



Board of Directors

Thursday, June 25, 2020

1:00 pm

Via Zoom Online Video Conferencing

A G E N D A

1. Call to Order

2. Land Acknowledgement

- 2.a)** We acknowledge and appreciate that the land on which we gather is the converging, traditional and unceded territory of the Syilx, Secwepemc, Sinixt and Ktunaxa Peoples as well as the Metis Peoples whose footsteps have also marked these lands.

3. Consideration of the Agenda (additions/deletions)

- 3.a)** The agenda for the Regional District of Kootenay Boundary Board of Directors meeting of June 25, 2020 is presented.

Recommendation: Corporate Vote Unweighted

That the agenda for the Regional District of Kootenay Boundary Board of Directors meeting of June 25, 2020 be adopted as presented.

4. Draft Minutes

- 4.a)** The draft minutes of the Regional District of Kootenay Boundary Board of Directors meeting held June 10, 2020 are presented.

[Minutes-Board of Directors-10 Jun-BoD June 25 20 - Pdf](#)

Recommendation: Corporate Vote Unweighted

That the draft minutes of the Regional District of Kootenay Boundary Board of Directors meeting held June 10, 2020 be adopted as presented.

5. Delegations/Presentations

5.a) Presentation

Interior Lumber Manufacturing Association (ILMA)

Dan McMaster, ILMA Executive

Dan Battistella, President, ILMA

Ken Kalesnikoff, Chairman, ILMA

At the request of the Board (April 30th meeting).

6. Applicants and Others Attending to Speak to Agenda Item

**6.a) Application for a Temporary Commercial Use Permit (TCUP)-
Electoral Area A**

Taylor Hamm, applicant, will be in attendance at the meeting to speak to his application.

L. Moore, Senior Planner

**Re: Temporary Commercial Use Permit for a Non-Medical
Cannabis Retail Store-Highway 3B-Electoral Area A**

*Director Grieve, Chair EAS Committee/Director McGregor, Vice
Chair*

A staff report from Liz Moore, Senior Planner regarding an application for a Temporary Commercial Use Permit (TCUP) for a Non-Medical Cannabis Retail Store (NMCRS) in Electoral Area A is presented.

[Staff Report 5Point9 TUP BoD June 25 20](#)

[Letter of Concern-Application for TUP-Retail NonMedicinal Cannabis-
AreaA-BoD June 25 20-](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the Regional District of Kootenay Boundary Board of Directors denies the Temporary Use Permit application submitted by Taylor Hamm, on behalf of 0963072 BC Ltd., to allow for a non-medical Cannabis Retail Store to operate on the property legally described as Lot 23, Plan NEP2016, DL 8392, KD, Beaver Valley, Electoral Area A.

**6.b) L. Moore, Senior Planner
Re: Application for Development Variance Permit
Electoral Area C/Christina Lake**

S. McKeddie, Applicant, will be in attendance at the meeting to speak to the application

*Director Grieve Electoral Area Services Committee
Chair/Director McGregor Vice Chair*

A staff report from Liz Moore, Senior Planner regarding an application for a Development Variance Permit from Steven McKeddie for the construction of a deck addition in Electoral Area C/Christina Lake is presented.

[Staff Report Mckeddie DVP Board-June 25 2020](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by

Steven McKeddie, to allow for a decrease in the rear parcel line setback from 7.5m to 2.1m – a variance of 5.4m to construct the proposed deck addition on the property legally described as Parcel A (KM27500), Block 17, DL 317, SDYD, Plan 50, Electoral Area C/Christina Lake.

**6.c) B. Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention-Electoral Area C/
Christina Lake**

Property Owners Attending

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1664 Westlake Drive-Electoral Area C/Christina Lake

Parcel Identifier: 025-988-697

**Lot 1 District Lot 317 Similkameen Division Yale District Plan
KAP75840**

Owners: Sean, Megan and Susan McQuarrie

[Staff Report-Bylaw Contravention McQuarrie-Board-June 25, 2020 - Pdf](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 317, Similkameen Division Yale District, Plan KAP75840.

7. Unfinished Business

7.a) Verbal Updates

M. Stephens, Interim Manager of Emergency Programs

Re: COVID-19 and Freshet

M. Andison, Chief Administrative Officer

**Re: Impacts of the Wage Wage Continuation COVID-19
Pandemic Policy**

Recommendation: Corporate Vote Unweighted

That the verbal updates on COVID-19, freshet and the impacts of the RDKB Wage Continuation COVID-19 Pandemic Policy be received as presented on June 25, 2020.

8. Communications-RDKB Corporate Communications Officer

8.a) F. Maika, Corporate Communications Officer

Re: Update on RDKB Corporate Communications

Recommendation: Corporate Vote Unweighted

That the verbal update on RDKB corporate communications, presented to the Board on June 25, 2020, be received.

9. Communications-Information Only

9.a) K. Krishna, Deputy Minister, Ministry of Municipal Affairs & Housing-June 18/20

Re: Ministerial Order M192-Public Presence at Meetings

[Update-K.Krishna-DM-MAH-Re. Public Presence-Order M192-BoD June 25 20](#)

[Order M192-Public Presence-BoD June 25 20 m192](#)

[Open Meetings Guidance-June 25 20](#)

9.b) Citizens for Safe Technology-June 14 & June 19/20

Re: What You Need to Know-Telecommunications-5G

[Email-Citizens for SafeTechnology-5G-What You Need to Know-BoD June 25 20](#)

[Citizens for SafeTechnology-Proactive Antenna Siting Protocol-Small Cell LicenceAgreement](#)

[Citizens for SafeTechnology-GettingItWrong in GettingIt Right-Preparing for 5G](#)

Recommendation: Corporate Vote Unweighted

That Information Communications Only items 9.a) and 9.b) be received and direction at the discretion of the Board.

10. Reports

10.a) Monthly Cheque Register Summary

Director Cacchioni, Finance Liaison

The May 2020 Monthly Cheque Register Summary is presented.

[2020 05 May Vendor Payments](#)

Recommendation: Corporate Vote Unweighted

That the May 2020 Monthly Cheque Register Summary for \$586,225.99 be received.

10.b) RDKB Committee Minutes

Minutes of RDKB Committee Meetings as adopted by the respective Committees are presented: Education & Advocacy Committee (May 5/20), Beaver Valley Regional Trails and Regional Parks Committee (May 19/20), and East End Services Committee (May 19/20)

[Minutes-Education and Advocacy Committee-05 May-E&A June 18-BoD June 25 20- Pdf](#)

[Minutes - 19 May 2020-BVRec -June 16-BoD June 25 20Pdf](#)

[Minutes-East End Services Committee-19 May-EES June 16-BoD June 25 20 Pdf](#)

Recommendation: Corporate Vote Unweighted

That the minutes of the following Committee meetings be received:

Education & Advocacy Committee (May 5/20), Beaver Valley Regional Trails and Regional Parks Committee (May 19/20), and East End Services Committee (May 19/20).

10.c) Recreation Commission Minutes

The minutes of the following Recreation Commission meetings are presented: Christina Lake Parks and Recreation Commission (May 13/20), and Grand Forks and District Recreation Commission (May 13/20).

[Final Minutes - Electoral Area C - Parks Recreation Commission - May 13, 2020](#)

[Final Minutes- Grand Forks and District Recreation Commission May 13, 2020](#)

Recommendation: Corporate Vote Unweighted

That the minutes of the following Recreation Commission meetings held on May 13, 2020 be received: Christina Lake Parks and Recreation Commission, and Grand Forks and District Recreation Commission.

10.d) Draft Advisory Planning Commission (APC) Minutes

Electoral Area A, Electoral Area C/Christina Lake, Electoral Area E/West Boundary, and Area E/West Boundary-Big White.

[APC Minutes-Area A-Board-June 25 2020](#)

[APCMinutes-Area C-Board-June 25 2020](#)

[APC Minutes-Area E-Board-June 25 2020](#)

[APC Minutes-Big White-Board-June 25 2020](#)

Recommendation: Corporate Vote Unweighted

That the minutes of the following draft Advisory Planning Commission meetings be received: Electoral Area A (June 2/20), Electoral Area C/Christina Lake (June 2/20), Electoral Area E/West Boundary (June 1/20) and Area E/West Boundary-Big White (June 2/20).

11. Refreshment Break

12. Committee Recommendations to Board of Directors

Recommendations to the Board of Directors referred by the respective RDKB Committees are presented for consideration.

12.a) Education & Advocacy Committee-June 18/20

Director Russell, Committee Chair/Director Dunsdon, Vice Chair

Energy Conservation Incentives-Amended Advocacy Strategy Resolution

[Staff Report-Electricity Conservation Incentives-Education&Advocacy-June18-BoD June 25 2020 - Pdf](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors adopt the amendments to the original RDKB *Energy Conservation Incentives Advocacy Strategy* resolution as recommended by the Education & Advocacy Committee and presented to the Board on June 25, 2020. **FURTHER** that the intent to equalize incentives across energy providers for all residential customers be recognized.

12.b) Education & Advocacy Committee-June 18/20

Director Russell, Committee Chair/Director Dunsdon Vice Chair

2020 UBCM Convention Meeting Requests

[Restrictions on Commercial Water Bottling-2020 UBCM MtgRequest-BoD June 20](#)

[RDKB Letter-Premier-Minister Donaldson-Groundwater Bottling-May 20.docx](#)

[Incentives for Use of High Efficiency Electrical appliances-Amended Advocacy Strategy](#)

[CPCC Sustainable Funding Models-RDKB Advocacy Strategy](#)

[Public Transport to Medical Appointments RDKB Advocacy Strategy](#)

[Cost of Health Care in Rural BC-Letter to Minister & MLA](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve submission of the following advocacy issues to the relevant Provincial Ministries and or Agencies requesting meetings at the 2020 UBCM Convention:

1. *Moratorium on Commercial Water Bottling*-Ministry of Forests, Lands, Natural Resource Operations and Natural Development (FLNROND).
2. *Incentives for Use of High Efficiency Electrical Appliances*-British Columbia Utilities Commission (BCUC)/Ministry of Energy, Mines & Petroleum Resources (EMPR).

3. *More Sustainable Funding Model for Ongoing Local Government Programs*-Ministry of Municipal Affairs & Housing (MAH).
4. *Public Transportation to Medical Appointments*-Ministry of Health, Interior Health, BC Transit
5. *TeleHealth*-Ministry of Health.

12.c) Education & Advocacy Committee-June 18/20

Director Russell, Committee Chair/Director Dunsdon, Vice Chair

Ministry Meetings in Victoria

[CPCC Sustainable Funding Models-RDKB Advocacy Strategy](#)

[Boundary Community Forests-RDKB Advocacy Strategy](#)

[Expanded Cell Coverage-RDKB Advocacy Strategy](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve the following advocacy issues for requesting meetings with the Province to be held in Victoria, BC:

1. *Columbia Pollution Control Centre (CPPC)*-Ministry of Municipal Affairs & Housing (MAH).
2. *Boundary Community Forests-Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD)*.
3. *Expanded Cell Coverage (Paulson/Nancy Greene Summit Areas)*-Ministry Responsible for Cell Coverage.

12.d) Education & Advocacy Committee-June 18/20

Director Russell, Committee Chair/Dunsdon, Vice Chair

Written Process for Determining Referral of Advocacy Issues from Board of Directors

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct staff to draft a policy that sets out a written process clarifying a practice for referring advocacy matters and discussions on issues which may take significant staff time, to the Board of Directors for consideration and direction.

12.e) Education & Advocacy Committee-June 18/20

Director Russell, Committee Chair/Director Dunsdon, Vice Chair

Refer Expanded Cell Coverage Advocacy to Highway 3 Mayors & Chairs Coalition

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors refer the matter of expanded cell coverage advocacy to the Highway 3 Mayors and Chairs Coalition for consideration. **FURTHER** that the

RDKB collaborate with, and provide the Highway 3 Mayors and Chairs Coalition support for any efforts it may take to enhance cell phone coverage.

13. New Business

13.a) B. Champlin, Manager of Building Inspection Services

Re: Building Bylaw Contravention-Electoral Area A

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1981 Old Salmo Road, Fruitvale, B.C.-Electoral Area A'

Parcel Identifier: 010-233-636

Lot B District Lot 1236 Kootenay District Plan 4481 Except Plan 17227

Owner: Katerina Manolis

[Staff Report-Bylaw Contravention Manolis-Board-June 25, 2020 - Pdf](#)

Recommendation: Stakeholder Vote (Electoral Area Directors) Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as against the property legally described as Lot B, District Lot 1236, Kootenay District, Plan 4481, Except Plan 17227.

13.b) B. Champlin, Manager of Building Inspection Services

Re: Building Bylaw Contravention-Electoral Area C/ Christina Lake

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

4485 Boat Access East Side-Electoral Area C/Christina Lake

Parcel Identifier: 019-059-329

Block A District Lot 4075S Similkameen Division Yale District

Owner: Janet Arnell

[Staff Report-Bylaw Contravention Arnell-Board-June 25, 2020 - Pdf](#)

Recommendation: Stakeholder Vote (Electoral Area Directors) Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally

described as against the property legally described as Block A, District Lot 4075S, Similkameen Division Yale District.

13.c) B. Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention-Electoral Area E/
West Boundary

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

6870 Christian Valley Road, Westbridge, B.C.-Electoral Area E/West Boundary

Parcel Identifier: 009-371-885

Lot 1 District Lot 3637 Similkameen District Yale District Plan 12818

Owner: Thomas Stoffel

[Staff Report-Bylaw Contravention Stoffel-Board-June 25, 2020 - Pdf](#)

Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as against the property legally described as Lot 1, District Lot 3637, Similkameen Division Yale District, Plan 12818.

13.d) B. Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention-Electoral Area E/
West Boundary

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

6475 Highway 33, Carmi, B.C.-Electoral Area E/West Boundary-Parcel Identifier: 030-104-858

Lot 2 District Lot 2360 Similkameen Division Yale District Plan EPP63586

Owners: Daniel and Michelle Kaufman

[Staff Report-Bylaw Contravention Kaufman-Board-June 25, 2020 - Pdf - Pdf](#)

Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted

That the Regional District of Kootenay Boundary Board of Directors invite the owners, Daniel and Michelle Kaufman, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against

the property legally described as Lot 2, District Lot 2360, Similkameen Division Yale District, Plan EPP63586.

13.e) J. Dougall, Manager of Environmental Services

RE: Service Truck Purchase Authorization

Director Russell, Environmental Services Liaison

A staff report from Janine Dougall, General Manager of Environmental Services regarding the results from the procurement process for the purchase of a service truck for use in Environmental Services (Solid Waste) is presented.

[Staff Report-Service Truck Purchase-BoD- June 25 20](#)

[Staff Memo-2020 Service Truck RFP Report-BoD June 25 20](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors authorize staff to proceed with the purchase of a 2020 Ford F350 Crew Cab with a Work Truck West Warner aluminum service body from Metro Motors Ltd. for a total cost of \$102,210 (including applicable taxes).

13.f) K. Anderson, Watershed Planner

Re: Boundary Integrated Watershed Service Grant Applications

Director Russell, Chair, Boundary Community Development Committee/Director McGregor, Vice Chair

A staff report from Kristina Anderson, Watershed Planner presenting a list of potential grant recipients related to the grant opportunity provided by Boundary Integrated Watershed Service (BIWS) to support the implementation of Boundary Watershed Management Plans.

[Staff Report-BIWS GrantApplications BoD June25 20](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approves the following two projects, for a combined total of \$20,000, using funds from the BIWS Project Fund - account # 12 610 235: Christina Lake Stewardship Society's request for \$10,000 in support of the project entitled "Christina Creek Fish Barrier Feasibility Study-Phase 1 (Northern Pike Prevention)"; and Granby Wilderness Society's request for \$10,000 in support of the project entitled "Restoring Black Cottonwood Riparian Ecosystems for Species at Risk in the Kettle River Watershed".

13.g) L. Moore, Senior Planner

Re: Application for Development Variance Permit Electoral Area C/Christina Lake

*Director Grieve Electoral Area Services Committee
Chair/Director McGregor, Vice Chair*

A staff report from Liz Moore, Senior Planner regarding an application for a Development Variance Permit from Rod Bergum, Bergum Contracting Ltd., on behalf of Susan Sander, for the construction of a detached garage with a secondary suite in Electoral Area C/Christina Lake is presented.

[Staff Report Sandner DVP-Board-June 25 2020](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by Rod Bergum, Bergum Contracting Ltd., on behalf of Susan Sandner, to allow for an increase in the maximum height of an accessory building from 4.6m to 7.5m – a variance of 2.9m to construct a detached two-storey garage and secondary suite on the property legally described as Parcel A, Plan KAP50, DL317, SDYD (Being a consolidation of Lots 4, 5, & 6, see LB378272), Electoral Area C/Christina Lake.

13.h) L. Moore, Senior Planner

**Re: Application for Development Variance Permit
Electoral Area E/West Boundary**

*Director Grieve Electoral Area Services Committee
Chair/Director McGregor Vice Chair*

A staff report from Liz Moore, Senior Planner regarding an application for a Development Variance Permit from Landform Architecture Ltd., on behalf of the owners of 130 Cougar Road, Mt. Baldy, Electoral Area E/West Boundary, to permit a decrease in the interior parcel line setback, is presented.

[Staff Report Mt. Baldy Estates DP Board-June 25 2020](#)
[Comments-Mt. Baldy CondoDVP](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by Landform Architecture Ltd, on behalf of Mount Baldy Estates Ltd, to allow for a decrease in the setback from the interior parcel line from 3.0m to 0.0m – a variance of 3.0m, to construct an exit canopy on the property legally described as SL 3, DL 100s, SDYD, Strata Plan KAS1840, Mount Baldy, Electoral Area E/West Boundary.

13.i) L. Moore, Senior Planner

Re: Application for Development Permit-Electoral Area E/West Boundary-Big White

*Director Grieve Electoral Area Services Committee
Chair/Director McGregor Vice Chair*

A staff report from Liz Moore, Senior Planner regarding an application from the purchasers of 7390 Porcupine Road, Joseph Gagnon and Sheri Anne Doyle, for an Alpine Environmentally Sensitive Development Permit in Electoral Area E/West Boundary-Big White is presented.

[Staff Report Gagnon-Doyle DP Board-June 25 2020](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That the staff report regarding the Development Permit application submitted by Joe Gagnon and Sheri Anne Doyle to construct a new covered staircase in the Alpine Environmentally Sensitive Landscape Reclamation Development Permit Area on the parcel legally described as Lot 10, DL 4109s, SDYD, Plan KAP23322, Big White, Electoral Area E/West Boundary, be received.

13.j) L. Moore, Senior Planner

Re: Atco Lumber Referral-Proposed Cut Blocks Electoral Area A

*Director Grieve Electoral Area Services Committee
Chair/Director McGregor Vice Chair*

A staff report from Liz Moore, Senior Planner regarding a referral from Atco Wood Products (ATCO) inviting the RDKB to provide comments on their proposal for 4 cut blocks (O15-O18) in Development Area 'O' (Linnie/Webster), Electoral Area A is presented.

[Staff Report ATCO Board-June 25 2020](#)

Recommendation: Corporate Vote Unweighted

That the staff report regarding ATCO Wood Products proposed harvest of a variety of trees from 4 cut blocks on DL 1236, DL12700, DL 12463 and portions of unsurveyed Crown Land in Electoral Area A be received.

13.k) L. Moore, Senior Planner

Re: FrontCounter BC Crown Land Tenure Referral Electoral Area B/Lower Columbia-Old Glory

Director Grieve, Chair, Electoral Area Services Committee/Director McGregor, Vice Chair

A staff report from Liz Moore, Senior Planner regarding a referral from FrontCounter BC for a Crown Land Tenure application from Steve

Powell, on behalf of Outback Snowmobile Tours Inc., in Electoral Area E/West Boundary is presented.

[Staff Report Snowmobile Board-June 25 2020](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors advise Front Counter BC that the referral regarding the Crown land tenure application from Outback Snowmobile Tours Inc., on unsurveyed Crown land in Big White and Electoral Area E/West Boundary is supported subject to:

- clarification from the applicant on the area involved for their proposed trail network, including potential areas where off-trail riding may occur;
- an assessment by a biologist on the potential impacts on wildlife of this trail network;
- clarification on the location of the outback cabin and sewage disposal for that cabin;
- an indication of where their machines and fuel will be stored and serviced, and the full range of machines that will be used on the trail network.

13.l) L. Moore, Senior Planner

**Re: Regional District of Okanagan-Similkameen (RDOS)
Referral**

**Bylaw Amendments-Adjacent to Electoral Area E/
West Boundary**

*Director Grieve, Chair, Electoral Area Services
Committee/Director McGregor, Vice Chair*

A staff report from Liz Moore, Senior Planner presenting a referral from the Regional District of Okanagan-Similkameen (RDOS) providing the RDKB an opportunity to provide comments on the RDOS proposed Official Community Plan (OCP) and Zoning Bylaw amendments for water and dock-related policy and regulation changes.

[Staff Report RDOS Board-June 25 2020](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors advise the Regional District of Okanagan-Similkameen that the Regional District of Kootenay Boundary supports the amendments to the Official Community Plans and Zoning Bylaws for RDOS's Electoral Areas 'A', 'C', 'D', 'E', 'F' and 'I' as outlined in the Bylaw Referral.

13.m) L. Moore, Senior Planner

**Re: Referral from Interfor Information Package for
Tree Farm Licence-Electoral Area E/West Boundary-Big White**

*Director Grieve, Chair, Electoral Area Services
Committee/Director McGregor, Vice Chair*

A staff report from Liz Moore, Senior Planner regarding a referral from Interfor providing the RDKB with an opportunity to provide comments on their Information Package for Tree Farm License 8 – Management Plan #11 in Electoral Area E/West Boundary is presented.

[Staff Report Interfor Board-June 25 2020](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct staff to forward this staff report Interfor Referral – Tree Farm License 8 – Management Plan #11 Information Package, dated June 25, 2020, which includes the recommendations of the Electoral Area E/West Boundary and Big White Advisory Planning Commissions to Interfor Corporation for consideration.

13.n) Grants in Aid - as of June 18, 2020:

[Grants in Aid-Board-June 25 2020](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Weighted**

That the following grants-in-aid be approved:

1. Beaver Valley X-Country Ski Club – Renovating Sno-Cat Garage and replacing Sno-Cat tracks – Electoral Area A - \$1,500.
2. Christina Lake Tourism Society – Supporting Student Hours – Electoral Area C/Christina Lake - \$2,482.
3. Joan Hiram (On Behalf of Cops for Kids) – Refreshments and Donation for RCMP Cops for Kids Bicycle Tour – Electoral Area C/Christina Lake - \$1,000

14. Board Appointments Updates

- 14.a)** Southern Interior Development Initiative Trust (S.I.D.I.T.)-Director McGregor
B.C. Rural Centre/Southern Interior Beetle Action Coalition (S.I.B.A.C.)-Director McGregor
Okanagan Film Commission-Director Gee (Reports Attached)
Boundary Weed Stakeholders Committee-Director Gee
Columbia River Treaty Local Government Committee (CRT LGC)-Directors Worley & Langman
(Reports Attached)
Columbia Basin Regional Advisory Committee (CBRAC)-Director Worley & Goran Denkovski, Manager of Infrastructure & Sustainability

West Kootenay Regional Transit Committee (Directors Cacchioni & Worley, Alternate Director Parkinson)
Rural Development Institute (RDI)-Director Worley
Chair's Update-Chair Langman
[OK FilmCommission-FilmingBeginning-WithSafetyProtocols-BoD June 25 20](#)
[OK Film-Report-Filming-COVID-19 SafetyPlans-BoD June 25 20](#)
[BC Hydro- cr ph2 mar06 20-BoD June 25 20](#)
[CCRT LGC Update May 20-BoD June 25 20](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors receive the Board Appointment(s) Updates as presented to the Board on June 25, 2020.

15. Bylaws

**15.a) J. Dougall, General Manager of Environmental Services
Re: RDKB Solid Waste Management Facilities Regulatory
Bylaw No. 1729, 2020**

First, Second, Third Readings and Adoption

Director Russell Environmental Service Liaison

A staff report from Janine Dougall, General Manager of Environmental Services regarding RDKB Bylaw No. 1729, 2020 is presented.

[Staff Report-SWM Facilities Regulatory Bylaw-BoD June25 20](#)
[Bylaw 1729-Adopt-BoD June2 20](#)

Recommendation: Corporate Vote Weighted

That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be read a First, Second and Third time.

Recommendation: Corporate Vote Weighted

That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be Reconsidered and Adopted.

**15.b) B. Ihlen, General Manager of Finance
RDKB Board of Directors Remuneration Bylaw No. 1736, 2020**

First, Second, Third Readings & Adoption

Director Cacchioni, Finance Liaison

A staff report from Barb Ihlen, General Manager of Finance regarding RDKB Bylaw No. 1736, 2020 is presented.

[Staff Report-Director Remuneration-Bylaw&Policy-BoD June 25-20](#)

Recommendation: Corporate Vote Unweighted

That Regional District of Kootenay Boundary Board of Directors Remuneration Bylaw No. 1736, 2020 be read a First, Second and Third time.

Recommendation: Corporate Vote Unweighted

That Regional District of Kootenay Boundary Board of Directors Remuneration Bylaw No. 1736, 2020 be read Reconsidered and Adopted.

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve the application of the 2020 remuneration rates to the members of the RDKB Board of Directors retroactive to January 1, 2020.

**15.c) T. Lenardon, Manager Corporate Administration/
Corporate Officer
Re: Adoption of Proposed RDKB Procedure Bylaw
No. 1720, 2020**

A staff report from Theresa Lenardon, Manager of Corporate Administration/Corporate Officer presenting the final draft of RDKB Procedure Bylaw No. 1720, including final updates as per feedback received from Directors after April 30, 2020 is presented.

[Staff Report & Bylaw 1720-Final Edits & Adoption-BoD June 25 20 - Pdf](#)

Recommendation: Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve the final updates to the proposed RDKB Procedure Bylaw No. 1720 as presented to, and discussed by the Board on June 25, 2020.

Recommendation: Corporate Vote Unweighted

That Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2020 be read a First, Second and Third time.

Recommendation: Corporate Vote Unweighted

That Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2020 be Reconsidered and Adopted.

**15.d) Bylaw No. 1724-Amending Electoral Area C Official
Community Plan -Bylaw No. 1250, 2004
Rescind Second Reading & Second Reading as Amended**

[Bylaw1724 OCP Amend Hicks-Updated-BoD June25 20](#)

[Staff Report-Bylaw Amendment Hicks Board-June 25 20](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That Regional District of Kootenay Boundary Official Community Plan Amendment Bylaw No. 1724, 2020 Second Reading be rescinded.

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That Regional District of Kootenay Boundary Official Community Plan Amendment Bylaw No. 1724, 2020 be read a Second time as amended.

15.e) RDKB Bylaw No. 1726-Amending Electoral Area C Zoning Bylaw No. 1300, 2007

Rescind Second Reading & Second Reading as Amended

[Bylaw1726 Zoning Amend Hicks-Updated-BoD June25 20](#)
[Staff Report-Bylaw Amendment Hicks Board-June 25 2020](#)

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That Regional District of Kootenay Boundary Zoning Amendment Bylaw No. 1726, 2020 Second Reading be rescinded.

**Recommendation: Stakeholder Vote
(Electoral Area Directors) Unweighted**

That Regional District of Kootenay Boundary Zoning Amendment Bylaw No. 1726, 2020 be read a Second time as amended.

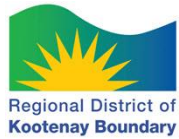
16. Late (Emergent) Items

17. Discussion of Items for Future Meetings

18. Question Period for Public and Media

Closed Meeting

20. Adjournment



Board of Directors
Wednesday, June 10, 2020
Zoom Online Video Conferencing
Minutes

Board Members Present:

Director D. Langman, Chair
Director G. McGregor, Vice-Chair
Director A. Grieve
Director L. Worley
Director R. Russell
Director V. Gee
Director S. Morissette
Director M. Walsh
Director R. Cacchioni
Director A. Morel
Director C. Korolek
Director G. Shaw
Director R. Dunsdon

Staff Present:

M. Andison, Chief Administrative Officer
T. Lenardon, Manager of Corporate Administration Corporate Officer/Recording Secretary
B. Ihlen, General Manager of Finance
J. Chandler, General Manager of Operations/Deputy Chief Administrative Officer
J. Dougall, General Manager of Environmental Services
B. Champlin, Manager of Building Inspection
M. Stephens, Interim Manager of Emergency Programs
F. Phillips, Senior Energy Specialist
G. Denkovski, Manager of Infrastructure and Sustainability
F. Maika, Corporate Communications Officer
D. Derby, Regional Fire Chief

Others Attending:

J. Edwards, Grand Forks Gazette
D. Powell, Delegate

1 Call to Order

1.a) The Chair called the meeting to order at 1:00 p.m.

2. Land Acknowledgement

2.a) We acknowledge and appreciate that the land on which we gather is the converging, traditional and unceded territory of the Syilx, Secwepemc, Sinixt and Ktunaxa Peoples as well as the Metis Peoples whose footsteps have also marked these lands.

3. Consideration of the Agenda (additions/deletions)

3.a) The agenda for the Regional District of Kootenay Boundary Board of Directors meeting of June 10, 2020 was presented.

The agenda was amended with the addition of a second link to the *Delegations* agenda item 5.a) and with the Province of BC's *#DifferentTogether Pledge* anti-racism declaration to the *Late (Emergent) Items* agenda item 14.a), and it was;

256-20 Moved: Director Morissette Seconded: Director Cacchioni

Corporate Vote Unweighted

That the agenda for the Regional District of Kootenay Boundary Board of Directors meeting of June 10, 2020 be adopted as amended.

Carried.

4. Draft Minutes

4.a) The draft minutes of the Regional District of Kootenay Boundary Board of Directors meeting held May 28, 2020 were presented.

The discussion on the update for the 9-1-1 Emergency Communications Work Plan on page 9 of the May 28th minutes will be revised to read "fire departments" turnout gear, (rather than 9-1-1 Emergency Communications turnout gear), and it was;

257-20 Moved: Director McGregor Seconded: Director Dunsdon

Corporate Vote Unweighted

That the draft minutes of the Regional District of Kootenay Boundary Board of Directors meeting held May 28, 2020 be adopted as amended.

Carried.

5. Delegations

5.a) Dan Powell, Christina Lake Marina

Re: Request for Letter of Support-Christina Lake Marina Grocery Store BC Liquor Distribution Branch Rural Agency Program Submission

The Chair welcomed Mr. Powell to the meeting.

Mr. Powell explained his request for a letter of support to include with his submission to the BC Liquor Distribution Branch Rural Agency program for a retail liquor licence at the Christina Lake Marina grocery store.

Mr. Powell reviewed the services the marina provides to boat access only property owners and he explained the BC Liquor Distribution Branch's requirements with respect to the distance of the marina in relation to the other three rural liquor agency stores located at the south end of Christina Lake, with the marina as the closest public moorage access.

Mr. Powell reviewed letters of support from Christina Gateway Community Development Association, the Christina Lake Tourism Society and several boat-access only property owners.

The Chair provided the Board with an opportunity for comments and questions. There were no questions. Director McGregor, Electoral Area C/Christina Lake thanked Mr. Powell for attending the meeting and providing the information. Mr. Powell left the meeting.

258-20 Moved: Director McGregor Seconded: Director Cacchioni

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors provide a letter of support to Mr. Dan Powell for the Christina Lake Marina Grocery Store Rural Agency Program submission to the BC Liquor Distribution Branch for a retail liquor licence as presented to the Board of Directors on June 10, 2020.

Carried.

6. Unfinished Business

6.a) Verbal Updates on COVID-19 & Freshet

M. Stephens, Interim Manager of Emergency Programs

M. Andison, Chief Administrative Officer (CAO)

Mark Stephens, Interim Manager of Emergency Programs

Re: COVID-19 and Freshet EOC Activations

Director Worley, Emergency Preparedness Liaison

Mr. Stephens gave an overview of the freshet and COVID-19 EOC activations. He advised that during May 29-31, there was a full EOC activation for flooding in the Grand Forks and Boundary areas and he reviewed the pre-planning work that was implemented. Mr. Stephens reported on the damage to some buildings and building contents. Work on demobilizing EOC assets has begun. The freshet EOC remains at Level 2, but is decreasing daily.

Mr. Stephens answered inquiries from the Board regarding evacuation mapping, EOC claims and a future debrief on this recent event. He advised that arrangements for an after-action meeting are in progress.

Mr. Stephens provided information regarding the COVID-19 EOC activities noting that not much has changed since the last update two weeks ago and that activation is minimal at this time. Community meetings continue to take place throughout the RDKB's jurisdiction.

For a future meeting, staff will provide a report, including an analysis on COVID-19 and flooding EOC expenses as well as information on what the cost recovery portion from the Province may be. Staff explained the Provincial position respecting funding support to local governments for COVID-19 cost recovery.

Staff answered further inquiries regarding COVID-19 recovery planning and cost-recovery and whether the matter will be reviewed and discussed by the Boundary Community Development and the East End Services Committees, as the primary venues for discussions, given the differences in the RDKB east and west end communities. Staff advised that most of the recovery planning is done at the corporate level while supporting the guidelines and restrictions set out by the Provincial Health Officer, IHA, WorkSafe BC and agencies and associations. It was noted that Board discussions can be referred to the aforementioned committees for additional details.

M. Andison, CAO

*Re: Impacts of the Wage Continuation COVID-19 Pandemic Policy
Director Cacchioni, Finance Liaison*

Mark Andison, CAO updated the Board on the costs related to the *Wage Continuation COVID-19 Pandemic Policy* and advised that since the last update provided to the Board on May 28th, that to date the cost of paid leave for staff self-quarantine is \$29,912.

259-20 Moved: Director Grieve Seconded: Director Worley

Corporate Vote Unweighted

That the verbal updates regarding COVID-19 and freshet EOC activations and the impacts of the Wage Continuation COVID-19 Pandemic Policy, as presented to the Board of Directors on June 10, 2020, be received.

Carried.

6.b) M. Andison, Chief Administrative Officer (CAO)**Re: Draft RDKB Services Restoration Plan**

A staff report from Mark Andison, CAO presenting the draft RDKB Services Restoration Plan which provides a high level framework for the resumption and continuation of RDKB services in the context of the current COVID-19 pandemic.

The CAO reviewed the draft Services Restoration Plan advising that the RDKB is taking a gradual staged approach to reopening its facilities and services. He noted that staff are developing parallel site specific safety plans. The Restoration Plan includes 4 stages and is a living document that will be reviewed and revisited as circumstances change. The Board will continue to receive updates on financial impacts.

The Chair reviewed the recommendation from the Provincial Health Officer, Bonnie Henry to take a slow and cautious approach to reopening.

Director Russell stated that he feels it is worth noting in the document that both physical and mental health are important in terms of objectives. There was a discussion on the criteria used for risk assessment in the draft plan and Director Russell suggested that an explicit assessment of the service(s) benefits be measured against the risks of opening.

260-20 Moved: Director Dunsdon Seconded: Director Russell

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve the RDKB Services Restoration Plan which provides a high level framework for the resumption and continuation of RDKB services in the context of the current COVID-19 pandemic.

Carried.

**6.c) Freya Phillips, Senior Energy Specialist and
Brian Champlin, Manager of Building Inspection Services
Re: BC Energy Step Code**

Director Russell, Environmental Services Liaison

A staff report from Freya Phillips, Senior Energy Specialist and Brian Champlin, Manager of Building Inspection Services regarding the *BC Energy Step Code* was presented.

Staff explained the three options for implementing the *BC Energy Step Code* and answered inquiries regarding the incentives for builders to meet one or more steps of the Code. Staff also answered questions on the third option; "early mandatory compliance" and reviewed stakeholder engagement

There will be a further discussion regarding RDKB incentives and how to fund them at a future meeting. Staff noted the difficulty with getting "buy-in" on incentives and explained that they are reviewing a different approach through engagement to find the needs of the RDKB communities and to build a program based on those needs.

261-20 Moved: Director Cacchioni Seconded: Director Shaw

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct staff to engage key stakeholders on the three Energy Step Code implementation options.

Carried.

**6.d) Appointment-Advisory Planning Commission
Electoral Area E/West Boundary-Big White**

Appoint Peter Hutchinson

262-20 Moved: Director Gee Seconded: Director Grieve

Stakeholder Vote (Electoral Area Directors) Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve the appointment of Peter Hutchinson to the Electoral Area E/West Boundary-Big White Advisory Planning Commission.

Carried.

7. Communications-RDKB Corporate Communications Officer

7.a) An update on RDKB corporate communications will be provided at a future meeting.

8. Communications-Information Only

8.a) Municipal Finance Authority of BC

Re: Report on Activities During 2019 & First Quarter of 2020

Once more information on lending becomes available, staff will advise the Board if there may be possible budgetary impacts and what they may be.

263-20 Moved: Director Shaw Seconded: Director McGregor

Corporate Vote Unweighted

That Communications (information only) Item 8.a) be received.

Carried.

9. Reports

9.a) Monthly Cheque Register Summary

The Monthly Cheque Register Summary will be provided at the next meeting.

9.b) RDKB Committee Minutes

Minutes of RDKB Committee Meetings as adopted by the respective Committees are presented.

264-20 Moved: Director McGregor Seconded: Director Korolek

Corporate Vote Unweighted

That the following minutes of RDKB Committee meetings be received:

Boundary Community Development Committee (May 6/20) and Policy and Personnel Committee (May 28/20).

Carried.

9.c) Recreation Commission Minutes

The meeting minutes of the May and June 2020 Christina Lake Parks and Recreation Commission and the Grand Forks and District Recreation Commission will be presented at a future meeting.

9.d) Draft Advisory Planning Commission (APC) Minutes

Draft APC minutes will be presented at the June 25, 2020 meeting.

10. Committee Recommendations to Board of Directors

Recommendations to the Board of Directors referred by the respective RDKB Committees are presented for consideration.

10.a) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Chair & Board Appointment Policy

265-20 Moved: Director Russell Seconded: Director Morel

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors approve an amendment to the Chair and Board Appointment Policy where the full Board of Directors appoints the RDKB representative to the Municipal Finance Authority (MFA) and the Municipal Insurances Association (MIA). **FURTHER** that the Policy be adopted as amended by the Board on June 10, 2020 and be circulated accordingly.

Carried.

10.b) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Closed Meeting Agendas & Information Policy

266-20 Moved: Director McGregor Seconded: Director Worley

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors adopt the Closed Meeting Agendas and Information Policy as presented to, and approved by the Policy and Personnel Committee on February 27, 2020. **FURTHER**, that the Policy be distributed accordingly.

Carried.

10.c) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Board Communication Protocol Policy

267-20 Moved: Director Cacchioni Seconded: Director Korolek

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors adopt the Board Communication Protocol Policy as presented to, and approved by the Policy and Personnel Committee on February 27, 2020. **FURTHER**, that the Policy be distributed accordingly.

Carried.

10.d) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Contaminated Soils Policy

268-20 Moved: Director McGregor Seconded: Director Dunsdon

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors adopt the Contaminated Soils Policy as presented to, and approved by the Policy and Personnel Committee on February 27, 2020. **FURTHER**, that the Policy be distributed accordingly.

Carried.

10.e) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Remuneration Bylaw Redesign

The Board reviewed the staff report and the recommendation proposing amendments to the Board Remuneration Bylaw that was referred to the Board from the Policy and Personnel Committee.

A discussion ensued. Staff answered questions relating to the formulas and methods used to determine Directors' personal deductions and taxation and after-tax compensation, the impact of removing the one-third tax exemption for local government elected officials (2018), the Consumer Price Index (CPI), the process used in payroll for deductions and the averaging of Statements of Financial Information (SOFI).

There was further discussion. Director Cacchioni expressed his concerns with the proposed recommendation in the staff report and noted that some of the remuneration values have not been changed since 2013. He also expressed concerns about CRA after-tax payments.

It was noted that CPI increases will be retroactive to January 1, 2020, and it was;

269-20 Moved: Director McGregor Seconded: Director Worley

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors adopt the following recommendation for the redesign of the Director Remuneration Bylaw as approved by the Policy and Personnel Committee on May 28, 2020:

1. simplify the calculation of Director remuneration and allowances by making it as straightforward as possible, easy to explain, and easy to understand;
2. maintain a distinction between base remuneration and expense allowances for eligible expenses such as travel, office and technology and/or those that are specific to the role and reflect the unique local conditions;
3. ensure all stipends and allowances have an annual increase based on the December BC CPI and be increased starting January 1 the following year;
4. review stipends and allowances one year prior to the election using comparable regional district data similar to the Management Compensation policy and/or retain a consultant to provide recommendations;
5. include an explicit list of the different meetings RDKB Directors attend over and above the RDKB Committee and Board meetings, such as Recreation Commission, APC etc. that includes the compensation to be provided; and
6. effective 2020 and moving forward, T2200-Declaration of Conditions of Employment forms be issued to all Directors.

Carried.

(Director Cacchioni opposed)

10.f) Policy & Personnel Committee-May 28/20

Director McGregor, Committee Chair/Director Grieve, Vice Chair

Findings Regarding Board Remuneration

Barb Ihlen, General Manager of Finance reviewed the findings with respect to Board remuneration and she explained the use of the best practices for group comparisons as set out in the UBCM Council and Board Remuneration Guide and the use of the

Statement of Financial Information (SOFI) reports to compare RDKB Director remuneration with other regional districts. There are complexities and challenges in comparing one regional district to another.

Staff also reviewed the increase in taxation due to increases in remuneration and stated that all personal tax situations are variable and different.

270-20 Moved: Director McGregor Seconded: Director Grieve

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors receive the findings on Director Remuneration as reviewed and discussed by the Policy and Personnel Committee on May 28, 2020 and as presented by staff to the Board on June 10, 2020.

Carried.

(Director Cacchioni opposed)

10.g) Boundary Community Development Committee (June 3/20)

Director McGregor, Committee Chair/Director Russell, Vice Chair

*Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Review of Kootenay-Boundary Land Use Plan*

Moved: Director McGregor Seconded: Director Korolek

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct staff to send a letter to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) requesting that the Ministry conduct a review of the Kootenay-Boundary Land Use Plan.

It was noted that the Boundary Community Development Committee discussed this matter at their June meeting where the discussion was about asking the Ministry when a review of the plan may take place and not about asking the Ministry for a review.

Directors McGregor and Korolek agreed to withdraw the motion, and it was;

271-20 Moved: Director McGregor Seconded: Director Korolek

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors ask the Ministry of Forests, Lands, Natural Resource Operations and Rural Development when they anticipate a review of the Kootenay-Boundary Land Use Plan may take place.

Carried.

11. New Business**11.a) F. Phillips, Senior Energy Specialist****Re: CARIP Reporting and Climate Action Update***Director Russell, Environmental Services Liaison*

A staff report from Freya Phillips, Senior Energy Specialist regarding the 2019 Climate Action Revenue Incentive Program (CARIP) Report and associated contribution to the Climate Action Reserve Fund was presented.

272-20 Moved: Director Cacchioni Seconded: Director Morel

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors direct staff to allocate \$18,165 to the RDKB Climate Action Reserve Fund to offset the RDKB's measurable corporate greenhouse gas emissions reported to the Province of BC for the 2019 fiscal year.

Carried.

11.b) Grants in Aid - as of June 4, 2020:

273-20 Moved: Director Grieve Seconded: Director Worley

Stakeholder Vote (Electoral Area Directors) Weighted

That the following grant-in-aid be approved:

Trails to the Boundary Society–2020 Administration and Quickbooks–Electoral Area 'E'–\$862.00.

Carried.

11.c) J. Chandler, General Manager of Operations/**Deputy Chief Administrative Officer****Re: Award of Construction Contract-Big White Fire Hall**

A staff report from James Chandler, General Manager of Operations/Deputy Chief Administrative Officer seeking pre-approval for the award of the construction contract for the Big White Fire Hall-Bay Expansion project was presented.

274-20 Moved: Director Gee Seconded: Director McGregor

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors authorize staff to award the construction contract for the Big White Fire Hall-Bay Expansion project in an amount over \$100,000 as per the June 3, 2020 staff report titled "Award of Construction Contract for the Big White Fire Hall-Bay Expansion Project" presented to the Board on June 10, 2020. **FURTHER** that any award issued remain within the approved 2020 Project Budget. **FURTHER** that the Board approve the RDKB authorized signatories to sign and execute the construction contract in full with staff providing a report to the Board in July 2020 advising of the value of contract awarded and the process taken.

Carried.

12. Board Appointments Updates

12.a) The Board Appointments Updates will be presented at the next meeting.

- Southern Interior Development Initiative Trust (S.I.D.I.T.)-Director McGregor
- B.C. Rural Centre/Southern Interior Beetle Action Coalition (S.I.B.A.C.)-Director McGregor
- Okanagan Film Commission-Director Gee
- Boundary Weed Stakeholders Committee-Director Gee
- Columbia River Treaty Local Government Committee (CRT LGC)-Directors Worley & Langman
- Columbia Basin Regional Advisory Committee (CBRAC)-Director Worley & Goran Denkovski, Manager of Infrastructure & Sustainability
- West Kootenay Regional Transit Committee (Directors Cacchioni & Worley, Alternate Director Parkinson)
- Rural Development Institute (RDI)-Director Worley
- Chair's Update-Chair Langman

13. Bylaws

There were no bylaws to consider.

14. Late (Emergent) Items

14.a) #DifferentTogether Pledge-Anti Racism Declaration

Board to consider and endorse the Province of B.C. #DifferentTogether Pledge

Chair Langman introduced the DifferentTogether Pledge noting that Minister Adrian Dix and Provincial Health Officer, Bonnie Henry are reaching out to local governments to support and endorse this pledge.

The Chair read the pledge, it was;

275-20 Moved: Director Russell Seconded: Director Morissette

Corporate Vote Unweighted

That the Regional District of Kootenay Boundary Board of Directors consider and endorse the following Province of B.C. #DifferentTogether Pledge presented to the Board on June 10, 2020:

Our B.C. is inclusive and respects people of all ethnicities, cultures and faiths and their contributions to our collective well-being.

Our B.C. holds diversity as a fundamental value at the heart of the success, strength and resilience of our communities, workplaces, schools, public and private institutions.

I pledge to uphold and promote these values and I commit to speaking up to oppose racism and hate in all its forms.

Carried.

15. Discussion of Items for Future Meetings

15.a) A discussion was not required.

16. Question Period for Public and Media

16.a) There weren't any questions from the public or media.

17. Closed Meeting

17.a) A closed meeting was not required.

18. Adjournment

18.a) There being no further business, the meeting was adjourned at 3:23 p.m.

TL



Regional District of
Kootenay Boundary

Staff Report

RE:	Temporary Use Permit – 5Point9 Cannabis		
Date:	June 25, 2020	File #:	A-8392-09351.000
To:	Chair Langman and Members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received a Temporary Commercial Use Permit (TCUP) application for a Non-Medical Cannabis Retail Store (NMCRS) from Taylor Hamm, on behalf of 5 Point 9 Cannabis, in Electoral Area A (see attachments).

Property Information	
Owner(s):	0963072 BC Ltd.
Agent:	Taylor Hamm
Location:	1106 Highway 3B
Electoral Area:	Electoral Area A
Legal Description(s):	Lot 23, Plan NEP2016, DL 8392, KD
Area:	0.4ha (1.0acr)
Current Use(s):	Commercial
Land Use Bylaws	
OCP Bylaw No. 1410:	Commercial; Rural Residential 2
DP Area:	NA
Zoning Bylaw No. 1460:	Commercial 1; Manufactured Home Park
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	Beaver Falls Waterworks District
Planning Agreement Area:	Montrose and Fruitvale Planning Agreement Areas

History / Background Information

The subject property is located on the southeast side of Highway 3B in Beaver Falls, approximately 500m east of Montrose. It is designated for "Commercial" and "Rural Residential 2" land use in the Electoral Area A Official Community Plan (OCP) Bylaw No. 1410 and zoned "Commercial 1" (C1) and "Manufactured Home Park" (MHP) in Zoning Bylaw No. 1460.

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The subject property is in both the Montrose and Fruitvale Planning Agreement Areas. The RDKB Board members for the Village of Montrose and Village of Fruitvale are entitled to vote on applications and referrals for properties within the Planning Agreement Areas.

The property currently has three commercial units on it. One is occupied by "Obsessed Optic Hunting Supply"; the second by "Jeld Auto Sales Ltd."; and, the third is the vacant unit currently under application for the NMCRS.

In 2014, an RDKB-led initiative was brought forward to the Electoral Area Services (EAS) Committee to amend the OCP and Zoning Bylaw to:

- re-designate the land use of the property from Rural Residential 2 to be entirely Commercial; and,
- rezone the 0.19ha MHP portion of the property and make the entire 0.4ha parcel C1.

Inconsistencies in the land use designation and zoning were noted by Planning and Development staff at that time, as the split-zoning was applied to account for a small manufactured home park at the rear of the parcel. There have not been mobile homes on the property for several years and it would not be possible to establish a new manufactured home park due to the requirements of our Mobile Home Park Bylaw No. 97. The EAS Committee decided not to proceed with the initiative, as it was felt that the property owner should initiate the change.

Proposal

The applicant is requesting a Temporary Use Permit (TUP) for a period of three years for a Non-Medical Cannabis Retail Store (NMCRS) in Unit A on the subject property.

The applicant is also required to obtain provincial licensing to operate a NMCRS, which they have applied for in addition to the TCUP.

Implications

OCP Land Use Considerations

The Electoral Area A OCP states considerations may be given to permitting cannabis retail sales, upon application for a zoning amendment. Such applications will be evaluated on criteria that includes, but is not necessarily limited to the following:

- a) Distance to educational, child care, community and institutional uses
- b) Distance to other cannabis retail sale locations
- c) Surrounding land use and impact on neighbouring property owners
- d) Size of the retail sale space.

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Land uses adjacent to or nearby the subject property are primarily residential or commercial. Beaver Valley Nursery School is approximately 50m away from the subject property, separated by a single residential property. Public notification to these properties is described in the section below. We would rely on the public notification process to determine whether there are impacts on neighbouring property owners.

This would be the first NMCRS in Electoral Area A. The floorspace of the unit is proposed to be approximately 62m² (670ft²).

Zoning Considerations

The TCUP would permit the single use of cannabis retail store and would not impact the actual zoning of the property. The applicant's intent in the long-term is to apply for a Zoning Amendment.

A TCUP may provide a more sensitive approach to introducing such a land use into the community, acting as a 'trial-run'. The permit could be valid for a maximum period of three years with the option to renew for an additional three years. The Board has the discretion to reduce the period of time, as it sees fit. Additionally, a renewal must receive Board approval and can only be requested once.

The public notification requirements for a TCUP include:

- posting a notice of development proposal on the subject property;
- a mail-out notification to property owners within 60m of the subject property; and,
- advertising in one issue of the local newspaper not less than 3 days and not more than 10 days before the public hearing.

These notification requirements have been met. Public notification is not required for the renewal of a temporary use permit.

Provincial Licensing

The applicant has also applied to the Liquor and Cannabis Licensing Branch (LCRB) for Provincial licensing. We have received a referral for this; however, we will not consider providing comments back to the Province until the zoning issue has been addressed. Once the Temporary Use Permit has been considered, the LCRB referral will be forwarded to the APC for consideration at a future meeting. The Provincial application process considers whether a proposed store:

- can provide a safe and responsible service;
- has adequate security measures in place;
- properly stores and displays cannabis products;
- has adequate preventative measures in place to prevent the purchase of cannabis by minors; and,

- will have an appropriate storefront and signage that is not marketed toward minors.

As such, the local government's primary responsibility in considering applications related to NMCRSs is to determine whether the location and site layout are appropriate for such a use and whether the relevant bylaws are met by the proposal.

Advisory Planning Commission (APC)

The Electoral Area A APC met on June 2, 2020. At that meeting the APC supported this application subject to licensing regulations and consideration of input from the affected neighbouring properties.

Planning and Development Comments

After the APC meeting, planning staff received a letter from the Beaver Valley Nursery School Board of Directors (attached) stating that they have no concerns at this time with the proposed store near their location.

We have received two letters in response to the neighbouring property letters (see attachments). Both express opposition to the proposed temporary use including the following concerns:

- number of NMCRSs already present in the area;
- An increase in traffic pulling off of the busy highway;
- Operating hours considering that there may be increased noise of traffic resulting with increased traffic;
- Potential impact in a rural family area; and
- An impact to their ability to sell their property in the future.

Staff communicated with the Ministry of Transportation and Infrastructure (MOTI) concerning access to the property from the highway. MOTI confirmed that an access permit will need to be applied for to assess the increased traffic on Highway 3B that may result from a new retail store at this outlet.

The Board has the ability to limit the time of the TCUP to a length of 1 year to act as a trial run for this use at this location. Through LCRB licensing processes we may limit the hours of operation to be in line with the BC Cannabis Store at the Waneta Plaza in Trail, which operates from 10am-6pm most days, with hours extended to 8pm on Fridays.

However, considering the opposition submitted by neighbouring property owners, staff is recommending that the Board deny this application.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors denies the Temporary Use Permit application submitted by Taylor Hamm, on behalf

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of 0963072 BC Ltd., to allow for a non-medical Cannabis Retail Store to operate on the property legally described as Lot 23, Plan NEP2016, DL 8392, KD, Beaver Valley, Electoral Area A.

Attachments

Site Location Map
Subject Property Map
Applicant Submission
Beaver Valley Nursery School Letter
Neighbouring Property Letters

The space below is provided to describe the proposed development. Additional pages may be attached.

Requesting a 3 year Temporary Use Permit for a non-medical cannabis retail store, which will cater to the surrounding Beaver Valley community. The proposed location is Unit A - 1106 Highway 38, Beaver Falls. The building is separated into three units, with Unit A (the proposed site) currently vacant. Obsessed Optic Hunting Supply and Jeld Auto Sales Ltd. are the businesses currently operating out of the other two units in the building. Internal renovations will be done to include locked cabinets for cannabis display, locked storage room, mandatory ID area, and checkout counter. Building security measures set out by the Liquor and Cannabis Regulation Branch will be met (ie. security cameras, alarm system). External alterations being proposed are mandatory frosted glass windows and doors, and store signage. Business name and signs will comply with the provincial requirements regarding cannabis retail. Proposed store name is 5POINT9. Please see attached example of proposed signage.

1224003 BC Ltd
PO Box 1899
Rossland BC
V0G 1Y0

Regional District of the Kootenay Boundary
202 – 843 Rossland Ave
Trail BC
V1R 4S8

May 19, 2020

Re: Beaver Valley Nursery School near Proposed Cannabis Retail Store

Hi Corey,

Please accept this letter addressing our acknowledgment of the Beaver Valley Nursery School near the location of our proposed Non-Medical Cannabis Retail Store at Unit A-1106 Hwy 3B, Beaver Falls BC. We have submitted a Temporary Use Permit application to the RDKB, to allow a Cannabis Retail Store to operate at the proposed location. We recognize that community input is an important step in this process. We have reached out to the Beaver Valley Nursery School, however, have not been able to get in contact with them.

If our application were to be approved, steps would be taken to minimize any exposure the children at the school would have to the store. Following the regulations set out by the LCRB, no cannabis will be visible from outside the store and purchases must be out of sight when leaving the premises. Absolutely no minors will be permitted in the store, even when accompanied by a parent.

When considering a store location, we were mindful of not choosing a site near a high school or youth centre. We are aware that while there will be minors nearby, the young children that attend the nursery school are accompanied by parents or school staff at all times. Furthermore, visibility of our location from the school is minimal, as the houses and trees in between the two properties obstruct the view of the store.

We recognize Non-Medical Cannabis Retail Stores are novel in the area, and we understand there may be concerns due to this. We are more than willing to work with the community and the Regional District to ensure the community members feel comfortable with this business venture. Please feel free to contact me with any questions or concerns you have.

Kind regards,

Taylor Hamm
1224003 BC Ltd

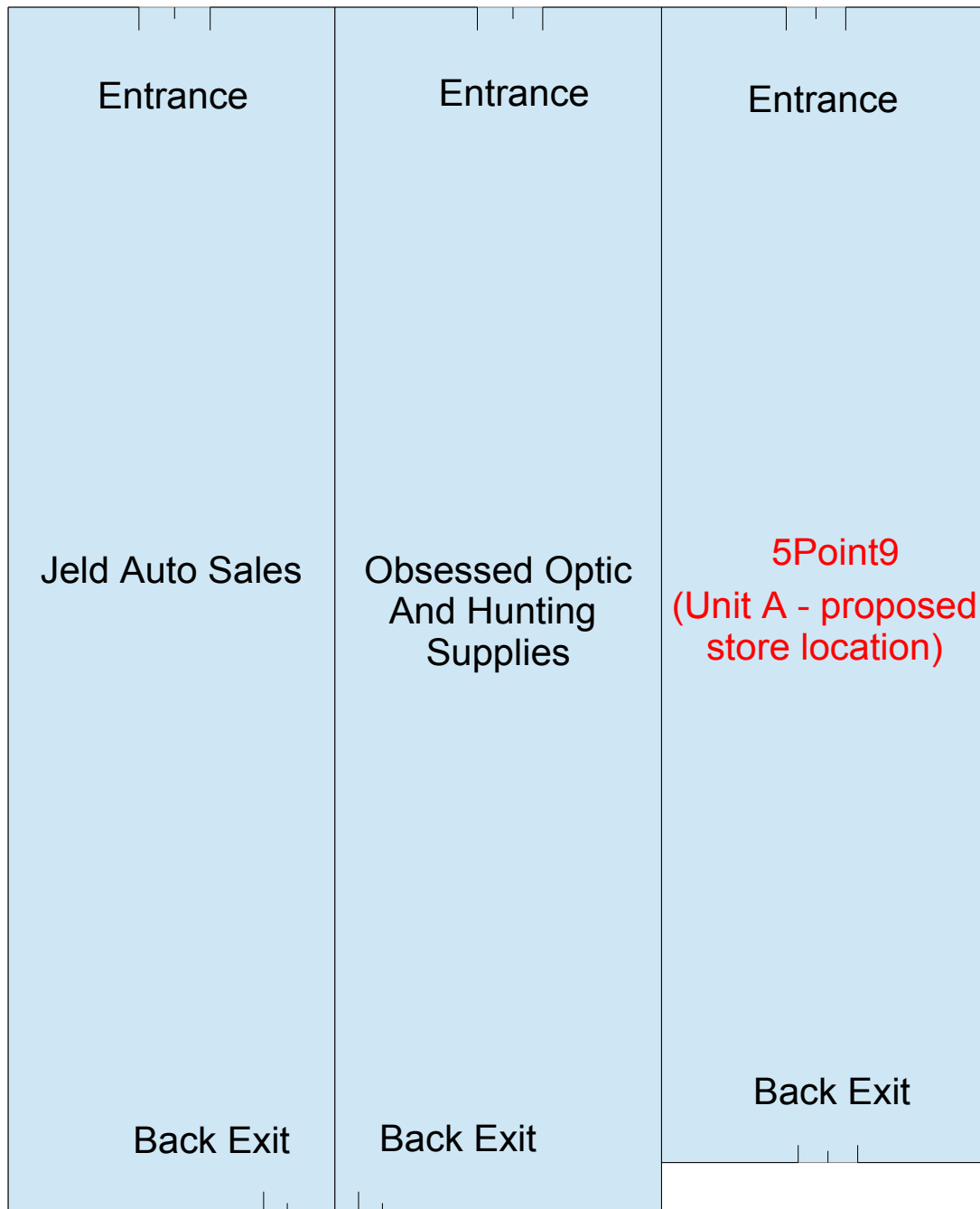
[REDACTED]

5Point9 – 1224003 BC Ltd.

