AGENDA

Regular Meeting of Council

Village of Clinton Council Chambers, 1423 Cariboo Highway
Wednesday, May 14, 2025 at 6:30 pm

Mission Statement: "*To Increase Economic Opportunity and Improve the Quality of Life for all Citizens*."

Vision Statement: "*Clinton is a lively resilient community, proud of its rich heritage while building a sustainable future with local Secwepemc and neighboring communities"*

Call to Order

"Mayor and Council acknowledge that we are meeting on the traditional ancestral and unceded territory of the Whispering Pines/Clinton Indian Band and High Bar First Nation."

Adoption of Agenda

Adoption of the Minutes

	Minutes of the Regular Meeting dated April 23, 2025.	**Page 4**

Delegations

	None	

Question Period

Correspondence and Reading File

Action	Legislative Assembly of BC – Request for Support in Redesigning the Kamloops BC Cancer Care Centre	**Page 8**

Information	None	

Reading File	April 18, 2025 to May 1, 2025	**Page 11**

Administrative Reports

CAO	Hazard Land Development Permit Report – 409 Lebourdais Ave & 1500 Engeman Lane – For permit authorization	**Page 12**
	Environmental Damages Fund – For Authorization	**Page 52**
CFO	None	
CDC	None	
Public Works	None	
Fire Department	March Report	**Page 54**
	April Report	**Page 58**
FireSmart Coordinator	None	
Bylaw Officer	First Quarter Report	**Page 62**
Committees	None	

Bylaws/Policies

	None	

Council Reports

Mayor Stanke	Council Report - Verbal	
Councillor Burrage	Council Report – Written	**Page 63**
Councillor Kosovic	Council Report – LOA	
Councillor Park	Council Report – Verbal	
Councillor Schapansky	Council Report – Verbal	

New Business

UBCM Resolutions deadline is June 15, 2025.

List of Outstanding Council Previous Action Items

	Current List of Motions	**Page 68**

Calendar of Events

May 17 – Clinton Annual Ball @ Memorial Hall
May 23 – Clinton Old Timer's Tea @ Memorial Hall 1 pm to 4 pm
May 24 – Annual Rodeo Parade 10 am start
May 24-25 – Rodeo Weekend starts at 1pm at the Rodeo grounds
May 24 – Steak Dinner 5pm @ Rodeo grounds
May 24 – Saturday Night Dance with "The Tumblin' Dice" @ 8pm – Rodeo Grounds
June 20 – Rock or Bust Concert @ Arena 8pm

Notice to Proceed to In-Camera

N/A

Re-call Regular Meeting

N/A

Adjournment

MINUTES
Regular Meeting of Council
Clinton Council Chambers, 1423 Cariboo Highway
Wednesday, April 23, 2025 at 6:30 pm

In Attendance:	Mayor Stanke, Councilors: Burrage, Park, Schapansky
Absent:	Councillor Kosovic – LOA
Staff:	CFO McKague, CAO Doddridge
Media: 0	Public: 1

Mission Statement: *"To Increase Economic Opportunity and Improve the Quality of Life for all Citizens."*

Vision Statement: *"Clinton is a lively resilient community, proud of its rich heritage while building a sustainable future with local Secwepemc and neighboring communities"*

Call to Order
The meeting was called to order at 6:30 pm
"Mayor and Council acknowledge that we are meeting on the traditional ancestral and unceded territory of the Whispering Pines/Clinton Indian Band and High Bar First Nation."

Adoption of the Agenda
Moved and Seconded
R050-25 **That Council approves the Agenda dated April 23, 2025.** **CARRIED**

Adoption of the Minutes
Moved and Seconded
R051-25 **That the Minutes of the Regular Council Meeting dated April 9, 2026, be adopted with the correction of the date on resolution R043-25.** **CARRIED**

Moved and Seconded
R052-25 **That the Minutes of the Special Council Meeting dated April 14, 2025, be adopted.** **CARRIED**

Delegation
Mario Piroddi – BDO – Presenting Draft Audited Financial Statement
Auditor Piroddi presented on the Financial Statement and Audit.

Question Period
None

Action Items
None

Information
None

Reading File
Received for Information.

Administrative Reports
CAO
Development Variance Permit – 1521 Cariboo Highway Parking Requirements for Approval
Moved and Seconded

R053-25 **THAT, Council of the Village of Clinton issue a Development Variance Permit to Maria Kosovic for the property located at 1521 Cariboo Highway, and legally described as lot 37, part e1/2, Lillooet land district, Clinton townsite, to vary Zoning Bylaw No. 439, 2007, s. 17.3 a) from the requirement for 6 parking spaces to only 3 parking spaces and to vary s 17.5 e) from the requirement for parking areas to be surfaced with pavement, in substantial accordance with the application as submitted on March 13, 2025.** **CARRIED**

Chief Financial Officer
2024 Draft Audited Statement – For Approval
Moved and Seconded

R054-25 **That, Council approves the Draft 2024 Audited Financial Statement for the Village of Clinton with amendments to the Growing Community Fund Reserve as discussed with the auditor.**
CARRIED

Community Development Coordinator
None

Public Works
None

Fire Department
None

FireSmart Coordinator
None

Bylaw Officer
None

Committees
Spirit of Clinton – Draft Minutes
Received for information

Bylaws/Policies

FireSmart Materials Policy G-01-2025
Moved and Seconded

R055-25 **THAT, the Village of Clinton adopts FireSmart Materials and Build Green with Wood Policy G-01-2025.** **CARRIED**

2025-2029 Financial Plan Bylaw No. 601, 2025 – For Third Reading
Moved and Seconded

R056-25 **THAT, Council gives third reading to the 2025-2029 Financial Plan Bylaw No. 601, 2025.** **CARRIED**

2025 Tax Rate Bylaw No. 602, 2025 – For First, Second and Third Reading
Moved and Seconded

R057-25 **THAT, Council gives first reading to the 2025 Tax Rate Bylaw No. 602, 2025.** **CARRIED**

Moved and Seconded

R058-25 **THAT, Council gives second reading to the 2025 Tax Rate Bylaw No. 602, 2025.** **CARRIED**

Moved and Seconded

R059-25 **THAT, Council gives third reading to the 2025 Tax Rate Bylaw No. 602, 2025.** **CARRIED**

Council Reports

Mayor Stanke – Verbal
Nothing to report.
Received for information as presented.

Councillor Burrage – Verbal
Citizen of the Year is coming up on Saturday, May 3, 2025.
Received for information as presented.

Councillor Kosovic – LOA
No report

Councillor Park – Verbal
Nothing to report.
Received for information as presented.

Councillor Schapansky – Verbal
Nothing to report.
Received for information as presented.

New Business

None

List of Outstanding Council Previous Action Items
Received for information.

Calendar of Events
Apr 24 – Museum Spaghetti Dinner 5pm @ Memorial Hall
Apr 27 - Seedy Sunday @ Memorial Hall 10 am to 2 pm
Apr 28 – Federal Election
Apr 30 – Accessibility Plan Engagement @ Memorial Hall 6 pm to 8 pm
May 3 – Citizen of the Year Event @ Memorial Hall
May 17 – Clinton Annual Ball @ Memorial Hall
May 23 – Clinton Old Timer's Tea @ Memorial Hall 1 pm to 4 pm
May 24 – Annual Rodeo Parade 10 am start
May 24-25 – Rodeo Weekend starts at 1pm at the Rodeo grounds
May 24 – Steak Dinner 5pm @ Rodeo grounds
May 24 – Saturday Night Dance with "The Tumblin' Dice" @ 8pm – Rodeo Grounds
June 20 – Rock or Bust Concert @ Arena 8pm

March 1 to April 30, 2024 - Free income tax preparation for seniors, students, and persons with low income. By appointment only. Tuesdays and Thursdays from 2-4 pm at the Clinton Library – 1506 Tingley. Call or email to book an appointment.

Yvette May – Cell 1-250-212-5506
Email – yvettermay@gmail.com

John White – phone 250-459-2680
Cell – 1-250-377-5848
Email – jewhite2680@gmail.com

Notice to Proceed to Closed Meeting
Moved and Seconded
R060-25 **Motion to proceed to Closed Meeting as per Section 90.1 (l) of the Community Charter at 7:05 pm.**

Adjournment
Moved and Seconded
R061-24 **That the Regular Meeting of Council be adjourned at 7:28 pm.** **CARRIED**

MAYOR

CORPORATE OFFICER

LEGISLATIVE ASSEMBLY
of BRITISH COLUMBIA

Peter Milobar, MLA
Kamloops Centre

Ward Stamer, MLA
Kamloops – North Thompson

Tony Luck, MLA
Fraser – Nicola

Lorne Doerkson, MLA
Cariboo – Chilcotin

Rosalyn Bird, MLA
Prince George – Valemount

April 28, 2025

Dear Chief, Mayor and Councils,

RE: Request for Support in Redesigning the Kamloops BC Cancer Care Centre

As MLAs for Kamloops Centre, Kamloops – North Thompson, Fraser – Nicola, Cariboo – Chilcotin and Prince George-Valemount, we are writing to request your support and advocacy for the redesign of the Kamloops BC Cancer Care Centre to ensure it provides the same level of care, resources, and services as other cancer centers throughout British Columbia.

Currently, the proposed Kamloops Cancer Centre differs significantly from other provincial cancer facilities in terms of being designed as a site with two different locations, one of which will be overseen by the local health authority and the other site overseen by B.C. Cancer; neither of their data and information software work with each other and lastly, the Kamloops centre will not include a PET-CT scanner.

These inconsistencies create inequitable access to cancer care for residents in our region compared to other areas of the province and will also create major challenges for proper recruitment and retention. Many communities across BC have benefited from comprehensively designed cancer centres that follow a provincial standard. Our community deserves the same level of care and consideration.

Although we have brought this to the Minister of Health's attention by way of letter, an in person meeting and most recently questioning the Minister during debate on budget estimates, we respectfully request that you advocate for this redesign by either using the enclosed letter template or drafting your own letter, requesting the Minister of Health address the concerns being raised by the medical community to ensuring the healthcare needs of the region are being adequately met not only now, but in the years to come.

We kindly ask that you email your letter to us by May 22nd as we are hoping to present your letters en masse to Minister Osborne at the legislature before the end of session.

Thank you for your consideration of this important matter. We would welcome the opportunity to discuss this further and provide additional information as needed.

Kamloops Centre
Constituency Office
446 Victoria Street
Kamloops, BC V2C 2A7
T 778.471.9371 | F 250.554.5417

Kamloops – North Thompson
Constituency Office
618B Tranquille Road
Kamloops, B.C. V2B 3H6
T 250.554.5416 | F 250.377.3448

Fraser - Nicola
Constituency Office
T 250.318.0355

Sincerely,

Peter Milobar
MLA Kamloops Centre

Ward Stamer
MLA Kamloops – North Thompson

Tony Luck
MLA Fraser – Nicola

Lorne Doerkson
MLA Cariboo-Chilcotin

Rosalyn Bird
MLA Prince George-Valemount

Cc. Chair and Board, Columbia-Shuswap Regional District
Chair and Board, Squamish-Lillooet Regional District
Chair and Board, Thompson Regional Hospital District
Chair and Board, Thompson-Nicola Regional District
Mayor and Council, Village of Ashcroft
Mayor and Council, District of Barriere
Mayor and Council, Village of Cache Creek
Mayor and Council, Village of Chase
Mayor and Council, District of Clearwater
Mayor and Council, Village of Clinton
Mayor and Council, City of Kamloops
Mayor and Council, District of Lillooet
Mayor and Council, District of Logan Lake
Mayor and Council, Village of Lytton
Mayor and Council, City of Merritt
Mayor and Council, Sun Peaks Mountain Resort Municipality
Mayor and Council, City of Williams Lake
Mayor and Council, District of 100 Mile House
Chief and Council, ?Esdilagh First Nation (Alexandria Indian Band)
Chief and Council, Adams Lake Indian Band (Sexqeltqin)
Chief and Council, Ashcroft Indian Band (Nlaka'pamux)
Chief and Council, Bonaparte First Nation (St'uxwtews)
Chief and Council, Boothroyd Band
Chief and Council, Boston Bar First Nation
Chief and Council, Bridge River Indian Band (Nxwisten)
Chief and Council, Cayoose Creek Band (Sekw'el'was)
Chief and Council, Chawathil First Nation (Lexw Siyo:les, Hope)
Chief and Council, Coldwater Indian Band (C'eletkwmx)
Chief and Council, Cook's Ferry Indian Band
Chief and Council, High Bar First Nation (Llenlleney'ten)

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Kamloops, B.C. V2B 3H6
T 250.554.5416 | F 250.377.3448

Fraser - Nicola Constituency Office
T 250.318.0355

Chief and Council, Kanaka Bar Band (T'eqt''aqtn'mux)
Chief and Council, Lheidli T'enneh First Nation (Fort George Indian Band)
Chief and Council, Lhoosk'uz Dene Government (Kluskus Indian Band)
Chief and Council, Little Shuswap Lake Band (Skwlax te Secwepemculecw)
Chief and Council, Lower Nicola Indian Band
Chief and Council, Lower Similkameen Indian Band (Skichistan)
Chief and Council, Lytton First Nation (Tl'kemtsin)
Chief and Council, Nazko First Nation (Ndazkoh)
Chief and Council, Neskonlith Indian Band (Neskainlith)
Chief and Council, Nicomen Indian Band (Nicoamen, Nicomeen, Nikaomin)
Chief and Council, Nooaitch Indian Band
Chief and Council, Oregon Jack Creek Band
Chief and Council, Peters First Nation
Chief and Council, Shackan Indian Band
Chief and Council, Shxw'ow'hamel First Nation
Chief and Council, Simpcw First Nation (North Thompson River)
Chief and Council, Siska Indian Band
Chief and Council, Skeetchestn Indian Band (Deadman's Creek)
Chief and Council, Skuppah Indian Band
Chief and Council, Soda Creek Indian Band (Xat??ll First Nation)
Chief and Council, T'it'q'et First Nation (Lillooet Indian Band)
Chief and Council, Takla First Nation
Chief and Council, Tk'emlúps te Secwépemc (Kamloops Indian Band)
Chief and Council, Ts'kw'aylaxw First Nation (Ts'kw'aylaxw First Nation)
Chief and Council, Tsay Keh Dene First Nation
Chief and Council, Tsilhqot'in National Government (Chilcotin First Nation)
Chief and Council, Tsq?éscen? First Nation (Canim Lake Band)
Chief and Council, Union Bar First Nation
Chief and Council, Upper Nicola Band (Nicoamen)
Chief and Council, Whispering Pines/Clinton First Nation (Pelltiq't)
Chief and Council, Williams Lake First Nation (T'exelc, U12 T'exelc)
Chief and Council, Xaxli'p First Nation (Fountain Indian Band)
Chief and Council, Yale First Nation
Chief and Council, Yekooche First Nation (Yekoochet'en)

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T 250.318.0355

#	DATE	RECEIVED FROM	SUBJECT
1	April 29	Village of Telkwa	Letter to David Eby re: formally calling a reset and audit of PNG
2	May 6	Communities in Bloom	May Newsletter

Staff Report to Council
Regular Meeting

Date: **May 14, 2025**

From: **Chief Administrative Officer**

Subject: **Hazard Land Development Permit Report – 409 Lebourdais Ave & 1500 Engeman Lane**

Attachments:

1. Hazard Land Development Permit Application – 409 Lebourdais Ave & 1500 Engeman Lane
2. Geohazard Assessment for 1500 Engeman Ln. and 409 Lebourdais Ave.

