



REGIONAL DISTRICT OF CENTRAL KOOTENAY

**CRESTON VALLEY AGRICULTURAL ADVISORY
COMMISSION
OPEN MEETING AGENDA**

**7:00 p.m. PT
Monday, June 8, 2026
Hybrid Meeting**

To promote openness, transparency and provide accessibility to the public we provide the ability to attend all RDCK meetings in-person or remote.

Join by Video:

<https://rdck-bc-ca.zoom.us/j/97534145331?pwd=DuyTclwGKeM2lqFR7Zr267aYqtnTSl.1>

Join by Phone:

• 833 955 1088 Canada Toll-free

Meeting ID: 975 3414 5331

Meeting Password: 846516

In-Person Location: Creston and District Community Complex – Erickson Room

1. CALL TO ORDER

Chair Meyer called the meeting to order at ____ p.m.

2. TRADITIONAL LANDS ACKNOWLEDGEMENT STATEMENT

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

3. ADOPTION OF AGENDA

MOVED and seconded,
AND Resolved:

The Agenda for the June 8, 2026 Creston Valley Agricultural Advisory Commission meeting, be adopted as circulated.

Carried/Defeated/Referred

4. RECEIPT OF MINUTES

The May 27, 2026 Creston Valley Agricultural Advisory Commission minutes, have been received.

5. STAFF REPORTS

5.1 Agricultural Land Reserve (Inclusion) Referral – Town of Creston

Moved and seconded,

AND Resolved that it be recommended to the Board:

That the following motion BE REFERRED from May 27, 2026 Creston Valley Agricultural Advisory Commission meeting to the June 8, 2026 Creston Valley Agricultural Advisory Commission meeting:

The Referral Package dated May 14, 2026 from Planner Zachari Giacomazzo, has been received.

That the Creston Valley Agricultural Advisory Commission SUPPORT/NOT SUPPORT the Agricultural Land Reserve Referral to Town of Creston c/o Joel Comer for the property located at 1993 Airport Road, Lister, Electoral Area B. BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT (PID: 009-724-991).

Carried/Defeated/Referred

5.2 Agricultural Land Reserve Referral

The Referral Package dated May 26, 2026 from Planner Sadie Chezenko, has been received.

Moved and seconded,

AND Resolved that it be recommended to the Board:

That the Creston Valley Agricultural Advisory Commission SUPPORT/NOT SUPPORT the Agricultural Land Reserve Referral to the Town of Creston c/o Joel Comer for the property located at Parcel 1: 905 32 Avenue South, Erickson, Electoral Area B. LOT 16 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT PLAN 1455 EXCEPT PARCEL A (SEE 16637010) (PID: 015-696-235). And Parcel 2: 1023 32 Avenue South, Erickson, Electoral Area B. LOT 3 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT PLAN 17744 (PID: 009-611-037).

Carried/Defeated/Referred

5 PUBLIC TIME

The Chair will call for questions from the public at ____ p.m.

6 NEXT MEETING

The next Creston Valley Agricultural Advisory Commission Meeting has not been scheduled yet.

ADJOURNMENT

MOVED and seconded,

AND Resolved:

The Creston Valley Agricultural Advisory Commission meeting be adjourned at ____ p.m.



REGIONAL DISTRICT OF CENTRAL KOOTENAY

**CRESTON VALLEY AGRICULTURAL ADVISORY
COMMISSION
OPEN MEETING MINUTES**

7:00 PM

Wednesday, May 27, 2026

Hybrid Meeting

To promote openness, transparency and provide accessibility to the public we provide the ability to attend all RDCK meetings in-person or remote.

Join by Video:

<https://rdck-bc-ca.zoom.us/j/97534145331?pwd=DuyTclwGKeM2lqFR7Zr267aYqtnTSl.1>

Join by Phone:

833 955 1088 Canada Toll-free

Meeting ID: 975 341 45331

Meeting Password: 846516

In-Person Location: Creston & District Community Complex – Erickson Room
312 19 Avenue North, Creston, BC

COMMISSIONERS

Commissioner Randy Meyer	Electoral Area B, Chair
Commissioner David Mutch	Electoral Area B
Commissioner Dean Eastman	Electoral Area C
Commissioner Dale McNamar	Electoral Area C

COMMISSIONERS ABSENT

Commissioner Larry Rast	Electoral Area C
Commissioner Owen Edwards	Electoral Area B

DIRECTORS

Garry Jackman	Electoral Area A, Director
Roger Tierney	Electoral Area B, Director
Kelly Vandenberghe	Electoral Area C, Director

STAFF

Robin Baril

Meeting Coordinator

PUBLIC

Cory and Rebecca Huscroft

Applicant

4 out of 6 voting Commission/Committee members were present – quorum was met.

1. CALL TO ORDER

Chair Meyer called the meeting to order at 7:05 p.m.

2. TRADITIONAL LANDS ACKNOWLEDGEMENT STATEMENT

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

3. ADOPTION OF AGENDA

MOVED and seconded,
AND Resolved:

The Agenda for the May 27, 2026 Creston Valley Agricultural Advisory Commission meeting, be adopted as circulated.

Carried

4. RECEIPT OF MINUTES

The March 20, 2026 Creston Valley Agricultural Advisory Commission minutes, have been received.

5. STAFF REPORTS

5.1 Agricultural Land Reserve Referral - Huscroft

The Referral Package dated May 13, 2026 from Planner Zachari Giacomazzo, has been received.

- The applicants presented their plans to the Commission.
- With what was happening in the neighbourhood with other businesses, the applicants started asking questions and that is when they found out that they needed Agricultural Land Commission (ALC) approval.
- Applicants want to abide by rules and took it upon themselves to search out the approvals that they need.
- 30% of retail sales was raised local product.
- 100% of product is outsourced (not raised on farm). Which is outside of the 50/50 rule set by the ALC.
- Applied to Interior Health to meet health requirements.

The Commission feels that this facility and the butcher shop is a service that is desperately needed in the area for meat producers.

MOVED and seconded,
AND Resolved:

That the Creston Valley Agricultural Advisory Commission SUPPORT the Agricultural Land Reserve Referral to Cory and Rebecca Huscroft for the property located 924 25 Avenue South, Erickson, Electoral Area B. LOT 26 DISTRICT LOT 891 KOOTENAY DISTRICT 698 EXCEPT (1) PARCEL A (SEE DD 18512) AND (2) PART INCLUDED IN PLAN 3031 (PID: 015-493-211).

Carried

5.2 Agricultural Land Reserve (Inclusion) Referral – Town of Creston

The Referral Package dated May 14, 2026 from Planner Zachari Giacomazzo, has been received.

- Airport use only; zoning prevents agricultural use.

MOVED and seconded,
AND Resolved:

That the Creston Valley Agricultural Advisory Commission SUPPORT/NOT SUPPORT the Agricultural Land Reserve Referral to Town of Creston c/o Joel Comer for the property located at 1993 Airport Road, Lister, Electoral Area B. BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT (PID: 009-724-991).

Referred

5.3 Bylaw Amendment Referral Form

The Referral Package dated May 4, 2026 from Planner Sadie Chezenko, has been received.

- Director Jackman reviewed the proposed changes for the Bylaw Amendment Referral
- The Commission has concerns regarding Residential zoned properties in the Agricultural Land Reserve (ALR) and questioned how this proposed bylaw effects those properties.
- The Commission voiced that they would like further clarity from staff.
- The Commission feels that the Official Community Plan is a better avenue to address these issues.

MOVED and seconded,
AND Resolved:

That the Creston Valley Agricultural Advisory Commission SUPPORT the Bylaw Amendment Referral Form for Electoral Areas A, B and C.

Carried

6. PUBLIC TIME

The Chair called for questions from the public at 8:58 p.m.

No questions or comments from the public online.

7. NEXT MEETING

That the Creston Valley Agricultural Advisory Commission Meeting is scheduled for June 3, 2026 at 7:00pm.

ADJOURNMENT

MOVED and seconded,
AND Resolved:

The Creston Valley Agricultural Advisory Commission meeting be adjourned at 9:00 p.m.

Carried

Digitally approved by

Randy Meyer, Chair



Agricultural Land Reserve (Inclusion) Referral

Referral Form – RDCK File A2605B

Date: May 14, 2026

You are requested to comment on the attached AGRICULTURAL LAND RESERVE APPLICATION for potential effect on your agency’s interests. We would appreciate your response WITHIN 30 DAYS (PRIOR TO June 15, 2026). If no response is received within that time, it will be assumed that your agency’s interests are unaffected.

LEGAL DESCRIPTION & GENERAL LOCATION:

1993 Airport Road, Lister, Electoral Area ‘B’
 BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT (PID: 009-724-991)

PRESENT USE AND PURPOSE OF PROPOSED APPLICATION:

The subject property is in the rural area of Lister south of Creston and is the location of the Creston Regional Airport. The property, including the portion to be included in the ALR is presently zoned Mixed Use Industrial (Airport) (M4) and designated Industrial (M) in the Area ‘B’ Comprehensive Land Use Bylaw No. 2316.

The purpose of this specific application is to consider including lands in the ALR. This ALR Inclusion application is being proposed to offset a proposed ALR Exclusion that has been submitted by the Town of Creston for a property (500 Davis Drive) within their municipal boundary.

For the purposes of this referral, the Exclusion application is not being reviewed in detail because the lands to be excluded are entirely within the Town of Creston municipal boundary, however information about the lands to be excluded is provided in the “Agricultural Impact Assessment” prepared by McTavish Resource and Management Consultants.

AREA OF PROPERTY AFFECTED	ALR STATUS	ZONING DESIGNATION	OCP DESIGNATION
Total Size: 96.6 hectares (240 acres)	Not within	Mixed Use Industrial	Industrial (M) in
Area of property to be included in ALR: 17.6 hectares (43.5 acres)	ALR	(Airport) (M4) in Comprehensive Land Use Bylaw No. 2316	Comprehensive Land Use Bylaw No. 2316

APPLICANT/AGENT:

Town of Creston c/o Joel Comer

Please provide your response via email. If your agency’s interests are ‘Unaffected’ no further information is necessary. In all other cases, we would appreciate receiving additional information to substantiate your position and, if necessary, outline any conditions related to your position. Please note any legislation or official government policy which would affect our consideration of this application.

If you are an RDCK commission member, do not respond via email. Your response is the commission’s recommendation which staff will collect from the meeting minutes.

**ZACHARI GIACOMAZZO, PLANNER
 REGIONAL DISTRICT OF CENTRAL KOOTENAY**

<input checked="" type="checkbox"/> REGIONAL AGROLOGIST <input checked="" type="checkbox"/> CRESTON VALLEY AGRICULTURAL ADVISORY COMMISSION <input type="checkbox"/> RDCK BUILDING SERVICES <input type="checkbox"/> RDCK ENVIRONMENTAL SERVICES (WATER) <input type="checkbox"/> INTERIOR HEALTH AUTHORITY (IHA) <input checked="" type="checkbox"/> FRONT COUNTER BC	<input type="checkbox"/> SHUSWAP NATION TRIBAL COUNCIL <input checked="" type="checkbox"/> KENPÉSQT (SHUSWAP) <input type="checkbox"/> QW?EWT (LITTLE SHUSWAP) <input type="checkbox"/> SEXQELTQÍN (ADAMS LAKE) <input type="checkbox"/> SIMPCW ((SIMPCW) <input type="checkbox"/> SKEMTSIN (NESKONLITH)
---	---

REGIONAL DISTRICT OF CENTRAL KOOTENAY

DIRECTORS FOR:

A B C D E F G H I J
 K

ALTERNATIVE DIRECTORS FOR:

A B C D E F G H I J
 K

APHC AREA 'B'

KTUNAXA NATION COUNCIL (ALL REFERRALS)

YAQAN NU?KIY (LOWER KOOTENAY)

?AKINK'UM?ASNUQ?I?IT (TOBACCO PLAINS)

?AKISQNUK (COLUMBIA LAKE)

?AQ'AM (ST. MARY'S)

SPLATSÍN (SPLATSÍN FIRST NATION)

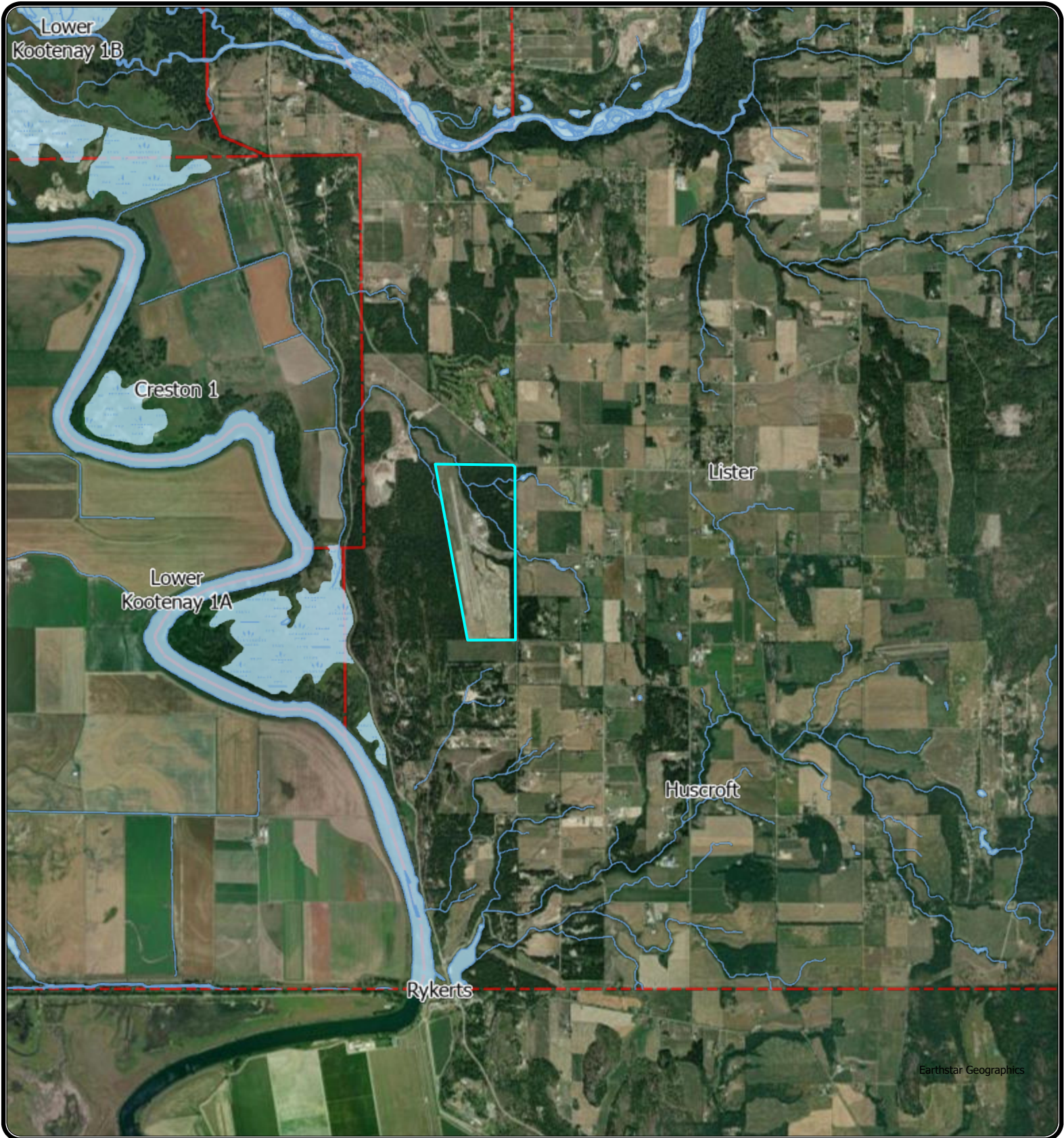
SKEETCHESTN INDIAN BAND

TK'EMLUPS BAND

The personal information on this form is being collected pursuant to *Regional District of Central Kootenay Planning Procedures and Fees Bylaw No. 2457, 2015* for the purpose of determining whether the application will affect the interests of other agencies or adjacent property owners. The collection, use and disclosure of personal information are subject to the provisions of FIPPA. Any submissions made are considered a public record for the purposes of this application. Only personal contact information will be removed. If you have any questions about the collection of your personal information, contact the Regional District Privacy Officer at 250.352.6665 (toll free 1.800.268.7325), info@rdck.bc.ca, or RDCK Privacy Officer, Box 590, 202 Lakeside Drive, Nelson, BC V1L 5R4.

RETURN TO: ZACHARI GIACOMAZZO, PLANNER
DEVELOPMENT AND COMMUNITY SUSTAINABILITY SERVICES
REGIONAL DISTRICT OF CENTRAL KOOTENAY
BOX 590, 202 LAKESIDE DRIVE
NELSON, BC V1L 5R4
Ph. 250-352-8190
Email: plandept@rdck.bc.ca

RDCK Map



Earthstar Geographics



REGIONAL DISTRICT OF CENTRAL KOOTENAY
Box 590, 202 Lakeside Drive,
Nelson, BC V1L 5R4
Phone: 1-800-268-7325 www.rdck.bc.ca
maps@rdck.bc.ca

Legend

- Place Names
- Streams and Shorelines
- Wetlands
- Lakes and Rivers
- Electoral Areas

Map Scale:

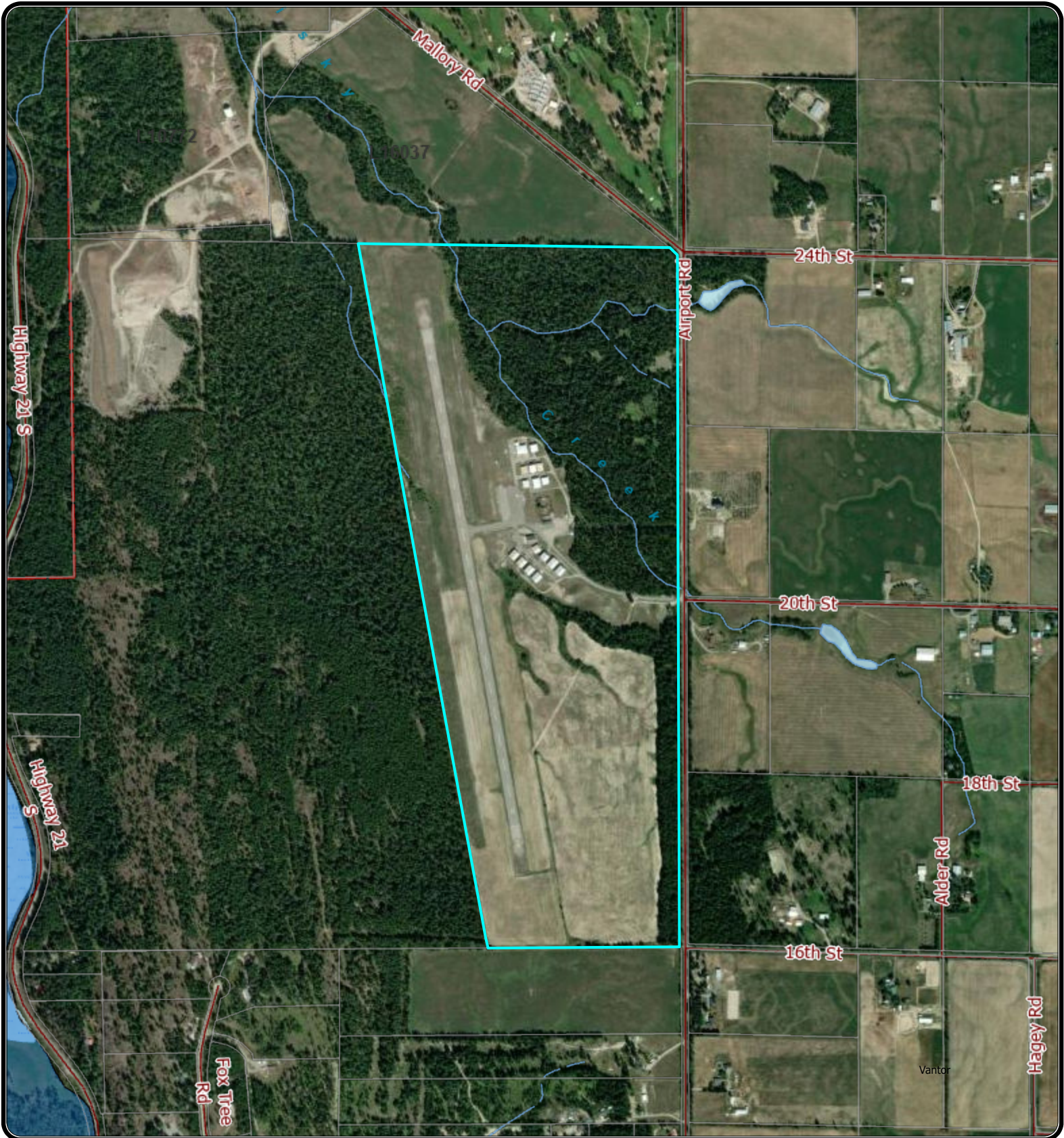
1:72,224

Date: May 5, 2026










The mapping information shown are approximate representations and should only be used for reference purposes. The Regional District of Central Kootenay is not responsible for any errors or omissions on this map.

RDCK Map



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 Nelson, BC V1L 5R4
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 maps@rdck.bc.ca

Legend

- | | |
|--|---|
|  Flood Construction Levels - 1990 |  Electoral Areas |
|  Streams and Shorelines |  RDCK Streets |
|  Wetlands |  Cadastre - Property Lines |
|  Lakes and Rivers | |

Map Scale:

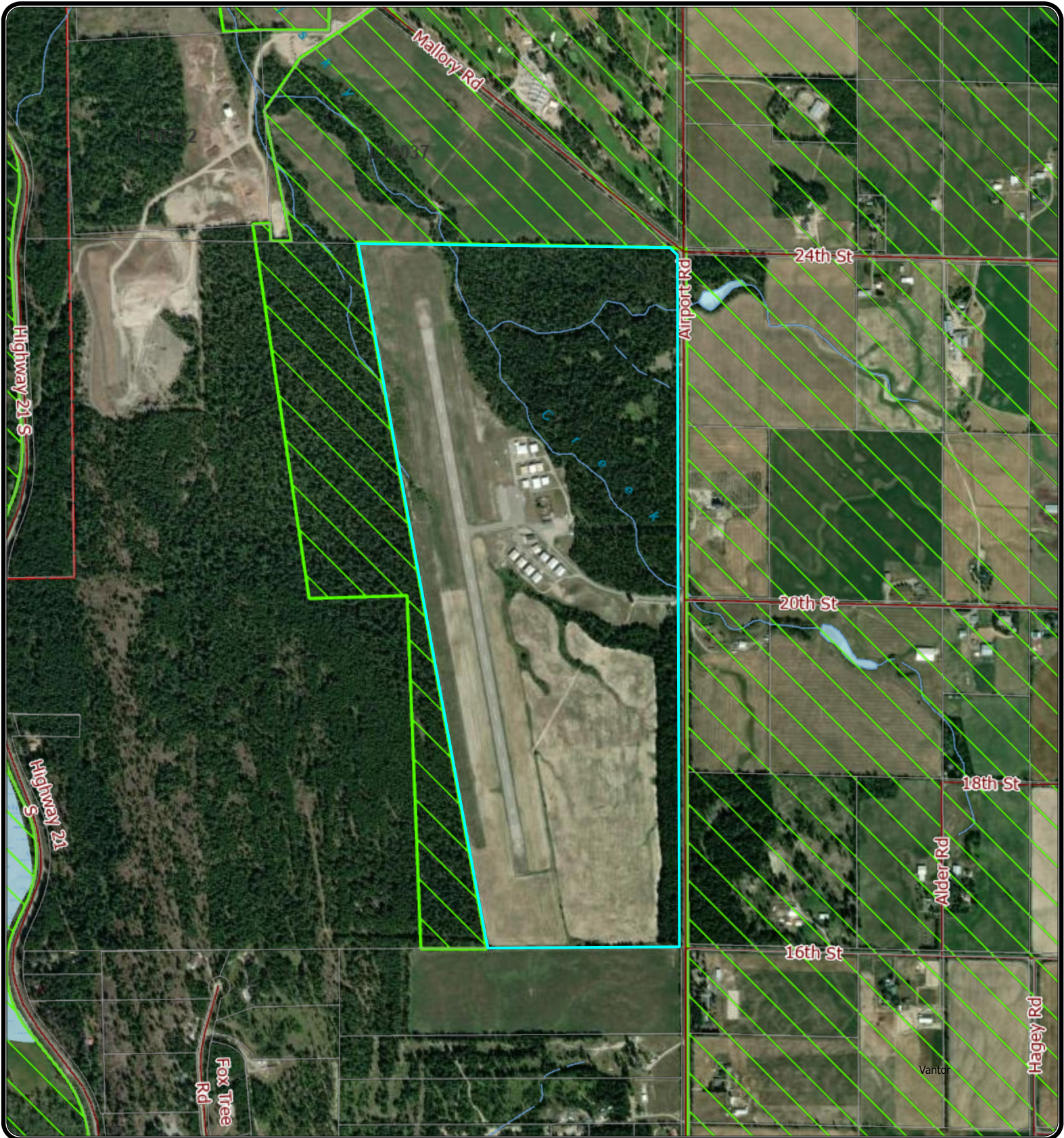
1:18,056

Date: May 5, 2026



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RDCK Map



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 maps@rdck.bc.ca

Legend

- Agriculture Land Reserve
- Streams and Shorelines
- Wetlands
- Lakes and Rivers
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines

Map Scale:

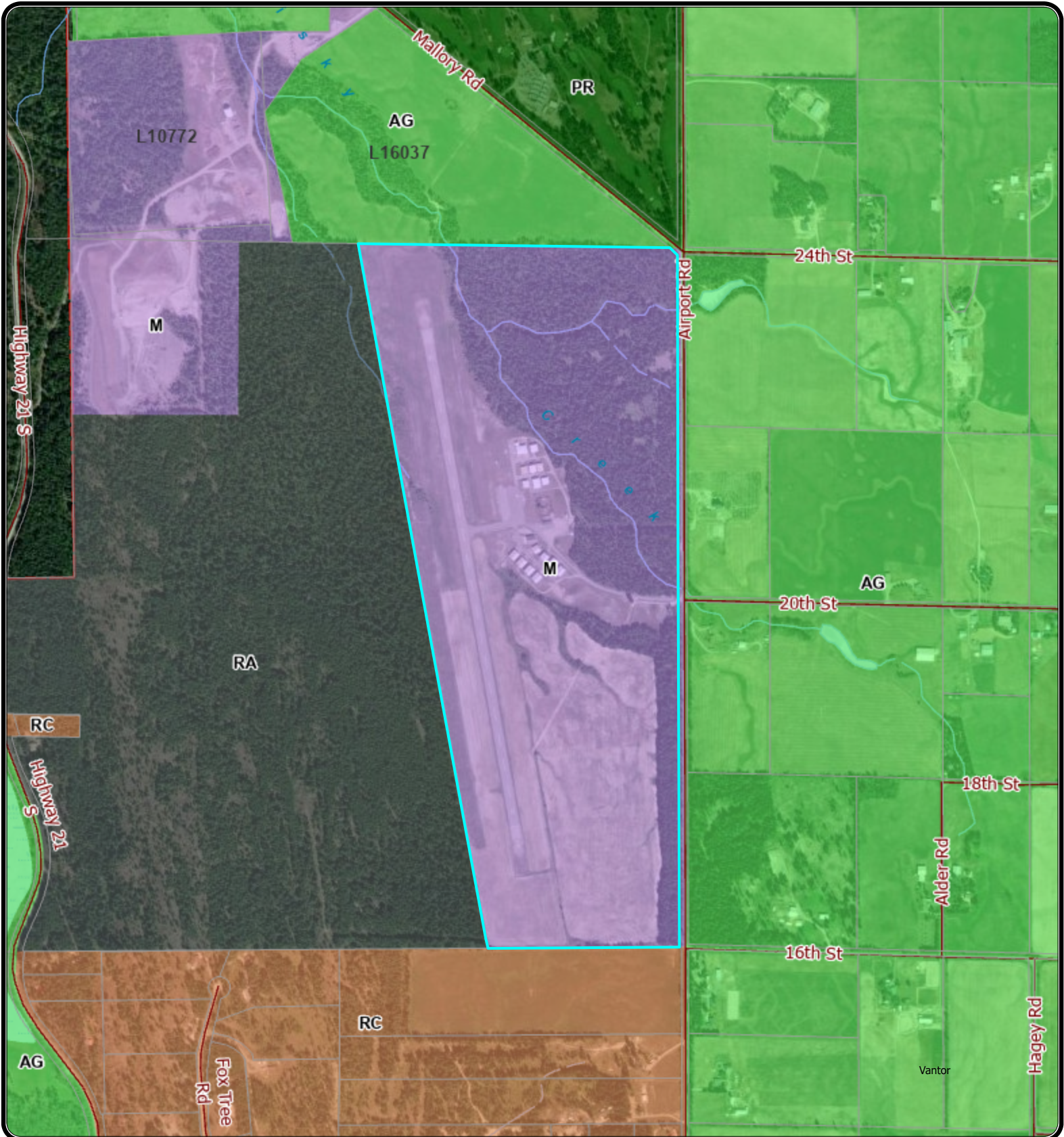
1:18,056

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 maps@rdck.bc.ca

Official Community Plan

- Agriculture
- Country Residential
- Industrial
- Parks and Recreation
- Resource Area

Legend

- Streams and Shorelines
- Wetlands
- Lakes and Rivers
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines

Map Scale:

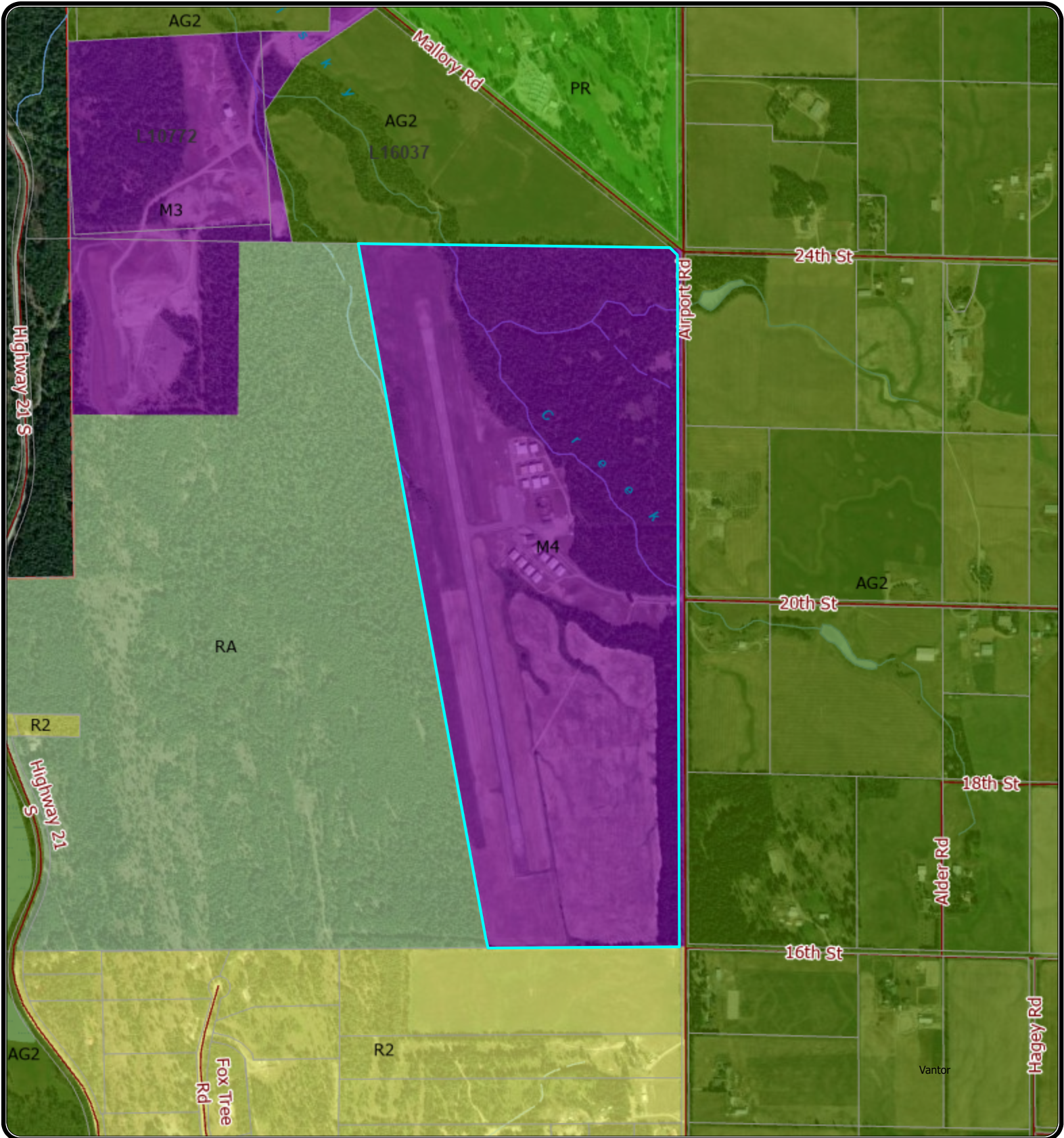
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Date: May 5, 2026



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RDCK Map



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 Phone: 1-800-268-7325 www.rdck.bc.ca
 maps@rdck.bc.ca

Legend

Zoning Class

- Agriculture
- Industrial
- Parks and Recreation
- Residential 2
- Resource Area

- Streams and Shorelines
- Wetlands
- Lakes and Rivers
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines

Map Scale:

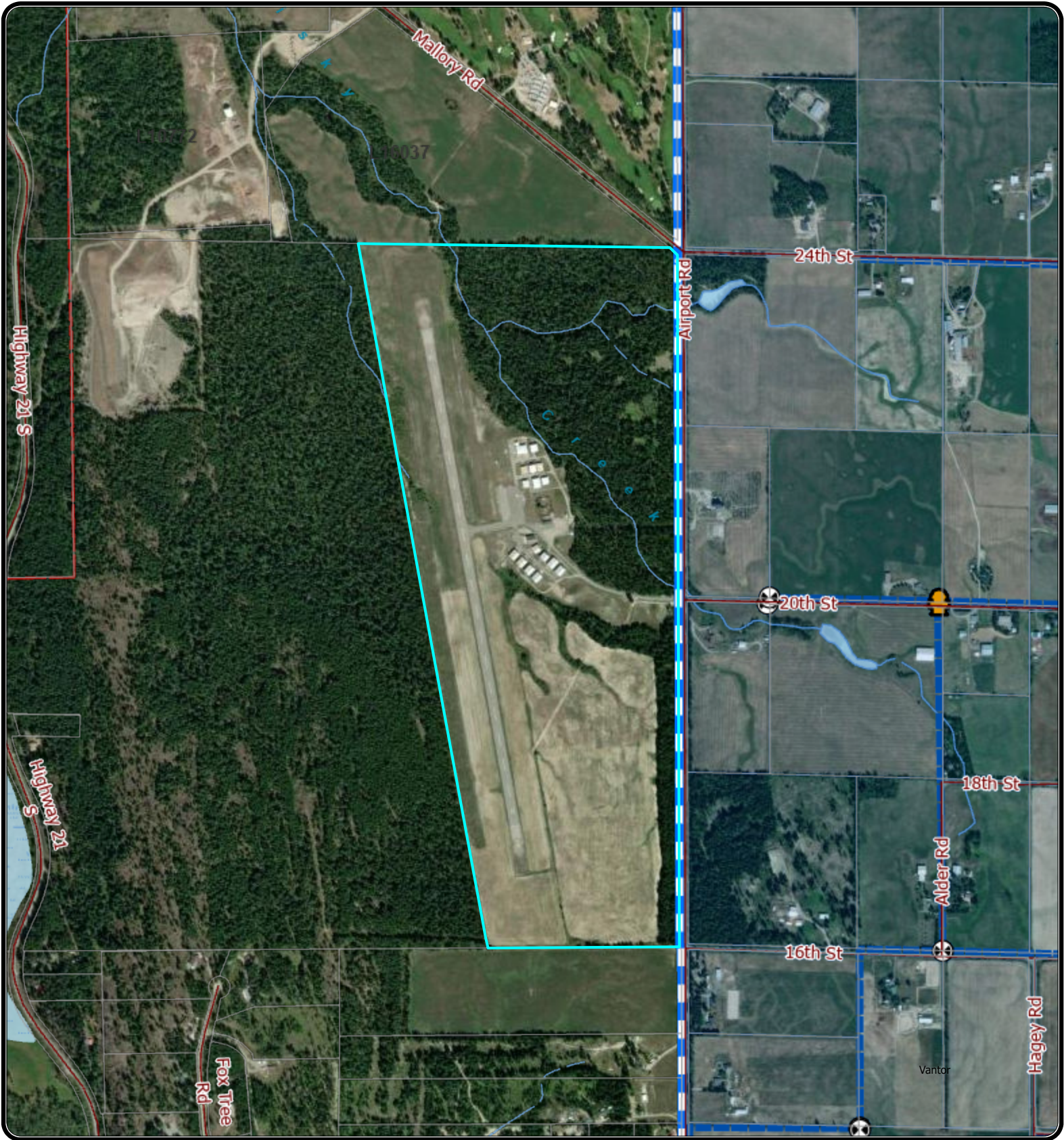
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RDCK Map



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 Valves

Water Systems


 RDCK OWNED

 Main Line


Hydrants

 Stand Pipe

Legend


 Streams and Shorelines

 Wetlands

 Lakes and Rivers

 Electoral Areas

 RDCK Streets

 Cadastre - Property Lines

Map Scale:

1:18,056

Date: May 5, 2026



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Provincial Agricultural Land Commission - Applicant Submission

Application ID: 103200
Application Type: Include Land into the ALR
Status: Submitted to L/FNG
Name: Town of Creston
Local/First Nation Government: Regional District of Central Kootenay

1. Parcel(s) Under Application

Parcel #1

Parcel Type Fee Simple
Legal Description BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT
Approx. Map Area 96.59 ha
PID 009-724-991
Purchase Date Jul 24, 1981
Farm Classification No
Civic Address 1993 Airport Road, Lister
Certificate Of Title TITLE-XB2612-PID-009-724-991.pdf

Land Owner(s)	Organization	Phone	Email	Corporate Summary
Kirsten Dunbar	Town of Creston	██████████	██████████ ██████████	Signing Authority.pdf

2. Other Owned Parcels

Do any of the land owners added previously own or lease other parcels that might inform this application process? Yes

Describe the other parcels including their location, who owns or leases them, and their use. PID 009-942-114 in Town of Creston, owned by Town of Creston, 8.8ha. Primarily a fallow field (5.9ha) occasionally hayed, with wastewater treatment facilities, brush, a cell tower, and gravel turn-around areas. The Town of Creston is requesting that the ALC exclude this property from the ALR in exchange for inclusion of the southeast portion of 1993 Airport Road. See complementary Exclusion Application ID:103193 and attachments.

3. Primary Contact

Type Local or First Nation Government Staff
First Name Joel
Last Name Comer
Organization (If Applicable) Community Services
Phone [REDACTED]
Email [REDACTED]

4. Government

Local or First Nation Government: Regional District of Central Kootenay

5. Land Use

Land Use of Parcel(s) under Application

Describe all agriculture that currently takes place on the parcel(s). The entire parcel is part of the Creston regional airport. Where there are not airport facilities, it is either wildland or farmed for alfalfa, oats or other forage grasses. The field that is proposed for inclusion consists of a mixture of oats and hay and is in active production.

Describe all agricultural The parcel has been cleared of vegetation and an access road built from the

improvements made to the parcel(s).

main road. The Town applies biosolids to the field based on crop needs.

Describe all other uses that currently take place on the parcel(s).

The field proposed for exclusion does not have any other uses aside from agriculture.

Land Use of Adjacent Parcels

	Main Land Use Type	Specific Activity
North	Agricultural / Farm	Forage crop
East	Agricultural / Farm	Forage
South	Agricultural / Farm	Forage
West	Unused	Wildland / natural vegetation

6. Proposal

How many hectares are you proposing to include?

17.6 ha

What is the purpose of the proposal?

The purpose of the proposal is to include 17.6 ha of productive agricultural land into the ALR in exchange for the exclusion of 8.8 ha of land required for the Town to expand their industrial land use. The inclusion is twice the size of the exclusion area, which is to act as an offset for exclusion.

Does the proposal support agriculture in the short or long term?

Yes. By adding land to the ALR in accordance with Section 6 of the ALC Act. The inclusion area is surrounded by ALR land and active farming operations, and is currently leased by a nearby farmer.

Describe any improvements that have been made to, or are planned for the parcel proposed for inclusion.

A renewable lease has been set up with a local producer to farm the land. Additionally, the Town has been applying biosolids to the land. The application and hauling cost of the biosolids is at no-cost to the farmer and will be an ongoing program, so as the farmer leasing the land wants to continue the program.

Proposal Map / Site Plan

Proposal Map Site Plan.pdf

Is the Regional District of Central

Yes

Kootenay the registered land owner of all parcels under this inclusion application?

7. Optional Documents

Type	Description	File Name
Other files that are related	Council Report	20260324 - RFD - 500 Davis Road - ALR Inclusion and Exclusion Applications.pdf
Professional Report	Agricultural Capability Report	MRMC_OT-136_Ag Capability Report_C.1_optimized.pdf

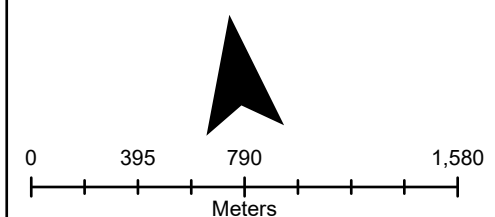
LEGEND

- Agricultural Land Reserve
- 500 Davis Drive
- 1983 Airport Road
- Inclusion Area

LOCATION OVERVIEW



N



Scale: 1:28,000
Projection: NAD 1983 BC Environment Albers





Project ID: OT-136
Project Description: City of Creston Agricultural Land Capability Assessment
Created By: MH
Date Exported: 9/24/2024

City of Creston Agricultural Capability Assessment: Area Overview Map



1983 Airport Road Detailed View
Scale: 1:9,000

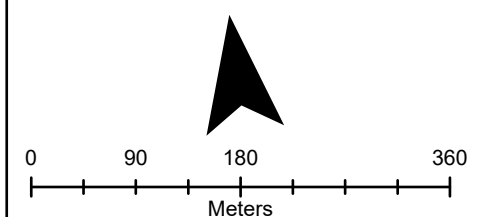
LEGEND

-  Agricultural Land Reserve
-  500 Davis Drive
-  BC Agricultural Capability Polygons
-  Soil Pit

LOCATION OVERVIEW



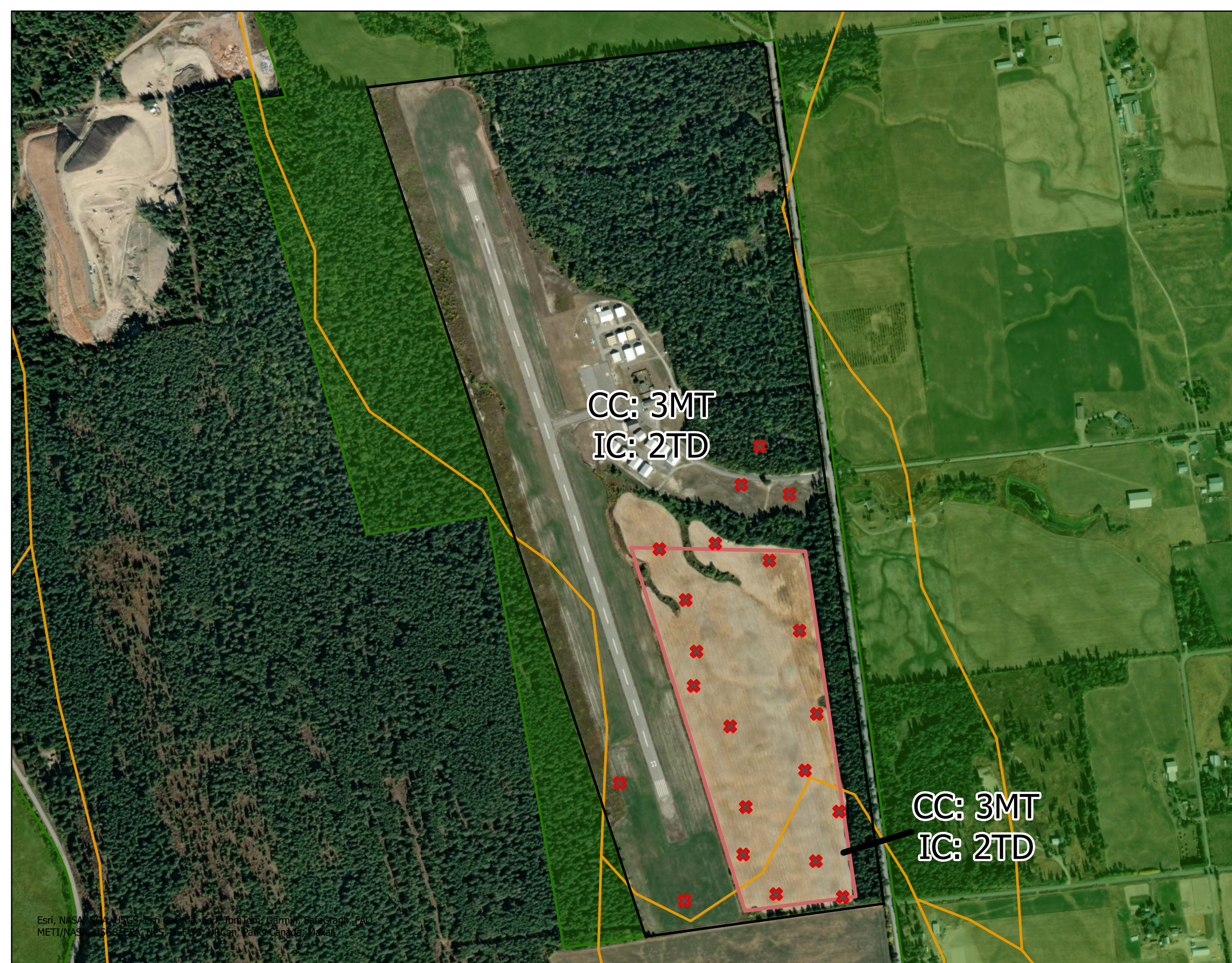
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Scale: 1:6,500
 Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
 Project Description: City of Creston Agricultural
 Land Capability Assessment
 Created By: MH
 Date Exported: 9/25/2024

**1983 Airport Road:
 Field Assessed Agricultural
 Capability**



CC: 3MT
 IC: 2TD

CC: 3MT
 IC: 2TD



Agricultural Impact Assessment for a Proposed Parcel Inclusion and Exclusion of Land in the Agricultural Land Reserve

Prepared for: Town of Creston

REV C.1

December 2024

Document title	Agricultural Impact Assessment for a Proposed Parcel Inclusion and Exclusion of Land in the Agricultural Land Reserve
Document subtitle	Prepared for: Town of Creston
Date	December 2024
Version	C.1

Document History

Version	Date	Author	Comments
0.1	19 August 2024	Megan Ludwig	Initial draft
0.2	19 September 2024	Trish Hanuszak	Draft 2
0.3	20 September 2024	Megan Ludwig	Issue for Review (Internal)
0.4	22 September 2024	Theresa Loewen	Internal Review
A.1	26 September 2024	Megan Ludwig	Issued for Client (Draft)
C.1	12 December 2024	Megan Ludwig	Issued for Client (Final)



**AGRICULTURAL IMPACT ASSESSMENT FOR A PROPOSED
PARCEL INCLUSION AND EXCLUSION OF LAND IN THE
AGRICULTURAL LAND RESERVE**

Prepared for: Town of Creston

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1. INTRODUCTION

McTavish Resource & Management Consultants Ltd. (McTavish) has been retained by the Town of Creston (the “Client”) to conduct an Agricultural Capability and Impact Assessment of one property located at 1993 Airport Road, Creston, BC (the “Inclusion Site”) and one property located at 500 Davis Drive, Creston, BC (the “Exclusion Site”). The purpose of the assessment was to document existing conditions and determine agricultural land capability of the Sites (the “Project”) as supporting information for an inclusion/exclusion application to the Agricultural Land Commission (ALC). The Project involved a desktop review to provide context to historic and on-going land use, a field assessment, and the collection of soil samples and photographic images.

The Exclusion Site is currently located within the BC Agricultural Land Reserve (ALR) and are therefore subject to the *Agricultural Land Commission Act* (2002) and its associated regulations. The specific characteristics of the parcels in which the Exclusion and Inclusion Sites are located are described in **Table 1-1**. An overview map of both sites and surrounding areas is provided in **Appendix I**.

The Client is proposing to exclude Parcel 1 (**Table 1-1**) which covers an area of 8.8 ha and include Parcel 2 which covers an area of 96.6 ha. This report involves determining the land capability and documenting the existing condition of both Sites and determining the potential impacts of removing the Exclusion Site from the ALR.

The following sections summarize the methodology, desktop and field assessments, laboratory analysis, agricultural capability revisions, crop suitability comments, local and regional impacts, results of the agricultural stakeholder analysis, and provides potential offsetting and mitigation strategies.

Table 1-1. Parcels within the Site and characteristics.

Parcel	Address	PID	Zoning	Area (ha)
1	500 Davis Drive, Creston, BC	009-942-114	AG – Agricultural & ALR	8.8
2	1993 Airport Road, Creston, BC	009-724-991	M4 – Industrial	96.6
			Total Site area	105.4

1.1 ALC Application History of Sites

Both the Exclusion and Inclusion Site have a history of ALC applications which are summarized in sections 1.1.1 and 1.1.2.

1.1.1 Exclusion Site

The Exclusion Site has an extensive history application submissions with the ALC beginning in 1990, with applications as recent as 2018.

In 1990 the wastewater treatment plant was expanded from the neighboring property to the north and a portion of the facilities were built on the Exclusion Site without approval from the ALC. In 1995, the Client submitted an application to the ALC (3852) to retroactively authorize the 1 ha area of the Exclusion Site that was occupied by facilities from the wastewater treatment plant. In this application, the Client also proposed to lease the remainder of the Exclusion Site as a baseball diamond. The ALC approved the wastewater facility as a non-farm use but refused the proposed baseball diamond. In the decision (Resolution #956/95) the ALC stated that the Client should improve the remaining portion of the Exclusion



Site not occupied by the wastewater treatment facilities for agriculture by improving drainage on the Site and offering a 10-year lease option to a local producer. In 1996, the Client requested a reconsideration of Resolution #956/95 stating that significant financial investments had been made to improve the land for agriculture, yet it remained relatively unproductive. The ALC refused this reconsideration and reiterated that the Client should work to improve drainage on the Exclusion Site. Another application (4866) was then submitted in 1996 to the ALC to place three trailers on the Exclusion Site for cadet and emergency staff training purposes. This proposal was also refused by the ALC in order to retain the land for agricultural use.

In 2010, ALC application 51002 was submitted to the ALC to utilize a 2 ha area of the Exclusion Site for the purpose of a fire and rescue training facility. The ALC approved the request on the stipulation that an agrologist report be submitted detailing how drainage improvements could be made on the remaining 5 ha of the Site along with the submission of a \$20,000 bond to ensure future reclamation of the Site, should fire and rescue training cease. To date, the Client has not pursued the fire and rescue training facility or associated stipulations outlined in the decision.

Finally in 2018, an application was submitted by Pine Profiles Inc (PPI), a wood product manufacturing facility, on the behalf the Client to utilize the Exclusion Site for the storage of wood products as part of the facilities expansion. The application requested a 2 ha area to be used for storage, as well as the placement of approximately 10,000 m³ of fill material. The ALC ultimately denied the application.

1.1.2 Inclusion Site

The Inclusion Site was removed from the ALR in 1981 (Joel Comer, Manger of Community Planning and Development, Town of Creston, September 20, 2024), however the exclusion application and other associated documents were not able to be retrieved on the public domain as part of this assessment.

2. METHODOLOGY

To determine the agricultural impact of the proposed inclusion and exclusion, McTavish conducted both field and desktop assessments, including the:

- Review of elevations, topography, and drainage from available mapping;
- Review of published soils and agricultural capability;
- Review of surrounding land use and agricultural activities;
- Determination of the soil types/series and depths present on the Site(s) through a detailed soil survey;
- Collection of six aggregate soil samples for chemical and physical analysis (two from the Exclusion Site and four from the Inclusion Site);
- Review of existing soil quality data for the Exclusion Site, provided by the Client;
- Gathering of information related to farming and land management practices;
- Assessing the impact of the proposed activities/exclusion on neighboring properties;
- Review potential for regional impacts on food production, local agricultural suppliers, and the general agricultural community in the region;
- Review of key agricultural stakeholders in the community; and
- Review of potential mitigation and offsetting strategies for the inclusion/exclusion.



2.1 Desktop Assessment

The following available information sources were reviewed to characterize existing conditions and to assess agricultural capability of the Sites:

- Aerial imagery (Google Earth, 2024; Regional District of Central Kootenay Webmap, 2024) – shows land use changes over time including urban development, deforestation, and ground disturbance.
- British Columbia Biogeoclimatic Ecosystem Classification (BEC) Zones (BC MOF 2023) – provides information on vegetation, topography, soils, moisture, and temperature, and classifies areas into ecoregions that share a broadly homogenous macroclimate.
- BC Soil Information Finder Tool (SIFT) (Province of BC 2018) – provides information on mapped soils, including soil classification, soil type (i.e., organic, mineral), parent material, land formations, slope, and soil profile. SIFT data is based on detailed soil surveys that occurred in the 1950s to 1970s. As land use has changed significantly since these reports were published, many soils have been modified and no longer belong to their original groups. A summary of soils present on the Sites is provided in **Appendix II**.
- Agricultural Capability Mapping and Classifications (Province of BC 2018) – provides information on the capability of land for a range of soil bound agricultural purposes. The classification system rates land on its capability as well as providing an indication of the management constraints. Under the system, land is ranked as Class 1 to 7, where Class 1 is best suited for agriculture and Class 7 is non-arable (Kenk and Cotic 1983). For organic soils (not including peaty phases of mineral soils), the land capability classes are designated as Class O1 to O7. Various subclasses describe the factors that limit agriculture. Detailed descriptions of agricultural capability classes and subclasses present on the Sites are provided in **Appendix III**.
- Climate and moisture data (Government of Canada 2022) – used in a version of the Priestly-Taylor equation to calculate potential evapotranspiration (PET) on the Site. PET indicates the potential for precipitation and weather conditions to limit agricultural capability and is used to determine the Climate Moisture Deficit (CMD) and the Soil Moisture Deficiency (SMD). The analysis followed the methods described in *Land Capability Classification for Agriculture in British Columbia* (Kenk and Cotic 1983).
- Agricultural Land Commission Application and Decision Portal (Provincial Agricultural Land Commission 2022) – provides information on previous applications to the ALC.
- Client correspondence for land use history and prospective plan for the Sites.

The desktop review provided guidance for the placement of the detailed soil pit investigation sites that would allow for pits to be installed based on mapped soil polygons and site history rather than placement driven by property boundaries alone.

Based on the desktop and field results the agricultural capability was confirmed or revised. Analysis of the agricultural capability considers (but is not limited to) climate and microclimate, site conditions, soils, land use, and/or management inputs. The Project adhered to BC ALC Criteria for Agricultural Capability Assessments Policy P-10 (BC ALC 2024).

2.2 Field Assessment

The field assessment was conducted on July 31 and August 1, 2024 by Megan Ludwig, M.Sc., P.Ag. and Trish Hanuszak, M.Sc., P.Ag. The assessment comprised:



- Recording observations of conditions on the Sites that may promote or limit agriculture (e.g., existing farm infrastructure, environmental conditions, drainage, topography, debris content). Topography was assessed based on the definitions provided by Luttmerding (1981).
- Conducting a detailed soil survey following the requirements of the ALC Policy P-10 (BC ALC 2017). ALC Policy P-10 requires that the soil survey meet the Survey Intensity Level 1 (SIL1), as outlined in the *Soil Inventory Methods for British Columbia* (Resources Inventory Committee, 1995). SIL1 requires one detailed soil pit per 1 to 5 ha.

A total of 2 detailed soil pits were installed across the Exclusion Site and 20 across the Inclusion Site. The detailed soil pits ensured assessment of each of the mapped soil polygons that occur on the two Sites. In the Exclusion Site each soil pit was hand dug to the C horizon, or until shovel refusal. In the Inclusion Site each soil pit was installed with an excavator and operator provided by the Client's public works department. The detailed soil survey included the documentation of soil characteristics based on *Soils Illustrated – Field Descriptions, 1st Edition* (Watson 2007).

2.3 Soil Laboratory analysis

Soil samples were collected from the topsoil (A) and subsurface (B) horizons of each soil pit during the field assessment. When pits had similar soil characteristics and land management practices, the individual samples were bulked into a single composite sample comprising soil from the same horizon (i.e., A or B) from up to four pits. Pits that did not share similar characteristics were sampled individually.

Soil samples were analyzed to determine soil physical and chemical properties that may promote or limit agriculture. The samples were analyzed at Element Materials Testing Laboratory accredited by the Standards Council of Canada (SCC) to ISO17025.

Topsoil samples were analyzed to determine particle-size analysis (PSA), soil macro¹- and micro²- nutrient content, pH, electrical conductivity (EC), base saturation (BS), organic matter (OM) content, and cation exchange capacity (CEC). Subsurface soil samples were analyzed to determine particle-size analysis (PSA), soil nitrogen (N), soil sulfur (S), pH, and electrical conductivity (EC).

¹ Plant macronutrients are essential nutrients required in relatively large amounts and include nitrogen (N), potassium (K), calcium (Ca), Magnesium (Mg), phosphorus (P), and sulfur (S).

² Plant micronutrients are essential nutrients used in smaller amounts (when compared to macronutrients) and include chlorine (Cl), iron (Fe), boron (B), manganese (Mn), zinc (Zn), copper (Cu), molybdenum (Mo), and nickel (Ni). However, Mo and Ni were excluded from laboratory analysis.



3. AGRICULTURAL CAPABILITY ASSESSMENT

3.1 Desktop Assessment Results

3.1.1 Site Location and Historical Use

3.1.1.1 Exclusion Site

Located west of Creston, approximately 3 km northeast of the Kootenay River, the 8.8 ha Exclusion Site is situated within the ALR and is accessed via Davis Road. The Exclusion Site is bordered by Highway 21 to the east, and non-cultivated rural properties to the north and south. A wood processing facility is located to the west of the Exclusion Site and the Creston wastewater treatment plant and biosolids handling facility is located to the northeast. A portion of the wastewater treatment plant and biosolids handling facility is located within the Exclusion Site parcel, occupying approximately 0.7 ha within the northwest of the parcel. The northeastern 0.7 ha of the parcel is a combination of brush as well as a gravel-turn around area. The southernmost 5.9 ha of the parcel are cultivated for forage crop production.