Job #002805

Front of Building

*All stores are separated by full
height walls and no connecting doors
exist between businesses*

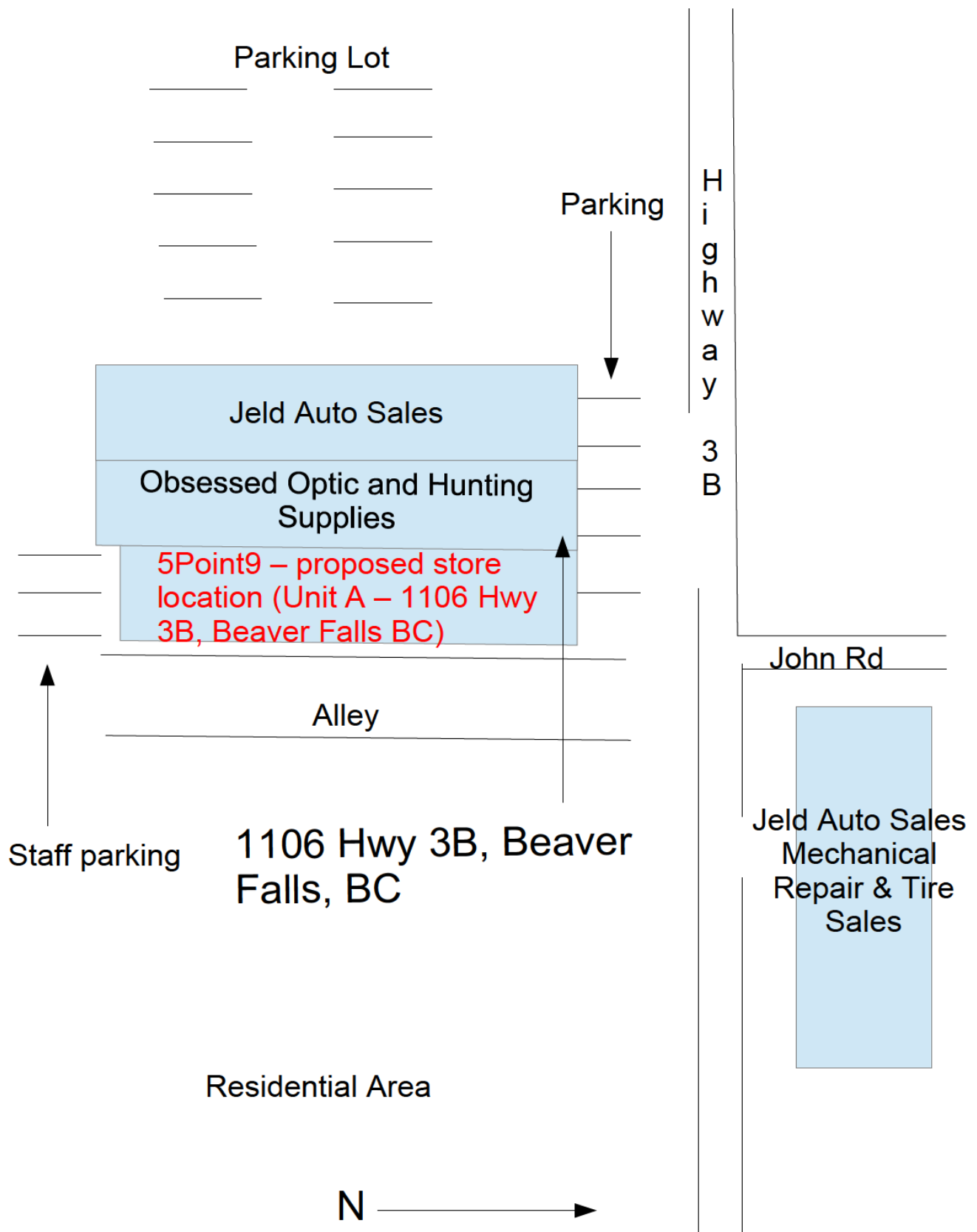


Back of Building

1106 Hwy 3B, Beaver Falls, BC

5Point9 – 1224003 BC Ltd.

Job # 002805

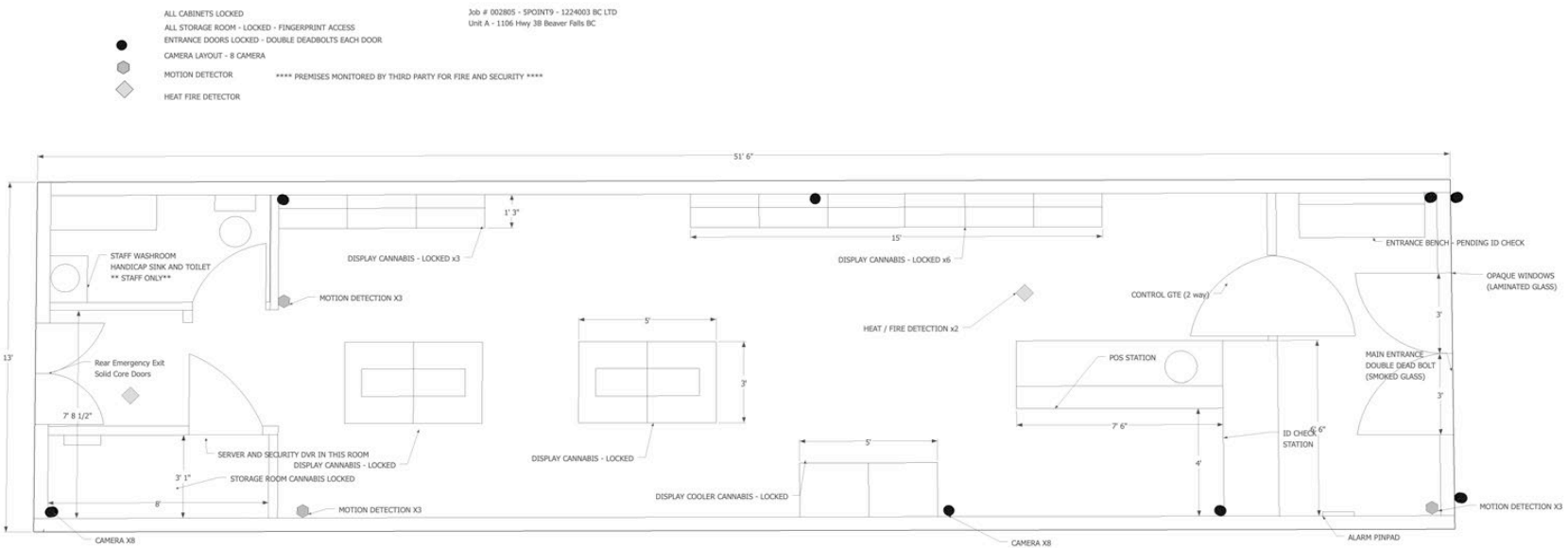




Signage

* Will have frosted glass doors

Unit A - 1106 Hwy 3B,
Beaver Falls BC





Beaver Valley Nursery School
1122 Highway 3B
Beaver Falls, BC V0G 1P0
June 2, 2020

To Whom it may concern,

The Beavery Valley Nursery School Board has met and at this time has no concerns of the future retail sales store proposed near our location.

Please let us know if you require anything more.

Sincerely,

Beaver Valley Nursery School
Board of Directors

Thanks from the Staff and the Board of Directors at Beaver Valley Nursery School

June 16, 2020

Re: 1106 Highway 3B
Lot 23, Plan NEP2016, DL 8392, KD
Electoral Area A

To Whom It May Concern:

We are writing to voice our concerns over the proposed location for a non-medicinal cannabis retail store at the above stated location. This proposed site is right next door to our property at 1110/1112 Highway 3B. Our first question is, Why? We would like to know why does this person feel the need to have another cannabis store in our area. There are enough of these outlets in our area (Fruitvale, The mall in Trail, Trail itself, Warfield and Rossland), why do we need another one in the middle of nowhere.

Secondly, this is a terrible location for any retail store as it is on a very busy highway, where speeding and passing are already issues. I can say without a doubt that there will be accidents happening when people are trying to turn into the proposed establishment. Also when they come out of the proposed place, they usually back onto the shoulder of the highway and wait for traffic to clear, therefore, impeding our sight line of oncoming traffic when we are leaving our driveway. We know this as when Jeld Auto had their business there it was always a problem. We also had a problem with people parking on the shoulder of the highway in front of our property.

Thirdly, what are the operating hours going to be? Do I now have to listen to more revving engines of cars going by when they leave the establishment? We chose this location to enjoy the peacefulness of rural living.

Fourth, we feel this will affect us selling our property if we ever needed to as it is right beside us.

There is also the concern of unwanted marijuana smell. We understand it is legal and we can come across it anywhere, but if I have a choice, I would rather not encourage it right beside my home.

We are hoping that these concerns can be voiced and we will get a response to our questions. We are opposed to having this type of establishment next door to us for the above noted reasons. There really is no need for it at this location.

Sincerely,

Greg & Jennifer Koopmans

June 10, 2020

REGIONAL DISTRICT OF
KOOTENAY BOUNDARY

JUN 17 2020

REF. TO: DD**RE: Application for a Development Variance Permit****Applicant(s): Taylor Hamm., Agent for 0963072 BC Ltd.****Property: 1106 Highway 3B
Lot 23, Plan NEP2016, DL 8392, KD
Electoral Area A**

In accordance with requirements in the *Local Government Act*, our Board of Directors will consider adopting a resolution regarding this application at their meeting scheduled for:

**June 25, 2020 at 1:00 p.m.
Via Zoom Video Conference**

All persons affected by the application will be given an opportunity to be heard at the Board meeting. Written submissions will also be accepted up to 9:00 a.m. the day of the meeting on June 25, 2020.

A copy of the Staff Report regarding the application has been attached.

This is a public process and submissions may become part of the public record.

If anyone other than the owner is a resident of this property, please forward a copy of this letter to the occupant.

Given our objective of limiting personal contact between staff and members of the public due to the COVID-19 virus, please contact me if you plan to attend the meeting and I will provide you with further instructions on how you may participate. I can be reached at 250-368-0241 or plandept@rdkb.com.

Sincerely,



Maria Ciardullo
Senior Planning Secretary

P:\PD\Public Hearings and Board Hearings\Notification_Letters\Development\VariationPermits\AreaA\Adjacent Owner Letters\0963072 BC Ltd-June 2020

TOTALLY OBJECT TO THE OPENING OF
THIS BUSINESS AT THIS LOCATION. WE DO NOT
NEED A CANNABIS STORE IN A RURAL FAMILY
AREA.

JUDITH WRIGHT
Judith Wright
1091 HWY 3B

604-619-8427

202 - 843 Rossland Avenue, Trail, BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



June 16, 2020

Re: 1106 Highway 3B
Lot 23, Plan NEP2016, DL 8392, KD
Electoral Area A

To Whom It May Concern:

We are writing to voice our concerns over the proposed location for a non-medicinal cannabis retail store at the above stated location. This proposed site is right next door to our property at 1110/1112 Highway 3B. Our first question is, Why? We would like to know why does this person feel the need to have another cannabis store in our area. There are enough of these outlets in our area (Fruitvale, The mall in Trail, Trail itself, Warfield and Rossland), why do we need another one in the middle of nowhere.

Secondly, this is a terrible location for any retail store as it is on a very busy highway, where speeding and passing are already issues. I can say without a doubt that there will be accidents happening when people are trying to turn into the proposed establishment. Also when they come out of the proposed place, they usually back onto the shoulder of the highway and wait for traffic to clear, therefore, impeding our sight line of oncoming traffic when we are leaving our driveway. We know this as when Jeld Auto had their business there it was always a problem. We also had a problem with people parking on the shoulder of the highway in front of our property.

Thirdly, what are the operating hours going to be? Do I now have to listen to more revving engines of cars going by when they leave the establishment? We chose this location to enjoy the peacefulness of rural living.

Fourth, we feel this will affect us selling our property if we ever needed to as it is right beside us.

There is also the concern of unwanted marijuana smell. We understand it is legal and we can come across it anywhere, but if I have a choice, I would rather not encourage it right beside my home.

We are hoping that these concerns can be voiced and we will get a response to our questions. We are opposed to having this type of establishment next door to us for the above noted reasons. There really is no need for it at this location.

Sincerely,

Greg & Jennifer Koopmans



Regional District of
Kootenay Boundary

Staff Report

RE:	Development Variance Permit – McKeddie		
Date:	June 25, 2020	File #:	C-317-00287.005
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received an application for a development variance permit from Steven McKeddie for the construction of a deck addition in Electoral Area C/Christina Lake (see attachments).

Property Information	
Owner(s):	Steven and Shauna McKeddie
Agent:	NA
Location:	64 Lavalley Road
Electoral Area:	Electoral Area C/Christina Lake
Legal Description(s):	Parcel A (KM27500), Block 17, DL 317, SDYD, Plan 50
Area:	0.1ha (0.245acr)
Current Use(s):	Single family dwelling
Land Use Bylaws	
OCP Bylaw 1250:	Residential
DP Area:	NA
Zoning Bylaw 1300:	Single Family Residential 1
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	Christina Lake Water Utility Service

History / Background Information

The subject property is located on the corner of Lavalley Road and Ode Road in Electoral Area C/Christina Lake. It is designated for "Residential" land use in Official Community Plan (OCP) Bylaw No. 1250 and is zoned "Single Family Residential 1" by Zoning Bylaw No. 1300. The property is approximately 60m south of Christina Lake and is outside of the floodplain.

Page 1 of 3

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Proposal

The proposal is for the construction of a 30m² (322ft²) deck addition (see attachments). The applicant is requesting to vary the minimum rear parcel boundary setback from 7.5m to 2.1m, a variance of 5.4m, for the proposed deck addition.

Implications

The deck addition is considered to be a part of the principal building, as it would be attached to the existing deck and single family dwelling. The proposed deck would be located 0.9m (3ft) off the ground and would be accessed from the upper deck that is 1.8m (6ft) off the ground (see attachments).

For development variance permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The applicant has submitted a rationale letter for their request in response to these considerations (see attachments). To summarize:

- There is currently no access from the existing deck to their backyard and the intent of this proposal is to increase the deck area while also providing access to the backyard area.
- The new deck addition is 3 feet high.
- There is a 5m-wide lane between their property and the neighbours to the west.
- The parcel sits above the neighbouring parcel to the north and there are pre-existing privacy concerns as a result. To remedy these concerns, they are planting a variety of native trees and bushes to improve the privacy for both property owners.

The proposal appears to meet all other requirements of the Zoning Bylaw.

Advisory Planning Commission (APC)

This application was considered by the Electoral Area 'C' APC at their June 2, 2020 meeting. The APC provided a recommendation of support with the comment that the deck not be constructed on top of the septic system.

Staff Comments

Planning staff spoke with the property owner concerning the location of their septic system. The owner said that the septic system is located in front of the house, on the opposite side from where the proposed deck will be built.

Page 2 of 3

P:\PD\EA_'C'\C-317-00287.005 McKeddie\2020 June DVP\Board\2020-06-02_Mckeddie_DVP_Board.docx

The owners had the septic system inspected when they bought the house last year and will forward a copy of the certificate to planning staff shortly.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by Steven McKeddie, to allow for a decrease in the rear parcel line setback from 7.5m to 2.1m – a variance of 5.4m to construct the proposed deck addition on the property legally described as Parcel A (KM27500), Block 17, DL 317, SDYD, Plan 50, Electoral Area C/Christina Lake.

Attachments

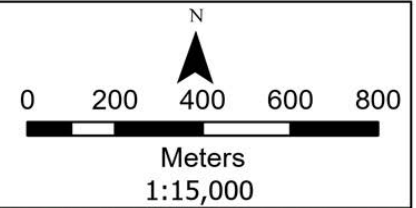
Site Location Map
Subject Property Map
Applicant Submission



2020-05-19

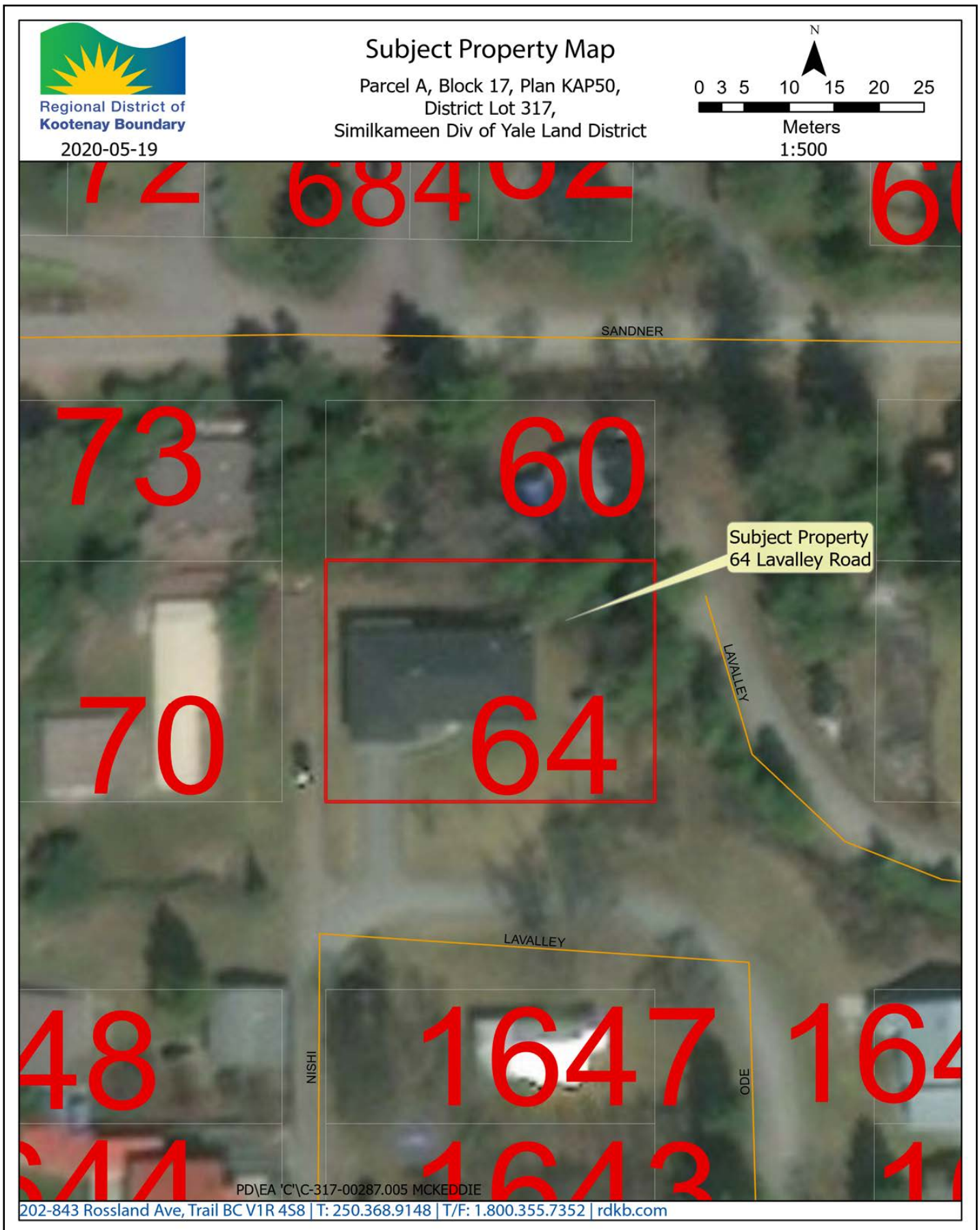
Site Location Map

Parcel A, Block 17,
Plan KAP50, District Lot 317,
Similkameen Div of Yale Land District



PD\EA 'C'\C-317-00287.005 MCKEDDIE

202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



The space below is provided to describe the proposed development. Additional pages may be attached.

SEE ATTACHED LETTER & ALSO PHOTOS.

DECK PROPOSAL TO BUILD 23' X 14' DECK, 3' OFF GROUND TO ALLOW STEP ACCESS INTO BACK YARD. NEW DECK WILL ONLY EXTEND OUT 12' FROM EDGE OF EXISTING DECK AS IT WILL BE BUILT UNDERNEATH.

CURRENT REAR SETBACK AS EST. IN 2018 IS 7.5 METRE. THIS IS A HARDSHIP AS IT PREVENTS US AS HOMEOWNERS FROM THE FULL ENJOYMENT AND ACCESS OF OUR PROPERTY.

THE CURRENT DISTANCE FROM OUR EXISTING DECK EDGE TO OUR PROPERTY LINE (REAR) IS 19'. WITH THE PROPOSED LOWER DECK EXTENDING ANOTHER 12', THIS STILL ALLOWS 7' CLEARANCE TO THE REAR PROPERTY LINE.

Regional District of Kootenay Boundary
202-843 Rossland Avenue
Trail, BC V1R 4S8

May 13th, 2020

RE: Variance sought for back deck extension at 64 Lavalley Road, Christina Lake, BC

Dear Board Members,

We are requesting variance approval for a lower addition to be made to our pre-existing deck situated in the back yard of our home. The north-side deck presently has no access into the backyard which makes enjoyment of the yard difficult, as we can only access it from the front door of our home. Our plans for the back of the house include stairs leading off of the pre-existing deck to a proposed lower deck approximately 3 feet off the ground, which would include stairs leading onto ground level.

The location of our home has access lanes directly to the east and west, so we do not have neighbors immediately on either side that will be impacted with the addition. The only shared property line is on the north side, which is shared with a seasonal neighbor. Our home is located up on a hill above the neighbor's property, with the current deck located with only their rear storage shed in our view line as the home on the lot is located at the east end of the property. The present and proposed decks situated at the rear of their property will not be overlooking their home.

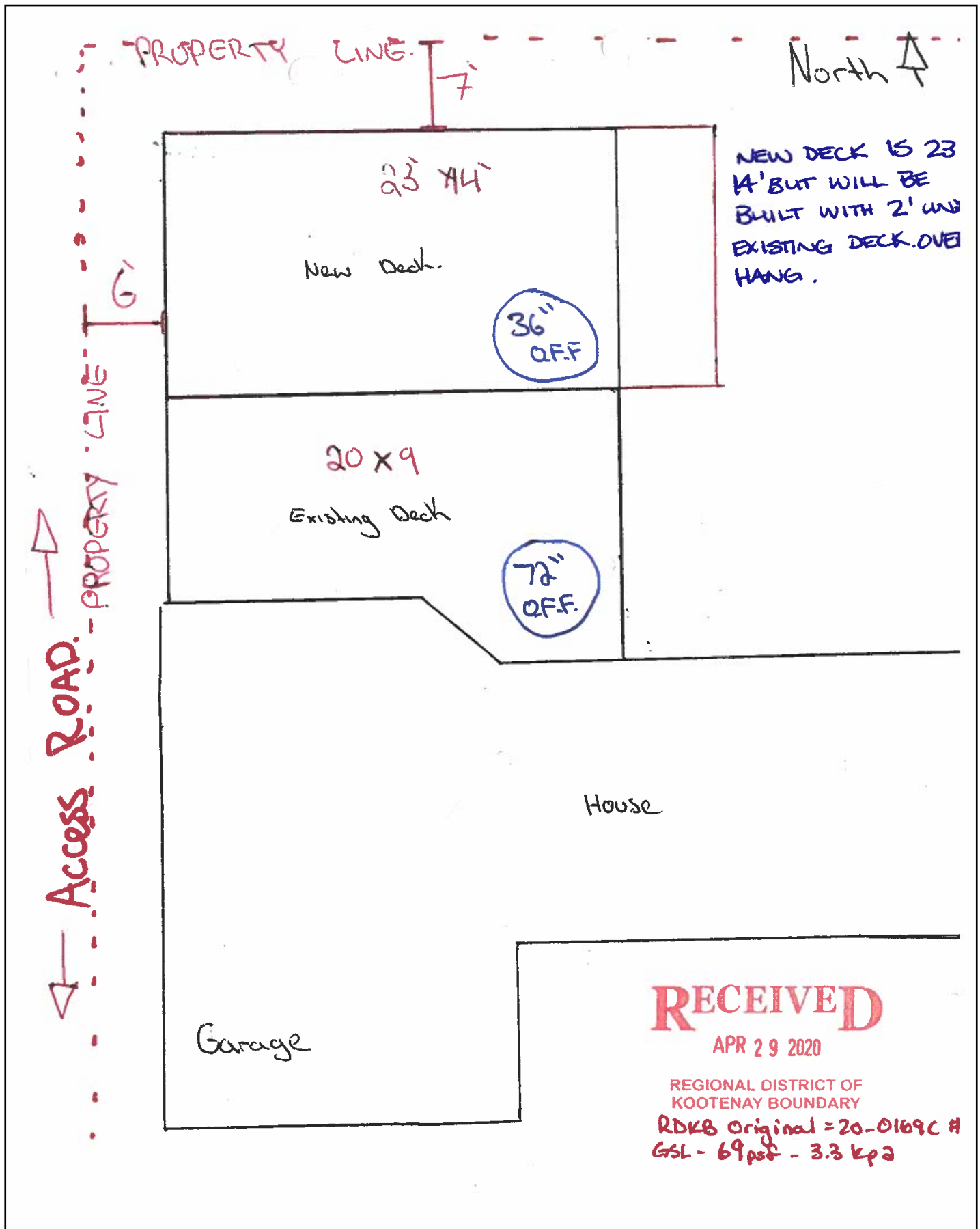
Presently, there is little privacy from the upper deck between ourselves and our neighbor's yard due to the natural geography of our adjoining lots. Additionally, there are few plants and trees covering the slope off the back of our lot, separating us from the lot below. The proposed lower deck would not impose any privacy concerns that do not already exist. Regardless, to improve privacy for both parties concerned, we have purchased and will be planting a variety of deer resistant, bee friendly, non-invasive trees and bushes that will block views between the two properties, and which will also help to stabilize the hillside preventing future erosion.

As full time residents of Christina Lake, we want to enjoy our home and yard to its full potential, and we feel the addition of a lower deck which that allows access into the yard below, will enable us to do so.

Kind regards,

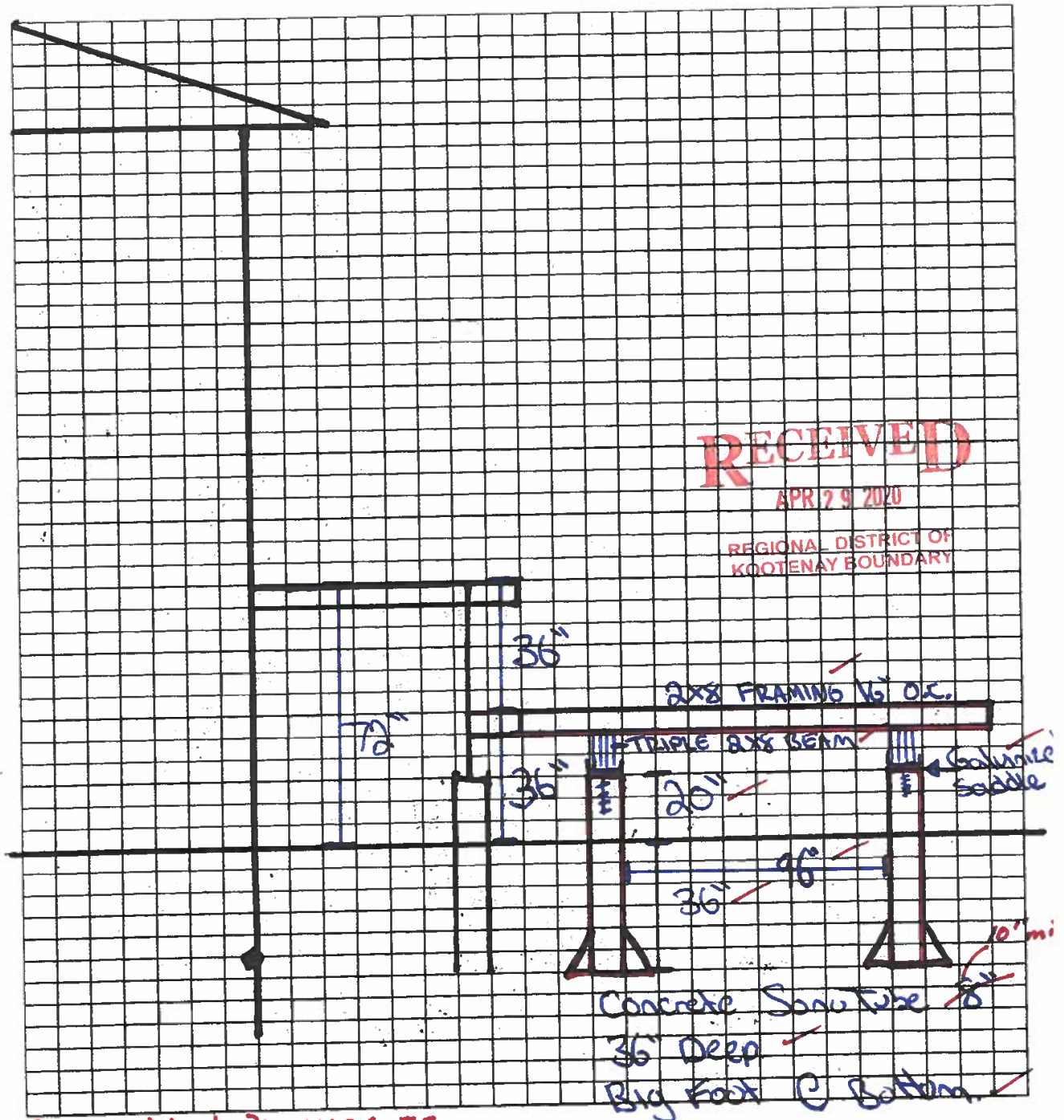
Steve and Shauna McKeddie

64 Lavalley Road
Christina Lake BC V0H 1E0



BUILDING SITE PLAN

1. Draw proposed location of home or building on space provided below, and show distances to all PROPERTY LINES. Also, show north arrow.
2. Show location of street access and names of streets.
3. Show location and distances of any water courses.



RDKB Original-20-0169C #3









STAFF REPORT

Date: 17 Jun 2020 **File**
To: Chair Langman and Board of Directors
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1664 Westlake Drive, Christina Lake, B.C.

Electoral Area 'C' / Christina Lake

Parcel Identifier: 025-988-697

Lot 1 District Lot 317 Similkameen Division Yale District Plan KAP75840

Owners: Sean, Megan and Susan McQuarrie

History/Background Factors

The Building Official confirmed that there have been no changes concerning the above referenced property. The owners, Sean, Megan and Susan McQuarrie, has constructed alterations to a single family dwelling on the above referenced property without first obtaining a building permit, development variance permit or floodplain exemption.

Implications

Should the Regional District not file a Notice on Title against the above mentioned property pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, future purchasers of the property would not be aware that the building(s) are in contravention of the B.C. Building Code and/or Building Bylaw.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- Staff Report dated May 19, 2020 submitted to the Board regarding the building bylaw contravention;
- Letter dated June 5, 2020 inviting the Owners to the June 25, 2020 Board Meeting.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that that Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 317, Similkameen Division Yale District, Plan KAP75840.



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date: 19 May 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1664 Westlake Drive, Christina Lake, B.C.

Electoral Area 'C' / Christina Lake

Parcel Identifier: 025-988-697

Lot 1 District Lot 317 Similkameen Division Yale District Plan KAP75840

Owners: Sean, Megan and Susan McQuarrie

History/Background Factors

The owners, Sean, Megan and Susan McQuarrie, has constructed alterations to a single family dwelling on the above referenced property without first obtaining a building permit, development variance permit or floodplain exemption.

The Regional District of Kootenay Boundary Building and Plumbing Amendment Bylaw No. 449 states:

Prohibition

7.1 No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction;

Duties of the Owner

12.1 Every owner shall:

(b) obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs, canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

The Regional District of Kootenay Boundary Electoral Area 'C' Zoning Bylaw No. 1300 states:

Part Four - Zone Designations

402 Single Family Residential 1 Zone

6. Setbacks - Minimum setbacks measured in metres:

Rear 7.5m

Natural Boundary of Christina Lake 7.5m

Implications

The Regional District of Kootenay Boundary Board of Directors has dealt with a number of Bylaw Contraventions by Filing a Notice on Title. The effect of this Notice is to alert future Purchasers of the property that the building(s) are in contravention of the B.C. Building Code and/or regulatory bylaws. The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, *Local Government Act* and *Community Charter* to enforce compliance with regulations.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- History / Background Factors;
- Registered letter dated September 16, 2019;
- Registered letter dated August 1, 2019;
- Registered letter dated June 20, 2019;
- Photos dated June 20, 2019.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that the Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

1. That the Regional District of Kootenay Boundary Board of Directors invite the owners, Sean, Megan and Susan McQuarrie, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 317, Similkameen Division Yale District, Plan KAP75840.



STAFF REPORT ATTACHMENT

Date:	May 19, 2020	File:	
To:	Chair Langman and Board of Directors		
From:	Brian Champlin, Manager of Building Inspection Services		
RE:	<u>BUILDING BYLAW CONTRAVENTION</u> 1664 WESTLAKE DRIVE, CHRISTINA LAKE, B.C. ELECTORAL AREA 'C' / CHRISTINA LAKE PARCEL IDENTIFIER: 025-988-697 LOT 1 DISTRICT LOT 317 SIMILKAMEEN DIVISION YALE DISTRICT PLAN KAP75840 OWNERS: SEAN, MEGAN AND SUSAN MCQUARRIE		

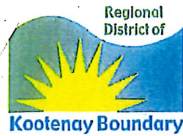
History/Background Factors

The owners, Sean, Megan and Susan McQuarrie, have constructed alterations to a single family dwelling without a valid building permit, development variance permit or floodplain exemption.

April 20, 2016	Application received for proposed alterations to a single family dwelling;
April 25, 2016	Email from Ken Wagner, RBO to Mark Andison, General Manager, Operations / Deputy CAO;
April 25, 2016	Email from previous owner, Richard McQuarrie, to Ken Wagner, RBO forwarded to Mark Andison, General Manager, Operations / Deputy CAO;
April 26, 2016	Email from Ken Wagner, RBO to previous owner, Richard McQuarrie;
April 27, 2016	Email from Dan Sahlstrom, P.Eng., WSA Engineering (2020) Ltd., to Mark Andison, General Manager, Operations / Deputy CAO and Carly Rimell, Planner;
April 28, 2016	Email from previous owner, Richard McQuarrie, to Mark Andison, General Manager, Operations / Deputy CAO, Carly Rimell, Senior Planner and Dan Sahlstrom, P.Eng., WSA Engineering (2020) Ltd.;
April 28, 2016	Email from Mark Andison, General Manager, Operations / Deputy CAO to Dan Sahlstrom, P.Eng., WSA Engineering (2020) Ltd., and Carly Rimell, Planner;
April 28, 2016	Email from Carly Rimell, Planner to previous owner, Richard McQuarrie and Dan Sahlstrom, P.Eng., WSA Engineering (2020) Ltd.;
June 9, 2016	Email from previous owner, Richard McQuarrie, to Carly Rimell, Planner;
Aug. 24, 2017	New owner listed as Susan McQuarrie;
Jan. 26, 2018	New owners listed as Sean, Megan and Susan McQuarrie;
June 20, 2019	Stop Work Order posted, photos taken;
June 20, 2019	First registered letter mailed to previous owners, Richard and Susan McQuarrie;
June 26, 2019	Canada Post confirmation that the letter was unclaimed;
Aug. 1, 2019	Second registered letter mailed to previous owners, Richard and Susan McQuarrie, requesting a response by August 29, 2019;
Aug. 24, 2019	Canada Post confirmation that the letter was delivered;
Sept. 16, 2019	Third registered letter mailed to previous owners, Richard and Susan McQuarrie, requesting a response by October 15, 2019;

Sept. 19, 2019
May 19, 2020

Canada Post confirmation that the letter was delivered;
To date, we have received no further response from the owners.



September 16, 2019

REGISTERED

Richard and Susan McQuarrie
1307-19th Street N.W.
Calgary, AB.
T2N 2K1

Re: STOP WORK ORDER 16-0231CSWO
1664 West Lake Drive
Lot 1, D.L. 317, Plan KAP75840

A review of the above referenced file indicates that we have not received the documentation requested in our letter dated August 1, 2019. A Stop Work Order was posted on June 20, 2019 for construction of a deck and roof at the above referenced property without a building permit, as well as for building without a required development variance permit, building in flood plain exemption zone and without a required legal survey map.

No building permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449

Section 7.1 No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b) Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

If we do not receive requested documentation by **October 15th, 2019**, we will recommend to the Regional District of Kootenay Boundary board of Directors that a Notice be registered on the title pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* (copies attached.). This notice will refer to a building bylaw contravention on the above referenced property and does not limit further action being taken.

If you have any questions, please contact the undersigned.

Respectfully,

Robert Silva, RBO
Building & Plumbing Official

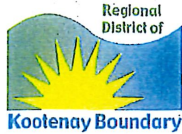
RS:mc

Attachment

Cc: Brian Champlin, RBO, CRBO, Manager of Building Inspection
Donna Dean, R.P.P., Manager of Planning and Development

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com





August 1, 2019

REGISTERED

Richard and Susan McQuarrie
1307-19th Street N.W.
Calgary, AB.
T2N 2K1

Re: STOP WORK ORDER
1664 West Lake Drive
Lot 1, D.L. 317, Plan KAP75840

A review of the above referenced file indicates that we have not received the documentation requested in our letter dated June 20, 2019. A Stop Work Order was posted on June 20, 2019 for construction of a deck and roof at the above referenced property without a building permit, as well as for building without a required development variance permit, building in flood plain exemption zone and without a required legal survey map.

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Section 7.1 No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b) Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

To apply for a permit, please fill out the enclosed application form and submit the relevant documentation listed on the "How to Obtain a Building Permit" checklist to our office by **August 29, 2019**. Failure to comply may result in legal action.

If you have any questions, please contact the undersigned.

Respectfully,

A handwritten signature in black ink, appearing to read "R. Silva".

Robert Silva, RBO
Building & Plumbing Official

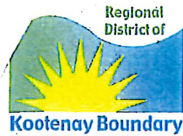
RS:rt

Attachment

Cc: Brian Champlin, RBO, CRBO, Manager of Building Inspection
Donna Dean, R.P.P., Manager of Planning and Development

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com





June 20, 2019

REGISTERED

Richard and Susan McQuarrie
1307-19th Street N.W.
Calgary, AB.
T2N 2K1

Re: STOP WORK ORDER
1664 West Lake Drive
Lot 1, D.L. 317, Plan KAP75840

This letter confirms the posting of a **Stop Work Order** on June 20, 2019 for construction of a deck and roof at the above referenced property without a building permit, as well as for building without a required development variance permit, building in flood plain exemption zone and without a required legal survey map.

No building permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449.

Section 7.1 No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b) Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs, canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

To apply for a permit, you must address the above referenced requirements as well as well as apply for a building permit, see enclosed.

If you have any questions, please contact the undersigned.

Yours truly,

A handwritten signature in blue ink, appearing to read "Don Lepithe".

Don Lepithe
Building & Plumbing Official

DL:rt

Attachment

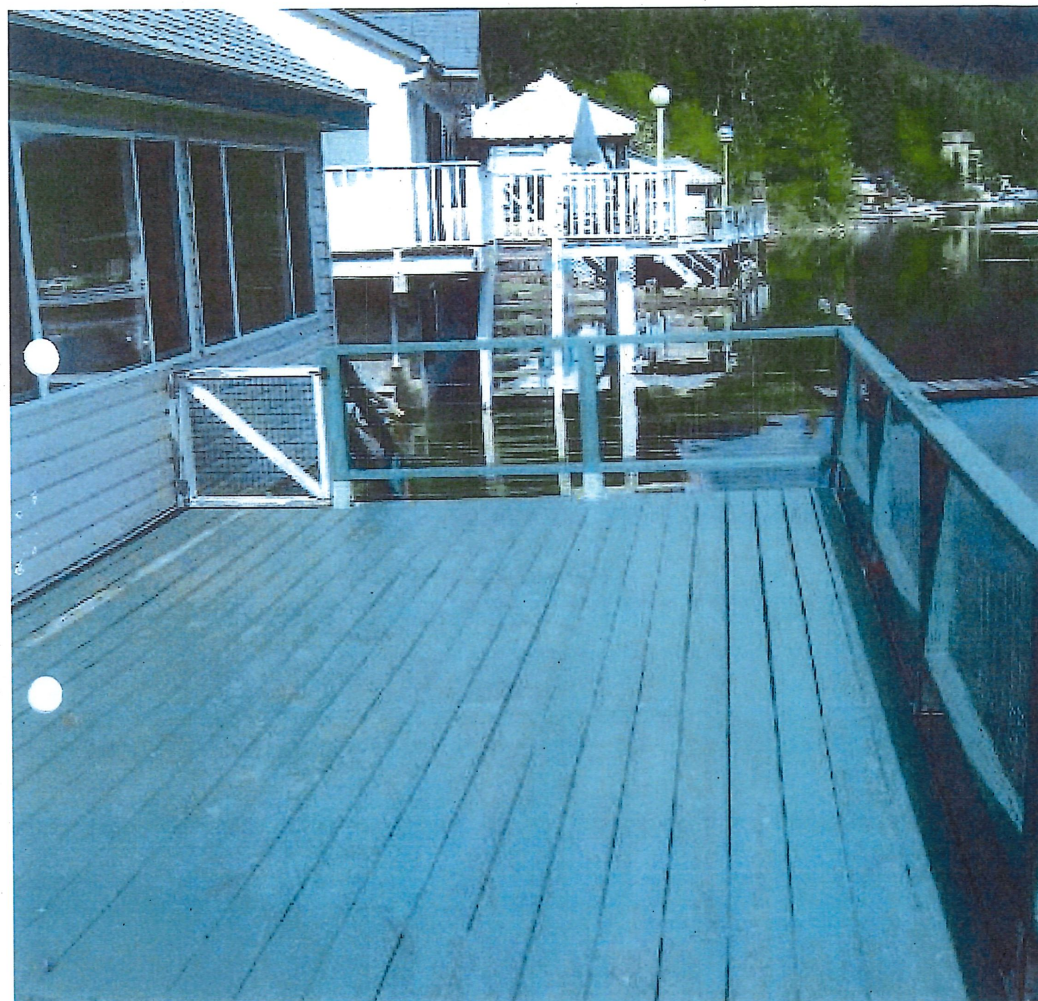
2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com





















June 5, 2020

Sean, Megan and Susan McQuarrie
1307 19th Street NW
Calgary, AB T2N 2K1

**Re: Constructed Alterations without a Building Permit
1664 Westlake Drive, Christina Lake, B.C. Electoral Area 'C' / Christina Lake
Contravention of Building Bylaw No. 449
Lot 1 District Lot 317 Similkameen Division Yale District Plan KAP75840**

On May 28, 2020 the Board of Directors reviewed the attached report regarding the above referenced property. As a consequence, the Board will, at its next regular meeting, be considering a resolution to direct the Chief Administrative Officer to file a formal Notice in the Land Title Office regarding this contravention. Pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, you are to be afforded the opportunity to be heard by the Board of Directors before such a Notice is filled. The Board has therefore, adopted the following resolution.

"That Sean, Megan and Susan McQuarrie be invited to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 317, Similkameen Division Yale District, Plan KAP78540".

This hearing before the Board of Directors is scheduled for Thursday, June 25, 2020 at approximately 1:00 p.m. As our offices are closed to the public at this time, this meeting will be held remotely through Zoom Video Conferencing. Please email Sara Bradley at sbradley@rdkb.com in advance, confirming whether you or a representative will be present for this hearing. If you will be remotely attending this hearing, we request a written submission from you relating to this matter by June 19, 2020. This will provide sufficient time for your report to be distributed to the Board of Directors and for us to send correspondence on how to join through Zoom Video Conferencing.

Please be advised that, in order to avoid registration of this Notice, the Board of Directors require a written confirmation from the Building Inspection staff that the property is now in compliance. You are encouraged to acquire that confirmation before the hearing date.

Enclosed for your information is a copy of Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*. The effect of this Notice is to remove liability from the Regional District of Kootenay Boundary and warn future purchasers of the property that the building(s) or

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construction on the property may have been in violation of the B.C. Building Code and/or Regulatory Bylaws of the Authority having Jurisdiction.

Yours truly,

Theresa Lenardon

Theresa Lenardon
Manager of Corporate Administration

Attachment

TL/sb

From: [Mark Andison](#)
To: [Theresa Lenardon](#); [James Chandler](#); [Janine Dougall](#); [Barb Ihlen](#); [Maureen Forster](#)
Subject: FW: Update from Kaye Krishna, Deputy Minister, Ministry of Municipal Affairs and Housing - Order M192
Date: June 19, 2020 8:42:31 AM
Attachments: [2020-06-17 Open Meetings Guidance.pdf](#)

From: MAH DMO MAH:EX <MAH.DMO@gov.bc.ca>
Sent: Thursday, June 18, 2020 9:23 AM
Subject: Update from Kaye Krishna, Deputy Minister, Ministry of Municipal Affairs and Housing - Order M192

Dear CAOs:

On June 17, 2020, MO139 was replaced with Order M192 to assist local governments as they move through the restart process towards a “new normal”. The primary changes under Order M192 are in relation to public presence at local government meetings and timing requirements for bylaw adoption. All other previous provisions under MO139 such as conducting public hearings electronically, allowing for Council, Boards and the Islands Trust to meet electronically and deferring improvement district annual general meetings, remain in effect under Order M192. Other rules such those as provided for in legislation or procedure bylaws such as: notice requirements, voting rules, minutes also continue to apply.

As you are aware, the previous order made it possible for local governments to meet without the public physically present – a significant departure from the standard rules that apply to council and board meetings. Order M192 continues to provide local governments flexibility in their meeting procedures while moving towards increased public presence at local government meetings where appropriate, for both “in person” and electronic meetings. The Order also transitions local governments to more standard rules in relation to bylaw adoption, limiting the previous order’s broad authority to read and adopt bylaws all at the same meeting to now only apply to the types of bylaws specified in Order M192.

Many local governments are already taking an incremental approach to again holding meetings in person and inviting their communities to be physically present at meetings, while complying with public health and safety direction. To encourage this transition, Order M192 requires local governments and the Islands Trust to make best efforts to accommodate the public to be present at in person or electronic meetings while continuing to meet public health orders and recommendations.

Local governments that have made best efforts and continue to face challenges having the public present at meetings due to things like facility size or technological limitations will continue to be able to limit in person attendance at electronic and physical meetings under the Order. In that case, under Order M192 local governments will need to pass a resolution to provide a rationale of the reasons why the public cannot be present, as well as a description of

the means by which the local government is meeting openness, transparency and accountability principles.

The following link provides additional guidance material to local governments that may be operating under the new Order M192:

<https://www2.gov.bc.ca/assets/download/A5B73B9507D64C4BBF79843F06043042>

Link to Order M192: http://www.bclaws.ca/civix/document/id/mo/mo/2020_m192

Any additional questions can be directed to: lggovernance@gov.bc.ca. We thank you for your continued hard work to conduct local government operations as you restart during the time of the pandemic.

Kaye Krishna
Deputy Minister
Ministry of Municipal Affairs and Housing

PROVINCE OF BRITISH COLUMBIA

**ORDER OF THE MINISTER OF PUBLIC SAFETY AND
SOLICITOR GENERAL**

Emergency Program Act

Ministerial Order No. M192

WHEREAS a declaration of a state of emergency throughout the whole of the Province of British Columbia was declared on March 18, 2020;

AND WHEREAS local governments, including the City of Vancouver, and related bodies must be able to conduct their business in accordance with public health advisories to reduce the threat of COVID-19 to the health and safety of members and employees of local government and related bodies and members of the public;

AND WHEREAS it is recognized that public participation in local governance is an essential part of a free and democratic society and is important to local governments' purpose of providing good government to communities;

AND WHEREAS the threat of COVID-19 to the health and safety of people has resulted in the requirement that local governments and related bodies implement necessary limitations on this public participation;

AND WHEREAS section 10 (1) of the *Emergency Program Act* provides that I may do all acts and implement all procedures that I consider necessary to prevent, respond to or alleviate the effects of any emergency or disaster;

I, Mike Farnworth, Minister of Public Safety and Solicitor General, order that

- (a) the Local Government Meetings and Bylaw Process (COVID-19) Order No. 2 made by MO 139/2020 is repealed, and
- (b) the attached Local Government Meetings and Bylaw Process (COVID-19) Order No. 3 is made.

17/06/2020
Date


Minister of Public Safety and Solicitor General

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Emergency Program Act*, R.S.B.C. 1996, c. 111, s. 10

Other: MO 73/2020; MO 139/2020; OIC 310/2020

LOCAL GOVERNMENT MEETINGS AND BYLAW PROCESS (COVID-19) ORDER NO. 3

Division 1 – General

Definitions

1 In this order:

- “**board**” has the same meaning as in the Schedule of the *Local Government Act*;
- “**council**” has the same meaning as in the Schedule of the *Community Charter*;
- “**improvement district**” has the same meaning as in the Schedule of the *Local Government Act*;
- “**local trust committee**” has the same meaning as in section 1 of the *Islands Trust Act*;
- “**municipality**” has the same meaning as in the Schedule of the *Community Charter*;
- “**municipality procedure bylaw**” has the same meaning as “procedure bylaw” in the Schedule of the *Community Charter*;
- “**regional district**” has the same meaning as in the Schedule of the *Local Government Act*;
- “**regional district procedure bylaw**” means a procedure bylaw under section 225 of the *Local Government Act*;
- “**trust body**” means
 - (a) the trust council,
 - (b) the executive committee,
 - (c) a local trust committee, or
 - (d) the Islands Trust Conservancy,
 as defined in the *Islands Trust Act*;
- “**Vancouver council**” has the same meaning as “Council” in section 2 of the *Vancouver Charter*;
- “**Vancouver procedure bylaw**” means a bylaw under section 165 [*by-laws respecting Council proceedings and other administrative matters*] of the *Vancouver Charter*.

Application

- 2
- (1) This order only applies during the period that the declaration of a state of emergency made March 18, 2020 under section 9 (1) of the *Emergency Program Act* and any extension of the duration of that declaration is in effect.
 - (2) This order replaces the Local Government Meetings and Bylaw Process (COVID-19) Order No. 2 made by MO 139/2020.

Division 2 – Open Meetings

Open meetings – municipalities

- 3 (1) A council, or a body referred to in section 93 *[application of rule to other bodies]* of the *Community Charter*, must use best efforts to allow members of the public to attend an open meeting of the council or body in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
- (2) A council or body is not required to allow members of the public to attend a meeting if, despite the best efforts of the council or body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
- (3) If a council or body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
- (a) the council or body must state the following, by resolution:
 - (i) the basis for holding the meeting without members of the public in attendance;
 - (ii) the means by which the council or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
 - (b) for the purposes of Division 3 *[Open Meetings]* of Part 4 *[Public Participation and Council Accountability]* of the *Community Charter*, the meeting is not to be considered closed to the public.
- (4) The council or body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
- (a) Division 3 *[Open Meetings]* of Part 4 *[Public Participation and Council Accountability]* of the *Community Charter*, and
 - (b) any applicable requirements in a municipality procedure bylaw of a council.

Open meetings – regional districts

- 4 (1) A board, a board committee established under section 218 *[appointment of select and standing committees]* of the *Local Government Act*, or a body referred to in section 93 *[application of rule to other bodies]* of the *Community Charter* as that section applies under section 226 *[board proceedings: application of Community Charter]* of the *Local Government Act*, must use best efforts to allow members of the public to attend an open meeting of the board, board committee or body in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
- (2) A board, board committee or body is not required to allow members of the public to attend a meeting if, despite the best efforts of the board, board committee or body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.

- (3) If a board, board committee or body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
 - (a) the board, board committee or body must state the following, by resolution:
 - (i) the basis for holding the meeting without members of the public in attendance;
 - (ii) the means by which the board, board committee or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
 - (b) for the purposes of Division 3 [*Open Meetings*] of Part 4 [*Public Participation and Council Accountability*] of the *Community Charter* as that Division applies to a regional district under section 226 of the *Local Government Act*, the meeting is not to be considered closed to the public.
- (4) The board, board committee or body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
 - (a) Division 3 [*Open Meetings*] of Part 4 [*Public Participation and Council Accountability*] of the *Community Charter*,
 - (b) section 226 [*board proceedings: application of Community Charter*] of the *Local Government Act*, and
 - (c) any applicable requirements in a regional district procedure bylaw of a board.

Open meetings – Vancouver

- 5 (1) The Vancouver council, or a body referred to in section 165.7 [*application to other city bodies*] of the *Vancouver Charter*, must use best efforts to allow members of the public to attend an open meeting of the Vancouver council or the body in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
- (2) The Vancouver council or a body is not required to allow members of the public to attend a meeting if, despite the best efforts of the Vancouver council or the body, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
- (3) If the Vancouver council or a body does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
 - (a) the Vancouver council or the body must state the following, by resolution:
 - (i) the basis for holding the meeting without members of the public in attendance;
 - (ii) the means by which the Vancouver council or the body is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
 - (b) for the purposes of section 165.1 [*general rule that meetings must be open to the public*] of the *Vancouver Charter*, the meeting is not to be considered closed to the public.

- (4) The Vancouver council or a body may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
 - (a) section 165.1 of the *Vancouver Charter*, and
 - (b) any applicable provision in the Vancouver procedure bylaw.

Open meetings – trust bodies

- 6 (1) A trust body, or a board of variance established by a local trust committee under section 29 (1) [*land use and subdivision regulation*] of the *Islands Trust Act*, must use best efforts to allow members of the public to attend an open meeting of the trust body or board of variance in a manner that is consistent with any applicable requirements or recommendations made under the *Public Health Act*.
- (2) A trust body or board of variance is not required to allow members of the public to attend a meeting if, despite the best efforts of the trust body or board of variance, the attendance of members of the public cannot be accommodated at a meeting that would otherwise be held in accordance with the applicable requirements or recommendations under the *Public Health Act*.
- (3) If a trust body or board of variance does not allow members of the public to attend a meeting, as contemplated in subsection (2) of this section,
 - (a) the trust body or board of variance must state the following, by resolution:
 - (i) the basis for holding the meeting without members of the public in attendance;
 - (ii) the means by which the trust body or board of variance is ensuring openness, transparency, accessibility and accountability in respect of the meeting, and
 - (b) For the purposes of section 11 [*procedures to be followed by local trust committees*] of the *Islands Trust Act*, the meeting is not to be considered closed to the public.
- (4) A trust body or board of variance may pass a resolution under subsection (3) (a) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (5) This section applies despite
 - (a) section 11 [*application of Community Charter and Local Government Act to trust bodies*] of the *Islands Trust Regulation*, B.C. Reg. 119/90, and
 - (b) any applicable requirements in a procedure bylaw of a trust body.

Division 3 – Electronic Meetings

Electronic meetings – municipalities

- 7 (1) A council, or a body referred to in section 93 [*application of rule to other bodies*] of the *Community Charter*, may conduct all or part of a meeting of the council or body by means of electronic or other communication facilities.

- (2) A member of a council or body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
- (3) When conducting a meeting under subsection (1), a council or body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
- (4) If a council or body does not use electronic or other communication facilities as described in subsection (3), the council or body must state the following, by resolution:
 - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
 - (b) the means by which the council or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) A council or body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) Section 128 (2) (c) and (d) [*electronic meetings and participation by members*] of the *Community Charter* does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless a council or body proceeds as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
 - (a) section 128 of the *Community Charter*, and
 - (b) any applicable requirements in a municipality procedure bylaw of a council.

Electronic meetings – regional districts

- 8 (1) A board, a board committee established under section 218 [*appointment of select and standing committees*] of the *Local Government Act*, or a body referred to in section 93 [*application of rule to other bodies*] of the *Community Charter* as that section applies under section 226 [*board proceedings: application of Community Charter*] of the *Local Government Act*, may conduct all or part of a meeting of the board, board committee or body by means of electronic or other communication facilities.
- (2) A member of a board, board committee or body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
- (3) When conducting a meeting under subsection (1), a board, board committee or body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
- (4) If a board, board committee or body does not use electronic or other communication facilities as described in subsection (3), the board, board committee or body must state the following, by resolution:

- (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
 - (b) the means by which the board, board committee or body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) A board, board committee or body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) Section 2 (2) (d) and (e) [*electronic meetings authorized*] of the Regional District Electronic Meetings Regulation, B.C. Reg. 271/2005, does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless a board, board committee or body proceeds by using electronic or other communication facilities as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
 - (a) section 221 [*electronic meetings and participation by members*] of the *Local Government Act*,
 - (b) the Regional District Electronic Meetings Regulation, and
 - (c) any applicable requirements in a regional district procedure bylaw of a board.

Electronic meetings – Vancouver

- 9
 - (1) The Vancouver council, or a body referred to in section 165.7 [*application to other city bodies*] of the *Vancouver Charter*, may conduct all or part of a meeting of the Vancouver council or the body by means of electronic or other communication facilities.
 - (2) A member of the Vancouver council or of a body who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
 - (3) When conducting a meeting under subsection (1), the Vancouver council or a body must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
 - (4) If the Vancouver council or a body does not use electronic or other communication facilities as described in subsection (3), the Vancouver council or the body must state the following, by resolution:
 - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
 - (b) the means by which the Vancouver council or the body is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
 - (5) The Vancouver council or a body may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

- (6) Section 2 (2) (c) and (d) [*electronic meetings authorized*] of the City of Vancouver Council Electronic Meetings Regulation, B.C. Reg. 42/2012, does not apply in respect of a meeting conducted by means of electronic or other communication facilities under this section unless the Vancouver council or a body proceeds by using electronic or other communication facilities as described in subsection (3) of this section, in which case those paragraphs apply.
- (7) This section applies despite
 - (a) section 164.1 [*meeting procedures*] of the *Vancouver Charter*,
 - (b) the City of Vancouver Council Electronic Meetings Regulation, and
 - (c) any applicable provision in the Vancouver procedure bylaw.

Electronic meetings – improvement districts

- 10 (1) An improvement district board, or a committee of an improvement district board appointed or established under section 689 [*appointment of select and standing committees*] of the *Local Government Act*, may conduct all or part of a meeting of the improvement district board or committee of an improvement district board, other than an annual general meeting, by means of electronic or other communication facilities.
- (2) A member of an improvement district board or committee of an improvement district board who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
- (3) When conducting a meeting under subsection (1), an improvement district board or committee of an improvement district board must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
- (4) If an improvement district board or committee of an improvement district board does not use electronic or other communication facilities as described in subsection (3), the improvement district board or committee of an improvement district board must state the following, by resolution:
 - (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
 - (b) the means by which the improvement district board or committee of an improvement district board is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) An improvement district board or committee of an improvement district board may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) This section applies despite
 - (a) section 686 [*meeting procedure – improvement district board*] of the *Local Government Act*, and
 - (b) any applicable requirements in a procedure bylaw of an improvement district board.

Electronic meetings – trust bodies

- 11 (1) A trust body, or a board of variance established by a local trust committee under section 29 (1) [*land use and subdivision regulation*] of the *Islands Trust Act*, may conduct all or part of a meeting of the trust body or board of variance by means of electronic or other communication facilities.
- (2) A member of a trust body or board of variance who participates in a meeting by means of electronic or other communication facilities under this section is deemed to be present at the meeting.
- (3) When conducting a meeting under subsection (1), a trust body or board of variance must use best efforts to use electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public.
- (4) If a trust body or board of variance does not use electronic or other communication facilities as described in subsection (3), the trust body or board of variance must state the following, by resolution:
- (a) the basis for not using electronic or other communication facilities that allow members of the public to hear, or watch and hear, the part of the meeting that is open to the public;
 - (b) the means by which the trust body or board of variance is ensuring openness, transparency, accessibility and accountability in respect of the meeting.
- (5) A trust body or board of variance may pass a resolution under subsection (4) in reference to a specific meeting or, if the same circumstances apply, more than one meeting.
- (6) This section applies despite
- (a) section 2 [*electronic meetings authorized*] of the *Islands Trust Electronic Meetings Regulation*, B.C. Reg. 283/2009, and
 - (b) any applicable requirements in a procedure bylaw of a trust body or applicable to a board of variance.

Division 4 – Timing Requirements**Timing requirement for bylaw passage – municipalities**

- 12 Despite section 135 (3) [*requirements for passing bylaws*] of the *Community Charter*, a council may adopt a bylaw on the same day that a bylaw has been given third reading if the bylaw is made in relation to
- (a) the following sections of the *Community Charter*:
 - (i) section 165 [*financial plan*];
 - (ii) section 177 [*revenue anticipation borrowing*];
 - (iii) section 194 [*municipal fees*];
 - (iv) section 197 [*annual property tax bylaw*];
 - (v) section 200 [*parcel tax bylaw*];
 - (vi) section 202 [*parcel tax roll for purpose of imposing tax*];
 - (vii) section 224 [*general authority for permissive exemptions*];

- (viii) section 226 [*revitalization tax exemptions*];
- (ix) section 235 [*alternative municipal tax collection scheme*], and
- (b) tax sales, as referred to in Divisions 4 [*Annual Tax Sales*] and 5 [*Tax Sale Redemption Periods*] of the Local Government Finance (COVID-19) Order made by MO 159/2020, or otherwise under Division 7 [*Annual Municipal Tax Sale*] of Part 16 [*Municipal Provisions*] of the *Local Government Act*.