Recommendations:

THAT Council of the Village of Clinton authorizes the issuance of Hazard Land Development Permit no. DP25-01 to John & Frances White for the subdivision to amend the lot line between DL 962, Plan 7124 except Plan 11715 and Lot 5, DL 962, Plan 27618 in substantial accordance with the DP Application as submitted on April 25, 2025.

Purpose:

To issue a Hazard Land Development Permit for the proposed subdivision at 409 Lebourdais Ave & 1500 Engeman Lane.

Background:

Mr. John White (*The Applicant*), the owner of 409 Lebourdais Ave & 1500 Engeman Lane has submitted an application for a subdivision to amend the location of the lot line between the properties to follow the natural terraced slope. The below image shows the proposed subdivision. Existing lot lines are in red, the proposed amended lot line in blue would replace the existing line dividing the properties.

A Hazard land Development Permit is required for the applicant, as the properties to be subdivided are within the Hazard Land Development Permit Area (*DPA*), as designated by Village of Clinton Official Community Plan Bylaw (*OCP*). For the Hazard Land DPA, the OCP states, "All land alteration, subdivision or development shall be subject to approval for a development permit where slopes are greater than 30%".

The OCP's guidelines for the DPA state as follows:

Slope Hazards

a. All development in the slope hazard development permit area shall be required to submit a geotechnical report prepared by a qualified professional engineer.

b. Development approvals should require certificates of approval on all construction works under the direct supervision of a qualified professional. Restrictive covenants may also be required to notify property owners of any specific conditions or concerns related to the geotechnical issues of the project or property.

c. Prohibit development on slopes greater than 40% except for public infrastructure

installations including private driveways. Such installations shall still require the submission of a geotechnical report identifying mitigation measures to control soil, rock, and water erosion. Disturbed areas shall require revegetation with mature native plant material after the servicing work is completed.

The Applicant has submitted a geotechnical report in accordance with the guidelines. The findings are in section 13 (pg. 23) of the report and indicate the property may be “used safely for the use intended”. Additionally, as the application is for a simple lot line amendment and does not involve construction, it is the recommendation of Staff to approve the issuance of a Hazard Land Development Permit. It is not recommended to impose additional restrictions on the property at this time.

The Applicant will be required to obtain another Development Permit if any construction is planned for the site, which is specific to the development proposed.

Figure 1: Proposed Subdivision – Existing lot lines in red, lot line in blue proposed to amend the dividing line between the properties.

Financial Impacts:
The application fee for the DP has been paid by the applicant.

Brian Doddridge
Chief Administrative Officer

CFO Initial _____

VILLAGE OF CLINTON
DEVELOPMENT PROCEDURES BYLAW NO. 510, 2014

SCHEDULE "A"

APPLICATION FOR A DEVELOPMENT PERMIT

I/We hereby make application for a Development Permit.

1. Name of Applicant(s): John Edward White + Frances Hildur White
2. Address: P.O. Box 104, Clinton, BC Folio # 2000 & 2400 50
3. Telephone Number: Business: _____ Residence: _____
4. Name of Owner(s): _____
   (If different from Applicant)
5. Address: _____
6. Legal Description of Property: Lot 1, DL 962, Plan 7124 exc. Plan 11715 and Lot 5 DL 962, Plan 27618
7. Street Address of Property: 409 Lebourdais Ave, 1500 Engeman Ln.
8. Existing Use of Subject Property: Residential + Residential
9. Existing Use of Adjacent Property:
   North: Vacant (Crown)
   South: Residential
   East: Residential
   West: Residential
10. Official Community Plan Map Designation: Low Density Residential
11. Present Zoning: R1

12. Detailed Description of Permit:
Attach two (2) Site Plans. Site plan should illustrate legal information, setbacks, parking, access, outer perimeter of buildings and structures, topographic features, water courses, proposed elevations, cross sections or relevant detail drawings.

Hazard Land Development permit to permit amendment to lot line.

13. The following items are attached:

[X] Application Fee of $250.00

[X] Current, date stamped State of Title Certificate

[ ] Letter of Consent from the Owner (if the Applicant is not the Owner)

I/WE HEREBY DECLARE THAT THE ABOVE STATEMENTS AND THE INFORMATION CONTAINED IN THE MATERIAL SUBMITTED IN SUPPORT OF THIS APPLICATION ARE TO THE BEST OF MY/OUR BELIEF TRUE AND CORRECT IN ALL RESPECTS.

Dated this 25 day of APR. 2025

JOHN E. WHITE
Print Name of Applicant

Signature of Applicant

Print Name of Applicant

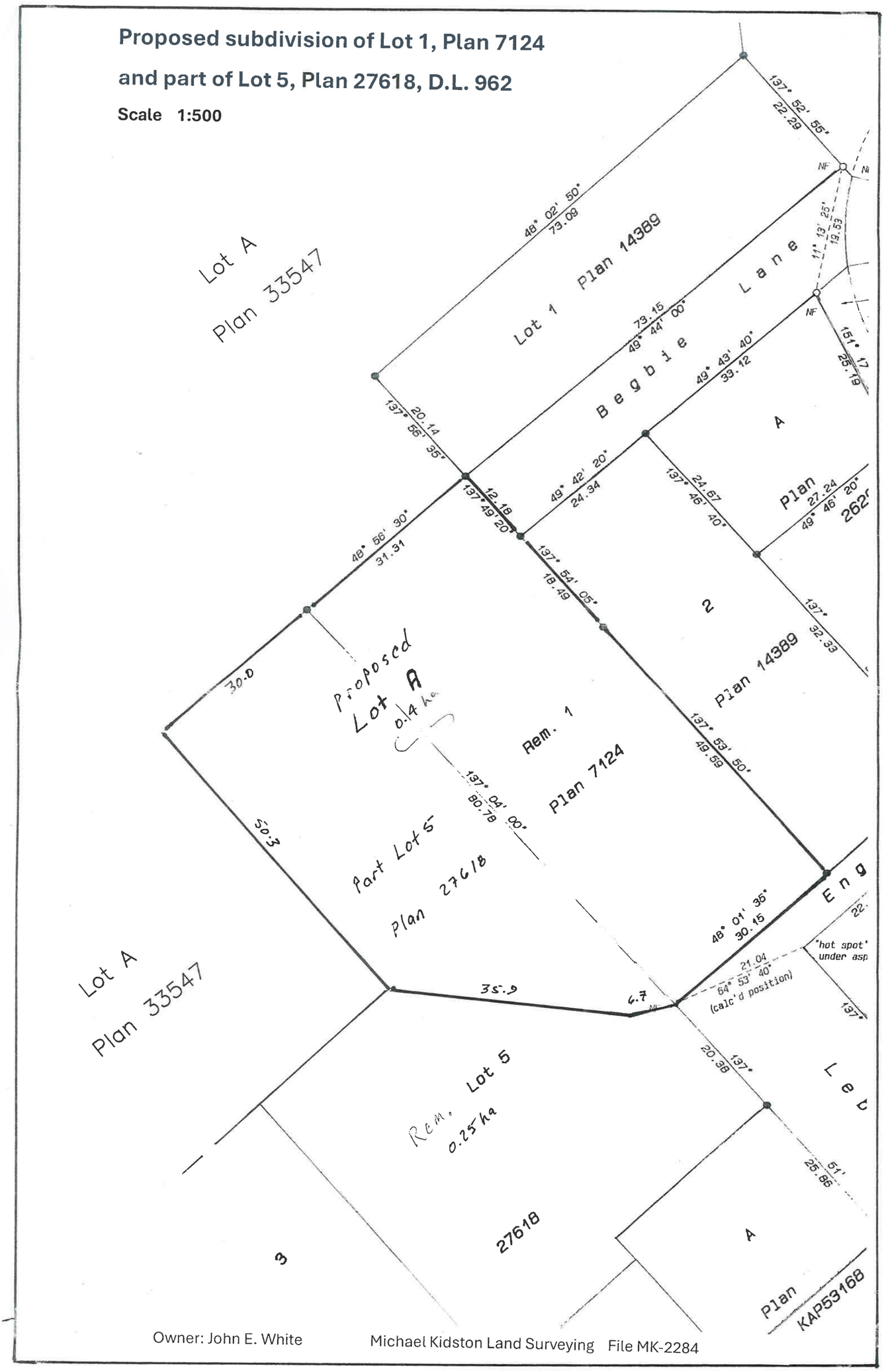
Signature of Applicant

NOTES:
1. The *Local Government Act* states that a development permit shall not vary:
   a. The use or density of land from that specified in the Bylaw; or
   b. The flood plain specification
2. Prior to the issuance of a Development Permit, the Village may require, as a condition of issuing the Permit, security to guarantee the performance of obligations under the Permit.

Proposed subdivision of Lot 1, Plan 7124

and part of Lot 5, Plan 27618, D.L. 962

Scale 1:500



Owner: John E. White

Michael Kidston Land Surveying File MK-2284

westrek
geotechnical services ltd.

Geohazard Assessment in Support of a Subdivision Application to Alter an Internal Lot Boundary

1500 Engeman Lane and 409 Lebourdais Ave
Clinton, BC

Prepared for:

John White
1500 Engeman Lane
Clinton, BC V0K 1K0
Attention: John White (jewhite2680@gmail.com)

Prepared by:

Westrek Geotechnical Services Ltd.
100 - 1383 McGill Road
Kamloops, BC V2C 6K7
www.westrekgeotech.com

April 17, 2025
File No. 025-018

Table of Contents

Attached: *Plan of Proposed Subdivision,* prepared by Michael Kidston
Select Site Photographs, Plates 1 and 2
Landslide Assessment Assurance Statement
Appendix A, *Interpretation and Use of Study and Report and Limitations*

1 Introduction and Scope

At the request of John White (White), Westrek Geotechnical Services Ltd. (Westrek) has completed a geohazard assessment (also known as a landslide assessment) in support of a subdivision application under the Village of Clinton's (the Village) Hazard Lands Development Permit Area (DPA) for 1500 Engeman Lane and 409 Lebourdais Ave (the Properties) in Clinton, BC.

The legal descriptions of the Properties are as follows:

- 1500 Engeman Lane: *Lot 1, Plan KAP7124, District Lot 962, Lillooet Land District, Except Plan 11715, PID: 002-735-113*; and
- 409 Lebourdais Ave: *Lot 5, Plan KAP27618, District Lot 962, Lillooet Land District, PID: 004-757-572*.

White is seeking to alter an internal boundary between the two existing lots, as shown on the *Plan of Proposed Subdivision* (attached), prepared by Michael Kidston and dated December 12, 2024. The subdivision application is being reviewed by the Village; however, no new lots or additional houses are proposed.

The Properties and the proposed property line change are also shown on Figure 1.

The DPA requires approval from the local government for any land alteration, subdivision, or development on slopes greater than 30% or within 2 km of high risk wildfire interface areas. All development within this DPA must be supported by a geotechnical report prepared by a Qualified Professional (QP). The Properties are located in an area with slopes exceeding 30%.

Based on BC Assessment[1], the house at 1500 Engeman Lane, referred to as Lot 1 on the *Plan of Proposed Subdivision* and in Figure 1, was constructed in 1964, and the house at 409 Lebourdais Ave, referred to as Lot 5, was constructed in 1955.

The DPA is referenced in Schedule C of the Village's Official Community Plan, dated February, 2016. As the construction of both houses on the Properties predates this DPA, it is reasonable to presume that the construction of them was grandfathered prior to the implementation of the DPA.

[1] https://www.bcassessment.ca

Figure 1: *The approximate location of the Properties, outlined in red. A mapped stream (Soues Creek), based on TRIM data, is also shown in blue, crossing the northwest corner of Lot 5 and along the southwestern boundary of this property. The approximate location of the proposed internal boundary change is shown by the dashed yellow line.*

Our assessment was completed in general conformance with Engineers and Geoscientists BC's (EGBC) *Landslide Assessments in British Columbia Professional Practice Guidelines* (the *Landslide Guidelines*) dated March 1, 2023. The requirements detailed in the *Landslide Guidelines* generally form the scope of our assessment, i.e., to complete a landslide assessment to determine whether the proposed alteration to the internal lot boundary between the Properties results in the new lots being *"safe for the use intended"*.

As no new buildings or lots will be developed (i.e., only an internal property line will be changed) as part of White's application, we propose to conduct a "Class 0" assessment in accordance with the *Landslide Guidelines*, i.e., renovations, expansions, new single houses, or new duplexes.

Our scope did not include:

- A subsurface investigation to assess the soil and groundwater conditions on the Properties, particularly with respect to the two existing houses;
- Flood hazard or snow avalanche assessments;
- Numerical landslide runout modelling; or
- Detailed design of slope hazard or risk mitigation measures, if required.

The terms and conditions for our services are outlined in our *Client Services Agreement* dated February 12, 2025. Where not specified in this agreement, they are subject to those in the attached *Interpretation and Use of Study and Report and Limitations* (Appendix A), incorporated herein.

White and the Village are considered "approved users" of our report.

2 Landslide Hazard Acceptability Criteria

The Village indicated in an email[2] to Westrek that they require a geohazard assessment to be completed by a QP for all land alteration, subdivision or development that includes slopes greater than 30%. The Village, however, does not have an acceptable level of landslide hazard or risk, and they defer to the QP to identify the appropriate levels of landslide hazard and risk to determine if, by altering the internal lot boundary, the land may be *"safe for the use intended"*[3].

For this assessment, we used a "hazard-based" approach, i.e., a partial risk assessment (also known as the encounter probability). As detailed in Appendix B of the *Landslide Guidelines*, the level of effort for our assessment was based on the requirements for a "Class 0" project, where the QP is asked to consider a return period of no less than 1 in 500 years for debris flows, debris avalanches and debris slides.