Adjacent land use to the Exclusion Site includes a residential subdivision to the east, a wood processing facility to the south, and a slough to the west and north of the facility. Numerous agricultural parcels are located to the north and west of the slough, which are primarily cultivated for forage crops. Parcels to the north, west and south of the parcel are located within the ALR, however, the parcels to the immediate west of the Exclusion Site which house the wood processing facility and wastewater treatment plant are not included in the ALR. The only ALR parcels within the vicinity of the Exclusion Site which are managed for soil-based agricultural production are located to the north and west, across the slough.

Available satellite imagery from Google Earth Imagery for the period between 2005 – 2021 was retrieved to assess historical land use. Historical satellite imagery indicates minimal changes in land use within the Exclusion Site during that time period. Facilities associated with the Creston wastewater treatment plant have been located within the north of the parcel since at least 2005 and the 5.9 ha cultivated portion of the parcel has been farmed for forage or hay production since at least 2005.

3.1.1.2 Inclusion Site

The Inclusion Site is located south of Creston, approximately 1 km east of the Kootenay River. The 96.6 ha Inclusion Site is located outside of the ALR and is the location of the Creston Valley Regional Airport. A runway runs north to south along most of the western border of the parcel. The airport itself is located centrally within the parcel, with numerous buildings and hangars occupying approximately 9.0 ha. Land use within the northeast 30 ha of the parcel is unmanaged forest. The southeastern area of the parcel, in addition to the area immediately surrounding the runway, are managed for forage crop production, totaling approximately 57.4 ha.

Adjacent land use to the Inclusion Site includes agricultural parcels to the north, east, and south, ranging in size from 3.5 ha to 16.0 ha. The adjacent farms are predominantly managed for forage crop production. The Creston composting facility is located less than 1 km to the northwest of the parcel, and the Creston golf club is located approximately 0.4 km to the north of the parcel. The neighbouring parcels to the north and east of the site are located entirely within the ALR. The parcel to the immediate west of the Inclusion Site is partially located within the ALR but is currently forested.

Available satellite imagery from Google Earth Imagery for the period between 2005 – 2020 was retrieved to assess historical land use. Historical satellite imagery indicates minimal changes in land use within the Inclusion Site during that time period. Between 2009 and 2010, the airport facility was expanded with 7 new buildings and additional access roads built, totaling approximately 1.0 ha. No other notable changes in land



use are observed during this period. The historical satellite imagery indicates that the agricultural field in the southeast of the parcel experiences periods of inundation.

3.1.2 Climate

Biogeoclimatic Ecosystem Classification (BEC) mapping provides an indication of the overall anticipated moisture and temperature conditions. Both Sites are within the Interior Cedar Hemlock, Very Dry Warm (ICHxw) BEC zone (MOF 2023). This BEC zone is found in lower to mid-elevations on the windward slopes of the Cariboo, Monashee and Selkirk mountains and is characterized by cool, wet winters and warm, dry summers (Meidinger and Pojar 1991).

The closest Environment Canada climate station to the Sites with historical data is CRESTON (Climate ID 1142160), located in the Town of Creston at an elevation of 610 meters above sea level (masl). Records from this station are available from 1981 to 2008. Mean annual precipitation was 662.4 mm including a mean annual rainfall of 524.5 mm. A daily extreme precipitation of 56.4 mm occurred on September 11, 1927. Mean annual temperature was 8.5°C, with a daily average maximum of 8.8°C and a minimum of 3.2°C. A daily extreme maximum of 39.4°C occurred on July 16, 1941 and a daily extreme minimum of -32.8°C occurred on January 3, 1924. There were on average 155 frost-free days per year with the first frost falling on average on October 7th and the last spring frost falling on May 3rd. There were on average 2045 growing degree days above 5°C and 1075 growing degree days above 10°C.

A climatic moisture deficit exists for both of the Sites. Modeled estimates of Potential Evapotranspiration (PET) indicate that the Sites are characterized by a soil moisture deficit from May to September, when the mean monthly precipitation is less than the estimated PET (Government of Canada 2022; Kenk and Cotic 1983). According to the Climatic Capability Classification for Agriculture in British Columbia (BC MOE 1981), the Sites have a Climate Capability Class of 5A due to the presence of a climatic moisture deficit (CMD) of 371 mm and a soil moisture deficit (SMD) of 271 mm in the upper 50 cm of soil during the growing season. The 5A classification indicates that the Sites are climatically limited by a moisture deficit that can be improved to Class 1 (no limitations) by installing irrigation.

3.1.2.1 Climate Change Impacts

With the onset of climate change, the impacts of soil moisture regimes and air temperature will affect crop production. Within the Central Kootenay region, annual temperatures are expected to rise by an average of 1.9°C (+1.5 to +2.6°C) and summer precipitation is expected to increase by 1.8% (-2.0% to 3.5%) over the period of 2021 to 2050 (PCIC 2020). This may exacerbate drought and the demand for irrigation. Overall precipitation events are expected to be more severe resulting in the increased incidents of flooding or flashy stream flows resulting in the need for improved drainage infrastructure. In addition, growing degree days and frost-free days are both expected to increase by 383 and 23 days respectively. Based on these predictions, higher crop productivity and a greater range of crops may be possible; however, agricultural challenges related to increased flooding, summer droughts, and demand for heat-tolerant plants are also likely to occur.

3.1.3 Published Soil Series

3.1.3.1 Exclusion Site

One soil polygon is documented to occur on the Exclusion Site (**Table 3.3-1**; Province of BC 2018). The soil series occurs in a complex (i.e. multiple soil series per polygon) map unit consisting of mineral soil parent materials that consist of Kuskanook and Fletcher soils. These mineral soils have developed from fluvial deposits (Jungen, 1980).



3.1.3.2 Inclusion Site

Two soil polygons of Lister and Burdett soils are documented to occur on the Inclusion Site (**Table 3.3-1**; Province of BC 2018). The soil series in this parcel occur in pure map units (i.e. single soil series per polygon) consisting of mineral soil parent materials. These mineral soils have developed from glaciolacustrine and colluvial parent materials (Jungen, 1980).

Descriptions of the soil series present within each of the parcels are provided in **Appendix II**. An overview map indicating the published soil series is provided in **Appendix IV**.

Table 3.3-1. Summary of Published Soil Series Polygons on the Site.

Polygon	Parcel	Mapped Soil Series 1	Soil Series 1 Classification	%	Mapped Soil Series 2	Soil Series 2 Classification	%	Area (ha)
1	Exclusion	Kuskanook	Orthic Gleysol	70	Fletcher	Orthic Dystric Brunisol	30	8.8
2	Inclusion	Lister	Orthic Gray Luvisol	100				94.2
3	Inclusion	Burdett	Orthic Eutric Brunisol	100				2.4

Note: Soil mapping data is from BC SIFT (Province of BC 2018).



3.1.4 Published Agricultural Capability

3.1.4.1 Exclusion Site

One agricultural capability polygon with two capability classes are documented on the Exclusion Site (**Table 3.4-1**; Province of BC 2018). The published unimproved agricultural capability within the Exclusion Site ranges from Class 4 (4MW) to Class 5 (5IW) with limitations due to soil moisture deficiency (M), excess water within the soil profile (W), and inundation (I). The published improved ratings range from Class 4 (4MW) to Class 5 (5IW) with limitations due to soil moisture deficiency (M), excess water within the soil profile (W), and inundation (I).

3.1.4.2 Inclusion Site

Three agricultural capability polygons with four capability classes are documented on the Inclusion Site (**Table 3.4-1**; Province of BC 2018). The published unimproved agricultural capability within the Inclusion Site ranges from Class 3 (TD) to class 6 (6TR) with limitations due to topography (T), undesirable soil structure (D), and shallow soil over bedrock (R). The published improved ratings range from Class 3 (3TD) to Class 5 (5T) with limitations due to topography (T) and undesirable soil structure (D).

Detailed descriptions of all Agricultural Capability subclasses are provided in **Appendix III**. An overview map delineating the published agricultural capability polygons is provided in **Appendix V**.

Table 3.4-1. Summary of Published Agricultural Capability Polygons on the Site.

Polygon	Parcel	Mapped Soil Series	Slope Class	Mapped Agricultural Capability	Improvable Agricultural Capability	Area (ha)
1	Exclusion	Kuskanook (70%) / Fletcher (30%)	Nearly level to gently undulating (70%) / nearly level to moderately rolling	⁷ 4MW ³ 5IW	⁷ 4MW ³ 5IW	8.8
2	Inclusion	Lister	Gently to moderately rolling	⁷ 4T ³ 3TD	⁷ 4T ³ 3TD	88.3
3	Inclusion	Lister	Gently to moderately rolling	5T	5T	5.4
4	Inclusion	Burdett	Undulating to hilly	6TR		2.9

Note: Superscript numbers represent proportion of polygon out of 10. Published ratings are from BC SIFT (Province of BC 2018).

3.1.5 Topography

3.1.5.1 Exclusion Site

Mapping indicates that topography on the Exclusion Site varies from 536 – 538 m above sea level (masl; Google Earth, 2024). The highest point on the Site is on the western side of the parcel. In general, the Exclusion Site is flat with only minor (i.e., <1 or 2 m) changes in elevation.



3.1.5.2 Inclusion Site

Mapping indicates that topography on the Inclusion Site varies from 632 – 658 m above sea level (masl; Google Earth, 2024). The highest point on the Site is in the southeast side of the parcel. In general, the main fields are gently sloping or flat with changes in elevation.

3.2 Field Assessment Results

3.2.1 Site Observations

3.2.1.1 Exclusion Site

The field assessment verified the access/egress point from a side road off of Davis Road and confirmed Site characteristics described the desktop review.

The field that makes up the majority of the Exclusion Site (approximately 6 ha in size) was cut forage at the time of the assessment. It was previously hayed, but at the time of the assessment, there was currently no one leasing the land (M. Moore, Chief Administrative Officer, Town of Creston, August 14, 2024). The Exclusion Site is isolated from parcels in agricultural production with no active agricultural fields directly adjacent. No evidence of drainage improvements to the Site were observed during the field visit.

Site photographs from the field assessment are provided in **Appendix VII**.

3.2.1.2 Inclusion Site

The Inclusion Site can be accessed from Airport Drive. The Inclusion Site was divided into four fields based on land use types for the purposes of the assessment; helicopter field, airstrip field, biosolids field, and forested. Each field's observed characteristics are described below.

- The helicopter field is a small field located on the west side of the parcel, adjacent to the airport hangers and access road. This field was about 1 ha in size and was fallow at the time of the assessment. The helicopter field is currently used as a staging area for fire fighting equipment, including helicopters, when required. At the time of the assessment there was no equipment on site.
- The airstrip field is the large field that extends the length of the eastern side of the property. This field has an active airstrip with the surrounding margins currently in alfalfa production. This field is about 30 ha in size and has been leveled. There is no irrigation, however the entire parcel was fenced with 2 m high page-wire fencing.
- The biosolids field is an approximately 20 ha field located in the southeast portion of the parcel. This field has been improved using biosolids from the Town of Creston's wastewater treatment facility. The field is currently leased with a 5-year lease in place and the producer currently utilizes the land to grow oats and hay. A portion of the biosolids field is currently unfarmed due to a failed oat crop, however it typically is planted.
- The forested areas were along the eastern edge of the parcel and the northeast portion of the parcel. These areas are not cultivated and have native vegetation and no plans to be developed for agriculture.
- Invasive vegetation was minimal across all the fields.



3.2.2 Soil Observations

3.2.2.1 Exclusion Site

The detailed soil survey comprised the excavation of 2 pits across the Exclusion Site (see **Appendix III** for soil pit location map). Based on the results of the detailed soil survey, the soil series present on the Site are consistent with soil mapping.

Soil pit 1 was installed in the southwest corner of the farm field and showed a clear Ap horizon followed by gleyed and clay enriched subsoil horizons (Btg, Btj, and Cg). No coarse fragments or water table were observed within the soil profile despite evidence of gleying and mottles. Soil Pit 1 is representative of the Kuskanook soil series.

Soil pit 2 was installed in the northeast portion of the Exclusion Site and differed from Soil pit 1 by horizon depths (apart from Ap horizon) and lack of mottles or distinct gleying. Soil Pit 2 is more representative of the Fletcher soil series.

Due to mottling and gleying present in the upper 50 cm of pit 1, and the high water-holding capacity of the soil textures for both soil pits installed, the drainage class was determined to be poor to very poor across the Exclusion Site agricultural field. At the time of the field assessment, the water table was not observed in either field.

Detailed soil cards for each soil pit excavated on the Site are provided in **Appendix VII**.

3.2.2.2 Inclusion Site

The detailed soil survey comprised the excavation of 20 pits across the Inclusion Site (see **Appendix III** for soil pit location map). Based on the results of the detailed soil survey, the soil series present on the Inclusion Site are consistent with soil mapping. The parcel was mapped as two soils polygons, Lister and Burdett. Lister was the prominent soil series characteristics and was observed in all of the soil pits installed across the Inclusion Site.

In general, the soils consisted of an Ap horizon ranging from 20 – 30 cm in depth followed by gleyed and clay enriched subsoil horizons (Btg, Btj, and Cg). Soil textures were determined to be silty clay loam for the topsoil and silty clay for subsoil horizons. The majority of soil pits excavated were free of coarse fragments within the soil profiles, but a few soil pits had coarse fragments present on adjacent walls in the lower depths. In two soil pits coarse fragments were rounded and 3 cm in diameter. In a few other soil pits, coarse fragments were angular and up to 20 cm in diameter. No water table was observed in any of the soil pits excavated despite evidence of gleying within the soil profiles. Tree roots, woody debris, and burn lines were observed in several of the soil pits at varying depths indicating historical clearing, burning, and land leveling activities.

Due to gleying present in the upper 50 cm of most pits installed, and the high water-holding capacity of the fine textured soils observed, the drainage class was determined to be imperfect to poor across the Inclusion field study area. At the time of the field assessment, the water table was not present in any soil pit excavated.

Detailed soil cards for each soil pit excavated on the Site are provided in **Appendix VII**.



3.2.3 Laboratory Results

3.2.3.1 Exclusion Site

Soil nutrient analysis results of the topsoil samples indicated that on average low levels of macronutrients. This would be expected for samples from poorly drained soils, as waterlogging can lead to anaerobic conditions and the mineralization of nutrients, leading to low levels of nitrogen, phosphorus and potassium. Subsoil was not analyzed for nutrients.

Organic matter content (%) in the topsoil was 1.2%, which is considered low, but within the normal range for the Kuskanook soils (Witneben and Sprout 1971).

All samples displayed neutral pH, ranging from 6.9 to 7.2 and electrical conductivities of <1 dS/m indicating no salinity issues, which is typical of soils in the region.

A summary of laboratory results is provided in **Table 4.3-1**. Full laboratory results are provided in **Appendix VIII**.

Table 4.3-1. Nutrient Test results of Soils on the Exclusion Site.

Sample	pH	EC	Total OM	Available			
				N	P	K	S
				ppm	ppm	ppm	ppm
Composite of Topsoil (0-30cm)	7.2 ^A	0.22 ^A	1.2 ^L	<2 ^{VL}	<5 ^{VL}	<25 ^{VL}	9 ^A
Composite of Subsoil (40-60 cm)	6.9 ^A	0.2 ^A	-	-	-	-	-

Note: Values are ranked according to general crop requirements: VL = Very Low, L = Low, M = Moderate, A = Adequate, SH = Slightly High, H = High, VH = Very High

3.2.3.2 Inclusion Site

Soil nutrient analysis results of the topsoil samples indicated adequate levels of macronutrients, except for nitrogen, which was very low in all fields except the biosolids field. Subsoil was not analyzed for nutrients.

Organic matter content (%) in the topsoil ranged from 2.8% to 5.4%, which is considered adequate and within normal range for the Lister soils (Witneben and Sprout 1971).

All samples displayed a neutral pH around 7 and electrical conductivities of <1 dS/m indicating no salinity issues, which is typical of soils in the region.

A summary of laboratory results is provided in **Table 4.3-1**. Full laboratory results are provided in **Appendix VIII**.

Table 4.3-1. Nutrient Test results of Soils on the Inclusion Site.

Sample	pH	EC	Total OM	Available			
				N	P	K	S
				ppm	ppm	ppm	ppm
Composite of Helicopter Field Topsoil (0-30cm)	7.0 ^A	0.29 ^A	2.8 ^A	<2 ^{VL}	26 ^A	168 ^A	2 ^L



Sample	pH	EC	Total OM	Available			
				N	P	K	S
				dS/m	%	ppm	ppm
Composite of Helicopter Field Subsoil (40-60 cm)	7.0 ^A	0.47 ^A	-	-	-	-	-
Composite of Airstrip Field Topsoil (0-30cm)	7.1 ^A	0.6 ^A	5.4 ^A	3 ^{VL}	27 ^A	136 ^L	2 ^L
Composite of Airstrip Field Subsoil (40-60 cm)	7.1 ^A	0.6 ^A	-	-	-	-	-
Composite of Biosolids Field Topsoil* (0-30cm)	6.5	0.31	-	14 ^A	41 ^A	163 ^A	-

Note: Values are ranked according to general crop requirements: VL = Very Low, L = Low, M = Moderate, A = Adequate, SH = Slightly High, H = High, VH = Very High

*Samples were taken by the Town of Creston in May 2024 as part of biosolids land application plan. No subsoil samples were taken

3.3 Agricultural Capability Discussion

The detailed soil survey and site assessment indicated that the agricultural capability of the Site is not fully consistent with mapping and revisions relating to the limitation subclasses have been made. Note that only dominant limitations are identified in **Table 3.1-1**. Descriptions of the limitations affecting the soils on the Site are provided in **Appendix III**.

3.3.1 Exclusion Site

The Exclusion Site was consistent with the published unimproved capability ratings for the agricultural fields apart from the I subclass (inundation). No indication of inundation was observed during the field survey of this location. Historical diking of the nearby river may have limited or eliminated the occurrence of this subclass from occurring on this Site.

The improved rating (IC) of the site has been improved from 4MW and 5IW to a 3W with the addition of irrigation.

3.3.2 Inclusion Site

The Inclusion Site capability mapping was inconsistent with published ratings for the polygons that overlap with the parcel. The T subclass rating (topography) was removed or reduced for all polygons overlapping with the Site. The Site has gently sloped or flat topography with minimal changes in elevation across the parcel. The unimproved Site classification was changed collectively from 4T, 5T and 6T to 3T over most of the Site. The D subclass rating (undesirable soil structure and or low perviousness) which is generally associated with silty clay loam and clay loam soils was fairly consistent with published ratings. The improved capability rating for the Site for the D subclass was reduced as the active agricultural fields are tilled yearly and incorporated with biosolids. Both practices are improvements to the rating subclass.



Table 3.3-1. Soil Series and Agricultural Capability Ratings across the Sites – Based on Field Assessment Results

Polygon	Parcel	Published				Assessed				
		Soil Series	Unimproved Capability Rating (CC)	Improved Capability Rating (IC)	Area (ha)	Soil Series	Unimproved Capability Rating (CC)	Improved Capability Rating (IC)	Area (ha)	Capability Rating Revision
1	Exclusion	Kuskanook (70%) Fletcher (30%)	74MW 35IW	74MW 35IW	8.8	Kuskanook (70%) Fletcher (30%)	74MW 35MW	73W	1.5	-Removal of I subclass -Removal of M subclass for IC -Improved class level for IC
2	Inclusion	Lister	74T 33TD	74T 33TD	88.3	Lister	3MT	2TD	0.3	-Revision of 4T and 3TD to 3MT -Improved class level for IC
3	Inclusion	Lister	5T	5T	5.4	Lister	NA	NA	NA	Not assessed. Polygon did not overlap with agricultural area of the Site.
4	Inclusion	Burdett	6TR		2.9	Lister	3MT	2D	NA	-Revision of 6TR for assessment area to 3MT -Improved class level for IC

i

ⁱ Note: Source of published unimproved and improved ratings area from BC SIFT (Province of BC 2018).

*Discussion of justification for revisions can be found in Section 3



3.3.3 Current Land Use & Crop Suitability

3.3.3.1 Exclusion Site

The ability of the Exclusion Site to support a wide range of crops is very limited by excess soil water during parts of the growing season and low fertility. This is exacerbated by the isolated nature of the Exclusion Site, having no active agricultural production nearby, making it unappealing for producers. It was stated by the Client that there is great difficulty leasing the Exclusion Site, and in years when it was leased, it was unprofitable for the producers, as the land was too wet to bring in machinery in the spring months to work the land. It is also surrounded by industrial land uses that could potentially bring in contaminants through the land through subsurface flow.

Crops suitable for the Site include spring wheat, winter wheat, oats, barley, corn, alfalfa, white clover, and seed peas (Wittneben and Sprout 1971).

3.3.3.2 Inclusion Site

The ability of the Inclusion Site to support a wide range of crops is potentially limited by lack of access to irrigation and low permeability and undesirable soil structure due to soil textures. The Inclusion Site currently has a producer with a 5-year lease and has not historically been an issue to find a producer to utilize the lands. The Client uses the field as a receiving site for biosolid applications and is planning to continue to do so for the foreseeable future. This requires the commitment for continual cropping and management for agricultural production by the Client.

Crops suitable for this Site include barley, alfalfa, and white clover (Wittneben and Sprout 1971).

4. IMPACTS AND MITIGATIONS

4.1 Local and Regional Impacts on agricultural production and community

The removal of the Exclusion Site from the ALR will result in a permanent loss of 8.8 ha of ALR land. However, the Exclusion Site is currently not in production and has not been leased for several years due to its isolated nature and high groundwater table that makes cultivation of the land difficult. The removal of the land from the ALR is not expected to impact local agricultural production or the community, as it is currently isolated from other agricultural production areas, and it is uncultivated and likely to remain uncultivated in the future.

4.2 Mitigation and offsetting strategies

It is proposed that the Client will offset the exclusion of ALR lands with the inclusion of 17.6 ha of productive agricultural land (referred to as the Inclusion Site within this report). The Client will continue to actively lease these lands on a 5-year lease to a local producer. Additionally, the Client will continue to provide biosolids for fertilization with no cost to the farmer, as needed based on crop requirements.

5. RECOMMENDATIONS

McTavish recommends the inclusion of the biosolids field (17.6 ha) at the Inclusion Site into the Agricultural Land Reserve (ALR) in exchange for the removal of the Exclusion Site (8.8 ha), which provides a 2:1 inclusion ratio. The Exclusion Site, which is currently unleased, has poor drainage, is isolated, and consists of a small field that is not conducive to agricultural productivity. Despite previous requests by the ALC, no improvements have been made to the Exclusion Site, reflecting the challenges and impracticality of such



efforts given the Client's need to expand its industrial infrastructure, particularly for wastewater treatment and biosolids processing.

In contrast, the biosolid field at the Inclusion Site is directly connected to the existing ALR, is surrounded by active farming operations, and is currently leased by a local farmer. This proximity reduces the cost and logistical challenges of maintaining the land. The Client has been actively building soil quality in this area through a biosolids application program, which it plans to continue funding, covering both application and hauling costs.

This arrangement supports continued agricultural use of the Inclusion Site, which will remain under a renewable lease, ensuring long-term agricultural viability.

6. SUMMARY AND CONCLUSIONS

McTavish conducted this agricultural land capability and impact assessment based on existing information and a detailed soil survey with the goals of determining land capability, documenting the existing condition of the Site, and determining the potential impacts of removing the Exclusion Site from the ALR.

The findings indicate that the proposed Exclusion Site is has limitations due to high groundwater in addition to being isolated from other ALR lands. The removal of these lands is not expected to impact local or regional agriculture and will be offset by the addition of 17.6 ha of productive agricultural land at the proposed Inclusion Site.



7. CLOSING

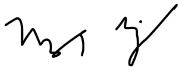
This report has been prepared for the exclusive use of the Client with the understanding that all available information of the Site has been disclosed. The Client has acknowledged that in order for McTavish to properly provide professional service, McTavish is relying upon full disclosure and accuracy of this information. McTavish is not liable for information that has not been provided or has been misrepresented.

We trust that this report satisfies the requirements outlined by the Client and the ALC. Should any questions regarding this report arise, please contact the undersigned.

Sincerely,

MCTAVISH RESOURCE & MANAGEMENT CONSULTANTS LTD.

Per



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Senior Project Agrologist



Theresa Loewen, M.Sc., P.Ag.

Senior Project Agrologist



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APPENDIX I. AREA OVERVIEW MAP



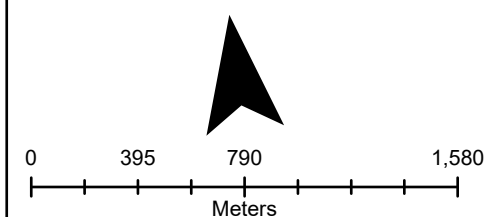
LEGEND

- Agricultural Land Reserve
- 500 Davis Drive
- 1983 Airport Road
- Inclusion Area

LOCATION OVERVIEW



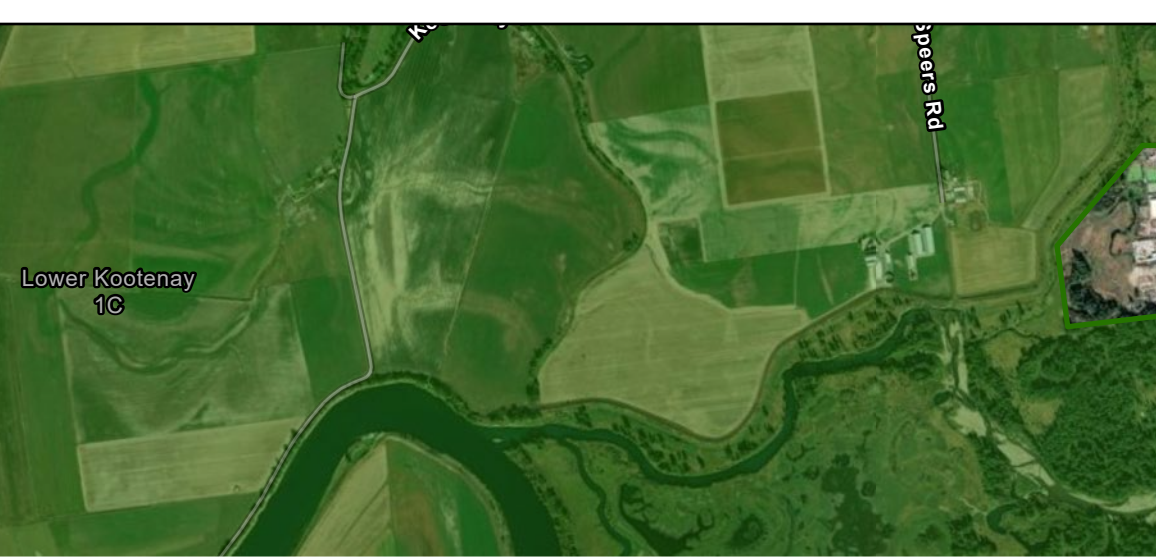
N



Scale: 1:28,000
Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
Project Description: City of Creston Agricultural Land Capability Assessment
Created By: MH
Date Exported: 9/24/2024

City of Creston Agricultural Capability Assessment: Area Overview Map



1983 Airport Road Detailed View
Scale: 1:9,000

APPENDIX II. DESCRIPTIONS OF SOIL SERIES

Soil series descriptions have been retrieved from Jungen (1980).

Kuskanook soils only occur on the diked portion of the Kootenay River floodplain near Creston. These soils have developed on level to gently undulating alluvium and occasionally older, partially filled river channels. Kuskanook soils are predominantly poorly drained but include some minor areas of well and very poor drainage. Kuskanook soils have a high capability for agriculture and represent some of the finest agricultural land in the West Kootenay region.

Fletcher soils occur in the lowland areas of major valleys, usually where tributary streams enter. These soils occur on deep, stone free, coarse to very coarse fluvial fan parent materials. Fletcher soils usually have poor base saturation, low cation exchange capacities and are moderately acid. Fletcher soils are mostly rapidly drained with inclusions of imperfect drainage near streams or areas of with high water tables. Fletcher soils are mostly non-arable, with limited grazing potential.

Lister soils are only found south of Creston where they comprise a substantial area on the rolling uplands. Lister soils have developed on moderately rolling, clayey, glaciolacustrine terrain. Lister soils are predominantly well drained but include some imperfectly to poorly drained inclusions in depressional areas. Lister soils have a high water holding capacity and are generally arable.

Burdett soils have typically developed from colluvial deposits along the lower slopes south of the Nelson area. These soils are commonly developed as Orthic or Lithic Eutric Brunisols with slightly acid upper horizons which grade to mildly alkaline at depth. Burdett soils are typically well to rapidly drained. Burdett soils are generally non-arable due to steep topography and rockiness, however, they do have moderate to good potential for grazing.



APPENDIX III. DESCRIPTIONS OF AGRICULTURAL CAPABILITY CLASSES AND SUBCLASSES

In BC, land is rated for its agricultural capability through a classification system known as *The Land Capability Classification for Agriculture in British Columbia* by Kenk and Cotic (1983) . Using this system, land in BC is rated between Class 1 to 7, where Class 1 is land best suited for agriculture and Class 7 is non-arable land (**Table AII-1**). For organic soils (not including peaty phases of mineral soils), the land capability classes are designated as Class O1 to O7. Various subclasses describe the factor(s) that limit agriculture (**Table AII-2**).