Division 5 – Public Hearings

Public hearings – Local Government Act

- 13** (1) A public hearing under Part 14 [*Planning and Land Use Management*] or 15 [*Heritage Conservation*] of the *Local Government Act*, including a public hearing under section 29 (1) (b) [*land use and subdivision regulation*] of the *Islands Trust Act*, may be conducted by means of electronic or other communication facilities.
- (2) For the purposes of providing notice of a public hearing to be conducted under subsection (1),
- (a) any notice of the public hearing must include instructions for how to participate in the public hearing by means of electronic or other communication facilities,
 - (b) any material that is to be made available for public inspection for the purposes of the public hearing may be made available online or otherwise by means of electronic or other communication facilities, and
 - (c) a reference to the place of a public hearing includes a public hearing that is conducted by means of electronic or other communication facilities.
- (3) This section applies to delegated public hearings.
- (4) This section applies despite the following provisions:
- (a) section 124 [*procedure bylaws*] of the *Community Charter*;
 - (b) section 225 [*procedure bylaws*] of the *Local Government Act*;
 - (c) section 11 [*application of Community Charter and Local Government Act to trust bodies*] of the Islands Trust Regulation, B.C. Reg. 119/90;
 - (d) section 2 [*electronic meetings authorized*] of the Islands Trust Electronic Meetings Regulation, B.C. Reg. 283/2009;
 - (e) any applicable requirements in a procedure bylaw made under the *Community Charter*, the *Local Government Act* or the *Islands Trust Act*.

Public hearings – Vancouver Charter

- 14** (1) A public hearing under Division 2 [*Planning and Development*] of Part 27 [*Planning and Development*] of the *Vancouver Charter* may be conducted by means of electronic or other communication facilities.
- (2) For the purposes of providing notice of a public hearing to be conducted under subsection (1),
- (a) any notice of the public hearing must include instructions for how to participate in the public hearing by means of electronic or other communication facilities,

- (b) any material that is to be made available for public inspection for the purposes of the public hearing may be made available online or otherwise by means of electronic or other communication facilities, and
- (c) a reference to the place of a public hearing includes a public hearing that is conducted by means of electronic or other communication facilities.
- (3) This section applies despite
 - (a) section 566 [*amendment or repeal of zoning by-law*] of the *Vancouver Charter*, and
 - (b) any applicable provision in the Vancouver procedure bylaw.

Division 6 – Deferral of Annual Requirements

Annual general meeting and requirements – improvement districts

- 15**
- (1) An improvement district may defer an annual general meeting that is required under section 690 [*annual general meeting – improvement districts*] of the *Local Government Act* to a date not later than December 31, 2020.
 - (2) An improvement district may defer the preparation of financial statements required under section 691 [*annual financial statements*] of the *Local Government Act* to a date not later than December 31, 2020.
 - (3) Despite the date referred to in section 691 (5) of the *Local Government Act*, an improvement district may submit to the inspector the audited financial statements of the improvement district for the preceding year and any other financial information required by the inspector at the time of the annual general meeting of the improvement district.
 - (4) If an annual general meeting of an improvement district is deferred under subsection (1) of this section and the term of an improvement district trustee would be expiring and the vacancy filled at that meeting, the term of the improvement district trustee is extended until the annual general meeting is held.
 - (5) This section applies despite
 - (a) Division 3 [*Governance and Organization*] of Part 17 [*Improvement Districts*] of the *Local Government Act*, and
 - (b) any applicable provisions in a letters patent for an improvement district.



Guidance for Open Meetings, Electronic Meetings and Timing Requirements for Bylaw Passage under Ministerial Order 192

Introduction

This document provides guidance to local governments on open meetings, electronic meetings and the timing requirements for bylaw passage as outlined in Ministerial Order 192 (replaces M139).

http://www.bclaws.ca/civix/document/id/mo/mo/2020_m192

Order 192 repeals and replaces M139, moves local governments towards normal operations as they move through the restart process. The guidance below provides practical advice to local governments while operating under Order M192 and measures that support recommendations of the Provincial Public Health Officer (PHO) and the principles of local government openness, accountability, accessibility and transparency.

This document focuses on the primary changes set out in Order M192. However, all other previous provisions under M139 such as conducting public hearings electronically, allowing for Council, Boards and the Islands Trust Body to meet electronically and deferring improvement district annual general meetings, remain in effect under Order M192. Other rules such as those provided for in legislation or local government procedure bylaws such as: notice requirements; voting rules; and, minutes also continue to apply.

Order M192 continues to provide local governments flexibility in their meeting procedures while moving towards increased public presence at local government meetings where appropriate, for both “in person” and electronic meetings. Order M192 also transitions local governments to more standard rules in relation to bylaw adoption, limiting the previous Order’s broad authority to read and adopt a bylaw on the same day it has been given to third reading to now only apply to the types of bylaws specified in Order M192.

Guidance for Ministerial Order 192

As local governments transition back towards more normal operations as part of [BC’s Restart Plan](#) -- including holding meetings with the public in attendance -- new or amended policies and procedures are needed to support elected officials, local government staff and the public.

Open Meetings

Order M192 requires local governments to undertake “best efforts” to meet the legislative requirements for open meetings so the public can continue to participate and understand local government decision-making in a way that is meaningful for them.

Local governments that are unable to meet the PHO recommendations and requirements and hold open meetings where the public can attend in person are now required to adopt a resolution to provide a

Ministry of Municipal Affairs
and Housing

Governance and Structure Branch
Local Government Division

Mailing Address:
Po Box 9839, STN PROV GOVT
Victoria, BC V8W 9T1
Phone: 250 387-4020
Fax: 250 387-7972

Location:
4th Floor, 800 Johnson Street
www.gov.bc.ca/mah

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rationale for the continued need to meet without the public present. They must also describe what local measures are being taken to meet the principles of openness, transparency and accessibility. The resolution may be in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

Best efforts from local governments include:

- Provide information to the local government staff, elected officials and the public on how the local government is meeting the PHO requirements and recommendations at open meetings:
 - how many members of the public can safely be accommodated at the meeting location while meeting physical distancing guidelines;
 - whether another meeting location has been considered to provide better space for public attendance (and what, if any, are the limitations of that space); and,
 - how public attendance at meetings will be managed if there is limited space; (e.g. restricting numbers of attendees; ensuring no crowds at entranceways).
- Offer alternative means by which the public can provide input on agenda topics before or during a meeting to increase accessibility (e.g. via email, online submission form, phone or written letter);
- If in-person presence will not be physically possible in the meeting room, consider technology for enabling the public to be present by electronic means (e.g. livestream proceedings in a space made available in other facilities where people can watch and hear the open meeting);
- Adjust the agenda and meeting schedules so that matters that are likely to be controversial or attract high public interest are the subject of a separate meeting held in a larger facility;
- Provide draft agendas, minutes and archived video of meetings (if available) to the public to facilitate public understanding of local government decision making; and,
- Document and be able to provide information to the public about what efforts have been made and considered if the local government needs to continue to meet without the public physically present.

For more information on legislative open meeting requirements please see:

<https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/councils-boards/meetings/rules>

Electronic Meetings

Order M192 requires that local governments undertake best efforts to provide facilities that enable the public to hear, or watch and hear, meetings if the meeting is held electronically or council members are attending by means of electronic communication.

If after best efforts, local governments are unable to provide the facilities where the public can hear, or watch and hear a meeting held electronically, they must provide, by resolution, the reasons for not providing facilities that allow the public to hear, or watch and hear, the meeting. The resolution must also describe the means by which they are ensuring openness, transparency, accessibility and accountability in respect of the meeting. The resolution may be in reference to a specific meeting or, if the same circumstances apply, more than one meeting.

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Best efforts from local governments include:

- Electronic meetings should attempt to resemble the in-person public meeting as much as possible, adhering to rules of procedural fairness. This means making best efforts to follow existing procedures and to allow members of the public to be heard;
- Explore alternative facilities that provide the means for the public to hear, or watch and hear, the electronic meeting (e.g. a larger venue or a venue that provides technology for the public to hear, or watch and hear the meeting);
- Explore available technology that will enable the public to hear, or watch and hear, the meeting (e.g. livestream, record and provide an archived copy on the local government website, or provide a telephone at the facility for the public to hear the meeting); and,
- Anticipate technology issues and consider allowing additional time on the agenda to resolve technical issues, including the possible lag when live-streaming.

For more information on electronic meetings please see:

<https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/councils-boards/meetings/electronic>

Timing Requirements for Bylaw Passage

Order M192 repeals the authority for the expedited passage of bylaws under M139 which authorized bylaw adoption in the same day as third reading for regional districts and the Islands Trust and narrows the eligibility for the expedited single-day bylaw adoption of certain financial bylaws by municipalities. This recognizes that the number and scope of very time-sensitive emergency-focused decisions needed diminish as local governments move into transition and restart, while providing targeted flexibility for certain municipal financial bylaws.

Allowing for at least a single day between third reading and adoption creates an opportunity for both reflective critical thought and other necessary actions, such as conditions, approvals, and further public input. Providing this time contributes to the principles of good governance, fairness and public process. However, it is critical that the Province continue to provide municipalities with the tools to quickly and effectively manage their cash flow issues. Many municipal financial bylaws also often have an annual requirement, meaning that they must occur within a specific timeframe, and if not adopted when necessary, could carry significant financial risk for a community.

The following bylaws regarded as important to the financial health and operation of have been authorized for expedited process where adoption can occur on the same day as third reading. These bylaws do not require approval, electoral consent or electoral assent. Bylaw making powers under the *Community Charter*, include:

- Financial Plan (s.165);
- Revenue Anticipation Borrowing (s.177);
- Municipal Fees (s.194);
- Annual Property Tax Bylaw (s.197);
- Parcel Tax Bylaw (s.200);
- Parcel Tax Roll for the Purpose of Imposing Tax (s.202);

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- General Authority for Permissive exemptions (s.224);
- Revitalization Tax Exemptions (s.226); and,
- Alternative Municipal Tax Collection Scheme (s. 235).

Bylaw making powers *under the Local Government Act*:

- Tax sales, as referred to in Divisions 4 [Annual Tax Sales] and 5 [Tax Sale Redemption Periods] of the Local Government Finance (COVID-19) Order made by MO 159/2020, or otherwise under Division 7 [Annual Municipal Tax Sale] of Part 16 [Municipal Provisions] of the *Local Government Act*.
The authority for expedited bylaw passage timing is not provided to regional districts as they have the existing authority under LGA s.228 to pass certain bylaws on the same day if there are 2/3 votes cast. It is also not provided to the Islands Trust as it is primarily a land use planning body and have limited involvement in emergency services and therefore are less likely to need the streamlined bylaw passage moving forward.

For more information on the bylaw adoption process please see:

<https://www2.gov.bc.ca/gov/content/governments/local-governments/governance-powers/bylaws/bylaw-adoption-process>

Further Guidance on Best Practices and Operational Considerations for Local Government Open Meetings

Order M192 requires that local governments make best efforts to hold open meetings with the public in attendance. The guidelines below are to help reduce the risk of person-to-person transmission of COVID-19 during open meetings and to assist local governments to create policies and procedures that follow the PHO requirements and recommendations and support the principles of local government openness, transparency and accessibility.

Training for Elected Officials and Local Government Staff

- Establish safe meeting policies and procedures based on the recommendations of the PHO;
- Identify areas of risk for holding open meetings and develop policies and procedures to address risks using the [WorkSafeBC COVID-19 Safety Plan template](#);
- Provide training for elected officials and local government staff including review of amended policies and procedures for open meetings, available technologies, changes to occupancy limits, meeting room flow/setup and how tasks are completed;
- Keep a record of who has completed and attended training and provide a way for elected officials, staff and the public to bring forward health and safety concerns for open meetings;
- Have a plan in place that considers what to do if someone falls ill at an open meeting or starts to feel unwell; and,
- Revisit open meeting procedures and policies every few weeks to ensure best efforts are continuing to be met and to review questions/concerns from the public.

Public Notice

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- Provide public notice that meetings of council or board are now open to the public;
- Create a robust communication plan so members of the public understand how to continue to be involved with their local government;
- Include a contact (e.g., corporate officer) in the public notice for the public to contact if they wish to attend remotely, call-in or provide comment on agenda items (*this will depend on technological capabilities of each local government*);
- Include information on the local government website, public notice posting place, social media and other community notice boards that outline the health and safety measures in place for open meetings (e.g., physical distancing; limit on number of people; attendance only if well);
- Include where draft meeting minutes and archived recordings of meetings (if available) may be found on the local government website;
- Include information on how the public can hear, or watch and hear the meeting either online or if another facility is provided for this purpose;
- Provide an e-mail subscription service where the public can sign up to receive notice of upcoming meetings, agendas and minutes or a newsletter with links to these items on the local government website;
- Provide regular updates to the public on changes that are made to procedures and policies for council or board meetings; and,
- If the community newspaper has shut down, notice may be given by alternative means per s.94(4) of the *Community Charter*.

Meeting Location

- Post signage, including occupancy limits and effective hygiene practices at the main entrance to the building and meeting room. Signage should also be posted indicating who is restricted from entering the premises (including visitors and staff with symptoms of COVID-19 or those who feel unwell);
- PHO has developed guidance for the retail food and grocery store sector that requires at least five square metres of unencumbered floor space per person;
- Have a greeter at the front entrance to explain safety procedures;
- Create separate entrance and exit doors and one-way walkways in the meeting space;
- Implement cleaning and sanitizing protocols for the meeting space before, during and after the meeting (e.g., multiple speakers using the same podium) particularly for high touch surfaces;
- Consider leaving doors open so there is no need to touch doors handles;
- Arrange the space in such a way as to meet physical distancing requirements for council or board members, local government staff and the public (e.g., members of the public moving in the space before, during and after the meeting and location of chairs and aisles);

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- Post directional signage at the entrance to the meeting room (e.g., that the public may not move chairs or other furniture and no food or drink except closed mugs/water bottles);
- Created designated seating areas for the public and any delegations; and,
- Consider alternative venues if the space can't accommodate the public at all due to physical distancing requirements and if it won't pose challenges for the technology being used. Local governments may by bylaw or resolution provide that meetings be held outside of the municipal boundaries (s.134.1 *Community Charter* and s.224 *Local Government Act*) Typically, this provision is in the local government procedure bylaw.

Elected Officials Attendance at Meeting Location

- If some members of council or board choose to attend by means of electronic communication, ensure that if quorum is lost there is a procedure in place to either suspend proceedings until quorum is achieved or cancel or postpone the meeting;
- Ensure council or board members can hear those members attending by electronic means;
- Amend the procedure bylaw to allow for electronic special meetings and electronic participation at regular meetings by some members (if this is not already provided for);
- In the procedure bylaw, develop guidelines to assist with electronic meeting process including how the presiding member will take a vote on a motion or bylaw adoption; and,
- Outline the process for how members attending electronically can participate in the debate.

Local Government Staff at Meeting Location

- Provide an option for local government staff presenting on agenda topics to present remotely or call-in to the meeting; and,
- Ensure physical distancing is in place for local government staff at the meeting.

Public Attendance at Meeting Location

- Provide space for the public to physically attend the meeting, but also encourage members of the public to attend remotely if this is option is available;
- Create a local government webpage with a picture of the public gallery showing the meeting space, how physical distancing requirements are being met and outline cleaning and sanitizing protocols;
- Provide information on how many members of the public can reasonably be accommodated in the meeting space, while meeting physical distancing requirements;
- Outline how in-person attendance at meetings will be managed at the start, during and after the meeting;
- Provide access to hand sanitizer before members of the public enter the building or meeting room and post signage indicating those who are unwell must stay home;

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- Have a staff member act as a greeter to explain the new protocols in place as the public enters the building (e.g. how to fill the public seating area – left to right or what to do if they must leave during the meeting or attend the washroom);
- Provide a designated seating area for delegations to limit how far they have to move through the space to present to council or board; and,
- Clearly mark how the public may enter and exit the space.

Agendas

- Provide agendas early if possible and make them available online and at the public notice posting place for the public to review what is coming up (this may help the public make an informed decision as to whether they wish to attend the meeting);
- At the top of the agenda or in some other way clearly state how the public may provide comment on agenda items both at the meeting and via email, online submission form, phone or written letter prior to the meeting and how these will be addressed at the meeting;
- Consider bunching agenda topics that may be of greater public interest at the beginning so a break can be provided afterwards if people wish to leave the meeting or consider controversial topics at different meetings;
- Provide opportunities for the public to leave at different points during the meeting;
- Move the consent agenda to the end of the meeting;
- Provide opportunities in the agenda to allow people to leave the meeting room safely; this may assist in not having everyone leave at the same time;
- If possible, postpone controversial agenda topics or consider using other engagement tools so the public can provide input outside of a meeting; and,
- Provide information to the public on how comments received via other mechanisms (email; letter; public engagement tool) will be presented at a council or board meeting or incorporated into the agenda.

Provide Opportunities for the Public to Watch and Hear Electronically (if technology is available)

- Provide easy to understand information on the local government website, public notice posting place and in other community spaces for the public to understand how they can attend electronically (if available) including:
 - how to call in and listen if this option is available;
 - where to view a livestream or archived version of the meeting; and,
 - how to ask questions during question period if this is an option;
- Make archived versions of recorded meetings and meeting minutes available to the public as soon as possible after the meeting; and,

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- Ensure the chair advises participants that the meeting is being recorded and include a statement to this effect in the agenda.

Opportunities for the Public to Provide Input on Meeting Topics

- Actively promote others means for the public to participate in council or board meetings;
- Ensure the process for the public to submit comments on agenda topics is well understood and there are several options available to support accessibility (e.g., by email, letter, phone, drop-box);
- If only limited seating is available for the public and there is a public question period, consider how questions from those in attendance and those attending electronically (if available) will be managed;
- Explore options for expanded on-line or in-person public engagement opportunities for specific projects and issues (particularly those that may be potentially controversial); and,
- Consider ways in which questions not answered at the meeting may be made public.

Delegations at Open Meetings

- Outline a clear method for delegations to participate in the meeting on the local government website;
- Continue to accept in-person delegations if physical distancing requirements can be met and the item is on the agenda;
- Provide alternative methods for delegations to present (e.g., written; electronic; drop-box; pre-recorded video or real-time presentation);
- Provide a reserved spot for a delegation to sit if they are presenting at the meeting location; and,
- Schedule delegations at the beginning of the meeting or stagger them so there are fewer people at the meeting location.

Minutes

- Post draft minutes of open meetings on the local government website and at the public notice posting place or other designated places after the meeting; and,
- If council or board members or local government staff attend electronically, reflect disconnections and connections in the meeting minutes.

Technical Difficulties

- Create a plan for when technical difficulties arise, including the process if a technical failure does not allow for the meeting to continue;
- Do a trial run with volunteers if using new technology or in a new location;
- Have a staff member on standby who is the contact for participants with technical issues;

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- Ensure accessibility considerations have been made for people with hearing or visual impairments;
- Solidify roles and responsibilities should there be technology issues or a technology failure;
- Practice organizing and incorporating public comments into the meeting;
- Provide etiquette guidelines for those attending online or by phone (e.g., muting themselves unless speaking, stating full name, behavior expectations or they may be dropped from the meeting);
- If the public is able to participate in a live streamed meeting, consider what controls the moderator has and consider a chat option where questions can be asked; and,
- Consider privacy and security of the platform being used.

Background

Open Meetings

The *Community Charter* (CC), Division 3 – Open Meetings s.89 and *Local Government Act* (LGA) s.226(1)(a) provide that council and regional district board meetings must be open to the public unless the subject matter relates to one of the items listed in the closed meetings section of the legislation.

Under legislation all meetings of local government elected (councils and boards) and appointed bodies (such as committees, commissions and other subsidiary bodies) must be open to the public. Discussion and decisions must occur in properly called meetings, where the public can review the agenda and listen to the debate to understand how and why a council or board is making decisions. The requirement for open meetings is broad, in keeping with the principles of openness, transparency and accountability.

The previous Orders under the *Emergency Program Act* recognized the need for local governments to make necessary decisions and provided an override to existing open meeting rules and waived the requirement for councils (including the City of Vancouver), regional district boards and the Islands Trust to hold meetings in a venue that is open to the public.

Electronic Meetings

Section 128 of the CC and s.226 of the LGA provide that local governments may hold special meetings electronically and allow council or board members to attend regular meetings by means of electronic communication if it is authorized in their procedure bylaw. The legislation provides that except for any part of the meeting that is closed to the public, the facilities must enable the public to hear, or watch and hear, the meeting at the meeting location.

The previous Orders under the *Emergency Program Act* recognized the need for local governments to continue to be able to hold meetings while following physical distancing guidelines and provided an override to existing rules and procedure bylaws and allowed councils (including the City of Vancouver), regional district boards and the Islands Trust to hold all or part of any meeting electronically. It also waived the requirement to provide facilities that enable to public to hear, or watch and hear, the meeting.

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Timing Requirements for Bylaw Passage

Section 135(3) of the CC requires municipal councils to leave one day between third reading of a bylaw and final adoption. Section 228 of the LGA provides that regional districts may adopt a bylaw in the same meeting if the bylaw receives at least 2/3 votes cast and it does not require approval, consent, or assent under any Act. Bylaws for the Islands Trust are subject to section 11 of the Islands Trust Regulation [application of CC and LGA] where trust bodies are subject to the bylaw timing requirements under the *Community Charter and Local Government Act*.

The previous Orders under the Emergency Program Act provided authority for municipalities, regional districts, and the Islands Trust to adopt bylaws on the same day as third reading with some limitations. It relaxed the requirements under s.135(3) of the CC and allowed municipalities to pass bylaws on the same day as third reading. It further relaxed the requirement for regional district bylaws by allowing for same day adoption if the motion for adoption received the majority of the votes cast (rather than 2/3 votes cast), provided that the bylaw did not require approval, consent, or assent under an Act before adoptions.

Additional Resources:

BC Centre for Disease Control

- [Event Planning](#)
- [General COVID-19 Information](#)

WorkSafeBC

- [Municipalities and COVID-19 safety](#)
- [WorkSafeBC Safety Plan Template](#)
- [WorkSafeBC Signs and Templates](#)
- [General Guide to Reducing Risk](#) <https://www.worksafebc.com/en/about-us/covid-19-updates/covid-19-returning-safe-operation>

BC Municipal Safety Association

- [Pandemic Exposure Control COVID-19](#)

Government of Canada

- [Risk assessment for mass gatherings](#)

World Health Organization

- [Planning recommendations for mass gatherings](#)
- [Getting workplace ready for COVID-19](#)

[Ombudsperson's Guide to Open Meetings](#)

[AMTCO Electronic Council Meeting Resources](#)

Electronic Participation Procedure:

https://amcto.com/Resources-Publications/Resources/Electronic-Council-Meetings/Electronic_Meeting_Procedure_2020.aspx

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Procedure for Electronic Participation in City Council Meetings:

[https://amcto.com/Resources-Publications/Resources/Electronic-Council-Meetings/Procedures for City Council Participation in Elect.aspx](https://amcto.com/Resources-Publications/Resources/Electronic-Council-Meetings/Procedures%20for%20City%20Council%20Participation%20in%20Elect.aspx)

From: s.ridout@shaw.ca
To: diane.langman@warfield.ca
Cc: [Administration](#)
Subject: Important Update - Providing a more protective Antenna Siting & Small Cell Agreement Policy
Date: June 19, 2020 7:33:10 AM
Attachments: [Creating a Proactive Antenna Siting Protocol & Small Cell Licensing Agreement.pdf](#)

Dear Chairs Langman, Russell & Directors,

A few days ago I sent two documents to support you in making sound telecommunications decisions. When one of Canada's top environmental health and radiofrequency radiation experts read the second document, she offered some eye-opening and significant suggestions about how we might improve it.

We apologize for adding to your inbox, but in order to ensure you have access to the best resources possible, a revised version of ***Creating Protective Antenna Siting Protocols & Proactive Small Cell Licensing Agreements*** is attached.

With Warm Regards,
Sherry Ridout

On Behalf of Citizens for Safe Technology

Who are We?

We represent an umbrella group of organizations and individuals advocating for safe and responsible technology.

For more information, you may reach us at cst.citizensforsafetechnology@gmail.com ,

From: s.ridout@shaw.ca <s.ridout@shaw.ca>

Sent: Sunday, June 14, 2020 5:08 PM

To: diane.langman@warfield.ca; Roly Russell - Area 'D'/Rural Grand Forks Director <rrussell@rdkb.com>

Cc: Administration <administration@rdkb.com>

Subject: 5G ~ What you Need to Know

Subject: 5G ~ What you Need to Know

Dear Chairs Langman & Russell & Directors,

Parliament has been remote. School has been virtual. Work has been online. Recent events have shown us how important safe and affordable high-speed broadband is.

In response, telecommunication providers are racing to install 5G. Is this the best connectivity option? What rights do local governments have when it comes to 5G? And why are the limited rights municipalities *do* have now under threat?

5G and You

The Federation of Canadian Municipalities (FCM) recently published *Getting it right: Preparing for 5G deployment in your municipality*. Although the FCM guide accurately answers the regulatory questions linked to 5G, including the potential loss of local input, it does not offer municipal governments the critical big picture information needed to understand the practical, policy and logistical implications of 5G.

To support you in making well-informed telecommunication decisions, we have prepared [Getting it Wrong in Getting it Right](#), a preamble and supplement to the FCM guide.

Action Item:

- Please take a moment to read the guide by clicking [Here](#). It is also attached.

Untying Your Hands

Perhaps you would like to create local 5G and small cell siting policies that reflect and protect community interests, but believe your hands are tied.

The second document we have prepared and attached, [Creating a Proactive Antenna Siting Protocol and Small Cell Licensing Agreement](#), shows you how to create the most protective policies possible given our regulatory landscape. It also covers critical liability issues which every local government should know about.

Action Item:

- Please read the document's *Overview* and share the document with your legal team. It is found [Here](#) and is also attached.

A Better Way

The infrastructure investments we make today will shape how the Internet will be provided and how it will impact our security, well-being, resilience, and sustainability for generations to come. **We encourage you to choose the fastest, safest, most energy-efficient and cyber-secure data delivery system for your community - fiber optics** connected directly to each premise.

Action Item:

- Visit this site to learn more:

[Connected Communities ~ Wired fiber for Sustainable Last-Mile Solutions](#)

Who are We?

We represent an umbrella group of organizations and individuals advocating for safe and responsible technology.

For more information, you may reach us at cst.citizensforsafetechnology@gmail.com ,

With Warm Regards,

Sherry Ridout

On Behalf of Citizens for Safe Technology

Creating a Proactive Antenna Siting Protocol & Small Cell Licensing Agreement

Overview

Although antenna siting falls under federal jurisdiction in Canada, Innovation, Science and Economic Development (ISED) encourages local governments to create siting protocols that reflect and protect local interests. When there is no local protocol in place, the ISED policy found [here](#) becomes the default process.

In some instances, telecommunication providers are not required to consult with land use authorities or the public before they install small cell antennas. For example, if a telecom is installing 4G or 5G small cell transmitters on existing structures, and its equipment does not increase the height of that structure by more than 25%, the proponent is only required to request a local government's permission if it wants to put antennas on property owned by the town..

In preparation for 5G, providers are installing a growing number of small cell antennas on our streets. Clearly, it is prudent to have antenna siting protocols in place that include small cells and protect local interests to the degree federal regulations permit. To draft a siting protocol for your town, use the template found [here](#) as a guide. To create the most protective protocols and small cell licensing agreements possible, be sure to add the **Specific Content Suggestions** found on Pages 5 to 16 of this document.

Please note: To provide the fastest, safest and most secure Internet infrastructure possible for generations to come, and to avoid the risks associated with wireless and 5G, communities are strongly advised to build a sustainable fiber-to-the-premises last mile in place of installing small cells.

DISCLAIMER: *This content is provided for informational purposes only and is not intended to substitute for legal advice regarding compliance with local, provincial, or federal law. CALM makes no assurances or guarantees regarding the applicability or suitability of this language for any municipality, and shall not be held responsible for any legal action arising from the use of language or concepts contained herein.*

General Examples of Areas to Address

Note: While the terms “certain distances” and “certain districts” are used below, specific values are later provided

LOCATION

- Prohibiting small cell installations in residential areas and in certain districts
- Requiring installations to be certain distances away from residences, schools, hospitals, and/or other installations

AESTHETICS / ENVIRONMENT

- Aesthetic, design, and noise requirements such as co-location, camouflage, height and light limits, and more

ADMINISTRATIVE / LEGAL

- Requiring that residents within a certain distance of an installation be notified
- Requiring annual recertification fees
- Requiring permittees to defend and indemnify the city from any liabilities arising from permits and the installation, operation and maintenance of small cells
- Requiring the proponent to have insurance that includes pollution liability with no electromagnetic field exclusions as well as data privacy protection
- Reserving the right to hire independent consultants at the applicant’s expense
- Reserving the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the small cell installations Permittee has in the Town to certify compliance with Safety Code 6 or the Town’s Guideline, whichever of these two guidelines sets the lowest emission limit. Learn about creating local radiofrequency exposure guidelines in **Policy Suggestion 2** below.

POLICY SUGGESTIONS

1. Appoint a committee to create a community-owned fiber optic network

Fiber optic cables wired directly to the premises are *always* faster, safer and more energy efficient and secure than wireless networks, including 5G. To learn more about the many economic and other benefits of community-owned fiber optics, please visit [Connected Communities ~ Wired fiber for Sustainable Last-Mile Solutions](#).

2. Establish a protective radiofrequency exposure guideline for your Town

Toronto has done it. So has Salt Spring Island, BC. These local governments assessed available health, environmental and technical data, concluded there are uncertainties in the science regarding the potential health risks associated with long-term exposures to radiofrequency radiation, and created exposure guidelines for their communities that are hundreds of times more protective than Safety Code 6. Although complying with these stricter municipal guidelines is voluntary, most telecommunication proponents do.

Salt Spring has incorporated its guideline - which at $2\mu\text{W}/\text{cm}^2$ is 500 times more stringent than Health Canada's - right into the body of its antenna siting protocol. Here is the wording used:

"No cell phone antenna should be installed within 500 metres of any facility concerned with continuous human activity. A proponent wishing to install an antenna closer than this distance should demonstrate, using an independent consultant acceptable to the Islands Trust, that incident power density is less than 2 microwatts per square cm ($2\mu\text{W}/\text{cm}^2$) at any facility concerned with continuous human activity within 500 metres of the proposed antenna. Additional antennae to be mounted on existing towers must also meet these standards, so that incident power density at any any facility where there is continuous human activity stays below 2 microwatts per square cm."

10 REASONS WHY LOCAL GOVERNMENTS ARE CREATING RADIOFREQUENCY EXPOSURE LIMITS THAT ARE MORE PROTECTIVE THAN SAFETY CODE 6

1. Safety Code 6 is a *guideline* and not a *standard*. While *standards* are enforceable, *guidelines* are "recommendations" that are not mandatory to follow.
2. Safety Code 6 has not been updated for decades, despite the fact that our exposure to radiofrequency radiation has continued to increase.
3. Safety Code 6 is based on an out-dated thermal effect that tells us harm only occurs when heating happens. Although this theory has value

when it comes to *non-living substances*, it is inappropriate to apply it to *living organisms*.

4. Instead, *biologically based guidelines* (often less than 1 microW/cm²) or the *precautionary principal* should be invoked when it comes to exposing living things to radiofrequency radiation.

5. Another critical aspect that makes Safety Code 6 inappropriate for living organisms is that it relies on a *6-minute average* (measured as root-mean-squared) rather than maximum exposures. *Extremes* are what instigate biological effects and not averages.

6. Furthermore, what this average fails to consider is exposure from all sources that may vary beyond a 6-minute timeframe, and thus not be captured by a 6-minute average.

7. Another issue – Safety Code 6 does not measure **peak values** for exposure, and it is peak emissions that do the most biological damage.

8. Also, because the millimetre waves that 5G will employ have not been tested for long-term exposure, it is critical that we establish limits that err on the side of caution.

9. Finally, cumulative exposure is not considered by Health Canada, and it is cumulative exposure that causes most of the adverse health effects. Taking a small amount of arsenic once may not be lethal, but if taken daily, it will eventually poison the body. The same applies to radiofrequency radiation.

10. For these reasons, we need to be very careful what limits we use to protect vulnerable populations (children, pregnant women, those who are chronically ill). We need to protect the population not against a heating effect but rather against cancer, reproductive problems, and neurohormonal and immunological problems, all of which have been documented in scientific peer-reviewed studies to occur at levels well below Safety Code 6 guidelines.

Specific Content Suggestions

Section 1: PERMITTING PROCESS

1.1 Permit Required. No small cell installation shall be constructed, erected, modified, mounted, attached, operated or maintained within the Town on or within any public right-of-way without the issuance of a permit. No approval granted under this chapter shall confer any exclusive right, privilege, license or franchise to occupy or use the public right-of-way of the Town for delivery of telecommunications services or any other purpose.

1.2 Application Content. All permit applications must include:

- A. Detailed site and engineering plans for each proposed small cell installation, including full address, GIS coordinates, a list of all associated equipment necessary for its operation, as well as a proposed schedule for the completion of each small cell installation covered by the application.
- B. A master plan showing the geographic service area for the proposed small cell installation(s), and all of applicant's existing, proposed and anticipated installations in the Town.
- C. Certification that the proposed small cell installation(s) addresses an existing and significant gap in coverage in the service area, such certification to include a detailed map of the "gap areas" and documentation of such gaps causing an inability for a user to connect with the land-based national telephone network or maintain a connection capable of supporting a reasonably uninterrupted communication.
- D. Photographs of proposed facility equipment.
- E. Visual impact analyses with photo simulations including both "before" and "after" appearances, including simulations of the appearance of the equipment from the perspective of any property owner within 100 metres.

F. Certification by a certified radiofrequency engineer that the small cell installation will comply with Safety Code 6, or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit, including aggregate emissions for all co-located equipment.

G. Certification that the applicant has a right under federal law to install wireless telecommunications facilities in the public right-of-way.

H. Documentation demonstrating a good faith effort to locate the small cell installation in accordance with the preferred provisions of this protocol.

I. Documentation that owners of all properties within 200 metres of the proposed small cell installation have been notified in writing via certified mail of the proposed installation, including its exact location.

J. An executed indemnification agreement as set forth in section 1.7 below.

K. A disclosure of all related third parties on whose behalf the applicant is acting, including contracting parties and co-locaters.

L. If the small cell installation is proposed to be attached to an existing utility pole or wireless support structure owned by an entity other than the Town, sufficient evidence of the consent of the owner of such pole or wireless support structure to the proposed collocation.

M. Performance specifications and data that identify the maximum and minimum amount or level of radiofrequency emissions that are produced by the equipment when it is in full operating mode, and a monitoring plan for the Applicant's equipment capable of tracking and recording the daily amounts or levels of radiofrequency emissions that are produced by the equipment in order to verify that average emissions do not exceed the levels permitted either by Safety Code 6 or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit.

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1.3 Application Fee. The Town shall assess a per-installation fee of _____ to cover the Town's costs of processing, reviewing, evaluating, conducting a public hearing, and other activities involved in consideration of the application, and conducting oversight of the construction of the small cell installation to ensure compliance with zoning requirements.

1.4 Consultant Fee. The Town shall have the right to retain an independent technical consultant to assist the Town in its review of the application. The reasonable cost of the review shall be paid by the applicant.

1.5 Hydro Fees. Permittee shall pay to the Municipality an annual hydro consumption surcharge of two hundred and fifty dollars (\$250) per Structure. This amount is due on January 2 of each year and is not pro-rateable or refundable.

1.6 Compliance Bond. Upon approval of the application, the Permittee shall be required to post a bond in the amount of \$50,000 for each small cell installation. Such bond is to be held and maintained during the entire period of Permittee's operation of each small cell installation in the Town as a guarantee that as determined by a qualified independent RF engineer, as outlined in Section 1.11.2 below, no such installation, including any co-located equipment exceeds or will exceed the allowable Safety Code 6 limits for RF radiation or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit.

1.7 Indemnification. Permittee shall provide an executed agreement in the form provided by the Town, pursuant to which Permittee agrees to defend, hold harmless and fully indemnify the Town, its officers, employees, agents, attorneys, and volunteers, from (i) any claim, action or proceeding brought against the Town or its officers, employees, agents, or attorneys to attack, set aside, void, or annul any such approval of the Town or (ii) a successful legal action brought against the Town for loss of property value or other harm caused by the placement or operation of a small cell installation. This indemnification agreement shall be in a form acceptable to the Town Attorney and shall include,

but not be limited to, damages, fees and/or costs awarded against the Town, if any, and cost of suit, attorney's fees, and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by the Permittee, the Town and/or the parties initiating or bringing such proceeding. The agreement shall also include a provision obligating the Permittee to indemnify the Town for all of the Town's costs, fees and damages which the Town incurs in enforcing the indemnification provisions of this Section.

1.8 Hazardous Substances. Permittee specifically acknowledges that the Town is not responsible for the escape, discharge or release of any hazardous substances from the Equipment, and specifically agrees to indemnify, protect and save the Town harmless from any and all actions, causes of actions, claims and demands regarding any such hazardous substance that has escaped, been discharged or released from the Equipment unless caused by the gross negligence or willful misconduct of the Town, its elected officials, appointed officers, employees, agents, contractors or any person the Town is responsible for in law.

"Hazardous Substance" means any hazardous or toxic substance, and includes radiofrequency electromagnetic energy, or other radiation, petroleum products and byproducts, industrial wastes, contaminants, pollutants, dangerous substances, and toxic substances, as defined in or pursuant to any law, ordinance, rule, regulation, bylaw or code, whether federal, provincial or municipal.

1.9 Environmental Liability. Permittee agrees to assume all environmental liability under federal, provincial and local government laws in Canada, as a responsible person or otherwise, relating to its occupancy and use of the Facilities, including but not limited to any liability for clean-up of any Hazardous Substance in, on, under, along, across and around the Facilities, which are proven to result directly from:

- (a) the installation, occupation, operation and removal by Permittee of the Equipment;

(b) any materials or goods brought to the Facilities by Permittee, or by any other person with the express or implied consent of Permittee.

Permittee shall not be responsible for, or required to remove or remediate any Hazardous Substances that have migrated onto or into a Facility or which existed at a Facility prior to Permittee's occupation or use of such Facility.

1.10 Insurance: For the duration of the Term:

(a) Permittee shall maintain comprehensive general liability insurance with coverage up to five million dollars (\$5,000,000.00), per occurrence and in the annual aggregate for products and completed operations, to protect Permittee from claims for personal injury, bodily injury or property damage arising out of Permittee's Work and/or operation of the Equipment. In addition, Permittee agrees that:

(i) the Town shall be added as an additional insured but only with respect to Permittee's legal liabilities arising out of Permittee's operations under this Agreement; and

(ii) the insurance shall include coverage for: products and completed operations; blanket contractual liability; cross-liability; non-owned automobile liability; pollution liability with no electromagnetic field exclusions, cyber-security and data privacy protection, and broad form property damage.

(b) Permittee shall also maintain automobile liability insurance, with coverage for bodily injury and property damage, for any Permittee owned or leased vehicles used in the performance of the Work in the amount of two million dollars (\$2,000,000.00) per accident.

(c) The comprehensive general liability insurance policy shall contain a provision whereby the insurers will endeavour to provide the Town with sixty (60) days' notice of cancellation.

(d) Upon execution of this Agreement, Permittee shall file with the Town a certificate of insurance of each insurance policy required. Permittee shall also provide a certificate of insurance at any time upon reasonable written request by the Town. Failure to maintain the insurance policies as required by this Agreement is a material breach of contract.

(e) Excess (umbrella) liability insurance may be used to achieve the required insured limits.

1.11 Annual Re-certification.

1.11.1 Each year, commencing on the first anniversary of the issuance of the permit, the Permittee shall submit to the Town an affidavit which shall list all active small cell wireless installations it owns within the Town by location, certifying that

(1) each active small cell installation is covered by liability insurance with no electromagnetic field exclusions in the amount of \$5,000,000 per installation, naming the Town as additional insured; and

(2) each active installation has been inspected for safety and found to be in sound working condition and in compliance with all federal safety regulations concerning radiofrequency exposure limits or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit.

1.11.2 The Town shall have the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the Permittee's small cell wireless installations located within the Town to certify their compliance with all Safety Code 6 radiofrequency emission limits or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit. The reasonable cost of such tests shall be paid by the Permittee.

1.11.3 In the event that such independent tests reveal that any small cell installation or installations owned or operated by Permittee or its Lessees, singularly or in the aggregate, is emitting RF radiation in excess of Safety

Code 6 exposure guidelines or the Town's radiation exposure guideline, whichever of these two guidelines sets the lowest emission limit, the Town shall notify the Permittee and all residents living within 500 metres of the small cell installation(s) of the violation, and the Permittee shall have forty-eight (48) hours to bring the small cell installation(s) into compliance. Failure to bring the small cell installation(s) into compliance shall result in the forfeiture of all or part of the Compliance Bond, and the Town shall have the right to require the removal of such installation(s), as the Town in its sole discretion may determine is in the public interest.

1.11.4 Any small cell wireless installation which is no longer in use shall be removed by the Permittee within 30 days of being taken out of use.

1.11.5 Any small cell wireless installation which is not removed within 30 days after being listed as no longer in use in the annual re-certification affidavit shall be subject to a fine of \$100/day until such installation is removed.

1.11.6 Where such annual re-certification has not been properly or timely submitted, or equipment no longer in use has not been removed within the required 30-day period, no further applications for small cell wireless installations will be accepted by the Town until such time as the annual re-certification has been submitted and all fees and fines paid.

1.12 Non-Permitted Installations Any small cell installation constructed, erected, modified or enhanced prior to the issuance of a site-specific permit from the Town shall be removed prior to the submission of any other application. No application for a small cell installation shall be considered while such unauthorized installations remain.

1.13 Notice of Permit Filing. Notice of the filing of any permit submitted pursuant to this protocol shall be sent to all property owners within 200 metres of each and every proposed small cell installation within five (5) days of such filing, such notice to be sent by certified mail at the expense of the Permittee.

1.14 Public Availability of Permit Applications. All permit applications submitted pursuant to this protocol, including all related documents, shall be made available for viewing and/or copying by any member of the public during normal business hours at the relevant office of the Town. Any charge for copies shall be limited to the Town's actual cost. No additional charges may be assessed against any member of the public for access to the entire permit and all of its related documents.

Section 2: LOCATION AND CONFIGURATION PREFERENCES

2.1 Siting Guidelines. The purpose of this section is to provide guidelines to applicants and the reviewing authority regarding the preferred locations and configurations for small cell installations in the Town, provided that nothing in this section shall be construed to permit a small cell installation in any location that is otherwise prohibited by the Town code.

2.2 Order of preference - Location. The order of preference for the location of small cell installations in the Town, from most preferred to least preferred is:

1. Industrial zone
2. Commercial zone
3. Mixed commercial and residential zone
4. Residential zone

Discouraged Locations:

1. Land use
 - Medium and high density residential areas
 - Schools, daycare facilities, playgrounds and similar facilities
 - Areas that adversely impact view corridors
 - Heritage areas (unless visibly unobtrusive) or on heritage structures unless it forms an integrated part of the structure's overall design (i.e. through the use of stealth structures).
 - Nature protection areas
 - Environmentally sensitive ecosystems

2. Other considerations, irrespective of land use designation

- Locations directly in front of doors, windows, balconies or residential frontages. (Please see Section 3.7 for specific setback requirements)
- Community gathering places such as community halls, churches, commercial eating & drinking establishments
- Sites of topographical and geographic prominence

(See *Note 1*)

Section 3: INSTALLATION SPECIFICATIONS

3.1 The Permittee must construct, install and operate the small cell installation in strict compliance with the plans and specifications included in the application.

3.2 Where feasible, as new technology becomes available, the Permittee shall replace larger, more visually intrusive facilities with smaller, less visually intrusive facilities, after receiving all necessary permits and approval required by the Town.

3.3 The Permittee shall submit and maintain current at all times basic contact and site information on a form to be supplied by the Town. The Permittee shall notify the Town of any changes to the information submitted within seven days of any change, including the name or legal status of the owner or operator.

3.4 At all times, all required notices and signs shall be posted on the site as required by ISED and federal law, and as approved by the Town. The location and dimensions of a sign bearing the emergency contact name and telephone numbers shall be posted pursuant to the approved plans.

3.5. The Permittee shall maintain current at all times liability and property insurance including pollution liability with no electromagnetic field exclusions for each small cell installation in the Public Right of Way in the amount of \$5,000,000 (Five Million dollars) naming the Town as additional insureds.

3.6. The proposed small cell installation shall have an adequate fall zone to minimize the possibility of damage or injury resulting from pole collapse or

failure, icfall or debris fall, and to avoid or minimize all other impacts upon adjoining properties.

3.7. Every effort shall be made to locate small cell installations no less than 650 metres away from the Permittee's or any Lessee's nearest other small cell installation, or within 500 metres of any school (nursery, elementary, junior high, and high school), trail, park or outdoor recreation area, sporting venues, and residential zones. (*See Note 2*)

3.8. A single or co-located small cell installation must be mounted on an existing structure such as a utility or lighting pole that can support its weight and the weight of any existing co-located equipment. All new wires needed to service the small cell installation must be located within the width of the existing structure so as to not exceed the diameter and height of the existing utility pole.

3.9. All equipment not to be installed on or inside the pole must be located underground, flush to the ground, within one metre of the utility pole. Each installation is to have its own dedicated power source to be installed and metered separately.

3.10 If a Permittee proposes to replace a pole in order to accommodate a small cell installation, the pole shall match the appearance of the original pole to the extent feasible, unless another design better accomplishes the objectives of this section. Such replacement pole shall not exceed the height of the pole it is replacing by more than two metres.

3.11 Each small cell installation facility shall be designed to be resistant to, and minimize opportunities for, unauthorized access, climbing, vandalism, graffiti and other conditions that would result in hazardous situations, visual blight, or attractive nuisances. The Town may require the provision of warning signs, fencing, anti-climbing devices, or other techniques to prevent unauthorized access and vandalism when, because of their location or accessibility, a small cell installation has the potential to become an attractive nuisance.

3.12 The Permittee shall repair, at its sole cost and expense, any damage including, but not limited to, subsidence, cracking, erosion, collapse, weakening,

or loss of lateral support to Town streets, sidewalks, walks, curbs, gutters, trees, parkways, street lights, traffic signals, improvements of any kind or nature, or utility lines and systems, underground utility line and systems, or sewer systems and sewer lines that result from any activities performed in connection with the installation or maintenance of a small cell installation in the public right-of-way. The Permittee shall restore such areas, structures and systems to the condition in which they existed prior to the installation or maintenance that necessitated the repairs. In the event the Permittee fails to complete such repair within the number of days stated on a written notice by the permitting authority, the permitting authority shall cause such repair to be completed at Permittee's sole cost and expense.

3.13 Prior to issuance of a building permit, the applicant shall obtain the permitting authority's approval of a tree protection plan prepared by a certified arborist if the small cell installation will be located within the canopy of a street tree, or a protected tree on private property, or within a 5-metre radius of the base of such a tree. Depending on site-specific criteria (e.g., location of tree, size, and type of tree, etc.), a radius greater than 5 metres may be required by the permitting authority. If there is evidence that the radiation from nearby antennas is causing trees to weaken or die, these antennas must be removed by the Permittee at the Permittee's sole cost and expense.

3.14 Applicant shall abide by all local, provincial and federal laws regarding design, construction and operation of the small cell installation, including all provincial and federal Occupational Health and Safety Regulations for worker safety in, around and above power lines and near radiation-emitting devices.

Note 1: The town may also wish to include preference for the *configuration* of small cell installations, from most preferred to least preferred. Configuration preferences might be: (1) Co-located with existing wireless facilities, (2) Mounted on existing utility poles, (3) Mounted on new poles or towers.

Considerations include the structural integrity of existing utility poles, the fact that mandating co-located equipment could result in an unfair aesthetic burden on some residents or neighborhoods, and the possibility that new poles might be bigger, heavier and more obtrusive.

Note 2: Every effort should be made to avoid placing small cell installations in close proximity to residences. Viable and defensible setbacks will vary based on zoning.

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Getting it wrong in “Getting it right: Preparing for 5G deployment in your municipality”

In February 2020, the Federation of Canadian Municipalities (FCM) published [Getting it Right: Preparing for 5G deployment in your municipality](#), a guide designed to help municipalities deal with the practical, policy and logistical implications of 5G technology in local communities.

This FCM document contains several half-truths, mistruths and framing tactics – listed below – which result in a biased, misleading and generally inaccurate guide.

The document did, however, get *some* things right. Part 2 of this summary outlines those points.

Part 1: Getting it Wrong

Misconception 1 The fifth generation of wireless technology (is) a necessity if Canada is to remain competitive on the world stage. (p.4)

Fact The benefits of 5G are dubious at best, and are they worth the costs?

There has been no cost-benefit analysis of 5G to see if its consequences and risks, including the costs stemming from security and data breaches, environmental damage, liability claims, lost productivity due to radiofrequency radiation-induced illness, and increased healthcare requirements, outweigh its benefits.

Driven by the belief that digital technology is neutral and therefore carries no unintended consequences or risks, politicians, policy makers, and society are ignoring the science-backed evidence that urges us to exercise precaution when investing in infrastructure that is wireless-dependent.

Learn more here:

1. Women’s College Hospital, Toronto, [Impacts of Wireless Technology on Health: A symposium for Ontario’s medical community](#), 31 May 2019
Video of Presentation by Dr. Magda Havas: [Impacts of EMFs on health in the community](#)
2. Schneier, B. (2019, September 25). [Essays: Every Part of the Supply Chain Can Be Attacked – Schneier on Security](#) – as published in the New York Times
3. Zarrett, David. (2020, February 19). [Threats to security, health, public infrastructure and other potential costs of Canada’s 5G rollout](#). Macleans

Misconception 2 5G is key to profiting and benefiting from enhanced connectivity and “Smart Cities.”

“Connectivity has become essential for any community’s economic, cultural and social development.” President’s Message (p.4)

“For municipal officials, the IoT translates into “smart cities” where countless data points generated by citizens, sensors and assets allow you to monitor traffic and parking, water, wastewater, storm water, bus and rail stops, etc. This would also allow municipalities to make adjustments, or allow systems to make adjustments on their own, as needed.” (p.8)

Fact 5G is not the pinnacle of connectivity; wired fiber optic networks are.

From resource and energy monitoring and management to improved emergency, educational and health care services, most of the smart city applications 5G promises can be provided by fiber optic cables connected directly to each premise - without the threats wireless 5G poses to privacy, national security, energy consumption, the environment and public health. A few of 5G’s perks - like autonomous vehicles - cannot be delivered by wired fiber networks. However, experts warn that self-driving cars are risk and liability laden, and that 5G will likely not be able to support them.

Learn more here:

1. The Benefits of [Wired Smart Cities](#), Connected Communities
2. Schoechle, Timothy. (2018). [Reinventing Wires: The Future of Landlines and Networks](#). The National Institute of Law and Public Policy
3. Dawson, Doug. (2019). [The Myth of 5G and Driverless Cars](#). CircleID
4. Jones Day law firm. (2017, November). [Legal issues Related to the Development of Automated, Autonomous and Connected Cars](#). A White Paper

Misconception 3 5G is the wireless industry’s solution to our ever-increasing wireless data consumption.

“The trend toward greater connectivity will only accelerate. The use of wireless Internet connected devices in our communities is exploding. The advent of fifth generation (5G) wireless networks is the industry’s response to this growth and the desire to further leverage the potential of the Internet.” (p.6)

Fact The main industry drivers behind 5G – Huawei, Ericsson and Qualcomm – admit they developed 5G by recognizing trends and opportunities. Consumers would not be consuming more and more data if an endless stream of wireless products were not being marketed and sold. Our growing wireless data consumption has serious environmental implications.

Which came first – our skyrocketing data usage or industry’s plan to sell us a wireless world that is dependent upon us consuming more and more data? Wireless technology uses 10 times more energy than wired technology does. Experts warn our environment cannot support unlimited digital consumption.

Industry is not providing 5G as a public service. When asked about the motivation driving 5G at a December 2016 meeting of *The Institute of Electrical and Electronics Engineers* (IEEE), respected industry expert and Senior Huawei Researcher Dr. H. Anthony Chan stated: “...if technology does not change, the company will die...it is about more jobs...engineering and manufacturing... People must buy a new phone.”

Learn more here:

1. A GSA Executive Report from Ericsson, Huawei and Qualcomm. (2015, November). [The Road to 5G: Drivers, Applications, Requirements and Technical Development](#)
2. The Shift Project. (2019, March). [Lean ICT: Towards “Digital Sobriety”: Our New Report on the Environmental Impact of ICT](#)
3. The Shift Project. (2019, July). [Climate Crisis: The Unsustainable use of Online Video: Our new Report on the Environmental Impact of ICT](#)

Misconception 4 5G will bring us the fastest Internet possible.

“Once fully deployed, 5G technology promises maximum theoretical speeds in the 10 Gbps range, at least 100 times faster than top theoretical speeds for existing 4G technology (up to 1,000 times faster than actual speeds in some circumstances). To get a sense of this change, downloading a two-hour movie will take less than four seconds versus approximately six minutes on existing 4G networks. (Note that consumer technology will also have to catch up as many existing devices are not 5G capable.) (p.7)

Fact New breakthroughs in fiber optics offers real-time transmission of 200 Gbps. *This is 20 times faster than the maximum theoretical speed of wireless 5G.*

Learn more here:

Brown, Mike. (2020, January 2). [A Fiber Optic Breakthrough Could Beat 5G for Rural Internet Access](#). Inverse

Misconception 5 “5G technology will outperform traditional land connections in some cases, making home routers a thing of the past.” (p.7)

Fact 5G may be faster than Internet provided through copper wires or coaxial cable, but it will never be faster than fiber wired directly to the premises.

Wireless signals can never be as fast as the fiber cables that transport data to antennas.

Learn more here:

Schoechele, Timothy. (2018). [Reinventing Wires: The Future of Landlines and Networks](#). The National Institute of Law and Public Policy

Misconception 6 “More significantly, 5G networks are key to opening up the potential of the “Internet of Things” (IoT). (p.7)

Fact A balanced and informed discussion of the IoT will include its potential, as well as its pitfalls. This discussion would include:

Privacy and National Security issues related to the IoT:

- Smart devices are easily hacked and controlled,
- They allow for increased surveillance, and potentially nefarious military and paramilitary capabilities such as “swarming” and robotic attack missions,
- They permit our personal data to be tracked and sold.

Environmental and Social Costs of the IoT:

- Powering , manufacturing and storing the data from trillions of sensor-equipped and chipped devices demands huge amounts of energy and resources,
- Massive amounts of e-waste will be generated due to planned obsolescence,
- An increasingly automated world threatens job security and heightens tech addiction,
- Mining for the rare minerals needed to make these devices is causing untold human suffering.

Learn more here:

1. Halpern, Sue. (2019, April 26). [The Terrifying Potential of the 5G Network](#). The New Yorker
2. Congressional Research Service. (2020, May 22). [National Security Implications of 5th Generation \(5G\) Mobile Technologies](#). A Report from the U.S. Congressional Research Service
3. Bordage, Frederic. (2019, October). [The Environmental Footprint of the Digital World Summary](#). A Report from Green IT.fr
4. McLelland, Callum. (2020, January 15). [The Impact of Artificial Intelligence - Widespread Job Losses](#). Retrieved from IoT for all
5. Annie Kelley. (2019, December 16). [Apple and Google named in US lawsuit over Congolese child cobalt mining deaths](#). The Guardian

Misconception 7 There are no Health Risks associated with 5G.

“Health Canada ensures that 5G installations comply with all existing safety regulations, including Safety Code 6 (SC6), which determines exposure limits for wireless devices and their associated infrastructure. Canada’s limits are consistent with the science-based standards used in other countries. Large safety margins have been incorporated into these limits to provide a significant level of protection for the general public and personnel working near radio frequency sources.” (p.23)

Fact There is ample peer-reviewed science linking non-thermal radio frequency radiation (RFR) to biological harm. Countries such as Italy, Switzerland and Russia have radiation exposure limits many times more protective than ours.

In 1976, the [US Naval Medical Research Institute](#) published a [bibliography of 3,700 scientific papers](#) on the thermal and non-thermal biological effects of RFR. The body of scientific evidence on the health implications of the non-thermal effects of RFR has grown exponentially since.

“Health Canada’s 2015 guidelines for human exposure to non-ionizing radiation (Safety Code 6) were out of date before they were published, and the review process was flawed,” says Dr. Meg Sears, PhD, Chair of Ottawa-based *Prevent Cancer Now*. “Hundreds of peer-reviewed, published studies show that radiofrequency (RF) radiation can cause cancers, damage sperm and DNA, impair reproduction, learning and memory, and more. We should be limiting public exposure, not increasing it.”

“We have sufficient data to classify RF radiation as a Group 1, known human carcinogen, along with, for example, asbestos and tobacco smoke,” states Dr. Anthony Miller MD, Professor Emeritus of the Dalla Lana School of Public Health, University of Toronto, who worked with the International Agency for Research on Cancer on the 2011 scientific review.

When the U.S. Naval Medical Research Institute identified the risks in 1976, governments should have limited the scope of technological change, and created radiation exposure standards that protected the public from harm. Instead, the evidence was hidden and ignored, and industry-influenced bodies like ICNIRP created the standards that Health Canada still emulates today.

Learn more here:

1. [Peer Reviewed Scientific Research on Wireless Health Effects](#) ~ Environmental Health Trust
2. [5G Telecommunications Science](#) - Physicians for Safe Technology
3. Lai, Henry. (2019). [Research Summaries of RFR scientific Literature](#). Retrieved from Bioinitiative.org

Misconception 8 Innovation Science and Economic Development Canada (ISED) regularly audits antenna sites to make sure they are safe.

“ISED’s regulatory framework, including market surveillance and compliance audits, provides safeguards to protect Canadians against overexposure from wireless devices and antenna installations.” (p. 23)

Fact ISED relies on cell tower operators to make sure their sites comply with Safety Code 6. Given how 5G and the IoT work, operators cannot accurately measure citizens radiofrequency radiation exposure.

Much like the fox watching the henhouse, ISED asks cell tower operators to self-monitor how much radiofrequency radiation their antenna sites are emitting. The tests these telecoms do are often software generated, and prone to inaccuracies.

ISED requires operators to “consider, in addition to their own radio system, the contributions of all existing radiocommunication installations within the local radio environment”. Given that 5G requires potentially dozens of small cell antennas on one street, and that millimetre wave 5G works “on demand”, it is impossible for an operator to take an accurate and consistent field measurement of the RF exposure residents are receiving on a daily basis.

For software-generated audits of 5G RF exposure to be accurate, operators would need to assess an ever-changing IoT “smart” landscape that includes multiple antenna sites owned by multiple operators as well as the RF-emitting smart infrastructure that 5G is purportedly there to support.

For the past six years, academics have been preparing for the increase in radiofrequency radiation exposure inherent to smart cities, and have been developing potential measurement tools. These measurement systems are much more involved and complex than what ISED now requires, and would likely put the onus on municipalities to monitor and regulate emissions and protect residents’ health.

Learn more here:

1. ISED. (2015, March 19). TN-261 [Safety Code 6 Radio Frequency Exposure Compliance Evaluation Template](#)
2. Diez, L., Agüero, R. and Muñoz, L. (2017, June) [Electromagnetic Field Assessment as a Smart City Service: The SmartSantander Use-Case](#). Retrieved from [Sensors \(Basel\)](#). 17(6): 1250

Part 2: Getting it Right

The FCM’s “Preparing for 5G deployment in your municipality” outlines several 5G-related planning and regulatory issues that all municipal governments in Canada should be aware of.

Planning Concerns

“Clusters of small cells can be visually unappealing and create unique safety concerns. They can, in particular, detract from the qualities and integrity of areas such as historical or heritage districts as well as some planned urban environments.” (p.24)

Regulatory Concerns

“For stand-alone tower structures, regardless of height, the procedure provides for formal consultations with the municipality as the local land-use planning authority. However, 5G small cell installations on existing structures (towers and non-tower structures such as a building or power pole) are excluded from this requirement as long as the height of the structure is not increased by more than 25 percent.” (p.14)

“In practical terms, this means that if the power poles are owned by the provincial utility in your jurisdiction, a carrier could enter into an agreement to install 5G small cell antennas on these poles and not even have to notify your municipality (even if the small cell is added at the top of the pole, as long as the addition is less than 25% of the existing height).” (p.14)

“A grey zone exists with respect to pre-emptive pole replacements by utilities. If a utility were to replace a pole with a much taller one, and then add antennas to it, it would likely fall outside the consultation requirements.” (p.16)

Liability Concerns

“... a number of municipalities, even those with comprehensive MAAs in place, are reporting the installation of 5G small cell antennas without their knowledge. Even if they are affixed to someone else’s asset—like a power pole—if the antenna is located within the ROW space, it could raise issues of interest to the municipality such as safety concerns for the public and municipal workers.” (p.14)

Municipal Rights in Jeopardy

Current Rights

“If a carrier has identified municipal assets (light poles, traffic lights, transit shelters, etc.) as one of its preferred options to install small cell antennas, it has to negotiate with the municipality and come to an agreement. As asset owners, municipalities have the right to refuse access.” (p.24)

“Municipalities can refuse antennas on their property, but they cannot refuse the installation of equipment required to connect antennas located on other assets. Municipalities cannot charge occupancy fees for the connecting cables and other equipment installed within the ROW, but they can charge market value for an antenna located on their assets.” (p.25)

“Some municipalities have been misinformed by carriers into believing that small cells deployment is already covered in MAA’s and that, as a result, carriers enjoy the same conditional right of access for antennas as they do for their cables, etc. This is not the case.” (p.25)

Potential Loss of Rights

Telecommunications in Canada is currently under two review processes:

1. The Report of the Broadcasting and Telecommunications Legislative Review Panel

In its January 2020 report, the Panel reviewed the governance framework for antennas and the issue of access to municipal infrastructure for network deployment.