Notably, in the *Landslide Guidelines*, a debris flood[4] (which is substantially different from a debris flow[5]) is considered a landslide; this document, however, does not provide a "level of effort" for assessing this hazard. Instead, guidance on the "level of effort" is provided in EGBC's *Legislated Flood Assessments in a Changing Climate in BC* (the *Flood Guidelines)* dated August 28, 2018. Using Table D-2 of these guidelines, we have also considered our assessment a "Class 0"; for this class, EGBC notes that specific return periods are typically not needed for this hazard.

[2] Dated January 10, 2025.
[3] The "use intended" is considered a single-family home on each lot; as noted, the houses are already constructed.
[4] A debris flood is defined as a very rapid, sediment-charged flow of water with abundant fines in suspension and gravels, cobbles and boulders transported as bedload. Debris floods have increased sediment volumes, but continue to be propelled by the tractive forces of water; objects impacted by debris floods are generally buried or surrounded by debris, but are often undamaged or only slightly damaged.
[5] A debris flow is defined as a very rapid to extremely rapid surging flow of saturated debris in a steep channel; they can be triggered by open slope landslides or may develop from in-channel sediment (i.e., bedload) transport.

3 Background Information

The following information was reviewed for our assessment:

- Aerial photographs: BC602 #43-44 (1948), BC1134 #114-115 (1950), BC2629 #56-57 (1959), BC5258 #199-200 (1967), BC7585 #70-71 (1974), BCC282 #77-78 (1981), BCC92017 #122-123 (1992), BCB95001 #6-7 (1995), BCB00012 #136-137 (2000), BCC05071 #18-19 (2005), and BCC11105 #68 (low-resolution; 2011).
- LiDAR datasets (flown in 2019) and obtained from the publicly available LiDAR BC Portal.
- Google Earth Professional™ imagery dated 9/27/2017, 3/8/2020, and 10/7/2021, overlain with relevant applications provided by DataBC Public Web Map Service, i.e., Terrain Resource Information Management (TRIM) 1:20,000 scale contours and Freshwater Atlas.
- The TNRD interactive public mapping viewer, including property boundaries and orthophoto imagery, accessed from https://www.tnrd.ca/services/maps-apps-data/.
- Bedrock geology mapping, logging and wildfire information, groundwater well records, and biogeoclimatic data obtained from the BC Data Catalogue via iMapBC.
- Fulton, R.J., 1995. Surficial materials of Canada; Geological Survey of Canada, Map 1880A, scale 1:5 000 000. doi:10.4095/205040
- Tipper, H.W., 1971. Surficial geology, Bonaparte Lake. Geological Survey of Canada, Map 1293A, scale 1:250,000.
- Natural Resources Canada *Simplified Seismic Hazard Map 2015* retrieved from: https://seismescanada.rncan.gc.ca/hazard-alea/simphaz-en.php.
- Church, M., and M. Jakob. 2020. *What is a debris flood?* Water Resources Research, 56. https://doi.org/10.1029/2020WR027144.
- DeMarchi, D.A. 2011. *An Introduction to the Ecoregions of British Columbia.* BC Ministry of Environment.
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4 Fieldwork

Leslie Muir MEng PGeo and Meghan Grossman GIT, both representing Westrek, conducted fieldwork on March 18, 2025. The weather at the time was sunny and dry, with an average temperature of 3°C. There was no snow on the ground within or immediately surrounding the Properties; however, there were patches of snow in the base of the gully, upstream from the Properties.

Information on the surficial sediments, slopes, soil drainage characteristics and geomorphological processes was obtained from site observations and/or hand-dug excavations only; no subsurface investigation (i.e., test pits, trenching or drilling) was completed.

Slope gradients were measured using a handheld clinometer, and relevant observations were recorded as waypoints using an iPad equipped with Avenza® Maps software; typical horizontal accuracy was ± 5 m. Elevations, where reported, are taken from the LiDAR data and are referenced as metres above sea level (masl).

5 Methodology

To complete our assessment, we adopted the following approach:

- Review the *Landslide* and *Flood Guidelines* to determine the type of assessment and the level of effort required.
- Review the available background information, including the bedrock and surficial geology mapping, TRIM data, climate, wildfire history, 2019 LiDAR, aerial photographs, and satellite imagery of the area. Terrain stability mapping for the slope on and around the Properties was not available.
- Determine the morphometrics for the watershed upslope of the Properties.
- Conduct a fieldwork program, which included, but was not limited to, visually assessing the terrain and slope stability conditions.
- Compile the background information and fieldwork results to complete the landslide hazard analyses, which included:
    - Determining the landslide hazards that may reasonably affect the Properties, and
    - Estimating the probability of occurrence.
- Summarize the results of the assessment and compare them against the acceptable levels of landslide hazard and risk (discussed in Section 2) to determine if the Properties can be considered *"safe for the use intended"*.
- Compile all of the information reviewed, analyses completed and present the results in a report.
- Complete a *Landslide Assessment Assurance Statement* for submission to the Village with the Geohazard Assessment Report.

6 Setting

6.1 General

The Properties are located along the northwestern edge of the Clinton Creek valley. Soues Creek, contained within an elongated, gullied watershed, extends upslope, dissecting the terrain in a northwest–southeast direction.

Approximately 300 m upslope of the Properties, a railway line, originally constructed around 1915[6] as part of the Pacific Great Eastern (PGE) Railway and now operated by Canadian National Railway (CN Railway), crosses the Soues Creek gully atop a large embankment.

The slopes between the railway and the Properties are sparsely vegetated with grasses, shrubs and trees, while the slopes above the railway exhibit denser vegetative cover.

To the northwest, the terrain gradually rises toward the upper slopes of the Soues Creek watershed at approximately 1810 masl, with an average gradient of 10% to 15%. The base of the gully has a similar overall gradient of approximately 10%, while the sidewall slopes are moderate to steep, ranging from approximately 55% to 80%.

A BC Hydro transmission line right-of-way traverses the slopes at approximately 1230 masl.

6.2 Bedrock and Surficial Geology

The bedrock geology of the study area is broadly mapped by Schiarizza et al. (1994)[7], with Cenozoic-aged, coarse clastic sedimentary and minor volcanic rocks of the Chilcotin Group identified on the Properties. These include unconsolidated fluviatile conglomerate, sandstone, and siltstone, as well as minor rhyolite ash, diatomaceous earth, olivine basalt, and breccia.

Fulton (1995) broadly mapped a till veneer on the Properties, comprised of a thin and discontinuous diamicton that may include extensive areas of rock outcrop.

Tipper (1971) mapped numerous small meltwater or abandoned stream channels on the slopes above the Properties, generally draining toward the southeast. In the Clinton Creek valley bottom, Tipper mapped larger meltwater or outwash channels and river channels, bounded by cutbanks and fluvial terraces.

6.3 Groundwater

No groundwater wells were drilled on the Properties. Several wells within a 1 km radius (Figure 2) of the Properties suggest that the static groundwater level is between 0 and 27 m below the ground surface. Finished well depths ranged from 9 to 55 m below the surface, with only one well that encountered bedrock, at a depth of 29 m, indicating that the surficial materials in this area are very thick. Based on lithological descriptions (from the drillers) on the

[6] www.clintonmuseumbc.org
[7] Accessed from iMapBC.

well records, the surficial materials primarily consist of silts, sands, and gravels in varying proportions.

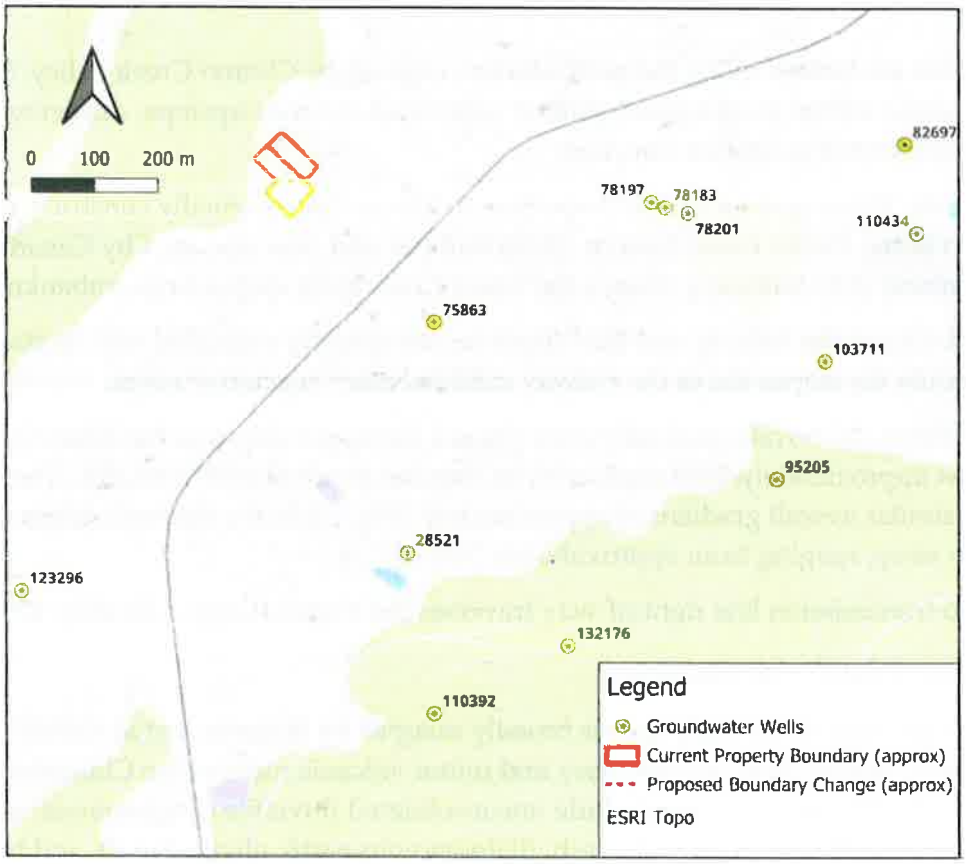

Figure 2: The locations of groundwater wells (yellow markers) within 1 km of the Properties (outlined red).

6.4 Biogeoclimatic Zone

The upper slopes of the Soues Creek watershed, above the Properties, rise to a maximum elevation of approximately 1810 masl, spanning three biogeoclimatic zones:

1. The upper watershed slopes lie within the Pavillion variant of the Montane Spruce biogeoclimatic zone (MSxk3), characterized by very dry, cool conditions.
2. Around 1540 masl, there is a transition to the Fraser variant of the Interior Douglas-fir biogeoclimatic zone (IDFdk3), which experiences dry, cool conditions.
3. The lower watershed slopes and the Properties, which are situated at an elevation of about 920 masl, lie within the Interior Douglas-fir biogeoclimatic zone (IDFxw), which is known for its very dry, warm conditions.

6.5 Climate

Regionally, the Properties lie within the Cariboo Basin Ecosection of the Fraser Plateau Ecoregion. DeMarchi (2011) describes this area as rolling upland plateaus with dry forests,

interspersed wetlands, and grasslands. The landscape consists of flat-lying basaltic lava that slopes gently to the west and south, shaped by past glaciation from both eastern and western mountain ice sheets that coalesced and moved northward in the north and southward in the south. The climate is transitional, influenced by warm, dry southern air and is one of the last areas in the region to be affected by cold Arctic air from the north. Numerous lakes, streams, and wetlands contribute to summer precipitation.

Using the 1991-2020 normals dataset, ClimateBC models the mean annual precipitation for the upper Soues Creek watershed as 567 mm, with 275 mm falling as snow. With about 49% of the precipitation falling as snow, the soils in the area are likely to be wet during and immediately after the spring freshet.

At the Properties, the mean annual precipitation is modelled as 377 mm, with 71 mm falling as snow. With only about 19% of the precipitation falling as snow, the soils are likely to be damp to moist during and immediately after the spring freshet.

6.6 Natural Disturbance

Ecosystem mapping obtained from the BC Data Catalogue via iMapBC indicates that the Properties and most of the Soues Creek watershed are located in an area classified as Natural Disturbance Type (NDT) 4. This includes grasslands, shrublands, and forested communities that normally experience a mixed severity fire regime. The varied intensity and frequency of fires across this landscape can create a natural mosaic of mostly uneven-aged forests, interspersed with grassy and shrubby openings.

Frequent stand-maintaining surface fires[8] have a return period ranging from about 4 to 50 years[9] in this ecosystem, while less frequent stand-initiating crown fires[10] have a return period ranging from 150 to 250 years, and sometimes longer.

The upper Soues Creek watershed, i.e., above elevation 1540 masl, is located in an area classified as NDT 3. These ecosystems experience frequent stand-initiating events, with fire regimes ranging from small spot fires[11] to large conflagrations[12] that can exceed 100,000 ha. Fire return intervals in this natural disturbance type vary by ecosystem type and range from about 100 to 150 years[13].

Data from the BC Wildfire Service[14] indicates that the slopes on and immediately above the Properties have not been affected by wildfires in recent history (i.e., within the last 100 years or

[8] These fires occur in relatively dry, hot climates and generally leave a portion of the fire-resistant overstory trees, maintaining the stand in a relatively open condition.
[9] Hall, E. 2010. *Maintaining Fire in British Columbia's Ecosystems: An Ecological Perspective.*
[10] A fire that advances through the crown fuel layer, usually alongside a surface fire.
[11] A fire that is less than 0.01 ha.
[12] A large, destructive fire that rapidly spreads.
[13] Hall, E. 2010. *Maintaining Fire in British Columbia's Ecosystems: An Ecological Perspective.*
[14] Obtained from iMapBC.

so). However, approximately 22% of the Soues Creek watershed was affected by wildfires between 1919 and 1922, roughly 4.5 km and 6 km upslope from the Properties (Figure 3).

