to occur. Most of the catchment or face unit has burned with a significant proportion burned at moderate and/or high severity	>20% (> 1:5)
High	An event is probable under adverse conditions. Most of the catchment or face unit has burned with a significant proportion (i.e., >50 %) of terrain conducive to post-wildfire natural hazard initiation burned at moderate or high severity. Existing indicators of pre-fire terrain instability within stream channels, on fans or face units.	1% to 20% (1:100 to 1:5)
Moderate	An event could occur under adverse conditions. It is not probable but possible over a several year period. More than 20% of the terrain conducive to post-wildfire natural hazards in the catchment or on the face-unit has burned with moderate and/or high severity. Historic geomorphic indicators of instability are present.	0.2% to 1% (1:500 to 1:100)
Low	An event could occur under very adverse conditions. It is considered unlikely over a several year period. Only a limited proportion of the catchment or face unit has burned. Few or no signs of pre-fire instability present along stream channels, fans or face units.	0.04% to 0.2% (1:2,500 to 1:500)
Very Low	An event will not occur or is conceivable though considered exceptionally unlikely. A limited proportion/none of the catchment was burned. No terrain instability indicators are present	<0.04% (< 1:2,500)

Table A2 defines spatial impact to an element of risk. Post-wildfire event magnitude is considered when rating spatial impact.

Table A2. Post-wildfire spatial impact.

Likelihood of spatial impact	Description	Probability range
H	It is probable that the event will impact the element at risk.	> 50%
M	It is possible that the event will impact the element at risk.	50% to 10%
L	It is unlikely that the event will impact the element at risk.	< 10%

Table A3 is a matrix which combines the hazard likelihood (Table A1) with the spatial impact likelihood (Table A2) to determine partial risk.

Table A3. Post-wildfire risk matrix partial risk matrix.

Hazard Likelihood P(HA) (Table 1)	Spatial Impact Likelihood (P(S:H)) (Table 2)		
	High	Moderate	Low
Very High	Very High	Very High	High
High	Very High	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Very Low
Very Low	Low	Very Low	Very Low

Report Standards

FLNRORD Land Management Handbook 69 is the primary standard followed in this report. LMH 69 describes the process to complete a detailed report. This reconnaissance report uses the framework of LMH 69 but does not follow it where detailed assessment procedures are described.

Land Management Handbook 69 Post Wildfire Natural Hazards Risk Analysis in British Columbia 2015

<https://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh69.htm>

Additional guidance is provided in the MOF SOG for PWNHRA and the 2014 FLNRO Landslide Risk Management Procedure.

Other professional guidance standards that may be used for the preparation of reconnaissance reports are listed below. These guidelines have similar report content to this reconnaissance assessment, but are for different purposes, have different levels of appropriate effort, and do not recognize the potential emergency nature of this reconnaissance assessment. These guidelines include:

EGBC Guidelines for TSA in the Forest Sector 2010

<https://www.egbc.ca/getmedia/684901d7-779e-41dc-8225-05b024beae4f/APEGBC-Guidelines-for-Terrain-Stability-Assessments.pdf.aspx>

EGBC Guidelines for Legislated Landslide Assessments 2010

<https://www.egbc.ca/getmedia/5d8f3362-7ba7-4cf4-a5b6-e8252b2ed76c/APEGBC-Guidelines-for-Legislated-Landslide-Assessments.pdf.aspx>

Legislated Flood Assessments in a Changing Climate in BC 2018

<https://www.egbc.ca/getmedia/f5c2d7e9-26ad-4cb3-b528-940b3aaa9069/Legislated-Flood-Assessments-in-BC.pdf>

Watershed Assessment and management of hydrologic and geomorphic risk in the Forest Sector

<https://www.egbc.ca/app/Practice-Resources/Individual-Practice/Guidelines-Advisories/Document/01525AMW2ATQA5BSODHJAKBAGZDYTRL6FJ/Watershed%20Assessment%20and%20Management%20of%20Hydrologic%20and%20Geomorphic%20Risk%20in%20the%20Forest%20Sector>

Other standards may also apply, depending on the professional qualifications of the writer.

Statement of Limitations

Reconnaissance PWNH Level 2 assessments are typically done in constrained timelines where personnel, resources, data collection, and analysis methods are limited. Post-wildfire hydrogeomorphic hazards in BC are not well understood and therefore hazard and risk assessments are estimates only. While probabilities ranges are given in Tables A1 and A2, the state of the science in BC does not allow for precise assessments, particularly near the borders of classes. Numeric probabilities ranges do not imply precision.

Identification of elements at risk relies on BC government data layers, satellite imagery, and perhaps an overview flight. BCWS and the MOF district office may provide additional information. No further confirmation of elements at risk was conducted.

Comments, conclusions, and suggestions contained in this reconnaissance assessment reflect my experience and judgement considering the information available to me at the time that this report was prepared and are considered appropriate for the reconnaissance nature of the review. The review has been carried out in accordance with generally accepted professional practices. This assessment and its contents are intended for the sole use of post-wildfire hazard management by provincial agencies, First Nation governments and local governments. I do not accept any responsibility for the accuracy of any of the data, the interpretation, or the conclusions contained or referenced in the report when the report is used or relied on for any other purpose than specified. Any such unauthorized use of this report is at the sole risk of the user