2. The CRTC Telecom Notice 2019-57 – Review of Wireless Services

In this national consultation regarding the future of wireless services in Canada, access to municipal infrastructure is an important theme.

How These Two Review Processes May Affect Municipal Governments in Canada:

1) If Recommendations 22, and 34-37 of the Legislative Review Panel’s Report are passed:

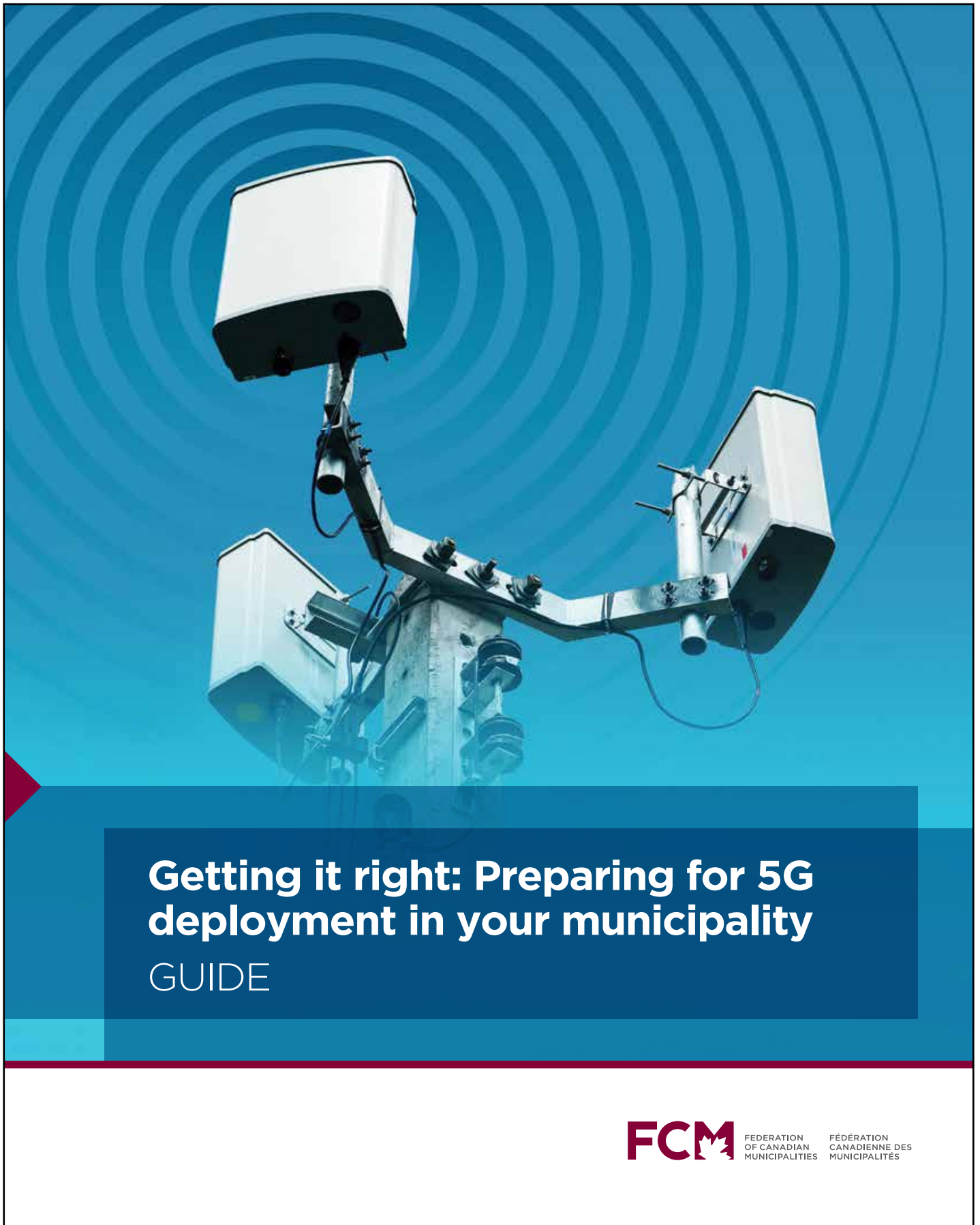
- Jurisdiction over antenna siting—including small cells for 5G—will be transferred from ISED to the CRTC. (p.11)
- The right of access that carriers currently enjoy within the right-of-way will be extended to encompass all potential support structures. These structures are referred to as “passive infrastructure” in the report, terminology that inaccurately portrays the functionality of a municipality’s assets. (p.11)
- Local governments’ current ability to refuse telecoms access to municipal assets and property would be lost. (p.11)

2) If the recommendations made by telecommunication carriers to the CRTC Wireless Review are adopted:

- The CRTC will have absolute authority over siting small cells antennas (p.26)
- The CRTC will impose time limits for municipalities to process 5G applications, as well as fee caps, and more. (p.26)

Note on Cost Recovery:

“To date, municipalities have been identifying direct costs (related to the deployment of 5G) such as engineering studies, electricity supply and workforce time, and billing them back to carriers. This seems to be the accepted best practice in Canada for the moment, a practice based in the sound public policy principle that **taxpayers should not be subsidizing the for-profit ventures of the carriers**”. (p.23)



Getting it right: Preparing for 5G deployment in your municipality

GUIDE



Disclaimer

This guide has been developed for FCM's municipal members. Information contained within the guide reflects FCM's best understanding and is believed to be accurate at the time of preparation. The material contained in this document is for informational purposes only and is not intended to provide legal advice and should not be relied upon in that regard. Municipalities are encouraged to seek professional legal advice specific to the realities of each municipality. FCM accepts no responsibility for damages, if any, suffered by any party as a result of decisions made or actions based on this document.

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An electronic copy of this handbook is available on fcm.ca

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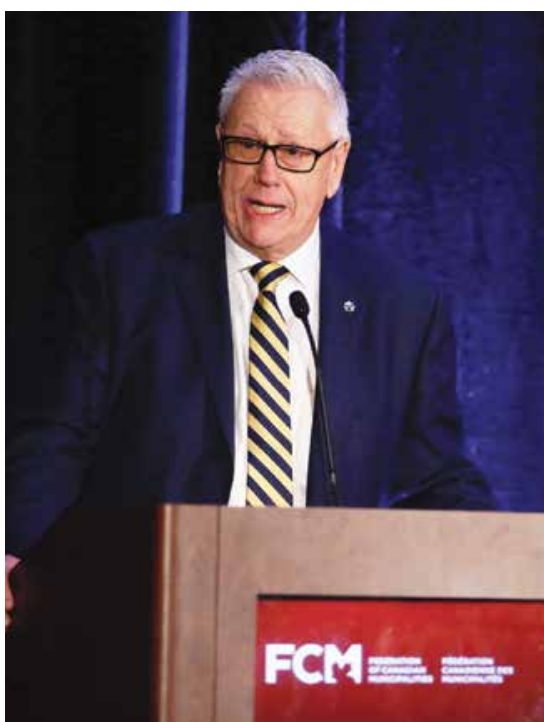
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President's message



Connectivity has become essential for any community's economic, cultural and social development. Even though important challenges remain in terms of access to basic broadband and wireless services in many smaller and rural municipalities—challenges which FCM continues to address in its work—the next wave of innovation is upon us. Telecommunications carriers, the federal government and the CRTC are gearing up for the deployment of the first components of the fifth generation of wireless technology (or “5G”)—a necessity if Canada is to remain competitive on the world stage.

PRESIDENT'S MESSAGE

Everyone has heard of 5G, but it is important for municipal officials to grasp and prepare for its practical, policy and logistical implications. From a practical perspective, this technology will revolutionize the place of the Internet in our professional and personal lives, including how municipalities provide services to the public.

5G will also pose challenges in that the infrastructure required is different from anything currently on the ground. In order to achieve its full potential, 5G will rely on vast numbers of small antennas—hundreds of thousands of them—that will become ubiquitous in our environment, each antenna requiring its own power and broadband connections. Furthermore, under the current legislative framework, the antenna and wireline components fall under different regulatory schemes, although this could evolve in the coming years.

Carriers have already stated that, for 5G to be fully deployed, they will require access to various municipal assets: traffic lights, light posts, bus shelters, etc. As with previous waves of communications innovation, municipalities will therefore be key in managing and supporting this deployment for the benefit of their residents and businesses. And FCM will play a leading role in advocating for the municipal sector and assisting municipalities in developing best practices.

This guide is the first practical tool developed by FCM to assist municipal officials as they prepare for 5G deployment in their communities. I wish to thank those who have contributed to this project, in particular the volunteer members of the Technical Committee on Rights-of-Way and the Small Cell Working Group.

As with other FCM resources, this guide provides members with a thorough overview of the information they need and the concrete steps they can take to adapt their individual relationships with carriers, as well as their own internal processes, in order to meet the challenge of 5G. FCM will continue to update this resource as the collective experience and the regulatory framework evolves.



Bill Karsten

FCM President and Councillor,
Halifax Regional Municipality

Connectivity: a new challenge

Connectivity is a crucial factor in ensuring a community's development and prosperity. For this reason, FCM has played a leading role in developing policies, programs, and tools that advocate for universal connectivity. Municipal officials also need help to protect their communities' interest while ensuring the efficient and timely deployment of technology within their jurisdiction. Thanks to the work of its Technical Committee on Rights-of-Way and, more recently, the work of the Small Cell Working Group, FCM has been instrumental in shaping best practices and defending municipal interests.

The trend toward greater connectivity will only accelerate. The use of wireless Internet-connected devices in our communities is exploding. Research shows that our current wireless data consumption has reached approximately 1.8 exabytes (one exabyte is one quintillion bytes) per month in North America alone, and this number is projected to grow six-fold by 2022. The advent of fifth generation (5G) wireless networks is the industry's response to this growth and the desire to further leverage the potential of the Internet. The Government of Canada is also encouraging the deployment of telecommunications infrastructure to meet its broadband and broader connectivity targets, both in urban settings and in rural areas.

5G technology requires entirely new networks comprised of great numbers of small, short-range antennas—"small cells"—to be deployed in order to provide effective coverage. Unless incentives (or even restrictions) to share infrastructure are put in place federally, each carrier will want to deploy its own network of small cells, which means that in some neighbourhoods there will be one small cell per carrier company every few hundred metres. Multiply this by the number of carriers operating in that neighbourhood and you get a sense of the magnitude of the undertaking. Estimates for 5G coverage in Canada set the number of installations at over 275,000 small cells.

CONNECTIVITY: A NEW CHALLENGE

The scope of this next wave of technological evolution makes it necessary for both the public and private sector to work closely together to ensure that the benefits of 5G technology become available to residents and businesses in a timely and cost-effective way. As the owners and managers of the right-of-way (ROW) space, as well as many other types of municipal or utility infrastructure (such as elevated tanks, buildings, posts and other possible supporting structures) where carriers want to install their 5G infrastructure, municipalities will have a pivotal role to play in balancing the need to provide connectivity to their communities with the protection of legitimate municipal interests such as safety and cost-recovery.

To assist municipal officials in their work and in tackling the new challenges posed by 5G, this guide seeks to provide readers with a basic understanding of 5G technology, of the current regulatory framework within which the deployment of the new networks will take place, as well as key considerations and emerging best practices municipal officials can take into account in preparing locally.

What is 5G?

5G, quite simply, refers to the “fifth-generation” of industry standards for wireless technology, the next wave in the evolution of mobile networks. While current 4G/LTE (fourth-generation/Long Term Evolution) technology revolutionized the capabilities of mobile handsets and other devices through faster connectivity and enhanced data capability, 5G will take wireless possibilities to a whole new level.

Once fully deployed, 5G technology promises maximum theoretical speeds in the 10 Gbps range, at least 100 times faster than top theoretical speeds for existing 4G technology (up to 1,000 times faster than actual speeds in some circumstances). To get a sense of this change, downloading a two-hour movie will take less than four seconds versus approximately six minutes on existing 4G networks. (Note that consumer technology will also have to catch up as many existing devices are not 5G capable.)

However, 5G is about much more than boosting speeds on your mobile phone. It is ultimately about enabling faster Internet connectivity everywhere and for everyone. In terms of coverage, 5G technology will outperform traditional land connections in some cases, making home routers a thing of the past. More significantly, 5G networks are key to opening up the potential of the “Internet of Things” (IoT), another popular term.

At the moment, most of the data that circulates on the Internet comes from human beings. In order for a news story, a research article, or a photo to find its way onto the web, someone has to create that content and upload it. To make a piece of data available on the Internet, by and large a person has to collect that data, then enter it into a computer. The IoT would allow countless devices, objects and even living beings—people, plants and animals—to be connected and provide accessible data in real time without the need for a human intermediary.

Imagine you own a dairy farm. You currently monitor the health of your cows by observing them and if you feel there is problem, by making certain tests. Now imagine if each cow

had a medical implant wirelessly connected to the Internet. You could consult, in real time on your mobile phone, any number of vital signs for each cow in your herd over the life of each animal. Each component in your car could report its own status, allowing you to make repairs before any real harm is done. Or imagine an implant monitoring your blood-sugar levels and informing you when you actually need a dose of insulin, as well as the size of the dose. Or a chip warning you that the blood markers of an imminent heart attack are present before you notice any symptoms. Smart home devices already on the market are just the tip of this technological iceberg and its potential.

For municipal officials, the IoT translates into “smart cities” where countless data points generated by citizens, sensors and assets allow you to monitor traffic and parking, water, wastewater, storm water, bus and rail stops, etc. This would also allow municipalities to make adjustments, or allow systems to make adjustments on their own, as needed. There are currently pilot projects across the country testing Smart City implementation and how to make use of the data that will flow from 5G to increase the efficiency and effectiveness of services and to respond to emerging needs.

Transportation and computer industry experts suggest the 5G deployments may also be crucial to the eventual use of autonomous vehicles or semi-autonomous driving. New pilot projects on provincial highways are exploring this possibility now.

In short, 5G opens the door to giving more and more things an IP address and connecting them to the Internet using some sort of sensor, allowing them to communicate with us and with each other, without the need for human interaction. This technology will bring new commercial opportunities, new services to residents, and open the door to innovation in the way municipal services are provided and managed.

How does 5G work?

In order to deliver on its promise to connect millions of densely packed devices and sensors, 5G relies on new technical standards as well as new infrastructure.

Without getting into too many technical details, 5G standards rely on a few key changes to achieve the new network’s full potential:

- ▶ **Greater bandwidth:** the ability to flow more data faster.
- ▶ **A different band of the radio spectrum:** different frequencies from current 4G networks.
- ▶ **Reduced latency:** the time it takes a device to connect to the network (measured in milliseconds).
- ▶ **Full duplex capabilities:** the ability to transmit and receive at the same time, instead of doing one, then the other, sequentially.
- ▶ **The ability to “speak” to large numbers of devices at the same time,** instead of switching very quickly between devices as is currently the case.

CONNECTIVITY: A NEW CHALLENGE

Of central importance to municipal officials is the fact that these new standards cannot be delivered with existing 4G wireless infrastructure. The larger antennas now found in most neighbourhoods do not operate in the right frequency range. 5G will therefore require an entirely new network of its own, gradually replacing existing mobile networks. The most significant change within the municipal realm is the advent of small cell installations. Although this equipment is relatively small, its range is also limited.

A study by Accenture estimates that achieving the full deployment of 5G in Canada will require the installation of somewhere in the order of 275,000 of these devices and, as you might expect, carriers will want to install these on any number of public assets. Developing business processes and technical parameters for the installation of thousands of these devices within your jurisdiction poses a challenge for municipalities and carriers alike.

The deployment of 5G networks will also require a number of new cell towers (“macro towers”), but the extent of that deployment is not known at this time, nor whether existing sites can accommodate these structures.

What are small cells?

Small cells are low-powered antennas (or “wireless base stations”, to use industry language) that function like cells in existing mobile wireless networks, typically covering targeted indoor or localized outdoor areas. It is essential to remember that “wireless” communications are only wireless for the end user. Small cells rely on a number of physical connections to function. In order for the data to flow into or from the Internet, each small cell antenna must be hard-wired into the carrier’s underground fibre-optic network. Each antenna is also accompanied by various support or control equipment and requires its own power source. Therefore a fiber optic cable conduit and a power supply conduit might need to be constructed where the cables are located underground.

There are various types of small cells: their size, shape, weight, the way in which they are attached as well as their individual ranges all vary. The smallest are for indoor use, operating on power levels similar to Wi-Fi routers. The largest are for outdoor use and typically consist of a small equipment cabinet (pedestal) and antennas. The antennas are small, mostly smaller than a briefcase, while the pedestals can be as large as fridge-sized cabinets. The larger small cells are often located on existing assets like traffic lights, street lights, crosswalk arms, power utility poles and buildings. Some can be incorporated

into LRT or subway platforms, bus shelters, or placed underground, while others are installed in municipal buildings (city hall, libraries, arenas, recreation centres, police and fire stations, etc.).

Unlike traditional cellular equipment, which is placed high up on single cell towers or buildings, small cell technology requires the density of multiple equipment installations clustered closely together, located in proximity to the end user and closer to the ground. While technical needs will vary according to the location and specific device used, providing full 5G coverage

WHAT ARE SMALL CELLS?

can require small cells as close to each other as every 250 metres. For these reasons, coupled with the high cost of installing dedicated mono-poles and the resulting public discontent that sometimes occurs in residential neighbourhoods due to tower proliferation, by installing small cells on existing municipal infrastructure, carriers can also reduce their costs. The collection of photographs at *Appendix A* provides you with a good overview of the variety of small cell installations that are commonly found.

How is the deployment of small cells regulated in Canada?

An evolving landscape

Having a basic understanding of how federal regulations are structured is important for municipal officials dealing with telecommunications issues. This section sets out the fundamentals of these rules. However, the legislative and regulatory landscape for small cells in Canada is currently the subject of two in-depth reviews that could bring about significant changes to this framework.

The first review was undertaken by the federal government. It appointed the *Broadcasting and Telecommunications Legislative Review Panel* to recommend revisions to the statutes that govern all aspects of communications in Canada. The Panel examined issues such as telecommunications, Canadian content creation, net neutrality, cultural diversity, and how to strengthen Canadian media. Of significance to municipalities, the Panel reviewed the governance framework for antennas and the issue of access to municipal infrastructure for network deployment.

The Panel issued its final report in January 2020 ([Full Text](#)). A number of recommendations (namely 22, and 34 to 37) involve municipalities directly. The Panel proposes transferring jurisdiction over antenna siting—including small cells for 5G—from ISED to the CRTC. The Panel further recommends that the right of access that carriers currently enjoy within the right-of-way be extended to encompass all potential support structures. These structures are referred to as “passive infrastructure”, terminology that inaccurately portrays the functionality of a municipality’s assets.

Although this is not stated explicitly, there seems to be an assumption on the part of the Panel that municipal consent will be required as per existing requirements under the *Telecommunications Act*—but the ability to refuse access to municipal assets outright would be lost if the Panel’s recommendations are adopted. Other recommendations, and several segments of the Panel’s “rationale”, on the other hand, are supportive of the municipal role and perspective as guardians of the right-of-way.

A summary of FCM’s submission to the Panel is set out at Appendix C. At the time of publication, FCM was in the process of determining its official response to the recommendations. The federal government was also still studying the report. FCM will remain engaged in this issue and will update this guide as required.

In a parallel proceeding, the CRTC has embarked on a national consultation regarding the future of wireless services in Canada ([Telecom Notice 2019-57](#)). FCM is also actively engaged in representing the municipal sector in this process during which access to municipal infrastructure has become an important theme. The consultation phase of this process is expected to wrap up in March 2020 with no definite timeline for a decision from the CRTC. (To access copies of FCM’s submissions to the CRTC, follow the links in *Appendix C*.)

In the meantime, please consider the present guide as a living document, which will grow alongside the legislative and regulatory landscape as it evolves.

The current legislative backdrop

All matters pertaining to interprovincial communications fall under federal jurisdiction. As it stands, the federal framework relating to telecommunications in Canada is set out in three key statutes:

- ▶ **Telecommunications Act:** The oldest of the statutes, this Act was initially meant to regulate telegraphs. Today, the Act essentially covers all modes of communication that involve a cable or wire. Significantly for municipalities, this Act gives carriers (the word used to designate telecommunications service providers) a right to use municipal ROWs to install, maintain and operate telecommunications infrastructure, subject to municipal consent. The Act is administered by the Canadian Radio-television and Telecommunications Commission (CRTC).
- ▶ **Radiocommunication Act:** This statute deals with the technical aspects of communications through transmitted signals: radio, television, cell phones, and the emerging 5G technology. The statute is administered by Industry, Science and Economic Development Canada (ISED), formerly known as Industry Canada. The placement of any towers for transmission antennas, for any consumer or commercial application, must be approved by ISED and the approval process is set out in the Antenna Tower Siting Procedure. Contrary to the *Telecommunications Act*, carriers do not enjoy any rights of access to install

transmission antennas, including small cells, and must negotiate access on a case-by-case basis.

- ▶ **Broadcasting Act:** Much less relevant to the municipal sector, this statute deals with the management of frequencies, sets out policies regarding such things as Canadian content, and establishes the CBC/Radio-Canada. Most matters under this Act are administered by the CRTC.

When these laws were put in place, telling “telecommunications” and “radiocommunications” apart was simple: a telephone relied on a wire, while watching television or listening to the radio depended on your proximity to an antenna. However, as we all know from our daily lives, this dividing line has become blurred more than ever. Technically, our telephones now rely on transmission antennas, not cables, to function. And we consume most of our content through means, such as fibre-optic cables, that do not involve traditional broadcasters or antennas. We also tend to purchase all our communications services from a single carrier. These dramatic changes are undoubtedly why legislative and regulatory reviews are underway.

For municipal officials, understanding the different set of rules, and how they are applied, is essential to develop bylaws, agreements and practices that protect their municipality’s interests while ensuring the latest telecommunications services are available to businesses and residents. Being well versed in how these rules interact will take on even greater importance with the impending deployment of 5G technology.

WHAT ARE SMALL CELLS?

Wires, cables, and municipal rights of way

If you have limited experience with the carriers operating within your ROW, understanding the rules regarding wireline infrastructure (such as fibre-optic cables) is important in the 5G context since—as we have seen—each small cell antenna has to be connected to the carrier’s wire network, typically located within the ROW —usually underground.

When it enacted the *Telecommunications Act*, Parliament did two things. First, it used its jurisdiction to grant carriers a right to access municipal ROW and “other public places” to deploy their networks. Second, Parliament also expressly curtailed the carriers’ rights. Under the Act, carriers can only access ROW and other public places with the consent of the municipality. Municipalities are prevented from refusing access to carriers, but they can dictate reasonable terms of access to their ROW through the conditions of their consent.

The conditions you set and the actual tool you decide to use to grant your municipality’s “consent” to a carrier’s work depends on your municipality’s circumstances. FCM’s updated handbook *Telecommunications and Rights-of-Way* explores in great detail the best practices that have developed over the last two decades in this field. The Small Cell Guide builds on that expertise, but only provides a cursory overview. You are therefore invited to consult the telecommunications handbook if you are not familiar with this topic.

In essence, there are three options available to you to grant consent for work within the ROW (or in other public places):

- ▶ **Ad hoc or individual permits:** If you only receive the occasional request from a carrier to perform work within your municipality’s ROW (typical in less densely-populated areas), you might decide to deal with the occasional request from a carrier through ad hoc or individual permits, attaching specific conditions to each permit. Individual agreements can also be used if the carrier is seeking access to public property, other than a ROW, that has unique characteristics such as a park.
- ▶ **Municipal access agreements:** The most widely used way of granting blanket consent and setting the terms of access to municipal ROWs is through the negotiation of a mutually-acceptable, comprehensive Municipal Access Agreement (or MAA). MAAs typically cover a host of issues to protect local taxpayers by ensuring direct and indirect costs are not transferred to the municipality (e.g. reinstatement costs, pavement degradation, relocation for municipal works, liabilities, etc.). Please note that site-specific access agreements are also used when dealing with unique properties or assets.
- ▶ **Municipal access bylaws:** The Telecommunications Act does not set out the form that municipal consent must take. Theoretically, therefore, consent and terms of access can take the form of a bylaw. A handful of municipalities have opted for this approach and, in some cases, the bylaws have worked well for some time. However, in other municipalities, the carriers have reacted by challenging the bylaws in

court. At the time of publication, cases involving Calgary, Alberta and Gatineau, Quebec are proceeding through the courts so the judicial response to this approach— the definitive interpretation of the word “consent” under the Telecommunications Act—is still unknown.

Regardless of the method used to grant municipal consent, both parties, the municipality as well as the carrier, can turn to the CRTC to resolve disagreements regarding the conditions of access to municipal ROWs. The CRTC has the authority to dictate the specific terms of carrier’s access and their decisions can be appealed to the Federal Court of Appeal, with the Court’s permission.

One of the central elements of the CRTC’s approach has been the principle of cost-neutrality. Under this principle, the CRTC has clearly set out how municipalities can recover all cost elements attributable to the work and presence of telecommunications infrastructure within the ROW. The only cost element the CRTC has consistently rejected is an occupancy fee. Municipalities are not allowed to charge occupancy fees or rent to carriers for the space (even if they do so for other ROW users).

Transmission antennas: towers and small cells

The legal framework for antennas is completely different and is set out under the *Radiocommunication Act*. Contrary to wires and cables, carriers do not have any rights to access property for the purposes of installing transmission antennas. Carriers must negotiate on an equal footing with the owners of the assets where they wish to install an antenna. Typically, carriers purchase or lease the land to install large towers or, if they wish to attach a smaller antenna to an existing structure (rooftop, building wall, utility pole, etc.), they negotiate an occupancy agreement with the owner, which usually includes some form of rent. Of course, any owner is free to refuse.

Once they have secured a location for an antenna, carriers must apply to Innovation, Science and Economic Development Canada (ISED) for technical approval. ISED will assess each application based on the Antenna Systems Procedure ([**Client Procedures Circular CPC-2-0-03**](#)).

For stand-alone tower structures, regardless of height, the procedure provides for formal consultations with the municipality as the local land-use planning authority. However, 5G small cell installations on existing structures (towers and non-tower structures such as a building or power pole) are excluded from this requirement as long as the height of the structure is not increased by more than 25 percent.

In practical terms, this means that if the power poles are owned by the provincial utility in your jurisdiction, a carrier could enter into an agreement to install 5G small cell antennas on these poles and not even have to notify your municipality (even if the small cell is added at the top of the pole, as long as the addition is less than 25% of the existing height). When the carrier undertakes work within the ROW to connect these antennas to their fibre network, they might approach you for a permit for that part of the process. However, a number of municipalities, even those with comprehensive MAAs in place, are reporting the installation of 5G small cell antennas without their knowledge. Even if they are affixed to someone else’s asset—like a power pole—if the antenna is located within the ROW space, it could raise issues of interest to the municipality such as safety concerns for the public and municipal workers. These aspects will be explored in the *Key considerations and emerging best practices* section of this guide.

5G DEPLOYMENT: WHERE WIRELINES AND ANTENNAS MEET

5G deployment: where wirelines and antennas meet

As explained earlier in this guide, to provide connectivity, 5G networks rely on large numbers of small, short-range antennas. To properly cover a large urban area, several hundred antennas (if not thousands) must be installed throughout the service area. These might be “wireless” as far as the end user is concerned, but for the technology to function, each small cell antenna requires a power source and must usually be physically connected, by a cable, to the rest of the carrier’s Internet network.

What this combination means is that 5G deployment simultaneously engages both sets of rules—the antenna regulations and the wireline regulations—and it does so on a very

large scale. From a legal and a practical ROW point of view, the deployment of 5G networks potentially engages your municipality in at least six different ways:

1. **Municipality as an asset owner:** Carriers must obtain the consent of any property owner in order to place an antenna. Therefore, if a carrier wishes to install an antenna on a municipal asset, it cannot proceed without the full agreement of the municipality. Conditions of access to a supporting structure for each small cell antenna (traffic light, bus shelter, light standard, hydro pole, etc.) will have to be negotiated between the carrier and the owner of the structure. As we will explore further below, conditions typically include assigning liability, accessing a power source, maintenance, occupancy fees, worker safety, etc. In negotiating access, a municipality should feel free to impose any reasonable conditions to safeguard its interests. Like other private property owners, municipalities typically receive rent from carriers for any antennas installed on their property.

2. Municipality as the ROW owner/custodian: Each small cell will have to be connected to the 5G network through cables to transmit the data captured by the small cells or to deliver data to the wireless users and devices. This wire connection component of a carrier's 5G network will likely be located within your ROW and could require the installation of pedestals or cabinets at grade. As per the rules applicable to wire-line infrastructure, carriers have a right to use the ROW space for these installations but, as we have seen, this right is subject to the terms of your municipality's consent. Disagreements on the terms of access can be brought to the CRTC by either party for resolution.

3. Municipality as land use planning authority: In 2014, the FCM was successful in advocating for regulatory amendments to the federal government's Antenna Siting Procedure that previously exempted smaller supporting structures (notably towers under 15 metres in height) from the public consultation requirements. The updated federal procedure requires consultation with the municipality and the public for all tower installations, regardless of height. In the 5G context, in the absence of a readily-available supporting structure, carriers might ask to place their own dedicated poles (or "monopoles," in 5G parlance—see *Appendix A* for images) within the ROW or elsewhere, to support a small cell antenna. Officially, the request to install a supporting structure would trigger the formal public consultation requirements with the land use planning authority, set out in ISED's procedure. Practically, since the carrier would have to seek permission from the municipality as the owner of the land on which the monopole is to be installed, both processes would likely unfold simultaneously.

Installations to existing towers or other existing structures such as power poles or buildings do not trigger the formal consultation requirement set out in CPC-2-0-03 unless the installation would result in an increase in height, of the existing structure, of more than 25 percent. A grey zone exists with respect to pre-emptive pole replacements by utilities. If a utility were to replace a pole with a much taller one, and then add antennas to it, it would likely fall outside the consultation requirements.

(Please note that, in addition to the changes to the federal framework, FCM negotiated a comprehensive Antenna System Siting Protocol Template with the Canadian Wireless Telecommunications Association. This template is not mandatory and has no legal force unless it is used by a municipality and a carrier to enter into an agreement that complements the federal consultation requirements and reflects local considerations.)

5G DEPLOYMENT: WHERE WIRELINES AND ANTENNAS MEET

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- 4. Municipality as building code enforcement authority:** If a carrier wishes to attach a transmission antenna to an existing privately-owned building or structure, municipalities should feel free to require a building permit application if they have any concerns regarding the effects of the installation on the structure. The rationale for this requirement is the same as for any other change to an existing structure and FCM is of the view that this approach is legally and constitutionally sound.
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- 5. Municipality as utility:** Each small cell installation requires a dedicated power supply (although battery back-ups are being reviewed by some manufacturers). If your municipality also owns the local power utility, or acts as the utility itself, it will also have to consider the technical requirements for these power connections, as well as determine how to metre and bill for each antenna's electricity usage. There is no expectation that the utility will simply allow carriers to plug in to their power source and use electricity without paying for it. Some municipalities have calculated an annual rate for non-metered power connections as the power utility, or with the agreement of the power provider.
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- 6. Municipality as legislator:** Municipalities also enjoy a number of lawmaking powers through the adoption of bylaws. However, municipal officials should keep in mind that, in the context of telecommunications, these powers are greatly limited by the federal government's exclusive jurisdiction in this field. As the Supreme Court of Canada's decision in *Rogers Communications Inc. v. Châteauguay (City)*, (2016 SCC 23) clearly sets out, municipalities cannot use their powers to establish mandatory rules regarding antenna placement. A bylaw establishing a minimum separation distance between a dwelling and a small cell, for example, would be unconstitutional.

Key considerations and emerging best practices

As with any change of this magnitude, it is difficult to anticipate all the legal and operational issues that will arise. Looking back to the impacts of the deregulation of the telecommunications industry in 1993—and the immediacy with which issues arose on the ground—we know that such changes can create significant challenges for individual municipalities and for the municipal sector as a whole.

FCM's goal through this guide and the ongoing work of the Technical Committee, particularly its Small Cell Working Group, is to support information sharing and the development of best practices with respect to 5G technology, and to do so as proactively as possible. Although 5G deployment is barely starting in Canada, we already know from Canadian municipalities at the forefront of this work and from experience elsewhere, that there are certain steps municipalities can take right away in order to protect municipal interests while make the deployment of 5G networks on their territory as smooth as possible.

GETTING STARTED Administrative and stakeholder considerations

Internal engagement: Depending on your municipality's size and its approach and experience in processing applications from carriers for traditional ROW work, your internal structures and/or resources may or may not be adequate to deal with 5G issues comprehensively. In some municipalities, the division of responsibilities between various administrative units (engineering, public works, water, legal, transit, etc.) might not lend itself to handling the various aspects of 5G deployment naturally. There might not even be any obvious coordination point for this work.

KEY CONSIDERATIONS AND EMERGING BEST PRACTICES

Coming together internally to figure out the basic “who does what,” including designating a 5G function within your structure, is often a necessary and worthwhile first step, even before the carriers come knocking. Some municipalities have used the opportunity to coordinate or centralize the technical 5G work with initiatives such as smart-city opportunities and connectivity strategic plans for their communities.

Engaging carriers: Being able to anticipate and plan for the arrival of 5G with the carriers is certainly the preferred approach. This might be a slightly utopian objective as deployment is largely market-driven, with carriers going first where they can make the most money. This can make it challenging to obtain detailed plans in advance. Carriers want to protect their competitive advantages and may be reluctant to share too much information. Furthermore, experience has shown that plans can change suddenly as carriers review their commercial priorities. Nonetheless, engaging carriers as early as possible remains a preferred approach.

Obtaining information on planned service areas, deployment timelines, preferred support structures, the types of small cells that will likely be used, the requirements for power and cable connections, etc., will allow you to assess what measures are required to ensure that the framework is in place to manage the arrival of 5G technology in your municipality.

Conversely, regular meetings with carriers will allow you to test out ideas on how your municipality is proposing to deal with these issues. For example, experience has shown that carriers can have difficulty understanding how power connections and fibre-optic feeds can be best installed to avoid safety risks and planning concerns. A healthy dialogue is often the most efficient way of resolving these issues.

Lastly, a proactive approach is also helpful in developing a healthy collaborative relationship with carriers for the long term. By and large, municipalities at the forefront of 5G deployment in Canada have reported good success with most carriers in jointly developing the parameters for a successful 5G introduction on their territory.

Business processes: The information gathered in the first two steps above will assist you in adapting or developing business processes and corresponding staffing needs to manage the influx of 5G small cell installation requests. Municipalities are free to develop and use whatever process is convenient and logical in their jurisdiction but, at this point in time, it seems that the type of installation has been guiding the comprehensiveness of permitting process used:

A. Attachment to an asset owned by a third party (like a power pole) within the ROW:

In these cases, the relationship is mainly between the carrier and the third-party owner. The power supply may or may not involve municipal interests while the wire connection might only require minor work within the ROW. In such cases, the governing ROW processes might be sufficient, along with a new “notification” requirement that allows you to know that there is a small cell at this location, the type and strength of the device, etc. This information would be useful to ensure a complete shutdown of the antenna if municipal employees must work in close proximity (more on this in the *Technical and engineering considerations* below). Some municipalities are going a bit further and treating the presence of this type of small cell installation within the ROW under their general ROW occupancy bylaws and requesting an occupancy fee for the small cell as well as an indemnity agreement with the carrier for civil liability and the cost of any future relocation at the municipality’s request.

- B. Attachments to private property outside the ROW:** In such cases, you might consider that being notified is sufficient, depending on how much work needs to take place within the ROW to connect the antenna to the carrier's wireline network.
- C. Attachments to municipally-owned assets:** In these cases, municipalities are generally requiring a full permit application process to make sure that municipal interests are protected, both as the asset owner and as the manager of the space. The complexity of the process will depend on whether the installation type has already been reviewed for technical and engineering purposes. If the application is for the same type of small cell antenna on the same type of municipal asset, for example, application processes are typically simplified and bulk applications are often considered. Applications for new antenna-asset combinations, on the other hand, typically require a closer examination (see *Technical and engineering considerations*).
- D. In-building installations:** Requests for small cell installations inside municipal buildings are not frequent yet but will be coming. These will obviously require individual consideration as each building will present different challenges. However, a standard set of conditions can be developed in advance to govern general legal and operational issues associated with the presence of the antenna within a municipal building.
- As with most approval processes, in developing any 5G-specific business process, you can set out the different goals that you wish to achieve: data collection on 5G infrastructure in your municipality, cost-recovery, protection for potential liabilities, public consultation or notification, etc.
- E. Pilot projects and soft launches:** In the Canadian municipalities where 5G deployment has progressed the most, municipal official and carriers have tended to work together in order to proceed incrementally and learn and develop best practices collectively. This has been achieved through limited pilot projects (installing a few small cells in different environments to identify practical issues that need to be resolved) or through soft launches of comprehensive business processes. In these cases, a permitting process and basic legal framework are put in place, a number of installations take place, and the lessons learned from this initial phase are used to inform the final versions of the permit process and master agreement between the carriers and the municipality.

KEY CONSIDERATIONS AND EMERGING BEST PRACTICES

Technical and engineering considerations

Civil or structural engineering: In many cases, attaching a small cell antenna to an existing asset will require a review by a civil engineer. Some poles might quite readily accommodate the added weight of the antenna, its control box and its power supply. But the added wind load on the pole (depending on the location of the device, its shape, and size) can become a problem that needs to be addressed through modifications to the pole or an outright replacement with a stronger structure. The great variety of small cell devices, multiplied with the various types of assets to which a carrier might want to attach an antenna, will mean that each antenna-structure configuration will need to be assessed to ensure public safety. On the positive side, once this work is done for a specific antenna-structure combination, approvals can proceed much more quickly, streamlining business processes over time. To that end, some municipalities are creating tables of each type of antenna coupled with each type of support structure with carriers and integrating them into their legal agreements.

Electrical engineering and power supply: How each small cell is powered is an important consideration in establishing approval parameters in your jurisdiction. This aspect will have to be examined closely as carriers often assume that a power source is readily available when, in fact, it is not. For example, in many municipalities, street lights are not powered at all during the day, requiring significant reconfiguration of lighting circuits in order to provide the 24-hour power required for the operation of the small cells. Provincial electrical codes also vary, which

means that a solution in one location might not work in another province. Lastly, metering power usage is an important part in ensuring full cost-recovery for taxpayers. Emerging practices currently vary according to the location and type of small cell, from individual smart meters attached to each cell, to a flat fee per cell negotiated with the local utility.

How an electrical feed is introduced in the pole is also another issue of contention. Where an external power feed is needed to feed a small cell antenna on an existing pole, the underground feed from the meter or the pedestal may be required, but supplying that feed through the existing streetlight's base can be problematic. Some carriers and municipalities have agreed to a shroud to cover the external cable routing on the outside of the base to the bottom of the pole itself, but it has been found to either be aesthetically undesirable or the shroud gets deformed or broken by snow clearing or by pedestrian traffic. A better practice is to allow for conduit paths in new streetlight bases/poles to allow an eventual power and/or fibre-optic feed through the base into the pole.

Access to municipal assets: In some municipalities, once the installation request has been reviewed, the carrier will be allowed to simply proceed with the work, from installing the small cell to connecting it to its power supply and to the underground fibre network. However, in other municipalities, work on municipal assets such as traffic lights and street lights can only be performed by municipal employees because of collective agreements. In some cases, this restriction might not apply to the installation of the antenna itself, as it is owned by the carrier. But the connection to the power supply within a pole might have to be done by

municipal workers. In other jurisdictions, work on municipal assets can only be performed by designated contractors. These are important considerations that will have to be examined in your own context.

It is worth noting that some municipalities have opted, with the concurrence of carriers, to undertake the work of connecting the antenna to a designated location where the carrier brings its fibre-optic. In other words, the carrier installs the antenna but the municipality does the rest of the work on (or inside) the pole. This includes hooking up the power supply and the fibre-optic cable to a designated and municipally-provided junction cabinet at grade, where the carrier then connects the antenna to its underground network. This ensures that any work affecting the integrity of the municipal asset is directly under municipal control. Furthermore, by providing common cabinets for all 5G antennas, the goal is to limit proliferation of at-grade infrastructure.

Abandoned assets: 5G will only increase demand for congested spaces. Ensuring that carriers remove infrastructure that is no longer useful will be important in many locations. By and large, carriers resist incurring these costs however, municipalities might have to become more demanding on this point as time goes on to ensure that the space available is used efficiently.

Density and antenna-sharing: The concern of demand for 5G locations outstripping the supply, particularly in dense urban areas, has been identified openly by some carriers. Municipalities should also bear this in mind as they move forward with 5G approvals. If five different carriers each want to install their own 5G small cell networks, will there be enough room on available structures? Will the resulting visual clutter be

tolerated by officials or residents? This is still an unknown variable, but an important one to keep in mind.

Shutdown and employee/contractor safety:

Municipal employees might need to work in close proximity to small cells (to install street signage, decorative banners, or flowerpots, for example), while those working on streetlight luminaires would have to pass the cells' radiation zone. First responders arriving at the scene of an accident where a pole has been knocked down and a small cell is lying on the roadway will be placed in a similar situation of being in close proximity to the radiation emitted by the small cell. While some provincial safety associations and industry groups are examining the potential impacts of this kind of deployment, mechanisms and protocols to ensure the complete shutoff of individual small cells in such circumstances should form part of any technical parameters developed with the carriers.

Interference with existing wireless assets:

There is a small risk that 5G small cells might interfere with existing wireless infrastructure. For example, if your municipality already uses wireless devices to control traffic flows or street lights, advanced testing of the carriers' preferred antenna models would be a worthwhile exercise to avoid any surprises.

Ground-mounted installations: On this point, it is sufficient to remember that all small cells have to be connected to a carrier's fibre network in order to function. How this is managed at grade is another logistical challenge, particularly in congested urban areas. Municipalities will likely want to ensure some level of coordination—or control—to avoid the proliferation of cabinets at grade.

KEY CONSIDERATIONS AND EMERGING BEST PRACTICES

Financial considerations

Cost recovery: With respect to traditional telecommunications infrastructure within the ROW, the CRTC has long supported full recovery of “causal costs”—cost elements associated with the work and presence of telecommunications infrastructure. Municipalities have been approaching the deployment of 5G technology with the same principle in mind: ensuring that the taxpayer is made whole. Municipalities have been identifying direct costs such as engineering studies, electricity supply and workforce time, and billing them back to carriers. This seems to be the accepted best practice in Canada for the moment, a practice based in the sound public policy principle that taxpayers should not be subsidizing the for-profit ventures of the carriers.

Permit fees: Municipal law parameters are well-established when it comes to what a municipality can charge to process permit applications. These fees must bear a direct relationship to the service provided. To charge less than the cost of processing permit applications would be problematic as carriers would be treated differently from other utilities that provide services that are also of vital importance locally and nationally. It would also amount to a *de facto* subsidy to carriers that could be challenged by others.

Occupancy fees: Although the CRTC has long held that municipalities cannot charge occupancy fees or rent for the use of the ROW space by telecommunications equipment, with respect to antennas, carriers have to negotiate access to the supporting structure and typically pay rent to the owner of that structure. This is certainly the case for current 4G antennas found on many buildings. In places where initial 5G installations

and testing has begun, agreements with carriers do include occupancy fees or rent for access to the municipality’s structure. These typically include a fixed annual fee for the location as well as a per-meter annual fee for the underground conduits where these are provided by the municipality. In some cases, in-kind contributions are also being considered, such as free access within municipal buildings, as part of the fees package.

Lastly, municipal officials should also keep in mind any developments with respect to access to hydro poles in their jurisdiction. Even in Ontario, where the Ontario Energy Board (OEB) has set a tariff for wireline attachments on hydro poles, the OEB declined to regulate fees for small cells. Carriers must therefore pay market rates for these attachments. These developments can have an effect on municipalities’ bargaining position.

Public opinion considerations

Health concerns: Health Canada ensures that 5G installations comply with all existing safety regulations, including Safety Code 6 (SC6), which determines exposure limits for wireless devices and their associated infrastructure. Canada’s limits are consistent with the science-based standards used in other countries. Large safety margins have been incorporated into these limits to provide a significant level of protection for the general public and personnel working near radio frequency sources. ISSED’s regulatory framework, including market surveillance and compliance audits, provides safeguards to protect Canadians against overexposure from wireless devices and antenna installations.

To this effect, ISED requires that all wireless equipment sold in Canada, including consumer devices such as cell phones, tablets and Wi-Fi routers comply with SC6. Carriers are obligated to comply with these regulations. In cases where residents express concern about this technology and health risks, carriers and Health Canada should be equipped to address the issue.

Planning concerns: Proper municipal oversight should help address the most obvious planning concerns such as sight lines and the effective management of the public realm by avoiding duplication, ensuring proper positioning, etc. However, clusters of small cells can be visually unappealing and create unique safety concerns. They can, in particular, detract from the qualities and integrity of areas such as historical or heritage districts as well as some planned urban environments. Products and techniques are available to camouflage and mask antennas, and municipalities can also facilitate placement in less visible locations.

Framework and legal considerations

Reviewing your Municipal Access Agreement:

The current dual governance structure, coupled with the relatively low number of antennas required for traditional cell phone technology, means that wireless connections are not often addressed explicitly in traditional MAAs. You should review any agreements in place to determine whether they capture items such as power feeds and fiber optic connections to the small cell attachments from a vault or pedestal. For example, what is the definition of “works” or similar word in your agreement? What is its scope? Obtaining legal advice on this point in advance is recommended as it will allow you to know what position to take in future negotiations. You might consider proposing changes to your MAAs to explicitly cover any unique elements flowing from 5G deployment.

Prepare to negotiate a lease for supporting structures:

If a carrier has identified municipal assets (light poles, traffic lights, transit shelters, etc.) as one of its preferred options to install small cell antennas, it has to negotiate with the municipality and come to an agreement. As asset owners, municipalities have the right to refuse access. In this light, municipalities would do well to give some thought to their needs in this regard beforehand. For example, are there locations or asset types for which your municipality is not prepared to grant access? There is currently no preferred model to govern access to municipal infrastructure, but basic parameters will undoubtedly evolve over time.

KEY CONSIDERATIONS AND EMERGING BEST PRACTICES

Combining legal agreements: You may find this more efficient, instead of entering into two distinct agreements to negotiate a comprehensive document to manage 5G deployments alongside traditional telecommunications infrastructure in your municipality. There is certainly nothing preventing a municipality from proceeding this way. However, it is worth repeating the fundamental point that antennas and their connecting infrastructure are subject to two different sets of rules. Municipalities can refuse antennas on their property, but they cannot refuse the installation of equipment required to connect antennas located on other assets. Municipalities cannot charge occupancy fees for the connecting cables and other equipment installed within the ROW, but they can charge market value for an antenna located on their assets.

Some municipalities have been misinformed by carriers into believing that small cells deployment is already covered in MAA's and that, as a result, carriers enjoy the same conditional right of access for antennas as they do for their cables, etc. This is not the case.

Prepare for litigation: While FCM's goal is to be a constructive partner in the deployment of 5G technology, there will inevitably be a few cases where it will be necessary to turn to regulatory bodies or the Courts to clarify jurisdictional grey zones. FCM, through its Legal Defense Fund, can intervene in key cases. However, experience in the telecommunications realm over the last 25 years has clearly shown that, in order to help regulators and the courts gain a better understanding of municipal needs, the presentation of strong, objective evidence, collected by individual municipalities, is crucial. By preparing reliable data on contentious legal and operational issues, individual municipalities will be able to demonstrate the legitimacy of their arguments and positions, not just for themselves but also for the municipal sector as a whole.

The future

There is still a fair amount of uncertainty with respect to how both the legislative framework and the range of technical challenges for 5G deployment will be managed. How will the federal government respond to the Report of the Broadcasting and Telecommunications Legislative Review Panel? If the Panel's recommended changes to the regulatory framework for antennas and wireline infrastructure are adopted, this would certainly upend existing practices. Changes of that magnitude would not only take time to make their way through Parliament, they would also generate inevitable legal questions that might require final determination by the courts.

From a technical point of view, the review of mobile wireless services undertaken by the CRTC in Telecom Notice 2019-57 is another source of uncertainty. As part of this process, some carriers have urged the CRTC to adopt an expansive interpretation of its authority in order to take over the authority over small cells antennas. Others argue that the CRTC should impose measures similar to those enacted by the Federal Communications Commission in the United States: time limits for municipalities to process 5G applications, fee caps, etc.

In its various submissions (see Appendix C for the complete documents), FCM has argued strenuously that the CRTC does not have the same authority as the FCC, and that the conditions in the U.S. that led to the imposition of measures simply do not exist in Canada. FCM's central position is that, in fact, the real impediments to timely and efficient deployment of 5G are technical—not legal—and the focus of all stakeholders' efforts should be on coming together to define and resolve these issues of common interest.

THE FUTURE

To that end, FCM has supported the proposals made by certain carriers who have opted for a more collaborative tone. For example, a proposal for the creation of a national 5G working group to work through common technical issues with municipalities and other stakeholders holds tremendous potential to make sure 5G deployment is done properly. Another suggestion from a number of stakeholders was the need for a faster dispute-resolution process to facilitate 5G implementation, an idea also endorsed by FCM.

During FCM's presentation at the CRTC hearings, the Commission seemed to express a good level of interest in this collaborative approach. The CRTC also seemed receptive to the various

examples provided by FCM with respect to the nature of the challenges on the ground—congestion, power supply to small cells, backhaul connections, etc—and the fact that these challenges require a technical solution, not a regulatory one. The CRTC's process is expected to wrap-up at the end of March 2020 with a final round of written submissions but a timeline on the publication of the CRTC's preferred approach was not known at the time of publication.

In short, municipal officials should continue to monitor closely developments on these fronts, as well as FCM communications on these issues.

APPENDIX A: **Photos**



Example 1 of 13-metre tall streetlight antenna pole with connection cabinet at grade

APPENDIX A: PHOTOS



Close-up of connection cabinet



Example 2 of 13-metre tall streetlight antenna pole with cabinet.



Close-up of connection cabinet

APPENDIX A: PHOTOS



Small cell attachments to decorative street lights
(the white vertical element is the light)



Small cell attachments to decorative street lights
(the white vertical element is the light)

APPENDIX B: The U.S. context

The deployment of 5G is a bit more advanced in the U.S., so there is more collective experience from which to learn. However, it should be noted that the unique political dynamics at play in the US also affect the scope of municipal authority with the FCC and several states specifically curtailing local ability to manage 5G installations.

Recent U.S. federal and state legislation (presently in 21 states) concerning the deployment of small cell technology may prevent cities from addressing aesthetic or safety concerns, and severely limits what cities may charge for private sector use of public streets as well as imposing new unfunded mandates on municipalities in the form of radically shortened application timelines.

The following areas have been the focus for legislative interest in the U.S.:

- ▶ Streamlining processing times for applications and permits.
- ▶ Capping and lowering collocation, application, and ROW fees.
- ▶ Limiting municipalities' design aesthetics jurisdictions.
- ▶ Limiting municipalities' control over denying applications for reasons other than required by legislation.

The Federal Communications Commission (FCC), the U.S. regulator, believes that municipal governments are overcharging wireless carriers to access public ROW. As an example of recent action, the FCC issued a Notice of Proposed Rulemaking (NPRM) on the topic of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment.

This NPRM suggests stripping local governments of siting authority by significantly shortening permitting "shot clocks" and eliminating cities' ability to temporarily freeze complicated siting applications. It also limits annual lease rates to \$270 per small cell, significantly lower than the present market rate in most communities. The RVA LLC/Next Century Cities found that among municipal governments surveyed, the average annual lease rate was US\$1,438 per attachment and the median annual lease rate per pole was US\$1,200.

Interestingly, the RVA LLC/Next Century Cities report also found that municipalities are indeed concerned about maintaining local control and input. For example, over half of respondents (59% of 176 surveys returned) reported being greatly concerned about state laws and 52% are concerned about federal regulations that are passed without municipal input. A full 84% of respondents believe that state laws presently under consideration related to pole use for small cells will have negative impacts for their community.

In the U.S., market value rates are being calculated by comparison for fees charged for installation of a monopole or lattice tower on municipal ROW or titled lands. For example, based on the current rates for monopoles—which can be anywhere from US \$20,000 to US\$27,000 per year—with the standard range of 1.3 km and the stated range of various wireless units of about 180 meters, the annual rate per pole could be anywhere from US\$2,769 to US\$3,738. The fee could be applied for multiple attachments, or per attachment. Some cities charge different fees depending on the number of poles attached (e.g. in increments such as 1-25, 26-50, 51-100, 100-200, and over 201). For example, the rate in Long Beach, CA is US\$1,500 per pole per year, whereas in Buffalo, NY, it is US\$2,000 per pole per year with an automatic 3% annual increase.

A 2018 study by RVA LLC/Next Century Cities that was implemented to help determine the current deployment status of, and community attitudes toward Smart City and small cell deployment, found that the appearance of the equipment was the most common complaint about small cells. Fifty-eight percent of 176 municipal respondents reported complaints from citizens about deployment aesthetics. In Boston, the city worked with carriers and community members to come to agreement on how to ensure the equipment blended in more naturally with the cityscape.

Huntington Beach, California

Huntington Beach had great success in balancing carriers' interests with maintaining local control and community values. They found that bringing as many stakeholders as possible to the table and collaboration was important at every turn.

They were able to leverage already available assets, by acquiring 11,000 street lights from Southern California Edison. As well, Philips approached Huntington Beach to offer a deal to deploy 200 Smart Fusion Poles, making them the first city in the country to have this technology. The poles include integrated stealth antennas that can support service from several carriers at each location. So far, agreements have been made with Verizon, AT&T, and Mobilitie, creating another source of revenue for the city.

APPENDIX B: THE U.S. CONTEXT

They first created a broadband strategic plan and then based on that wider plan, a specific plan with carriers to deploy small cell technology. They also made use of public-private partnerships, where this made sense, in the deployment of small cells.

They created an internal (municipal) telecommunications committee to evaluate all permitting processes. At the start, internal permitting processes didn't include any protocol for wireless siting in the public ROW, so a new process for permitting of wireless facilities through the public works department was created. They also amended the zoning code to permit small cells that meet pre-approved design standards within the public ROW. The committee created a forum that encouraged participation from all city departments, including fire and police, to work together to create policies that worked for everyone.

Importantly, the municipality worked with carriers to develop four pre-approved small cell design standards. Input from carriers on design was incorporated into the final permitting process, so if carriers' deployments fit one of the four standards, they are free to follow a streamlined, over-the-counter application process for permits. Collaborating with carriers to develop these designs was integral to ensuring the permitting process would work for both the city and the carriers. They also worked with other municipalities in Orange County to develop best practices in wireless siting. As a group, the cities worked through similar questions together to problem-solve and create shared resources and tools.

Denver, Colorado

Denver is currently exploring its policies and ordinances for Small Cell infrastructure and reviewing all new pole applications, within the parameters of federal and state law as well as Denver rules and ordinances. Under current law, it is not clear how the city can restrict height, design, or location (unless conflicting) of Small Cell infrastructure. The city is having success in coordinating expectations and recommendations through enhanced communication efforts at the outset of each carrier's program. So far each carrier has been receptive to:

- ▶ Considering standardizing pole design elements, colour, location, etc. to meet intent and character of existing infrastructure in the public ROW.
- ▶ Limiting pole heights to match existing street lighting and other poles in the public ROW.
- ▶ Generally avoiding placing poles adjacent to parks and historical places.
- ▶ Encouraging pole and equipment designs that enclose as much equipment as possible to minimize visual impact.

- ▶ Co-locating equipment onto existing infrastructure wherever feasible.
- ▶ Installing consistent infrastructure that does not discriminate based on neighbourhood type, demographic, or character.
- ▶ Exploring new concepts in combining equipment from multiple companies into single poles.

Public Works currently performs careful consultation with top executive and program management staff from each wireless carrier about proposed infrastructure programs before the carrier is allowed to submit any applications for approval. This ensures that each carrier approaches the city in a consistent manner, and that the city's current policies and permitting procedures are well known at the outset.

Per state law, the city must allow each company to propose their infrastructure in the public ROW. Additionally, the city must offer permitting procedures that can process "bulk" Small Cell programs in batches, in 90 days or less, rather than requiring individual permits for each pole or antenna. In response to these requirements, Public Works has established a plan review and permitting program that combines existing utility plan review and encroachment permitting into one contiguous process. Each applicant may submit batches of 10 or fewer unique poles or pieces of ground-mounted equipment per application. Each application will result in a revocable encroachment permit.

APPENDIX C: FCM submissions

Broadcasting and telecommunications legislative review process

January 2019 – Recommendations (excerpt from the full submission which can be found here: [https://www.ic.gc.ca/eic/site/110.nsf/vwapj/908_FederationofCanadianMunicipalities_10_EN_CA.pdf/\\$FILE/908_FederationofCanadianMunicipalities_10_EN_CA.pdf](https://www.ic.gc.ca/eic/site/110.nsf/vwapj/908_FederationofCanadianMunicipalities_10_EN_CA.pdf/$FILE/908_FederationofCanadianMunicipalities_10_EN_CA.pdf))

As stated, municipalities are crucial partners in the timely and cost-effective deployment of communications infrastructure in Canada. Therefore, in their submission to the Broadcasting and Telecommunications Legislative Review, (January 2019) FCM made clear their recommendations involving municipal ROW management related to access and consent, including:

- ▶ Develop a national broadband strategy, with elements that enhance accountability, transparency and cooperation between federal agencies, orders of government and with industry to improve broadband service across the country, as well as better ensure universal access to emerging technologies at affordable rates for consumers.
- ▶ Maintain municipalities' legislated role in managing public space for the benefit of all users. Achieving national connectivity objectives must build on and enhance the long-standing partnership with municipalities.
- ▶ Maintain the integrity of the local taxpayer without transferring costs onto the municipal tax base.
- ▶ Maintain the wording of sections 43 and 44 of the *Telecommunications Act*.
- ▶ Maintain the jurisdiction between the CRTC and ISED in the governance of small cells.
- ▶ Clarify the responsibilities of ISED and the CRTC over broadband in order to facilitate the implementation of a national broadband strategy.

FCM continues to focus on ensuring that municipalities maintain their rights around managing ROW issues and assisting with informational tools and strategies to improve the operational deployment of emerging technologies.

CRTC Telecom Notice 2019-57 – Review of Wireless Services

Initial submission dated May 15, 2019 – <https://services.crtc.gc.ca/pub/DocWebBroker/OpenDocument.aspx?DMID=3646824>

Response to the CRTC's "Request for Information" (RFI), a series of targeted questions, dated September 2019 <https://data.fcm.ca/documents/tools/guides/crtc-telecom-notice-2019-57-fcm-responses-to-questions.pdf>

Further comments, as per CRTC procedures, in response to all submissions and responses to RFIs submitted by all parties, dated November 23, 2019 <https://services.crtc.gc.ca/pub/DocWebBroker/OpenDocument.aspx?DMID=3756327>

FCM presentation slides for the CRTC hearings on February 21, 2020 – https://data.fcm.ca/documents/members_only/board_march/2020/FCM-CRTC-Telecom-Notice-2019-57-Presentation-en.pptx

Video recording of FCM's presentation at the CRTC hearings on February 21, 2020 – <https://www.cpac.ca/en/programs/crtc-hearings/episodes/66152116/>

APPENDIX D: CANADIAN CASE STUDY

APPENDIX D:

Canadian case study

Edmonton, Alberta

The City of Edmonton proceeded using a clear and precise order in finding solutions to small cell deployment issues. Public consultation was an important piece and the technical review of the technology was extensive. The telecom carriers had input, and they indicated that they thought the process made sense. Edmonton has developed ROW consent and access agreements that are separate from MAAs and has developed a streamlined permitting process along with clear policies for permit review. The following is a brief selection and summary of agreement provisions and requirements.

- ▶ The annual fee for an attachment is \$500 plus GST per attachment, as approved by city council.
- ▶ The cabinets associated with the antenna are not to be attached to the pole, contractor cabinet bases will not be allowed.
- ▶ For large cabinetry, there is no objection to the unit being wrapped or painted with a mural or other artwork approved by the City.
- ▶ Any proposal to install an attachment in an area serviced with decorative poles must be designed to match, as much as possible, the design used in that neighbourhood.
- ▶ If multiple attachments are proposed in a given area, it is the city's preference that the poles are fed from a central location (e.g. three or four poles with a fibre-optic feed from a central vault).
- ▶ Installations will be permitted at any time (subject to co-ordination with other construction work and/or events).
- ▶ "Mid-span" stand-alone poles will only be allowed in areas where there are no existing street lights or poles. Should an area become serviced by standard street lighting, any stand-alone pole may need to be removed at the telecommunication company's expense.