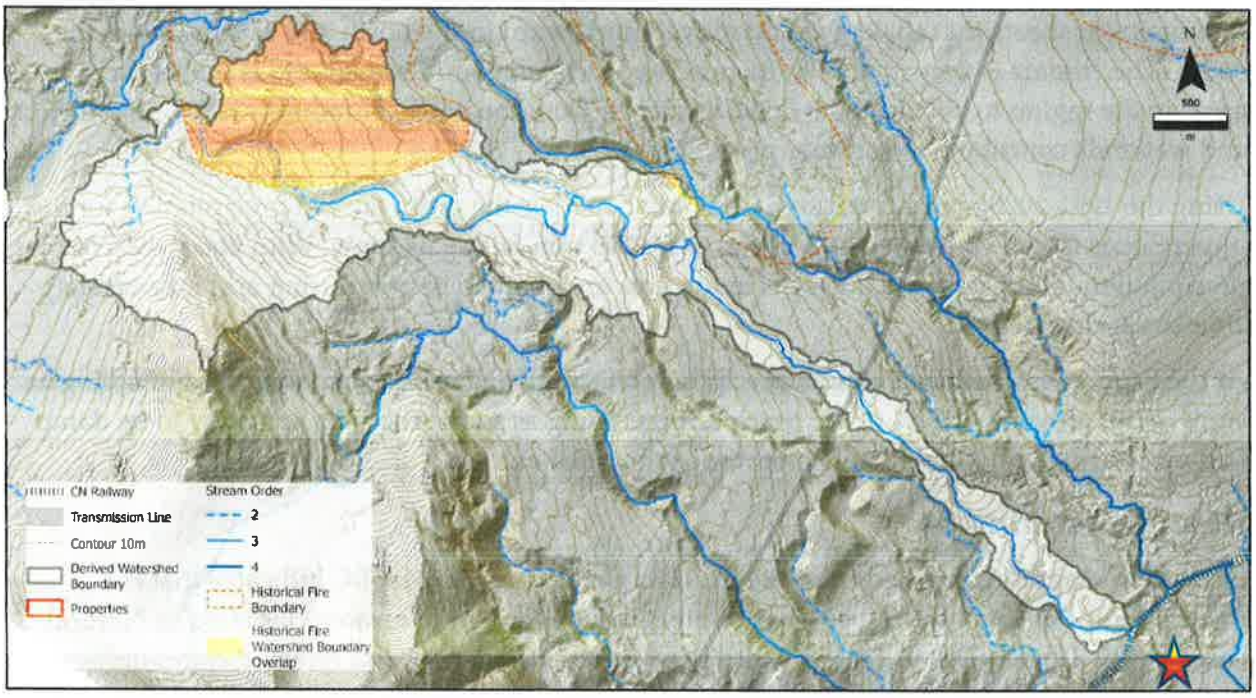

Figure 3: *The areas within the Soues Creek watershed that were affected by wildfires between 1919 and 1922 (shaded orange). The approximate extent of the derived watershed is outlined by a dark grey line. The location of the Properties is shown by a red star, and the mainstem creek is light blue within the watershed boundary.*

7 Imagery Review

7.1 Aerial Photographs and Satellite Orthoimagery

Air photos from 1948 to 2005, a low-resolution digital photo from 2011, and Google Earth™ orthoimagery from 2017 to 2021 were reviewed to understand the recent anthropogenic changes to the slopes in the general area and determine whether this affected the slope stability. A review of the historic landslide activity was also completed.

The following is a summary of the relevant observations:

1948: The Properties are undeveloped, and the ground appears covered with sparse vegetation. Within the valley bottom, there is cleared land for agriculture and occasional residential structures and roads. The CN Railway, a portion of the Cariboo Highway, as well as several trails built on the lower northwestern Clinton Creek valley slopes, are present in these early images.

Two possible landslides were identified in these images; they are located about 1.4 km northeast and 2.6 km southwest of the future Properties. These landslides appear to have initiated on the slopes directly above the railroad and may have been the result of over-steepened cut slopes;

however, this could not be confirmed. The landslide to the northeast appears to have arrested on the slope about 50 m below the CN Railway and the landslide to the southwest arrested on the CN Railway surface, i.e., debris deposited relatively quickly at the slope toe.

1950: Residential development within the Village has increased, including the construction of a house near the outlet of the gully (possibly neighbouring the future location of the Properties). Several new trails/roads have been constructed on the slopes above the future Properties and on the sidewalls of the gully adjacent to the Soues Creek watershed.

1959: New roads and houses have been built within the vicinity of the Properties, including the house at 409 Lebourdais Ave.

1967: An area was logged about 2.5 km north of the Properties. It appears that the harvested area extends to a gully sidewall, adjacent to the Soues Creek watershed. According to BC Assessment, the house at 1500 Engeman Lane should be constructed; however, its presence is unclear in the imagery.

1974: A BC Hydro transmission line right-of-way is visible and extends in a northeast-southwest direction, crossing the slopes about 2.8 km northwest of the Properties. The house at 1500 Engeman Lane is now visible, and the CN Railway upslope has been upgraded/widened.

1981: Aside from an area of possible erosion noted within the gully adjacent to the Soues Creek watershed, and some selective logging on the slopes around the same gully, there are no significant changes to the slopes around the Properties.

1986: Aside from the development of a few small borrow pits, likely associated with road construction, there are no significant changes to the slopes around the Properties.

1992: An area of possible erosion from an old road is visible within the Soues Creek watershed, directly above the Properties. Erosional debris appears to have arrested near the toe of the slope and did not impact the Properties.

1995: No significant changes noted.

2000: No significant changes noted.

2005: Aside from evidence of selective logging above the transmission line, about 2.8 km northwest of the Properties, there are no other significant changes noted.

2011, 2017, 2020, and 2021 (digital image and Google Earth orthoimagery): Aside from possible erosion on the gully sidewall above the railway crossing on Soues Creek, about 350 m upstream from the Properties, no significant changes were noted in the images.

No landslides, landslide debris, or potentially unstable slopes were visible on the reviewed imagery in the immediate vicinity of the Properties.

No historical wildfires within or above the Properties were evident from the imagery reviewed. Despite this, wildfires are likely to impact the region.

7.2 LiDAR Hillshade Imagery

A review of the hillslope morphology was completed using bare earth imagery derived from the 2019 LiDAR dataset (Figure 4); this provided a baseline understanding of the slope hazards within the study area and identified geomorphic changes (either natural or human-made) to the landscape.

The general area is characterized by gentle, irregular to somewhat hummocky and kettled valley slopes that are dissected by drainage channels and deeply incised gullies. Some of the gullies host active streams, as evidenced by smaller, secondary incised channels within the gully bottoms and by signs of more recent sediment movement. The secondary channels appear underfit relative to the size of the gullies, indicating that the gullies were likely formed during the paraglacial period[15]. The valley slopes also feature other glacial landforms such as eskers[16].

To the southeast, the slopes transition into a broad plain.

Upslope of the Properties is a wide, moderately to steeply incised gully that contains Soues Creek. The sidewalls are predominantly uniform in profile and broadly undulating along the contour. The watershed likely drains upper elevation wetlands and lakes. The CN Railway crosses the gully about 300 m upstream of Lot 5, where it appears to infill the channel. Numerous trails/old roads also traverse the slopes and the gully sidewalls above the Properties. A small erosional feature was identified near one of these old roads; the age of this feature is unknown, but it was likely caused by a drainage diversion.

The northwestern portion of the Lot 5 property boundary is situated at the gully outlet, and the existing house is located on the fan deposits, about 90 m downslope of the outlet. Beyond the outlet, the slopes have been substantially modified to accommodate residential development.

Downslope of the Properties, the slopes are predominantly gentle to planar and extend across the valley bottom.

[15] The time period following glaciation in which the landscape undergoes significant modifications due to the melting of ice, erosion, sediment deposition and other geomorphological processes.
[16] A long, narrow ridge or mound composed of sand, gravel, and boulders, deposited by meltwater streams flowing on, within, or beneath a stagnant or retreating glacier.

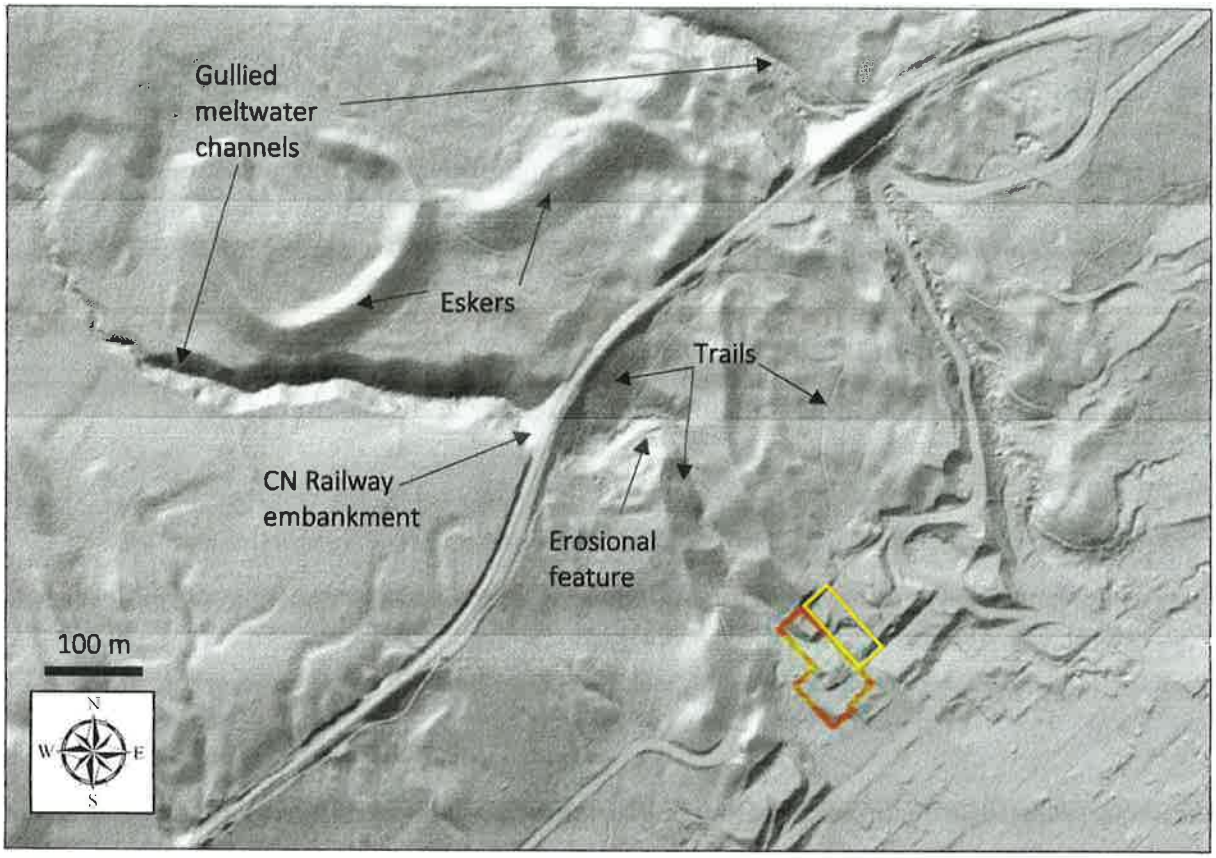

Figure 4: Annotated hillshade imagery derived from 2019 LiDAR. The approximate boundary of Lot 1 is outlined in yellow, and Lot 5 is outlined in orange.

8 Watershed Discussion

8.1 The Watershed

Overall, the watershed is large and elongated, covering an area of about 593 ha and ranging in elevation from 960 to 1810 masl. The mainstem channel gradient averages around 10% and generally does not exceed 40%. The channel is well-confined in a deeply incised gully.

The Province of BC Data Catalogue[17] has mapped the Soues Creek watershed upstream of the Properties; however, its delineation relies on low-resolution TRIM data, which can be unreliable. With the availability of LiDAR data, a more accurate boundary for the watershed was delineated (Figure 3).

To assist in delineating the watershed boundaries, the LiDAR-derived Digital elevation Model (DEM) was processed using the *Fill, Flow Direction*, and *Flow Accumulation* tools in ArcGIS to

[17] https://catalogue.data.gov.bc.ca/dataset/freshwater-atlas-named-watersheds

create a hydrologically conditioned surface and extract stream networks. Pour points[18] were then defined, and the *Watershed* tool was applied to generate boundaries based on flow direction. This method effectively identifies "contributing areas" for hydrological analysis. For this analysis, the CN Railway crossing on Soues Creek, located approximately 300 m upstream of the Properties, was selected as the pour point. Although the true gully outlet lies downstream from this location, at the rear boundary of Lot 5, the watershed was delineated from a point upslope of the railway crossing since the embankment represents a significant barrier, and essentially functions as a dam in the model.

8.2 Watershed Morphometrics

Wilford *et al.* (2004) used the following morphometrics to predict the dominant hydrogeomorphic hazard(s) that could be expected within a watershed:

- The Melton ratio[19], where the class boundaries between floods, debris floods and debris flows are based on a Melton ratio of <0.3, 0.3 to 0.6 and >0.6, respectively; and
- The watershed length, where the Melton ratio is >0.6, to distinguish between debris floods (>2.7 km) and debris flows (<2.7 km).

More recently, Church and Jakob (2020), plotted steep creek processes as a function of the Melton ratio and stream length. Both methods of analysis are useful in determining the hydrogeomorphic response. The Wilford et al. (2004) method is more definitive, setting clear bounds between the categories. The Church and Jakob (2020) method allows for more of a transitional comparison.

The results of our morphometric analysis for this watershed are as follows:

Parameter	Value (estimated from the LiDAR data)
Watershed Area	593 ha
Min./Max. Watershed Elevations	960 m/1810 m
Watershed Relief	850 m
Melton Ratio	0.35
Watershed Length	7.7 km
Stream Length	9.2 km

Based on the Wilford *et al.* (2004) approach, the Soues Creek watershed is likely to be debris flood prone.

Using Church and Jakob (2020), the expected hydrogeomorphic event for the watershed generally plots within the "mixed floods and debris floods" classification (Figure 5).

[18] Pour points are used in watershed delineation to identify the outlet of a catchment, i.e., the lowest point to which surface water from upstream will naturally flow.
[19] Watershed relief divided by the square root of the watershed area.