The agricultural land capability classification indicates the range of crops that can be grown and/or the management inputs required based on soil and climate parameters. The ratings can be “unimproved” based on the conditions that exist at the time of the survey without any management inputs or “improved” based on the rating after the limitations have been alleviated through improvements.

Table AII-1. Descriptions of BC Land Capability Classes for Agriculture

Class	Description
1	Land has little or no limitations, is level or nearly level, and is easily maintained for a wide range of field crops. Soils are deep, hold moisture well, and can be managed without difficulty.
2	Land has minor limitations that either require good ongoing management practices or may restrict the range of crops (or both). Soils are deep, hold moisture well, and can be managed with little difficulty.
3	Land has limitations that require moderately intensive management practices, or may moderately restrict the range of crops, or both. Limitations may restrict choice of crop, timing and ease of tillage, planting and harvesting, and methods of soil conservation.
4	Land may only be suitable for a few crops, or a wide range of crops with low yield. Risk of crop failure is high. Soil conditions are such that special development and management practices are required. Limitations may restrict choice of crop, timing and ease of tillage, planting and harvesting, and methods of soil conservation.
5	Land has limitations that make it suitable for perennial forage or other specially adapted crops. Crops such as cranberries may be appropriate, or fruit trees or grapes if area is climatically suitable (stoniness and/or topography are not significant limitations to these crops). Productivity of these suited crops may be high. Class 5 lands may be used to cultivate field crops, provided intensive management is employed. If adverse climate is the main limitation, cultivated crops may be grown, however crop failure is expected under average conditions.
6	Land in class is non-arable but is capable of growing native and/or uncultivated forage crops. Land may be placed in this class because the terrain is unsuitable for cultivation or the use of farm machinery, the soils may not respond to intensive improvement practices, or in a region with severe climate. Diking, draining, and/or irrigation may improve Class 6 lands.
7	Land has no capability for arable agriculture, or sustained natural grazing. Class 7 lands also include rockland, non-soil areas, and small water-bodies not shown on maps. Land may be placed in this class because the terrain is unsuitable for cultivation or the use of farm machinery, the soils may not respond to intensive improvement practices, or in a region with severe climate. Diking, draining, and/or irrigation may improve Class 7 lands.



Table All-2. Descriptions of BC Land Capability Subclasses for Agriculture.

Subclass	Description
<p>W</p> <p>Excess Water</p>	<p>The W subclass describes how imperfect or poor drainage due to high water tables, seepage, or runoff may limit or prevent agriculture.</p> <p>On Class 1 land, excess water is not a limiting factor. Class 2W land may have occasional excess water during the growing season and without other contribution limiting factors, is not likely to significantly impact agriculture or the range of crops that can be grown. Class 3W has occasional occurrences of excess water during the growing season and the occurrence of excess soil water during the winter months that would adversely affect perennial crops. Class 4W has frequent or continues excess water during the growing season and the water level is at the surface most of the winter and into mid spring. This may force late seeding and/or restrict the crop type or production in a moderate way. Class 5W has frequent or continuous occurrence of excess water during the growing period making land suitable only for perennial forage crops and/or improved pasture. In this case, water level is at the surface until early summer. Class 6W land has a continuous occurrence of excess water during the growing season with an effective grazing period of 5 to 10 weeks. The water level is at or above the soil surface except for a short period in mid-summer. On Class 7W land is under water most of the growing season and is not suitable for grazing or agriculture.</p>
<p>M</p> <p>Soil Moisture Deficits</p>	<p>The M subclass is used where crops are adversely affected by drought either through insufficient precipitation or low water holding capability in the soil. This limitation is determined for all lands subject to soil moisture deficits (SMD) during the growing season for the upper 50 cm of mineral soil.</p> <p>Class ratings are differentiated by the SMD: Class 1 land, SMD occurs within 40 mm; Class 2M, between 40 and 115 mm; Class 3M, between 116 and 190 mm; Class 4M, between 191 and 265 mm; Class 5M, between 266 to 340 mm; Class 6M, 341 to 415 mm and the land in present condition provides sustained natural grazing for domestic livestock; and Class 7M, soil moisture deficits occur in depths greater than 340 mm and the land in present condition is not useable for arable agriculture or sustained natural grazing for domestic livestock.</p>
<p>D</p> <p>Undesirable soil structure and/or low perviousness</p>	<p>The D subclass is used when soil may be difficult to till, may pose problems for farm equipment operation and movement, and require special management for seedbed preparation. Land may have insufficient aeration, absorb, and distribute water slowly, have consolidated bedrock or permafrost, or have the depth of rooting zone restricted by conditions other than wetness such as a high-water table.</p> <p>In Class 1 land, no root restricting layer is present in the upper 75 cm of the mineral soil surface and the upper 25 cm has a texture coarser than silty loam that is non-sticky. Class 2D has a root restricting layer that occurs from 50 to 75 cm of the mineral soil surface; or the upper 25 cm has a texture of silty loam, clay loam, or sandy clay that is slightly sticky-wet. Class 3D has a root restricting layer that occurs within 25 to 50 cm of the mineral soil surface, or the upper 25 cm has a texture of silty clay or clay that is sticky-wet. Class 4D has a root restricting layer that occurs within 25 cm of the soil surface, or the upper 25 cm has a texture of heavy clay that is very sticky-wet. There are no subclasses 5D, 6D, or 7D.</p>



Subclass	Description
<p data-bbox="201 281 220 306">E</p> <p data-bbox="201 386 285 411">Erosion</p>	<p data-bbox="391 268 1279 294">The E subclass is used when land has undergone some past damage from erosion.</p> <p data-bbox="391 331 1421 1020">Class 1 land is not eroded, or very slightly eroded and therefore is suitable for agricultural use. Class 2E land is slightly eroded. Land may require some minor management or soil conservation practices. Class 3E land is more eroded and may have up to 25% of the original solum lost over 50% of the area because of sheet, rill, or wind erosion and/or gullies may be present that could be filled during normal tillage operations without the need for special equipment. Continuous management or soil conservation practices are required to prevent increased erosion. Class 4E land is severely eroded and may have 25% to 50% of the original solum lost over 75% of the area because of sheet, rill, or wind erosion and/or gullies are common. Few moderately deep gullies may occur and require special equipment to fill. Intensive management or soil conservation practices are required to prevent increased erosion. Class 5E land is very severely eroded and may have 50% to 75% of the original solum lost over 75% of the area because of sheet, rill, or wind erosion. Shallow gullies are common, and moderately deep, to deep gullies frequent. Gullies are impractical to improve; yet farm equipment can be operated on Class 5E land. Class 6E land is extremely severely eroded and has over 75% of the solum lost over 75% of the area because of sheet, rill, or wind erosion and the area is dissected by moderately deep, to deep gullies with small areas of intact soil between. Improvements are not feasible, and farm machinery cannot be reasonably operated. Land in Class 6E in its present condition may provide sustained natural grazing for domestic livestock. Class 7E land is extremely severely eroded and has over 75% of the solum lost over 75% of the area because of sheet, rill, or wind erosion and the area is dissected by moderately deep, to deep gullies with small areas of intact soil between. Improvements are not feasible, and farm machinery cannot be reasonably operated. Land in Class 7E in its present condition does not provide sustained natural grazing for domestic livestock.</p>
<p data-bbox="201 1052 220 1077">F</p> <p data-bbox="201 1157 285 1182">Fertility</p>	<p data-bbox="391 1052 1421 1220">The F subclass describes the soils inherent low natural fertility due to a lack of available nutrients, high acidity or alkalinity, low exchange capacity, high levels of calcium carbonate or presence of toxic compounds which will impact the productivity and agricultural capability of the site. Low inherent fertility is correctable with constant and careful management in the use of fertilizers and soil amendments or is difficult to correct in a feasible way.</p> <p data-bbox="391 1241 1421 1850">In Class 1 land, soils are well supplied with nutrients easily and are continuously available to plants. Class 2F includes both soils with minor fertility limitations in the upper 50 cm and/or soils with moderate to severe fertility problems below the 50 cm depth. Class 2F is highly responsive to fertilizers and amendments. The low fertility of Class 3F soils does not restrict the range of crops, but moderate, ongoing additions of fertilizer and/or other soil amendments are required to maintain productivity. Class 4F soils have severe nutrient imbalances. Fertility status of Class 4F soils significantly restricts the range of crops but intensive and judicious applications of fertilizers and/or other soil amendments can improve the productivity of the soil. Class 5F includes soils with very severe nutrient imbalances, extreme acidity or alkalinity, and/or extreme carbohydrates levels in the upper 50 cm. Fertility status in this class affects the range of crops to perennial forages or other specially adapted crops such as cranberries. With very intensive, closely controlled and monitored applications of amendments, land in class 5F may be improvable to crop range, climate permitting. (Improved rating is Class 2F if expected crop range is wide upon improvement, or 3F). Land in Class 6F includes soils that have very poor fertility status are unsuited for agricultural crops, and are impractical to improve. Specially adapted native plants are present that are suitable for grazing by domestic livestock. Land in Class 7F includes soils that contain elements or compounds that are toxic to vegetation, or support poisonous plants to animals that cannot be removed with feasible management practices.</p>



Subclass	Description
<p>L</p> <p>Degree of Decomposition and Permeability</p>	<p>The L subclass describes the level of decomposition in organic soils which has an impact on agricultural capability. The first 30 cm of the soil surface are less important to the overall agricultural capability because it may be drained, cultivated, aerated, and amended and thus will experience active microbial degradation and reach advanced decomposition within three to four years. The sub layers, however, are more important as they contribute to drainage permeability, capillary rise of water, and rate of subsidence. Aquatic muck, a highly decomposed saturated organic material with porridge-like consistency is also considered in this subclass as it is impermeable and causes challenges for farm equipment operation.</p> <p>Class O1 is characterized as mesic soil that is continuous from 30 to 150 cm in depth and no cumulo mineral layers greater than 5 cm thick occur in the upper 150 cm. Class O2L is dominantly mesic soil in the 30 to 150 cm depth and/or a cumulo or continuous layer of sandy soil greater than 5 cm thick occurs in the upper 150 cm. Class O3L is dominantly humic of fibric soil in the 30 to 150 cm depth, and/or a cumulo or aquatic muck greater than 5 cm thick in the 100 to 150 cm depth, and/or a cumulo or continuous layer of loamy soil greater than 5 cm thick occurring in the upper 150 cm. Class O4L has aquatic muck greater than 5 cm thick occurs within 100 cm of the surface and/or a cumulo or continuous layer of clayey soil or marl greater than 5 cm thick occurs in the upper 150 cm. There are no subclasses O5L, O6L, or O7L.</p>
<p>I</p> <p>Inundation</p>	<p>The I subclass (limitation due to overflow) describes soils where overflow by streams, lakes or marine tides cause crop damage or restricts agricultural use.</p> <p>In Class 1 soils there is no risk of damaging overflow. Class 2I soils are subject to occasional very brief flooding (~1 day) during the growing period which can result in crop damage. Class 3I soils are subject to frequent, brief (~2 day) overflow during the growing period which may result in crop damage. Class 4I soils are subject to frequent or extended overflow during the growing season resulting on crop damage and potential crop loss. Additionally, 4I soils may experience flooding until late spring delaying seeding. Class 5I soils are subject to frequent overflow of extended durations (>7 days) during the growing season or are flooded until early summer. Class 6I soils experience extended flooding (>6 weeks) during the growing season. Inundation can be prevented by diking and no further hazard is then assumed. Land in Class 7I is flooded for most of the growing season and is unsuitable for agriculture or grazing.</p>



Subclass	Description
<p>N</p> <p>Salinity</p>	<p>The N subclass describes how soluble salts in the soil may limit or prevent agriculture. Salt content is expressed as the electrical conductivity of the extract from water-saturated paste.</p> <p>On Class 1N, salinity is not a limiting factor and soils have a low (<2 mS/cm) salt content from 0-100cm. In Class 2N land, only salt sensitive crops are adversely affected, and soils have a low (<2 mS/cm) salt content from 0-50cm and a moderate (2-4 mS/cm) salt content from 50-100cm. In Class 3N, most crops are adversely affected, and soils have a moderate (2-4 mS/cm) salt content from 0-50cm and/or a high to very high (>4 mS/cm) salt content from 50-100cm. Class 4N land has moderate limitation to most crops, and soils have a high (4-8 mS/cm) salt content from 0-50cm. In Class 5N land, salt content is sufficiently severe to preclude most crops (>8 mS/cm between 0-50cm), but salt-tolerant forage crops can be established and maintained. In Class 6N land, soils are too salty for cultivated crops but can support specially adapted, native salt tolerant plant species, some of which are suitable for domestic livestock grazing. In Class 7N land, soils are too salty for cultivated crops and cannot support specially adapted, native salt tolerant plant species suitable for grazing. Soils may also support poisonous plants that cannot be removed with feasible management practices.</p>
<p>P</p> <p>Stoniness</p>	<p>The P subclass describes the presence of coarse fragments such as gravels (0.2 cm to 7.5 cm diameter), cobbles (7.5 cm to 25 cm diameter), stones (25 cm to 60 cm diameter), and boulders (>60 cm diameter). Coarse fragments may hinder tillage, planting, and/or harvesting.</p> <p>On Class 1 land, the total coarse fragments is less than 5 percent and offers no, or very slight hindrance to cultivation. Class 2P has between 6 and 10% coarse fragments and less than 1 percent cobbles or stones resulting in a very slight hindrance to cultivation. Class 3P has between 11 and 20 % coarse fragments with cobbles and stones occupying 2 to 5% volume leading to a significant hindrance to cultivation. Class 4P has between 21 and 40% coarse fragments with cobbles and stones occupying 16 to 30% volume. In areas that are climatically suitable for growing tree fruits and grapes, Class 4P may not be significantly limiting. Class 5P has 41 to 60% of coarse fragments, or cobbles and stones occupying 6 to 15% volume, which prevents sustained cultivation unless considerable picking has taken place. Class 6P has 41 to 60% coarse fragments, or cobbles and stones occupying 61 to 90% volume, which prevents sustained cultivation and are impractical to pick to improve agricultural capability. Class 7P has more than 60% coarse fragments, or cobbles and stones occupy more than 30% volume, which prevents sustained natural grazing for domestic livestock.</p>







Subclass	Description
<p>R</p> <p>Depth to bedrock</p>	<p>The R subclass (limitation due to depth to solid bedrock and/or rockiness) describes how bedrock near the surface may restrict rooting depth and tillage, and/or how rock outcrops may restrict agricultural use.</p> <p>Class 1 soils have solid bedrock is greater than 1m and rock outcrops are greater than 75 m apart; Class 2R soils have a bedrock depth of 75 to 100 cm and rock outcrops are greater than 75 m apart; Class 3R soils have a bedrock depth of 50 to 75 cm and/or rock outcrops are between 50 and 75 m apart; Class 4R soils have a bedrock depth of 25 to 50 cm and/or rock outcrops are between 25 and 50 m apart; Class 5R soils have a bedrock depth of 25 to 50 cm and/or rock outcrops are between 10 and 25 m apart; Class 6R soils have a bedrock depth less than 25 cm and rock outcrops are between 2 and 10 m apart. The land in its present condition provides sustained natural grazing for domestic livestock; and Class 7R soils have a bedrock depth less than 25 cm and rock outcrops are less than 10 m apart. The land in its present condition does not provide sustained natural grazing for domestic livestock</p>
<p>T</p> <p>Topography</p>	<p>The T subclass describes how topography may limit agriculture. Adverse topography may prevent the use of farm machinery, limit the types and uniformity of growth of crops, and increase the potential for water erosion. Depending on the region and crop type, topography may not be a significant limiting factor (e.g., tree fruits or grapes). Classification is based on the slope and complexity of slopes.</p> <p>Class 1 land has simple slopes of 5% or less or complex slopes 2% or less. Class 2T has simple slopes between 6 and 10% or complex slopes between 3 and 5%; Class 3T has simple slopes between 11 and 15% or complex slopes between 6 and 10%; Class 4T has simple slopes between 16 and 20% or complex slopes between 11 and 15%; Class 5T has simple slopes between 21 to 30% or complex slopes between 16 to 30%; Class 6T has either simple or complex slopes, range from 31 to 60% and the land in its present condition provides sustained natural grazing for domestic livestock; and Class 7T has either simple or complex slopes greater than 30% and the land in its present condition does not provides sustained natural grazing for domestic livestock.</p>



APPENDIX IV. PUBLISHED SOIL SERIES MAP



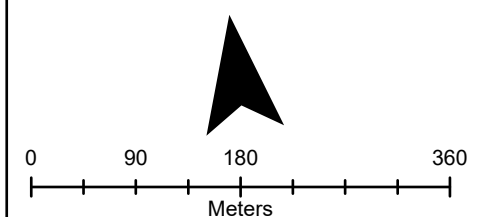
LEGEND

-  Agricultural Land Reserve
-  1983 Airport Road
-  Inclusion Area
-  BC Soil Survey Polygons

LOCATION OVERVIEW



N



Scale: 1:6,500
Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
Project Description: City of Creston Agricultural Land Capability Assessment
Created By: MH
Date Exported: 9/24/2024

**1983 Airport Road:
Published Soil Series**




LISTER

LISTER

BURDETT

LISTER

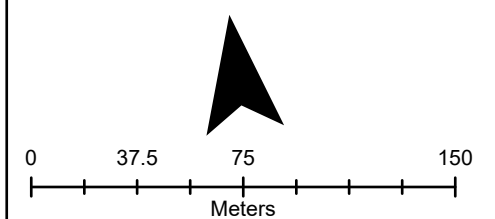
LEGEND

-  Agricultural Land Reserve
-  500 Davis Drive
-  BC Soil Survey Polygons

LOCATION OVERVIEW



N



Scale: 1:2,674
Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
Project Description: City of Creston Agricultural Land Capability Assessment
Created By: MH
Date Exported: 9/24/2024





**500 Davis Drive
Published Soil Series**

**KUSKANOOK (70%)
FLETCHER (30%)**

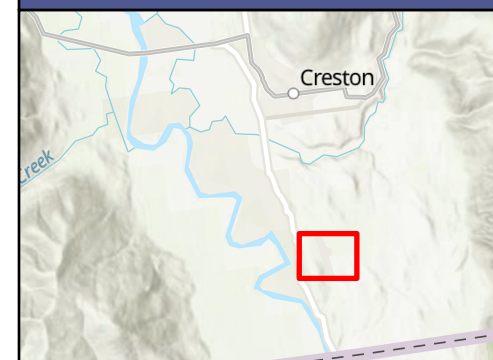
APPENDIX V. PUBLISHED AGRICULTURAL CAPABILITY MAP



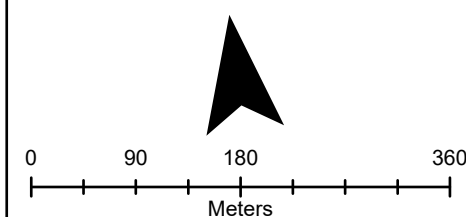
LEGEND

-  Agricultural Land Reserve
-  1983 Airport Road
-  Inclusion Area
-  BC Agricultural Capability Polygons

LOCATION OVERVIEW



N



Scale: 1:6,500
 Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
 Project Description: City of Creston Agricultural
 Land Capability Assessment
 Created By: MH
 Date Exported: 9/24/2024




**1983 Airport Road:
 Published Agricultural
 Capability**

CC: 7:4T~3:3TD
 IC: (7:4T~3:3TD)

CC: 6TR

CC: 5T
 IC: (5T)

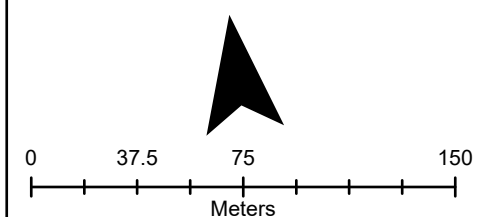
LEGEND

-  Agricultural Land Reserve
-  500 Davis Drive
-  BC Agricultural Capability Polygons

LOCATION OVERVIEW



N



Scale: 1:2,674
Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
Project Description: City of Creston Agricultural
Land Capability Assessment
Created By: MH
Date Exported: 9/24/2024

**500 Davis Drive
Published Agricultural
Capability**

CC: 7:4MW~3:5IW
IC: (7:4MW~3:5IW)

APPENDIX VI. SOIL CARDS



Exclusion Site Soil Pit 1

Land Use:
Tame Forage

Mapped Soil Series:
70% Kuskanook
30% Fletcher

Mapped Soil Classification:
70% Orthic Humic Gleysol
30% Orthic Dystric Brunisol

General Observations
Rooting Depth: 20 cm
Water Table Depth (cm): N/A
Drainage Class: Poor

General Comments: Production field adjacent to municipal wastewater treatment center.



Figure 1. Soil Pit 1 representative landscape.



Figure 2. Soil Pit 1 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 20 cm	0%	NA	Silt Loam (SiL)	Medium subangular blocky (M SBK)	Friable	7.5YR 4/2	N/A
Btg1	20 – 35 cm	0%	NA	Silt Loam (SiL)	Medium subangular blocky (M SBK)	Friable	G1 7/1	Coarse / Common / Distinct
Btg2	35 - 57 cm	0%	NA	Silt Loam (SiL)	Medium subangular blocky (M SBK)	Firm	G1 6/1	Coarse / Few / Prominent
Cg	57 – 64 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Firm	G1 6/1	Coarse / Many / Prominent
Cg2	64 – 80 + cm	0%	NA	Silty Clay Loam (SiCL)	Medium subangular blocky (M SBK)	Friable	G1 1/1	Coarse / Few / Prominent

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 500 Davis Drive, Creston, BC
PID: 009-942-114

Longitude: 49°05'31.6 °W
Latitude: 116°31'41.3 °N

Exclusion Site Soil Pit 2

Land Use:
Tame forage

Mapped Soil Series:
70% Kuskanook
30% Fletcher

Mapped Soil Classification:
70% Orthic Humic Gleysol
30% Orthic Dystric Brunisol

General Observations

Rooting Depth: 30 cm
Water Table Depth (cm): N/A
Drainage Class: Poor

General Comments: Production field adjacent to municipal wastewater treatment center.



Figure 3. Soil Pit 2 representative landscape.



Figure 4. Soil Pit 2 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silt Loam (SiL)	Medium subangular blocky (M SBK)	Friable	7.5YR 4/2	N/A
Btj	30 - 50 cm	0%	NA	Silt Loam (SiL)	Medium subangular blocky (M SBK)	Friable	G1 7/1	N/A
Cg	50 – 70+ cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Friable	G1 6/1	N/A

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 500 Davis Drive, Creston, BC
PID: 009-942-114

Longitude: 49°05'31.6"°W
Latitude: 116°31'41.3" °N

Inclusion Site Soil Pit 3

Land Use:

No active agriculture at time of visit, mowed grassed field adjacent to airfield access.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20-25 cm

Water Table Depth (cm): N/A

Drainage Class: Poor

General Comments: communication with site manager indicated field is used as helicopter laydown during summer months. Pit 3 and 4 had similar soil characteristics including texture, soil horizon thickness and colour/ Hard pan in soil observed between A and B horizon.



Figure 5. Soil Pit 3 representative landscape.



Figure 6. Soil Pit 3 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 25 cm	0%	NA	Silty Clay Loam (SiCL)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 6/2	NA
Btgj	25 - 55 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	G1 5/1	NA
Cg	55 – 85+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G1 5/1	NA

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'32.68"°W
Latitude: 49° 2'9.75"°N

Inclusion Site Soil Pit 4

Land Use:

No active agriculture at time of visit.
Mowed grassed field adjacent to airfield access.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm
Water Table Depth (cm): N/A
Drainage Class: Poor

General Comments:

See pit 3 soil card for soils description and site use history



Figure 7. Pit 4 representative landscape.



Figure 8. Soil Pit 4 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 27 cm	0%	NA	Silty Clay Loam (SiCL)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 6/2	NA
Btgj	27 - 55 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	G1 5/1	NA
Cg	55 – 85+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G1 5/1	NA

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'36.93"°W
Latitude: 49° 2'10.70"°N

Inclusion Site Soil Pit 5

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop present at time of visit.

Mapped Soil Series: Lister

Mapped Soil Classification:
Orthic Grey Luvisol

General Observations

Rooting Depth: N/A

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: presence of clods on soil surface.



Figure 9. Pit 5 representative landscape.

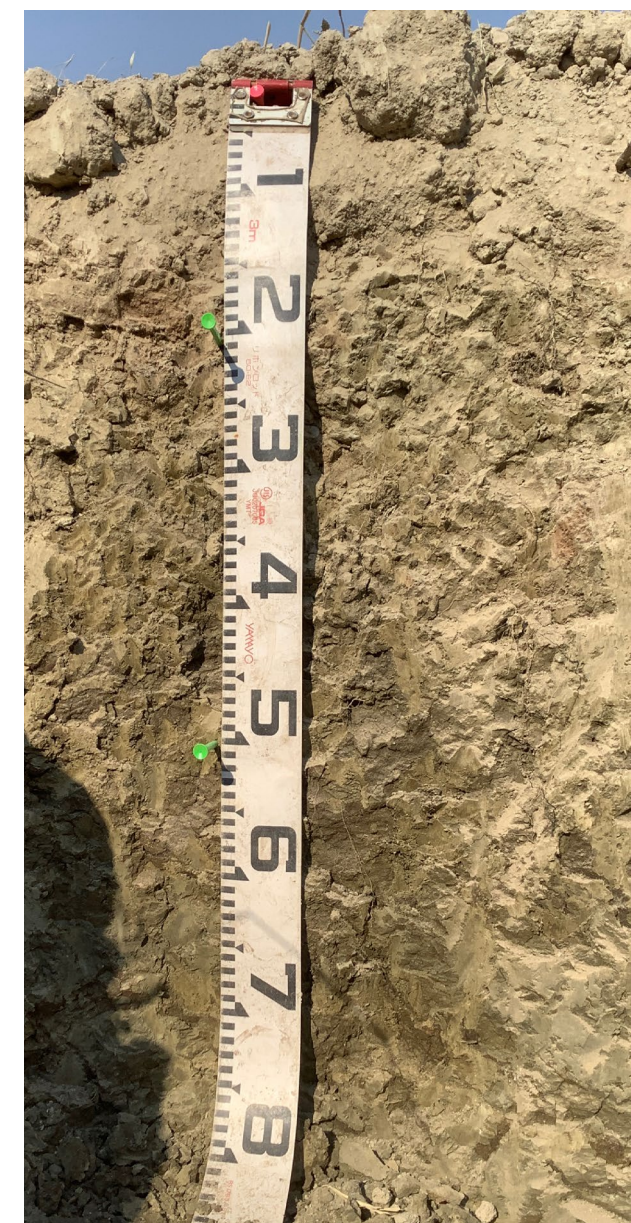


Figure 10. Soil Pit 5 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 20 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	20 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	50 – 85+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'35.31"W
Latitude 49° 2'5.96"N

Inclusion Site Soil Pit 6

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop present at time of visit.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: N/A

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: See pit 5 soil card for soils description



Figure 11. Pit 6 representative landscape.



Figure 12. Soil Pit 6 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 25 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	25 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	50 – 85+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'40.00"W
Latitude: 49° 2'7.41"N

Inclusion Site Soil Pit 7

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop present at time of visit.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: wood debris and burnt material observed 30 – 50 cm in the soil profile. No CF observed in soil profile. Angular coarse fragments observed in base of soil pit.



Figure 13. Soil Pit 7 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	30 - 45 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	45– 60 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	60 – 100+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'43.02"W
Latitude: 49° 2'1.12"N

Inclusion Site

Soil Pit 8

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop present at time of visit.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: 20 cm diameter coarse fragment observed in soil pit, but no coarse fragments observed in soil pit profile



Figure 14. Coarse fragment observed in adjacent wall of soil pit.



Figure 15. Soil Pit 8 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 20 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	20 – 40 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	40 – 70 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
Cg	70 – 85+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'43.37"W
Latitude: 49° 2'4.29"N

Inclusion Site Soil Pit 9

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 25 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: woody debris observed in soil profile between 20 – 50 cm



Figure 16. Soil Pit 9 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 25 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	25 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btj2	50 – 60 cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA
Cg	60 – 80+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	Fine / Many / Distinct

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'45.13"W
Latitude: 49° 2'7.53"N

Inclusion Site Soil Pit 10

Land Use:

Forage field, previously cropped in oats in 2023. No cover crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: no coarse fragments or woody debris observed in soil profile



Figure 17. Soil Pit 10 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	30 - 45 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	45 – 90 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	90 – 100 + cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 11

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 15 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: no coarse fragments or woody debris observed in soil profile



Figure 18. Soil Pit 11 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	30 - 60 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	60 – 95+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 12

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: woody debris including large roots observed at 60 cm in the soil profile and adjacent soil pit walls



Figure 19. Soil Pit 12 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	30 - 60 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	60 – 95+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 13

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: woody debris observed between 20 and 60 cm depth. Between 70 – 100 cm secondary platy structure observed along z axis.



Figure 20. Soil Pit 13 profile.



Figure 21. Soil Pit 13 lower profile structure.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	30 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	50 – 70 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	70 – 100+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'40.46"W
Latitude: 49° 1'51.45"N

Inclusion Site Soil Pit 14

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: Between 70 – 100 cm secondary platy structure observed along z axis.