- ▶ Red light camera poles and/or CCTV poles are not available for attachments.
- ▶ The companies shall be responsible for all electrical permits, installation of the power feed, meter installation, and associated power consumption bills from the power carrier.

The city will review and, where appropriate, approve the installation of attachments. Once a pole has been determined to be useable, the applicant shall apply for a Utility Line Assignment (ULA) permit for the underground connections to the pole. All fees associated with the ULA permit process, pavement degradation fees, and lost productivity costs shall be charged as per the applicable agreement with the company (usually the ROW Consent and Access Agreement).

For the installation of pole attachments on public road ROW, there will be a pre-consultation site investigation meeting with the city to:

- ▶ Determine if a specific pole can accommodate an attachment.
- ▶ Identify preliminary issues of concern.
- ▶ Identify requirement for public consultation.
- ▶ Guide the content of the proposal submission.

Once the meeting has taken place, Edmonton's City Operations will give the applicant an information package that includes requirements for public consultation, installation and design and a list of plans and studies that may be required as well as any additional approvals and/or studies that the City has identified as being required. If the proposal is found to be technically possible, City Operations will forward an agreement to the applicant, advise if any additional approvals are required and require the applicant to engage in public consultation similar to the consultation required under City of Edmonton Policy C471C "Policy for Siting Telecommunications Facilities."

APPENDIX E: REFERENCES FOR FURTHER READING

APPENDIX E: References for further reading

Models and Challenges for the Deployment of Next-Generation Telecom Systems in Cities, report commissioned by the City of Montreal, June 2018 (English version)

<https://res.cloudinary.com/villemontreal/image/upload/v1573053761/portail/nitmhkpzlhctyi00poxi.pdf>

Background of Small Cell Technology. SmartWorks Partners. December 18, 2018

<https://www.smartworkspartners.com/small-cell-overview>

Becoming Broadband Ready: A Toolkit for Communities. Next Century Cities. January 2019

<https://nextcenturycities.org/becoming-broadband-ready/>

Broadband Strategy, City of San José CA

<https://www.sanjoseca.gov/your-government/department-directory/office-of-the-city-manager/civic-innovation/broadband-strategy-and-small-cell-deployment-5147>

Broadband Strategic Plan. Huntington Beach, CA

<https://nextcenturycities.org/guest-blog-bridging-the-digital-divide-in-huntington-beach/>

New Guide: How to Plan for Small Cell Wireless Infrastructure. National League of Cities (NLC). August 27, 2018

<https://www.nlc.org/article/new-guide-how-to-plan-for-small-cell-wireless-infrastructure> accessed March 4, 2019

Next Century Cities' 5G and Small Cell Resources. June 28, 2018

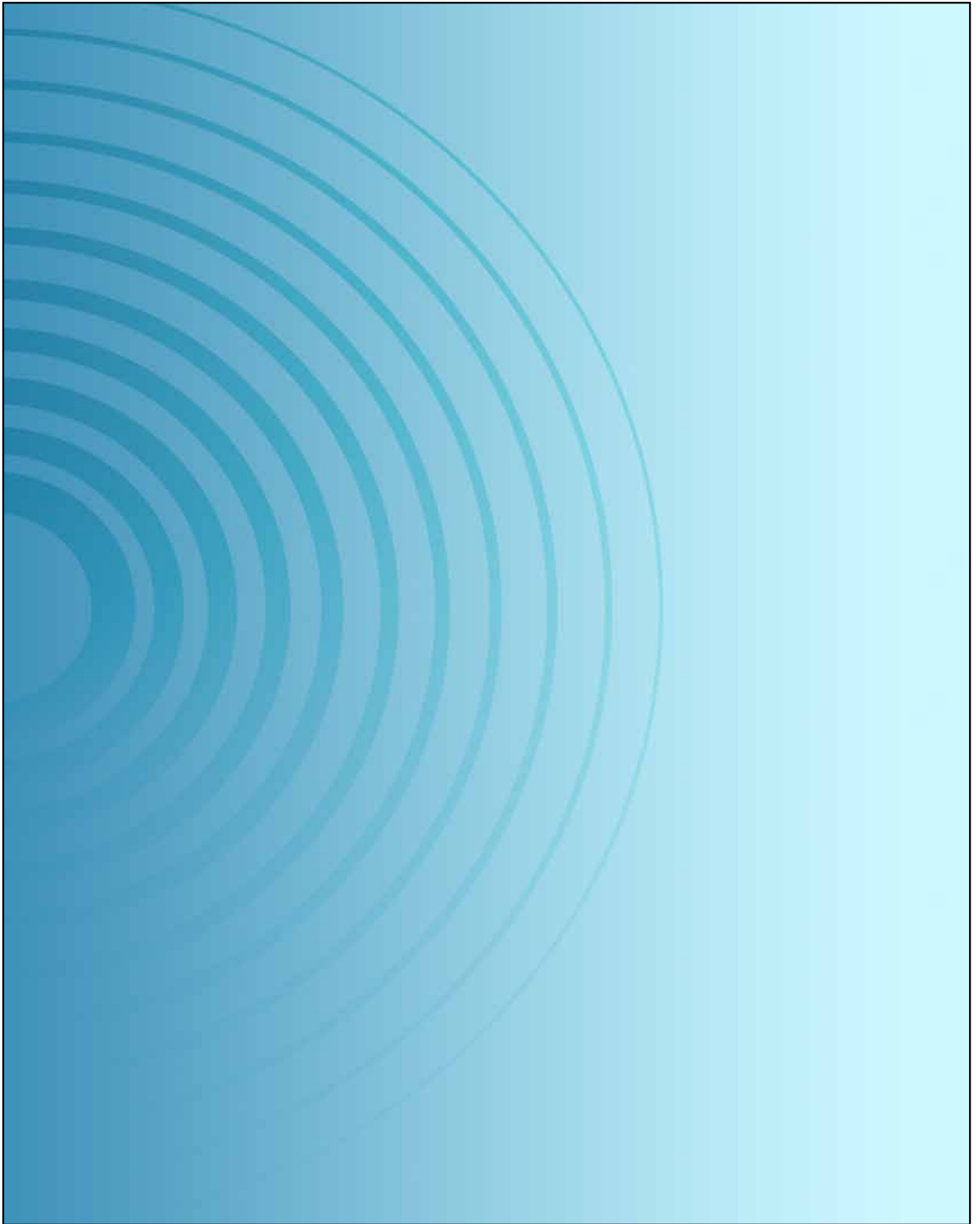
<https://nextcenturycities.org/next-century-cities-5g-resources/>

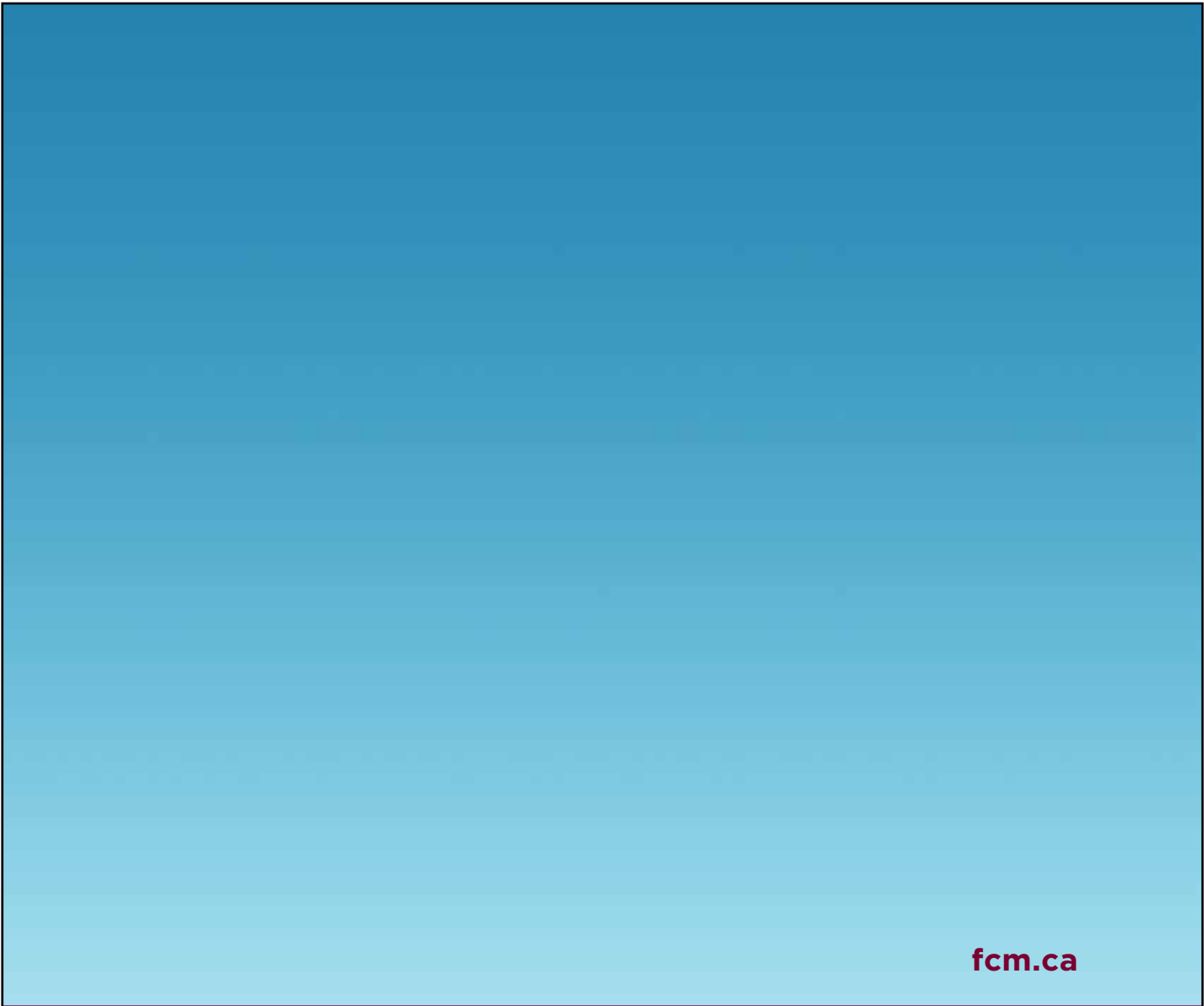
Status of U.S. Small Cell Wireless/ 5G & Smart City Applications from The Community Perspective. RVA LLC/Next Century Cities. March 2018

<https://nextcenturycities.org/wp-content/uploads/5Gresearch.pdf>

Summary of Final FCC Small Cell Order Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment. Declaratory Ruling and Third Report and Order; WT Docket No. 17-79; WC Docket No. 17-84. December 20, 2018

<https://nextcenturycities.org/wp-content/uploads/Guide-to-FCC-Small-Cell-Order.pdf>





fcm.ca

Regional District of Kootenay Boundary
Cheque Register-Summary for month of May 2020

Cheque Date	Supplier	Name	Amount
1-May-20	ABC060	ABC - ASSOCIATION OF 9-1-1 SERVICE	\$ 300.00
22-May-20	ALG010	A.L.G. SAFETY	\$ 2,857.05
22-May-20	BAU030	BAULNE, CHELAN-PETTY CASH	\$ 192.50
22-May-20	BCO020	BC ONE CALL LIMITED C/O HUGHESMAN	\$ 21.74
15-May-20	BEL070	BELL MEDIA RADIO GP	\$ 218.48
22-May-20	BIG055	BIG WHITE MOUNTAIN COMMUNITY	\$ 5,375.00
22-May-20	BOU030	BOUNDARY MUSEUM SOCIETY	\$ 5,000.00
22-May-20	BOU036	BOUNDARY COUNTRY REGIONAL	\$ 4,900.00
8-May-20	BOU070	BOUNDARY HOME BUILDING CENTRE	\$ 4.48
15-May-20	BOU470	BOUNDARY COMMUNITY FOOD BANK	\$ 4,000.00
8-May-20	BRI001	BRINK'S CANADA LIMITED	\$ 521.28
8-May-20	BRI260	BRITISH COLUMBIA ECONOMIC	\$ 9,450.00
1-May-20	CHA110	CHAMPLIN, BRIAN	\$ 50.00
15-May-20	CHA110	CHAMPLIN, BRIAN	\$ 25.00
15-May-20	CHR018	CHRISTINA LAKE ARTS AND ARTISAN	\$ 2,000.00
15-May-20	CHR040	CHRISTINA LAKE MARINA	\$ 300.30
22-May-20	COL026	COLUMBIA WIRELESS INC.	\$ 610.40
8-May-20	DEL070	DELL CANADA INC	\$ 315.84
15-May-20	DEL070	DELL CANADA INC	\$ 11,101.84
1-May-20	ECL010	ECLIPSE INSPECTION & WELDING	\$ 367.50
22-May-20	FLU010	FLUENT INFORMATION MANAGEMENT	\$ 1,050.00
15-May-20	FRA015	FRANCIS, MICHAEL	\$ 70.00
22-May-20	FRU006	FRUITVALE PAC	\$ 2,470.38
22-May-20	FRU020	FRUITVALE CO-OP	\$ 90.25
22-May-20	FRU020	FRUITVALE CO-OP	\$ 105.68
15-May-20	FRU070	FRUITVALE FIRE DEPT	\$ 16.00
15-May-20	GEN040	GENELLE VOLUNTEER FIRE DEPT	\$ 16.00
8-May-20	GIL180	GILL, COLIN	\$ 20.00
22-May-20	GRA043	GRAND FORKS FARMERS MARKET	\$ 7,000.00
1-May-20	GRA055	GRAND FORKS RENOVATION CENTRE	\$ 131.71
15-May-20	GRA055	GRAND FORKS RENOVATION CENTRE	\$ 120.03
22-May-20	GRA055	GRAND FORKS RENOVATION CENTRE	\$ 136.90
8-May-20	HAR190	HARRIS COMPUTER SYSTEMS	\$ 7,001.71
22-May-20	HOM010	HOME DEPOT CREDIT SERVICES	\$ 6.07
1-May-20	IMP020	IMPERIAL OIL LIMITED	\$ 50.03
15-May-20	INL090	INLAND KENWORTH CASTLEGAR	\$ 25.97
8-May-20	INN020	INNERSPACE WATERSPORTS INC.	\$ 3,673.51
1-May-20	KEN090	KENNY WHITE CONTRACTING	\$ 10,584.00
8-May-20	KEN090	KENNY WHITE CONTRACTING	\$ 2,305.97
22-May-20	KOO100	KOOTENAY COLUMBIA LEARNING	\$ 750.00
15-May-20	KOR030	KOROLEK, CATHERINE	\$ 50.00
22-May-20	LAK050	LAKETIME SERVICES	\$ 537.53

Regional District of Kootenay Boundary
Cheque Register-Summary for month of May 2020

Cheque Date	Supplier	Name	Amount
1-May-20	LAK060	LAKESIDE GENERAL STORE	\$ 893.14
12-May-20	LAN030	BC LAND TITLE & SURVEY AUTHORITY	\$ 1,000.00
22-May-20	LEX010	LEXISNEXIS CANADA INC.	\$ 478.28
1-May-20	MCG010	MCGREGOR ROBERT "IN TRUST"	\$ 90.90
8-May-20	MDC020	MDC	\$ 118.26
15-May-20	MDC020	MDC	\$ 194.74
8-May-20	MEQ010	MEQUIPCO LTD.	\$ 695.79
1-May-20	MIN040	MINISTER OF FINANCE	\$ 436.39
15-May-20	MIN040	MINISTER OF FINANCE	\$ 687.36
1-May-20	MIN170	MINISTER OF FINANCE	\$ 1,200.00
15-May-20	MIN170	MINISTER OF FINANCE	\$ 1,200.00
8-May-20	MIN190	MINISTRY OF ENVIRONMENT AND	\$ 20,814.71
15-May-20	MON040	MONTROSE FIRE DEPARTMENT	\$ 16.00
1-May-20	MUN002	MUNICIPAL PENSION PLAN 50151-	\$ 22,283.29
15-May-20	MUN002	MUNICIPAL PENSION PLAN 50151-	\$ 23,280.19
29-May-20	MUN002	MUNICIPAL PENSION PLAN 50151-	\$ 22,416.47
1-May-20	MUN003	MUNICIPAL PENSION PLAN 00151-	\$ 36,705.53
15-May-20	MUN003	MUNICIPAL PENSION PLAN 00151-	\$ 36,573.84
29-May-20	MUN003	MUNICIPAL PENSION PLAN 00151-	\$ 37,132.08
22-May-20	NEO001	NEOPOST	\$ 3,000.00
8-May-20	NOF010	NO FRILLS	\$ 469.56
22-May-20	PET002	PETERSON, WAYNE	\$ 200.00
15-May-20	PET010	PETRO CANADA	\$ 5,105.32
8-May-20	PUR020	PUROLATOR INC.	\$ 68.14
15-May-20	PUR020	PUROLATOR INC.	\$ 109.20
1-May-20	REC002	RECEIVER GENERAL	\$ 736.21
15-May-20	REC002	RECEIVER GENERAL	\$ 736.21
1-May-20	REC010	RECEIVER GENERAL FOR CANADA	\$ 106,814.95
15-May-20	REC010	RECEIVER GENERAL FOR CANADA	\$ 106,194.77
1-May-20	RED100	RED TAG FITNESS	\$ 4,742.83
22-May-20	ROC190	ROCK CREEK COMMUNITY MEDICAL	\$ 1,642.02
15-May-20	ROS140	ROSSLAND FIRE DEPT.	\$ 16.00
22-May-20	SAL020	SALVATION ARMY TRAIL BRANCH	\$ 1,000.00
1-May-20	SAV040	SAVE-ON-FOODS	\$ 106.31
8-May-20	SAV040	SAVE-ON-FOODS	\$ 63.55
22-May-20	SAV040	SAVE-ON-FOODS	\$ 36.37
22-May-20	SEL010	SELECT OFFICE PRODUCTS	\$ 694.07
15-May-20	SEX010	SEXAUER LTD.	\$ 114.24
1-May-20	SHA030	SHAW CABLE	\$ 513.55
8-May-20	SHA030	SHAW CABLE	\$ 92.28
15-May-20	SHA030	SHAW CABLE	\$ 135.47
22-May-20	SHA030	SHAW CABLE	\$ 232.28

Regional District of Kootenay Boundary
Cheque Register-Summary for month of May 2020

Cheque Date	Supplier	Name	Amount
1-May-20	SOL005	SOLUTIONS NOTARIUS INC.	\$ 229.95
8-May-20	SPC010	SOCIETY FOR PREVENTION OF CRUELTY	\$ 7,437.00
1-May-20	STA007	DESJARDINS CARD SERVICES	\$ 90.39
22-May-20	STE120	STERLING, GREG	\$ 1,350.00
22-May-20	STE130	STERICYCLE COMMUNICATION	\$ 888.82
15-May-20	SYM030	SYMPHONY TOURISM SERVICES	\$ 21,000.00
1-May-20	TEL001	TELUS COMMUNICATIONS (B.C.) INC.	\$ 111.15
22-May-20	TEL001	TELUS COMMUNICATIONS (B.C.) INC.	\$ 119.15
1-May-20	TEL002	TELUS MOBILITY	\$ 5,073.51
8-May-20	TEL002	TELUS MOBILITY	\$ 4,855.45
22-May-20	TEL050	TELUS COMMUNICATIONS CO. C/O	\$ 52.93
1-May-20	TRA046	TRAIL HAMMER AND BOLT CO. LTD.	\$ 957.33
8-May-20	TRU003	TRUE NORTH DISTILLERIES	\$ 200.00
15-May-20	VIS050	VISTA RADIO LTD.	\$ 1,460.48
22-May-20	WES015	WEST KOOTENAY DIRT BIKE & ATV	\$ 3,750.00
15-May-20	WES016	WESTBRIDGE RECREATION SOCIETY	\$ 14,502.07
22-May-20	WES035	WESTERN FINANCIAL GROUP FRUITVALE	\$ 95.00
15-May-20	WIE030	WIEBE, GABRIEL	\$ 100.00
22-May-20	WOO010	WOODY'S TIRE & AUTO LTD.	\$ 112.00
1-May-20	ZOO010	ZOOM VIDEO COMMUNICATIONS INC	\$ 977.31
Total Accounts Paid			\$ 586,225.99

NB: Payments greater than \$100,000 related to Provincial Emergency Program (service 012) are marked with an asterisk.



Education and Advocacy Committee

Minutes

Tuesday, May 5, 2020

Held Via Zoom Video Online Conferencing

Committee members present:

Director R. Russell, Chair
Director R. Dunsdon
Director G. McGregor
Director D. Langman (left meeting at 1:45 pm)
Director A. Morel

Staff present:

M. Andison, Chief Administrative Officer
M. Forster, Executive Assistant/Recording Secretary
J. Chandler, General Manager of Operations/Deputy CAO
T. Lenardon, Manager of Corporate Administration
G. Denkovski, Manager of Infrastructure and Sustainability
F. Phillips, Senior Energy Specialist

CALL TO ORDER

The Chair called the meeting to order at 1:03 pm.

ADOPTION OF AGENDA (ADDITIONS/DELETIONS)

The agenda for the Education and Advocacy Committee meeting of April 30, 2020 was presented.

Moved: Director McGregor Seconded: Director Morel

That the agenda for the Education and Advocacy Committee meeting of April 30, 2020 be adopted as presented.

Carried.

ADOPTION OF MINUTES

The minutes of the Education and Advocacy Committee meeting of January 28, 2020 were presented.

Moved: Director Dunsdon Seconded: Director McGregor

That the minutes of the Education and Advocacy Committee meeting of January 28, 2020 be adopted as presented.

Carried.

GENERAL DELEGATIONS

There were no scheduled delegations.

UNFINISHED BUSINESS

UBCM 2019 Correspondence-March 27/20 & March 30/20

Re: RDKB 2019 Resolutions

Referred from Board of Directors April 30/20

Victims Services Funding, Support for Fire Services, Forestry Development Plan Referral Best Practices (March 27/20)
Rural Dividend Reconsideration (March 30/20).

There was no further action on this item.

Moved: Director Morel Seconded: Director Dunsdon

That the March 27 and March 30, 2020 letters from the UBCM regarding the RDKB 2019 UBCM Resolutions be received.

Carried.

UBCM April 8/20

Re: RDKB 2020 Resolution Submitted to AKBLG to 2020 UBCM

Referred from Board of Directors April 30/20

There was no further action on this item.

Moved: Director McGregor Seconded: Director Morel

That the letter from the UBCM dated April 8, 2020 regarding the RDKB 2020 Resolution submitted to the AKBLG be received.

Carried.

Review of 2020 Advocacy Strategy

The RDKB 2020 Advocacy Strategy was presented.

Discussion ensued on the Columbia Pollution Control Centre (CPCC) and the timing of communication to support the CPCC project as well as the appropriate time to invite Ministerial officials to view the operation. The Committee also discussed shovel ready projects throughout the region and needing clarity on the definition of "shovel ready projects".

Moved: Director McGregor Seconded: Director Dunsdon

That the Education and Advocacy Committee recommends that staff develop a communication package to aid in communication to support the CPCC project proposal, based on recommended timing from staff regarding advocacy for the CPCC project.

Carried.

Discussion Item

Advocacy Meetings with Provincial Government in Victoria

The Committee discussed possible topics for advocacy meetings with the Provincial Government in Victoria:

- Columbia Pollution Control Centre (East End Sewerage Treatment Plant), Minister of Municipal Affairs And Housing
 - This item was discussed earlier in the agenda.
- Boundary Community Forest, Minister of Forest, Lands, Natural Resource Operations and Rural Development
 - Staff felt that because of COVID-19, this issue would involve more discussion. Committee members discussed the need for a model or blueprint to establish a community forest in the Boundary. There were no amendments to this strategy. Director Russell pointed out that the

first task would be to secure an invitation to apply for a community forest.

- Expanded Cell Coverage (Paulson/Nancy Greene Summit Area)
 - Staff recommended that advocacy should be in the form of working together with other groups, i.e. RCMP, fire departments, Columbia Broadband Corporation and RDCK to lobby for expanded cell coverage. The challenge for expanded coverage was the lack of available power. There were no amendments to this strategic piece.
- Highway 3 Mayors and Chairs Coalition
 - The Committee members were informed that the East End Services Committee has requested to review the transit service. There were no amendments to this strategic piece.

Discussion Item

Meetings with Ministers /Agencies at UBCM Convention

The Committee discussed possible topics, as identified in 2020 RDKB Advocacy Strategies Document (beyond those identified above related to a separate delegation travelling to Victoria):

- Moratorium on Commercial Water Bottling - Minister of Forest, Lands, and Natural Resource Operations and Rural Development
 - The Committee members discussed amending a zoning bylaw and developing a land use bylaw in this regard. It was suggested to explore any process that would be advocating for water use with K. Anderson, Watershed Planner.
- Incentives for Use of High Efficiency Electrical Appliances, BCUC / Minister of Energy, Mines and Petroleum Resources
 - The Committee was informed that this topic was sent to the AKBLG and subsequently sent directly to the UBCM due to the cancellation of the 2020 AKBLG. There was more discussion on this topic later in the agenda: 4F - BC Utilities' Electricity Conservation Incentive.
- More Sustainable Funding Model for Ongoing Local Government Programs, Minister of Municipal Affairs and Housing
 - The Committee was informed that staff was waiting to hear from UBCM with a call for proposals at which time this topic will be submitted.
- Public Transportation to Medical Appointments - Ministry of Health, IHA, BC Transit

- The Committee was informed that BC Transit is looking at different models with IHA to help fund medical transfers and connections. Discussions are in place.

Director Langman left the meeting at 1:45 pm.

F. Phillips, Senior Energy Specialist

Re: BC Utilities' Electricity Conservation Incentive (2020 Advocacy Strategy)

Referred from Board of Directors (April 16/20)

A staff report from Freya Phillips, Senior Energy Specialist regarding BC Utilities' electricity conservation incentives was presented.

One of the strategies the Committee had developed was to focus energy conservation incentives on electricity use rather than the current focus on natural gas use. In January 2020, the RDKB Board of Directors adopted a resolution supporting further incentives for electricity use be forwarded to the AKBLG for consideration at the 2020 convention. Discussion ensued on whether to amend the resolution given that the AKBLG has been cancelled due to the COVID-19 pandemic. Discussion also ensued on the residential model and the equalization of the two incentives and the greener solution. After further discussion, it was:

Moved: Director Morel Seconded: Director McGregor

That the Education and Advocacy Committee requests staff to bring forward a suggested amendment to the original resolution to AKBLG recognizing the intent is to equalize incentives across electrical and natural gas providers for all residential uses.

Carried.

There will be further discussion on this resolution at the Board level.

NEW BUSINESS

Discussion Item

What Determines Whether Advocacy Issues are Presented to the Education and Advocacy Committee or Not

Currently there is no formal policy around this issue. Broad discussions on issues usually come before a Committee or the Board. It was suggested that

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Education and Advocacy Committee
May 5, 2020*

Page 5 of 7

if a task requires staff time in any material way, there should be some avenue for direction coming from the Board. It was also suggested in moving towards having something written that clarifies that practice. Duties as laid out in the Terms of Reference were discussed.

**Cost of Health Care & Unnecessary Expenses for BC Rural Areas
Referred from Board of Directors (April 16/20)**

The Committee members discussed different modes of delivering health care that would reduce costs as well as the cost of drugs.

Moved: Director Dunsdon Seconded: Director McGregor

That the Regional District of Kootenay Boundary Board of Directors approves that a letter be sent to Katrine Conroy, MLA Kootenay South and Minister Responsible for Family and Children Development, Linda Larsen, MLA, Boundary Similkameen, and Minister Dix, Minister of Health, requesting support for telephone and video-based remote options for health care delivery, and ensuring that compensation models for health care providers support these modes of health care delivery.

Carried.

Discussion Item

Advocacy Meetings with Linda Larsen, MLA, Boundary Similkameen

This agenda item was added to ensure that there was an equitable process for all MLAs.

First Nations / Indigenous Relations and Territorial Acknowledgement

Discussion of First Nations/Indigenous relations and language of the current land acknowledgement script included on agendas for RDKB Board of Directors meetings and whether it should be included on Committee agendas.

The Committee members discussed the acknowledgement and there was general agreement to include it on Committee meeting agendas.

Moved: Director Dunsdon Seconded: Director Morel

That the First Nations/Indigenous Relations and Territorial Acknowledgement be included on all Committee agendas. **FURTHER** that it will be left at the discretion of the Chair in terms of how they wish to verbally present the Acknowledgement.

Carried.

LATE (EMERGENT) ITEMS

There were no late (emergent) items for discussion.

DISCUSSION OF ITEMS FOR FUTURE MEETINGS

The next Education and Advocacy meeting will be scheduled for June 18, 2020 at 1:00 pm.

QUESTION PERIOD FOR PUBLIC AND MEDIA

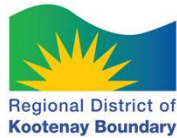
A question period for public and media was not required.

CLOSED (IN CAMERA) SESSION

A closed (in camera) session was not required.

ADJOURNMENT

The meeting was adjourned at 3:01 pm.



Beaver Valley Regional Parks and Regional Trails Committee

Minutes Tuesday, May 19, 2020 Held Via Zoom Video Online Conferencing

Committee members present:

Director A. Grieve, Chair
Director S. Morissette
Director M. Walsh

Staff present:

M. Daines, Manager of Facilities and Recreation
M. Forster, Executive Assistant/Recording Secretary

CALL TO ORDER

The Chair called the meeting to order at 9:00 am.

ACCEPTANCE OF THE AGENDA (additions/deletions)

The agenda for the May 19, 2020 Beaver Valley Regional Parks and Regional Trails Committee meeting was presented.

The agenda was amended by the addition of a late item: Beaver Valley Family Skatepark.

Moved: Director Walsh Seconded: Director Morissette

That the agenda for the May 19, 2020 Beaver Valley Regional Parks and Regional Trails Committee meeting be adopted as amended.

Carried.

ADOPTION OF MINUTES

The minutes of the April 21, 2020, Beaver Valley Regional Parks and Regional Trails Committee meeting were presented.

Moved: Director Morissette Seconded: Director Walsh

That the minutes of the April 21, 2020 Beaver Valley Regional Parks and Regional Trails Committee meeting be adopted as presented.

Carried.

DELEGATIONS

There were no delegations present.

UNFINISHED BUSINESS

There was no unfinished business for discussion.

NEW BUSINESS

M. Daines, Manager of Facilities and Recreation

Re: 2020 Beaver Valley Recreation, Beaver Valley Arena and Beaver Valley Parks and Trails Work Plans - 011/013/019

The purpose of this report was to provide an update on the 2020 Beaver Valley Recreation, Beaver Valley Arena and Beaver Valley Parks and Trails Work Plans.

M. Daines, Manager of Facilities and Recreation, updated the Committee members on recreation work plans. He provided the Committee members with an overview of park and facilities maintenance, reopening of parks, camping at Beaver Valley Family Park and the current suspension of all recreation programs.

M. Daines also spoke to the implications of having all recreation programs suspended for the summer. RDKB staff is collaborating with City of Trail to develop a plan for reopening of recreation programs. The Committee will be kept apprised.

Moved: Director Morissette Seconded: Director Walsh

That the Beaver Valley Regional Parks and Regional Trails Committee receive the May 6th staff report titled "2020 Work Plan Update".

Carried.

M. Daines, Manager of Facilities and Recreation
Re: Ice Facility User Rates

A staff report from Mark Daines, Manager of Facilities and Recreation sought a 2% increase in Ice Facility User Rates as per CPI increase, was presented.

Moved: Director Morissette Seconded: Director Walsh

That the Beaver Valley Regional Parks and Regional Trails Committee receive the 2020/21 Ice Facility User Rates. **FURTHER**, that the Beaver Valley Regional Parks and Regional Trails Committee approve the 2020/21 Ice Facility User Rates.

Carried.

M. Daines, Manager of Facilities and Recreation
Re: Fall Brochure - Discussion

M. Daines, Manager of Facilities and Recreation, requested direction from the Committee members in whether staff should move forward with the fall brochure. He provided the Committee with the costs and staff resources involved in the production. Due to the uncertainty of moving forward given the current conditions during the pandemic, the Committee agreed to not move forward with the brochure. This discussion will be revisited at the June meeting.

M. Daines, Manager of Facilities and Recreation
Re: Beaver Valley Family Park - Discussion

M. Daines, Manager of Facilities and Recreation, informed the Committee members that Beaver Valley Family Park would reopen June 1, 2020 until Labour Day with restrictions. A draft Exposure Control Plan has been developed.

Newsletter Additions

Director Grieve spoke to the June newsletter and/or other local newsletters and putting out some information about fall recreation programming.

LATE (EMERGENT) ITEMS

A. Grieve

Re: Beaver Family Skate Park

Director Grieve informed the Committee members of a recent incident of an unauthorized use of the skate park in May and how it was managed.

Director Morissette spoke to the idea of an additional bike park. Discussion ensued on possible locations and developing long-term capital plan in this regard.

DISCUSSION OF ITEMS FOR FUTURE MEETINGS

A discussion of items for future meetings was not required.

QUESTION PERIOD FOR PUBLIC AND MEDIA

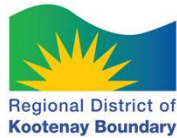
A question period for public and media was not required.

CLOSED (IN CAMERA) SESSION

A closed (in camera) session was not required.

ADJOURNMENT

The meeting was adjourned at 9:38 am.



East End Services Committee

Minutes

Tuesday, May 19, 2020

Held Via Zoom Video Online Conferencing

Committee members:

Director L. Worley - Chair
Director A. Grieve
Director A. Morel
Director R. Cacchioni
Director M. Walsh
Director S. Morissette
Alternate Director A. Parkinson

Staff present:

M. Andison, Chief Administrative Officer
M. Forster, Executive Assistant
J. Chandler, General Manager of Operations/Deputy CAO
B. Ihlen, General Manager of Finance/CFO
D. Derby, Regional Fire Chief

Call to Order

The Chair called the meeting to order at 10:30 am.

Acceptance of the Agenda (additions/deletions)

The agenda for the May 19, 2020 East End Services Committee meeting was presented.

Moved: Director Cacchioni Seconded: Director Grieve

That the agenda for the May 19, 2020 East End Services Committee meeting be adopted as presented.

Carried.

Minutes

The minutes of the April 21, 2020 East End Services Committee meeting were presented.

Moved: Alternate Director Parkinson Seconded: Director Morel

That the minutes of the April 21, 2020 East End Services Committee meeting be adopted as presented.

Carried.

Delegations

There were no delegations present.

Unfinished Business

There was no unfinished business for discussion.

New Business

D. Derby, Regional Fire Chief

Re: May 2020 Work Plan Update - Kootenay Boundary Regional Fire Rescue Service - 050

The purpose of this report was to provide an update on the 2020 Kootenay Boundary Regional Fire Rescue Service work plan.

Moved: Director Cacchioni Seconded: Director Morissette

That the East End Services Committee receive the May 12, 2020 staff report titled "2020 Work Plan update – May Update – Kootenay Boundary Regional Fire Rescue Service".

Carried.

J. Chandler, General Manager of Operations/Deputy CAO
Re: May 2020 Work Plan Update - Transit

The purpose of this report was to provide an update on the 2020 Transit Service work plan.

J. Chandler, General Manager of Operations/Deputy CAO provided an update on the status of the Rivervale bus stop. Discussion ensued on the impacts of fare box collection, revenue and ridership during the pandemic. Staff will contact Selkirk College to get some idea on what to expect in September and the school year in terms of transit service for students attending college.

Moved: Director Grieve Seconded: Director Morissette

That the East End Services Committee receive the May 12, 2020 staff report titled "2020 Work Plan update – May Update – Transit Services and the letter to FAIR".

Carried.

B. Reilly, Program Manager
Re: May 2020 Work Plan Update - Victims Services - 009

The purpose of this report was to provide an update on the 2020 Victims Services work plan.

Additional information was requested on the current average number of clients being serviced.

Moved: Director Cacchioni Seconded: Director Walsh

That the East End Services Committee receive the May 12, 2020 staff report titled "2020 Work Plan update – May Update – Victims Services".

Carried.

J. Chandler, General Manager of Operations/Deputy CAO
Re: May 2020 Work Plan Update - East End Animal Control Service - 070

The purpose of this report was to provide an update on the 2020 East End Animal Control Service work plan.

Staff will report out on any impacts experienced since the BCSPCA moved to Castlegar on the next work plan update.

Moved: Director Grieve Seconded: Alternate Director Parkinson

That the East End Services Committee receive the May 12, 2020 staff report titled "2020 Work Plan update – May Update – East End Animal Control Service" and letter from BCSPCA.

Carried.

B. Ihlen, General Manager of Finance
Re: EES Annual Requisition & Budget Summary

Moved: Director Cacchioni Seconded: Director Morissette

That the East End Services Committee receive the Annual Requisition & Budget Summary as presented.

Carried.

Late (Emergent) Items

There were no late (emergent) items for discussion.

Discussion of items for future agendas

A discussion on the BC Transit operating agreement.

Question Period for Public and Media

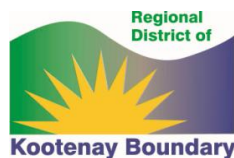
A question period for public and media was not required.

Closed (In camera) Session

A closed (in camera) session was not required.

Adjournment

The meeting was adjourned at 11:10 am.



Electoral Area "C" Parks & Recreation Commission
Regular Meeting
Wednesday, May 13, 2020
Zoom Electronic Meeting
8:00 AM
Minutes

Commission Members Present:

Adam Moore
Brenda Auge
Erica McCluney
Paul Beattie
Tara Bobocel
Randy Gniewotta

Absent:

Josh Strzelec
Joe Sioga

Area Director

Grace McGregor

Staff Present:

Paul Keys
Melina Van Hoogevest

Alternate Area Director

Donna Wilchynski

1. Call to Order

The Chair called the meeting to order at 8:01am.

2. Acceptance of the Agenda (additions/deletions)

The agenda for the May 13, 2020 Christina Lake Parks & Recreation Commission meeting was presented.

10-20

Moved: Tara Bobocel

Seconded: Erica McCluney

That the Agenda for the May 13, 2020 Christina Lake Parks & Recreation Commission meeting be adopted as presented.

Carried

maintenance along the Badger Trail was done a month ago, but new trees have fallen since. Jonathan will be invited to attend the next Christina Lake Parks & Recreation Commission meeting scheduled for June 10, 2020.

6. Old Business

A. Christina Sands Resort / Nature Park Triangle Property

The Welcome Centre and Nature Park are located on a leased piece of property owned by the Provincial Government. It was recommended that the Christina Lake Parks & Recreation Commission write a letter to the Provincial Government and enquire whether they would be interested in pursuing ownership of the Christina Sands Resort / Nature Triangle Property.

14-20

Moved: Paul Beattie

Seconded: Randy Gniewotta

That the Christina Lake Parks & Recreation Commission writes a letter to the Provincial Government in regards to the purchase of Christina Sands Resort / Nature Park Triangle property.

Carried

B. Christina Creek Pedestrian Bridge funding

An overview of the current project development was provided. It was requested that the design plans of the Christina Creek Pedestrian Bridge project be provided for review.

7. New Business

There was no new business to consider.

8. Informational Items

A. Bylaw Clarification of Quorum Requirements

- Confirmed the requirements for a quorum for the Christina Lake Recreation Commission:
A quorum is a majority of appointed members. The Christina Lake Parks & Recreation Commission has nine appointed members which indicate that a majority of five members are needed for a quorum.

B. Financial Plan

- A Christina Lake Recreation 2020 Work Plan was provided and included the current financial development of the Recreation Program Services, Christina Lake

Parks & Recreation Commission Program Services, Christina Lake Recreation Facilities, and Christina lake Regional Parks and Trails.

- There are concerns in regards to lost revenue at The Christina Lake Community Hall during Covid19.

C. Project Updates

- The Christina Lake Recreation Work Plan Update highlights the status of each project for the Recreation Program Services, Christina Lake Parks & Recreation Commission Program Services, Christina Lake Recreation Facilities, and Christina lake Regional Parks and Trails.
- A request was made that the Christina Lake Stewardship Society be involved in the meetings with The Osoyoos Indian Band when discussing special projects that require archeological assessments.
- Administration was asked to research the construction materials used for the board walk, specifically the inclusion of pressure treated lumber.

D. Sub Committee Report

- No report available.

E. Staff Monthly Report/Community Events Report

- Coronavirus Update
An overview was provided outlining the current development of reopening outdoor and indoor facilities in consecutive phases following BC Recreation & Parks Association, Red Cross and Lifesaving Society's guidelines.

9. Late Emergent Items

There were no late emergent items to consider.

10. Discussion of Items for Future Meetings

A discussion was not necessary.

11. Adjournment

There being no further business to discuss, the meeting was adjourned (time: 8:57am).

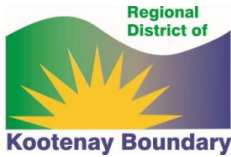
15-20 Moved: Brenda Auge

Seconded: Erica McCluney

Carried

Melina Van Hoogevest,
Recording Secretary

Grace McGregor,
Chairperson



Grand Forks & District Recreation Commission
Regular Meeting
Thursday, May 14, 2020
Zoom Meeting from individual offices/homes
8:45 AM
Minutes

Minutes of the Regular Meeting of the Grand Forks and District Recreation Commission held May 14, 2020 through a ZOOM meeting.

Commission Members Present:

Brian Noble
 Bob MacLean
 Chris Moslin
 Jaime Massey
 Nigel James
 Roly Russell
 Terry Doody

Absent:

Eric Gillette
 Susan Routley

Staff Present:

Paul Keys
 Melina Van Hoogevest

1. Call to Order

The Chair called the Meeting to order at 8:47am.

2. Acceptance of the Agenda (additions/deletions)

- The agenda for the May 14, 2020 Grand Forks and District Recreation Commission meeting is presented.

13-20 Moved: Terry Doody Seconded: Jaime Massey

That the agenda for the May 14, 2020 Grand Forks and District Recreation Commission meeting be adopted as presented.

Carried

3. Adoption of the Minutes

- The minutes of the Grand Forks and District Recreation Commission meeting held on ~~March 9, 2020~~ April 8, 2020 are presented.

14-20 Moved: Roly Russell Seconded: Jaime Massey

That the minutes for the Grand Forks and District Recreation Commission meeting held on ~~March 12, 2020~~ April 8, 2020 be adopted as presented.

Carried

- The minutes of the Grand Forks and District Recreation Commission meeting held February 13, 2020 are presented. They were not approved at the March meeting due to lack of quorum.

15-20 Moved: Roly Russell Seconded: Jaime Massey

That the minutes for the Grand Forks and District Recreation Commission meeting held on ~~March 12, 2020~~ February 13, 2020 be adopted as presented.

Carried

4. Delegation

There were no delegations to be made.

5. Correspondence

There was no correspondence to report.

6. Old Business

- Commission Bylaw Review – scope of involvement beyond the Aquatic Centre and the Arena.

Administration previously asked RDKB General Manager of Operations/Deputy Chief Administrative Officer, James Chandler, to attend a Grand Forks and District Recreation Commission meeting to discuss the scope of involvement that the Commission has beyond the Aquatic Centre and the Arena. James indicated that he would like to review the bylaw prior to meeting in the future.

16-20 Moved: Roly Russell Seconded: Terry Doody

That James Chandler, RDKB General Manager of Operations/Deputy Chief Administrative Officer be invited to attend a Commission Meeting as a guest to discuss the Grand Forks and District Recreation Commission Bylaw and the scope in which the Commission has to operate outside of the Grand Forks Aquatic Centre and the Grand Forks Arena.

Carried

7. New Business

- **Work Plan Update – Received for information**

The 2020 Work Plan Update highlights the status of each project for the Recreation Program Services, the Grand Forks Arena and the Grand Forks Aquatic Centre.

It was noted that the 2020 Work Plan Update included the Grand Forks Curling Rink, however, this facility is not under the scope in which the Grand Forks and District Recreation Commission is responsible for. The 2020 Work Plan Update was submitted as a Staff Report to Regional District of Kootenay Boundary.

An enquiry was made about the Pump House Removal Phase 2 Project and if the preliminary interior work had been completed to begin the demolition of the building. Administration confirmed that there had been asbestos detected in the building when tested and will follow up with the progress of that project. A request was made that the city be notified when the demolition process begins.

- **New Addition: Coronavirus Verbal Report**

A verbal report was provided outlining the current development of reopening outdoor and indoor facilities in consecutive phases following BC Recreation & Parks Association, Red Cross and Lifesaving Society's guidelines.

Regional District of Kootenay Boundary is in the process of reopening tennis courts and pickle ball courts. The City of Grand Forks is also reopening their courts, but would like to do that in conjunction with the Regional District of Kootenay Boundary. Administration stated that they would contact the City of Grand Forks to collaborate the reopening of these recreation facilities.

A request was brought forward that Regional District of Kootenay Boundary administration provide additional communication in regards to the most recent information available for the reopening of recreational facilities as it progresses.

8. Information Items

A. Financial Plan

- YTD/2020 – Revenue Report – Received for information
- The 2020 Work Plan was provided and included the current financial development of the Recreation Program Services, the Grand Forks Arena and the Grand Forks Aquatic Centre.

B. Supervisor Reports

- Aquatic Maintenance Coordinator – Received for information
- Aquatic Program Coordinator – Received for information
- Arena Chief Engineer – Received for information

9. Late Emergent Items

There were no late emergent items to consider.

10. Round Table

- **School District # 51**
 - The teacher's current collective agreement was recently ratified.
 - An increase of \$900,000 was given to SD#51 for programs.
 - There is a five level phase for returning students to school full time. Schools are currently operating at a level two.
 - SD #51 has a higher number of high risk students. There are approximately twenty students working on assignments at Grand Forks Secondary School, maintaining physical distancing, who are not able to complete their online assignments at home.
 - Educational staff are not required to report to work, but can voluntarily continue working if they choose.
 - WCB is currently creating a safe back to work plan for teachers.

- **Library and Arts Societies (Culture)**
 - No Report
- **Recreation and Culture Committee of City Council**
 - Highlighted the five streams of vulnerable populations and the possibility of needing the arena space to provide a designated hospital space for the care of Covid19 patients, if an outbreak should occur, at stream four.
 - Expressed the innovative ways that groups are doing recreation within the community such as Youth Outreach Workers walking with youth and organized stroller walks for young parents. These groups are utilizing wide trails that promote physical distancing measures within our community.
- **Community Members at Large-**
 - Request for members to regroup in one week over Zoom to collectively gather information/solutions/ideas for re-engaging the community to get outside and recreate.
 - There are concerns of the future long term impact of Covid19 restrictions and how to move forward with a strategy in place.

11. Discussion of Items for Future Meetings

A discussion was not necessary.

12. Question Period for Public Media

A question period was not necessary.

13. Closed (In Camera) Session

A closed meeting was not required.

14. Adjournment

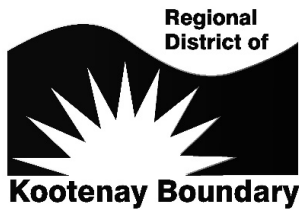
There being no further business to discuss, the meeting was adjourned (time: 9:52am)

17-20 Moved: Jaime Massey Seconded: Chris Moslin

Carried

Melina Van Hoogevest,
Recording Secretary

Brian Noble,
Chairperson



ELECTORAL AREA 'A'
ADVISORY PLANNING COMMISSION
MINUTES

Tuesday, June 2, 2020 via tele-conference, commencing at 4:30 p.m.

PRESENT: Fred Buckley, Linda Green, Rob Ironmonger, Shelley Levick, Craig Stemmler, Tyleen Underwood

ABSENT:

RDKB DIRECTOR: Ali Grieve

RDKB STAFF:

GUESTS:

1. CALL TO ORDER

The meeting was called to order at 4:30 PM

2. ADOPTION OF AGENDA

It was moved and seconded that the June 2, 2020 Electoral Area 'A' APC agenda be adopted.

3. ADOPTION OF MINUTES

It was moved and seconded that the May 5, 2020 Electoral Area 'A' APC minutes be adopted.

4. DELEGATIONS

None

5. NEW BUSINESS

A) 0963072 BC Ltd.

RE: Temporary Use Permit

1106 Highway 3B

RDKB File: A-8392-09351.000

Discussion/Observations:

The application was reviewed by the committee as to the process and the licensing requirements.

Recommendation:

It was moved, seconded and resolved that the APC recommend to the Regional District that the application be:

1. Supported subject to licensing regulations and consideration of input from the affected neighbouring properties.

A) ATCO Wood Products

RE: Cut Blocks (Linnie/Webster)

RDKB File: A-AT16

Discussion/Observations:

Craig Stemmler removed himself from voting on the application, he did offer to answer questions. There were no questions or concerns brought forward. Recommendation:

It was moved, seconded and resolved that the APC recommend to the Regional District that the application be:

1. Supported

6. FOR INFORMATION

Director Grieve provided an update on the proposed Ren Energy Plant.

The company has indicated that they will be providing more information

To the Regional District in the near future.

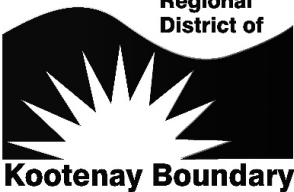
7. FOR DISCUSSION

Consideration of Moratorium on Commercial Water Bottling Exports from the Region

The topic was briefly discussed, the committee asked for clarification on the permitted uses in the OCP and zoning bylaw. The topic was deferred for future meetings.

8. ADJOURNMENT

It was moved and seconded that the meeting be adjourned at 4:58 PM

	<p style="text-align: center;">ELECTORAL AREA 'C'/CHRISTINA LAKE</p> <p style="text-align: center;">ADVISORY PLANNING COMMISSION</p> <p style="text-align: center;">MINUTES</p>
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Tuesday, June 2, 2020 via Zoom video-conference, commencing at 7:00 p.m.

PRESENT: Peter Darbyshire, Terry Mooney, Dave Bartlett, Jason Patrick Taylor, Annie Rioux, Butch Bisaro, Donna Wilchynski

ABSENT: Phil Mody, Jeff Olsen, Jessica Coleman

RDKB DIRECTOR: Grace McGregor

RDKB STAFF:

GUESTS:

1. CALL TO ORDER

The meeting was called to order at 7:02 p.m.

2. ADOPTION OF AGENDA (Additions/Deletions)

MOVED, SECONDED AND RESOLVED: That the June 2, 2020 Electoral Area 'C'/Christina Lake Advisory Planning Commission Agenda be adopted as presented. Peter/Annie

3. ADOPTION OF MINUTES

MOVED, SECONDED AND RESOLVED: That the May 5, 2020 Electoral Area 'C'/Christina Lake Advisory Planning Commission Meeting Minutes be adopted as presented. Butch/Annie

4. DELEGATIONS

5. OLD BUSINESS & UPDATES TO APPLICATIONS AND REFERRALS

6. NEW BUSINESS

A) Susan Sandner, Rod Bergum – Agent

RE: Development Variance Permit

47 Sandner Road

RDKB File: C-317-00236.005

Discussion/Observations:

Commission discussed whether septic system was going to be big enough (adequate) for a secondary suite as new regulations state that increase of square footage increases septic system size.

MOVED, SECONDED AND RESOLVED: That the APC recommends to the Regional District that the application be referred back for further information from the proponent on whether the size of the septic system can accommodate the secondary suite.

B) Steven and Shauna McKeddie

RE: Development Variance Permit

64 Lavalley Road

RDKB File: C-317-00287.005

Discussion/Observations:

Application does not outline where septic system is located.

MOVED, SECONDED AND RESOLVED: that the APC recommends to the Regional District that the application be: Supported with the condition that the deck not be constructed on top of the septic system. Butch/Dave

7. FOR INFORMATION

8. DISCUSSION

Consideration of Moratorium on Commercial Water Bottling Exports from the Region.

MOVED, SECONDED AND RESOLVED: That the Christina Lake APC is in strong favour of a *permanent* Moratorium on commercial water botting exports from the region. Peter/Donna

9. ADJOURNMENT

It was moved and seconded that the meeting be adjourned at 7:39 Butch/Jason



ELECTORAL AREA 'E'/WEST BOUNDARY
ADVISORY PLANNING COMMISSION
MINUTES

Monday, June 1, 2020 via tele-conference, commencing at 6:00 p.m.

PRESENT: Florence Hewer, Fred Marshall, Randy Trerise, Frank Van Oyen,
Lynne Storm, Michael Fenwick-Wilson

ABSENT with notification: Jamie Haynes

Absent without notification: Grant Harfman

RDKB DIRECTOR: Vicki Gee

RDKB STAFF: None

GUEST: Chris Allen

1. **CALL TO ORDER**
The meeting was called to order at 6 PM
2. **ADOPTION OF AGENDA**
Recommendation: That the June 1, 2020 Electoral Area 'E'/West Boundary Planning Commission Agenda be adopted as presented with the discussion on item D as the first order of business. Moved by Lynne and seconded by Flo. Motion carried.
3. **ADOPTION OF MINUTES**
Recommendation: That the May 4, 2020 Electoral Area 'E'/West Boundary Planning Commission Minutes be adopted as presented. Moved by Randy and seconded by Michael. Motion carried.
4. **DELEGATIONS** None
5. **UPDATES TO APPLICATIONS AND REFERRALS** None
6. **NEW BUSINESS**

Electoral Area E' APC Minutes
June 1, 2020
Page 1 of 5

A) Interfor**RE: TFL #8**

RDKB File: I-1-E

Discussion/Observations: We discussed the yield tables and the large number of pages devoted to these tables. We also discussed whether the unsalvageable losses will be higher than estimated due to climate change, increases in losses to insect attacks and fire that we have experienced. It was pointed out that the plan speaks to silviculture as tree planting and there is more than planting involved in the silviculture.

There is no commitment in the plan to limiting openings to 40 ha as recommended by the Chief Forester for the TSA. It was suggested that a no net new roads policy should be part of the plan. The plan contains significant new roads that will add to the current road distances.

There is no commitment in the plan to following the government utilization standards. Our understanding is that currently Interfor does not comply with these standards and requires logs to be larger in diameter than specified in the provincial utilization standards.

There is no allowance in the plan for drought even though we have had some severe drought in the last few years. Climate change may have an impact on the yield tables.

There is no commitment to partial cut harvesting. The plan has a reliance on clearcuts and clearcuts with reserves. We would like to see selective logging taking place particularly on south aspects.

Recommendation:

It was moved by Michael and seconded by Frank and resolved that the APC recommends to the Regional District that the application be

1. Not Supported (with stated reasons as follows):
 - a) The company should commit to keep the cutblock size to 40 ha or less as suggested by the Chief Forester for the TSA
 - b) The company should attempt to manage to a net no new roads policy.
 - c) The company should commit to utilize all logs to the provincial utilization standards (i.e. 10 cm tops). Current company log specifications exceed 10 cm. Timber is being cut and not properly utilized.
 - d) The plan makes no appropriate allowance for expected droughts. This could be accommodated with more partial cutting on south facing slopes, smaller cutblocks and less optimistic yield tables for future volumes.
 - e) There is no indication of the use of the precautionary principle in the plan. For example, 2 year regen delay for plantations and 5 years for naturals is optimistic. There are too many roads, blocks are too large, yield tables are overly optimistic and climate change is not well addressed.

- f) The silviculture section of the plan speaks about planting and should also discuss other topics including partial cutting, site preparation, brushing and weeding, thinning, and pruning.
- g) Stumping should be limited as it is causing the following problems – limiting access by cattle and wildlife, reducing grass growth, moisture retention, impacting drainage, negative visual impact, and increase weed infestations. Stumps should be turned upside down in the hole to reduce trafficability problems, speed up the stump decomposition and get more soil back in the hole.
- h) The plan has no acknowledgement of other resource users.

Motion carried.

Randy did not support this motion and asked to have his vote recorded.

B) Outback Snowmobile Tours Inc.

RE: License of Occupation

RDKB File: B-17

Discussion/Observations:

We discussed the proposal and it was pointed out that the use of these trails by wolves and other predators after they are packed by snowmobiles, could cause problems with predation on ungulates. Part of the area in question may be through deer and moose winter range. There is no assessment by biologists on the impacts on wildlife from this proposal.

Evidently this applicant has been operating their snowmobile business for years and are just now applying for this formal agreement. Are they currently operating without a permit?

There is no mention of consultations with First Nations with this application.

The application says it covers only about 40 ha, but the area outlined in red on the map covers an area of over 16,000 ha.

There is no mention of where the snowmobiles will be stored. The proposal speaks about 2-hour tours, but the web site also includes extended tours and off trail riding that may impact newly regenerating forests, small trees, and wildlife. Evidently there is a cabin for use by guests, but the proposal does not mention the location or provision for proper sewage disposals.

Recommendation:

It was moved by Michael and seconded by Lynne and resolved that the APC recommends to the Regional District that the application be:

Electoral Area E' APC Minutes
June 1, 2020
Page 3 of 5

1. Not Supported (with stated reasons as follows):

- a) The area applied for is not clear. The application lists the area as about 40 ha. but the area encircled by the trails map is over 16000 ha.
- b) There is no assessment by a biologist on potential impacts to wildlife. We have extreme concerns about the impacts on wildlife and ungulate winter ranges until a qualified biologist has assessed the potential impacts.
- c) There is no indication of the location of the outback cabin or of the sewage disposal for this cabin.
- d) There is no commitment to stay on the trails - the web site advertises the thrill of riding in wide open champagne powder which is inconsistent with the application.
- e) There is no indication of where machines and fuel will be stored or serviced.
- f) There is no indication of referrals to First Nations.
- g) We did not get the actual front counter application for this proposal as is customary with these types of referrals.
- h) The mapping is very confusing. All three of the maps provided are different.
- i) The use of side by side vehicles is not mentioned in the application but advertised on the web site.
- j) No referral has been made to Interfor regarding snowmobile impacts on young plantations on TFL 8.
- k) No use of these trails should be permitted until all of these points have been addressed.

Motion carried.

C) Regional District of Okanagan Similkameen

RE: Bylaw Referral

RDKB File: O-2

Discussion/Observations: We see no concerns or conflicts.

Recommendation:

It was moved by Lynne and seconded by Flo and resolved that the APC recommends to the Regional District that the application be supported. Motion carried.

D) Mt. Baldy Estates

RE: Development Variance Permit

RDKB File: MB-100s-01400.700

Discussion/Observations: Chris Allen explained that one of the exit doors on the east side of the property of the Baldy Condominiums needs a non-combustible extension to prevent snow from accumulating and causing a safety hazard. A variance is being requested to allow this extension to be built. Chris explained that the neighbour to the east has been contacted and had a favourable response. Snow that may be shed from the extension will stay on the condominium property

Recommendation:

It was moved, by Michael and seconded by Frank and resolved that the APC recommends to the Regional District that the application be supported as presented. Motion carried.

7. FOR INFORMATION

8. FOR DISCUSSION

Consideration of Moratorium on Commercial Water Bottling Exports from the Region. Vicki indicated that the Regional District supports this moratorium on the licensing and extraction of groundwater for water bottling and export. The education and advocacy committee asked whether this provision should be added to the current OCPs. This would not apply to existing water bottling plants. Moved by Lynne and seconded by Michael that we support a moratorium on commercial water bottling exports from our region. Motion carried.

9. ADJOURNMENT The meeting was adjourned at 8:30 PM.



Regional District of
Kootenay Boundary

ELECTORAL AREA 'E' (BIG WHITE)
ADVISORY PLANNING COMMISSION

Tuesday, June 2, 2020 via tele-conference, commencing at 4:00 p.m.
Minutes taken by: _Deb Hopkinson No Quorum achieved

PRESENT: John Lebrun, Deb Hopkinson, Rachelle Hawk, Vicki Gee
ABSENT: Anastasia Byrne, Paul Sulyma, Gerry Molyneaux
RDKB DIRECTOR: Vicki Gee
RDKB STAFF:
GUESTS:

1. CALL TO ORDER

The meeting was called to order at 4:13 p.m.

2. ADOPTION OF AGENDA (Additions/Deletions)

Recommendation: That the June 2, 2020 Electoral Area 'E' (Big White) Advisory Planning Commission Agenda be adopted.

3. ADOPTION OF MINUTES

Recommendation: That the April 7, 2020 Electoral Area 'E' (Big White) Advisory Planning Commission Minutes be adopted.

4. DELEGATIONS

5. UPDATED APPLICATIONS AND REFERRALS

Electoral Area 'E'/BIG WHITE APC Minutes
June 2, 2020
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6. **NEW BUSINESS**

A) Interfor

RE: TFL #8

RDKB File: I-1-E

Discussion/Observations:

Climate Change inclusions in document only include species selection for planting and not how drought might affect growing time or potential.