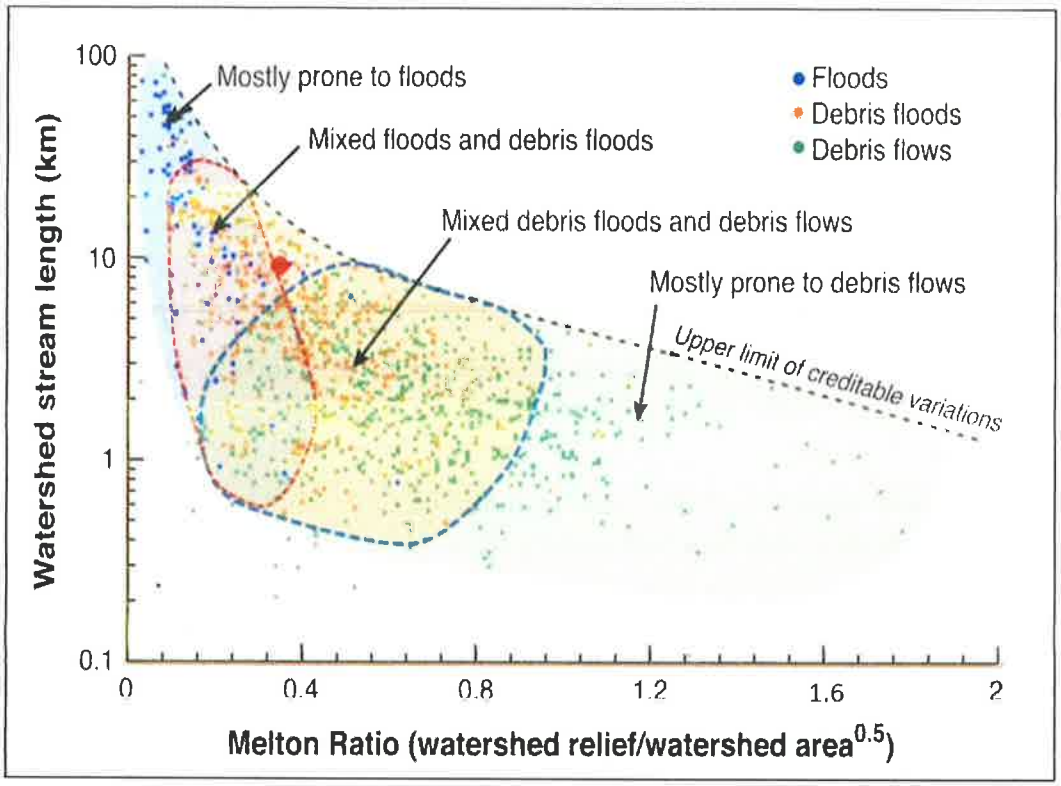

Figure 5: *Hydrogeomorphic processes as a function of the Melton ratio and stream length (Church and Jakob, 2020). The derived Soues Creek watershed plots near the border of the "mixed floods and debris floods" category (red marker).*

The results of the morphometric analysis are further supported by the gradient of the base of the gully upstream from the Properties, which averages 10% over a distance of approximately 9.2 km, which is not steep enough to initiate or result in prolonged transport of a debris flow. That is, Takahashi (1991)[20] states that debris flows require channel gradients in excess of 27% for prolonged transport and may continue at lower gradients under 20%, but they tend to lose momentum and begin to transition to deposition. The average slopes for debris floods and floods tend to be much lower than those for debris flows[21].

9 Field Observations

The following summarizes our field observations and notable features.

9.1 1500 Engeman Lane (Lot 1)

The house is situated on a planar to gently sloping pad, excavated into the slope, about 70 m southeast of the gully outlet (Photo 1), and approximately 5 to 10 m above the elevation of the

[20] Takahashi, T. 1991. *Debris flow: Monograph of IAHR, Balkema.* Rotterdam: 1–165.
[21] Lau, C.A. 2017. *Channel Scour on Temperate Alluvial Fans in British Columbia.* MSc Thesis, Simon Fraser University. Retrieved from http://summit.sfu.ca/files/iritems1/17564/etd10198_CLau.pdf.

fan. A series of landscaped retaining walls are present on the north, east, and south sides of the house.

The walls on the north and south sides are:

- Approximately 10 m from the house foundations;
- Near-vertical and about 2 m high on the upslope (north) side and 1.2 m high on the downslope (south) side; and
- Constructed of rounded river stone (mainly cobbles) held together with cement.

On the south side, a grassed slope averaging 70% and about 10 m long, separates an upper wall from a lower one. These walls and the intervening slope appeared generally stable at the time (Photo 1 inset).

On the east boundary of the lot, a timber crib wall infilled with cobbles is present. It is about 2 m high and located approximately 8 m horizontally from the house.

It is not known whether any of the walls were engineered, although it is highly unlikely. None showed significant signs of displacement or potential failure at the time, and no seepage was observed emanating from them.

The walls on the north and east sides are located far enough away from the house and are separated by flat landscaping such that, if they failed, debris is unlikely to impact house. Similarly, the 10 m setback between the house and the crest of the southern slope makes it unlikely that a collapse of the landscape walls would affect the house.

The property covers an area of about 2,500 m^2 and also includes several benches separated by short (< 5 m high) moderate to moderately steep excavated slopes (Photo 2), which expose well-drained, gravelly, cobbly sand with trace to some silt, interpreted as glacial till. A veneer of eolian silt and sand is also present in some areas.

No significant groundwater seepage zones were observed.

9.2 409 Lebourdais Ave (Lot 5)

The house is situated about 125 m southeast and downstream of the fan apex, 90 m from the gully outlet, on a level pad excavated into the fan surface (Photo 1). From the gully outlet, the fan slopes toward the south at less than 10% (Photo 3).

Similar to Lot 1, the terrain on this property has been modified by landscaping and driveway construction. Three terraced landscaping walls, each about 1.2 m high and constructed of stacked cobbles, are located immediately south of (i.e., downslope from) the house. These walls are also unlikely to have been engineered. Minor deformation was evident along the walls; however, they appeared generally stable. A deck attached to the house overhangs (but is not attached to) the uppermost wall.

Excavated slopes on the lot expose well-drained, gravelly, cobbly sand with trace to some silt, also interpreted as till; there are actively ravelling slopes ranging from 57% to 65% (Photo 4).

The property covers an area of about 4,400 m².

No significant groundwater seepage zones were observed.

9.3 The Soues Creek Watershed

The gully within the Soues Creek watershed extends over 7 km upstream of Lot 5 in a northwest-southeast direction. Its width, depth, and morphology vary along its length, with some sections more deeply incised than others. As previously noted, the overall average gradient of the base of the gully is about 10%. No exposed bedrock was observed during our field traverse in the lower watershed.

Approximately 300 m upstream of Lot 5, the CN Railway crosses the 20 m wide gully on an approximately 20 m high embankment (Photo 5). The embankment has a base width of approximately 30 m and supports a 10.5 m wide, ballasted surface at the crest. A gently sloping ditch is located on the upstream side, directing runoff into the upstream portion of the gully (Photo 6). The ditch was dry at the time. Above the ditch, the adjacent cut slope is approximately 1.5 m high, with a slope gradient of 57%.

The upstream side of the embankment has a slope gradient ranging from 70% to 75% for 30 m, down to the base of the gully. The downstream side of the embankment is traversed by a footpath, dividing it into an upper section about 23 m long and sloping at 78%, and a lower section about 15 m long sloping at 55%. There was no active streamflow directly upstream or downstream of this crossing; however, the presence of a shallow, eroded channel suggests seasonal flows do occur. The base of the channel was covered with leaf litter, woody debris, and established shrub growth.

The footpath exposes subrounded to rounded, gravelly, cobbly, fine- to coarse-grained sand with trace silt around the centre of the embankment, transitioning to silty sand with trace gravel, cobbles, and occasional boulders closer to the gully sidewalls. No seepage or signs of erosional scour were observed on these slopes, and the surficial materials appeared well-drained. No signs of potential slope failures, such as tension cracks, were found; overall, the relative density appeared to be at least compact.

A 400 mm diameter, corrugated metal pipe (CMP) culvert is installed at the base of the embankment (Photo 7), which is likely significantly undersized for the catchment. At the time, the outlet was infilled about one-third with debris. Downstream from the culvert, the base of the gully varies from 20% to 25% for the first 10 m, then flattens to around 10%.

Approximately 65 m downstream of the railway embankment, an old road/trail crosses the gully. A culvert was not observed during the site visit; however, it may have been obscured by partial snow cover.

Another 35 m further downstream, a small debris slide had occurred on the western sidewall of the gully, upslope of a trail on the same side (Photo 8). The sidewall in this section averages 80% and is about 12 m high (vertical). The headscarp is 2 m wide and near vertical for 0.5 m. Mobilized material from the slide has accumulated at the base of the gully; however, the trail

remains intact. Silt and fine-grained sand are exposed in the headscarp, and are interpreted to be eolian deposits. The terrain upslope of the headscarp is ridged, with no visible signs of seepage or concentration of runoff to this area. Below, the gully has a basal width of approximately 6 m and a gradient of about 10%. No significant signs of active erosional scour were evident, although surface conditions were partially obscured by patchy snow cover.

Further downstream another 40 m, the gully morphology transitions from flat-bottomed/U-shaped to more V-shaped. In this reach, the 2 m wide base is incised less than 0.75 m deep and has a gradient ranging from 10% to 15%. Lag deposits consisting of moss-covered, subrounded to rounded cobbles and boulders, up to 0.8 m in diameter, were present within the gully bottom, along with abundant woody debris. Loose, unconsolidated surficial materials were observed along the gully sidewalls; however, no recent erosion or sediment mobilization was observed.

Continuing downstream for another 25 m, two sediment wedges were observed within the base of the gully (Photo 9). The wedges were vegetated and likely represent remnants of the original gully floor, prior to incision.

Approximately 35 m farther downstream, the base of the gully transitions into a wide, flat surface, consistent with an old road bench. In this reach, the gully widens to between 4 and 6 m, and the gradient flattens to approximately 8%. Sidewall slopes range from 60% to 70% and generally appeared stable.

Prior to reaching the outlet, the gully makes a sharp, nearly 90° turn to the southeast (Photo 10). This abrupt change in direction could slow flow rates and promote debris deposition if it is bedrock-controlled; however, no exposed bedrock was observed. The house on Lot 5 is located more than 100 m downstream from this bend.

At the outlet, the base of the gully was approximately 5 m wide, with a gradient less than 10%. The outlet was dry at the time and contained scattered woody debris and moss-covered, coarse lag deposits (Photo 11). No significant erosional scour was observed.

From the outlet, a driveway leading to Lot 1 is situated about 10 m away, with a gentle incline towards the house. The house on Lot 5 is located about 90 m downslope from the outlet (Photo 12).

The sidewalls around the gully outlet are gently benchy in profile and undulating along the contour. The western sidewall slopes at approximately 27% over the lower 6 m, steepening to 55% to 60% upslope for about 30 m. The eastern sidewall extends about 40 m upslope at a gradient of 60%.

Overall, aside from the very small debris slide noted, our observations of the gully sidewalls downstream from the railway crossing revealed no signs of unstable or potentially unstable slopes, including no jack-strawed or pistol-butted trees, tension cracks, slumps, seepage zones, failures along trail surfaces, or evidence of substantial erosional scour.

10 Seismicity

According to Natural Resources Canada's *2015 Simplified Seismic Hazard Map* (Figure 6), the Properties are located in an area of moderate seismic hazard. It is known that earthquakes can trigger debris slides, debris avalanches, rockslides and rockfall. The annual probability of earthquakes triggering these landslides within the study area is not known, but it can be assumed that the area has experienced numerous earthquakes since deglaciation (roughly 10,000 years ago). Therefore, seismically induced landslides are likely to be reflected in the slope conditions that were observed during our fieldwork.

If an earthquake triggered a landslide within the vicinity of the Properties, the expected type would most likely be a debris slide or debris avalanche. As no indications of significant slope failures were identified on the slopes within or immediately upslope of the Properties, the likelihood of a seismically induced debris slide or debris avalanche being triggered is unlikely to exceed 1 in 10,000.

Channelized landslides, such as debris floods, are related to rainfall/snowmelt and streamflow, and as such, seismic activity is highly unlikely to affect the frequency of their occurrence.

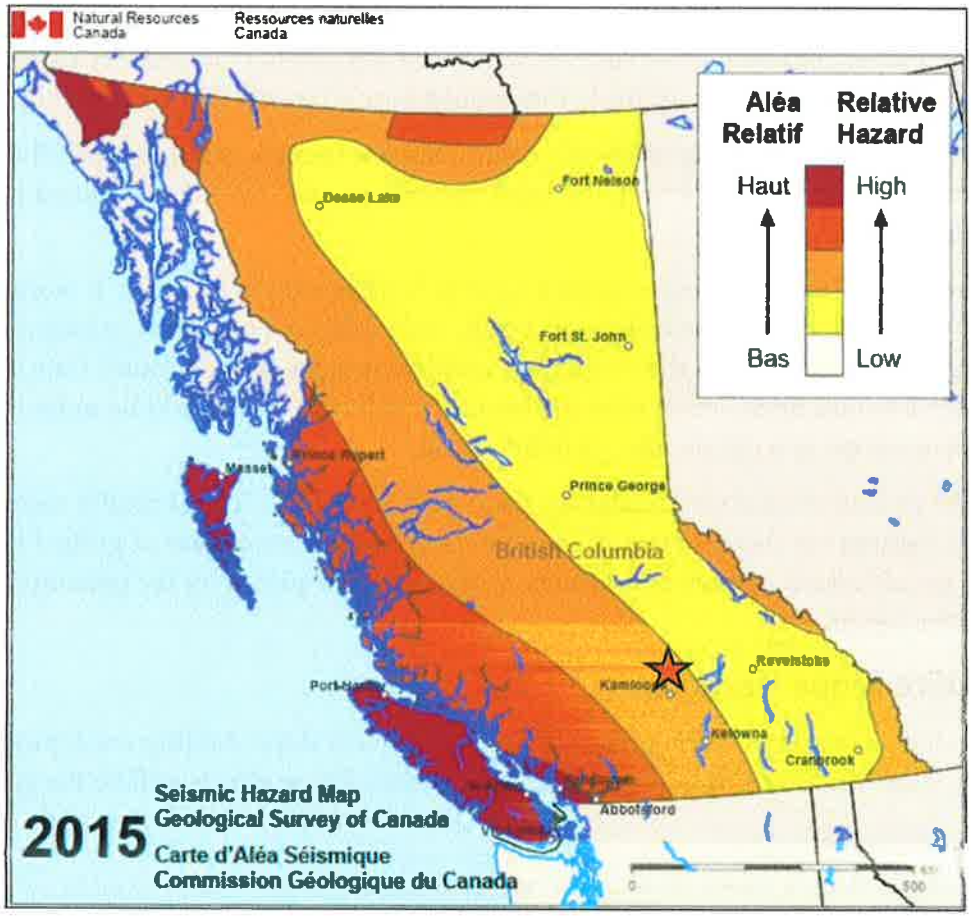

Figure 6: *Geological Survey of Canada Seismic Hazard Map; the approximate location of the Properties is indicated by a red star.*

11 Changed Conditions

11.1 Upslope Logging

Clearcut logging and road/trail construction can lead to a significant increase in the overall hillslope runoff and groundwater levels, which may result in increased soil pore-water pressures, the primary trigger for most slope failures[22].

Our experience indicates that poorly located and/or a lack of drainage structures, as well as insufficient maintenance of them, can intercept, redirect, and concentrate hillslope runoff. These scenarios are commonly referred to as drainage diversions, and many landslides observed in the BC Southern Interior tend to occur as a result of them. Drainage diversions can either redirect runoff onto unconditioned slopes below or increase the catchment area for drainage structures. This can increase the likelihood of landslides being triggered. When drainage diversions on roads are noted higher up on a slope, the problem usually compounds as the runoff moves downslope.

If logging were to occur on the gentle slopes above the moderately steep gully sidewalls directly upslope of the Properties, the likelihood of a landslide reaching the Properties as a result of such activities is considered low[23] (i.e., annual probability not exceeding 1 in 500). This is supported by LiDAR and field observations, which did not reveal evidence of existing or historic slope instabilities of a magnitude that would pose a hazard to the Properties.