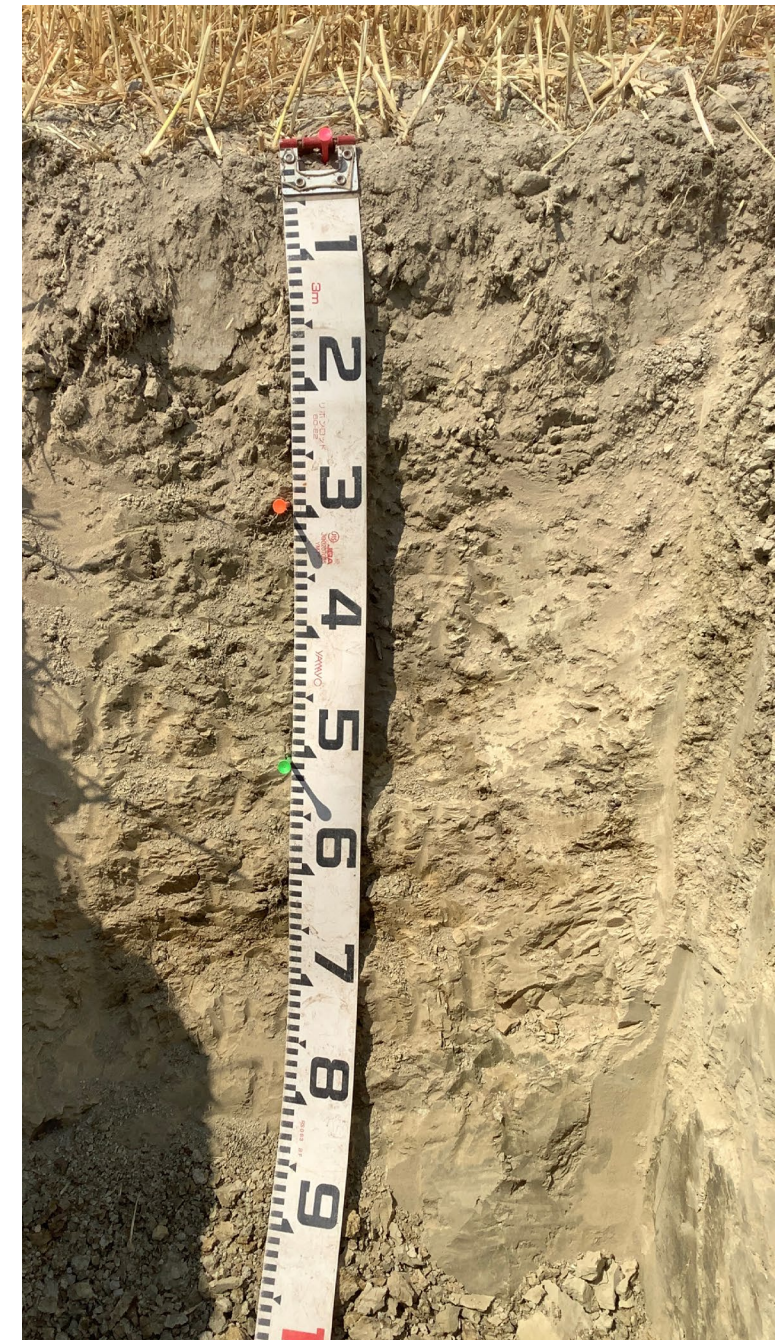


Figure 22. Soil Pit 14 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	30 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	50 – 70 + cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 15

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect to Poor

General Comments: no coarse fragments or woody debris observed in soil profile



Figure 23. Soil Pit 15 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 31 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	31 - 50 cm	1%	3 cm diameter sub angular	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	50 – 85+ cm	1%		Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 16

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: tree roots observed between 45 – 75 cm



Figure 24. Soil Pit 16 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 35 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	35 - 60 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	60 – 80 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	80 – 100+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 17

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: burn line with ash observed around 50 cm in depth. Roots observed from 40 to 60 cm



Figure 25. Soil Pit 17 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	30 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btgj2	50 – 70 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	70 – 100+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky	5 YR 5/4	NA

Field Baseline Assessment

Site Information

Inclusion Site Soil Pit 18

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: woody debris observed at 50 cm depth in soil profile



Figure 26. Soil Pit 18 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj1	30 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Btj2	50 – 80 cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA
C	80 – 100+ cm	0%	NA	Silty Clay Loam (SiCL)	Coarse subangular blocky (C SBK)	Very Sticky		NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'34.66"W
Latitude: 49° 1'53.15"N

Inclusion Site Soil Pit 19

Land Use:

Biosolid application field with hay crop.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 20 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: no coarse fragments or woody debris observed in soil profile



Figure 27. Soil Pit 19 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	30 - 50 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
C	50 – 100+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'32.90"W
Latitude: 49° 1'56.43"N

Inclusion Site Soil Pit 20

Land Use:

Field adjacent to landing strip planted with alfalfa crop

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: no coarse fragments or woody debris observed in soil profile



Figure 28. Soil Pit 20 profile.



Figure 29. Alfalfa crop adjacent to soil pit 20

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 30 cm	0%	NA	Silty Clay Loam (SiCL)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	30 - 70 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
C	70 – 100+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information

Inclusion Site

Soil Pit 21

Land Use:

Field edge adjacent to landing strip planted with alfalfa crop

Mapped Soil Series: Burdett

Mapped Soil Classification:

Orthic Eutric Brunisol

General Observations

Rooting Depth: 45 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: roots observed to a depth of 60 cm



Figure 30. Soil Pit 21 profile.

Horizon	Depth	Coarse Fragments (%)		Texture	Structure – dominant	Consistence	Colour	Mottling (size, abundance, contrast)
Ap	0 – 20 cm	0%	NA	Silty Clay Loam (SiCL)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 7/2	NA
Btj	20 – 46 cm	0%	NA	Silty Clay (SiC)	Medium subangular blocky (M SBK)	Very Sticky	2.5 YR 4/3	NA
Cg	46 – 85+ cm	0%	NA	Silty Clay (SiC)	Coarse subangular blocky (C SBK)	Very Sticky	G2 6/1	NA

Field Baseline Assessment

Site Information



Completed by: Trish Hanuszak, PAg

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'51.59"W
Latitude: 49° 1'53.89"N

Inclusion Site Soil Pit 22

Land Use:

Treed area adjacent to access road for airfield.

Mapped Soil Series: Lister

Mapped Soil Classification:

Orthic Grey Luvisol

General Observations

Rooting Depth: 30 cm

Water Table Depth (cm): N/A

Drainage Class: Imperfect

General Comments: based on quick exaction soil is consistent with Lister soil series.



Figure 31. Scratch Soil Pit 22.



Figure 32. Representative landscape for soil pit 22.

Field Baseline Assessment



Completed by: Trish Hanuszak, PAg

Site Information

Address: 1993 Airport Road, Creston, BC
PID: 009-724-991

Longitude: 116°29'34.79"W
Latitude: 49° 2'12.85"N

APPENDIX VII. LABORATORY RESULTS





CERTIFICATE OF ANALYSIS

REPORTED TO	Associated Environmental Consultants Inc. (Vernon) #200 - 2800 29th Street Vernon, BC V1T 9P9	WORK ORDER	24D0888
ATTENTION	Megan Ludwig	RECEIVED / TEMP REPORTED	2024-04-05 08:23 / NA 2024-04-19 16:35
PO NUMBER			
PROJECT	2022-8172.02		
PROJECT INFO			

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: <https://www.caro.ca/terms-conditions>

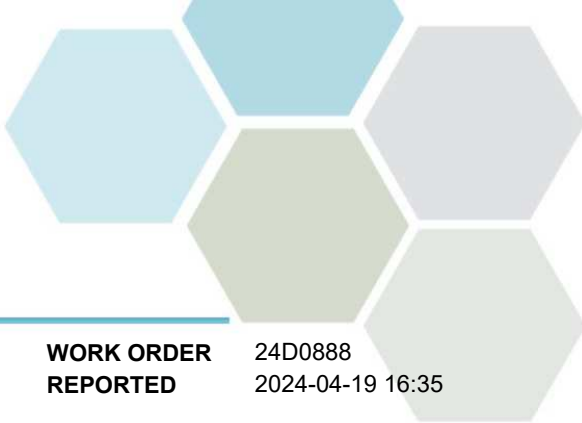
If you have any questions or concerns, please contact me at bwhitehead@caro.ca

Authorized By:

Brent Whitehead
Account Manager

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7 | #108 4475 Wayburne Drive Burnaby, BC V5G 4X4

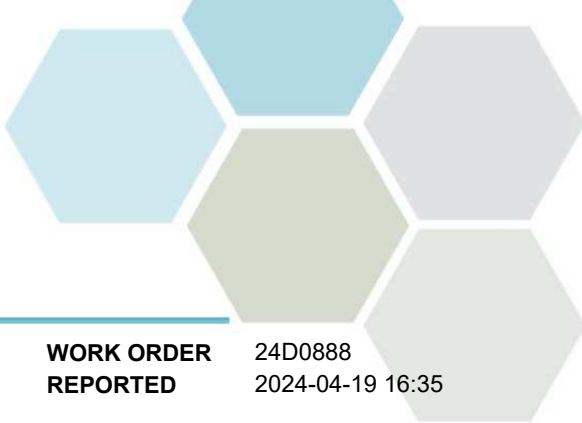


TEST RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Area #1 (24D0888-01) Matrix: Soil Sampled: 2024-04-03 14:00					
Fertility / Nutrient Parameters					
Calcium, Available	3450	N/A	5 mg/kg dry	2024-04-18	
Magnesium, Available	205	N/A	5 mg/kg dry	2024-04-18	
Potassium, Available	165	N/A	5 mg/kg dry	2024-04-18	
Sodium, Available	11	N/A	5 mg/kg dry	2024-04-18	
Ammonia, Available (as N)	11.0	N/A	1.0 mg/kg dry	2024-04-18	
Nitrate, Available (as N)	11.0	N/A	1.0 mg/kg dry	2024-04-18	
Phosphorus, Available	18	N/A	2 mg/kg dry	2024-04-18	
General Parameters					
Bulk Density (Received)	1.23	N/A	0.01 g/cm ³	2024-04-18	
Moisture	23.7	N/A	1.0 % wet	2024-04-12	
pH (1:2 H ₂ O Solution)	7.12	N/A	0.10 pH units	2024-04-12	
pH (0.01M CaCl ₂)	7.80	N/A	0.10 pH units	2024-04-12	
Salinity Parameters (Sat. Paste Extract)					
Saturation	73.3	N/A	1.0 %	2024-04-10	
Conductivity, Saturated Paste	0.36	N/A	0.20 ds/m	2024-04-12	
Sodium Adsorption Ratio	< 0.1	N/A	0.1 -	2024-04-12	
Calcium, Saturated Paste.	49	N/A	2 mg/kg dry	2024-04-10	
Calcium, Saturated Paste	67	N/A	5 mg/L	2024-04-10	
Chloride, Saturated Paste.	< 2.5	N/A	2.5 mg/kg dry	2024-04-11	
Chloride, Saturated Paste	< 5.0	N/A	5.0 mg/L	2024-04-11	
Magnesium, Saturated Paste.	5.7	N/A	2.0 mg/kg dry	2024-04-10	
Magnesium, Saturated Paste	7.7	N/A	4.0 mg/L	2024-04-10	
Potassium, Saturated Paste.	2.5	N/A	1.0 mg/kg dry	2024-04-10	
Potassium, Saturated Paste	3.4	N/A	2.0 mg/L	2024-04-10	
Sodium, Saturated Paste.	2.3	N/A	1.0 mg/kg dry	2024-04-10	
Sodium, Saturated Paste	3.2	N/A	2.0 mg/L	2024-04-10	
Sulfate, Saturated Paste.	< 20	N/A	10 mg/kg dry	2024-04-11	CST2
Sulfate, Saturated Paste	< 20	N/A	20 mg/L	2024-04-11	
Strong Acid Leachable Metals					
Aluminum	23900	N/A	40 mg/kg dry	2024-04-12	
Antimony	0.51	N/A	0.10 mg/kg dry	2024-04-12	
Arsenic	9.77	N/A	0.30 mg/kg dry	2024-04-12	
Barium	206	N/A	1.0 mg/kg dry	2024-04-12	
Beryllium	0.90	N/A	0.10 mg/kg dry	2024-04-12	
Boron	5.2	N/A	2.0 mg/kg dry	2024-04-12	
Cadmium	0.268	N/A	0.040 mg/kg dry	2024-04-12	
Chromium	45.5	N/A	1.0 mg/kg dry	2024-04-12	
Cobalt	14.9	N/A	0.10 mg/kg dry	2024-04-12	
Copper	43.7	N/A	0.40 mg/kg dry	2024-04-12	
Iron	38000	N/A	20.0 mg/kg dry	2024-04-12	
Lead	22.4	N/A	0.20 mg/kg dry	2024-04-12	



TEST RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Area #1 (24D0888-01) Matrix: Soil Sampled: 2024-04-03 14:00, Continued						
<i>Strong Acid Leachable Metals, Continued</i>						
Lithium	34.1	N/A	0.10	mg/kg dry	2024-04-12	
Manganese	570	N/A	0.40	mg/kg dry	2024-04-12	
Mercury	0.049	N/A	0.040	mg/kg dry	2024-04-12	
Molybdenum	0.72	N/A	0.10	mg/kg dry	2024-04-12	
Nickel	44.9	N/A	0.60	mg/kg dry	2024-04-12	
Selenium	< 0.20	N/A	0.20	mg/kg dry	2024-04-12	
Silver	0.36	N/A	0.10	mg/kg dry	2024-04-12	
Strontium	55.6	N/A	0.20	mg/kg dry	2024-04-12	
Thallium	0.26	N/A	0.10	mg/kg dry	2024-04-12	
Tin	0.81	N/A	0.20	mg/kg dry	2024-04-12	
Tungsten	0.34	N/A	0.20	mg/kg dry	2024-04-12	
Uranium	0.964	N/A	0.050	mg/kg dry	2024-04-12	
Vanadium	41.1	N/A	1.0	mg/kg dry	2024-04-12	
Zinc	107	N/A	2.0	mg/kg dry	2024-04-12	

Area #2 (24D0888-02) | Matrix: Soil | Sampled: 2024-04-03 14:00

Fertility / Nutrient Parameters

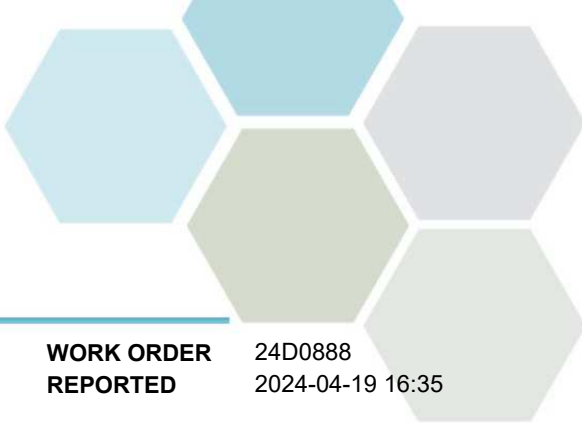
Calcium, Available	1850	N/A	5	mg/kg dry	2024-04-18	
Magnesium, Available	180	N/A	5	mg/kg dry	2024-04-18	
Potassium, Available	120	N/A	5	mg/kg dry	2024-04-18	
Sodium, Available	16	N/A	5	mg/kg dry	2024-04-18	
Ammonia, Available (as N)	9.9	N/A	1.0	mg/kg dry	2024-04-18	
Nitrate, Available (as N)	11.0	N/A	1.0	mg/kg dry	2024-04-18	
Phosphorus, Available	35	N/A	2	mg/kg dry	2024-04-18	

General Parameters

Bulk Density (Received)	1.34	N/A	0.01	g/cm ³	2024-04-18	
Moisture	18.0	N/A	1.0	% wet	2024-04-12	
pH (1:2 H2O Solution)	5.32	N/A	0.10	pH units	2024-04-12	
pH (0.01M CaCl2)	6.23	N/A	0.10	pH units	2024-04-12	

Salinity Parameters (Sat. Paste Extract)

Saturation	49.4	N/A	1.0	%	2024-04-10	
Conductivity, Saturated Paste	< 0.20	N/A	0.20	ds/m	2024-04-12	
Sodium Adsorption Ratio	0.2	N/A	0.1	-	2024-04-12	
Calcium, Saturated Paste.	9	N/A	2	mg/kg dry	2024-04-10	
Calcium, Saturated Paste	18	N/A	5	mg/L	2024-04-10	
Chloride, Saturated Paste.	< 2.5	N/A	2.5	mg/kg dry	2024-04-11	
Chloride, Saturated Paste	< 5.0	N/A	5.0	mg/L	2024-04-11	
Magnesium, Saturated Paste.	< 2.0	N/A	2.0	mg/kg dry	2024-04-10	
Magnesium, Saturated Paste	< 4.0	N/A	4.0	mg/L	2024-04-10	
Potassium, Saturated Paste.	< 1.0	N/A	1.0	mg/kg dry	2024-04-10	



TEST RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
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Area #2 (24D0888-02) | Matrix: Soil | Sampled: 2024-04-03 14:00, Continued

Salinity Parameters (Sat. Paste Extract), Continued

Potassium, Saturated Paste	< 2.0	N/A	2.0 mg/L	2024-04-10	
Sodium, Saturated Paste.	2.0	N/A	1.0 mg/kg dry	2024-04-10	
Sodium, Saturated Paste	4.0	N/A	2.0 mg/L	2024-04-10	
Sulfate, Saturated Paste.	< 10	N/A	10 mg/kg dry	2024-04-11	
Sulfate, Saturated Paste	< 20	N/A	20 mg/L	2024-04-11	

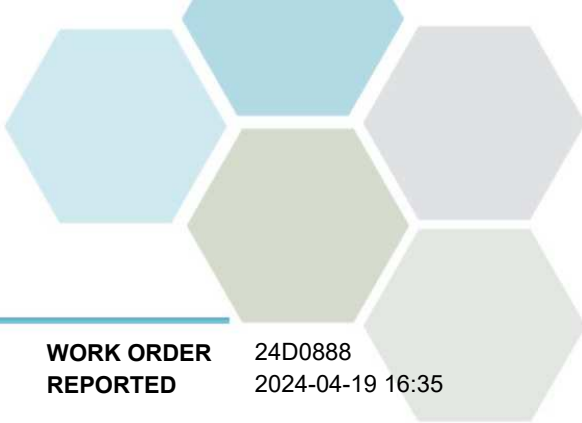
Strong Acid Leachable Metals

Aluminum	23800	N/A	40 mg/kg dry	2024-04-12	
Antimony	0.32	N/A	0.10 mg/kg dry	2024-04-12	
Arsenic	6.32	N/A	0.30 mg/kg dry	2024-04-12	
Barium	231	N/A	1.0 mg/kg dry	2024-04-12	
Beryllium	0.84	N/A	0.10 mg/kg dry	2024-04-12	
Boron	4.0	N/A	2.0 mg/kg dry	2024-04-12	
Cadmium	0.180	N/A	0.040 mg/kg dry	2024-04-12	
Chromium	37.5	N/A	1.0 mg/kg dry	2024-04-12	
Cobalt	14.9	N/A	0.10 mg/kg dry	2024-04-12	
Copper	24.4	N/A	0.40 mg/kg dry	2024-04-12	
Iron	32300	N/A	20.0 mg/kg dry	2024-04-12	
Lead	19.2	N/A	0.20 mg/kg dry	2024-04-12	
Lithium	28.2	N/A	0.10 mg/kg dry	2024-04-12	
Manganese	740	N/A	0.40 mg/kg dry	2024-04-12	
Mercury	< 0.040	N/A	0.040 mg/kg dry	2024-04-12	
Molybdenum	0.67	N/A	0.10 mg/kg dry	2024-04-12	
Nickel	33.6	N/A	0.60 mg/kg dry	2024-04-12	
Selenium	< 0.20	N/A	0.20 mg/kg dry	2024-04-12	
Silver	0.11	N/A	0.10 mg/kg dry	2024-04-12	
Strontium	24.6	N/A	0.20 mg/kg dry	2024-04-12	
Thallium	0.23	N/A	0.10 mg/kg dry	2024-04-12	
Tin	0.63	N/A	0.20 mg/kg dry	2024-04-12	
Tungsten	0.29	N/A	0.20 mg/kg dry	2024-04-12	
Uranium	1.12	N/A	0.050 mg/kg dry	2024-04-12	
Vanadium	37.8	N/A	1.0 mg/kg dry	2024-04-12	
Zinc	104	N/A	2.0 mg/kg dry	2024-04-12	

Area #3 (24D0888-03) | Matrix: Soil | Sampled: 2024-04-03 14:00

Fertility / Nutrient Parameters

Calcium, Available	1850	N/A	5 mg/kg dry	2024-04-18	
Magnesium, Available	160	N/A	5 mg/kg dry	2024-04-18	
Potassium, Available	160	N/A	5 mg/kg dry	2024-04-18	
Sodium, Available	20	N/A	5 mg/kg dry	2024-04-18	
Ammonia, Available (as N)	28.0	N/A	1.0 mg/kg dry	2024-04-18	
Nitrate, Available (as N)	20.0	N/A	1.0 mg/kg dry	2024-04-18	



TEST RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Area #3 (24D0888-03) | Matrix: Soil | Sampled: 2024-04-03 14:00, Continued

Fertility / Nutrient Parameters, Continued

Phosphorus, Available	51	N/A	2	mg/kg dry	2024-04-18	
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General Parameters

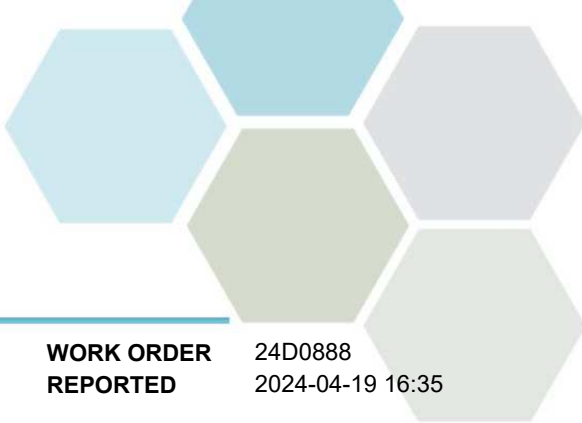
Bulk Density (Received)	1.28	N/A	0.01	g/cm ³	2024-04-18	
Moisture	20.2	N/A	1.0	% wet	2024-04-12	
pH (1:2 H2O Solution)	5.20	N/A	0.10	pH units	2024-04-12	
pH (0.01M CaCl2)	5.80	N/A	0.10	pH units	2024-04-12	

Salinity Parameters (Sat. Paste Extract)

Saturation	62.3	N/A	1.0	%	2024-04-10	
Conductivity, Saturated Paste	0.33	N/A	0.20	ds/m	2024-04-12	
Sodium Adsorption Ratio	0.3	N/A	0.1	-	2024-04-12	
Calcium, Saturated Paste.	24	N/A	2	mg/kg dry	2024-04-10	
Calcium, Saturated Paste	38	N/A	5	mg/L	2024-04-10	
Chloride, Saturated Paste.	< 2.5	N/A	2.5	mg/kg dry	2024-04-11	
Chloride, Saturated Paste	< 5.0	N/A	5.0	mg/L	2024-04-11	
Magnesium, Saturated Paste.	4.0	N/A	2.0	mg/kg dry	2024-04-10	
Magnesium, Saturated Paste	6.4	N/A	4.0	mg/L	2024-04-10	
Potassium, Saturated Paste.	4.2	N/A	1.0	mg/kg dry	2024-04-10	
Potassium, Saturated Paste	6.7	N/A	2.0	mg/L	2024-04-10	
Sodium, Saturated Paste.	4.0	N/A	1.0	mg/kg dry	2024-04-10	
Sodium, Saturated Paste	6.5	N/A	2.0	mg/L	2024-04-10	
Sulfate, Saturated Paste.	< 10	N/A	10	mg/kg dry	2024-04-11	
Sulfate, Saturated Paste	< 20	N/A	20	mg/L	2024-04-11	

Strong Acid Leachable Metals

Aluminum	23700	N/A	40	mg/kg dry	2024-04-12	
Antimony	0.35	N/A	0.10	mg/kg dry	2024-04-12	
Arsenic	6.54	N/A	0.30	mg/kg dry	2024-04-12	
Barium	239	N/A	1.0	mg/kg dry	2024-04-12	
Beryllium	0.84	N/A	0.10	mg/kg dry	2024-04-12	
Boron	4.7	N/A	2.0	mg/kg dry	2024-04-12	
Cadmium	0.248	N/A	0.040	mg/kg dry	2024-04-12	
Chromium	38.4	N/A	1.0	mg/kg dry	2024-04-12	
Cobalt	14.2	N/A	0.10	mg/kg dry	2024-04-12	
Copper	25.4	N/A	0.40	mg/kg dry	2024-04-12	
Iron	32600	N/A	20.0	mg/kg dry	2024-04-12	
Lead	19.0	N/A	0.20	mg/kg dry	2024-04-12	
Lithium	28.3	N/A	0.10	mg/kg dry	2024-04-12	
Manganese	746	N/A	0.40	mg/kg dry	2024-04-12	
Mercury	< 0.040	N/A	0.040	mg/kg dry	2024-04-12	
Molybdenum	0.71	N/A	0.10	mg/kg dry	2024-04-12	
Nickel	35.5	N/A	0.60	mg/kg dry	2024-04-12	
Selenium	< 0.20	N/A	0.20	mg/kg dry	2024-04-12	



TEST RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Area #3 (24D0888-03) Matrix: Soil Sampled: 2024-04-03 14:00, Continued						
<i>Strong Acid Leachable Metals, Continued</i>						
Silver	0.14	N/A	0.10	mg/kg dry	2024-04-12	
Strontium	22.7	N/A	0.20	mg/kg dry	2024-04-12	
Thallium	0.24	N/A	0.10	mg/kg dry	2024-04-12	
Tin	0.65	N/A	0.20	mg/kg dry	2024-04-12	
Tungsten	0.30	N/A	0.20	mg/kg dry	2024-04-12	
Uranium	0.814	N/A	0.050	mg/kg dry	2024-04-12	
Vanadium	38.0	N/A	1.0	mg/kg dry	2024-04-12	
Zinc	109	N/A	2.0	mg/kg dry	2024-04-12	

Area #4 (24D0888-04) | Matrix: Soil | Sampled: 2024-04-03 14:00

Fertility / Nutrient Parameters

Calcium, Available	2350	N/A	5	mg/kg dry	2024-04-18	
Magnesium, Available	170	N/A	5	mg/kg dry	2024-04-18	
Potassium, Available	210	N/A	5	mg/kg dry	2024-04-18	
Sodium, Available	23	N/A	5	mg/kg dry	2024-04-18	
Ammonia, Available (as N)	12.0	N/A	1.0	mg/kg dry	2024-04-18	
Nitrate, Available (as N)	15.0	N/A	1.0	mg/kg dry	2024-04-18	
Phosphorus, Available	61	N/A	2	mg/kg dry	2024-04-18	

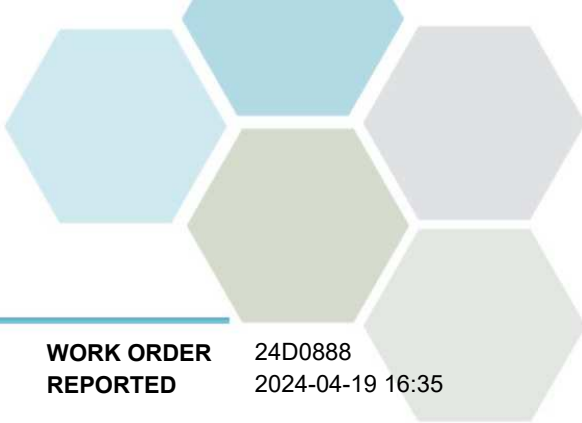
General Parameters

Bulk Density (Received)	1.27	N/A	0.01	g/cm ³	2024-04-18	
Moisture	22.3	N/A	1.0	% wet	2024-04-11	
pH (1:2 H2O Solution)	6.15	N/A	0.10	pH units	2024-04-12	
pH (0.01M CaCl2)	6.01	N/A	0.10	pH units	2024-04-12	

Salinity Parameters (Sat. Paste Extract)

Saturation	58.6	N/A	1.0	%	2024-04-10	
Conductivity, Saturated Paste	0.24	N/A	0.20	ds/m	2024-04-12	
Sodium Adsorption Ratio	0.2	N/A	0.1	-	2024-04-12	
Calcium, Saturated Paste.	18	N/A	2	mg/kg dry	2024-04-10	
Calcium, Saturated Paste	30	N/A	5	mg/L	2024-04-10	
Chloride, Saturated Paste.	< 2.5	N/A	2.5	mg/kg dry	2024-04-11	
Chloride, Saturated Paste	< 5.0	N/A	5.0	mg/L	2024-04-11	
Magnesium, Saturated Paste.	2.5	N/A	2.0	mg/kg dry	2024-04-10	
Magnesium, Saturated Paste	4.3	N/A	4.0	mg/L	2024-04-10	
Potassium, Saturated Paste.	2.8	N/A	1.0	mg/kg dry	2024-04-10	
Potassium, Saturated Paste	4.7	N/A	2.0	mg/L	2024-04-10	
Sodium, Saturated Paste.	3.1	N/A	1.0	mg/kg dry	2024-04-10	
Sodium, Saturated Paste	5.4	N/A	2.0	mg/L	2024-04-10	
Sulfate, Saturated Paste.	< 10	N/A	10	mg/kg dry	2024-04-11	
Sulfate, Saturated Paste	< 20	N/A	20	mg/L	2024-04-11	

Strong Acid Leachable Metals



TEST RESULTS

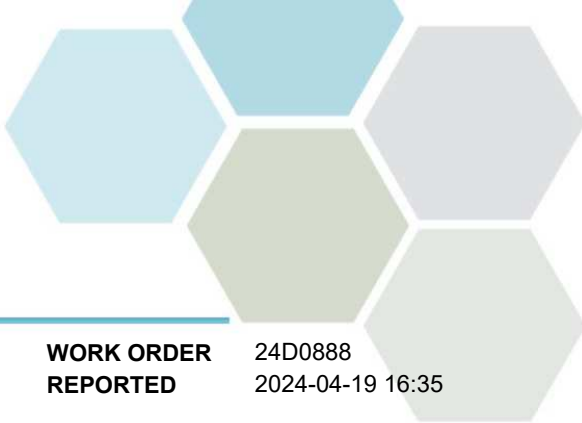
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Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Area #4 (24D0888-04) Matrix: Soil Sampled: 2024-04-03 14:00, Continued					
<i>Strong Acid Leachable Metals, Continued</i>					
Aluminum	22500	N/A	40 mg/kg dry	2024-04-12	
Antimony	0.32	N/A	0.10 mg/kg dry	2024-04-12	
Arsenic	5.70	N/A	0.30 mg/kg dry	2024-04-12	
Barium	292	N/A	1.0 mg/kg dry	2024-04-12	
Beryllium	0.79	N/A	0.10 mg/kg dry	2024-04-12	
Boron	4.3	N/A	2.0 mg/kg dry	2024-04-12	
Cadmium	0.290	N/A	0.040 mg/kg dry	2024-04-12	
Chromium	33.3	N/A	1.0 mg/kg dry	2024-04-12	
Cobalt	12.7	N/A	0.10 mg/kg dry	2024-04-12	
Copper	22.2	N/A	0.40 mg/kg dry	2024-04-12	
Iron	29700	N/A	20.0 mg/kg dry	2024-04-12	
Lead	19.2	N/A	0.20 mg/kg dry	2024-04-12	
Lithium	26.7	N/A	0.10 mg/kg dry	2024-04-12	
Manganese	917	N/A	0.40 mg/kg dry	2024-04-12	
Mercury	< 0.040	N/A	0.040 mg/kg dry	2024-04-12	
Molybdenum	0.75	N/A	0.10 mg/kg dry	2024-04-12	
Nickel	32.1	N/A	0.60 mg/kg dry	2024-04-12	
Selenium	< 0.20	N/A	0.20 mg/kg dry	2024-04-12	
Silver	0.12	N/A	0.10 mg/kg dry	2024-04-12	
Strontium	26.8	N/A	0.20 mg/kg dry	2024-04-12	
Thallium	0.19	N/A	0.10 mg/kg dry	2024-04-12	
Tin	0.61	N/A	0.20 mg/kg dry	2024-04-12	
Tungsten	< 0.20	N/A	0.20 mg/kg dry	2024-04-12	
Uranium	0.673	N/A	0.050 mg/kg dry	2024-04-12	
Vanadium	33.0	N/A	1.0 mg/kg dry	2024-04-12	
Zinc	113	N/A	2.0 mg/kg dry	2024-04-12	

Sample Qualifiers:

CST2 [11:43 AM] Casey Pearson
MRL Raised due to saturation exceeding default MRL based on 50% saturation.