Cut blocks should be as small as possible.

Trans Canada Trail buffer should be 12 Meters on both sides

Should the province give permission for the trail to be used as a road at any time that the Trail be restored to original condition when Interfor is finished using it.

When the trail is restored there should be an inspection by local Trail coordinators, Trails to the Boundary Society.

Please accept our discussion as we are unable to resolve without a quorum.

Recommendation:

It was moved, seconded and resolved that the APC recommends to the Regional District that the application be: *(select one of the following options)*

1. Supported (with stated reasons if appropriate):
2. Supported with conditions (state the conditions):
3. Not Supported (with stated reasons if appropriate):
4. Postponed to (date) for the following reasons:

B) Outback Snowmobile Tours Inc.

RE: License of Occupation

RDKB File: B-17

Discussion/Observations:

We have no issues with this application.

Please accept our comment as we cannot resolve without a quorum.

Recommendation:

Electoral Area 'E'/BIG WHITE APC Minutes
June 2, 2020
Page 2 of 4

It was moved, seconded and resolved that the APC recommends to the Regional District that the application be: *(select one of the following options)*

1. Supported (with stated reasons if appropriate):
2. Supported with conditions (state the conditions):
3. Not Supported (with stated reasons if appropriate):
4. Postponed to (date) for the following reasons:

C) Joseph Gagnon and Sheri Anne Doyle

RE: Development Permit

RDKB File: BW-4109s-07405.000

Discussion/Observations:

We have no issues with this application.

We are unable to resolve as we have no quorum.

Recommendation:

It was moved, seconded and resolved that the APC recommends to the Regional District that the application be: *(select one of the following options)*

1. Supported (with stated reasons if appropriate):
2. Supported with conditions (state the conditions):
3. Not Supported (with stated reasons if appropriate):
4. Postponed to (date) for the following reasons:

7. FOR DISCUSSION

Consideration of Moratorium on Commercial Water Bottling Exports from the Region

There should be a moratorium on Commercial Water Bottling and Exports from the region. Taking water from the aquifer which is struggling to keep up shouldn't happen. Adding plastic bottles to the ecosystem shouldn't happen. Provincial action should be taken to stop taking water from the aquifer for bottling purposes.

The moratorium on Water bottling plants should be included in OCP.

Bottling plant outside of Osoyoos would probably be grandfathered.

8. FOR INFORMATION

Flooding – Grand Forks area very high but did not break banks over last weekend.

Cory Scott, one of planners has left for Nelson so looking for another.

9. ADJOURNMENT

It was moved and seconded that the meeting be adjourned at 4:35 pm.

**STAFF REPORT**

Date: 18 Jun 2020 **File**
To: **Chair Russell and Members of the Education and Advocacy Committee**
From: Freya Phillips, Senior Energy Specialist
Re: Amending Resolution-Energy Conservation Incentives

Issue Introduction

A staff report from Freya Phillips, Senior Energy Specialist presenting an amending resolution regarding the BC Utilities' Electricity Conservation Incentive.

History/Background Factors

RDKB Education and Advocacy Committee has developed the RDKB Advocacy Strategies 2020. One of the strategies developed by the Committee was focused energy conservation incentives on electricity use rather than the current focus on natural gas use.

On January 30, 2020 the RDKB Board of Directors adopted that the following general resolution supporting further incentives for electricity use be forwarded to the Association of Kootenay and Boundary Local Governments (AKBLG) for consideration at the 2020 convention.

RDKB Advocacy Strategy (Original)

That the following resolution be forwarded to the Association of Kootenay Boundary Local Governments for consideration at the 2020 Convention:

Whereas several Kootenay Boundary communities have committed to a transition to 100% renewable energy by 2050; and

Whereas electricity generated in B.C. is considered a renewable energy source while natural gas is not;

And whereas the incentives available from suppliers for natural gas use in the province are considerably greater than those available for use of electricity;

Therefore, be it resolved that the Government of B.C. require all electricity suppliers in the province, including FortisBC, to increase the incentives available to the public supporting the use of high efficiency electrical appliances to the point where those incentives are at level equal to those currently provided by natural gas suppliers.

At the May 5th Education & Advocacy Meeting, the Committee reviewed the staff report - BC Utilities' Electricity Conservation Incentive (2020 Advocacy Strategy) that was referred from Board of Directors (April 16, 2020).

A staff report from Freya Phillips, Senior Energy Specialist regarding BC Utilities' electricity conservation incentives was presented.

One of the strategies the Committee had developed was to focus energy conservation incentives on electricity use rather than the current focus on natural gas use. In January 2020, the RDKB Board of Directors adopted a resolution supporting further incentives for electricity use be forwarded to the AKBLG for consideration at the 2020 convention. Discussion ensued on whether to amend the resolution given that the AKBLG has been cancelled due to the COVID-19 pandemic. Discussion also ensued on the residential model and the equalization of the two incentives and the greener solution. After further discussion, it was:

Moved: Director Morel Seconded: Director McGregor

That the Education and Advocacy Committee requests staff to bring forward a suggested amendment to the original resolution to AKBLG recognizing the intent is to equalize incentives across electrical and natural gas providers for all residential uses.

RDKB Advocacy Strategy (Suggested Amendment)

That the following resolution be forwarded to the Association of Kootenay Boundary Local Governments for consideration at the 2020 Convention:

Whereas several Kootenay Boundary communities have committed to a transition to 100% renewable energy by 2050; and

Whereas electricity generated in B.C. is considered a renewable energy source and carbon free while natural gas is not;

And whereas the incentives available from suppliers for carbon intensive energy sources e.g. natural gas in the province are greater than those available for carbon free sources;

Therefore, be it resolved that the Government of B.C. requires all energy suppliers in the province, including FortisBC, to increase the carbon free energy incentives available to all residents to support the use of high efficiency carbon free energy appliances and heating systems to the point where those incentives are at a minimum equalized to those currently provided by carbon incentive energy suppliers.

Implications

The RDKB resolution (amendment) for the Government of BC would require all energy suppliers in the province to increase the carbon free incentives available to the residential customers to support the use of high efficiency carbon free appliances and heating systems to the point where those incentives are at level equal to those currently provided by carbon intensive energy suppliers. The objective is to increase the availability and uptake of high efficiency carbon free appliances and heating systems across the province.

Advancement of Strategic Planning Goals

Environmental Stewardship/Climate Preparedness

Background Information Provided

1. Staff Report - BC Utilities_ Electricity Conservation Incentives - Board - April 16 2020

Alternatives

1. That the Education and Advocacy Committee adopt the amendments to the original RDKB Advocacy Strategies resolution recognizing the intent to equalize incentives across energy providers for all residential customers.
2. That the Education and Advocacy Committee refer the Staff Report back to staff for further investigation as directed by the Education and Advocacy Committee.

Recommendation(s)

That the Education and Advocacy Committee adopt the amendments to the original RDKB Advocacy Strategies resolution recognizing the intent to equalize incentives across energy providers for all residential customers.

RDKB Advocacy Strategy – Restrictions on Commercial Water Bottling

That the RDKB's Electoral Area Services Committee consider amending the region's zoning bylaws to restrict in all zones the use of land for "commercial water bottling facilities". And further, that the RDKB write a letter to the Minister of Forests, Lands and Natural Resource Operations and Rural Development and the Premier requesting that Provincial action be taken to immediately cease the licensing and extraction of groundwater for commercial water bottling and/or bulk water exports from aquifers, as per the 2019 UBCM endorsed resolution B154 on Groundwater Extraction sponsored by Strathcona Regional District.



May 25, 2020

FLNR.Minister@gov.bc.ca

The Honourable Doug Donaldson, MLA

Minister of Forests, Lands, Natural Resource Operations
and Rural Development
Room 248 Parliament Buildings
Victoria, BC V8V 1X4

Dear Minister;

**Re: Request the Province to Cease the Licencing and Extraction of
Groundwater for Commercial Water Bottling and/or Bulk Water Exports from Aquifers**

Advocating for a moratorium on commercial water bottling exports from the region has been reviewed by the RDKB Board of Directors since summer 2019 and is included in the RDKB 2020 Advocacy Strategy as an advocacy issue. The 2020 Advocacy Strategy has been adopted by the RDKB Board of Directors. This issue has also been raised provincially at the 2012 and 2019 UBCM Conventions.

The RDKB Education and Advocacy Committee adopted the following recommendation at a meeting held on January 28, 2020:

That the RDKB write a letter to the Minister of Forests, Lands and Natural Resource Operations and the Premier requesting that Provincial action be taken to immediately cease the licensing and extraction of groundwater for commercial water bottling and/or bulk water exports from aquifers, as per the 2019 UBCM endorsed resolution B154 on Groundwater Extraction sponsored by Strathcona Regional District.

Our Board of Directors is very concerned about the potential impacts of commercial water bottling on our aquifers, especially those aquifers that we have limited knowledge about.

Sincerely,

A handwritten signature in black ink that reads "Diane Langman". The signature is fluid and cursive, with the first name "Diane" and last name "Langman" clearly distinguishable.

Diane Langman, Chair, RDKB Board of Directors

cc: The Honourable John Horgan, MLA, Premier of British Columbia
Director A. Grieve, Chair, RDKB Electoral Area Services Committee
Director R. Russell, Chair Education and Advocacy Committee

/tl

Amended Advocacy Strategy-Incentives for Use of High Efficiency Electrical
Appliances

Education & Advocacy Committee June 18/20

Board of Directors June 25/20

That the following resolution be forwarded to the Association of Kootenay Boundary
Local Governments for consideration at the 2020 Convention:

Whereas several Kootenay Boundary communities have committed to a
transition to 100% renewable energy by 2050; and

Whereas electricity generated in B.C. is considered a renewable energy source
and carbon free while natural gas is not;

And whereas the incentives available from suppliers for carbon intensive energy
sources e.g. natural gas in the province are greater than those available for
carbon free sources;

Therefore, be it resolved that the Government of B.C. requires all energy
suppliers in the province, including FortisBC, to increase the carbon free energy
incentives available to all residents to support the use of high efficiency carbon
free energy appliances and heating systems to the point where those incentives
are at a minimum equalized to those currently provided by carbon incentive
energy suppliers.

RDKB Advocacy Strategy – Columbia Pollution Control Centre ICIP Grant

That staff draft a letter to the Minister of Municipal Affairs and Housing and Ministry staff requesting a meeting in Victoria to discuss the merits of the ICIP Green Infrastructure Program grant application relating to the replacement of the Columbia Pollution Control Centre; and

Further, that that the letter include an invitation to the Minister of Municipal Affairs and Housing and Ministry staff to travel to Trail to view the Columbia Pollution Control Centre project area first-hand.

RDKB Advocacy Strategy – Public Transportation to Medical Appointments

That the RDKB schedule a meeting(s) with IHA, the Ministry of Health, and BC Transit representatives to discuss currently available options for transportation of residents to medical appointments in larger centres.



May 25,2020

The Honourable Adrian Dix, MLA
 Minister, Ministry of Health
 Room 337 Parliament Buildings
 Victoria, BC V8V 1X4
HLTH.Minister@gov.bc.ca

The Honourable Katrine Conroy, MLA
 Minister, Ministry of Children & Family Development
 Room 134 Parliament Buildings
 Victoria, BC V8V 1X4
MCF.Minister@gov.bc.ca

Dear Minister Dix and Minister Conroy;

Re: Cost of Health Care & Unnecessary Travel Expenses in Rural BC

On behalf of RDKB Electoral Area A Director Ali Grieve, Director Steve Morissette, Mayor of the Village of Fruitvale and myself as Chair, RDKB Board of Directors, I wish to thank Minister Conroy for taking time to meet with us this past March 2020 to listen to our concerns related to various issues within the RDKB's rural communities, including the cost of health care in Rural B.C.

As you are already aware, residents who do not live in the Lower Mainland must travel to larger centres for minor checkups and face-to-face appointments increasing the overall cost to health care with unnecessary travel and accommodation expenses when these appointments could possibly be managed via telephone or virtual appointments. The current COVID-19 Pandemic has highlighted how virtual appointments can work well under certain circumstances.

The RDKB Board of Directors hopes that a Ministry's review of the compensation policy for our BC physicians would allow for a same payment for virtual or on line meetings as if the appointment were a face to face appointment.

As an added inquiry to you and Minister Dix, are there currently any plans within your government to review the cost of prescriptions for seniors? This was a concern also raised at a later date by a committee within our Board.

Our Board of Directors adopted a recommendation on April 16 2020 to bring these matters forward to you on behalf of our residents. Thank you for your consideration of this matter, and we look forward to hearing from you soon.

Sincerely,

A handwritten signature in black ink that reads "Diane Langman". The signature is fluid and cursive, with the first name "Diane" and last name "Langman" clearly distinguishable.

Diane Langman, Chair, Board of Directors, Regional District of Kootenay Boundary

cc: RDKB Director A. Grieve, Electoral Area A
 RDKB Director S. Morissette, Mayor, Village of Fruitvale
 RDKB Director R. Russell, Chair, Education and Advocacy Committee

/tl

RDKB Advocacy Strategy – Columbia Pollution Control Centre ICIP Grant

That staff draft a letter to the Minister of Municipal Affairs and Housing and Ministry staff requesting a meeting in Victoria to discuss the merits of the ICIP Green Infrastructure Program grant application relating to the replacement of the Columbia Pollution Control Centre; and

Further, that that the letter include an invitation to the Minister of Municipal Affairs and Housing and Ministry staff to travel to Trail to view the Columbia Pollution Control Centre project area first-hand.

RDKB Advocacy Strategy – Boundary Community Forest

That a letter be written to the Minister of Forests, Lands and Natural Resources Operations and Rural Development requesting a meeting in Victoria to discuss the merits of establishing a Boundary Community Forest tenure, the date of which would coincide with the meeting regarding the Columbia Pollution Control Centre ICIP Green Infrastructure Program grant application.

RDKB Advocacy Strategy – Expanded Cell Coverage

That the RDKB develop an advocacy strategy for pursuing improved cell service in the Paulson / Nancy Greene Summit areas, including: discussions with the RDCK determine if there's an opportunity or potential benefit in a joint campaign; discussions with CBT's Columbia Basin Broadband program staff; solicitation of support from emergency response organizations including the RCMP, BC Ambulance Service; Fire Departments, regional emergency program managers, and search and rescue organizations and from Worksafe BC.

**STAFF REPORT**

Date: 17 Jun 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1981 Old Salmo Road, Fruitvale, B.C.

Electoral Area 'A'

Parcel Identifier: 010-233-636

Lot B District Lot 1236 Kootenay District Plan 4481 Except Plan 17227

Owner: Katerina Manolis

History/Background Factors

The Building Official confirmed that there have been no changes concerning the above referenced property. The owner, Katerina Manolis, has constructed an addition to a single family dwelling without completion of a final inspection.

Implications

Should the Regional District not file a Notice on Title against the above mentioned property pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, future purchasers of the property would not be aware that the building(s) are in contravention of the B.C. Building Code and/or Building Bylaw.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- Staff Report dated May 19, 2020 submitted to the Board regarding the building bylaw contravention;
- Letter dated June 5, 2020 inviting the Owner to the June 25, 2020 Board Meeting.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that that Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as against the property legally described as Lot B, District Lot 1236, Kootenay District, Plan 4481, Except Plan 17227.



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date: 19 May 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

1981 Old Salmo Road, Fruitvale, B.C.

Electoral Area 'A'

Parcel Identifier: 010-233-636

Lot B District Lot 1236 Kootenay District Plan 4481 Except Plan 17227

Owner: Katerina Manolis

History/Background Factors

The owner, Katerina Manolis, has constructed an addition to a single family dwelling without completion of a final inspection.

The Regional District of Kootenay Boundary Building and Plumbing Amendment Bylaw No. 449 states:

Permits

10.2 Every permit is issued upon the condition that:

(b) the work is not to be discontinued or suspended for a period of more than one year;

Duties of the Owner

12.1 Every owner shall:

(h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work;

(v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or portion of the building.

Implications

The Regional District of Kootenay Boundary Board of Directors has dealt with a number of Bylaw Contraventions by Filing a Notice on Title. The effect of this Notice is to alert future Purchasers of the property that the building(s) are in contravention of the B.C. Building Code and/or regulatory bylaws. The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, *Local Government Act* and *Community Charter* to enforce compliance with regulations.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

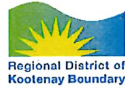
- History / Background Factors;
- Registered letter dated April 9, 2020;
- Registered letter dated March 3, 2020;
- Registered letter dated January 27, 2020;
- Building Permit 09-0269A.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that the Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

1. That the Regional District of Kootenay Boundary Board of Directors invite the owner, Katerina Manolis, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot B, District Lot 1236, Kootenay District, Plan 4481, Except Plan 17227.



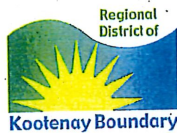
STAFF REPORT ATTACHMENT

Date:	May 19, 2020	File:	
To:	Chair Langman and Board of Directors		
From:	Brian Champlin, Manager of Building Inspection Services		
RE:	<u>BUILDING BYLAW CONTRAVENTION</u> 1981 OLD SALMO ROAD, FRUITVALE, B.C. ELECTORAL AREA 'A' PARCEL IDENTIFIER: 010-233-636 LOT B DISTRICT LOT 1236 KOOTENAY DISTRICT PLAN 4481 EXCEPT PLAN 17227 OWNER: KATERINA MANOLIS		

History/Background Factors

The owner, Katerina Manolis, has constructed an addition to a single family dwelling without completion of a final inspection.

June 17, 2009	Application received from previous owners, Richard and Natalia Bilenki, to construct an addition to a single family dwelling;
July 6, 2009	Building Permit 09-0269A issued for an addition to a single family dwelling;
Sept. 1, 2009	Footing inspection conducted, passed;
Sept. 1, 2009	Framing inspection conducted, re-inspection required;
Nov. 4, 2009	Framing re-inspection conducted, re-inspection required;
Dec. 2, 2009	Framing re-inspection conducted, passed;
Dec. 2, 2009	Insulation and vapour inspection conducted, passed;
June 14, 2011	Final inspection conducted, re-inspection required;
June 2, 2017	New owner listed as Katerina Manolis;
Dec. 12, 2017	Site inspection conducted noting project had not progressed, permit expired;
Oct. 16, 2019	Letter mailed to owner, requesting a response by November 15, 2019;
Nov. 18, 2019	Registered letter mailed to owner requesting a response by December 17, 2019;
Nov. 21, 2019	Canada Post confirmation that the owner address had changed;
Dec. 23, 2019	Letter mailed to owner's new address, requesting a response by January 21, 2020;
Jan. 27, 2020	First registered letter mailed to owner requesting a response by February 26, 2020;
Jan. 31, 2020	Canada Post confirmation that the letter was delivered;
March 3, 2020	Second registered letter mailed to owner requesting a response by April 2, 2020;
March 9, 2020	Canada Post confirmation that the letter was delivered;
April 9, 2020	Third registered letter mailed to owner requesting a response by May 9, 2020;
April 17, 2020	Canada Post confirmation that the letter was delivered;
May 19, 2020	To date, we have received no response from the owner.



April 9, 2020

Folio #: 05235.500
REGISTERED MAIL

Katerina Manolis
1333 Birch Cliff Drive
Oakville, ON L6M 2A5

Re: Addition SFD
1981 Old Salmo Road, Fruitvale, B.C. (Area 'A')
Building Permit No.: 09-0269A

Further to our registered letters dated January 27, 2020 and March 3, 2020, we have received no response regarding the above building permit expiring without completion of a final inspection as outlined in the Regional District of Kootenay Boundary Building and Plumbing Bylaw No. 449 (1985);

PERMITS

- 10.2 Every permit is issued upon the condition that:
- (b) the work is not to be discontinued or suspended for a period of more than one year;

DUTIES OF THE OWNER

12.1 Every owner shall:

- (h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work;
- (v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole of portion of the building.

If we do not complete a final inspection or receive a renewal permit by **May 9, 2020**, we will recommend to the Regional District of Kootenay Boundary Board of Directors that a Notice be registered on the title pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* (copies attached). This notice will refer to a building bylaw contravention on the above referenced property and does not limit further action being taken.

Our office is closed to the public but we have a drop box outside our main doors for applications. Alternatively, it can be emailed to sbradley@rdkb.com.

If you have any questions concerning the above information, please contact the undersigned at 250-368-0222.

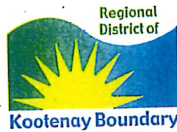
Regards,

Brian Zanussi
Building and Plumbing Official

cc: Brian Champlin, Manager of Building Inspection Services
Attachment
BZ/sb

202 - 843 Rosland Ave Trail, British Columbia Canada V1R 4S8
toll-free: 1 800 355-7352 • tel: 250 368-9148 • fax: 250 368-3990
email: admin@rdkb.com • web: www.rdkb.com





March 3, 2020

Folio #: 05235.500
REGISTERED MAIL

Katerina Manolis
1333 Birch Cliff Drive
Oakville, ON L6M 2A5

Re: Addition SFD
1981 Old Salmo Road, Fruitvale, B.C. (Area 'A')
Building Permit No.: 09-0269A

Further to our registered letter dated January 27, 2020, we have received no response regarding the above building permit expiring without completion of a final inspection as outlined in the Regional District of Kootenay Boundary Building and Plumbing Bylaw No. 449 (1985);

PERMITS

- 10.2 Every permit is issued upon the condition that:
- (b) the work is not to be discontinued or suspended for a period of more than one year;

DUTIES OF THE OWNER

- 12.1 Every owner shall:
- (h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work;
 - (v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or portion of the building.

Please find enclosed original building permit and last inspection report for reference. If the work has been completed, please call to book a final inspection by **April 2 2020**. Failure to comply may result in legal action.

If you have any questions concerning the above information, please contact the undersigned at 250-368-0222.

Regards,

Brian Zanussi
Building and Plumbing Official

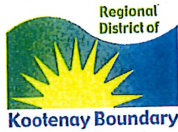
cc: Brian Champlin, Manager of Building Inspection Services

Attachment

BZ/sb

202 - 843 Rossland Ave. Trail, British Columbia Canada V1R 4S8
toll-free: 1 800 355-7352 • tel: 250 368-9148 • fax: 250 368-3990
email: admin@rdkb.com • web: www.rdkb.com





January 27, 2020

Folio #: 05235.500
REGISTERED MAIL

Katerina Manolis
1333 Birch Cliff Drive
Oakville, ON L6M 2A5

Re: Addition SFD
1981 Old Salmo Road, Fruitvale, B.C. (Area 'A')
Building Permit No.: 09-0269A

Further to our letter dated December 23, 2019, we have received no response regarding the above building permit expiring without completion of a final inspection as outlined in the Regional District of Kootenay Boundary Building and Plumbing Bylaw No. 449 (1985);

PERMITS

- 10.2 Every permit is issued upon the condition that:
(b) the work is not to be discontinued or suspended for a period of more than one year;

DUTIES OF THE OWNER

- 12.1 Every owner shall:
(h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work;
(v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole of portion of the building.

Please find enclosed original building permit and last inspection report for reference. If the work has been completed, please call to book a final inspection by **February 26, 2020**. Failure to comply may result in legal action.

If you have any questions concerning the above information, please contact the undersigned at 250-368-0222.

Regards,


Brian Zanussi
Building and Plumbing Official

cc: Brian Champlin, Manager of Building Inspection Services

Attachment

BZ/sb

202 - 843 Rosland Ave Trail, British Columbia Canada V1R 4S8
toll-free: 1 800 355-7352 • tel: 250 368-9148 • fax: 250 368-3990
email: admin@rdkb.com • web: www.rdkb.com





No. 09-0269A

INSPECTION CALLS: (250) 368-0222

Regional District of Kootenay Boundary

DATE PERMIT
GRANTED: Jul 06, 09BUILDING INSPECTION DEPARTMENT
202-843 Rossland Ave., Trail, B.C. V1R 4S8PERMIT TO CONSTRUCT, ERECT, INSTALL, ALTER, ADD TO, REPAIR, MOVE,
OR DEMOLISH, A BUILDING, STRUCTURE, OR PLUMBING

PURSUANT TO THE APPLICABLE REGULATIONS RICHARD BILENKI		ADDRESS: 1981 OLD SALMO ROAD FRUITVALE		TELEPHONE:	
BORN TO THE OWNER OR ACTING WITH CONSENT OF THE OWNER IS HEREBY GRANTED					
A PERMIT TO: ADDITION TO SINGLE FAMILY DWELLING					
AT: 1981 OLD SALMO RD		FOLIO: 711 05235.500			
LOT: B	BLOCK:	RANGE:	D.L. 1236	PLAN: 4481	LD:
OWNER: RICHARD BILENKI		ADDRESS: 1981 OLD SALMO ROAD		TELEPHONE:	
CONTRACTOR: CAREY BAGG		ADDRESS: FRUITVALE, B.C.		TELEPHONE:	
PARTICULARS - PERMIT IS ISSUED SUBJECT TO THE FOLLOWING SPECIAL REQUIREMENTS: ALL WORK TO CONFORM TO THE 2006 B.C. BUILDING CODE AND RELEVANT ELECTORAL AREA 'A' BYLAWS; MINIMUM SETBACKS: FRONT 7.5M, INTERIOR SIDE 3M, EXTERIOR SIDE 7.5M, REAR 4.5M; PROPERTY LINES TO BE IDENTIFIABLE; SEE NOTES ON PLANS; CALL FOR FOOTING, FRAMING, INSULATION/VAPOUR BARRIER AND FINAL INSPECTIONS.					

		FEES
AREA OF LIVING SPACE		
CONSTRUCTION VALUE	\$ 10000	
BUILDING PERMIT FEE		\$ 80
PLUMBING FIXTURES		\$ 0
DEMOLITION		
OTHER		
SUB-TOTAL		\$ 80
TITLE SEARCH		\$ 10
TOTAL		\$ 90
LESS DEPOSIT		
BALANCE OWING		\$ 90

WAIVER OF INDEMNITY

In consideration of the granting of this permit, the undersigned: (a) releases the Regional District of Kootenay Boundary and those acting on behalf of the Regional District of Kootenay Boundary from all claims and expenses which the undersigned may have or incur as a result of the issue of this permit or the enforcement or non-enforcement of the Regional District of Kootenay Boundary Bylaws or of the British Columbia Building Code; (b) indemnifies the Regional District of Kootenay Boundary from all such claims and expenses which may be made by any other person; and (c) acknowledges that the Regional District of Kootenay Boundary owes no duty of care to the undersigned or any one else in respect of these matters.

Richard Bilinski
Owner's Signature

Mickey Repin
MICKEY REPIN
Building/Plumbing Official

DATE PAID JUL - 7 2009

1. Prior to placing concrete in the footings 2. After installation of drain tiles/dampproofing/before backfilling 3. When framing completed 4. Insulation and vapour barrier completed 5. Before any part of plumbing system covered 6. Final Inspection - An occupancy permit is required prior to occupancy of building.

June 5, 2020

Katerina Manolis
1333 Birch Cliff Drive
Oakville, ON L6M 2A5

**Re: Constructed Addition without Final Inspection
1981 Old Salmo Road, Fruitvale, B.C. Electoral Area 'A'
Contravention of Building Bylaw No. 449
Lot B District Lot 1236 Kootenay District Plan 4481 Except Plan 17227**

On May 28, 2020 the Board of Directors reviewed the attached report regarding the above referenced property. As a consequence, the Board will, at its next regular meeting, be considering a resolution to direct the Chief Administrative Officer to file a formal Notice in the Land Title Office regarding this contravention. Pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, you are to be afforded the opportunity to be heard by the Board of Directors before such a Notice is filled. The Board has therefore, adopted the following resolution.

"That Katerina Manolis be invited to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot B, District Lot 1236, Kootenay District, Plan 4481, Except Plan 17227".

This hearing before the Board of Directors is scheduled for Thursday, June 25, 2020 at approximately 1:00 p.m. As our offices are closed to the public at this time, this meeting will be held remotely through Zoom Video Conferencing. Please email Sara Bradley at sbradley@rdkb.com in advance, confirming whether you or a representative will be present for this hearing. If you will be remotely attending this hearing, we request a written submission from you relating to this matter by June 19, 2020. This will provide sufficient time for your report to be distributed to the Board of Directors and for us to send correspondence on how to join through Zoom Video Conferencing.

Please be advised that, in order to avoid registration of this Notice, the Board of Directors require a written confirmation from the Building Inspection staff that the property is now in compliance. You are encouraged to acquire that confirmation before the hearing date.

Enclosed for your information is a copy of Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*. The effect of this Notice is to remove liability from the Regional District of Kootenay Boundary and warn future purchasers of the property that the building(s) or construction on the property may have been in violation of the B.C. Building Code and/or Regulatory Bylaws of the Authority having Jurisdiction.

202 – 843 Rossland Avenue, Trail, BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



Yours truly,

Theresa Lenardon

Theresa Lenardon
Manager of Corporate Administration

Attachment

TL/sb

**STAFF REPORT**

Date: 17 Jun 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

4485 Boat Access East Side, Christina Lake, B.C.

Electoral Area 'C' / Christina Lake

Parcel Identifier: 019-059-329

Block A District Lot 4075S Similkameen Division Yale District

Owner: Janet Arnell

History/Background Factors

The Building Official confirmed that there have been no changes concerning the above referenced property. The owner, Janet Arnell, has constructed an accessory building without completion of a final inspection.

Implications

Should the Regional District not file a Notice on Title against the above mentioned property pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, future purchasers of the property would not be aware that the building(s) are in contravention of the B.C. Building Code and/or Building Bylaw.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- Staff Report dated May 19, 2020 submitted to the Board regarding the building bylaw contravention;
- Letter dated June 5, 2020 inviting the Owner to the January 15, 2020 Board Meeting.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that that Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as against the property legally described as Block A, District Lot 4075S, Similkameen Division Yale District.



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date: 19 May 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

4485 Boat Access East Side, Christina Lake, B.C.

Electoral Area 'C' / Christina Lake

Parcel Identifier: 019-059-329

Block A District Lot 4075S Similkameen Division Yale District

Owner: Janet Arnell

History/Background Factors

The owner, Janet Arnell, has constructed an accessory building without completion of a final inspection.

The Regional District of Kootenay Boundary Building and Plumbing Amendment Bylaw No. 449 states:

Duties of the Owner

12.1 Every owner shall:

(h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work:

(v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or portion of the building.

Implications

The Regional District of Kootenay Boundary Board of Directors has dealt with a number of Bylaw Contraventions by Filing a Notice on Title. The effect of this Notice is to alert future Purchasers of the property that the building(s) are in contravention of the B.C. Building Code and/or regulatory bylaws. The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, *Local Government Act* and *Community Charter* to enforce compliance with regulations.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- History / Background Factors;
- Registered letter dated November 21, 2019;
- Registered letter dated May 29, 2019;
- Registered letter dated March 18, 2019;
- Building Permit 12-0142C.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that the Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

1. That the Regional District of Kootenay Boundary Board of Directors invite the owner, Janet Arnell, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Block A, District Lot 4075S, Similkameen Division Yale District.

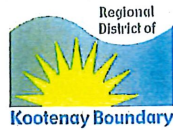
**STAFF REPORT ATTACHMENT**

Date:	May 19, 2020	File:	
To:	Chair Langman and Board of Directors		
From:	Brian Champlin, Manager of Building Inspection Services		
RE:	<u>BUILDING BYLAW CONTRAVENTION</u> 4485 BOAT ACCESS EAST SIDE, CHRISTINA LAKE, B.C. ELECTORAL AREA 'C' / CHRISTINA LAKE PARCEL IDENTIFIER: 019-059-329 BLOCK A DISTRICT LOT 4075S SIMILKAMEEN DIVISION YALE DISTRICT OWNER: JANET ARNELL		

History/Background Factors

The owner, Janet Arnell, have constructed an accessory building without completion of a final inspection.

April 30, 2012	Application received for proposed accessory building;
June 19, 2012	Building Permit 12-0142C issued for an accessory building;
June 19, 2012	Footing inspection conducted, passed;
Jan. 23, 2014	Final inspection conducted, re-inspection required;
Jan. 9, 2015	Email from Ken Wagner, RBO to contractor, Rod Bergum, Bergum Contracting Ltd.;
Jan. 20, 2016	Email from Ken Wagner, RBO to contractor, Rod Bergum, Bergum Contracting Ltd.;
Jan. 9, 2017	Email from Ken Wagner, RBO to contractor, Rod Bergum, Bergum Contracting Ltd.;
Jan. 10, 2018	Site inspection report update, final re-inspection required;
March 18, 2019	First registered letter mailed to owner, requesting a response by April 18, 2019;
March 22, 2019	Canada Post confirmation that the letter was delivered;
May 29, 2019	Second registered letter mailed to owner, requesting a response by June 28, 2019;
June 10, 2019	Canada Post confirmation that the letter was delivered;
Nov. 21, 2019	Third registered letter mailed to owner, requesting a response by December 21, 2019;
Dec. 2, 2019	Canada Post confirmation that the letter was delivered;
May 19, 2020	To date, we have received no further response from the owner.



May 29, 2019



Janet Arnell
Box 149
Turner Valley, AB
T0L 2A0

REGISTERED

RE: Schedule C-B for Structural & Final Inspection
Building Permit 12-0142C – Construct Accessory Building
4485 Boat Access East, Christina Lake, B.C.
DL 4075S, Block 'A'

A review of the above referenced file indicates that we have not received the documentation requested in our letter dated March 18, 2019 and May 29, 2019. A Stop Work Order was posted on March 15, 2019 for construction of an accessory building without a final inspection and submission of supporting Schedule C-B.

We will now be recommending to the Regional District of Kootenay Boundary Board of Directors that a notice be registered on title pursuant to Section 695 of the Local Government Act and Section 57 of the Community Charter (copies attached). This notice will refer to a building bylaw-contravention on the above referenced property and does not limit further action being taken.

If you have any questions or wish to discuss this notice, please contact the undersigned by December 21, 2019.

The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, Local Government Act and Community Charter to enforce compliance with regulations. Your attention to this matter is appreciated.

Respectfully,

A handwritten signature in blue ink that reads "R. Silva".

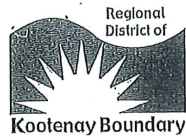
Robert Silva, RBO
Building & Plumbing Official

RS:rj
Attachment

Cc: Brian Champlin, RBO, CRBO | Manager of Building Inspection Services

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfblding@rdkb.com • web: www.rdkb.com





May 29, 2019

Janet Arnell
Box 149
Turner Valley, AB
T0L 2A0

REGISTERED

RE: Schedule C-B for Structural & Final Inspection
Building Permit 12-0142C – Construct Accessory Building
4485 Boat Access East, Christina Lake, B.C.
DL 4075S, Block 'A'

A review of the above referenced file indicates that we have not received the documentation requested in our letter dated March 18, 2019. A Stop Work Order was posted on March 15, 2019 for construction of an accessory building without a final inspection and submission of supporting Schedule C-B.

As required by the Regional District of Kootenay Boundary Building Bylaw No. 449,

Section 12.1 Every owner shall:

- (h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work:
- (v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or a portion of the building.

Please submit the required Schedule C-B Structural discipline & book a final inspection by June 28, 2019. Failure to comply may result in legal action.

If you have any questions, please contact the undersigned

Respectfully,

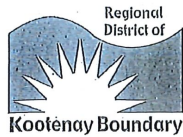

Don Lepitre, RBO
Building & Plumbing Official

DL:rj
Attachment

Cc: Brian Champlin, RBO, CRBO | Manager of Building Inspection Services

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com





March 18, 2019

Janet Arnell
Box 149
Turner Valley, AB
T0L 2A0

REGISTERED

RE: Schedule C-B for Structural & Final Inspection
Building Permit 12-0142C – Construct Accessory Building
4485 Boat Access East, Christina Lake, B.C.
DL 4075S, Block 'A'

A recent review was conducted on your building permit file, which indicates that an inspection has not been carried out since June 19, 2012. Additionally, this office has not received the documentation requested in our site inspection reports dated January 23, 2014 and January 10, 2018.

As required by the Regional District of Kootenay Boundary Building Bylaw No. 449,

Section 12.1 Every owner shall:

- (h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work:
- (v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or a portion of the building.

Please submit the required Schedule C-B Structural discipline & book a final inspection by April 18, 2019. Failure to comply may result in legal action.

If you have any questions, please contact the undersigned

Respectfully,


Don Lepitre, RBO
Building & Plumbing Official

RS:rj
Attachment

Cc: Brian Champlin, RBO, CRBO | Manager of Building Inspection Services ✓

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com



No. 12-0142C

INSPECTION CALLS: (250) 442-2708 or 1-877-520-7352

PERMIT
ISSUED: Jun 19, 12**Regional District of Kootenay Boundary**BUILDING INSPECTION DEPT.
2140 Central Ave., Box 1965, Grand Forks, B.C. V0H 1H0PERMIT TO CONSTRUCT, ERECT, INSTALL, ALTER, ADD TO, REPAIR, MOVE,
OR DEMOLISH, A BUILDING, STRUCTURE, OR PLUMBING

PERMIT TO BE APPLICABLE REGULATIONS

PAT ARNELL ADDRESS: **CHRISTINA LAKE, B.C.** TELEPHONE:

BEING THE OWNER OR ACTING WITH CONSENT OF THE OWNER IS HEREBY GRANTED

A PERMIT TO: **CONSTRUCT ACCESSORY BUILDING**

AT: **4485 BOAT ACCESS EAST S** FOLIO: **712 09124.580**

LOT: BLOCK: **A** RANGE: D.L. **407SS** PLAN: LD:

OWNER: **PAT ARNELL** ADDRESS: TELEPHONE:

CONTRACTOR: ADDRESS: TELEPHONE:

PARTICULARS - PERMIT IS ISSUED SUBJECT TO THE FOLLOWING SPECIAL REQUIREMENTS:

ALL WORK TO CONFORM TO THE 2006 B.C. BUILDING CODE AND RELEVANT AREA 'C' BYLAWS.

MINIMUM SETBACKS: FRONT 7.5M, INTERIOR SIDE 3.0M, REAR 3.0M. PROPERTY PINS TO BE IDENTIFIABLE.

CALL FOR FOOTINGS & FINAL/OCCUPANCY INSPECTIONS.

SECTION 290 LETTER (FROM THE LOCAL GOVERNMENT ACT) FORMS PART OF THIS PERMIT.

ALL FIELD REPORTS BY REGISTERED PROFESSIONALS MUST BE SUBMITTED TO BUILDING OFFICIAL ON DATE OF INSPECTION.

SCHEDULE C-B TO BE SUBMITTED FROM ALL REGISTERED PROFESSIONALS ENGAGED IN CONSTRUCTION PRIOR TO OCCUPANCY.

FEES		
AREA OF LIVING SPACE		
CONSTRUCTION VALUE	\$ 20000	
BUILDING PERMIT FEE		\$ 160
PLUMBING FIXTURES		\$ 0
DEMOLITION		
OTHER	SEC 290 (-10%)	-\$ 16
SUB-TOTAL		\$ 144
TITLE SEARCH		\$ 10
TOTAL		\$ 154
LESS DEPOSIT		
BALANCE OWING		\$ 154

WAIVER OF INDEMNITY

In consideration of the granting of this permit, the undersigned: (a) releases the Regional District of Kootenay Boundary and those acting on behalf of the Regional District of Kootenay Boundary from all claims and expenses which the undersigned may have or incur as a result of the issue of this permit or the enforcement or non-enforcement of the Regional District of Kootenay Boundary Bylaws or of the British Columbia Building Code; (b) indemnifies the Regional District of Kootenay Boundary from all such claims and expenses which may be made by any other person; and (c) acknowledges that the Regional District of Kootenay Boundary owes no duty of care to the undersigned or any one else in respect of these matters. The owner or contractor must give 72 hours notice upon completion of the work.

Owner's Signature

KEN WAGNER, RBO

BUILDING INSPECTOR'S SIGNATURE

DATE PAID June 19, 12

for to placing concrete in footings 2. After installation of drain tiles/damproofing/before backfilling 3. When
ing completed 4. Insulation and vapour barrier completed 5. Before any part of plumbing system covered 6.
1 inspection - An occupancy permit is required prior to occupancy of building.

June 5, 2020

Janet Arnell
PO Box 149
Turner Valley, AB T0L 2A0

**Re: Constructed Accessory Building without a Final Inspection
4485 Boat Access East Side, Christina Lake, B.C. Electoral Area 'C' / Christina Lake
Contravention of Building Bylaw No. 449
Block A District Lot 4075S Similkameen Division Yale District**

On May 28, 2020 the Board of Directors reviewed the attached report regarding the above referenced property. As a consequence, the Board will, at its next regular meeting, be considering a resolution to direct the Chief Administrative Officer to file a formal Notice in the Land Title Office regarding this contravention. Pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, you are to be afforded the opportunity to be heard by the Board of Directors before such a Notice is filled. The Board has therefore, adopted the following resolution.

"That Janet Arnell be invited to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Block A, District Lot 4075S, Similkameen Division Yale District".

This hearing before the Board of Directors is scheduled for Thursday, June 25, 2020 at approximately 1:00 p.m. As our offices are closed to the public at this time, this meeting will be held remotely through Zoom Video Conferencing. Please email Sara Bradley at sbradley@rdkb.com in advance, confirming whether you or a representative will be present for this hearing. If you will be remotely attending this hearing, we request a written submission from you relating to this matter by June 19, 2020. This will provide sufficient time for your report to be distributed to the Board of Directors and for us to send correspondence on how to join through Zoom Video Conferencing.

Please be advised that, in order to avoid registration of this Notice, the Board of Directors require a written confirmation from the Building Inspection staff that the property is now in compliance. You are encouraged to acquire that confirmation before the hearing date.

Enclosed for your information is a copy of Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*. The effect of this Notice is to remove liability from the Regional District of Kootenay Boundary and warn future purchasers of the property that the building(s) or construction on the property may have been in violation of the B.C. Building Code and/or Regulatory Bylaws of the Authority having Jurisdiction.

202 – 843 Rossland Avenue, Trail, BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



Yours truly,

Theresa Lenardon

Theresa Lenardon
Manager of Corporate Administration

Attachment

TL/sb



STAFF REPORT

Date: 17 Jun 2020 **File**
To: Chair Langman and Board of Directors
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

6870 Christian Valley Road, Westbridge, B.C.

Electoral Area 'E' / West Boundary

Parcel Identifier: 009-371-885

Lot 1 District Lot 3637 Similkameen District Yale District Plan 12818

Owner: Thomas Stoffel

History/Background Factors

The Building Official confirmed that there have been no changes concerning the above referenced property. The owner, Thomas Stoffel, has constructed a single family dwelling without a final inspection or occupancy certificate.

Implications

Should the Regional District not file a Notice on Title against the above mentioned property pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, future purchasers of the property would not be aware that the building(s) are in contravention of the B.C. Building Code and/or Building Bylaw.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- Staff Report dated May 20, 2020 submitted to the Board regarding the building bylaw contravention;
- Letter dated June 5, 2020 inviting the Owner to the January 15, 2020 Board Meeting.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that that Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors direct the Chief Administration Officer to file a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as against the property legally described as Lot 1, District Lot 3637, Similkameen Division Yale District, Plan 12818.



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date: 20 May 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

6870 Christian Valley Road, Westbridge, B.C.

Electoral Area 'E' / West Boundary

Parcel Identifier: 009-371-885

Lot 1 District Lot 3637 Similkameen District Yale District Plan 12818

Owner: Thomas Stoffel

History/Background Factors

The owner, Thomas Stoffel, has constructed a single family dwelling without a final inspection or occupancy certificate.

The Regional District of Kootenay Boundary Building and Plumbing Amendment Bylaw No. 449 states:

Prohibition

7.2 No person shall occupy or use any building or part thereof contrary to the terms of any permit, notice or certificate given by the authority having jurisdiction;

Permits

10.10 Where a building permit has been issued for a single family residence, the owner may apply for a permit to occupy the building prior to completion of construction, which permit may be withheld until the building or part thereof complies with this Bylaw and with the health and safety requirements of the Bylaws

of the authority having jurisdiction or the provisions of any Provincial or Federal statutes;

Duties of the Owner

12.1 Every owner shall:

- (h) give at least 72 hours notice to the authority having jurisdiction and request his inspection of the work;
- (v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or portion of the building.

Implications

The Regional District of Kootenay Boundary Board of Directors has dealt with a number of Bylaw Contraventions by Filing a Notice on Title. The effect of this Notice is to alert future Purchasers of the property that the building(s) are in contravention of the B.C. Building Code and/or regulatory bylaws. The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, *Local Government Act* and *Community Charter* to enforce compliance with regulations.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

- History / Background factors;
- Registered letter dated January 23, 2019;
- Registered letter dated November 7, 2019;
- Building Permit 14-0388E.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that the Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

1. That the Regional District of Kootenay Boundary Board of Directors invite the owner, Thomas Stoffel, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 3637, Similkameen Division Yale District, Plan 12818.

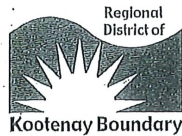
**STAFF REPORT ATTACHMENT**

Date:	May 20, 2020	File:	
To:	Chair Langman and Board of Directors		
From:	Brian Champlin, Manager of Building Inspection Services		
RE:	BUILDING BYLAW CONTRAVENTION 6870 CHRISTIAN VALLEY ROAD, WESTBRIDGE, B.C. ELECTORAL AREA 'E' / WEST BOUNDARY PARCEL IDENTIFIER: 009-371-885 LOT 1 DISTRICT LOT 3637 SIMILKAMEEN DIVISION YALE DISTRICT PLAN 12818 OWNER: THOMAS STOFFEL		

History/Background Factors

The owner, Thomas Stoffel, has constructed a single family dwelling without a final inspection or occupancy certificate.

Oct. 29, 2014	Application received for proposed single family dwelling;
Dec. 15, 2014	Building Permit 14-0388E issued for a single family dwelling;
July 2, 2015	Setback / siting inspection, passed;
Sept. 10, 2015	Underslab plumbing inspection, passed;
Aug. 18, 2016	Letter mailed to owner, requesting a response by September 19, 2016;
Sept. 29, 2016	Letter mailed to owner, requesting a response by October 28, 2016;
Nov. 7, 2016	First registered letter mailed to owner, requesting a response by December 7, 2016;
Nov. 28, 2016	Telephone call from owner to Robert Silva, RBO;
Jan. 23, 2019	Second registered letter mailed to owner, requesting a response by February 22, 2019;
Jan. 30, 2019	Canada Post confirmation that the letter was delivered;
May 20, 2020	To date, we have received no further response from the owner.



January 23, 2019

Thomas Stoffel
Box 2307, RPO Banks Centre
Kelowna, B.C.
V1X 6A5

RE: Building Permit 14-0388E

6870 Christian Valley Rd., Electoral Area 'E'/West Boundary

All that part of Lot 1 lying south of a line drawn parallel to and perpendicularly distant of 1445.00 feet from the southerly boundary of the said lot; DL 3637, Plan 12818

A recent review was carried out on your building permit file for a single family dwelling which indicates that an inspection has not been carried out since September 10, 2015.

No occupancy permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449:

10.10 Where a building permit has been issued for a single family residence, the owner may apply for a permit to occupy the building prior to completion of construction, which permit may be withheld until the building or part thereof complies with this Bylaw and with the health and safety requirements of the Bylaws of the authority having jurisdiction or the provisions of any Provincial or Federal statutes.

12.1(h)
(v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or a portion of the building.

To date, no follow up has been received by this office for an *inspection as requested* in our letter dating November 7, 2016 & subsequent telephone conversation November 28, 2018. A Bylaw Contravention was posted to your file on January 15, 2019.

We will now be recommending to the Regional District of Kootenay Boundary Board of Directors that a notice be registered on title pursuant to Section 302 of the Local Government Act and Section 57 of the Community Charter (copies attached). This notice will refer to a building bylaw contravention on the above referenced property and does not limit further action being taken.

If you have any questions or wish to discuss this notice, please contact the undersigned by February 22, 2019.

The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, Local Government Act and Community Charter to enforce compliance with regulations.

Respectfully,

A handwritten signature in dark ink, appearing to read "R Silva", is written over a light background.

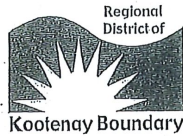
Robert Silva, RBO
Building & Plumbing Official

RS:rj

Cc: Brian Champlin, RBO, CRBO | Manager of Building Inspection Services

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfbldg@rdkb.com • web: www.rdkb.com





November 7, 2016

REGISTERED

Thomas Stoffel
Box 2307, RPO Banks Centre
Kelowna, B.C.
V1X 6A5

RE: Building Permit 14-0388E

6870 Christian Valley Rd., Electoral Area 'E'/West Boundary

All that part of Lot 1 lying south of a line drawn parallel to and perpendicularly distant of 1445.00 feet from the southerly boundary of the said lot; DL 3637, Plan 12818

A recent review was carried out on your building permit file for a single family dwelling which indicates that an inspection has not been carried out since September 10, 2015 (copy enclosed).

No occupancy permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449:

10.10 Where a building permit has been issued for a single family residence, the owner may apply for a permit to occupy the building prior to completion of construction, which permit may be withheld until the building or part thereof complies with this Bylaw and with the health and safety requirements of the Bylaws of the authority having jurisdiction or the provisions of any Provincial or Federal statutes.

12.1(h)
(v) after the building or portion thereof is complete and ready for occupancy, but before occupancy takes place of the whole or a portion of the building.

An Occupancy Permit may be issued if all building code requirements have been met.

Please contact our Building Department at (250) 442-2708 by December 7, 2016 and make arrangements to update or close your file. Failing to respond may result in legal action.

Respectfully,

A handwritten signature in dark ink, appearing to read "R Silva".

Robert Silva, RBO
Building & Plumbing Official

RS:rt

Cc: Mark Anderson, MCIP, RPP, General Manager, Operations/Deputy CAO

Attachment

2140 Central Ave Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: building-gf@rdkb.com • web: www.rdkb.com



No. 14-0388E

INSPECTION CALLS: (250) 442-2708 or 1-877-520-7352

DATE PERMIT
GRANTED: Dec 15, 14Jan 5.15
Mar 2.15**Regional District of Kootenay Boundary**

BUILDING INSPECTION DEPT.

2140 Central Ave., Box 1065, Grand Forks, B.C. V0H 1H0

PERMIT TO CONSTRUCT, ERECT, INSTALL, ALTER, ADD TO, REPAIR, MOVE,
OR DEMOLISH, A BUILDING, STRUCTURE, OR PLUMBING

PULSIVE TO THE APPLICABLE REGULATIONS

THOMAS STOFFEL

ADDRESS: CHRISTIAN VALLEY

TELEPHONE:

LET'S THE OFFICE OR ACTION OF THE OFFICE IN THE GRANT

A PERMIT TO: CONSTRUCT SINGLE FAMILY DWELLING

AT: 6870 CHRISTIAN VALLEY R

FOLIO: 713 07193.200

LOT: 1

BLOCK:

RANGE:

D.L. 3637

PLAN: KAP12818

L.D.:

OWNER: THOMAS STOFFEL

ADDRESS:

TELEPHONE:

CONTRACTOR: PURCELL TIMBERFRAME

ADDRESS:

TELEPHONE:

PARTICULARS - PERMIT IS ISSUED SUBJECT TO THE FOLLOWING SPECIAL REQUIREMENTS:

ALL WORK TO CONFORM TO THE 2012 B.C. BUILDING CODE AND RELEVANT ELECTORAL AREA 'E' WEST BOUNDARY
BYLAWS. MINIMUM SETBACKS: FRONT 4.5M. SEE NOTES ON PLANS.CALL FOR: SETBACKS, PRIOR TO PLACING CONCRETE, DRAINTILE/DAMP PROOFING/BEFORE BACKFILLING, PLUMBING
SYSTEM AND FINAL OCCUPANCY INSPECTIONS.

SECTION 290 LETTER (FROM THE LOCAL GOVERNMENT ACT) FORMS PART OF THIS PERMIT.

PRIOR TO OCCUPANCY PERMIT, PROOF OF LEGAL DISPOSITION OF CONSTRUCTION WASTE IS REQUIRED.

(ATTACHMENT)

ALL FIELD REPORTS BY REGISTERED PROFESSIONALS MUST BE SUBMITTED TO BUILDING OFFICIAL ON DATE OF
INSPECTION.SCHEDULES C-B TO BE SUBMITTED FROM ALL REGISTERED PROFESSIONALS ENGAGED IN CONSTRUCTION PRIOR TO
OCCUPANCY.

GIVE AT LEAST 72 HOURS NOTICE TO THE AUTHORITY HAVING JURISDICTION TO REQUEST INSPECTION OF THE WORK.

FEES

AREA OF LIVING SPACE	2500	
CONSTRUCTION VALUE	\$ 340000	
BUILDING PERMIT FEE		\$ 2720
PLUMBING FIXTURES		\$ 0
DEMOLITION		
OTHER	SEC 290 LETT (-10%)	-\$ 272
SUB-TOTAL		\$ 2448
TITLE SEARCH		\$ 10
TOTAL		\$ 2458
LESS DEPOSIT		
BALANCE OWING		\$ 2458

WAIVER OF INDEMNITY

In consideration of the granting of this permit, the undersigned: (a) releases the Regional District of Kootenay Boundary and those acting on behalf of the Regional District of Kootenay Boundary from all claims and expenses which the undersigned may have or incur as a result of the issue of this permit or the enforcement or non-enforcement of the Regional District of Kootenay Boundary Bylaws or of the British Columbia Building Code; (b) indemnifies the Regional District of Kootenay Boundary from all such claims and expenses which may be made by any other person; and (c) acknowledges that the Regional District of Kootenay Boundary owes no duty of care to the undersigned or any one else in respect of these matters. The owner or contractor must give 72 hours notice upon completion of the work.

Thomas Stoffel
Owner's Signature

Robert Silva
ROBERT SILVA, RBO
BUILDING INSPECTOR'S SIGNATURE

DATE PAID: Mar 26.15

\$ Intake \$1014.9202 Actual Intake \$2258.00

1. Prior to placing concrete in footings 2. After installation of drain tiles/damp proofing/before backfilling 3. When framing completed 4. Insulation and vapour barrier completed 5. Before any part of plumbing system covered 6. Final Inspection - An occupancy permit is required prior to occupancy of building.

June 5, 2020

Thomas Stoffel
PO Box 2307, RPO Banks Centre
Kelowna, B.C. V1X 6A5

**Re: Constructed SFD without a Final Inspection or Occupancy
6870 Christian Valley Road, Westbridge, B.C. Electoral Area 'E' / West Boundary
Contravention of Building Bylaw No. 449
Lot 1 District Lot 3637 Similkameen Division Yale District Plan 12818**

On May 28, 2020 the Board of Directors reviewed the attached report regarding the above referenced property. As a consequence, the Board will, at its next regular meeting, be considering a resolution to direct the Chief Administrative Officer to file a formal Notice in the Land Title Office regarding this contravention. Pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*, you are to be afforded the opportunity to be heard by the Board of Directors before such a Notice is filed. The Board has therefore, adopted the following resolution.

"That Thomas Stoffel be invited to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 1, District Lot 3637, Similkameen Division Yale District, Plan 12818".

This hearing before the Board of Directors is scheduled for Thursday, June 25, 2020 at approximately 1:00 p.m. As our offices are closed to the public at this time, this meeting will be held remotely through Zoom Video Conferencing. Please email Sara Bradley at sbradley@rdkb.com in advance, confirming whether you or a representative will be present for this hearing. If you will be remotely attending this hearing, we request a written submission from you relating to this matter by June 19, 2020. This will provide sufficient time for your report to be distributed to the Board of Directors and for us to send correspondence on how to join through Zoom Video Conferencing.

Please be advised that, in order to avoid registration of this Notice, the Board of Directors require a written confirmation from the Building Inspection staff that the property is now in compliance. You are encouraged to acquire that confirmation before the hearing date.

Enclosed for your information is a copy of Section 302 of the *Local Government Act* and Section 57 of the *Community Charter*. The effect of this Notice is to remove liability from the Regional District of Kootenay Boundary and warn future purchasers of the property that the building(s) or construction on the property may have been in violation of the B.C. Building Code and/or Regulatory Bylaws of the Authority having Jurisdiction.

202 – 843 Rossland Avenue, Trail, BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



Yours truly,

Theresa Lenardon

Theresa Lenardon
Manager of Corporate Administration

Attachment

TL/sb

**STAFF REPORT**

Date: 17 Jun 2020 **File**
To: **Chair Langman and Board of Directors**
From: Brian Champlin, Manager of Building Inspection Services
Re: Building Bylaw Contravention

Issue Introduction

A staff report from Brian Champlin, Manager of Building Inspection Services, regarding a Building Bylaw Contravention for the property described as:

6475 Highway 33, Carmi, B.C.

Electoral Area 'E' / West Boundary

Parcel Identifier: 030-104-858

Lot 2 District Lot 2360 Similkameen Division Yale District Plan EPP63586

Owners: Daniel and Michelle Kaufman

History/Background Factors

The owners, Daniel and Michelle Kaufman, have constructed an accessory building without a building permit.

The Regional Regional District of Kootenay Boundary Building and Plumbing Amendment Bylaw No. 449 states:

Duties of the Owner

12.1 Every owner shall:

(b) obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs, canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work.

Implications

The Regional District of Kootenay Boundary Board of Directors has dealt with a number of Bylaw Contraventions by Filing a Notice on Title. The effect of this Notice is to alert future Purchasers of the property that the building(s) are in contravention of the B.C. Building Code and/or regulatory bylaws. The above action does not preclude the Regional District of Kootenay Boundary from taking such steps as may be further authorized by Bylaw, *Local Government Act* and *Community Charter* to enforce compliance with regulations.

Advancement of Strategic Planning Goals

Not applicable.

Background Information Provided

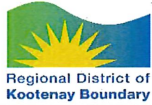
- History / Background Factors;
- Registered letter dated September 16, 2019;
- Registered letter dated July 30, 2019;
- Registered letter dated January 24, 2019.

Alternatives

1. Once all deficiencies are rectified, the Owner may request that the Regional District of Kootenay Boundary Board of Directors remove the Notice on Title upon receipt of \$200.00 (Administration fee for removal of the Notice).

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors invite the owners, Daniel and Michelle Kaufman, to appear before the Board to make a presentation relevant to the filing of a Notice in the Land Title Office pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* against the property legally described as Lot 2, District Lot 2360, Similkameen Division Yale District, Plan EPP63586.



Regional District of
Kootenay Boundary

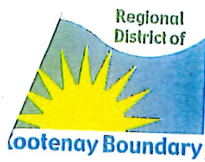
STAFF REPORT ATTACHMENT

Date:	June 17, 2020	File:	
To:	Chair Langman and Board of Directors		
From:	Brian Champlin, Manager of Building Inspection Services		
RE:	<u>BUILDING BYLAW CONTRAVENTION</u> 6475 HIGHWAY 33, CARMÍ, B.C. ELECTORAL AREA 'E' / WEST BOUNDARY PARCEL IDENTIFIER: 030-104-858 LOT 2 DISTRICT LOT 2360 SIMILKAMEEN DIVISION YALE DISTRICT PLAN EPP63586 OWNERS: DANIEL AND MICHELLE KAUFMAN		

History/Background Factors

The owners, Daniel and Michelle Kaufman, have constructed an accessory building without a building permit.

Jan. 22, 2019	Stop Work Order posted;
Jan. 24, 2019	First registered letter mailed to owners, requesting a response by February 25, 2019;
Feb. 1, 2019	Canada Post confirmation that the letter was delivered;
Feb. 7, 2019	Application received for proposed accessory building;
April 2, 2019	Email to Daniel Kaufman from Robert Silva, RBO, requesting documentation;
April 3, 2019	Email from Daniel Kaufman to Robert Silva, RBO, confirming request;
July 30, 2019	Second registered letter mailed to owners, requesting a response by August 27, 2019;
Aug. 9, 2019	Canada Post confirmation that the letter was delivered;
Sept. 16, 2019	Third registered letter mailed to owners, requesting a response by October 15, 2019;
Sept. 20, 2019	Canada Post confirmation that the letter was delivered;
Nov. 1, 2019	Duplicate application received for proposed accessory building;
Nov. 7, 2019	Email to Daniel Kaufman from Kevin Santori, Building and Plumbing Official, requesting documentation;
Feb. 13, 2020	Telephone call from Daniel Kaufman with Michele Cipressi, Receptionist, regarding requirements;
March 6, 2020	Email to Daniel Kaufman from Robert Silva, RBO, requesting documentation;
March 8, 2020	Email from Daniel Kaufman to Robert Silva, RBO, confirming request;
June 17, 2020	To date, we have received no further response from the owners.