Although harvesting on the gully sidewalls could increase the risk of slope destabilization, such practices would not be consistent with the legal framework and objectives outlined in the *Forest and Range Practices Act*.

If a slope failure related to logging activities were to be triggered in this area, it would most likely involve a small, translational slide on a gully sidewall. Given the low gradients in the base of the gully upstream from the Properties, and the absence of year-round flow, any resulting debris would likely arrest near the toe of the sidewall and would be unlikely to propagate downslope as a debris flow or debris flood.

To reduce the potential for slope failures on steep gully sidewalls, it is generally recommended that upslope logging not increase runoff into the natural catchment areas of gullied streams. This would be addressed in a terrain stability assessment completed by the person(s) completing the logging.

11.2 Post-Wildfire Slope Hazards

For fire-affected slopes, short-term effects on hydrology and slope stability are typically triggered by short-duration/high-intensity rainfall events. These effects will be the greatest for

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[22] Hammond, C., Hall, D., Miller, S., Swetik, P. 1992. *Level 1 Stability Analysis (LISA) documentation for version 2.0 Gen. Tech. Rep.* INT-285. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 190 p.

[23] Wise, M.P., G.D. Moore, and D.F. VanDine. 2004. *Landslide risk case studies in forest development planning and operations.* B.C. Min. For., Res. Br., Victoria, B.C. Land Management. Handbook. No. 56.

the first 5 years following a wildfire, when hydrophobicity[24] and lack of vegetative ground cover are at the highest levels.

Longer-term effects at a watershed scale are typically associated with changes to the spring snowmelt hydrograph (i.e., snow accumulation, snowmelt, and rain-on-snow events). These effects are expected to persist beyond 5 years, until vegetation in the watershed recovers and canopy closure occurs.

Since most post-wildfire landslides are typically driven by rainfall, they tend to occur in streams, draws, and/or on convergent slopes, spreading out when confinement is lost. This usually results in channelized landslides, such as debris floods or debris flows. The house on Lot 5 is situated directly downslope of a gully outlet; however, the potential for future post-wildfire landslide hazards to affect it are reduced by the presence of the CN Railway embankment upstream.

Sediment-laden flows, which may occur on open slopes following a wildfire, are smaller-scale, runoff-driven processes that entrain ash, soil, and woody debris as they move downslope. These events are generally less damaging than channelized landslides and are typically regarded as nuisance-level hazards.

11.3 Climate Change Considerations

Potential climate change impacts for the Thompson-Nicola region were obtained through the "Plan2Adapt" web-based tools published by the Pacific Climate Impacts Consortium (PCIC). Their models predict the following changes, which are compared to baseline data from 1981 to 2010:

- 2021 to 2050
    - Average annual temperature is expected to increase by 1.6°C.
    - Average annual precipitation is expected to increase by 2.2%, with spring precipitation decreasing by 2.8%, summer precipitation decreasing by 5.9%, fall precipitation decreasing by 0.7%, and winter precipitation increasing by 14%.
    - About 2.9% less precipitation will fall as snow annually.
- 2041 to 2070
    - Average annual temperature is expected to increase by 2.7°C.
    - Average annual precipitation is expected to increase by 5.5%, with spring precipitation increasing by 2.6%, summer precipitation decreasing by 8.7%, fall precipitation increasing by 4.6%, and winter precipitation increasing by 18.2%.

[24] Study of the persistence of fire induced water repellency (i.e., hydrophobicity) in soils indicates that it is a spatially variable phenomenon. Water repellency tends to decrease when soils have prolonged contact with moisture, but persistence is site specific, dependent upon the strength and extent of hydrophobic chemicals in the soil and the physical and biological factors affecting the breakdown of these chemicals.

- About 7.1% less precipitation will fall as snow annually.

Climate projections suggest a reduction in snowfall and a rise in frost-free days. Prolonged periods of high temperatures and drought could diminish water resources and elevate the threat of future wildfires.

As a result of these possible changes to the temperature and precipitation patterns, there is an increased probability of experiencing more rainfall. Related to wildfires, this could increase the potential for post-wildfire slope hazards, such as debris floods and sediment-laden flows upslope from the Properties.

According to Table F-1 in the *Landslide Guidelines*, similar or higher magnitude, shallow landslides could occur, particularly if rainfall intensity increases. Higher rainfall may lead to greater slope instability and increased landslide mobility due to progressive entrainment and increased toe erosion along creeks; however, these outcomes are highly dependent on site-specific conditions. Debris from shallow landslides will likely continue to deposit near the slope toe, well away from the existing houses on the Properties.

12 Hazard Analysis

Based on our review of the background information, historic imagery, and fieldwork, the following potential landslide hazards were considered in assessing the risk to the existing houses on the proposed lots:

- Debris slides and debris avalanches; and
- Debris flows and debris floods.

A very small (<20 m^3) debris slide was observed approximately 200 m upstream of the Properties, originating from a steep gully sidewall. No other unstable slopes (i.e., existing landslides) were identified on or immediately upslope of the Properties. The gully sidewalls are moderately to steeply sloping (55% to 80%), mantled by thick (>2 m) surficial materials, and exceed 6 m in height.

Should a landslide occur on these slopes, it would most likely be a shallow, translational failure; debris is expected to arrest either on an existing trail (if present) or at the slope toe, which is consistent with our field observations. Based on this, the likelihood of a debris slide initiating on these slopes and affecting the houses on the Properties is considered low (i.e., it does not exceed 1 in 500).

From the watershed morphometrics and our field observations, the watershed upslope of the Properties is not considered prone to debris flows. Therefore, a debris flow is not a credible hazard to the existing house on either lot.

Therefore, the potential landslide hazard we have considered is a debris flood, which would most likely be triggered following a wildfire, if:

- At least 40% of the slopes within the watershed were burned at moderate and/or high severity, and
- A short-duration/high-intensity rainfall impacted these burned slopes within the first five (5) years of the wildfire.

In assessing the debris flood risk, the *Flood Guidelines* state that specific return periods are typically not needed for a "Class 0" project.

Whether a post-wildfire debris flood triggered in the headwaters of Soues Creek could affect the Properties depends on the:

- Magnitude of the runoff generated event; and
- Efficacy of the 20 m high railway embankment fill, i.e., due to the small diameter culvert within the embankment, it is highly unlikely that a debris flood would be conveyed through the culvert and it would "fill up" behind the embankment, creating a temporary dam.

The design of this structure, and whether it was built in accordance with this design, is not known[25,26]. Furthermore, it is not known whether the embankment was engineered to withstand a debris flood initiating from the Soues Creek watershed. Regardless, it has been in place since around 1915 and appeared to be in good condition at the time of our fieldwork, i.e., there was no signs of instability or potential instability on it. Since it has conveyed heavy train loads for more than 100 years, it is reasonable to assume that it is likely to be a sound structure.

Nevertheless, should the temporary dam created by the embankment fail, a much larger area in the Village, in addition to Lots 1 and 5, would be affected. Without rebuilding the embankment to manage this risk (which is extremely unlikely), the downstream impact will affect multiple properties.

However, in reviewing the results of our assessment, the Village should be aware that the risk profile to the residents in the existing houses on Lots 1 and 5 does not change with the proposed property line alteration.

Should a debris flood occur in the stream reaches downstream of the embankment, the event would likely be very small in magnitude, more akin to a sediment-laden flow. While the house on Lot 5 may be affected, such an event is highly unlikely to be life-threatening or cause significant harm or damage. Additionally, the house on this lot is situated above the lowest point on the fan, and runoff will preferentially flow to the west and south of it, further eroding/deepening the low point and directing flow away from the house.

[25] The Village confirmed that they have no records related to the design or construction of the embankment in an email from the Chief Administrative Officer to Westrek dated April 9, 2025.
[26] No response had been received from either CN Railway or the BC Railway Company (BCRC) at the time of writing this report.

Due to its slope position, the existing house on Lot 1 is not considered to be at risk from post-wildfire debris floods.

The stability of the landscape retaining walls on both lots is unknown, and is beyond the scope of this geohazard assessment. Based on our observations, however, the walls generally appeared stable at the time. Should any of these walls fail, the failure and debris is highly unlikely to affect either house.

The deck attached to the house on Lot 5, however, could be affected by ongoing settlement and/or deformation on the walls below it. While this is considered highly unlikely to pose a life-safety risk, it could affect the structural integrity of the deck.

13 Conclusions and Recommendations

Based on the results of our geohazard assessment, the proposed property line alteration between the Properties does not:

- Increase the landslide risk profile to the residents of the existing houses, or
- Introduce any additional risk to public safety.

Although the CN Railway embankment will provide some mitigation against a post-wildfire debris flood, its capacity to withstand a large event (such as the 1 in 500 year return period) is not known, due to insufficient information regarding its construction methods, materials, and design. Regardless, for a "Class 0" assessment, the *Flood Guidelines* do not require a return period of this magnitude to be assessed.

Therefore, based on the results of our assessment and the unchanged risk profiles resulting from the proposed property line alteration, it is our opinion that the existing houses on the proposed lots shown on the *Plan of Proposed Subdivision* (attached) can be *"used safely for the use intended"*.

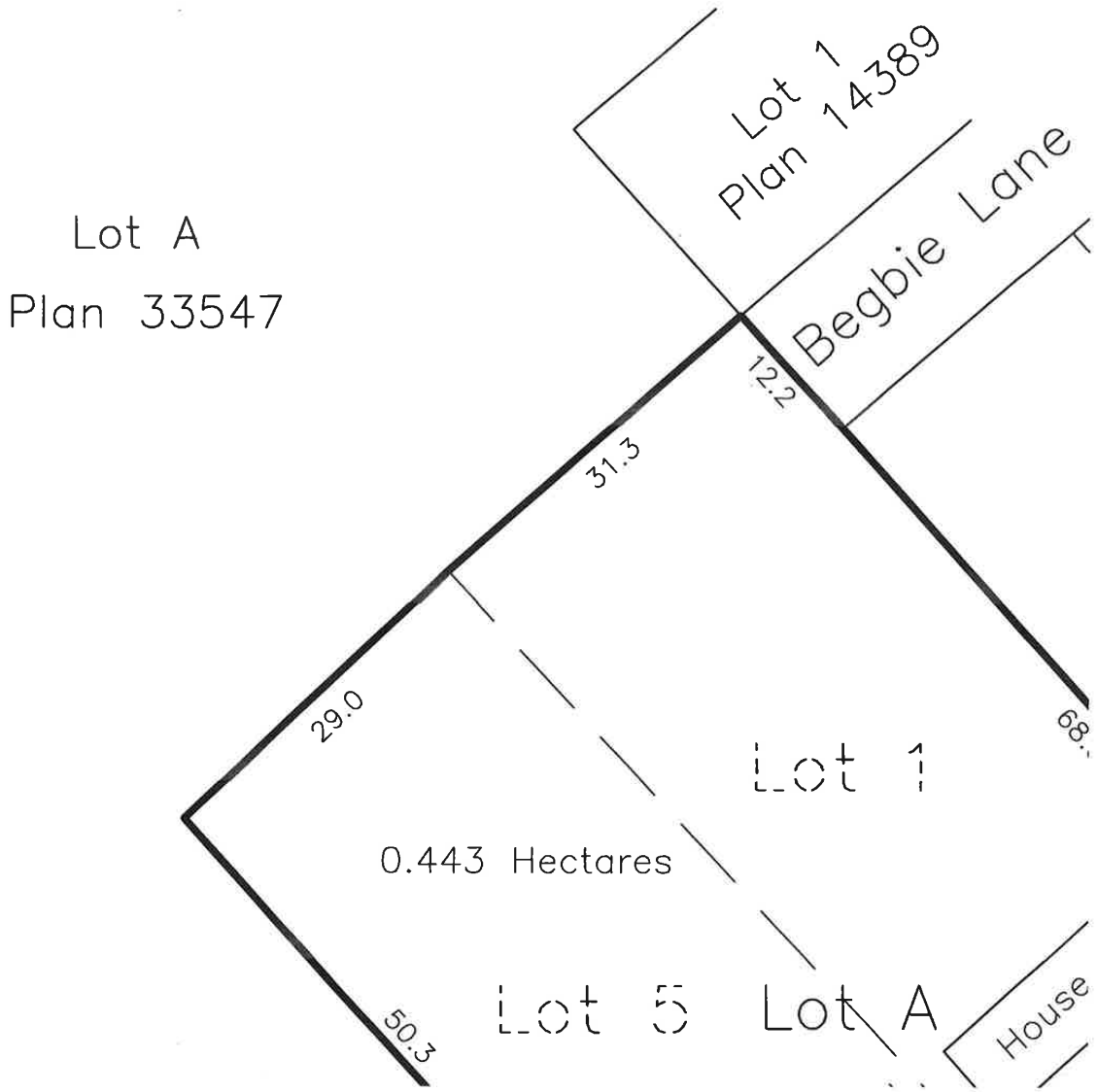
A *Landslide Assessment Assurance Statement*, reflecting these conclusions, is attached.

Plan of Proposed Subdivision of Lot 1, Plan 7[illegible] and Lot 5, Plan 27618, all of District Lot 962, Lillooet District

BCGS 92P.003

0 10 20 30 metres 1:500

Buildings located by scaling from previous subdivision proposal.



14 Closure

We trust that this report is complete for your present requirements. Please contact the undersigned if you have any questions.

Yours truly,

Westrek Geotechnical Services Ltd.

2024-04-17

This is an electronic replica of the original signed and sealed report and has been provided for convenience. Westrek has retained the original signed / sealed report on file and can provide an authenticated document if required.

Leslie Muir MEng, PGeo
Geoscientist

Rev.: TS, 2025-04-16

Permit to Practice No. 1002522

Photo 1: Aerial view of the existing houses on each lot. Lot 1 (1500 Engeman Lane) is circled yellow, and Lot 5 (409 Lebourdais Ave) is circled orange. The gully outlet is to the top left of the picture. The inset photo shows the landscaped walls and slope below the house on Lot 1.

Photo 2: The ravelling cut slopes behind the house on Lot 1 exposing well-dra cobbly sand with trace to some silt, as well as eo

Photo 7: *A 400 mm diameter CMP culvert located at the base of the embankment. Debris has infilled approximately 1/3 of the culvert.*

Photo 8: *Very small debris slide on the western side of the gully, about 200 m the Properties.*

LANDSLIDE ASSESSMENT ASSURANCE STATEMENT

Notes: This statement is to be read and completed in conjunction with the Engineers and Geoscientists BC *Professional Practice Guidelines – Landslide Assessments in British Columbia* ("the guidelines") and the current *BC Building Code* (*BCBC*), and is to be provided for Landslide Assessments (not floods or flood controls), particularly those produced for the purposes of the *Land Title Act, Community Charter,* or *Local Government Act.* Some jurisdictions (e.g., the Fraser Valley Regional District or the Cowichan Valley Regional District) have developed more comprehensive assurance statements in collaboration with Engineers and Geoscientists BC. Where those exist, the Qualified Professional is to fill out the local version only. Defined terms are capitalized; see the Defined Terms section of the guidelines for definitions.