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
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Analysis Description	Method Ref.	Technique	Accredited	Location
Available NH ₄ -N and NO ₃ -N in Soil	Carter 4	Nitrate and Exchangeable Ammonium Nitrogen		Sublet
Bulk Density in Soil	In-House	N/A		Sublet
Cations, Available in Soil	MSSMA 4.51	1N Ammonium Acetate Extraction, Atomic Spectroscopy		Sublet
Metals in Sat. Paste Extract in Soil	EPA 6020B	Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Moisture in Soil	ASTM D2974-87*	Gravimetry (Dried at 105C)		N/A
pH in Soil	Carter 16.2 / SM 4500-H+ B (2021)	1:2 Soil/Water Slurry / Electrometry	✓	Richmond
Phosphorus, Available in Soil	UBCPLMM 6.1	Bray Extraction, Colorimetric		Sublet
SALM in Soil	BCMOE SALM V.2 / EPA 6020B	HNO ₃ +HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Saturated Paste Anions in Soil	SM 4110 B (2020)	Ion Chromatography		Richmond
Saturated Paste Conductivity in Soil	SM 2510 B (2021)	Conductivity Meter	✓	Richmond
Saturated Paste Extraction in Soil	Carter 18.2.2 / Carter 15.2.1	Saturated Paste Extraction / Calculation		Richmond
Sodium Adsorption Ratio in Soil	Carter 15.4.4	Calculation (based on the concentration of Na/Ca/Mg in Sat. Paste extract)		Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

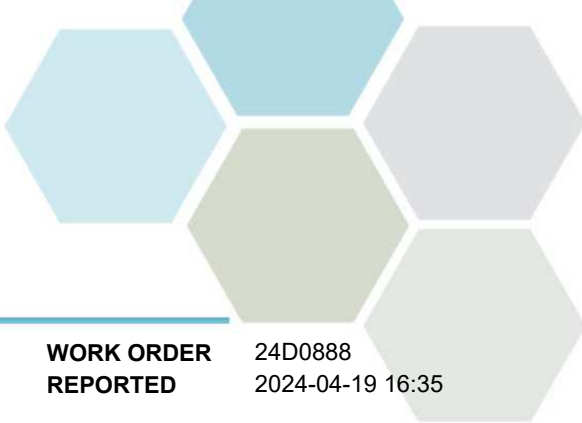
Glossary of Terms:

RL	Reporting Limit (default)
%	Percent
% wet	Percent (as received basis)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
ds/m	Decisiemens per metre
g/cm ³	Grams per cubic centimetre
mg/kg dry	Milligrams per kilogram (dry weight basis)
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, pH > 7 = basic
ASTM	ASTM International Test Methods
Carter	Soil Sampling and Methods of Analysis, 2nd Edition (2007), Carter/Gregorich
EPA	United States Environmental Protection Agency Test Methods
MSSMA	Manual on Soil Sampling and Methods of Analysis, J.A. McKeague
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association
UBCPLMM	Methods Manual, Pedology Laboratory, 1977/1981, L.M. Lavkulich, UBC Department of Soil Science

Guidelines Referenced in this Report:

[Guidelines for Canadian Drinking Water Quality \(Health Canada, September 2022\)](#)

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO Associated Environmental Consultants Inc. (Vernon)
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WORK ORDER 24D0888
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General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager: bwhitehead@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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General Parameters, Batch B4D2408

Reference (B4D2408-SRM1)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (1:2 H2O Solution)	11.15	0.10 pH units	11.4		98	95-105			
Reference (B4D2408-SRM2)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (1:2 H2O Solution)	11.14	0.10 pH units	11.4		98	95-105			

General Parameters, Batch B4D2484

Reference (B4D2484-SRM1)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (1:2 H2O Solution)	10.97	0.10 pH units	11.4		96	95-105			
Reference (B4D2484-SRM2)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (1:2 H2O Solution)	10.94	0.10 pH units	11.4		96	95-105			
Reference (B4D2484-SRM3)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (1:2 H2O Solution)	10.94	0.10 pH units	11.4		96	95-105			

General Parameters, Batch B4D2485

Duplicate (B4D2485-DUP1)		Source: 24D0888-01		Prepared: 2024-04-12, Analyzed: 2024-04-12					
pH (0.01M CaCl2)	7.94	0.10 pH units		7.80			2	5	
Reference (B4D2485-SRM1)		Prepared: 2024-04-12, Analyzed: 2024-04-12							
pH (0.01M CaCl2)	11.22	0.10 pH units	11.4		98	95-105			

Salinity Parameters (Sat. Paste Extract), Batch B4D2091

Blank (B4D2091-BLK1)		Prepared: 2024-04-09, Analyzed: 2024-04-10							
Saturation	50.0	1.0 %							
Reference (B4D2091-SRM1)		Prepared: 2024-04-09, Analyzed: 2024-04-10							
Saturation	33.5	1.0 %	31.8		105	60-140			

Salinity Parameters (Sat. Paste Extract), Batch B4D2145



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Salinity Parameters (Sat. Paste Extract), Batch B4D2145, Continued

Blank (B4D2145-BLK1)

Prepared: 2024-04-10, Analyzed: 2024-04-10

Calcium, Saturated Paste	< 5	5 mg/L							
Calcium, Saturated Paste.	< 2	2 mg/kg dry							
Magnesium, Saturated Paste	< 4.0	4.0 mg/L							
Magnesium, Saturated Paste.	< 2.0	2.0 mg/kg dry							
Potassium, Saturated Paste	< 2.0	2.0 mg/L							
Potassium, Saturated Paste.	< 1.0	1.0 mg/kg dry							
Sodium, Saturated Paste	< 2.0	2.0 mg/L							
Sodium, Saturated Paste.	< 1.0	1.0 mg/kg dry							

Duplicate (B4D2145-DUP1)

Source: 24D0888-04

Prepared: 2024-04-10, Analyzed: 2024-04-10

Calcium, Saturated Paste	29	5 mg/L		30			3	30	
Calcium, Saturated Paste.	20	2 mg/kg dry		18			15	30	
Magnesium, Saturated Paste	4.3	4.0 mg/L		4.3				30	
Magnesium, Saturated Paste.	3.0	2.0 mg/kg dry		2.5				30	
Potassium, Saturated Paste	4.7	2.0 mg/L		4.7				30	
Potassium, Saturated Paste.	3.3	1.0 mg/kg dry		2.8				30	
Sodium, Saturated Paste	5.5	2.0 mg/L		5.4				30	
Sodium, Saturated Paste.	3.9	1.0 mg/kg dry		3.1				26	

Reference (B4D2145-SRM1)

Prepared: 2024-04-10, Analyzed: 2024-04-10

Calcium, Saturated Paste	56	5 mg/L	50.0		113	60-140			
Calcium, Saturated Paste.	56	2 mg/kg dry	50.0		113	60-140			
Magnesium, Saturated Paste	14.5	4.0 mg/L	12.0		121	60-140			
Magnesium, Saturated Paste.	14.5	2.0 mg/kg dry	12.0		121	60-140			
Potassium, Saturated Paste	5.2	2.0 mg/L	5.00		103	60-140			
Potassium, Saturated Paste.	5.2	1.0 mg/kg dry	5.00		104	60-140			
Sodium, Saturated Paste	24.6	2.0 mg/L	24.0		103	60-140			
Sodium, Saturated Paste.	24.6	1.0 mg/kg dry	24.0		103	60-140			

Salinity Parameters (Sat. Paste Extract), Batch B4D2444

Blank (B4D2444-BLK1)

Prepared: 2024-04-11, Analyzed: 2024-04-11

Chloride, Saturated Paste	< 5.0	5.0 mg/L							
Chloride, Saturated Paste.	< 2.5	2.5 mg/kg dry							
Sulfate, Saturated Paste	< 20	20 mg/L							
Sulfate, Saturated Paste.	< 10	10 mg/kg dry							

Duplicate (B4D2444-DUP1)

Source: 24D0888-04

Prepared: 2024-04-11, Analyzed: 2024-04-11

Chloride, Saturated Paste	< 5.0	5.0 mg/L		< 5.0				20	
Chloride, Saturated Paste.	< 2.5	2.5 mg/kg dry		< 2.5				30	
Sulfate, Saturated Paste	< 20	20 mg/L		< 20				20	
Sulfate, Saturated Paste.	< 10	10 mg/kg dry		< 10				20	

Salinity Parameters (Sat. Paste Extract), Batch B4D2471

Blank (B4D2471-BLK1)

Prepared: 2024-04-12, Analyzed: 2024-04-12

Conductivity, Saturated Paste	< 0.20	0.20 ds/m							
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Strong Acid Leachable Metals, Batch B4D2440

Blank (B4D2440-BLK1)

Prepared: 2024-04-11, Analyzed: 2024-04-12

Aluminum	< 40	40 mg/kg dry							
Antimony	< 0.10	0.10 mg/kg dry							
Arsenic	< 0.30	0.30 mg/kg dry							
Barium	< 1.0	1.0 mg/kg dry							



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Strong Acid Leachable Metals, Batch B4D2440, Continued									
Blank (B4D2440-BLK1), Continued					Prepared: 2024-04-11, Analyzed: 2024-04-12				
Beryllium	< 0.10	0.10 mg/kg dry							
Boron	< 2.0	2.0 mg/kg dry							
Cadmium	< 0.040	0.040 mg/kg dry							
Chromium	< 1.0	1.0 mg/kg dry							
Cobalt	< 0.10	0.10 mg/kg dry							
Copper	< 0.40	0.40 mg/kg dry							
Iron	< 20.0	20.0 mg/kg dry							
Lead	< 0.20	0.20 mg/kg dry							
Lithium	< 0.10	0.10 mg/kg dry							
Manganese	< 0.40	0.40 mg/kg dry							
Mercury	< 0.040	0.040 mg/kg dry							
Molybdenum	< 0.10	0.10 mg/kg dry							
Nickel	< 0.60	0.60 mg/kg dry							
Selenium	< 0.20	0.20 mg/kg dry							
Silver	< 0.10	0.10 mg/kg dry							
Strontium	< 0.20	0.20 mg/kg dry							
Thallium	< 0.10	0.10 mg/kg dry							
Tin	< 0.20	0.20 mg/kg dry							
Tungsten	< 0.20	0.20 mg/kg dry							
Uranium	< 0.050	0.050 mg/kg dry							
Vanadium	< 1.0	1.0 mg/kg dry							
Zinc	< 2.0	2.0 mg/kg dry							
LCS (B4D2440-BS1)					Prepared: 2024-04-11, Analyzed: 2024-04-12				
Aluminum	211	40 mg/kg dry	200		105	80-120			
Antimony	2.01	0.10 mg/kg dry	2.00		101	80-120			
Arsenic	20.5	0.30 mg/kg dry	20.0		102	80-120			
Barium	2.1	1.0 mg/kg dry	2.00		103	80-120			
Beryllium	2.10	0.10 mg/kg dry	2.00		105	80-120			
Boron	21.0	2.0 mg/kg dry	20.0		105	80-120			
Cadmium	2.05	0.040 mg/kg dry	2.00		102	80-120			
Chromium	2.1	1.0 mg/kg dry	2.00		103	80-120			
Cobalt	2.09	0.10 mg/kg dry	2.00		104	80-120			
Copper	2.05	0.40 mg/kg dry	2.00		103	80-120			
Iron	212	20.0 mg/kg dry	200		106	80-120			
Lead	2.10	0.20 mg/kg dry	2.00		105	80-120			
Lithium	2.10	0.10 mg/kg dry	2.00		105	80-120			
Manganese	2.12	0.40 mg/kg dry	2.00		106	80-120			
Mercury	0.202	0.040 mg/kg dry	0.200		101	80-120			
Molybdenum	2.10	0.10 mg/kg dry	2.00		105	80-120			
Nickel	2.12	0.60 mg/kg dry	2.00		106	80-120			
Selenium	20.2	0.20 mg/kg dry	20.0		101	80-120			
Silver	2.07	0.10 mg/kg dry	2.00		103	80-120			
Strontium	2.07	0.20 mg/kg dry	2.00		103	80-120			
Thallium	2.11	0.10 mg/kg dry	2.00		105	80-120			
Tin	2.11	0.20 mg/kg dry	2.00		106	80-120			
Tungsten	2.09	0.20 mg/kg dry	2.00		105	80-120			
Uranium	2.12	0.050 mg/kg dry	2.00		106	80-120			
Vanadium	2.1	1.0 mg/kg dry	2.00		104	80-120			
Zinc	20.2	2.0 mg/kg dry	20.0		101	80-120			
Reference (B4D2440-SRM1)					Prepared: 2024-04-11, Analyzed: 2024-04-12				
Aluminum	13400	40 mg/kg dry	12100		111	70-130			
Antimony	0.64	0.10 mg/kg dry	0.634		100	70-130			
Arsenic	86.9	0.30 mg/kg dry	83.6		104	70-130			
Barium	43.5	1.0 mg/kg dry	41.4		105	70-130			
Beryllium	0.41	0.10 mg/kg dry	0.377		108	70-130			



APPENDIX 2: QUALITY CONTROL RESULTS

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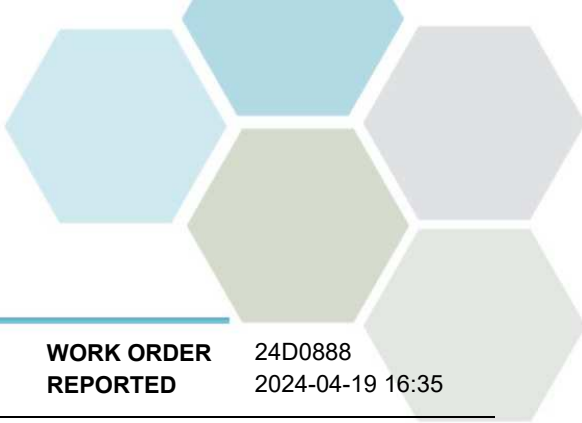
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Strong Acid Leachable Metals, Batch B4D2440, Continued									
Reference (B4D2440-SRM1), Continued					Prepared: 2024-04-11, Analyzed: 2024-04-12				
Chromium	69.6	1.0 mg/kg dry	66.0		105	70-130			
Cobalt	11.4	0.10 mg/kg dry	10.8		106	70-130			
Copper	20.9	0.40 mg/kg dry	20.3		103	70-130			
Iron	21800	20.0 mg/kg dry	20400		107	70-130			
Lead	17.7	0.20 mg/kg dry	16.7		106	70-130			
Lithium	18.7	0.10 mg/kg dry	16.8		112	70-130			
Manganese	342	0.40 mg/kg dry	319		107	70-130			
Mercury	0.105	0.040 mg/kg dry	0.114		92	70-130			
Nickel	34.9	0.60 mg/kg dry	32.5		107	70-130			
Silver	1.60	0.10 mg/kg dry	1.55		103	70-130			
Strontium	25.0	0.20 mg/kg dry	22.5		111	70-130			
Uranium	1.25	0.050 mg/kg dry	1.15		109	70-130			
Vanadium	39.5	1.0 mg/kg dry	36.3		109	70-130			
Zinc	40.6	2.0 mg/kg dry	39.7		102	70-130			

Strong Acid Leachable Metals, Batch B4D2454

Blank (B4D2454-BLK1)			Prepared: 2024-04-12, Analyzed: 2024-04-12						
Aluminum	< 40	40 mg/kg dry							
Antimony	< 0.10	0.10 mg/kg dry							
Arsenic	< 0.30	0.30 mg/kg dry							
Barium	< 1.0	1.0 mg/kg dry							
Beryllium	< 0.10	0.10 mg/kg dry							
Boron	< 2.0	2.0 mg/kg dry							
Cadmium	< 0.040	0.040 mg/kg dry							
Chromium	< 1.0	1.0 mg/kg dry							
Cobalt	< 0.10	0.10 mg/kg dry							
Copper	< 0.40	0.40 mg/kg dry							
Iron	< 20.0	20.0 mg/kg dry							
Lead	< 0.20	0.20 mg/kg dry							
Lithium	< 0.10	0.10 mg/kg dry							
Manganese	< 0.40	0.40 mg/kg dry							
Mercury	< 0.040	0.040 mg/kg dry							
Molybdenum	< 0.10	0.10 mg/kg dry							
Nickel	< 0.60	0.60 mg/kg dry							
Selenium	< 0.20	0.20 mg/kg dry							
Silver	< 0.10	0.10 mg/kg dry							
Strontium	< 0.20	0.20 mg/kg dry							
Thallium	< 0.10	0.10 mg/kg dry							
Tin	< 0.20	0.20 mg/kg dry							
Tungsten	< 0.20	0.20 mg/kg dry							
Uranium	< 0.050	0.050 mg/kg dry							
Vanadium	< 1.0	1.0 mg/kg dry							
Zinc	< 2.0	2.0 mg/kg dry							

Reference (B4D2454-SRM1)			Prepared: 2024-04-12, Analyzed: 2024-04-12						
Aluminum	12300	40 mg/kg dry	12100		101	70-130			
Antimony	0.69	0.10 mg/kg dry	0.634		108	70-130			
Arsenic	90.6	0.30 mg/kg dry	83.6		108	70-130			
Barium	46.2	1.0 mg/kg dry	41.4		112	70-130			
Beryllium	0.39	0.10 mg/kg dry	0.377		104	70-130			
Chromium	71.2	1.0 mg/kg dry	66.0		108	70-130			
Cobalt	11.6	0.10 mg/kg dry	10.8		108	70-130			
Copper	22.0	0.40 mg/kg dry	20.3		108	70-130			
Iron	22100	20.0 mg/kg dry	20400		109	70-130			
Lead	18.3	0.20 mg/kg dry	16.7		110	70-130			



APPENDIX 2: QUALITY CONTROL RESULTS

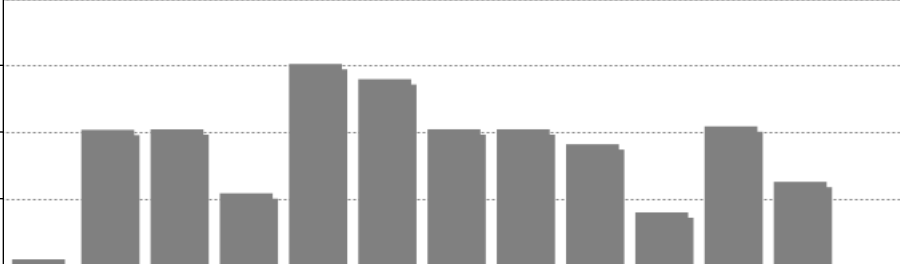
REPORTED TO PROJECT Associated Environmental Consultants Inc. (Vernon)
2022-8172.02

WORK ORDER REPORTED 24D0888
2024-04-19 16:35

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Strong Acid Leachable Metals, Batch B4D2454, Continued									
Reference (B4D2454-SRM1), Continued					Prepared: 2024-04-12, Analyzed: 2024-04-12				
Lithium	17.3	0.10 mg/kg dry	16.8		103	70-130			
Manganese	343	0.40 mg/kg dry	319		107	70-130			
Mercury	0.126	0.040 mg/kg dry	0.114		111	70-130			
Nickel	35.7	0.60 mg/kg dry	32.5		110	70-130			
Silver	1.68	0.10 mg/kg dry	1.55		109	70-130			
Strontium	24.6	0.20 mg/kg dry	22.5		109	70-130			
Uranium	1.33	0.050 mg/kg dry	1.15		116	70-130			
Vanadium	39.9	1.0 mg/kg dry	36.3		110	70-130			
Zinc	43.0	2.0 mg/kg dry	39.7		108	70-130			

Farm Soil Analysis

Bill To: Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	Grower Name: OT-136 Site ID: Field Name: Helicopter TS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030219 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Aug 01, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality			
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #
0" - 6"	<2	26	168	2	1270	210	60.4	1.0	0.9	0.3	6.5	5.0	<30	7.0	0.29	2.8	27212
Excess														Alkaline	Extreme	High	
Optimum														Neutral	Very High	Normal	
Marginal														Acidic	High	Low	
Deficient														Very Acidic	Good	Very Low	
Total lbs/acre	4	53	335	5	Texture <i>Silty Clay Loam</i> Hand Texture <i>n/a</i>				BS 100 % CEC 8.5 meq/100 g				Ca 74.6 % Mg 20.3 % Na <1.5 % K 5.0 %				
Estimated lbs/acre	8	53	335	10	Sand 17.0 % Silt 47.0 % Clay 35.6 %				Ammonium <i>n/a</i>				TEC 8.5 meq/100 g				
					Lime <i>n/a</i>				Buffer pH <i>n/a</i>				K/Mg Ratio <i>n/a</i>				

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P ₂ O ₅	K ₂ O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:

Element uses nutrient extraction and analytical methods specifically developed for western Canadian soils.

The modified Kelowna extractant used to analyze key nutrients in this Farm Soil Analysis report is the standard method used in soil fertility research in western Canada. It is used in developing crop response curves to fertilizer in the prairies. The Element "RECOMMENDATIONS FOR BALANCED CROP NUTRITION" are based on those research data. Element recommendations are accurate but should not replace responsible judgement.

Farm Soil Analysis

Bill To: McTavish Resource & Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	Grower Name: OT-136 Site ID: Field Name: Helicopter SS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030220 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Jul 31, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality			
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #
0" - 6"	<2			4										7.6	0.47		27213
Excess														Alkaline	Extreme	High	
Optimum														Neutral	Very High	Normal	
Marginal														Acidic	High	Low	
Deficient														Very Acidic	Good	Very Low	
Total lbs/acre	4			9	Texture <u>Silty Clay</u> Hand Texture <u>n/a</u>				BS	n/a	CEC		n/a				
Estimated lbs/acre	8			17	Sand 14.6 %	Silt 42.0 %	Clay 42.6 %	Ca	n/a	Mg	n/a	Na	n/a	K	n/a		
					Ammonium	n/a		TEC	n/a								
					Lime	n/a		Buffer pH	n/a		K/Mg Ratio	n/a					

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P2O5	K2O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

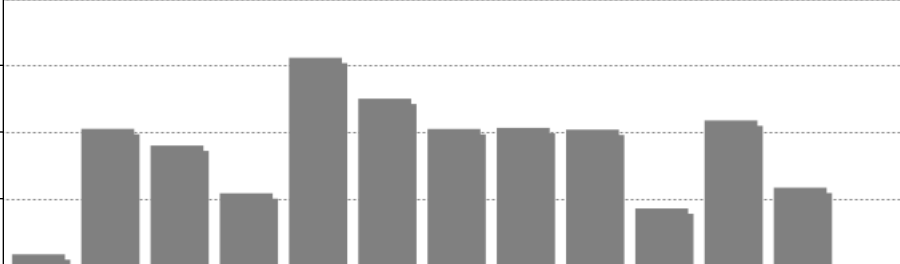
Comments:

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Farm Soil Analysis

Bill To: McTavish Resource & Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	Grower Name: OT-136 Site ID: Field Name: Airfield TS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030221 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Aug 01, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality				
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #	
0" - 6"	3	27	136	2	2110	152	64.8	1.1	2	0.3	10.8	5	<30	7.1	0.60	5.4	27214	
Excess														Alkaline	Extreme	High		
Optimum														Neutral	Very High	Normal		
Marginal														Acidic	High	Low		
Deficient														Very Acidic	Good	Very Low		
Total lbs/acre	7	54	271	5	Texture <i>Silty Clay Loam</i>				Hand Texture <i>n/a</i>				BS 100 %		CEC 12.1 meq/100 g			
Estimated lbs/acre	14	54	271	10	Sand 18.0 %		Silt 43.0 %		Clay 39.1 %		Ca 86.8 %		Mg 10.3 %		Na <1.1 %		K 2.9 %	
					Ammonium <i>n/a</i>				TEC 12.1 meq/100 g									
					Lime <i>n/a</i>				Buffer pH <i>n/a</i>				K/Mg Ratio <i>n/a</i>					

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P ₂ O ₅	K ₂ O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:

Element uses nutrient extraction and analytical methods specifically developed for western Canadian soils.

The modified Kelowna extractant used to analyze key nutrients in this Farm Soil Analysis report is the standard method used in soil fertility research in western Canada. It is used in developing crop response curves to fertilizer in the prairies. The Element "RECOMMENDATIONS FOR BALANCED CROP NUTRITION" are based on those research data. Element recommendations are accurate but should not replace responsible judgement.

Farm Soil Analysis

Bill To: Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	McTavish Resource &	Grower Name: OT-136 Site ID: Field Name: Airfield SS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030222 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Jul 31, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality			
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #
0" - 6"	3			2										7.7	0.47		27215
Excess														Alkaline	Extreme	High	
Optimum														Neutral	Very High	Normal	
Marginal														Acidic	High	Low	
Deficient														Very Acidic	Good	Very Low	
Total lbs/acre	5			4	Texture <u>Silty Clay</u> Hand Texture <u>n/a</u>				BS n/a		CEC n/a						
Estimated lbs/acre	11			9	Sand 13.0 %	Silt 44.0 %	Clay 43.5 %	Ca n/a		Mg n/a		Na n/a		K n/a			
					Ammonium n/a		TEC n/a										
					Lime n/a	Buffer pH n/a	K/Mg Ratio n/a										

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P ₂ O ₅	K ₂ O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:

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Farm Soil Analysis

Bill To: McTavish Resource & Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	Grower Name: OT-136 Site ID: Field Name: WW TS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030223 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Aug 01, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality			
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #
0" - 6"	<2	<5	<25	9	617	115	52.4	1.7	<0.5	<0.1	2.3	8.8	57	7.2	0.22	1.2	27216
Excess														Alkaline	Extreme	High	
Optimum														Neutral	Very High	Normal	
Marginal														Acidic	High	Low	
Deficient														Very Acidic	Good	Very Low	
Total lbs/acre	4	10	50	18	Texture <u>Silt Loam</u> Hand Texture <u>n/a</u>				BS 100 % CEC 4.3 meq/100 g				Ca 72.1 % Mg 22.1 % Na 5.8 % K <1.5 %				
Estimated lbs/acre	8	10	50	37	Sand 29.0 % Silt 58.0 % Clay 13.0 %				Ammonium n/a				TEC 4.3 meq/100 g				
					Lime n/a				Buffer pH n/a				K/Mg Ratio n/a				

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P ₂ O ₅	K ₂ O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:

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Farm Soil Analysis

Bill To: McTavish Resource & Address: 203-19292 60 Ave. Surrey, BC., Canada V3S 3M2 Agreement: 36394	Grower Name: OT-136 Site ID: Field Name: WW SS Acres: Legal Location: Previous Crop: Crop not provided	Lot ID: 1749082 Report Number: 3030224 Report Type: Final Report Date Received: Jul 29, 2024 Date Reported: Jul 31, 2024 Event Code:
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Nutrient analysis (ppm)														Soil Quality			
Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	Na	pH	EC(dS/m)	OM(%)	Lot Ref #
0" - 6"	<2			13										6.8	0.2		27217
Excess														Alkaline	Extreme	High	
Optimum														Neutral	Very High	Normal	
Marginal														Acidic	High	Low	
Deficient														Very Acidic	Good	Very Low	
Total lbs/acre	4			25	Texture <u>Silt Loam</u> Hand Texture <u>n/a</u>				BS n/a		CEC n/a						
Estimated lbs/acre	8			52	Sand 19.0 %	Silt 58.0 %	Clay 23.4 %	Ca n/a		Mg n/a		Na n/a		K n/a			
					Ammonium n/a		TEC n/a										
					Lime n/a	Buffer pH n/a	K/Mg Ratio n/a										

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

Macro-nutrients	Crop not provided				
	Yield	N	P ₂ O ₅	K ₂ O	S
Growing Condition	To be added (lbs/acre)				
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:





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The modified Kelowna extractant used to analyze key nutrients in this Farm Soil Analysis report is the standard method used in soil fertility research in western Canada. It is used in developing crop response curves to fertilizer in the prairies. The Element "RECOMMENDATIONS FOR BALANCED CROP NUTRITION" are based on those research data. Element recommendations are accurate but should not replace responsible judgement.