September 16, 2019

Daniel & Michelle Kaufman,
Box 240
Beaverdell, B.C.
V0H 1A0

REGISTERED

Re: STOP WORK ORDER 19-0077ESWO
Construct an Accessory Building without a Building Permit
6475 Highway 33, Carmi, B.C.
Lot 2, DL 2360, Plan EPP63586

A review of the above referenced file indicates that we have not received the documentation requested in our letters dated January 24, 2019, and July 30, 2019. A Stop Work Order was posted on January 22, 2019 for construction of an accessory building without a building permit.

No building permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449

Section 7.1

No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b)

Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

If we do not receive documentation by **October 15th, 2019**, we will recommend to the Regional District of Kootenay Boundary Board of Directors that a Notice be registered on the title pursuant to Section 302 of the *Local Government Act* and Section 57 of the *Community Charter* (copies attached). This notice will refer to a building bylaw contravention on the above referenced property and does not limit further action being taken.

If you have any questions, please contact the undersigned.

Respectfully,

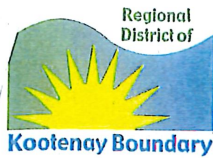
Robert Silva, RBO
Building & Plumbing Official

RS:mc

Attachment

Cc: Brian Champlin, RBO, CRBO, Manager of Building Inspection
Donna Dean, R.P.P., Manager of Planning and Development

2140 Central Ave. Box 1965 Grand Forks, British Columbia, Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: info@building@rdkbc.com



July 30, 2019

REGISTERED

Daniel & Michelle Kaufman,
Box 240
Beaverdell, B.C.
V0H 1A0

Re: STOP WORK ORDER
Construct an Accessory Building without a Building Permit
6475 Highway 33, Carmi, B.C.
Lot 2, DL 2360, Plan EPP63586

A review of the above referenced file indicates that we have not received the documentation requested in our letter dated January 24, 2019. A **Stop Work Order** was posted on January 22, for **construction of an accessory building** without a building permit.

No building permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449

Section 7.1

No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b)

Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

To apply for a permit, please fill out the enclosed application form and submit the relevant documentation listed on the "How to Obtain a Building Permit" checklist to our office by **August 27, 2019**. Failure to comply may result in legal action.

If you have any questions, please contact the undersigned.

Respectfully,

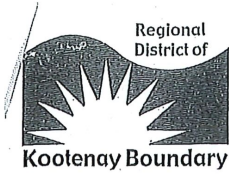
Robert Silva, RBO
Building & Plumbing Official

RS:rt

Attachment

Cc: Brian Champlin, RBO, CRBO, Manager of Building Inspection
Donna Dean, R.P.P., Manager of Planning and Development





January 24, 2019

REGISTERED

Daniel & Michelle Kaufman
Box 240
Beaverdell, B.C.
V0H 1A0

Re: STOP WORK ORDER- Construct an Accessory Building Without a Building Permit
6475 Highway 33, Carmi, B.C.
Lot 2, DL 2360, Plan EPP63586

This letter confirms the posting of a **Stop Work Order** on January 22, 2019 for **Construction of an Accessory Building** without a Building Permit at the above referenced property.

No building permit has been issued as required by the Regional District of Kootenay Boundary Building Bylaw No. 449,

Section 7.1 No person shall commence or continue any work provided for in Section 3.2 or related to building unless he has a valid and subsisting permit issued by the authority having jurisdiction.

Section 12.1 b) Every owner shall:
obtain where applicable from the authority having jurisdiction, permits relating to demolition, excavation, building, repair of buildings, zoning, change in classification of occupancy, sewers, water, plumbing, signs canopies, awnings, marquees, blasting, street occupancy, electricity, buildings to be moved, and all other permits required in connection with the proposed work prior to the commencement of such work;

To apply for a permit, please fill out the enclosed application form and submit the relevant documentation listed on the "How to Obtain a Building Permit" checklist to our office by **February 25, 2019**. Failure to comply may result in legal action.

If you have any questions, please contact the undersigned.

Respectfully,

A handwritten signature in cursive script that reads "R Silva".

Robert Silva, RBO
Building & Plumbing Official

RS:rj

Cc: Brian Champlin, RBO, CRBO | Manager of Building Inspection Services

Attachment

2140 Central Ave. Box 1965 Grand Forks, British Columbia Canada V0H 1H0
toll-free: 1 877 520-7352 • tel: 250 442-2708 • fax: 250 442-2688
email: gfblding@rdkb.com • web: www.rdkb.com



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date:	25 June 2020	File	ES - Solid Waste
To:	Chair Langman and Board of Directors		
From:	Janine Dougall, General Manager of Environmental Services		
Re:	Service Truck Purchase - Authorization		

Issue Introduction

A Staff report from Janine Dougall, General Manager of Environmental Services regarding the results from the procurement process for the purchase of a service truck for use in Environmental Services (Solid Waste).

History/Background Factors

The purchase of a service truck to replace an existing 2008 unit was included in the Regional Solid Waste Management Work Plan as a 2020 project. The service truck is a critical piece of equipment used to maintain and repair RDKB equipment at all facilities in the Boundary and allows for solid waste management services to be provided in an efficient and cost effective manner. \$95,000 was included in the approved 2020 budget for purchase of the new service truck.

A Request for Proposal document was issued on May 22, 2020 with a closing date of June 12, 2020. The procurement document was advertised on BC Bid as well as the RDKB website.

Implications

Prior to the closing date, a total of 5 submissions were received in response to the Request for Proposals. An evaluation of received proposals was conducted by RDKB staff. Please see attached documentation from Rob McGregor, Solid Waste Operations Coordinator for additional information.

Based on the evaluations conducted, the recommendation is to proceed with purchase of a 2020 Ford chassis with a Work Truck West Warner aluminum service body from Metro Motors Ltd. for a total cost of \$102,210 (including applicable taxes).

Although the cost for the service truck exceeds the budgeted monies by \$7,210, there are other capital projects that can be deferred to future years to ensure the overall Regional Solid Waste (010) budget is not exceeded.

Due to requirements outlined in the RDKB Purchasing Policy, authorization for purchase of the new service truck is being sought from the Board of Directors as the total cost is greater than \$100,000.

Advancement of Strategic Planning Goals



This project is directly related to the provision of "Exceptional Cost Effective and Efficient Services".

Background Information Provided

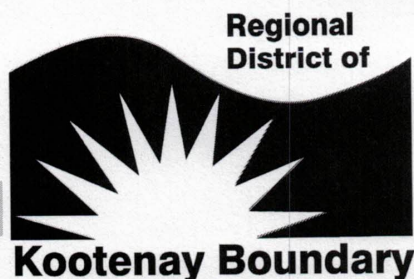
Memorandum from Rob McGregor, Solid Waste Operations Coordinator – Results from 2020 Service Truck RFP

Alternatives

1. That the Board of Directors authorize staff to proceed with the purchase of a 2020 Ford F350 Crew Cab with a Work Truck West Warner aluminum service body from Metro Motors Ltd. for a total cost of \$102,210 (including applicable taxes).
2. That the Board of Directors not authorize the purchase of a replacement service truck.

Recommendation(s)

That the Board of Directors authorize staff to proceed with the purchase of a 2020 Ford F350 Crew Cab with a Work Truck West Warner aluminum service body from Metro Motors Ltd. for a total cost of \$102,210 (including applicable taxes).



8798 GRANBY RD.
BOX 1965
GRAND FORKS, B.C
VOH 1HO
(250) 442-2734, Cell (250) 442-7042
rmcgregor@rdkb.com

MEMORANDUM

TO: JANINE DOUGALL, GENERAL MANAGER OF ENVIRONMENTAL SERVICES
FROM: ROB MCGREGOR, SOLID WASTE OPERATIONS COORDINATOR
DATE: JUNE 17, 2020

SUBJECT: Results from 2020 Service Truck RFP

MESSAGE: Five submissions were received before the deadline for the purchase of a new Service Truck for RDKB Solid Waste Operations. The results of those submissions are listed in the table below:

Ranking	Submitted by	Chassis	Service Body	Missing Specs	Unit Price	Total Cost	Notes
3	Kal Tire Equipment	GMC	Custom	heated seats,	\$ 99,119.41	\$ 106,057.76	Aluminum Body
4	Abbotsford Chrysler	Dodge	WTW Warner	Non-LED Driving lights	\$ 96,472.00	\$ 103,225.04	Steel Body
5	Abbotsford Chrysler	Dodge	WTW Warner	Non-LED Driving lights	\$ 102,472.00	\$ 109,648.04	Aluminum Body
2	Metro Motors	Ford	WTW Warner		\$ 89,500.00	\$ 95,790.00	Steel Body
1	Metro Motors	Ford	WTW Warner		\$ 95,500.00	\$ 102,210.00	Aluminum Body
Total cost include PST ,fees, and levys							

It is staff's recommendation that the RFP be awarded to Metro Motors/Work Truck West for their submission to supply the Ford F350 Crew Cab with the Work Truck West Warner Aluminum Service Body for the unit price of \$95,500 plus applicable tax and fees. This will bring the purchase total to \$102,210.00.

This submission meets and exceeds all our required specifications. Staff feels the added features the aluminum service body with weight savings increasing carrying capacity, fuel economy, and the better corrosion protection over the life of the vehicle is the better option than the cheaper steel version. Staff has no concerns as to the quality or service that will be expected from this supplier in being able to service our needs with this quality piece of equipment for its service life.

This submission can be delivered within the allotted time frame, but is \$7,200.00 over our 2020 budgeted amount.

Corporately yours

Rob McGregor, Solid Waste Operations Coordinator



**Regional District of
Kootenay Boundary**

STAFF REPORT

Date:	June 25, 2020	File #:	BIWS - Grant BIWS Opportunity
To:	Chair Langman and members of Board of Directors		
From:	Kristina Anderson, Watershed Planner		
RE:	Boundary Integrated Watershed Service – Grant Applications		

Issue Introduction

The purpose of this report is to present a list of potential grant recipients related to the grant opportunity provided by Boundary Integrated Watershed Service (BIWS) to support the implementation of Boundary Watershed Management Plans, for consideration by the Board of Directors.

History / Background Information

The Kettle River Watershed Management Plan, which was endorsed by the RDKB Board of Directors “envisions a healthy, resilient and sustainable Kettle River Watershed, which functions to meet the needs and values of its communities, who in turn act as stewards of the watershed”. The BIWS is working toward the implementation of the Kettle River Watershed Management Plan and the Christina Lake Watershed Management Plan. There is financial support available to local organizations who are working on actions identified in one or both of the Plans. A total of \$20,000 in funding is available per year, with a maximum amount for each organization not to exceed \$10,000.

The deadline for submissions was April 30, 2020, which brought in three applications at a combined request of \$29,914.50. K. Anderson completed an initial review of the applications based on the eligibility criteria below and has determined that the eligibility criteria has been met for each of the three applications.

Eligibility:

- Organizations must be actively working to implement the goals of the Boundary Watershed Management Plans.
- Eligible applicants can be: (1) Not-for-profit organizations; (2) community coalitions; under a not-for-profit umbrella organization who can administer the funds, and (3) schools or school districts.
- All applicants must be in good standing with the RDKB. Any applicant with an outstanding Project Financial Report from a previous grant is not eligible until the report is received by the RDKB, unless an extension has been granted.

Conditions:

- All funds must be spent by May 31st, 2021, unless the project time-line presented in the application is beyond May 31.
- Applications should demonstrate how the funds will be used to help deliver one or more actions in the Kettle River Watershed Management Plan or the Christina Lake Watershed Management Plan.
- Retroactive costs are not eligible; that is costs incurred prior to project approval.
- Operational costs are not eligible; that is costs to support staff positions and regular payments expected to be made by the organization to ensure the continuity of its operations such as rent payments, utilities, levies and other contractual obligations.
- A final report is required, which includes a brief description of the work accomplished, as well as statement of income and expenses for the Project.

The three applications submitted include:

Project Title: Boundary Forest Watershed Stewardship Society "Streamkeepers"

Organization: Boundary Forest Watershed Stewardship Society (BFWSS)

Contact Person: Roy Schiesser

Project Description: Identify critically disturbed areas in the Kettle River Watershed. Once identified, the BFWSS will document the location, quality and conditions of all watercourses and riparian zones within these areas. Data will be reviewed by a qualified consultant. This project will lay the groundwork for a sustainable Streamkeepers program by developing a system for monitoring and collecting data, training volunteers, and establishing a database of information about the watershed.

Action items from Management Plan: KRWMP Action 3.2.3: Work with local conservation groups to establish a formal "streamkeepers" group or similar organization for ongoing water quality monitoring, wetland/riparian restoration and other stewardship activities.

Amount Requested: \$9,914.50

Additional Information: Consultant time would be broken into two categories. Technical support and a project coordinator who is local to the area. Discussions with the consultant Erik Piikkila was initiated in response to the technical component, however finalizing of consultants would not happen until after the funding and timing has been determined. Contact with the Pacific Streamkeepers was made in support of this project.

Project Title: Christina Creek Fish Barrier Feasibility Study-Phase 1 (Northern Pike Prevention)

Organization: Christina Lake Stewardship Society (CLSS)

Contact Person: Suzanne Adrain-Vincent

Project Description: Literature review and field data collection towards the prevention of the establishment of Northern Pike in the Christina Lake system. Northern Pike are a species of predatory fish, non-native to our local waters. They were introduced into the Kettle River via the Columbia River system, and are making their way north towards Christina Creek which leads directly to Christina Lake. Christina Lake is inhabited by many native species that will be greatly threatened if pike become established there. In the Columbia, Pend Oreille and Kettle Rivers, pike have been increasing in numbers and Governments and First Nations are spending thousands of dollars on suppression programs meant to protect the native fish populations.

This project will establish whether there are barrier options to keep pike from entering Christina Lake so that we do not end up requiring suppression. It will also give an understanding of the habitat in the creek and lake to determine if it is viable pike habitat, this info will be valuable for future fish studies, and moving into Phase 2 of the project.

All work will be completed by two consultants, Wood Environment & Infrastructure Solutions and Mountain Water Research; quote and description of project is attached to application.

Action items from Management Plan: KRWMP Direction 1.3. Action 3.2.3: Assess and improve the consistency, alignment and application of policies and regulations for protecting water quality, water quantity, and habitat in aquatic and related upland ecosystems.

The CLWMP gives direction on the importance of lake and watershed health that includes prevention of aquatic invasive species. In addition, KRWMP (under Direction 4.2 – “Maintain a healthy fishery through habitat protection and restoration...”) indicates that management of our watersheds to protect native species and habitat is of utmost importance.

Amount Requested: \$10,000

Additional Information: Requested extension of timeline to July 31, 2021. CLSS is a part of a larger group who have an interest in managing the pike which include the Province, Okanagan Nation Alliance (ONA), Colville Confederated Tribes (CCT). This project will be building off what we know now, and what these other groups know. CCT has an extensive fishing program that is conducted every year for suppression, as they have quite a bit of pike in their waters. CLSS is looking to learn more around current practices by CCT for Pike management and their learnings through the process. The province is ready to help by providing any information they have on pike, and have been great supporters of our pike fishing challenge and aquatic invasive education initiatives. ONA completed some electrofishing last year and did not catch any pike, they had return to the lake again this spring.

Project 3: Restoring Black Cottonwood Riparian Ecosystems for Species at Risk in the Kettle River Watershed

Organization: Granby Wilderness Society

Contact Person: Jenny Coleshill

Project Description: Riparian planting and maintenance of the plants in support of restoring black cottonwood riparian ecosystems for species at risk. This project will contribute to our

efforts to help landowners, municipalities, and other land managers to contribute to the conservation and restoration of riparian areas within the Kettle River Watershed. Continuing these efforts will contribute to a resilient and functioning landscape in these areas.

One of our focuses has been the conservation of the Black Cottonwood Riparian Ecosystem. We have been using the Lewis's Woodpecker as our Umbrella Species to work towards the conservation of these areas critical to the health of the Kettle River Watershed and to several local species at risk. Undertaking restoration and enhancement activities such as planting native trees and shrubs has been a successful way to engage landowners and land managers in conservation efforts.

This project will contribute to our efforts to help landowners, municipalities, and other land managers to contribute to the conservation and restoration of riparian areas within the Kettle River Watershed. Continuing these efforts will contribute to a resilient and functioning landscape in these areas.

Action items from Management Plan: KRWMP Direction 1.3. Action 1.2.5 (contributes to a better understanding of the watershed to the public and land managers); 1.3.2 (highlights the need for better policy around riparian areas); 1.4.1 (acquiring funding from other sources for project implementation); 2.4.1 (resilient riparian areas helps to mitigate impacts from drought); 3.2 & 3.3 (this project contributes to all activities under these directives).

Amount Requested: \$10,000

Additional Information: Works are proposed for several different locations, both private and public lands. This financial support will be used to support the fall and spring planting season. There are eight properties that Granby Wilderness is working on this spring, and another eight where work had occurred in the past and requires maintenance. There is a GIS online database available upon request the outlines the location of all past and proposed sites.

Implications

The proposed projects described above will address action items listed in the Kettle River Watershed Management Plan or the Christina Lake Management Plan.

Staff Comments

BIWS provides the following comments in response to the above application. Each applicant was sent one email in order to clarify information provided; BIWS appreciated the care and detail provided in these responses.

1. BFWSS Streamkeepers: The establishment of a streamkeepers group is a very important project, and one that is needed in the Boundary region. BIWS is encouraged that BFWSS is considering supporting the establishment of this important action. Following significant discussion, BIWS feels that the information provided regarding the establishment, standards and conduct of a Boundary Streamkeepers group unfortunately did not provide sufficient detail to offer the confidence that a Streamkeepers group would result from this project nor specific monitoring standards that would be adhered to in order to ensure repeatable and defensible results. The RDKB would like to work with BFWSS to ensure these conditions are met for future grant applications.

2. Northern Pike Prevention: CLSS has retained the services of a qualified consultant to complete both a review and initial field monitoring in response to the goal of Northern Pike Prevention. Research and monitoring is currently underway throughout surrounding water bodies, this work will support and compliment existing efforts. BIWS recommends supporting this project.
3. Restoring Riparian Ecosystems: Although the application submitted lacks details on the specific works proposed, this multi-year project has been reviewed extensively through the Provincial and RDKB process. The money requested for this work will be combined with previous grants received from HCTF (Habitat Conservation Trust Foundation), Province and RDKB. BIWS recommends supporting this project.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors approves the following two projects, for a combined total of \$20,000, using funds from the BIWS Project Fund - account # 12 610 235: Christina Lake Stewardship Society's request for \$10,000 in support of the project entitled "Christina Creek Fish Barrier Feasibility Study-Phase 1 (Northern Pike Prevention)"; and Granby Wilderness Society's request for \$10,000 in support of the project entitled "Restoring Black Cottonwood Riparian Ecosystems for Species at Risk in the Kettle River Watershed".



Regional District of
Kootenay Boundary

Staff Report

RE:	Development Variance Permit – Sandner		
Date:	June 25, 2020	File #:	C-317-00236.005
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received an application for a development variance permit from Rod Bergum of Bergum Contracting Ltd., on behalf of Susan Sandner, for the construction of a detached garage with a secondary suite above it in Electoral Area C/Christina Lake (see attachments).

Property Information	
Owner(s):	Susan Sandner
Agent:	Bergum Contracting Ltd. c/o Rod Bergum
Location:	47 Sandner Road
Electoral Area:	Electoral Area C/Christina Lake
Legal Description(s):	Parcel A, Plan KAP50, DL317, SDYD (Being a consolidation of Lots 4, 5, & 6, see LB378272)
Area:	0.1ha (0.248acr)
Current Use(s):	Single family dwelling
Land Use Bylaws	
OCP Bylaw 1250:	Residential
DP Area:	NA
Zoning Bylaw 1300:	Single Family Residential 1
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	Christina Lake Water Utility Service

History / Background Information

The subject property is located on the corner of Benniger Road and Sandner Road in Electoral Area C/Christina Lake. It is designated for "Residential" land use in Official Community Plan (OCP) Bylaw No. 1250 and is zoned "Single Family Residential 1" by Zoning Bylaw No. 1300. The property is approximately 50m south of Christina Lake and 90m west of Christina Creek.

Page 1 of 3

P:\PD\EA_C\C-317-00236.005 Sandner\2020-June DVP\Board\2020-06-02_Sandner_DVP_Board.docx

It is not within the floodplain setback area; however, the 1:200-year flood level does reach the front of the property.

The parcel was subdivided from District Lot 317 in 2017, along with 8 new strata lots to the south and east of the subject property.

Proposal

The proposal is for the construction of a two-storey 53m² (572ft²) detached two-car garage and secondary suite. The secondary suite is proposed above the garage (see attachments).

The applicant is requesting to vary the maximum height of an accessory building from 4.6m to 7.5m, a variance of 2.9m.

Implications

For Development Variance Permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The application form that was submitted is an old version that does not request this information, so a statement was not submitted. However, staff discussed these considerations with the applicant during the preparation of this report.

Applicant's Rationale

To summarize the applicant's rationale:

- Under the current height requirements, the property owners would have to construct an additional building to accommodate their needs.
- The current proposal results in a maximum total parcel coverage of approximately 25%.
- If the Bylaw's height requirements are met, achieving the same floor area would result in more than 30% parcel coverage.
- An addition to the existing single family dwelling could be built to the same siting with the same height and meet the Zoning Bylaw's height requirements.

The proposal appears to meet all other requirements of the Zoning Bylaw. Additionally, the siting of the proposed structure to the rear of the property ensures it is outside of the floodplain.

The subject property is outside the Waterfront Environmentally Sensitive Development Permit Area since it is adjacent to Christina Creek, which is an outflow of the lake.

Advisory Planning Commission (APC)

This application was considered by the Electoral Area 'C' APC at their June 2, 2020 meeting. The APC recommended to the Regional District: "that the application be referred back for further information from the proponent on whether the size of the septic system can accommodate the secondary suite."

Staff Comments

This application is for a development variance permit and not for a Waterfront Environmentally Sensitive Development permit. As such the size of the septic system is not relevant to the current application. Further, the size of the septic system and its ability to accommodate a secondary suite is reviewed at the building permit stage. Staff is recommending approval for the development variance permit, so as not to delay the application by sending it back to the APC due to a concern that is addressed separately.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by Rod Bergum, Bergum Contracting Ltd., on behalf of Susan Sandner, to allow for an increase in the maximum height of an accessory building from 4.6m to 7.5m – a variance of 2.9m to construct a detached two-storey garage and secondary suite on the property legally described as Parcel A, Plan KAP50, DL317, SDYD (Being a consolidation of Lots 4, 5, & 6, see LB378272), Electoral Area C/Christina Lake.

Attachments

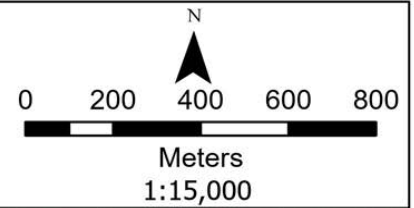
Site Location Map
Subject Property Map
Applicant Submission



2020-05-19

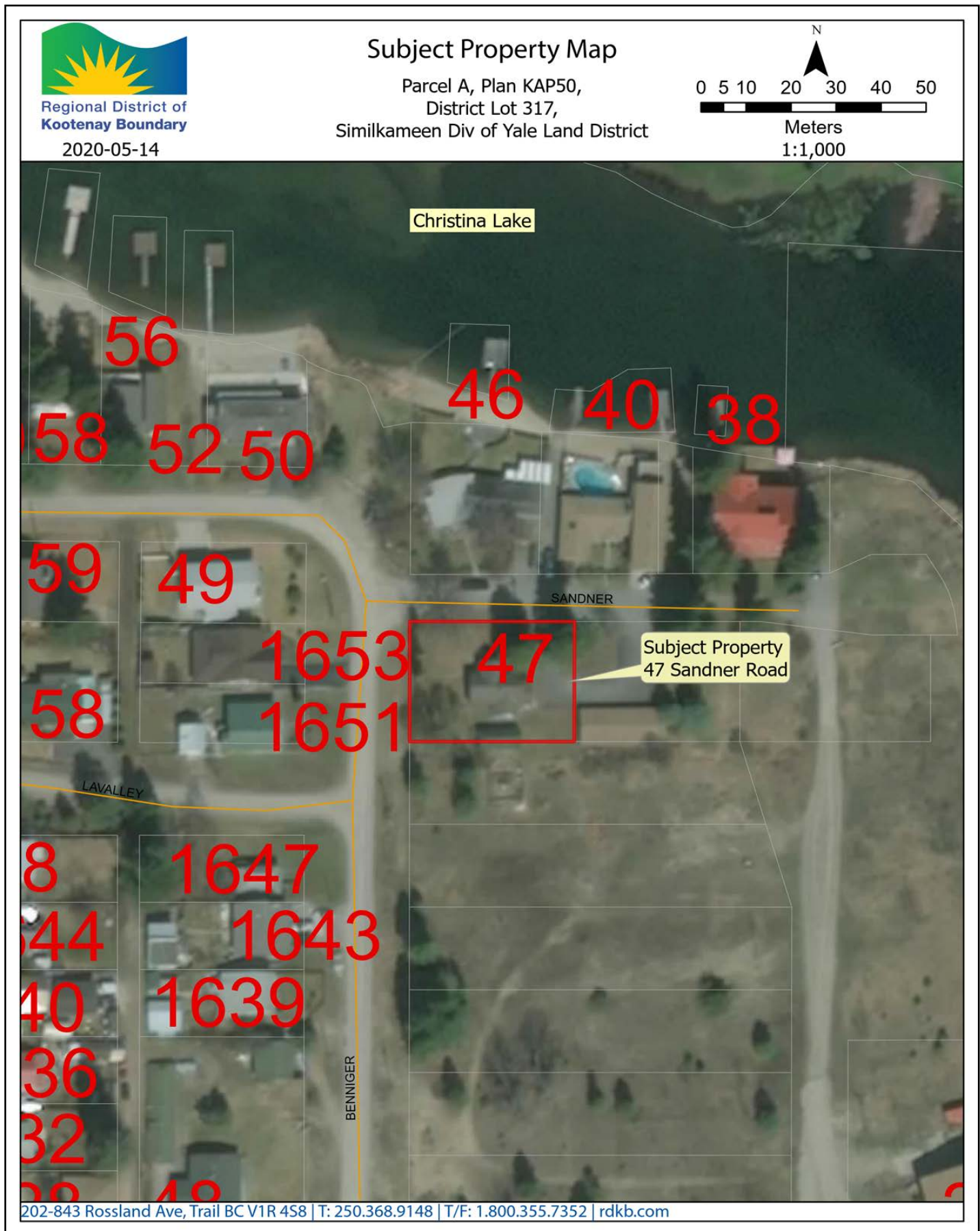
Site Location Map

Parcel A, Plan KAP50,
District Lot 317,
Similkameen Div of Yale Land District



PD\EA 'C'\C-317-00236.005 Sandner\SLM

202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



Please explain your reasons for requesting this application, and please also describe in detail your development proposal (use space provided on the back of this form, or attach a separate sheet of paper if needed):

REQUEST INCREASE IN HEIGHT FOR PROPOSED BUILDING
FROM 4.5m (under Section 402 SINGLE FAMILY RES. ZONE - SECTION 8)
TO 7.5m TO ALLOW FOR A SECONDARY SUITE OVER A
2 CAR GARAGE ON GRADE.
THIS SECONDARY SUITE WILL MEET THE 40% RATIO AS
PERMITTED IN THE APPROPRIATE RODB BY LAW.

SUPPORTING INFORMATION REQUIRED

In support of your application, please answer the following questions:

- | | YES | NO |
|----------------------------------------------------------------------------|----------------------------------|----------------------------------|
| 1. Are there any Restrictive Covenants registered on the subject property? | <input type="radio"/> | <input checked="" type="radio"/> |
| 2. Are there any registered Easements over the subject property? | <input type="radio"/> | <input checked="" type="radio"/> |
| 3. Is there legal and practical road access to the subject property? | <input checked="" type="radio"/> | <input type="radio"/> |

****The following information is also required (failure to do so may delay or jeopardise the application):**

- A copy of the Certificate of Title or recent Tax Assessment notice for the subject property or properties;
- A plan drawn to an appropriate scale, accompanied by a written report (if necessary) showing:
 - the legal boundaries and dimensions of the subject property;
 - boundaries and dimensions of any proposed lots (if subdivision is being proposed);
 - the location of any physical or topographic constraints on the subject property (such as watercourses, shorelines, ravines, wetlands, steep slopes, bedrock outcrops, etc.);
 - the location of permanent buildings and structures on the subject property;
 - the location of any proposed buildings, structures or additions thereto;
 - the location of any existing or proposed access roads, driveways, screening and fences;
 - the proposed method of sewage disposal and the location of any existing and/or proposed septic tank, tile field, sewer line or similar, and water sources (well or community water service pipe location); and
 - the location of any earthworks/grading and/or proposed landscaping on the subject property.
- Application types (d) and (i) only: A copy of a professional's report which addresses relevant development permit guidelines may be required. Please consult the Regional District Planning and Development Department if you are unsure about this requirement.
- Additional material, or more detailed information may be requested by the Regional District upon reviewing your application.

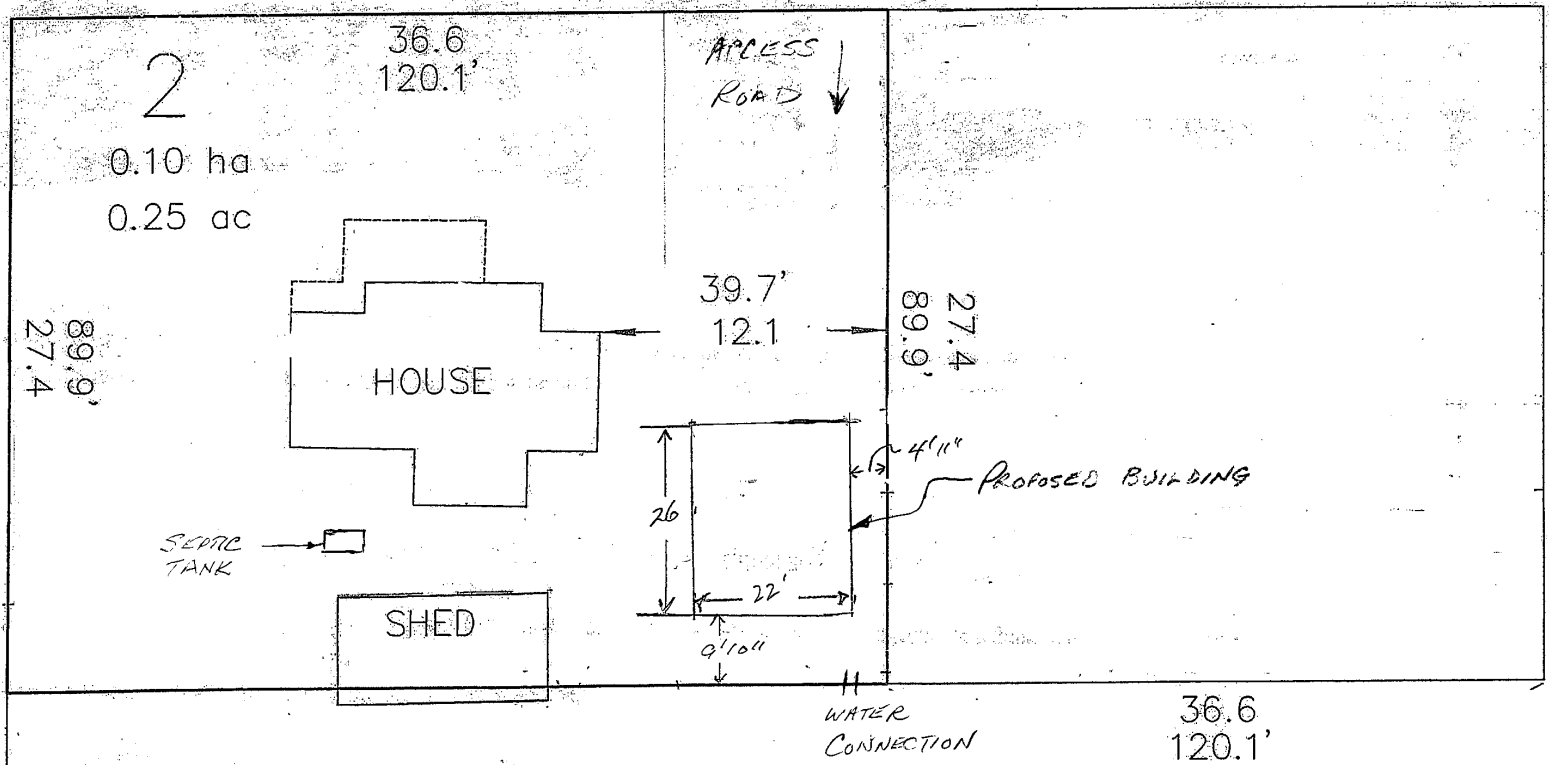
If the Regional District believes it to be necessary for the property boundaries and the location of improvements thereon to be more accurately defined due to uncertainty over natural boundaries of watercourses or other reasons, a sketch prepared by a British Columbia Land Surveyor may be required. The voluntary submission of such a sketch may prevent a possible delay in processing the application.

11/11

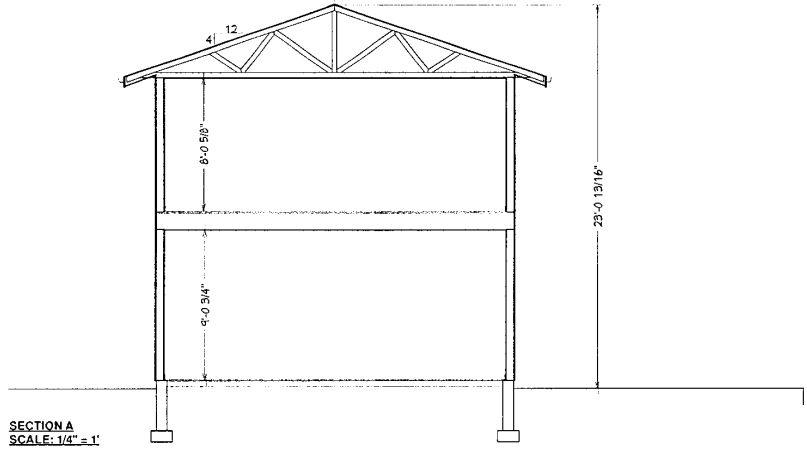
DETAIL

Not to scale

SANDNER ROAD



Drawing date: MAY 14/20



SECTION A
SCALE: 1/4" = 1'

NO. DESCRIPTION		BY	DATE
SECTION		47 SANDNER RD CHRISTINA LAKE BC	
BERGUM CONTRACTING 24 PARK ROAD CHRISTINA LAKE, B.C.		DATE: 2020-05-12	
SCALE: 1/4" = 1'		SHEET: A-1	



Regional District of
Kootenay Boundary

Staff Report

RE:	Development Variance Permit – Mount Baldy – Mount Baldy Estates Ltd.		
Date:	June 25, 2020	File #:	MB-100s-01400.700
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received an application from Landform Architecture Ltd, on behalf of the owners of 130 Cougar Road, for a Development Variance Permit in Electoral Area E/West Boundary (see attachments).

Property Information	
Owner(s):	Mount Baldy Estates Ltd.
Agent:	Landform Architecture Ltd.
Location:	130 Cougar Road
Electoral Area:	Electoral Area E/West Boundary
Legal Description(s):	SL 3, DL 100s, SDYD, Strata Plan KAS1840
Area:	0.25ha (0.61acr)
Current Use(s):	Multiple Family Residential
Land Use Bylaws	
OCP Bylaw No.: 1335	Eagle Residential; Open Space, Trails and Parks
DP Area:	Eagle Residential
Zoning Bylaw No.: 1340	Eagle Residential 1 (R1)
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	NA
Planning Agreement Area:	NA

History / Background Information

The subject property is located along Cougar Road in the original strata subdivision at Mt. Baldy Ski Resort. It is designated for "Eagle Residential" and "Open Space, Trails and Park" land use in the Mt. Baldy Official Community Plan (OCP) Bylaw No. 1335 and zoned "Eagle Residential 1" (R1) by the Mt. Baldy Ski Resort Zoning Bylaw No. 1340. The property is also in the Eagle Residential Development Permit Area (DPA); however, the

Page 1 of 3

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proposed development activity – a building addition less than 100m² – does not trigger the requirement for a Development Permit.

Proposal

The applicant is proposing to reconstruct the 8m² (88ft²) exit canopies on the west and east entrances of the twelve-unit strata building (see attachments). The east exit canopy would be entirely within the required 3.0m side yard (interior parcel line) setback. As such, the applicant is requesting to reduce the minimum interior parcel line setback from 3.0m to 0.0m, a variance of 3.0m, to reconstruct the canopy.

Implications

The existing building was built in the early 1970s, prior to there being any RDKB regulations with respect to setbacks at Mt. Baldy Ski Resort. Units 11 and 12, along with the recently removed east exit canopy, are within the required 3.0m setback area as a result (see attachments).

For development variance permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The applicant has submitted a proposal description as part of their application (see attachments). To summarize:

- The previous structure was removed as it was deteriorating and located partially on the neighbouring property to the east.
- The new canopy will be entirely on the property and will be non-combustible construction, as required by the BC Building Code.
- The removal of the previous canopy has created unsafe conditions at the exit area, as it is not sheltered from heavy snowfalls during the winter.

The west exit canopy meets the siting requirements of the Zoning Bylaw and does not require a variance.

Advisory Planning Commission (APC)

This application was considered by the Electoral Area 'E' APC at their June 1, 2020 meeting. The APC provided a recommendation of support.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors approves the Development Variance Permit application submitted by Landform Architecture Ltd, on behalf of Mount Baldy Estates Ltd, to allow for a decrease in the setback from the interior parcel line from 3.0m to 0.0m – a

Page 2 of 3

P:\PD\EA_'E'_Mt_Baldy\MB-100s-01400.700 Mt. Baldy Estates\2020-June-DVP\APC\2020-06-01_Mt. Baldy Estates
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variance of 3.0m, to construct an exit canopy on the property legally described as SL 3, DL 100s, SDYD, Strata Plan KAS1840, Mount Baldy, Electoral Area E/West Boundary.

Attachments

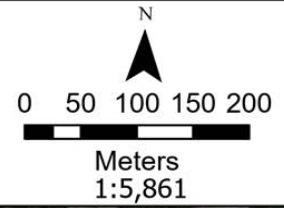
Site Location Map
Subject Property Map
Applicant Submission



2020-05-19

Site Location Map

Strata Lot 3, Plan KAS1840,
District Lot 100S,
Similkameen Div of Yale Land District



PD\MB\MB-100s-01400.700

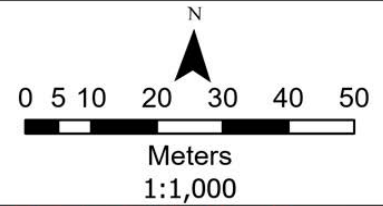
202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



2020-05-19

Subject Property Map

Strata Lot 3, Plan KAS1840,
District Lot 100S,
Similkameen Div of Yale Land District



PD\MB\MB-100s-01400.700

202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com

The space below is provided to describe the proposed development. Additional pages may be attached.

This application requests a variance to an interior side yard setback, so a safe exit path can be maintained for an existing 12-unit residential building.

The specific regulation to be varied is:

Mt. Baldy Zoning Bylaw No. 1340, 2010, 402.5.c):
Minimum setback from the *interior side parcel line*

The required setback of 3.0 m would be varied to 0.0 m in the vicinity of the exit door.

A new, non-combustible exit canopy will replace a historic lean-to structure. The former structure was demolished in 2019 out of courtesy to the neighbour to the east, as it was deteriorating, and portions crossed the property line. The proposed replacement will not cross the property line, and will be non-combustible as required by the BC Building Code for any structure within 1.2m of a property line. Therefore it will not cause a negative impact to the neighbouring property.

The removal of the former canopy has created an unsafe condition where the deep snowfalls typical to a ski hill can block the exit path. Because the original building was placed close to the property line on the east side, there is no space within the setback. The proposed variance would resolve this hardship, and allow for a much-needed improvement to the function, durability and safety of this historic building.

The proposed West Canopy, while similar in construction, does not require a variance as it does not cross the setback line.

COUGAR ROAD

WEST EXIT
CANOPY

EXISTING BUILDING
NO CHANGE

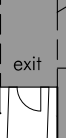
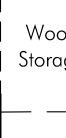
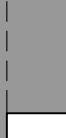
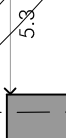
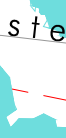
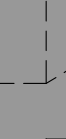
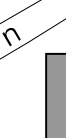
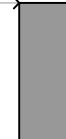
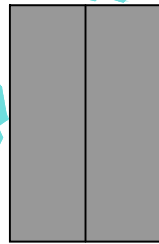
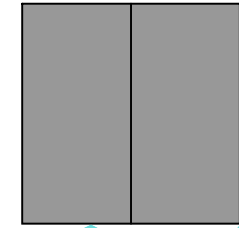
EAST EXIT
CANOPY

LOCATION OF
PROPOSED VARIANCE

PARKING LOT

A1 MT. BALDY ESTATES
1:250
May 12, 2020

Landform Architecture Ltd.
205-301 Main Street
Penticton, BC V2A 5B7
250-276-4106
info@landformadb.com
www.landformadb.com





3.0 m

3.0 m side yard setback
NO VARIANCE REQUIRED

PROPERTY LINE

Architectural floor plan of a proposed exit canopy. The plan shows a rectangular structure with a total width of 12'-0" and a total depth of 5'-0". The canopy is 1'-4" wide and 1'-0" deep. It features a curved entrance on the right side, a set of stairs labeled "down" in the center, and a door labeled "exit path" at the bottom. The plan also shows the "outline of new canopy above" and "new retaining walls to protect exit".

existing building, no change

UNIT 2

HALL

UNIT 1

Architectural elevation drawing of the exterior of a building, showing a sloped roof, corrugated metal siding, and stone rubble concrete. The drawing includes annotations for existing features like the exit door and stairs, and new features like the retaining wall and pad footings. A scale bar indicates 1'-0".

Annotations and details:

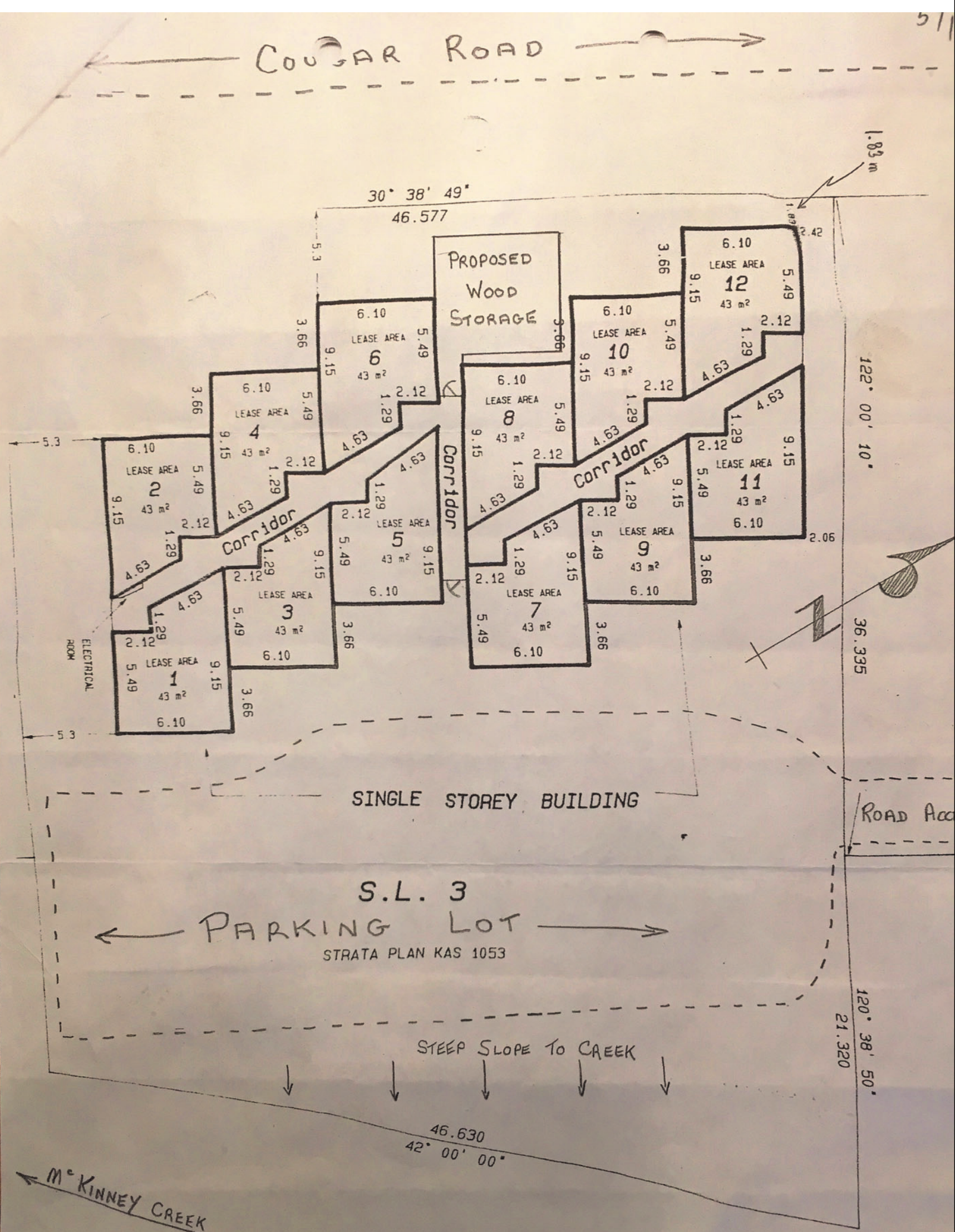
- corrugated roofing wraps down to retaining wall
- 7'-0"
- 1'-0"
- 12
- 3
- existing exit door
- corrugated metal siding
- stone rubble concrete
- existing exit stair rotated and re-used maintain hand rail / guard rail both sides
- concrete
- new pad footings (2)
- perforated pipe on top side of existing retaining wall, connect to rockpit downslope from building

New Non-combustible Canopy

$\frac{7}{8}$ " wave form corrugated roofing
 3" galvalume z-girts @ 4'-0" o.c.
 2" x 4" HSS welded frame, paint black

A3 **MT. BALDY ESTATES**
 $\frac{1}{4} = 1'$
 May 11, 2020

Landform Architecture Ltd.
205-301 Main Street
Penticton, BC V2A 5B7
250-276-4106
info@landformadb.com
www.landformadb.com



1911-66th Avenue,
Osoyoos, BC, V0H 1V6
June 18, 2020

Regional District Kootenay Boundary,
202-843 Rossland Avenue,
Trail, BC, V1R 4S8

Attention:- Maria Ciardullo, Senior Planning Secretary

RE: 130 Cougar Road, Mt. Baldy (Strata Lot 3, Plan KAS1840, DL 100s, SDYD Application
for a Development Variance Permit

Dear Ms. Ciardullo,

Thank you for your letter and attachments dated June 10, 2020 regarding the above item, We were aware of what was planned for the building and the reasons why it was proposed. We had previously discussed it with Chris Akehurst, a director of Mt. Baldy Estates Ltd., and had indicated to him that we were generally receptive to what was planned, with a couple of provisos.

We were led to believe that the doorway on the East side, which was always there and had previously accessed their "woodshed" and which had been used as an exit and an entry using our property to do so, was now to become an exit at the request of the local Midway fire commissioner. Even after the demolition of the woodshed, last winter the door was still being used as both an exit and an entrance with people using our property to that end.

Since we understand that this doorway is supposed to be an exit for emergency purposes only, we would like to see the following items incorporated to ensure that it used only for that purpose:-

- Install panic hardware on the inside of the door so as to allow people to exit, and do not install any latch or other door hardware on the outside. This would ensure that it would be used for exiting only, in a manner similar to that used in hotels.
- Put a retaining wall down the property line side of the structure similar to what is proposed for the exit on the West end of the building. This would ensure people exiting are directed down or along the side of the building, rather than on to our lot.

As an aside, on drawings A2 and A3, the swing of the doors should probably be reversed so as to direct people in the right direction and avoid them having to go around the door to leave the exit structure.

Yours truly,

Robert & Iris Stubbs

(Strata Lot 2, 110 Cougar Road), Tel. 250-495-4446

cc. Chris Akehurst



Regional District of
Kootenay Boundary

Staff Report

RE:	Development Permit – Gagnon and Doyle		
Date:	June 25, 2020	File #:	BW-4109s-07405.000
To:	Chair Langman and the Members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received an application from the purchasers of 7390 Porcupine Road, Joseph Gagnon and Sheri Anne Doyle, for an Alpine Environmentally Sensitive Development Permit in Electoral Area E/West Boundary-Big White (see attachments).

Property Information	
Owner(s):	Dawn and Keith Taplay
Agent:	Joseph Gagnon and Sheri Anne Doyle
Location:	7390 Porcupine Road
Electoral Area:	Electoral Area E/West Boundary-Big White
Legal Description(s):	Lot 10, DL 4109s, SDYD, Plan KAP23322
Area:	0.01ha (0.243acr)
Current Use(s):	Single Family Residential
Land Use Bylaws	
OCP Bylaw No.: 1125	Medium Density Residential
DP Area:	Commercial and Multi-Family DP1; Alpine Environmentally Sensitive DP2
Zoning Bylaw No.: 1166	Chalet Residential 1
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	NA
Planning Agreement Area:	NA

History / Background Information

The subject property is located along Porcupine Road at Big White Ski Resort. It is designated "Medium Density Residential" in the Official

Community Plan Bylaw No. 1125 (OCP) and zoned "Chalet Residential 1" (R1) in Zoning Bylaw No. 1166.

The property is also within the Commercial and Multiple Family and Alpine Environmentally Sensitive Development Permit Areas (DPAs). The proposal is exempt from a Multiple Family Development Permit because it only involves the construction of a covered staircase. However, it is still subject to the requirements of the Alpine Environmentally Sensitive DPA.

Proposal

The applicants are requesting a development permit to replace an existing wooden staircase with a new covered staircase (see attachments). An Alpine Environmentally Sensitive Development Permit is required as the proposal involves the disturbance of land.

Implications

A Landscape Reclamation Plan (see attachments) was submitted with the application, which includes additional detail on the project description and the remediation plan. To summarize, as the new staircase will utilize the same footprint very limited, if any, disturbance to existing vegetation is anticipated. No trees or shrubs will be removed. Any areas of disturbance will be re-seeded with "Eco-Green Rapid Cover Revegetation Mix", which is a seed mix that is recommended for rapid erosion control.

The proposal is consistent with the goals, objectives and policies contained within the OCP, the regulations of the Zoning Bylaw as well as the Alpine Environmentally Sensitive DPA Guidelines.

Advisory Planning Commission (APC)

The Big White APC did not have quorum at their June 2, 2020 meeting. Their recorded comments expressed no concerns with this application.

Planning and Development Comments

Planning staff received documentation of the change of ownership for this property from Dawn and Keith Taplay to Joseph Gagnon and Sheri Anne Doyle.

Due to the cancellation of the Electoral Area Services Committee meeting scheduled for June 11, this permit was issued on June 8, 2020 following the APC meeting and in consultation with the Director for Electoral Area 'E'/West Boundary.

Recommendation

That the staff report regarding the Development Permit application submitted by Joe Gagnon and Sheri Anne Doyle to construct a new covered staircase in the Alpine Environmentally Sensitive Landscape Reclamation

Development Permit Area on the parcel legally described as Lot 10, DL 4109s, SDYD, Plan KAP23322, Big White, Electoral Area E/West Boundary, be received.

Attachments

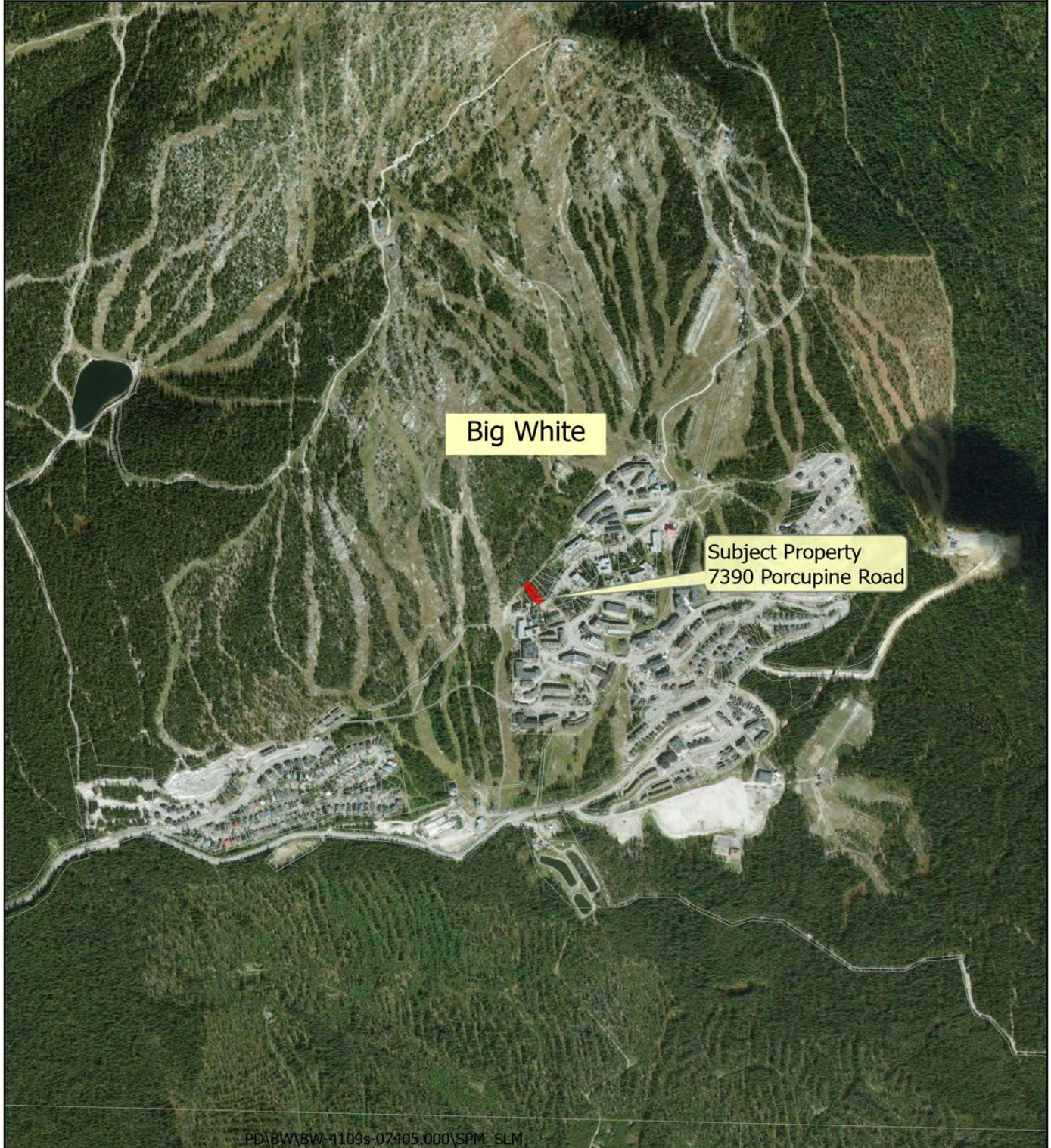
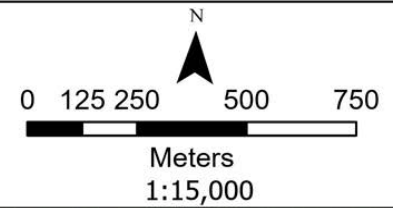
Site Location Map
Subject Property Map
Applicant Submission



2020-05-14

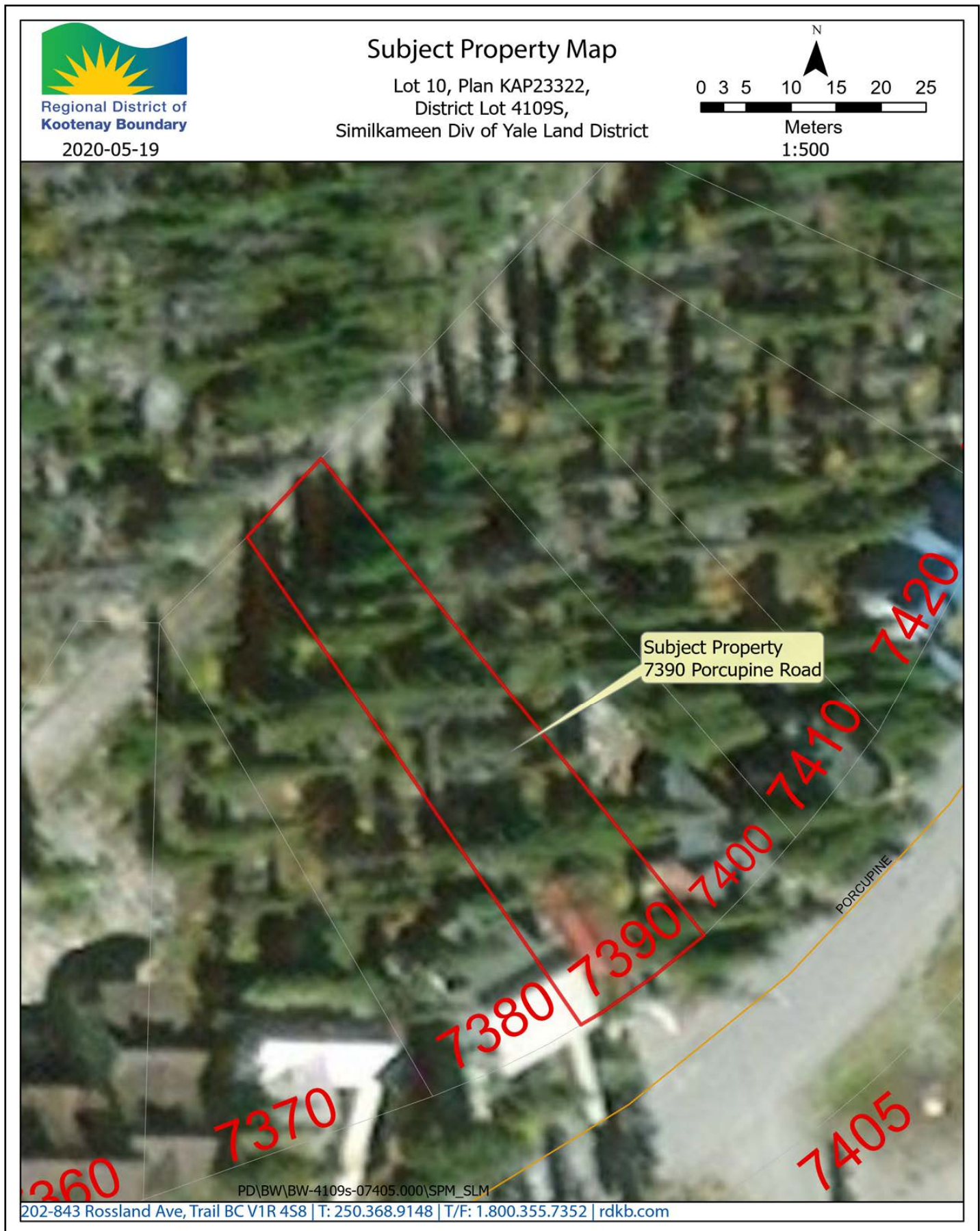
Site Location Map

Lot 10, Plan KAP23322,
District Lot 4109S,
Similkameen Div of Yale Land District



PD\BW\BW-4109s-07405.000\SPM_SLM

202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com



May 12, 2020

Landscape Reclamation Plan – Staircase Replace and Rebuild

7390 Porcupine Road, Big White, V1P 1P3

Lot 10 Plan KAP23322 District Lot 4109S Land District 54

PID: 006-481-744

Project Description

The staircase leading to the entrance of the cottage at 7390 Porcupine Road is in disrepair. The current staircase has been in place for many years (20+). Several stairs and some railings are in poor condition and pose a safety risk.

The project involves the rebuilding of a new staircase in the same location as the old. The new staircase will follow the same “footprint” as the old and be made of wood. The new staircase will have a small roof over the stairs to prevent snow buildup and to improve the safety of the staircase (for ice buildup etc.). The roof will be similar to those above the staircases of adjacent properties. All existing trees/shrubs will be retained.

Landscape Remediation Plan

As there has been a staircase in place for over twenty years, there is minimal vegetation under the staircase due to lack of sunlight. The vegetation consists of native grass. The slope upon which the staircase is build is mainly rock with several fir trees and small shrubs on either side of the stairs.