To: The Approving Authority (or Client) Date: April 17, 2025

The Village of Clinton

PO Box 309, 1423 Cariboo Highway, Clinton, BC V0K 1K0

Jurisdiction/name and address

With reference to (CHECK ONE):

- ☑ A. *Land Title Act* (Section 86) – Subdivision Approval
- ☐ B. *Local Government Act* (Sections 919.1 and 920) – Development Permit
- ☐ C. Community Charter (Section 56) – Building Permit
- ☐ D. Non-legislated assessment

For the following property (the "Property"):

1500 Engeman Lane & 409 Lebourdais Ave, Clinton, BC V0K 1K0

Civic address of the Property

The undersigned hereby gives assurance that they are a Qualified Professional and a professional engineer or professional geoscientist who fulfils the education, training, and experience requirements as outlined in the guidelines.

I have signed, authenticated, and dated, and thereby certified, the attached Landslide Assessment Report on the Property in accordance with the guidelines. That report must be read in conjunction this statement.

In preparing that report I have:

[CHECK TO THE LEFT OF APPLICABLE ITEMS]

- ✓ 1. Collected and reviewed appropriate background information
- ✓ 2. Reviewed the proposed Residential Development or other development on the Property
- ✓ 3. Conducted field work on and, if required, beyond the Property
- ✓ 4. Reported on the results of the field work on and, if required, beyond the Property
- ✓ 5. Considered any changed conditions on and, if required, beyond the Property
- 6. For a Landslide Hazard analysis or Landslide Risk analysis, I have:
  - ✓ 6.1 reviewed and characterized, if appropriate, any Landslide that may affect the Property
  - ✓ 6.2 estimated the Landslide Hazard
  - ✓ 6.3 identified existing and anticipated future Elements at Risk on and, if required, beyond the Property
  - ✓ 6.4 estimated the potential Consequences to those Elements at Risk
- 7. Where the Approving Authority has adopted a Level of Landslide Safety, I have:
  - ___ 7.1 compared the Level of Landslide Safety adopted by the Approving Authority with the findings of my investigation
  - ___ 7.2 made a finding on the Level of Landslide Safety on the Property based on the comparison
  - ___ 7.3 made recommendations to reduce Landslide Hazards and/or Landslide Risks

8. Where the Approving Authority has **not** adopted a Level of Landslide Safety, or where the Landslide Assessment is not produced in response to a legislated requirement, I have:

- ☑ 8.1 described the method of Landslide Hazard analysis or Landslide Risk analysis used
- ☑ 8.2 referred to an appropriate and identified provincial, national, or international guideline for Level of Landslide Safety
- ☑ 8.3 compared those guidelines (per item 8.2) with the findings of my investigation
- ☑ 8.4 made a finding on the Level of Landslide Safety on the Property based on the comparison
- ☑ 8.5 made recommendations to reduce Landslide Hazards and/or Landslide Risks

☑ 9. Reported on the requirements for future inspections of the Property and recommended who should conduct those inspections

Based on my comparison between:

[CHECK ONE]

☐ the findings from the investigation and the adopted Level of Landslide Safety (item 7.2 above)
☑ the appropriate and identified provincial, national, or international guideline for Level of Landslide Safety (item 8.4 above)

Where the Landslide Assessment is not produced in response to a legislated requirement, I hereby give my assurance that, based on the conditions[1] contained in the attached Landslide Assessment Report:

A. SUBDIVISION APPROVAL

☑ For subdivision approval, as required by the *Land Title Act* (Section 86), "the land may be used safely for the use intended"
[CHECK ONE]
- ☐ with one or more recommended additional registered Covenants
- ☑ without an additional registered Covenant(s)

B. DEVELOPMENT PERMIT

☐ For a development permit, as required by the *Local Government Act* (Sections 488 and 491), my report will "assist the local government in determining what conditions or requirements it will impose under subsection (2) of [Section 491]"
[CHECK ONE]
- ☐ with one or more recommended additional registered Covenants
- ☐ without an additional registered Covenant(s)

C. BUILDING PERMIT

☐ For a building permit, as required by the *Community Charter* (Section 56), "the land may be used safely for the use intended"
[CHECK ONE]
- ☐ with one or more recommended additional registered Covenants
- ☐ without any additional registered Covenant(s)

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[1] When seismic slope stability assessments are involved, Level of Landslide Safety is considered to be a "life safety" criteria, as described in Commentary JJJ of the *National Building Code of Canada (NBC) 2015*, Structural Commentaries (User's Guide – NBC 2015: part 4 of division B). This states:

"The primary objective of seismic design is to provide an acceptable level of safety for building occupants and the general public as the building responds to strong ground motion; in other words, to minimize loss of life. This implies that, although there will likely be extensive structural and non-structural damage, during the DGM (design ground motion), there is a reasonable degree of confidence that the building will not collapse, nor will its attachments break off and fall on people near the building. This performance level is termed 'extensive damage' because, although the structure may be heavily damaged and may have lost a substantial amount of its initial strength and stiffness, it retains some margin of resistance against collapse."

LANDSLIDE ASSESSMENT ASSURANCE STATEMENT

Leslie Muir PGeo, MEng
Name (print)

April 17, 2025
Date

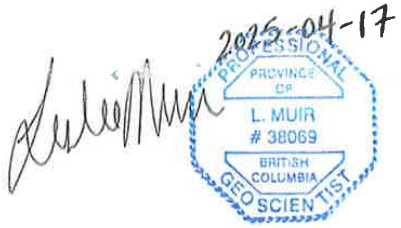
100 - 1383 McGill Road
Address

Kamloops, BC V2C 6K7

778-765-9525
Telephone

lmuir@westrekgeotech.com
Email

2025-04-17



(Affix PROFESSIONAL SEAL and signature here)

The Qualified Professional, as a registrant on the roster of a registrant firm, must complete the following:

I am a member of the firm Westrek Geotechnical Services Ltd.
(Print name of firm)

with Permit to Practice Number 1002522
(Print permit to practice number)

and I sign this letter on behalf of the firm.

INTERPRETATION AND USE OF STUDY AND REPORT AND LIMITATIONS

1. STANDARD OF CARE.

This study and Report have been prepared in accordance with generally accepted engineering and geoscience practices. No other warranty, express or implied, is made. Geological and geotechnical studies and reports do not include environmental consulting unless specifically stated in the report.

2. COMPLETE REPORT.

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report which is of a summary nature and is not intended to stand alone without reference to the instructions given to us by the Client, communications between us and the Client, and to any other reports, writings, proposals or documents prepared by us for the Client relative to the specific site described herein, all of which constitute the Report.

IN ORDER TO UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. WE CANNOT BE RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF THE REPORT.

The Report has been prepared for the specific site, development, design objectives and purpose that were described to us by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the document are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to us unless we are specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT.

The information and opinions expressed in the Report, or any document forming the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT OUR WRITTEN CONSENT. WE WILL CONSENT TO ANY REASONABLE REQUEST BY THE CLIENT TO APPROVE THE USE OF THIS REPORT BY OTHER PARTIES AS "APPROVED USERS". The contents of the Report remain our copyright property and we authorise only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of the Report by those parties. The Client and Approved Users may not give, lend, sell or otherwise make the Report or any portion thereof, available to any party without our written permission. Any uses, which a third party makes of the Report, or any portion of the Report, are the sole responsibility of such third parties. Westrek accepts no responsibility for damages suffered by any third party resulting from unauthorised use of the Report.

5. INTERPRETATION OF THE REPORT.

(i) Nature and Exactness of Soil and Description: Classification and identification of soils, rocks, geological units, and engineering estimates have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature and even comprehensive sampling and testing programs, implemented with the appropriate equipment by experienced personnel, may fail to locate some conditions. All investigations utilising the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarising such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and all persons making use of such documents or records should be aware of, and accept, this risk. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

(ii) Reliance on Provided information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to us. We have relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, we cannot accept responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of misstatements, omissions, misrepresentations or fraudulent acts of any persons providing representations, information and instructions.

(iii) To avoid misunderstandings, Westrek should be retained to work with the other design professionals to explain relevant geotechnical findings and to review the adequacy of their plans and specifications relative to engineering issues. Further, Westrek should be retained to provide field reviews during the construction, consistent with generally accepted practices.

6. LIMITATIONS OF LIABILITY.

Westrek's liability will be limited as follows:

(a) In recognition of the relative risks and benefits of the Services to be provided to the Client by Westrek, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of Westrek, its officers, directors, partners, employees, shareholders, owners, subconsultants and principals for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, whether arising in contract or tort including negligence, including legal fees and costs and disbursements (the "Claim"), so that the total aggregate liability of Westrek, its officers, directors, partners, employees, shareholders, owners, subconsultants and principals:

i. if the Claim is satisfied by the re-performance of the Services proven to be in error, shall not exceed and shall be limited to the cost to Westrek in re-performing such Services; or

ii. if the Claim cannot be satisfied by the re-performance of the Services and:

1. if Westrek's professional liability insurance does not apply to the Claim, shall not exceed and shall be limited to Westrek's total fee for services rendered for this matter, whichever is the lesser amount. The Client will indemnify and hold harmless Westrek from third party Claims that exceed such amount; or

2. if Westrek's professional liability insurance applies to the Claim, shall be limited to the coverage amount available under Westrek's professional liability insurance at the time of the Claim. The Client will indemnify and hold harmless Westrek from third party Claims that exceed such coverage amount. Westrek shall maintain professional liability insurance in the amount of $2,000,000 per occurrence, $2,000,000 in the aggregate, for a period of two (2) years from the date of substantial performance of the Services or earlier termination of this Agreement. If the Client wishes to increase the amount of such insurance coverage or duration of such policy or obtain other special or increased insurance coverage, Westrek will cooperate with the Client to obtain such coverage at the Client's expense.

It is intended that this limitation will apply to any and all liability or cause of action however alleged or arising, including negligence, unless otherwise prohibited by law. Notwithstanding the foregoing, it is expressly agreed that there shall be no claim whatsoever against Westrek, its officers, directors, partners, employees, shareholders, owners, subconsultants and principals for loss of income, profit or other consequential damages howsoever arising, including negligence, liability being limited to direct damages.

(b) Westrek is not responsible for any errors, omissions, mistakes or inaccuracies contained in information provided by the Client, including but not limited to the location of underground or buried services, and with respect to such information, Westrek may rely on it without having to verify or test that information. Further, Westrek is not responsible for any errors or omissions committed by persons, consultants or specialists retained directly by the Client and with respect to any information, documents or opinions provided by such persons, consultants or specialists, Westrek may rely on such information, documents or opinions without having to verify or test the same.

(c) Notwithstanding the provisions of the Limitation Act, R.S.B.C. 2012 c. 13, amendments thereto, or new legislation enacted in its place, Westrek's liability for any and all claims, including a Claim as defined herein, of the Client or any third party shall absolutely cease to exist after a period of two (2) years following the date of:

i. Substantial performance of the Services,

ii. Suspension or abandonment of the Services provided under this agreement, or

iii. Termination of Westrek's Services under the agreement,

whichever shall occur first, and following such period, the Client shall have no claim, including a Claim as defined herein, whatsoever against Westrek.

Staff Report to Council
Open Meeting

Date: May 14, 2025

From: Chief Administration Officer

Subject: Environmental Damages Fund

Attachments:
None

Recommendations:
THAT Council authorize Staff to apply to the Environmental Damages Fund for the Reg Conn Park Environmental Remediation Project and the Clinton Upper Reservoir Environmental Remediation Project.

That the Village of Clinton issue letters to Whispering Pines Clinton Indian Band, High Bar First Nation, and select community groups requesting letters of support for the Village's Environmental Damages Fund application.

Background:
The Environmental Damages Fund (EDF) is a Government of Canada program administered by Environment and Climate Change Canada (ECCC) that directs monies from fines, penalties, court orders, and voluntary payments to priority projects benefiting Canada's natural environment. Its goal is to ensure environmental good follows environmental harm by funding restoration and conservation initiatives in affected areas.
EDF funding supports projects in four categories, including Restoration—such as dredging waterways to remove contaminated sediments from the upper reservoir and Clinton Creek and pond in Reg Conn Park—and may cover related costs like environmental assessments, engineering design, Indigenous consultation, and post-project monitoring. Funding can cover up to 100% of eligible project costs, with no mandatory cost-share required.
Available funding varies by the amount and purpose of directed fines; courts may set Fund Use Requirements specifying recipient, location, and scope. Applicants should contact their regional ECCC office to determine the funding envelope for their area.
The application process involves submitting a Letter of Intent and a full proposal through the online Grants and Contributions Enterprise Management System (GCEMS) portal. EDF applications undergo a two-stage review and may take several months. Initiating environmental studies, engineering design, and Indigenous engagement early will strengthen the application and support timely project delivery.

Financial Impacts:

Initial estimates indicate that dredging the upper reservoir and Clinton Creek would cost approximately $250,000. As the EDF covers 100% of eligible project costs, the Village could secure up to $250,000 in grant funding to fully offset these expenses. The Village will pay for project expenses as they occur and then receive reimbursement in instalments as outlined in the final contribution agreement.