APPENDIX VIII. REVISED AGRICULTURAL CAPABILITY MAP



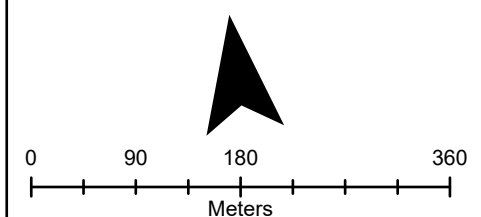
LEGEND

-  Agricultural Land Reserve
-  500 Davis Drive
-  BC Agricultural Capability Polygons
-  Soil Pit

LOCATION OVERVIEW



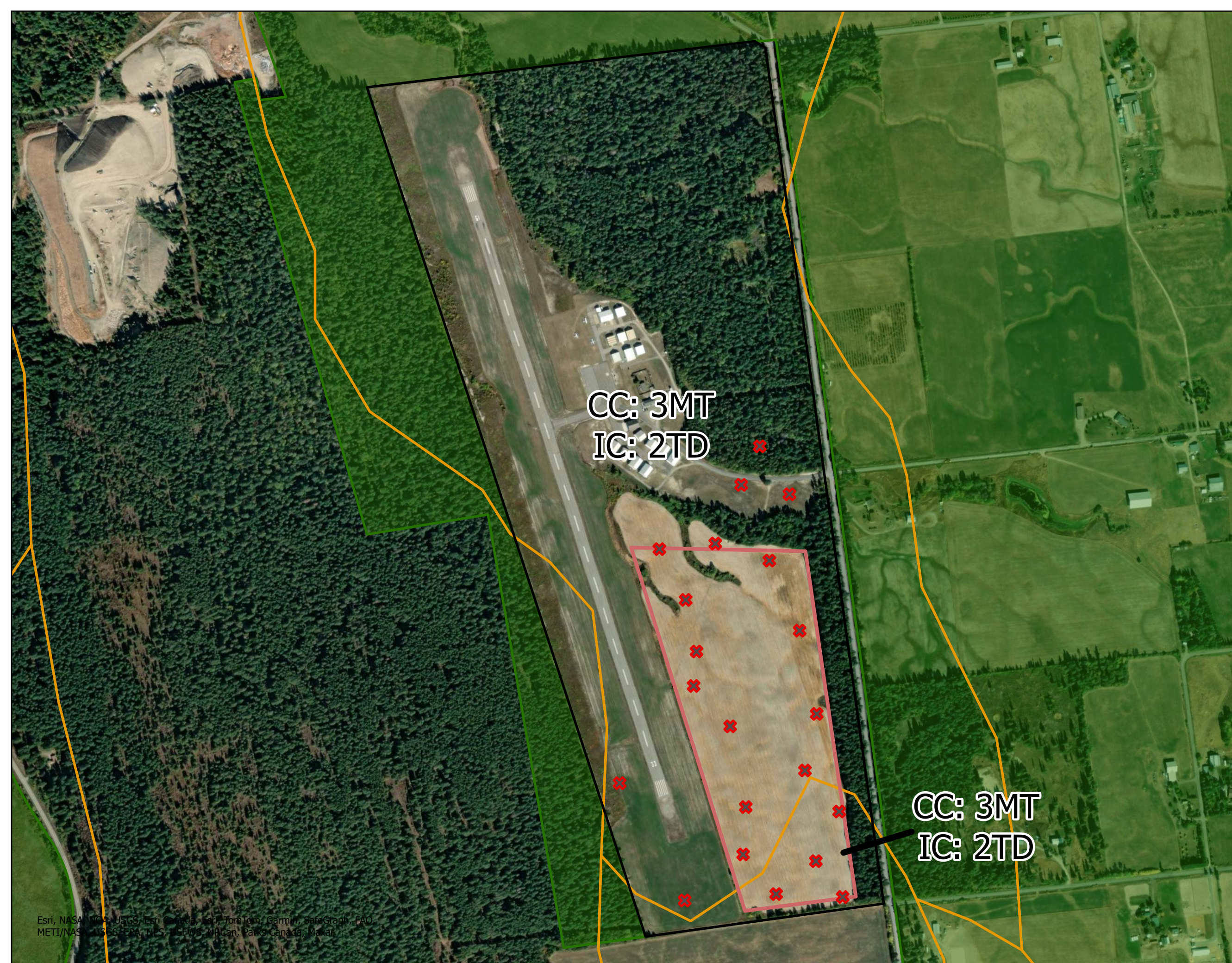
N



Scale: 1:6,500
 Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
 Project Description: City of Creston Agricultural
 Land Capability Assessment
 Created By: MH
 Date Exported: 9/25/2024

**1983 Airport Road:
 Field Assessed Agricultural
 Capability**



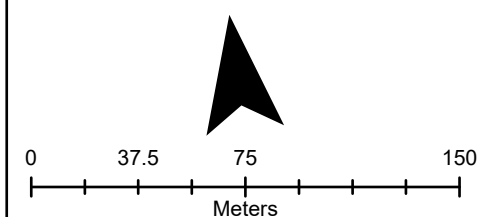
LEGEND

- Agricultural Land Reserve
- 500 Davis Drive
- BC Agricultural Capability Polygons
- Soil Pits

LOCATION OVERVIEW



N



Scale: 1:2,647
Projection: NAD 1983 BC Environment Albers

Project ID: OT-136
Project Description: City of Creston Agricultural Land Capability Assessment
Created By: MH
Date Exported: 9/25/2024

**500 Davis Drive:
Field Assessed Agricultural
Capability**

CC: 7:4MW~3:5MW
IC: 3W

REQUEST FOR DECISION

DATE:	March 24, 2026
TOPIC:	Agricultural Land Reserve Inclusion and Exclusion Applications
PROPOSAL:	Submission to the Agricultural Land Commission
PROPOSED BY:	Joel Comer, Director of Community Services
DIVISION:	Community Services

SECTION 1: SUMMARY

This report provides Council with the opportunity to consider and decide whether to approve or withdraw two applications to the Agricultural Land Commission (ALC):

1. Agricultural Land Reserve (ALR) Inclusion Application for lands near the Town's Airport
2. ALR Exclusion Application for the property at 500 Davis Drive.

Staff Recommendation:

THAT Council RECEIVES the March 24, 2026, Council Report, titled "ALR Inclusion and Exclusion Applications – Submission to the Agricultural Land Commission", from the Director of Community Services;

THAT Council APPROVES the submission of the Exclusion Application for the lands located at 500 Davis Road, legally described as: BLOCK 42 DISTRICT LOT 9555 KOOTENAY DISTRICT, to the Agricultural Land Commission;

AND FURTHER THAT Council APPROVES the submission of the Inclusion Application for the lands located near the Town of Creston Airport, legally described as: BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT, to the Agricultural Land Commission.

SECTION 2: BACKGROUND

The Town would like to request that Agricultural Land Commission exclude the 8.8 ha parcel located at 500 Davis Drive from the Agricultural Land Reserve, to allow for the expansion of municipal and industrial uses onto the parcel, such as private commercial industrial use to support attraction and retention of industry, and facilities associated with wastewater treatment. The 500 Davis Drive 8.8 ha parcel would be in exchange for the inclusion of 17.6 ha of productive farmland located near the Town's airport.

The Town of Creston lacks land for industrial and residential expansion. Excluding the 500 Davis Drive parcel from the Agricultural Land Reserve gives Creston the opportunity to diversify Creston's economy and attract investment, creating jobs and infrastructure that make farming overall more feasible for families.

For further background information, refer to the February 10, 2026, Council Report, titled "ALR Exclusion Application – 500 Davis Drive".

SECTION 3: ISSUE ANALYSIS / DISCUSSION

A Public Hearing for the Exclusion Application was held on February 28, 2026, following public notice and posting of signage. At that meeting, Council directed staff to submit the ALR Exclusion Application to the ALC. In addition to this direction, a formal Council resolution is required.

Public notice and public hearing requirements do not apply to the ALR Inclusion Application. However, RDCK Official Community Plan and Zoning amendments may be required upon successful application to ensure conformance with RDCK bylaws.

Environmental Considerations

The 8.8 ha exclusion parcel would be in exchange for the inclusion of 17.6 ha of productive land located near the Town’s airport, creating a net gain in protected agricultural land. Future development of industrial lands may have environmental impact depending on the specific use.

Social Considerations

Expanding municipal and industrial land supports essential services and creates local employment opportunities. The simultaneous inclusion of 17.6 ha of land would directly benefit farming by providing a larger land area with better suitability for agriculture.

Economic Considerations

Additional industrial land helps attract investment, diversify the economy, and strengthen job growth.

SECTION 4: ORGANIZATION IMPLICATIONS

Legislative Considerations (Policies and/or Bylaws)

Agricultural Land Commission Act

Strategic Focus

Economic Health.

Reconciliation Considerations

None identified.

Communication Considerations

Staff will provide Council with a report regarding the ALC’s decision, once such a decision has been made.

SECTION 5: FINANCIAL IMPLICATIONS

<p>Included in Financial Plan: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>	<p>Financial Plan Amendment Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Next Budget Cycle</p>
--	---

None identified.

SECTION 6: OPTIONS AND ALTERNATIVES

Option 1:

Council approves the submission of the Inclusion and Exclusion applications.

- Applications will be submitted to the ALC.

Option 2:

Council withdraws the applications.

- Staff will cancel the applications. No further action will be taken at this time.

Option 3:

Council directs staff to provide information, as specified by Council.

- Should Council require additional information, staff will provide Council with a follow-up report, addressing the requested additional information.

SECTION 7: RECOMMENDATIONS

That Council passes the following resolution(s):

THAT Council RECEIVES the March 24, 2026, Council Report, titled "ALR Inclusion and Exclusion Applications – Submission to the Agricultural Land Commission", from the Director of Community Services;

THAT Council APPROVES the submission of the Exclusion Application for the lands located at 500 Davis Road, legally described as: BLOCK 42 DISTRICT LOT 9555 KOOTENAY DISTRICT, to the Agricultural Land Commission;

AND FURTHER THAT Council APPROVES the submission of the Inclusion Application for the lands located near the Town of Creston Airport, legally described as: BLOCK A SECTION 13 TOWNSHIP 7 KOOTENAY DISTRICT, to the Agricultural Land Commission.

SECTION 8: SUBMITTED AND REVIEW

This report is respectfully submitted by:



Joel Comer, Director of Community Services

CAO or designate comments of report. Signature is approval of report being submitted.



Kirsten Dunbar, Acting Chief Administrative Officer

PowerPoint: Yes No

Attachments

Nil.

References

No references for this report.



Agricultural Land Reserve Referral

RDCK File A2604B

Date: May 26, 2026

You are requested to comment on the attached AGRICULTURAL LAND RESERVE APPLICATION for potential effect on your agency's interests. We would appreciate your response WITHIN 30 DAYS (PRIOR TO June 26, 2026). If no response is received within that time, it will be assumed that your agency's interests are unaffected.

LEGAL DESCRIPTION & GENERAL LOCATION:

Parcel 1:

905 32nd Ave South, Erickson, Electoral Area 'B'
 LOT 16 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT
 PLAN 1455 EXCEPT PARCEL A (SEE 166370I)
 PID: 015-696-235
 Owner: Gwendolyn Telling

Parcel 2:

1023 32nd Ave South, Erickson, Electoral Area 'B'
 LOT 3 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT
 PLAN 17744
 PID: 009-611-037
 Owner: Town of Creston



PRESENT USE AND PURPOSE OF PROPOSED APPLICATION:

The purpose of this application is to consider allowing a boundary adjustment subdivision within the Agricultural Land Reserve (ALR). The applicant is proposing to adjust the boundaries between two parcels in Erickson to formalize and secure legal access to the adjacent Town of Creston property at 3015 Riley Road.

A full explanation of the proposal is included in the applicants ALC application attached to this referral form.

AREA OF PROPERTY AFFECTED	ALR STATUS	ZONING DESIGNATION	OCF DESIGNATION
Parcel 1: 2.23 ha (5 acres)	Yes	Agriculture 1 (AG1) in Comprehensive Land Use Bylaw no. 2316, 2013	Agriculture (AG) in Comprehensive Land Use Bylaw no. 2316, 2013
Parcel 2: 6.08 ha (15.02 acres)			

APPLICANT/AGENT:

Joel Comer

Please provide your response via email.

If your agency's interests are 'Unaffected' no further information is necessary. In all other cases, we would appreciate receiving additional information to substantiate your position and, if necessary, outline any conditions related to your position. Please note any legislation or official government policy which would affect our consideration of this application.

If you are an RDCK commission member, do not respond via email. Your response is the commission's recommendation which staff will collect from the meeting minutes.

**SADIE CHEZENKO, PLANNER
 REGIONAL DISTRICT OF CENTRAL KOOTENAY**

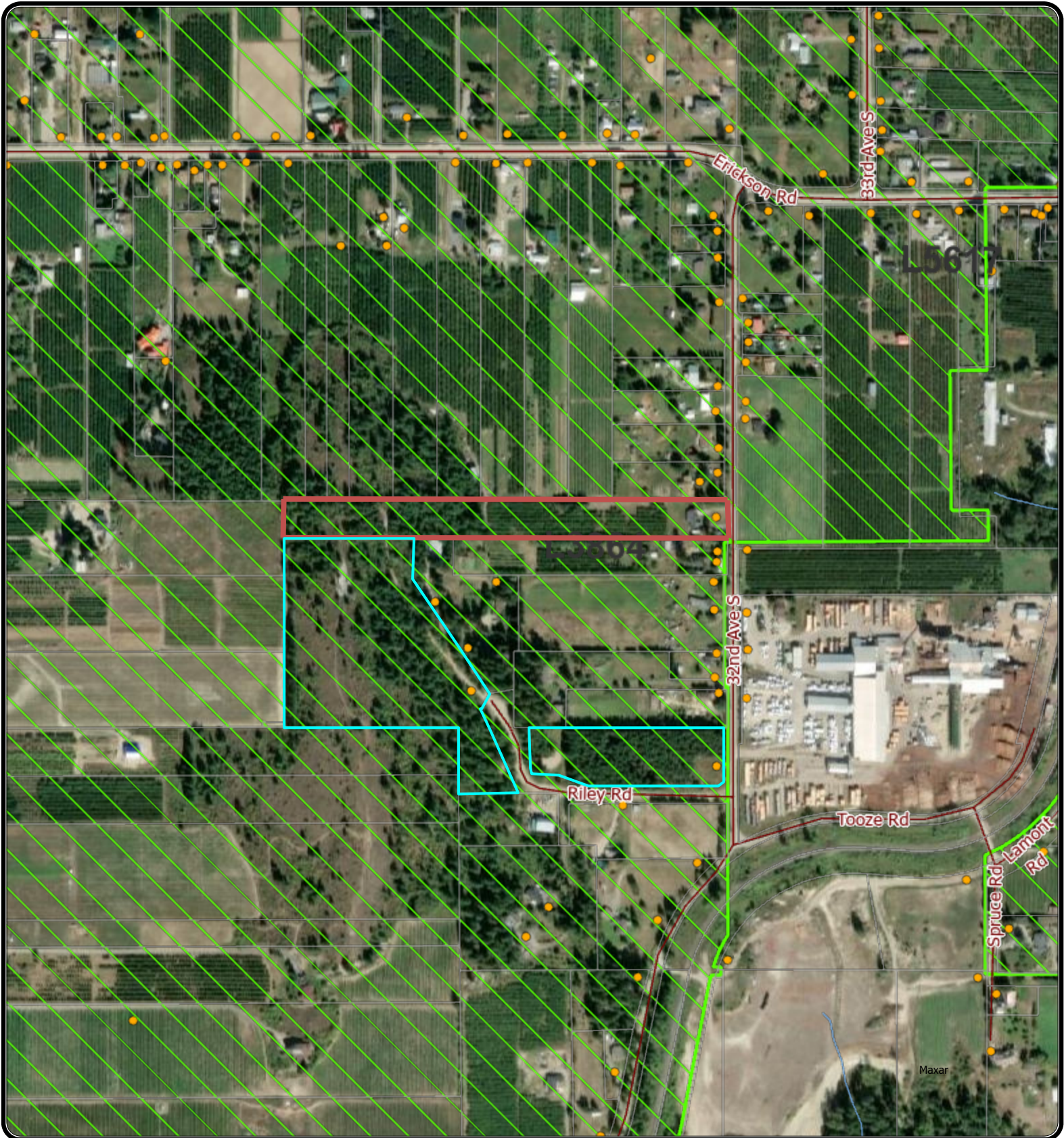
<input checked="" type="checkbox"/> REGIONAL AGROLOGIST <input checked="" type="checkbox"/> CRESTON VALLEY AGRICULTURAL ADVISORY COMMISSION <input checked="" type="checkbox"/> RDCK BUILDING SERVICES <input checked="" type="checkbox"/> RDCK ENVIRONMENTAL SERVICES (WATER) REGIONAL DISTRICT OF CENTRAL KOOTENAY DIRECTORS FOR:	<input type="checkbox"/> OKANAGAN NATION ALLIANCE <input type="checkbox"/> C'ƏC'ƏWIXA? (UPPER SIMILKAMEEN) <input type="checkbox"/> KŁK'ƏR'MÍWS (LOWER SIMILKAMEEN) <input type="checkbox"/> SNPÍNTKTN (PENTICTON) <input type="checkbox"/> STQA?TKWƏTWT (WEST BANK)
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<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H <input type="checkbox"/> I <input type="checkbox"/> J <input type="checkbox"/> K ALTERNATIVE DIRECTORS FOR: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H <input type="checkbox"/> I <input type="checkbox"/> J <input type="checkbox"/> K <input type="checkbox"/> APHC AREA B <input checked="" type="checkbox"/> KTUNAXA NATION COUNCIL (ALL REFERRALS) YAQAN NU?KIY (LOWER KOOTENAY) ?AKINK'UM?ASNUQ?I?IT (TOBACCO PLAINS) ?AKISQNUK (COLUMBIA LAKE) ?AQ'AM (ST. MARY'S) <input type="checkbox"/> SINIXT CONFEDERACY	<input type="checkbox"/> SUKNAQ'INX (OKANAGAN) <input type="checkbox"/> SW'ÍWS (OSOYOOS) <input type="checkbox"/> SPAXOMƏN (UPPER NICOLA) <input type="checkbox"/> SHUSWAP NATION TRIBAL COUNCIL <input checked="" type="checkbox"/> KENPÉSQT (SHUSWAP) <input type="checkbox"/> QW?EWT (LITTLE SHUSWAP) <input type="checkbox"/> SEXQELTQ'ÍN (ADAMS LAKE) <input type="checkbox"/> SIMPCW ((SIMPCW) <input type="checkbox"/> SKEMTSIN (NESKONLITH) <input type="checkbox"/> SPLATS'ÍN (SPLATS'ÍN FIRST NATION) <input type="checkbox"/> SKEETCHESTN INDIAN BAND <input type="checkbox"/> TK'EMLUPS BAND
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The personal information on this form is being collected pursuant to *Regional District of Central Kootenay Planning Procedures and Fees Bylaw No. 2457, 2015* for the purpose of determining whether the application will affect the interests of other agencies or adjacent property owners. The collection, use and disclosure of personal information are subject to the provisions of FIPPA. Any submissions made are considered a public record for the purposes of this application. Only personal contact information will be removed. If you have any questions about the collection of your personal information, contact the Regional District Privacy Officer at 250.352.6665 (toll free 1.800.268.7325), info@rdck.bc.ca, or RDCK Privacy Officer, Box 590, 202 Lakeside Drive, Nelson, BC V1L 5R4.

RETURN TO: SADIE CHEZENKO, PLANNER
 DEVELOPMENT AND COMMUNITY SUSTAINABILITY SERVICES
 REGIONAL DISTRICT OF CENTRAL KOOTENAY
 BOX 590, 202 LAKESIDE DRIVE
 NELSON, BC V1L 5R4
 Ph. 250-352-1585
 Email: plandept@rdck.bc.ca

RDCK Map



REGIONAL DISTRICT OF CENTRAL KOOTENAY
 Box 590, 202 Lakeside Drive,
 Nelson, BC V1L 5R4
 Phone: 1-800-268-7325 www.rdck.bc.ca
 maps@rdck.bc.ca

Legend

- Agriculture Land Reserve
- Streams and Shorelines
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines
- Address Points

Map Scale:

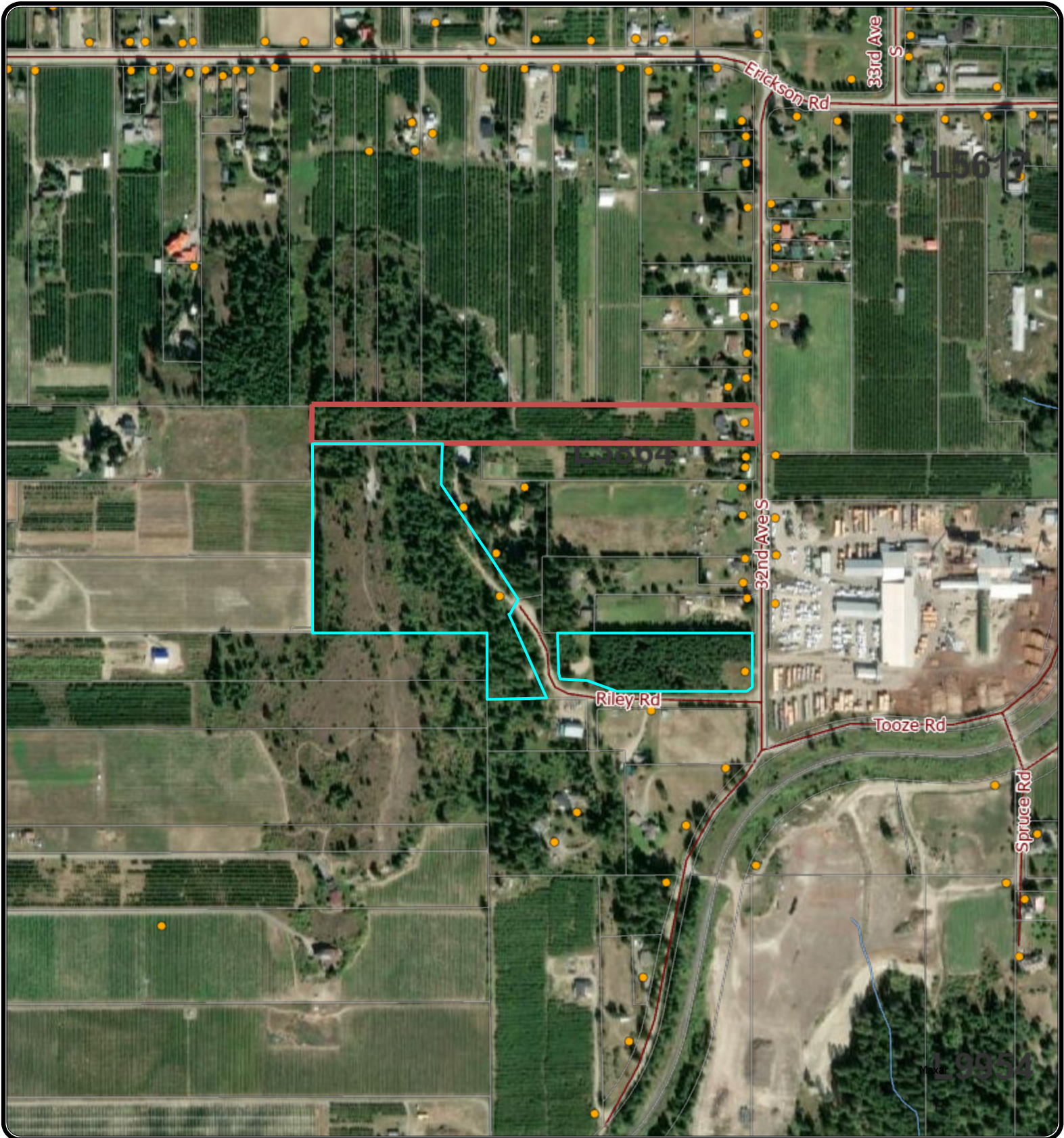
1:9,028

Date: June 23, 2025








The mapping information shown are approximate representations and should only be used for reference purposes. The Regional District of Central Kootenay is not responsible for any errors or omissions on this map.

RDCK Map



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Legend

-  Streams and Shorelines
-  Electoral Areas
-  RDCK Streets
-  Cadastre - Property Lines
-  Address Points

Map Scale:

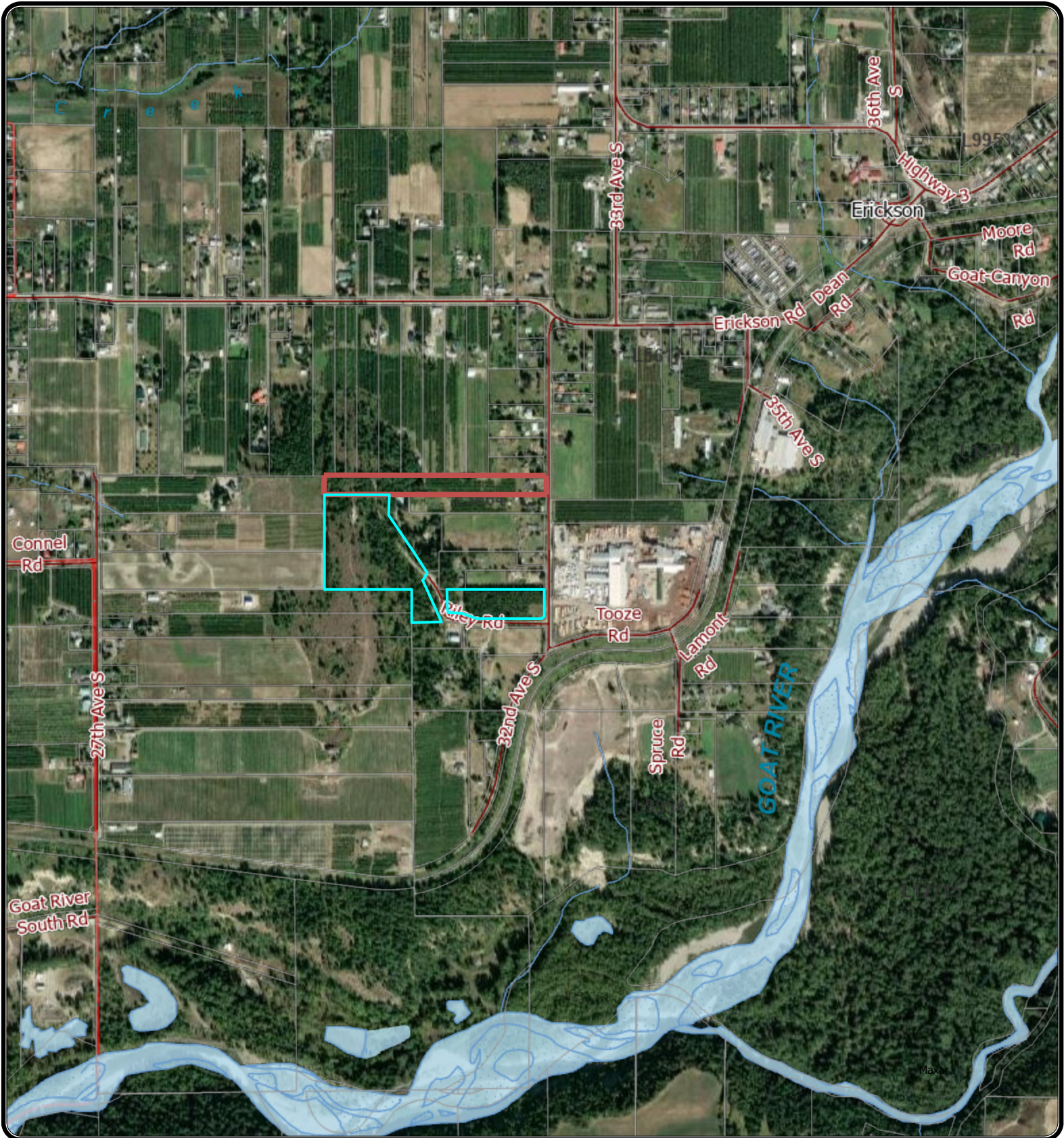
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Legend

- | | |
|------------------------|---------------------------|
| Place Names | Electoral Areas |
| Streams and Shorelines | RDCK Streets |
| Lakes and Rivers | Cadastre - Property Lines |
| Wetlands | |

Map Scale:

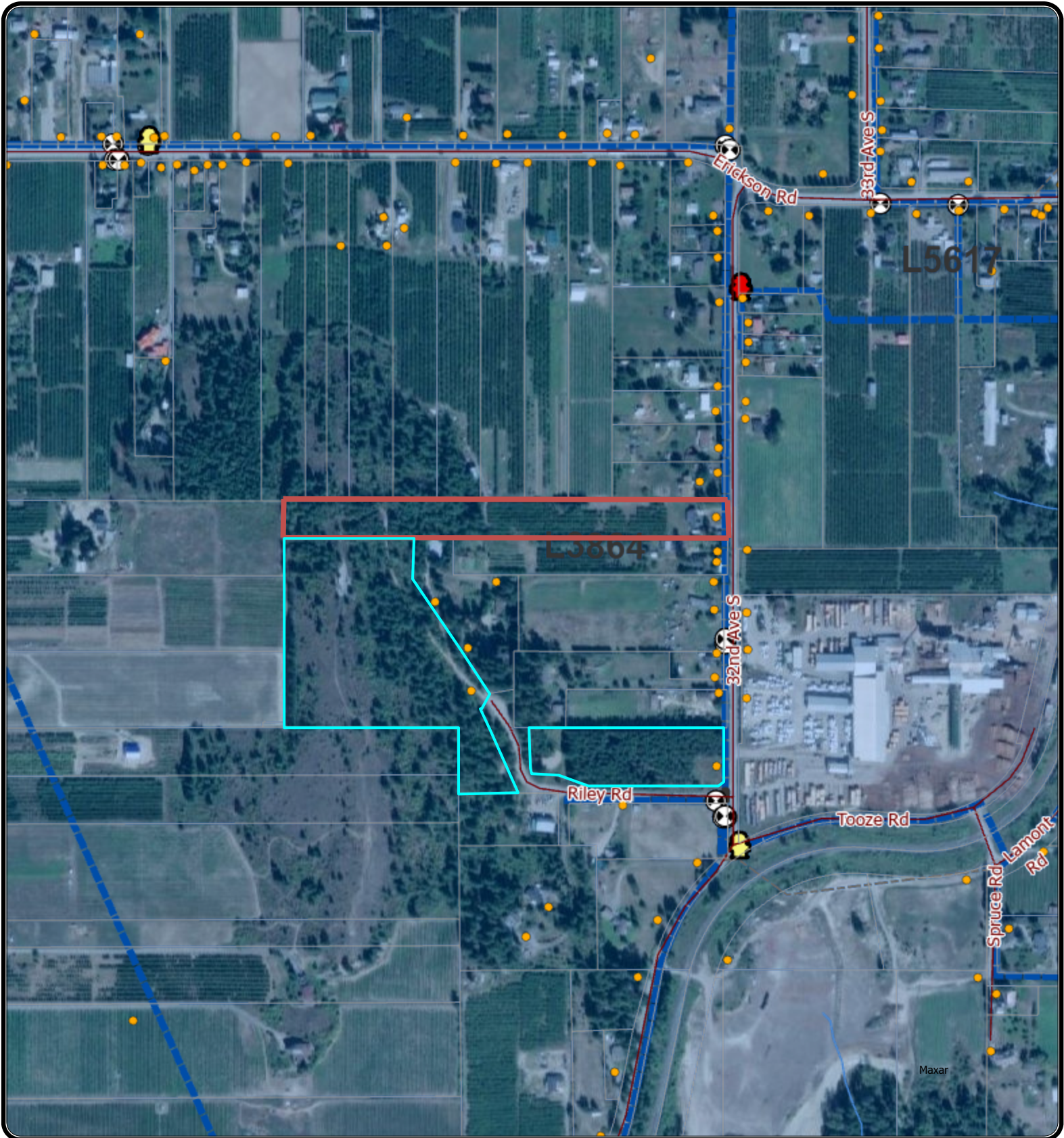
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Date: June 23, 2025



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Legend

- | | |
|-----------------------------|---------------------------|
| Distribution Infrastructure | Hydrant |
| Decommissioned Mainline | Other |
| Valves | Streams and Shorelines |
| Water Systems | Electoral Areas |
| RDCK OWNED | RDCK Streets |
| Main Line | Cadastre - Property Lines |
| | Address Points |

Map Scale:

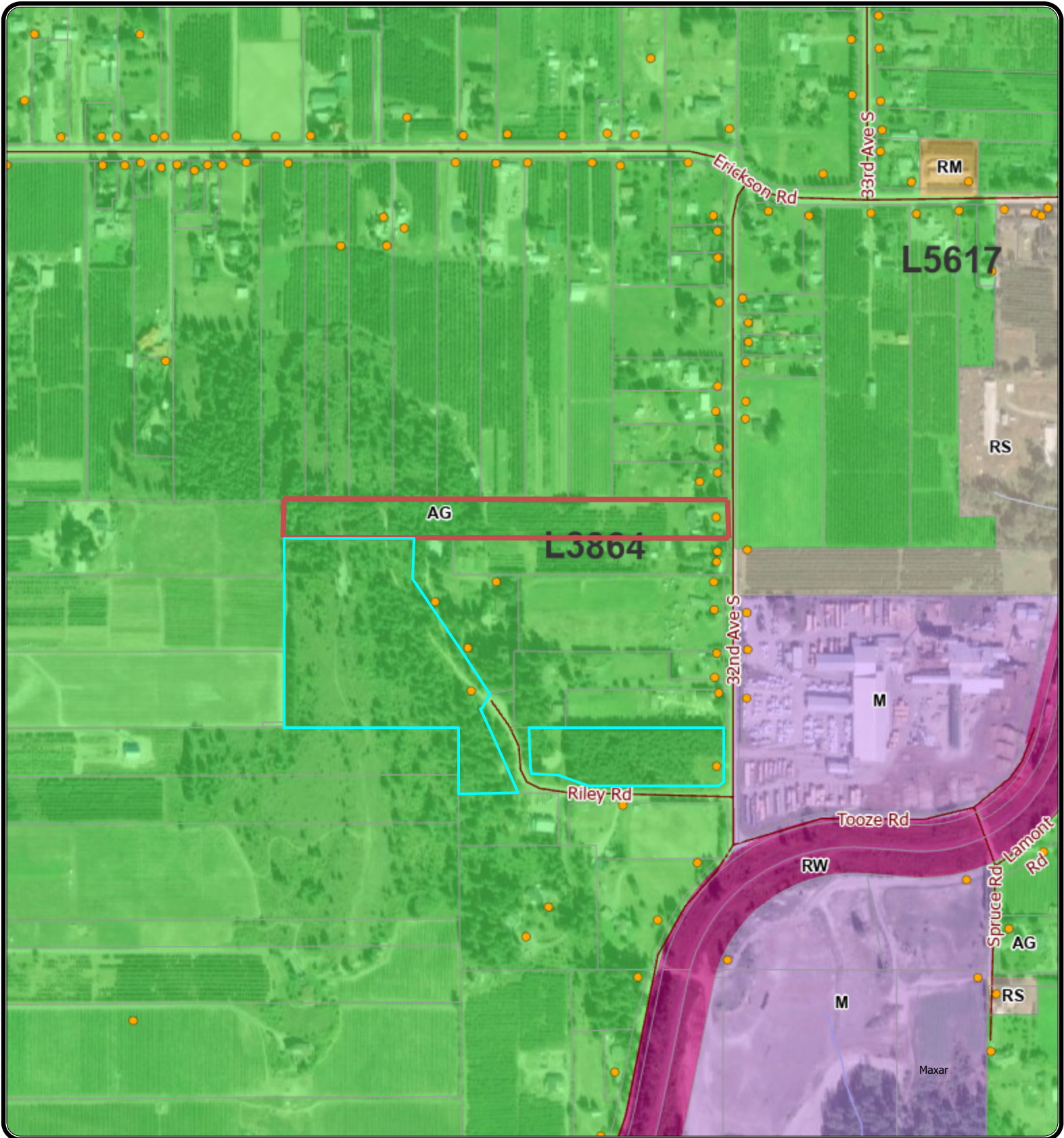
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Official Community Plan

- Agriculture
- Community Services
- Industrial
- Multi Unit Residential
- Suburban Residential

Legend

- Utility, Railway and Transportation
- Streams and Shorelines
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines
- Address Points

Map Scale:

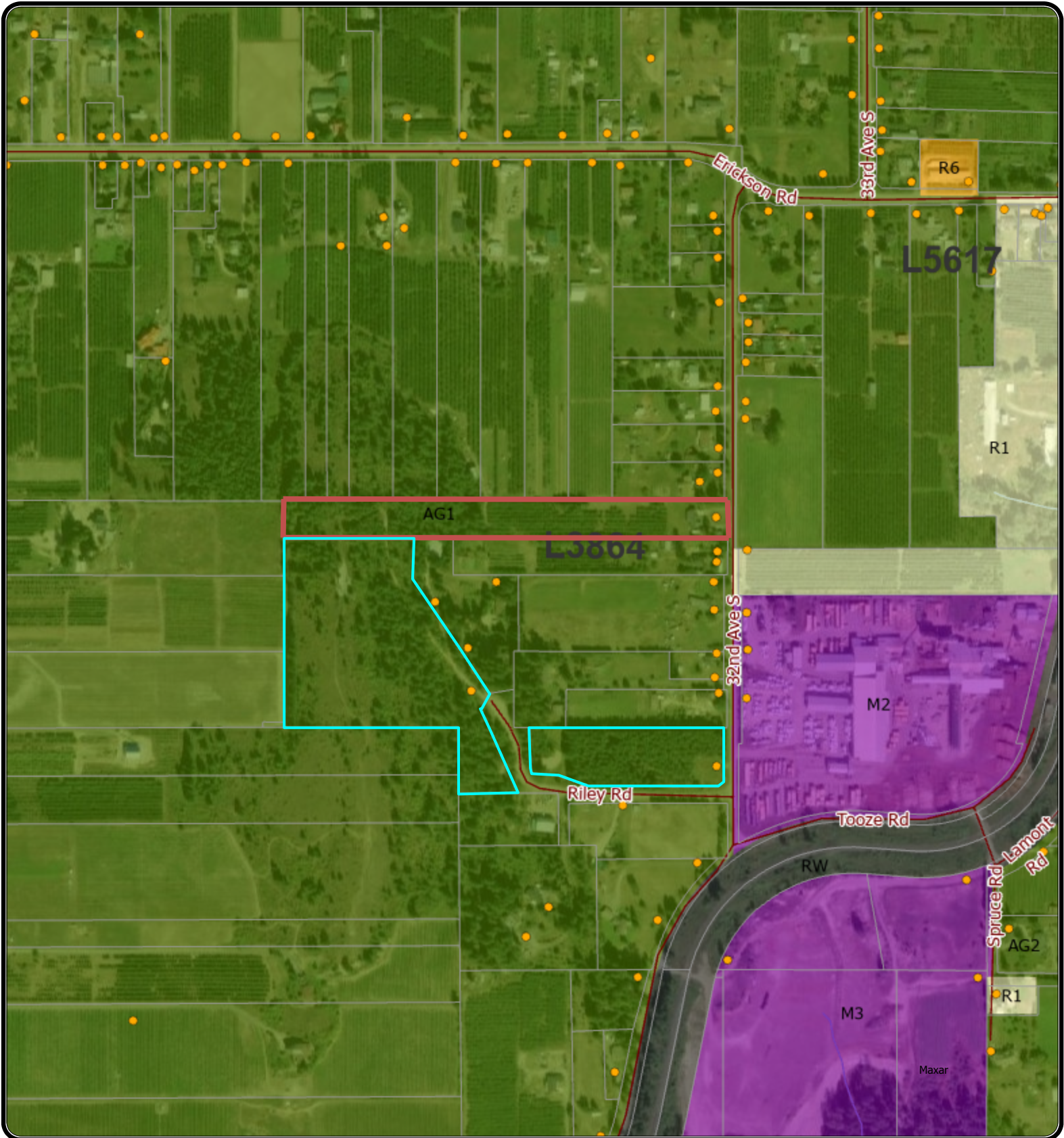
1:9,028

Date: June 23, 2025



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Zoning Class

- Agriculture
- Community Services
- Industrial
- Railway
- Residential 1

Legend

- Residential 6
- Streams and Shorelines
- Electoral Areas
- RDCK Streets
- Cadastre - Property Lines
- Address Points

Map Scale:

1:9,028

Date: June 23, 2025



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Provincial Agricultural Land Commission - Applicant Submission

Application ID: 106999
Application Type: Subdivide Land in the ALR
Status: Submitted to L/FNG
Name: TELLING et al.
Local/First Nation Government: Regional District of Central Kootenay

1. Parcel(s) Under Application

Parcel #1

Parcel Type Fee Simple
Legal Description LOT 16 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT PLAN 1455 EXCEPT PARCEL A (SEE 166370I)
Approx. Map Area 2.25 ha
PID 015-696-235
Purchase Date Jan 2, 1980
Farm Classification No
Civic Address 905 32 Ave S Creston BC
Certificate Of Title TITLE-P21956-PID-015-696-235.pdf

Land Owner(s)	Organization	Phone	Email	Corporate Summary
GWENDOLYN MURIEL TELLING	Not Applicable			Not Applicable

Parcel #2

Parcel Type	Fee Simple
Legal Description	LOT 3 DISTRICT LOTS 812 AND 3864 KOOTENAY DISTRICT PLAN 17744
Approx. Map Area	6.02 ha
PID	009-611-037
Purchase Date	Dec 19, 2023
Farm Classification	No
Civic Address	3015 Riley Road
Certificate Of Title	TITLE-CB1084978-PID-009-611-037.pdf

Land Owner(s)	Organization	Phone	Email	Corporate Summary
Joel Comer	Town of Creston			Signing Authority.pdf

2. Other Owned Parcels

Do any of the land owners added previously own or lease other parcels that might inform this application process? No

3. Primary Contact

Type	Local or First Nation Government Staff
First Name	Joel
Last Name	Comer
Organization (If Applicable)	Community Services
Phone	
Email	

4. Government

Local or First Nation Government: Regional District of Central Kootenay

5. Land Use

Land Use of Parcel(s) under Application

Describe all agriculture that currently takes place on the parcel(s).

The 2.2 ha parcel contains approximately 0.86 ha of actively cultivated fruit trees situated on the lower, arable portion of the property. The existing single-family dwelling, associated residential yard area, and one secondary outbuilding occupy roughly 0.3 ha. The remaining upland area of the parcel consists of a steep, rocky hillside characterized by mature trees and natural brush. Due to its terrain, soil limitations, and lack of arable qualities, this portion of the property is not suitable for agricultural production. Additionally, a 100 m Telus access road traverses the property to provide service access to the telecommunications tower located on the adjacent parcel to the south (3015 Riley Road), which is owned by the Town of Creston.

Describe all agricultural improvements made to the parcel(s).

The proposed boundary adjustment is not anticipated to improve agricultural use or enhance agricultural capability on the subject property. The majority of the upland portion of the parcel consists of steep, rocky terrain with significant tree and brush cover, rendering it unfarmable and unsuitable for any form of agricultural production. As such, the lands proposed for subdivision do not contribute to agricultural activity and have no practical potential for future farming.

The intent of the boundary adjustment is instead to formalize and secure legal access to the adjacent Town of Creston property at 3015 Riley Road. This access is currently provided through an existing Telus Corporation service road located on the subject lands. Through the boundary adjustment, this access corridor will be transferred to the Town of Creston. This transfer will ensure long-term, uninterrupted public access to 3015 Riley Road, which is used for passive recreation. The proposal therefore maintains public benefit by preserving access to municipal lands, while not affecting the agricultural use of the remaining cultivated portion of the property.

Describe all other uses that currently take place on the parcel(s).

A single-family residential dwelling is located on the eastern portion of the property, with an approximate building footprint of 250 m². This residence includes the associated yard and maintained residential area surrounding

the home. The only other structure on the parcel is a small outbuilding, approximately 50 m² in size, used for storage and general utility purposes. In addition to these structures, an existing access road—approximately 100 metres in length—crosses the western side of the property. This road currently provides access for Telus Corporation to service the telecommunications tower located on the adjacent parcel to the south (3015 Riley Road).
No other uses or structures are present on the property.

Land Use of Adjacent Parcels

	Main Land Use Type	Specific Activity
North	Agricultural / Farm	The five parcels north of the subject property grow cherries on their lower, flat portions. Their southern halves extend into a steep, rocky hillside that overlaps the subject lands. This upper area has shallow soils, exposed rock, and dense brush, making it unsuitable for agriculture and unused for farming.
East	Agricultural / Farm	Cherries. Lumber Mill.
South	Residential	The southern properties are primarily residential, with only small areas used for agriculture.
West	Agricultural / Farm	Grapes

6. Proposal

Proposed Lot Areas

#	Type	Size
1	Lot	1.6
2	Lot	6.67

What is the purpose of the proposal?

The purpose of this subdivision proposal is to adjust the western property line of 905 32nd Avenue South, creating a 0.65-hectare remaining parcel. This parcel will ultimately be acquired by the Town of Creston and consolidated with the adjacent Town-owned lands located

at 3015 Riley Road, resulting in a 6.65 ha parcel. Transferring this corridor to the Town will secure long-term, legal public access to municipal lands currently used for passive recreation. The subdivision formalizes an access route that is presently informal and shared with the Telus service road, ensuring clear land tenure and responsibility for maintenance.

Creating a dedicated access parcel also reduces potential future conflicts between public users, utility providers, and the private landowner. By placing the corridor under municipal ownership, access needs can be managed independently of the agricultural operation, eliminating overlapping uses and improving operational clarity. Although the subdivision does not directly increase agricultural capacity, it supports ongoing farm use by removing non-farm traffic from the productive portion of the property. Only the steep, rocky hillside—land with no agricultural value—is proposed for subdivision, ensuring all arable land suitable for cherry production remains intact under a single ownership. This separation preserves the long-term agricultural viability and operational efficiency of the orchard.

Why do you believe this parcel is suitable for subdivision?

The parcel is suitable for subdivision because the area proposed for separation consists entirely of steep, rocky hillside terrain with no agricultural capability. This land is physically separated from the productive orchard by natural slope and soil limitations and does not contribute to agricultural production.

The lands proposed for subdivision already function exclusively as an access corridor, containing the existing Telus service road. This use does not align with agricultural purposes but directly supports the intent of the subdivision.

The proposed lot configuration follows the established access road leading to the Town of Creston's property at 3015 32nd Avenue South. Aligning the boundary with the existing corridor ensures only non-farmable land is included, avoids fragmentation of productive farmland, and creates a logical property structure based on current use.

This configuration also provides the Town with a clearly defined, manageable access route for municipal purposes while preventing future conflicts with farm operations. Overall, the subdivision isolates non-productive land and preserves the agricultural integrity of the remaining orchard.

Does the proposal support agriculture in the short or long term? Please explain.

The proposal supports agriculture both in the short and long term by ensuring that all arable land on the subject property remains intact. The lands proposed for subdivision consist solely of steep, rocky hillside terrain that has no agricultural capability and is not usable for current or future farming. Removing this non-productive area from the main

parcel does not affect the existing orchard and helps maintain the agricultural integrity of the property.

In the short term, the subdivision reduces non-farm traffic through the cultivated area by transferring the access corridor to the Town of Creston. This helps minimize potential conflicts between agricultural operations and public or utility-related access.

In the long term, the proposal prevents future land-use conflicts by clearly separating municipal access needs from farm operations. This ensures that the remaining productive land can continue to be farmed efficiently without encumbrances, interruptions, or competing uses. By isolating only land with no agricultural value, the proposal protects the long-term viability of the orchard and maintains the overall agricultural functionality of the property. Additionally, the property currently serves as a passive recreation space for the surrounding agricultural community.

Proposal Map / Site Plan

BoundaryAdjustmentSketch.pdf

Are you applying for subdivision pursuant to the ALC Homesite Severance Policy?

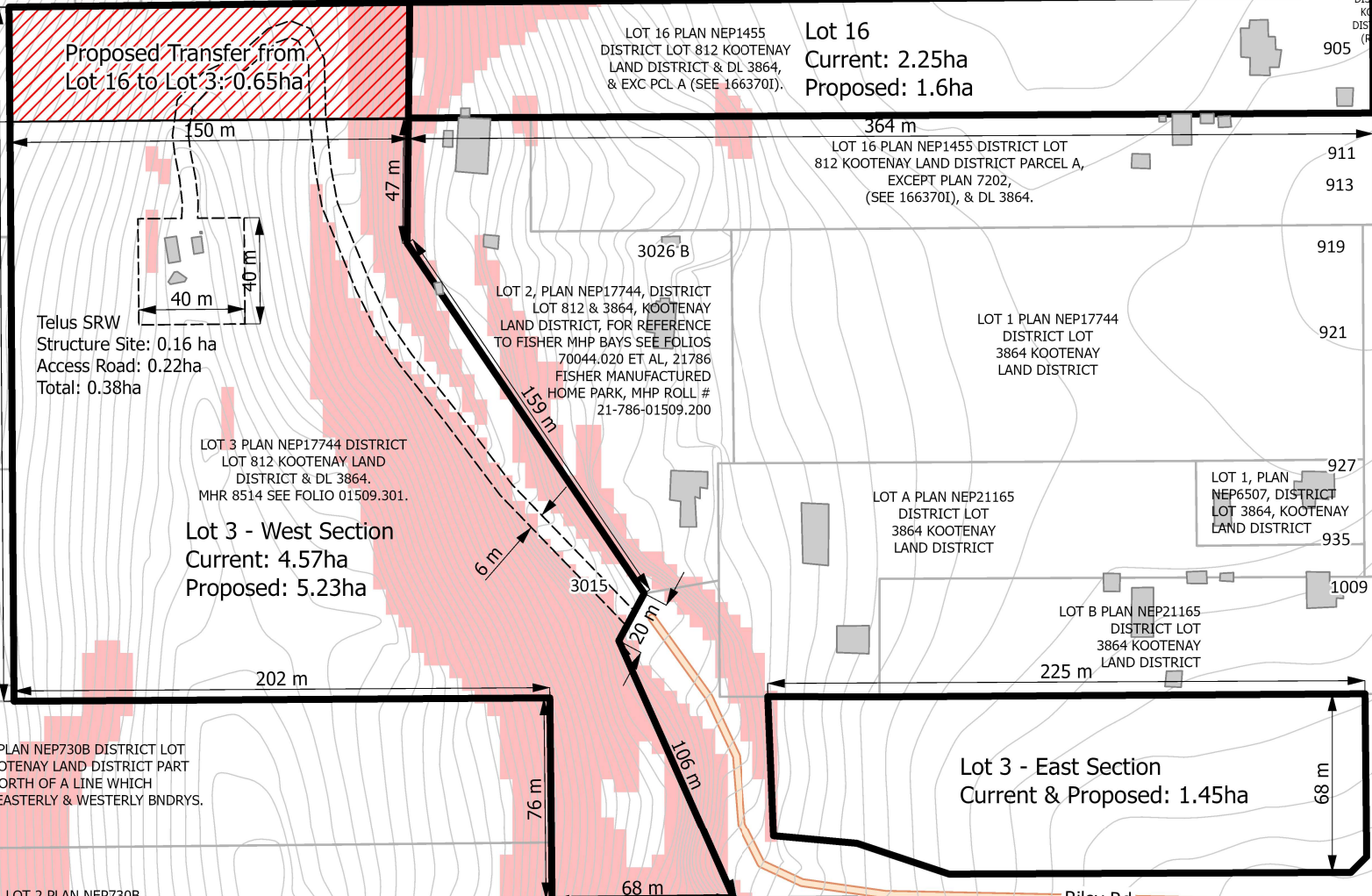
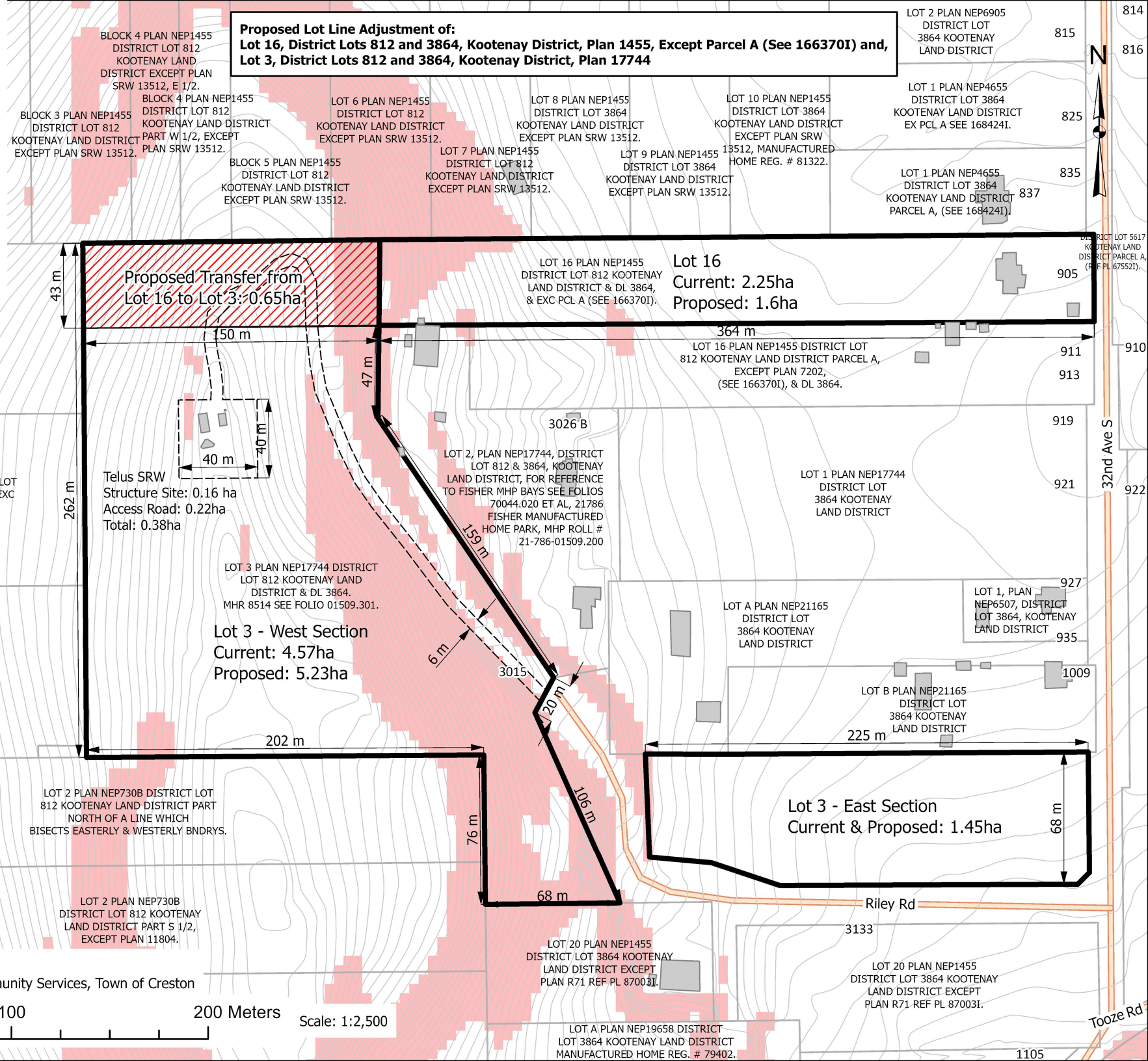
No

7. Optional Documents

Type	Description	File Name
Other files that are related	Map Boundary Sketch	BoundaryAdjustmentSketch.pdf
Photo of the Application Site	2022 Ortho Photo	2022OrthoPhoto.png
Other files that are related	Reservation H11269	905-H11269.pdf
Other files that are related	Title	905 - TITLE-P21956-PID-015-696-235.pdf
Other files that are related	Site Disclosure Statement	905 32 Ave S - Site Disclosure Declaration.pdf
Other files that are related	Chance Find Procedures	Chance_Find_Procedures_KNC.pdf
Other files that are related	Reservation V18728	905 - V18728.pdf
Other files that are related	NEP1455	905 - NEP1455.pdf
Other files that are related	SRW Telus Communications Site Map	905 - KR65381.pdf
Other files that are related	SRW Telus Communications Modification	905 - CA7962628.pdf

- Legend**
- Structures
 - Boundary Adjustment Area
 - Current Lot Boundary
 - Proposed Lots
 - Telus SRW
 - Cadastre
 - 1m Contours
 - Slope < 25%
 - Slope > 25%
 - Road

**Proposed Lot Line Adjustment of:
 Lot 16, District Lots 812 and 3864, Kootenay District, Plan 1455, Except Parcel A (See 1663701) and,
 Lot 3, District Lots 812 and 3864, Kootenay District, Plan 17744**



Drawn: May 19, 2025
 Joel Comer, Director of Community Services, Town of Creston



814
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32nd Ave S
 Tooze Rd