Brian Doddridge, CAO

CFO Initial

CLINTON VOLUNTEER FIRE DEPARTMENT

MONTHLY REPORTS

MONTH OF March 2025

CLINTON FIRE DEPARTMENT

Attendance Record for Fire Calls March 2025

Mar-25	#1	#2	#3	#4	#5	#6	#7
DATE CALLED OUT:	02-Mar	13-Mar	19-Mar	19-Mar	21-Mar	23-Mar	
NAMES OF FIREMEN	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
Wayne Walch		1	1	2	1	3	
John Engelhart	1	1		2	1	3	
Gerald Painter	1	1	1	2	1	3	
Ned Horsley		1	1	2	1	3	
Karl Hansen	1	1	1	2	1	3	
Jordan Lawrence	1	1		2		3	
Jeff Painter			1	2	1		
Trent Huggins	1	1	1			3	
Dan Hawkins			1	2		3	
Richard Armit	1		1	2	1	3	
Dean McFarland							
Devin McFarland				2			
Jake Painter		1	1	2		3	
Paige Annett							
Lillian Crossman			1	2	1	3	
Bailey Annett			1	2	1	3	
Tyler Aske							
TOTALS	6	8	11	26	9	36	0

FIRE CALL OUT DETAILS AND COMMENTS
Mar 2 -Fire Alarm (Fir Ave.)
Mar 13 - MVI (Hwy 97 & BB Rd.)
Mar 19 - Fire Alarm (Fir Ave.)
Mar 19 - Grass Fire (Valley Rd.)
Mar 21 - MVI (Hwy 97 & BB Rd.)
Mar 23 - Structure Fire (6824 Hwy 97)

Clinton Fire Department

2025 Monthly Attendance Record for Practices

MONTH OF	Mar-25					
DATE	3rd	10th	17th	24th	31st	
NAMES OF FIRE FIGHTER						
Wayne Walch	2	2	2	2	2	
John Engelhart	2	2		2	2	
Gerald Painter	2		2	2	2	
Ned Horsley		2	2	2	2	
Karl Hansen	2	2	2	2	2	
Jordan Lawrence	2	2	2	2	2	
Jeff Painter			2	2		
Trent Huggins	2	2	2		2	
Dan Hawkins	2	2	2	2	2	
Richard Armit	2	2	2	2	2	
Dean McFarland	2		2	2	2	
Devin McFarland		2		2		
Jake Painter		2	2	2		
Paige Annett						
Lillian Crossman	2		2	2	2	
Bailey Annett	2	2	2	2	2	
Tyler Aske	2	2	2	2		
Total	24	24	28	30	24	

2025 RECORD OF MISCELLANEOUS PURCHASES FOR REIMBURSEMENT
(PLEASE PROVIDE RECEIPTS WHERE POSSIBLE)

ITEMS PURCHASED	ET PRI	P.S.T.	G.S.T.	GROSS PRICE

CLINTON VOLUNTEER FIRE DEPARTMENT

MONTHLY REPORTS

Fire Inspections
_____ inspections completed at $_____each for $_____ total.

TRAINING: March 2025

3rd - WSPP (Wildland Fire) & Auto Extrication

10th - WSPP Written Test

17th - Fire Suppression Written & Forestry Pumps

24th - Hall & Truck Cleanup

31st - Forestry Pumps and Sprinklers

GENERAL COMMENTS:

KARL HANSEN, FIRE CHIEF **DATE**

CLINTON VOLUNTEER FIRE DEPARTMENT

MONTHLY REPORTS

MONTH OF April 2025

CLINTON FIRE DEPARTMENT

Attendance Record for Fire Calls April 2025

Apr-25	#1	#2	#3	#4	#5	#6	#7
DATE CALLED OUT:	15-Apr	19-Apr	26-Apr				
NAMES OF FIREMEN	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
Wayne Walch							
John Engelhart							
Gerald Painter	1	1	1				
Ned Horsley		1					
Karl Hansen	1	1	1				
Jordan Lawrence	1						
Jeff Painter	1						
Trent Huggins		1					
Dan Hawkins							
Richard Armit		1	1				
Dean McFarland		1					
Devin McFarland							
Jake Painter							
Paige Annett							
Lillian Crossman		1					
Bailey Annett							
Tyler Aske							
TOTALS	4	7	3	0	0	0	0

FIRE CALL OUT DETAILS AND COMMENTS
April 15 - Fire Alarm at Skating Rink
April 19 - Grass Fire (Foster Ave.)
April 26 - Lift Assist (Begbie Ln.)

Clinton Fire Department

2025 Monthly Attendance Record for Practices

MONTH OF	Apr-25					
DATE	7th	14th	21st	28th		12th,13th
NAMES OF FIRE FIGHTER						
Wayne Walch	2		H			
John Engelhart	2	2	O	2		
Gerald Painter	2	2	L	2		
Ned Horsley	2	2	I			
Karl Hansen	2	2	D	2		
Jordan Lawrence	2	2	A	2		
Jeff Painter	2	2	Y			
Trent Huggins	2	2		2		
Dan Hawkins	2	2	H	2		
Richard Armit	2	2	O	2		
Dean McFarland	2	2	L	2		
Devin McFarland	2		I	2		
Jake Painter	2	2	D			
Paige Annett			A			
Lillian Crossman	2		Y	2		
Bailey Annett	2	2				
Tyler Aske	2	2				
Total	32	26	0	20	0	

2025 RECORD OF MISCELLANEOUS PURCHASES FOR REIMBURSEMENT
(PLEASE PROVIDE RECEIPTS WHERE POSSIBLE)

ITEMS PURCHASED	ET PRI	P.S.T.	G.S.T.	GROSS PRICE

CLINTON VOLUNTEER FIRE DEPARTMENT

MONTHLY REPORTS

Fire Inspections
_____ inspections completed at $_____each for $_____ total.

TRAINING: April 2025

7th - Officer Elections

14th - Forestry Pumpos & Sprinklers

21st - Holiday

28th - Fire Behaviour (Written Test), Driving

12th & 13th - Boots on the Ground/Truck Boss

GENERAL COMMENTS:

KARL HANSEN, FIRE CHIEF **DATE**

Bylaw Quaterly Report **CLINTON** **1st Quarter**

	Jan-25			Feb-25			Mar-25		
Task	**Carried Over**	**New**	**Resolved**	**Carried Over**	**New**	**Resolved**	**Carried Over**	**New**	**Resolved**
Animal Control	1	4	1	4	1	2	3	1	2
Unsightly Complaints	2	1	0	3	0	0	3	1	2
Watering	0	0	0	0	0	0	0	0	0
Long Grass	0	0	0	0	0	0	0	0	0
Business Licence	0	0	0	0	0	0	0	0	0
Noise Complaints	0	0	0	0	0	0	0	0	0
Derelict Vehicles	0	0	0	0	0	0	0	0	0
Fire Hazard	0	0	0	0	0	0	0	0	0
Outdoor Burning	0	0	0	0	0	0	0	0	0
Sign complaints	0	2	1	1	0	0	1	0	1
Snow on Sidewalks	0	4	1	3	0	3	0	0	0
Other	1	0	1	0	1	1	0	1	1
TOTAL	**4**	**11**	**4**	**11**	**2**	**6**	**7**	**3**	**6**

2025 started with snow on the ground which of course meant that I had to remind residents and business owners of their responsibilities to clear their sidewalks. By the end February, they were all in compliance.

We had one animal control complaint that was carried over from December. Even with 4 additional complaints in the 1st quarter, we were back to 1 unresolved complaint by the end of March.

We carried 2 unsightly files from 2024 which have been ongoing for a few months. The enforcement strategy is to achieve progressive compliance. Unfortunately even with 4 new files during those 3 months, the same 2 have remained non-compliant, and I have been required to follow up multiple times with increasing enforcement measures.

A new focus became issues with signs. Some of the problem signs are pre-existing, others were temporary adverstising signs that were quickly removed.

The 1st quarter saw 15 new complaints, 15 closed files, and 6 files carried over to the 2nd quarter. The focus for the 2nd quarter is to close off ongoing files by gaining voluntary compliance. I try to communicate to people that if they reach out to me after first receiving correspondence from the Village, we can figure out a workable plan with a reasonable timeline.

The prediction, based on available data, indicates another very dry summer, so I'm sure my work load will increase again shortly to bring neglected properties into compliance.

Silga (Southern Interior Local Government Association) AGM and Conference – Merritt BC

Report from Councillor Burrage

Pre-Conference Sessions-Tuesday April 29th

Visitor Centre Strategies and MRDT- presented by Sapphire Games, Visitor Services & Communications coordinator, Salmon Arm Visitor Centre and Jenna Robins Tourism Marketing Coordinator, Salmon Arm Economic Development

- The city took over the lead to oversee tourist services after seeing a 33% drop in the traditional visitor center model.
- They first developed a visitor services strategy.
- Introduced a mobile outreach-they set up at trail heads, community functions, local attractions.
- Ensured that the visitor needs matched with village/residents visions.
- They have also a brick and mortar set up at the city hall and various locations – I think some information kiosk at our public washrooms.
- The mobile outreach can also set up at businesses if the businesses ask to have it set up there.
- Digital outreach as well. Posters around with a QR code.
- They utilize summer students to man some of these kiosks
- MRDT (Municipal and Regional District Tax) a 2% tax on the purchase of accommodation, can be used to support marketing events.
- Salmon Arm is the main applicant
- Provides marketing support, event planning support and event planning support in shoulder seasons (not July and August)
- If the events are primary fundraising, then they are not eligible but other support can be provided i.e. marketing and swag.
- They have their wayfinding on pillars throughout the city. We could utilize our bus shelter
- Other funds-Sustainable Tourism Fund which provides consistent revenue for tourism initiatives/ Visitor Paid Fund
- The city also has for community groups to use: Pop Up tents, heaters, portable picnic tables, sandwich boards free of charge as they feel many groups cannot afford their own or to even afford to rent.
- Use tourism websites, social channels, videos

Interior Health Human Resources Strategy- presented by Kathy Doull, executive director clinical operations Kamloops community programs, Jennifer Miller Executive director, medical strategy recruitment and Taya Sanders, director, recruitment, human resources

- The claims are to be there is a 26% increase in regular frontline workers from 2020-2025
- Employment vacancies went from 12% to 9%
- Increased hiring – over 700 have been on boarded
- Streamlining the process of hiring physicians-29% increase in executing physician contracts
- Working with community partnerships- care options in communities: Primary Care Clinics, Medical Clinics, Health BC virtual doctor, Urgent and Primary Care, pharmacies.

This session seemed to be a lot of talk. Everything sounded great but we know what is really not happening. I hope they are trying to achieve what they claim

Wednesday April 30th

Supporting Economic Development in the Southern Interior – Lessons Learned

Presented by Laurel Douglas, CEO ETSI-BC and Renata King, project consultant, ETSI-BC

- ETSI BC is an economic foundation that provides grants. (We have NDIT)
- Strategic Pillars: Building Economic Capacity, Supporting Business Resilience, Innovating and Advancing Key Sectors, Developing Human Capital, Creating ? (I didn't finish my note!)
- From April 2021-present has given out $9.6 million for 377 projects which in turn have supported 22,000 jobs
- Community Development project example: Sicamous developed a pamphlet they give to realtors to handout that has all the community information on it, Small Scale Meat Producers Association- Butcher Hub Network, Zest Food Hub Activation (this is in Salmon Arm and maybe worth reaching out to see what info they have to help us attain our goal for the hall to be a Hub)
- Small Communities can collaborate with neighboring communities to leverage their project idea.

We are in NVIT's area. They will have similar statistics. It was suggested that the two foundations present next time, and communities can attend the presentation for their area.

Regional Districts – Legislative Reform

Presented by Don Lidstone

Don presented on proposals for reforming legislation on regional district powers, procedures, governance, finance, taxation and services, looking for what current problems are and the options for the future.

Although this was interesting, I had a difficult time retaining what was presented. I was thinking on how to turn our bus shelter into a mobile visitor hub with a QR code poster .....

Keynote Speaker Norm Van Eeden Petersman

Director of Movement, Building Strong Towns

This presentation was about how many towns find themselves in decline after decades of growth. He showed how to move forward with changing the way we develop, plan and build. Making the most out of real estate footprints...making the most bang for your buck. It is a radical departure from the traditional development pattern.

This is in Oregan. The city created "garden shed" shops on city property. Vendors and artisans can rent these on a very affordable scale. The vendors can afford to sell their goods. The city gets some revenue from a lot that has sat empty. The area gets tourists to stay and shop. There is a similar thing in Carcross, Yukon and Crawford Bay BC. I think this could be an opportunity to have at Robertson Square. Local potter's, artists, jewelry makers etc could set up a shop for the summer seasons.

Welcome Reception

This amazing reception was held at NVIT with most incredible charcuterie board, catered by Valley Craze. mesmerizing entertainment by Cecila's Musicians, Hand Drumming by Willard Wallace, Love to Dance Academy and the Sheena- Patrick Family Dancers. I left with all my senses full and happy.

Raven Sheena-Patrick

Thursday May 1st

AGM, UBCM President Address, Taking Stock of the Trade War

- I wandered around the trade show, talked to some vendors and made mental wish lists
- AGM session – adoption of minutes, financial plan, president's address
- Trish Mandewo addressed to members
- Presentation on the Trade War

Culture Counts! Stories, Stats and Secrets to Thriving Communities

Presented by Kathleen Darby, Ex. Director, Creative City Network of Canada, David Gonella, Ex. Directive, Salmon Arm Roots and Blues, Aimee Grice, Marketing and Promotions Coordinator, Oliver Theatre.

- Arts and Culture are an economic sector/driver
- Turn creativity into community and economic growth. They provide tools, training and national connections
- When culture thrives so does everything else-local pride, business, tourisisitor magnets
- m and quality of life
- Many jobs can emerge from the "arts"
- The arts aren't a luxury- they're a local economic engine
- Trail, BC 2020 Art Walks brought new life to the downtown
- Salmon Roots and Blues Festival fuels tourism-started small and grew steadily
- People don't just travel to places-they travel for experiences.
- Heritage Festivals, mural tours, artisan markets = visitor magnets
- Culture extends stays, supports businesses and builds identity
- Thriving creative communities have in common: champions in city hall, clear goals and cultural strategies, partnerships, artist led initiatives with municipal support, data that tells your story and guides next step.

Community Excellence Awards

Social Responsibility – Village of Keremeos

- Every Child Matters Crosswalks and signage at parks. Collaborative project with local First Nations bands and the village

Economic Sustainabilty-Oliver

-Station Street Market. Started in the park with a few vendors. Grew to 15-20 vendors and food trucks

Environmental Sustainability-Lumby

-Waste management project

Thursday ended with a tour of NDIT, an amazing facility and the banquet. Another amazing meal catered by Woods Smoking BBQ Pit. I did not stay for the band.

Friday May 2nd

On Friday they had a few panels present. I attended Unlocking Grant Opportunities workshop. Panels included: Gateway 286-Harnessing Intersectoral Cooperation for Development, Mining in the Southern Interior (basically the need for copper and how to mine responsibly)

By this time my head was full and I was changing gears to get ready for our Volunteer Recognition Reception. Was a informative few days and I am impressed with the City of Merritt. Next year AGM/Conference will be held in Revelstoke. Thank you for letting me have the opportunity to attend!!

Rotary Club's Spray Park

It isn't very big but it gets heavy use

Solar panel pedestrian crossing signs. They are all along Voght St.

Interested to see if we could have something like this at LeBourdais Ave and the Hwy.

Action items arising from Council Meetings

Date updated: May-6-25

Resolution/Direction to Staff	WHO/DONE
April 2025	
Notice of Motion – ***THAT Council initiate research of the planning process under the LGA to establish a Community Heritage Registry to establish a heritage conservation bylaw for buildings and historical sites.***	**CAO** **In Progress**
Basketball/Tennis Court Refurbishment - ***THAT, Council directs staff to prepare an RFP for the development of a Multi-Use Court as per Option 1 AND THAT, Council directs staff to notify nearby property owners of the intent to develop a court and provide opportunity for written comment.***	**CAO** **In Progress**