We will protect the natural landscape during the construction of a new staircase in the following ways:

1. Staircase will be constructed using footprint of existing staircase
2. No trees or shrubs will be removed – several fir trees on either side of staircase provide slope erosion control.
3. Debris will be removed immediately (and not piled on existing vegetation)
4. Staircase will rest on footings – with soil disruption only needed at footing locations. This reduces erosion.
5. Reseeding any area where landscape may have been disturbed with Eco-Green Rapid Cover Reveg Mix for rapid erosion control.

Time Sensitivity of Request

Outdoor construction at Big White has a short window. We were planning on beginning construction in June/July 2020 and ask that this request be approved as soon as possible to provide the opportunity to schedule a contractor to complete the project (subject to approval of building permit – to be submitted shortly).

Image #1 – Front View of Cottage showing existing staircase. Same footprint will be used for new staircase



Image #2 – Closer view of existing staircase depicting vegetation under stairs (minimal native grass among rock)



Image #3 – View of staircase from cottage depicting fir trees surrounding staircase which will not be disturbed, and which provide erosion control on slope



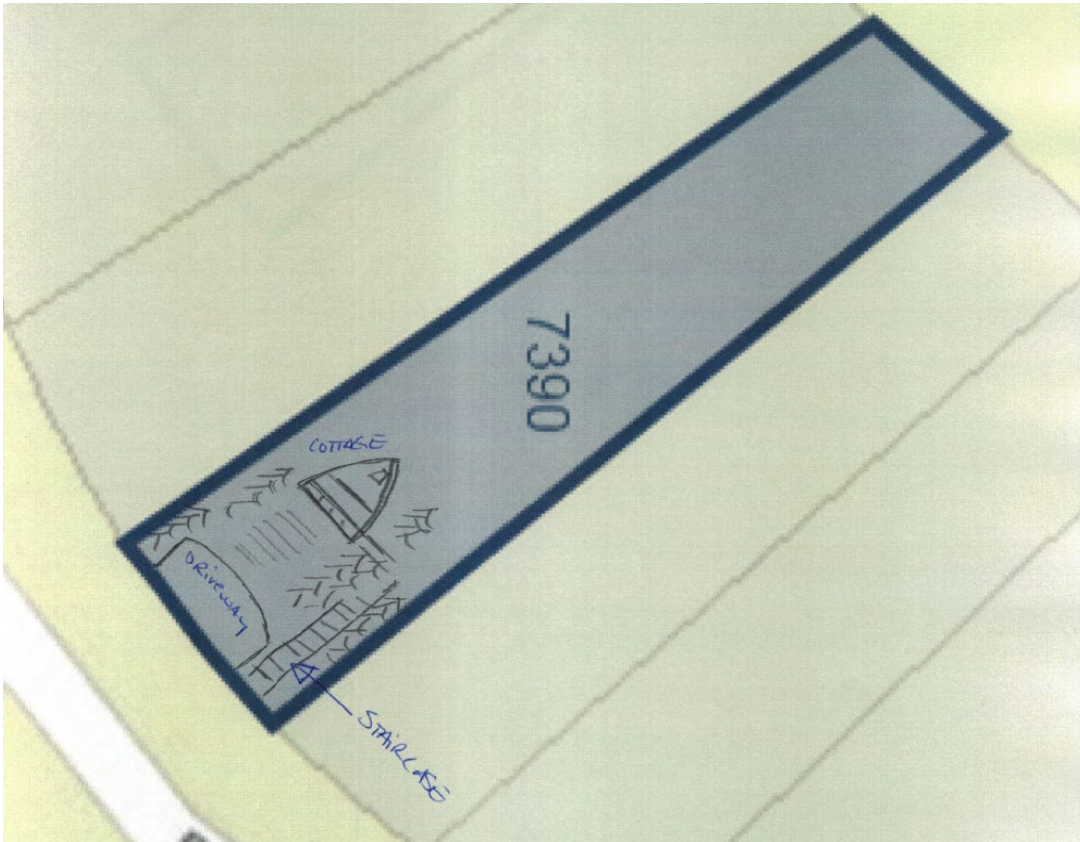
Image #4 – Property Map. Cottage/Staircase towards front of property onto Porcupine Road. There will be no disruption to vegetation on slope behind cottage.



Image #5 – Satellite View of Property showing forest on slope – the construction of a staircase will not disturb the trees on the slope behind the property.



Image #6 – Image showing staircase placement on property (refer also to Image #1 for stair placement as new stairs will replace old)





Regional District of
Kootenay Boundary

Staff Report

RE:	Forestry Referral – Atco Wood Products: Development Area 'O' (Linnie/Webster)		
Date:	June 2, 2020	File #:	A-16 ATCO
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received a referral from Atco Wood Products (ATCO) inviting us to provide comments on their proposal for 4 cut blocks (O15-O18) in Development Area 'O' (Linnie/Webster), which is located in Electoral Area A (see attachments).

Property Information	
Owner(s):	Crown Provincial
Agent:	Adam Rodgers RPF
Location:	East of Beaver Falls
Electoral Area:	Electoral Area A
Legal Description(s):	DL 1236; DL12700; DL 12463; Portions of Unsurveyed Crown Land
Area:	Unknown
Current Use(s):	Forest; Communications Tower
Land Use Bylaws	
OCP Bylaw No. 1410:	Rural Resource 1; Rural Resource 2
DP Area:	NA
Zoning Bylaw No. 1460:	Rural Resource 1; Rural Resource 2
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	NA
Planning Agreement Area:	NA

History / Background Information

The proposed development areas are located on Crown land south of Fruitvale, in the forested area east of McLeod Road, west of Nine Mile Road

and south of Wilson Road. The northernmost cut block areas are on the same District Lot as a CBC communication tower.

The lands adjacent to the proposed development areas appear to have been harvested previously. Based on our orthoimagery, it appears that the adjacent lands have been replanted.

The lands are designated for "Rural Resource 1" and "Rural Resource 2" land use in the Electoral Area A Official Community Plan (OCP) Bylaw No. 1410 and zoned "Rural Resource 1" (RUR1) and "Rural Resource 2" (RUR2) in Zoning Bylaw No. 1460.

Proposal

ATCO proposes to harvest a variety of trees from 4 cut blocks. Tree species include Western Larch, Western Red Cedar, Lodgepole Pine, Douglas-fir and Western Hemlock. The proposed cut blocks are all on Crown Land in Electoral Area A and will be accessed via proposed sections of Road Permit R05993 and in-block roads (see attachments).

Implications

The northernmost areas proposed for harvesting are adjacent to a CBC communications tower. Based on the plans provided, the development areas are anticipated to be approximately 100m from the access road to the tower and 200m from the tower itself at their closest extent. No use of the CBC access road is proposed.

Land Use and Zoning Considerations

The proposed development areas appear to be consistent with the land use objectives and policies contained within the OCP. Additionally, "resource use" is permitted in both the RUR1 and RUR2 zones. Resource use is defined as:

- the use of land providing for the conservation and management of natural resources, extraction of primary forest materials, or the extraction and grading of mineral resources, and including agriculture and grazing.

All forest operations on Crown land in BC are governed by the *Forest and Range Practices Act (FRPA)* and its regulations. ATCO ensures that measures are put in place to mitigate environment impacts for each proposed block. Proposed cut block "O18" appears to have a mapped watercourse that runs through it.

To ensure development activities aren't adversely affecting watercourses, ATCO has the following practices:

- Consultation with hydrologists and engineers;
- Assessments of the blocks are done during snow free times of the year;

- Create riparian reserve zones and machine free zones;
- Minimize road lengths;
- Create water bars and deactivate in-block roads post-harvest;
- Minimize skidding trails and stream crossings;
- Closely monitor the harvesting activities occurring near watercourses;
- Conduct post-harvest assessments to verify that everything went as planned; and,
- Conduct follow up work as needed.

Advisory Planning Commission (APC)

The Electoral Area A APC considered this referral at their June 2, 2020 meeting. The APC supported the proposed cut blocks as presented in this referral.

Recommendation

That the staff report regarding ATCO Wood Products proposed harvest of a variety of trees from 4 cut blocks on DL 1236, DL12700, DL 12463 and portions of unsurveyed Crown Land in Electoral Area A be received.

Attachments

Site Location Map
Subject Property Map
Applicant Submission

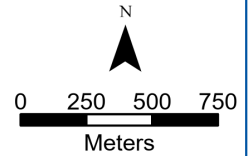


Regional District of
Kootenay Boundary

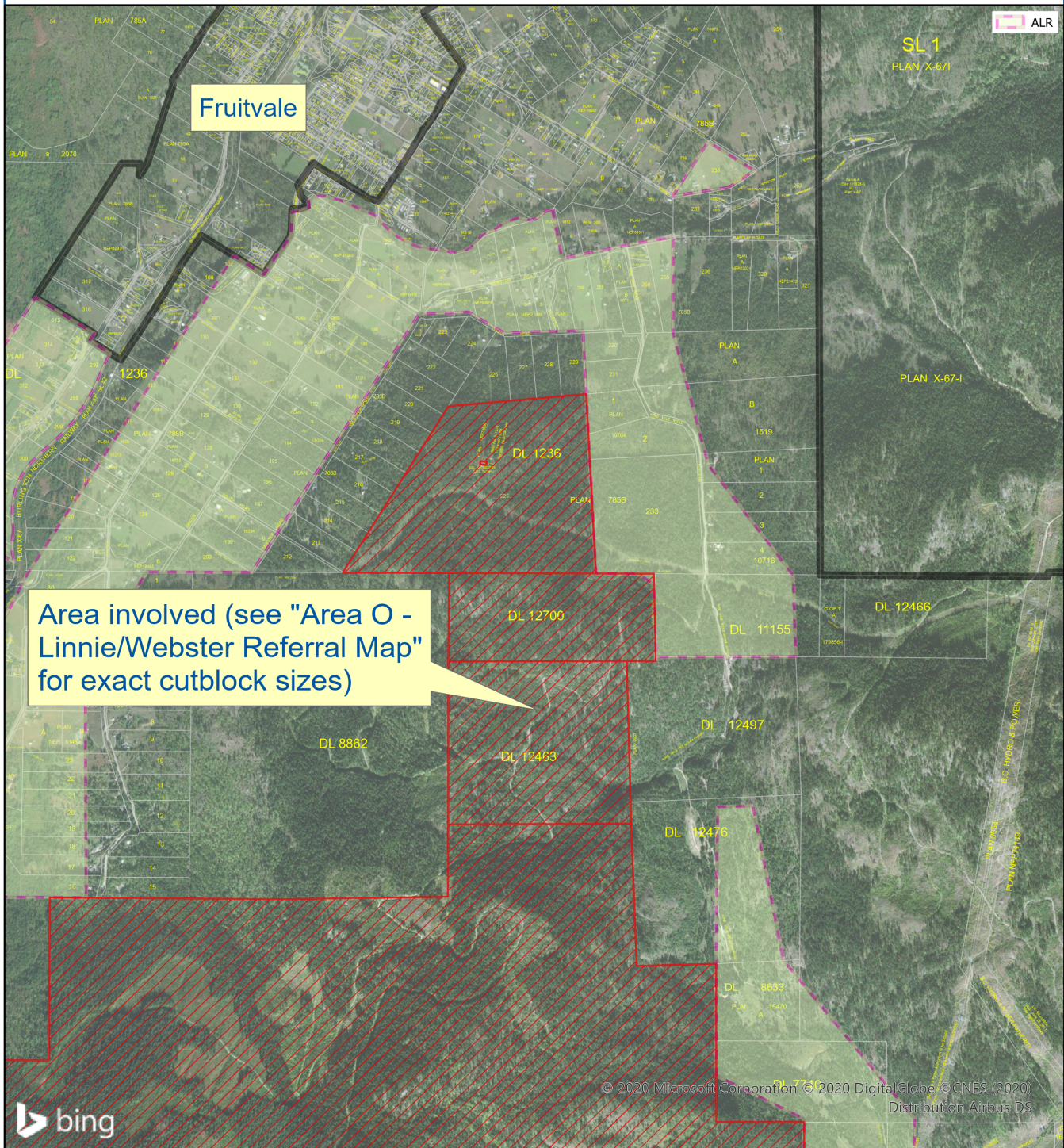
Date: 2020-05-15

Site Location Map

ATCO Referral



1:25,000



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Document Path: P:\PD\EA\A\A-8392-09351.000 0963072 BC Ltd\2020-06-Temporary Use Permit\Mapping\2020-05-14_SM_A-8392-09351.000.aprx



May 5, 2020

Regional District Kootenay Boundary
202-843 Rossland Avenue
Trail, BC
V1R 4S8

Attn: Planning Department

Re: Atco Wood Products, Development Area 'O' (Linnie / Webster) Proposed Development

This letter is to provide you with an opportunity to comment on proposed cut blocks O15 to O18 in geographic area letter 'O'. Attached is a map for your reference of approximate block locations.

The proposed cut blocks are located in the Linnie / Barclay / Webster geographic area. The proposed blocks will be accessed via proposed sections of Road Permit R05993 and in-block roads. The main focuses of the blocks are timber volume with some minor forest health.

Additional details of this development is available. Please contact me by my direct line or email (see below) to set up a confirmed time or to make alternate arrangements.

All comments must be received in writing by June 26, 2020.

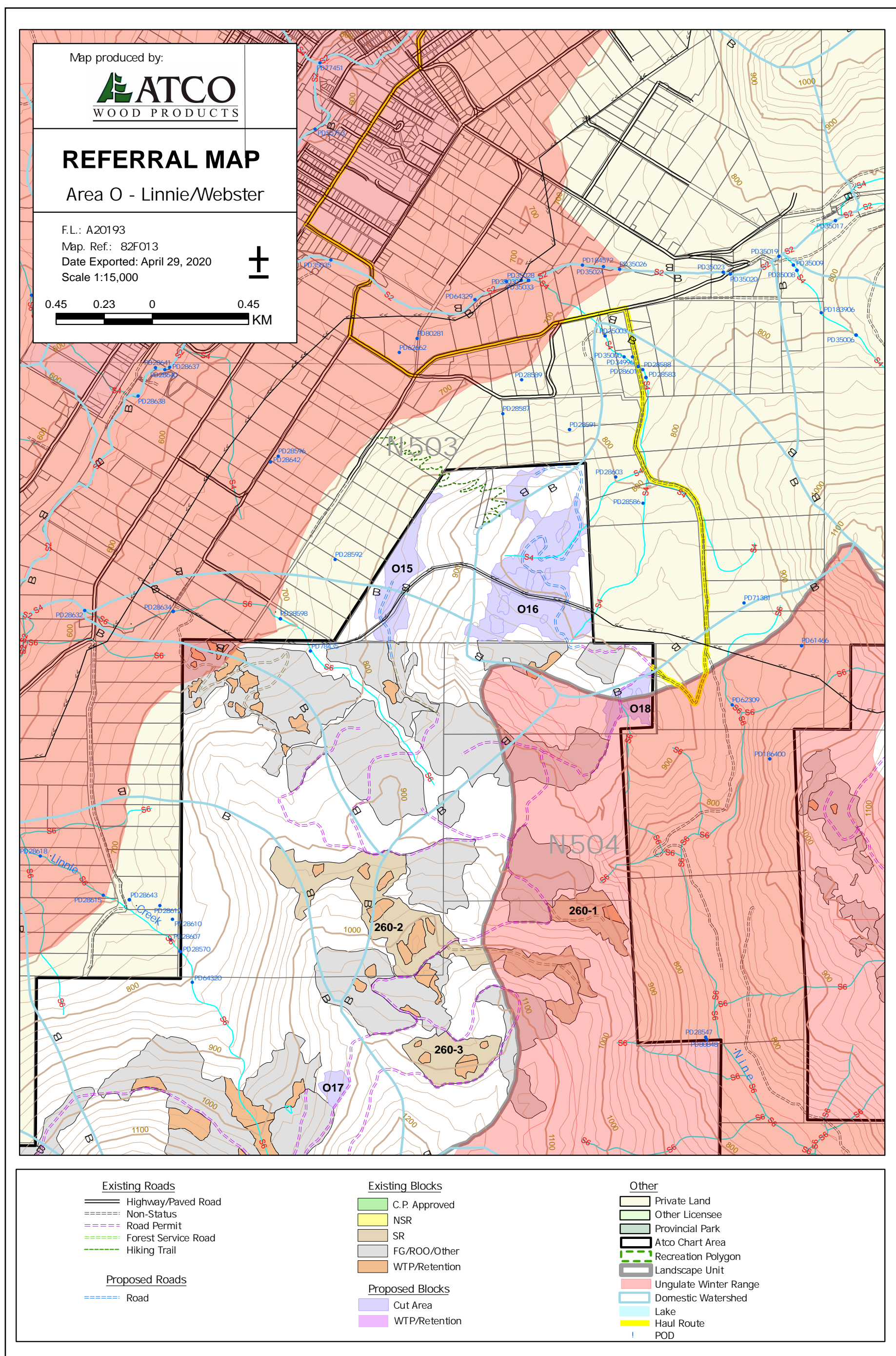
Yours truly,

A handwritten signature in blue ink, appearing to read "A. Rodgers", on a light blue lined background.

Adam Rodgers, RPF
Development Forester

AR/ar

P.O. Box 460 Fruitvale, BC V0G 1L0
Main Office: P 250 / 367.9441 F 250/367.6210
Direct Line : P 250 / 367.2526 F 250/367.6210
Email: adamr@atcowood.com





Regional District of
Kootenay Boundary

Staff Report

RE:	FrontCounter BC Referral – Crown Land Tenure		
Date:	June 25, 2020	File #:	B-17
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received a referral from FrontCounter BC for a Crown Land Tenure application from Steve Powell, on behalf of Outback Snowmobile Tours Inc., in Electoral Area E/West Boundary (see attachments).

Property Information	
Owner(s):	Crown Provincial
Agent:	Outback Snowmobile Tours Inc. c/o Steve Powell
Location:	Various areas surrounding Big White Ski Resort and Big White Ecological Reserve
Electoral Area:	Electoral Area E/West Boundary-Big White
Legal Description(s):	Unsurveyed Crown Land
Area:	±40ha
Current Use(s):	Vacant
Land Use Bylaws	
OCP Bylaw No. 1125:	Recreational Resource; Black Forest Future Growth Area
DP Area:	Alpine Environmentally Sensitive Landscape Reclamation (exempt)
Zoning Bylaw No. 1166:	Recreational Resource 1 (REC 1)
Other	
ALR:	NA
Waterfront / Floodplain:	NA
Service Area:	NA
Planning Agreement Area:	NA

History / Background Information

The land under application is an existing trail network within Electoral Area E/West Boundary and surrounding Big White Ski Resort. The trail network spans over approximately 40ha of Crown Provincial land. There appear to be

Page 1 of 4

P:\PD\General Files\B-17 Big White Ski - General Applications\2020-May Front Counter\APC\2020-06-02_FCBC_Board.docx

small trail segments that fall within the tenure area for Big White Ski Resort near Happy Valley (see attachments). The areas that are within Big White's Controlled Recreation Area (CRA) are designated for "Recreational Resource" and "Black Forest Future Growth Area" land uses in the Big White Ski Resort Official Community Plan Bylaw No. 1125 and zoned "Recreational Resource 1" (REC 1) in Big White Ski Resort Zoning Bylaw No. 1166.

Proposal

The applicant is requesting a Crown Land Tenure to utilize existing snowmobile trails for guided snowmobile tours (see attachments). They would prefer a long-term tenure but recognize that typically shorter tenures are issued for newly proposed uses of Crown land. As such, they are anticipating a tenure of approximately 5-10 years to start.

Implications

The trail segments near Happy Valley appear to be well away from any downhill skiing-related infrastructure. They are proposed to start at the Snowmobile Trailhead labelled on Big White's Nordic Trail Map (see attachments). The access trail to the trail network is designated for multi-purpose use. The applicant has noted that they are working with Big White Ski Resort, as the Resort already has tenure over the trail.

The trail network appears to extend beyond the Cross-Country Ski Area Boundary near the Big White sewage treatment area. Beyond that area only snowmobile traffic is anticipated.

All trail segments within the Big White Ski Resort Tenure Area are zoned Recreational Resource 1 (REC 1). The REC 1 zone lists "outdoor recreational uses" as a permitted use; guided snowmobile tours would fit within this use. As such, the proposal meets the requirements of the Zoning Bylaw.

Portions of the trail network as well as some of the base operations at Big White Ski Resort fall within the Alpine Environmentally Sensitive Landscape Reclamation Development Permit Area. The proposal does not require a development permit, as it does not involve the construction of any new buildings or structures. Should the applicant wish to construct buildings or structures in the future, a development permit may be required.

Advisory Planning Commission (APC)

This referral was considered by the Big White APC at their June 2, 2020 meeting. The APC did not have quorum at this meeting. However, the members present commented that they saw no issues with what is proposed in the referral.

This referral was also considered by the Electoral Area 'E' APC at their June 1, 2020 meeting. The APC provided a recommendation of non-support and included the following comments:

- a) The area applied for is not clear. The application lists the area as about 40 ha, but the area encircled by the trails map is over 16000 ha.
- b) There is no assessment by a biologist on potential impacts to wildlife. We have extreme concerns about the impacts on wildlife and ungulate winter ranges until a qualified biologist has assessed the potential impacts.
- c) There is no indication of the location of the outback cabin or of the sewage disposal for this cabin.
- d) There is no commitment to stay on the trails - the web site advertises the thrill of riding in wide open champagne powder which is inconsistent with the application.
- e) There is no indication of where machines and fuel will be stored or serviced.
- f) There is no indication of referrals to First Nations.
- g) We did not get the actual front counter application for this proposal as is customary with these types of referrals.
- h) The mapping is very confusing. All three of the maps provided are different.
- i) The use of side by side vehicles is not mentioned in the application but advertised on the web site.
- j) No referral has been made to Interfor regarding snowmobile impacts on young plantations on TFL 8.
- k) No use of these trails should be permitted until all of these points have been addressed.

Staff Comments

With regard to point c) in the Electoral Area E APC's comments, part of the discussion recorded in the APC's minutes was around the timing of the tours as shown on the Outback Snowmobile Tours website and the location of the cabin mentioned in the referral material.

Staff visited the website at <https://www.outbacksnowmobiletours.com/>. Their facilities appear to be primarily located in Big White in the vicinity of the Happy Valley Lodge, including bathrooms and their main business operations. In the section that describes the snowmobile tours, there is mention that their 'Twilight Hours' tour includes a ride to an outback cabin.

As the APC pointed out, this cabin is not indicated on the maps provided with the referral material.

Regarding f) of Electoral Area E APC's comments, the Duty to Consult Indigenous peoples on uses of Crown land lies with the Provincial and it is their responsibility to ensure that appropriate consultation has occurred.

Following up on g) of Electoral Area E APC's comments, the Front Counter application form has been included in the attachments for this Staff Report.

Regarding j) of Electoral Area E APC's comments, stakeholder engagement is a responsibility of the Provincial government. They are responsible for referring this information to the appropriate resource users, such as forestry companies, to help identify any conflicts in land uses.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors advise Front Counter BC that the referral regarding the Crown land tenure application from Outback Snowmobile Tours Inc., on unsurveyed Crown land in Big White and Electoral Area E/West Boundary is supported subject to:

- clarification from the applicant on the area involved for their proposed trail network, including potential areas where off-trail riding may occur;
- an assessment by a biologist on the potential impacts on wildlife of this trail network;
- clarification on the location of the outback cabin and sewage disposal for that cabin;
- an indication of where their machines and fuel will be stored and serviced, and the full range of machines that will be used on the trail network.

Attachments

Site Location Map

Provincial Referral Material

- a) Front Counter BC Crown Land Tenure Application
- b) Outback Snowmobile Tours Management Plan
- c) Google Map and Geomark
- d) Legal Description Schedule
- e) Applicant's 'My Collection' Map

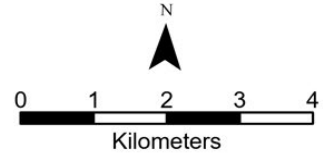


Regional District of
Kootenay Boundary

Date: 2020-05-14

Site Location Map

Outback Snowmobile Tours Inc.
Proposed Trail Network



1:90,000



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com

Document Path: P:\PD\General Files\B-17 Big White Ski - General Applications\2020-May Front Counter\Mapping

Referral Material



Crown Land Tenure Application - All Seasons Resort

Tracking Number: 100302463

Applicant Information

If approved, will the authorization be issued to an Individual or Company/Organization? Company/Organization
 What is your relationship to the company/organization? Owner

REFERRAL / PUBLIC COMMENT CONTACT INFORMATION

Company / Organization: OUTBACK SNOWMOBILE TOURS INC.
 Contact Name: Steve Powell
 Contact Address: [REDACTED]
 Contact Phone: [REDACTED]
 Contact Email: [REDACTED]

APPLICANT COMPANY / ORGANIZATION CONTACT INFORMATION

Please enter the contact information of the Individual/Organization who is acting on behalf of the applicant.

Name: OUTBACK SNOWMOBILE TOURS INC.
 Doing Business As:
 Phone: [REDACTED]
 Fax: [REDACTED]
 Email: [REDACTED]
 BC Incorporation Number: BC0804844
 Extra Provincial Inc. No:
 Society Number:
 GST Registration Number: [REDACTED]
 Contact Name: Steve Powell
 Mailing Address: [REDACTED]

CORRESPONDENCE E-MAIL ADDRESS

If you would like to receive correspondence at a different email address than shown above, please provide the correspondence email address here. If left blank, all correspondence will be sent to the above given email address.

Email: [REDACTED]
 Contact Name: Steve Powell

ELIGIBILITY

Question	Answer	Warning
Do all applicants and co-applicants meet the eligibility criteria for the appropriate category as listed below?	Yes	

Applicants and/or co-applicants who are Individuals must:

1. be 19 years of age or older and
2. must be Canadian citizens or permanent residents of Canada. (Except if you are applying for a Private Moorage)

Applicants and/or co-applicants who are Organizations must either:

1. be incorporated or registered in British Columbia (Corporations also include registered partnerships, cooperatives, and non-profit societies which are formed under the relevant Provincial statutes) or
2. First Nations who can apply through Band corporations or

Referral Material

Indian Band and Tribal Councils (Band or Tribal Councils require a Band Council Resolution).

TECHNICAL INFORMATION

Please provide us with the following general information about you and your application:

EXISTING TENURE DETAILS

Do you hold another Crown Land Tenure? No

ALL SEASONS RESORTS

The All Seasons Resorts Program serves to support the development of Alpine Ski and non-ski resorts on Crown land. For more detailed information on this program please see the operational policy and if you have further questions please contact FrontCounter BC.

Are you applying within an alpine ski resort? Yes

WHAT IS YOUR INTENDED USE OF CROWN LAND?

Use the "Add Purpose" button to select a proposed land use from the drop down menu.

If you wish to use Crown land for a short term, low impact activity you may not need to apply for tenure, you may be authorized under the Permissions policy or Private Moorage policy.

To determine if your use is permissible under the Land Act please refer to either the Land Use Policy - Permissions or Land Use Policy - Private Moorage located here.

Purpose	Tenure	Period
Adventure Tourism Snowmobiling	Licence of Occupation	Ten to thirty years

ACCESS TO CROWN LAND

Please describe how you plan to access your proposed crown land from the closest public road: We would access crown land from Big White Ski Resort

ADVENTURE TOURISM

Adventure Tourism applies to tourism operators who provide outdoor recreation activities for a fee or other form of compensation. For more information visit the website.

Specific Purpose: Snowmobiling
Period: Ten to thirty years
Tenure: Licence of Occupation

TOTAL APPLICATION AREA

Please give us some information on the size of the area you are applying for.

Specify Length: 16000 meters
Specify Width: 19000 meters

MECHANIZED / NON-MECHANIZED

Mechanized Activity means guided AT activities where mechanized or motorized transport of clients (e.g., helicopters, snowmobiles, All Terrain Vehicles, etc.) is an integral part of the recreation experience offered to the clients. Motorized use includes vessels that use power as an integral part of the guided operation. Vessels that use motorized propulsion only intermittently for control or safety purposes are considered non-mechanized (e.g. whitewater rafting). In addition, where a vessel simply provides a transport service to and from a kayak operation it will be considered a non-motorized activity.

Does your operation include motorized / mechanized activities? Yes

GUIDE OUTFITTER (COMMERCIAL HUNTING GUIDES)

Any improvements on Crown land for the purpose of guide outfitting must be approved and tenured under this program (e.g. lodges, cabins, camps).

Is your application related to a guide outfitting operation? No

Referral Material

ANGLING GUIDE

Any improvements on Crown land for the purpose of guided angling must be approved and tenured under this program (e.g. lodges, cabins, camps).

Is your application related to an Angling guide operation? No

ALL SEASONS RESORT

If your activities include more than one million dollars in Recreational Infrastructure and more than 100 Commercial Bed Units, your activities may fall under the All Seasons Resort Policy.

Are you applying to build an all season resort as defined under the All Seasons Resort Policy, including more than one million dollars in Recreational Infrastructure and more than 100 Commercial Bed Units? No

ADDITIONAL QUESTIONS

In many cases you might require other authorizations or permits in order to complete your project. In order to make that determination and point you in the right direction please answer the questions below. In addition, your application may be referred to other agencies for comments.

Is the Applicant or any Co-Applicant or their Spouse(s) an employee of the Provincial Government of British Columbia? Yes

Are you planning to cut timber on the Crown Land you are applying for? No

Are you planning to use an open fire to burn timber or other materials? No

Do you want to transport heavy equipment or materials on an existing forest road? No

Are you planning to work in or around water? No

Does your operation fall within a park area? No

LOCATION INFORMATION**LAND DETAILS****DRAWINGS**

Please provide information on the location and shape of your Crown land application area. You can use one or more of the tools provided.

☒ I will upload a PDF, JPG or other digital file(s)

MAP FILES

Your PDF, JPG or other digital file must show your application area in relation to nearby communities, highways, railways or other land marks.

Description	Filename	Purpose
Snowmobile Tours	IMG_0428-1.jpg	Adventure Tourism

☒ I will upload files created from a Geographic Information System (GIS)

Tracking Number: 100302463 | Version 1.1 | Submitted Date: Dec 4, 2019

Page 3 of 5

Referral Material

SPATIAL FILES

Do you have a spatial file from your GIS system? You can upload it here.

NOTE: If uploading a .shp, please ensure that it is a polygon that has been projected in BC Albers in NAD83 format.

Description	Filename	Purpose
Snowmobile Tours	Track.kml	Adventure Tourism
Snowmobile Tours	Track2.kml	Adventure Tourism
Snowmobile Tours	Track1.kml	Adventure Tourism

☒ I have geographic coordinate data (i.e. GPS)

GEOGRAPHIC COORDINATES

For Latitude and Longitude, you must enter a number between 47 to 60 and -140 to -113 respectively. Your Geographic Coordinates must be in decimal degree format. Example: 54.144869 (lat) and -124.120275 (long) If you are using Google Earth for finding the latitude and longitude values and you need to be sure the format is correct, then follow the steps:

1. Please click on "Tools" in the menu bar
2. Click "Options"
3. Select "Decimal Degree" under "Show Lat/Long" section

Latitude	Longitude	Description
49.3960000	-118.4660000	snowmobile tours
49.4480000	-119.0220000	Snowmobile Tours

ATTACHED DOCUMENTS

Document Type	Description	Filename
General Location Map	Snowmobile Tours	IMG_0428-1.jpg
Management Plan	Management Plan	Management Plan.pdf

PRIVACY DECLARATION

☒ Check here to indicate that you have read and agree to the privacy declaration stated above.

IMPORTANT NOTICES

- Once you click 'Next' the application will be locked down and you will NOT be able to edit it any more.

DECLARATION

☒ By submitting this application form, I, declare that the information contained on this form is complete and accurate.

APPLICATION AND ASSOCIATED FEES

Item	Amount	Taxes	Total	Outstanding Balance
Crown Land Tenure Application Fee	\$3,300.00	GST @ 5%: \$165.00	\$3,465.00	\$0.00

OFFICE

Office to submit application to: Kamloops

PROJECT INFORMATION

Is this application for an activity or project which requires more than one natural resource authorization from the Province of BC? No

Referral Material

OFFICE USE ONLY		
Office Kamloops	File Number	Project Number
	Disposition ID	Client Number

Referral Material

Outback Snowmobile Tours Management Plan

Outback Snowmobile Tours operates with Big White Ski Resort to offer guided snowmobile tours to local and international guests. We have a long relationship with Big White and employ over ten people. Our plan is to work with Big White Ski Resort, Kelowna Snowmobile Club, and Government agencies to provide a safe, scenic, and once in a lifetime opportunity for some backcountry experience to the “Super Natural British Columbia.”

A average tour is two hours long; staging from Happy Valley at Big White Ski Resort, we start by signing waivers and properly assessing clothing ie. helmets, jackets, boots etc. Then move onto a orientation on the operations of the snowmobile, its controls, and handling characteristics followed by a blind test of controls to ensure the client understands, then we leave on groomed trails with excellent photo opportunities of Big White Resort, the Monashees, and other great BC backcountry background. Finally, we make our way back to Big White, and fuel all machines from a 1000gal double wall enviro tank, and then back to Happy Valley to drop off clients.

All Outback Snowmobile Tours guides are required to have current first-aid carry level 1 first-aid kit, fuel spill kits, and carry communication devices incase of emergency, as well we have access to Big White’s first-aid as a partner with them for the safety of our clients and staff. We are available and active in search and rescue situations.

As we require no new infrastructure and plan to use existing roads, we will have minimum, if any, environmental impact as there is no soil disturbance and no vegetation removal required. We do not take tour on or close to either lakes or avalanche areas to maximize safety and minimize impact.

We will adhere to the Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia.

We will work with all interested parties including:

- Big White Ski Resort
 - Kelowna Snowmobile Club
 - Local and Government Authorities
- to obtain all authorizations, permits and approvals.

Our mission is to work with local groups, stakeholders, and the public, to enjoy and preserve the beautiful backcountry of British Columbia, all while introducing people from all over the world to see the best of what British Columbia has to offer.

Referral Material

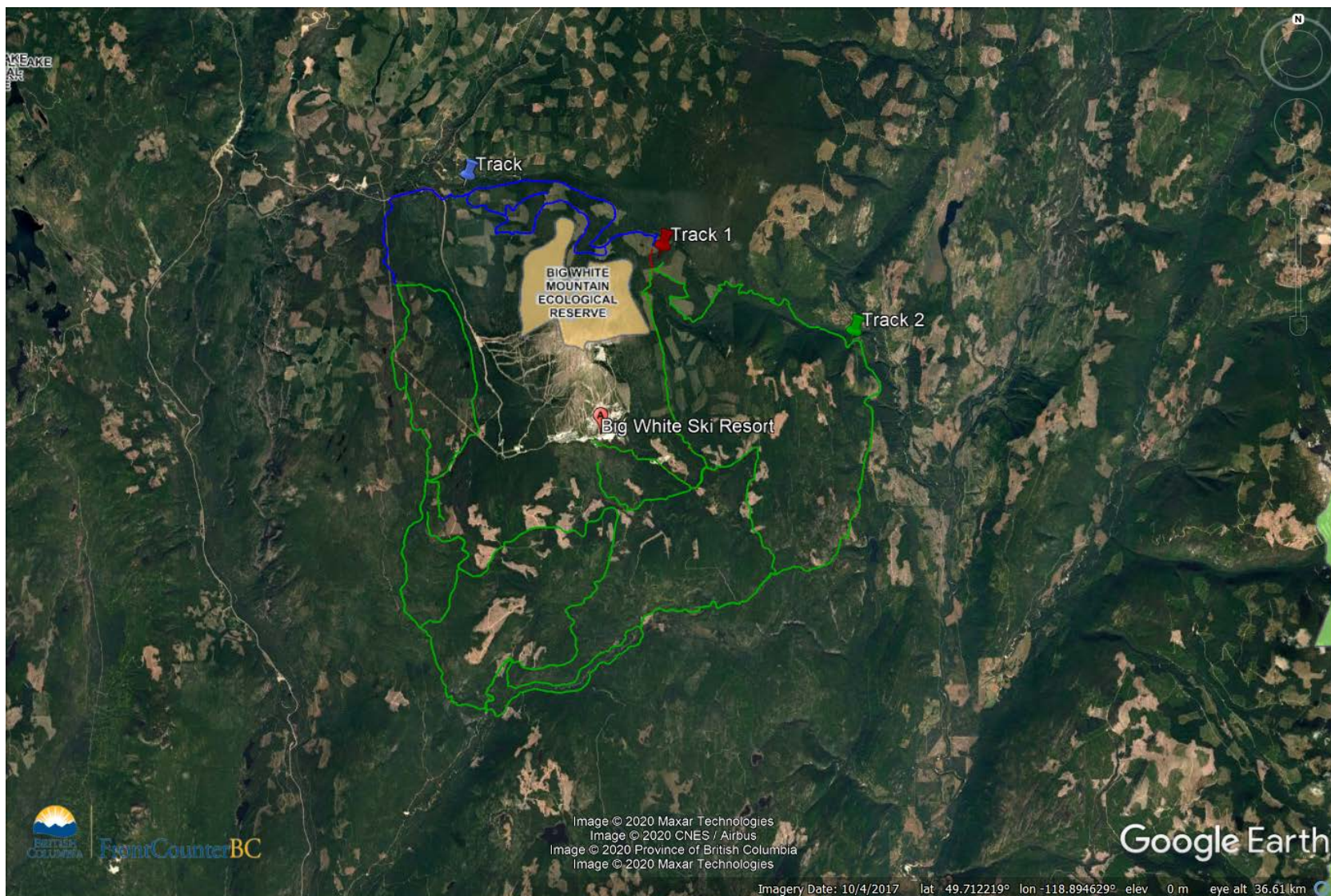
- For parking, our clients can ride the gondola from the village of Big White to Happy Valley. Alternatively, clients can also park in the Happy Valley Parking Lot, or ride the Big White Shuttle to Happy Valley.
- We expect to operate the same days as Big White Ski Resort. The typical season is the end of November to mid-April.
- Our projected client days for the next for 2021-2022 are 1800
Our projected client days for the next for 2022-2023 are 1800
Our projected client days for the next for 2023-2024 are 1800
Our projected client days for the next for 2024-2025 are 1800
Our projected client days for the next for 2025-2026 are 1800
Our projected client days over a five year period, starting 2021 is 9000.
- Washrooms are available for clients use at the Happy Valley Day Lodge or Happy Valley Adventure Park. There are also dumpsters in the Happy Valley Day Lodge for our use to dispose of all waste and anything that gets taken on tour, the guides will ensure to bring out to the dumpsters. We will also make a trip in the early summer after all the snow is melted to clean up anything that may have been left behind by tours and the public.
- We are not planning on any improvements.
- Outback Snowmobile Tours is aware that any operations or events cannot restrict any public access.
- Outback Snowmobile Tours works with Big White Ski Resort, who books our tours at their reservation booths and supplies us with a staging area in Happy Valley, as well as access to parking in Happy Valley for clients. We are a corporate member of the Kelowna Snowmobile Club which also has interest on the ground. Outback

Referral Material

Snowmobile Tours maintains the grooming of trails we use, and the Kelowna Snowmobile Club as we own our own groomer.

Google Map and Geomark

Geomark: [gm-38653A2911B6470EAF677EB741C63EEF](https://www.google.com/maps/@49.712219,-118.894629,15z)



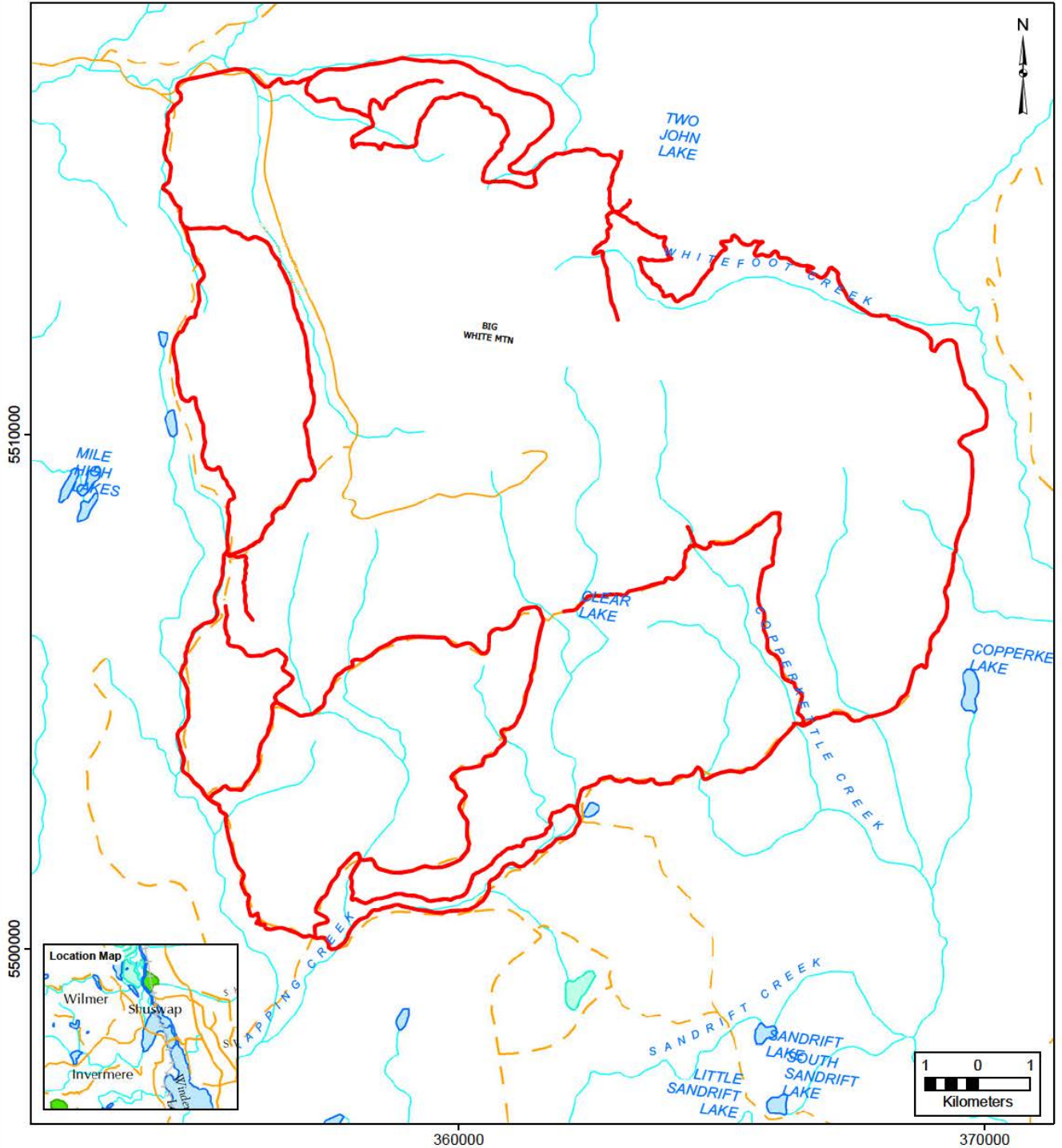
Referral Material

Licence

Legal Description Schedule

File No: 4406089
Disposition: 938565

All that unsurveyed Crown land situated in the vicinity of Big White Mountain, Similkameen Division of Yale District, more particularly shown outlined in red and containing 39.58 hectares, more or less

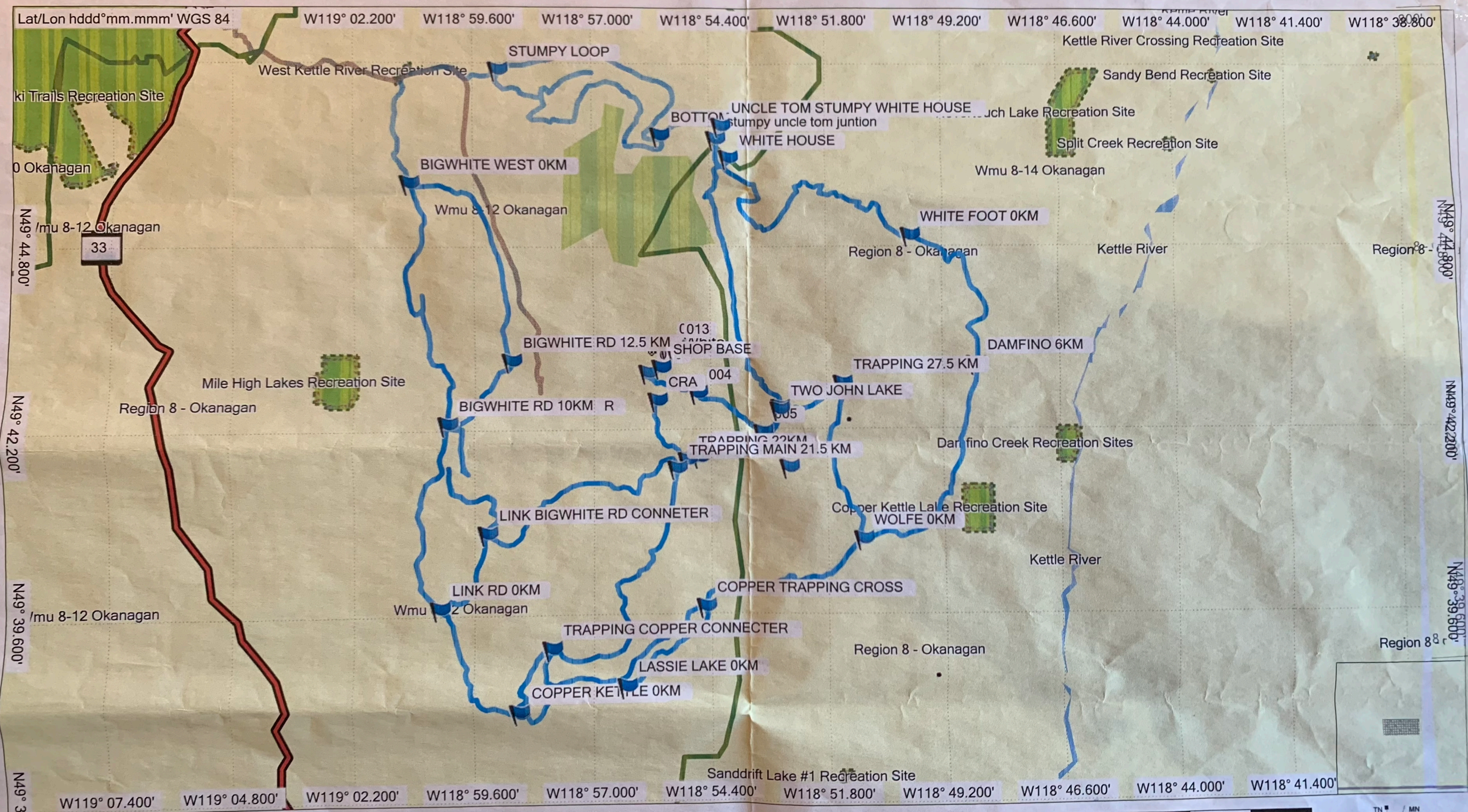
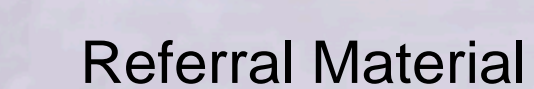


Scale 1:100,000

BCGS Mapsheet(s): 82E.065/66/75/76

 4406089

Page ____ of ____



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My Collection

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1/1/20



Regional District of
Kootenay Boundary

Staff Report

RE:	Regional District of Okanagan-Similkameen (RDOS) Referral – Bylaw Amendments		
Date:	June 25, 2020	File #:	O-2 Okanagan-Similkameen, Regional District (RDOS)
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have been invited to provide comments on the Regional District of Okanagan-Similkameen's (RDOS) proposed Official Community Plan (OCP) and Zoning Bylaw amendments for water and dock-related policy and regulation changes (see attachments).

Proposal

The RDOS is proposing to amend the OCPs and Zoning Bylaws throughout its jurisdiction to introduce a policy direction for water-based recreation, docks and other water-based development as well as a new "Okanagan Basin Lakes Zone."

The proposed amendments to the Electoral Area OCPs and Zoning Bylaws for Electoral Areas 'A', "C", "D", "E", "F", and "I" are described in the attached referral. To summarize, the amendments would:

- provide opportunities for water-based recreation and provide guidance and regulations on docks and related water-based development;
- introduce a new "Okanagan Basin Lakes Zone", in which the principal permitted use includes "water-based recreation" (defined as the "use of water for outdoor recreation activities such as fishing, water skiing, boating, swimming, and diving");
- permit accessory uses including a dock, boatlift, swimming platform, and moorage buoy; and,
- provide a new policy and regulatory framework so that more intensive water uses, such as group moorage, marinas and commercial docks are subject to a site-specific rezoning process.

Implications

The proposed amendments provide a framework that lays out the RDOS's expectations for the use of properties adjacent to portions of the Okanagan, Kalamalka, Wood, Skaha, Vaseux and Osoyoos Lakes within the RDOS's jurisdiction. The proposed amendments are aligned with the Provincial

Page 1 of 2

P:\PD\General Files\O-2 Okanagan-Similkameen, Regional District (RDOS)\2020\2020-June-Referral\APC\2020-06-01_RDOS_Board.docx

General Permission for the Use of Crown Land for Private Moorage. Further, by implementing a water zone that restricts more intensive water uses, the RDOS Board of Directors is given more opportunities to consider more impactful water-based development on a case-by-case basis through the zoning amendment process.

Advisory Planning Commission (APC)

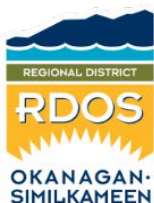
This referral was considered by the Electoral Area 'E' APC at their June 1, 2020 meeting. The APC provided a recommendation of support.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors advise the Regional District of Okanagan-Similkameen that the Regional District of Kootenay Boundary supports the amendments to the Official Community Plans and Zoning Bylaws for RDOS's Electoral Areas 'A', 'C', 'D', 'E', 'F' and 'I' as outlined in the Bylaw Referral.

Attachments

RDOS Referral



Bylaw Referral

Regional District of Okanagan-Similkameen

101 Martin Street, Penticton, BC, V2A-5J9

Telephone: 250-492-0237 / Email: planning@rdos.bc.ca

OFFICE USE ONLY

Date: May 4, 2020

Bylaw: 2862

File: X2019.09-ZONE

You are requested to comment on the attached bylaws for potential effect on your agency's interests. We would appreciate your response WITHIN 30 DAYS. If no response is received within that time, it will be assumed that your agency's interests are unaffected.

Please email your reply to planning@rdos.bc.ca by June 3, 2020

PURPOSE OF THE BYLAWS:

- The Regional District is proposing a set of amendments to the Electoral Area Official Community Plan and Zoning Bylaws for Electoral Areas 'A', "C", "D", "E", "F", and "I". The intent is to provide opportunities for water-based recreation, and to provide guidance and regulations on docks and related water-based development.
- The proposed policies and zoning regulations would be applied to the aspects of Okanagan, Kalamalka, Wood, Skaha, Vaseux and Osoyoos Lakes within the RDOS's jurisdiction.
- The proposed Zoning Bylaw changes would introduce a new "Okanagan Basin Lakes Zone", in which the principal permitted use includes "water-based recreation" (defined as the "use of water for outdoor recreation activities such as fishing, water skiing, boating, swimming, and diving").
- Permitted accessory uses include a dock, boatlift, swimming platform, and moorage buoy. The proposed zoning regulations for permitted docks aligns with the Provincial General Permission for the Use of Crown Land for Private Moorage.
- The proposed changes also provide a new policy and regulatory framework so that more intensive water uses, such as group moorage, marinas and commercial docks would need to be reviewed on a case-by-case basis by the RDOS Board through a site specific rezoning process.
- In the case of Electoral Area "F" Zoning Bylaw, the proposed Zoning Bylaw would replace the existing regulations related to docks and marinas.
- The Parks and Recreation Zone within the affect bylaws currently permit "public moorage and marina". In the amendment bylaw, this permitted use would be limited to "public moorage", thereby ensuring that any marina proposals are subject to the Board's review through a site-specific rezoning process

OTHER INFORMATION:

Additional information can be found at the following location:

<https://www.rdos.bc.ca/development-services/planning/strategic-projects/dock-regulation-review/>

Please fill out the Response Summary on the back of this form. 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 bylaw.

Cory Labrecque

Cory Labrecque
Planner II, RDOS

Agency Referral List

Refer to "Agency Referral List"



Regional District of
Kootenay Boundary

Staff Report

RE:	Interfor Referral – Tree Farm License 8 – Management Plan #11 Information Package		
Date:	June 25, 2020	File #:	I-1-E
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We have received a referral from Intefor giving us the opportunity to provide comments on their Information Package for Tree Farm License 8 – Management Plan #11 in Electoral Area E/West Boundary (see attachments).

Property Information	
Owner(s):	Crown
Agent:	Chris Shelley RPF
Location:	Okanagan Highlands and Midway Range/Boundary Creek
Electoral Area:	Electoral Area E/West Boundary-Big White
Legal Description(s):	Unsurveyed Crown Land
Area:	77,189 (total area)
Current Use(s):	Forest
Land Use Bylaws	
OCP Bylaw No.:	NA
DP Area:	NA
Zoning Bylaw No.:	NA
Other	
ALR:	NA
Waterfront / Floodplain:	Various
Service Area:	NA
Planning Agreement Area:	NA

History/Background Information

Tree Farm License 8 (TFL8) was approved in 2009 with an annual allowable cut (AAC) of 186,000 m³. TFLs are typically reviewed every ten years in order to capture changes in data, practices, policy or legislation influencing

forest management in the TFL area. As part of this exercise, the AAC is also reviewed to determine whether it is still appropriate.

Information on the review of TFL8 was previously referred to us on two separate occasions by Interfor in the last ten years:

1. A 'Supply Analysis' for TFL8 considered by the Board on March 27, 2018; and,
2. A Management Plan for TFL8 considered by the Board on January 31, 2019.

Both the 'Supply Analysis' and Management Plan are required to determine whether the existing AAC in TFL8 is still appropriate. The AAC determination was postponed in September 2018 by the Province's Chief Forester to incorporate First Nations interests into the timber supply analysis.

The revised Management Plan Information Package currently under review (see attachments) will form part of the Management Plan that was previously considered. It reflects updates made in response to the comments received from public review of the Plan as well as the efforts undertaken by Interfor to work with First Nations since 2018.

TFL8 spans over two areas in the West Boundary; one in the Okanagan Highlands west of Beaverdell that extends north to Big White Ski Resort and the other north of Greenwood and Midway (see attachments). TFL consists of approximately 77,189ha of Crown Land. The forests are predominantly mixtures of Douglas-fir, larch, lodgepole pine and ponderosa pine types at lower and mid elevations, and lodgepole pine and spruce/balsam types at the higher elevations.

Purpose

The referral we have received provides us an opportunity to review and comment on Interfor's updates to the Management Plan since its last review by the RDKB in 2019.

Implications

Previous Referral Comments

The Timber Supply Analysis was forwarded to us in February of 2018. It was considered by the Electoral Area E/West Boundary APC at their March 5, 2018 meeting. The APC had several concerns with the Analysis, as presented in the APC minutes. These concerns included, but are not limited to:

- Inconsistencies with forest area figures.
- Wildlife range and habitat protection.
- Pine Beetle.
- Riparian areas, drainage and waterways protection.
- Highway rights of way, recreation sites and trail systems.

- Tree retention.
- The absence of discussion regarding climate change.

The APC did not support the Timber Supply Analysis due to the concerns raised.

Ten months later, the Management Plan was considered by the APC at their January 7, 2019 meeting and the following comments were provided:

- There was disappointment that the projected AAC isn't taking forest resiliency and sustainability into consideration;
- Members recalled that the 300 year plan didn't mention climate change.
- There was discussion about the extraordinarily large cut block sizes we're seeing, in spite of the Kootenay Boundary Higher Level Plan recommending a maximum size of 40 ha.
- One at Boundary Creek was about 450 ha.
- One member drove past Chenier today and said you can now see all the way to Baldy after recent logging.
- Members questioned why 100% of logging was now clear cut.
- In the past, there was more selective logging.

The APC provided the following recommendation in the Management Plan's consideration:

"It was moved by Frank and seconded by Jamie and resolved that the APC recommend to the Regional District that the Management Plan not be supported because we don't see any provision for climate change, insects, disease and increased fire events, and FURTHER, that we encourage the RDKB to advocate to government to improve plan/ operating standards and enforcement to address these issues in Forestry in general."

Changes to the Management Plan

The new Management Plan Information Package appears to contain more analysis and material than the two previous referrals. With respect to previous concerns raised by the APC, the Information Package contains additional detail on:

- Wildlife Habitat Areas, Riparian Management Areas, Environmentally Sensitive Areas, Rights-of-way, Recreation Sites and Reserves, the Trans-Canada Trail and Old Growth Management Areas (OGMAs) (Part 8);
- Mountain Pine Beetle Infestation (Part 3);
- Wildlife Tree Retention (Part 8); and,
- Climate Change Considerations (Part 12).

Advisory Planning Commission (APC)

This referral was considered by the Electoral Area 'E' APC at their June 1, 2020 meeting. The APC did not support this referral and provided the following comments:

- a) The company should commit to keep the cutblock size to 40 ha or less as suggested by the Chief Forester for the TSA
- b) The company should attempt to manage to a net no new roads policy.
- c) The company should commit to utilize all logs to the provincial utilization standards (i.e. 10 cm tops). Current company log specifications exceed 10 cm. Timber is being cut and not properly utilized.
- d) The plan makes no appropriate allowance for expected droughts. This could be accommodated with more partial cutting on south facing slopes, smaller cutblocks and less optimistic yield tables for future volumes.
- e) There is no indication of the use of the precautionary principle in the plan. For example, 2 year regen delay for plantations and 5 years for naturals is optimistic. There are too many roads, blocks are too large, yield tables are overly optimistic and climate change is not well addressed.
- f) The silviculture section of the plan speaks about planting and should also discuss other topics including partial cutting, site preparation, brushing and weeding, thinning, and pruning.
- g) Stumping should be limited as it is causing the following problems – limiting access by cattle and wildlife, reducing grass growth, moisture retention, impacting drainage, negative visual impact, and increase weed infestations. Stumps should be turned upside down in the hole to reduce trafficability problems, speed up the stump decomposition and get more soil back in the hole.
- h) The plan has no acknowledgement of other resource users.

This referral was also considered by the Big White APC at their June 2, 2020 meeting. The APC did not have quorum, however they provided the following comments for consideration:

- Climate Change inclusions in document only include species selection for planting and not how drought might affect growing time or potential.
- Cut blocks should be as small as possible.
- Trans Canada Trail buffer should be 12 Meters on both sides

- Should the province give permission for the trail to be used as a road at any time that the Trail be restored to original condition when Interfor is finished using it.
- When the trail is restored there should be an inspection by local Trail coordinators, Trails to the Boundary Society.

Recommendation

That the Regional District of Kootenay Boundary Board of Directors direct staff to forward this staff report *Interfor Referral – Tree Farm License 8 – Management Plan #11 Information Package*, dated June 25, 2020, which includes the recommendations of the Electoral Area E/West Boundary and Big White Advisory Planning Commissions to Interfor Corporation for consideration.

Attachments

Tree Farm Licence 8 – Management Plan #11 Information Package

Tree Farm Licence 8 – Management Plan #11

INFORMATION PACKAGE

Version 2.0

March 26, 2020

Project 1320-2

Prepared for:

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Interfor Corporation
Grand Forks Division
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Acknowledgements

We would like to acknowledge and thank the following people who made significant contributions that were instrumental in completion of this project:

- Debbie Bhattacharya, RPF (Interfor)
- Chris Shelley, RPF (Interfor)
- Randy Waterous, RFT (Interfor)
- Jeff Stone, RPF, RPBio (FLNRO)
- Jim Brown, RPF (FLNRO)
- Mike Clarkson, RPF (FLNRO)
- Ian Wiles, RPF (FLNRO)
- Dean Christianson, RPF (FLNRO)
- Gordon Nienaber, RPF (FLNRO)
- James Pepper, RPBio (PIB)

Forsite staff who contributed to this project include:

- Robert Kennett, RPF (Strategic Planning Forester)

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List of Acronyms

AAC	Allowable Annual Cut
AOS	Aerial Overview Survey
AU	Analysis Unit
BEC	Biogeoclimatic Ecosystem Classification
ESSF	Engelmann Spruce Sub-alpine Fir
FAIB	Forest Analysis and Inventory Branch
FLNRO	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FPPR	Forest Planning and Practices Regulation
GAR	Government Actions Regulation
GIS	Geographic Information System
ICH	Interior Cedar Hemlock
IDF	Interior Douglas-Fir
IP	Information Package
KBHLPO	Kootenay Boundary Higher Level Plan Order
LU	Landscape Unit
MAI	Mean Annual Increment
MP	Management Plan
MS	Montane Spruce
NDT	Natural Disturbance Type
NRL	Non-Recoverable Losses
OAF	Operational Adjustment Factor
OGMA	Old Growth Management Area
PFLB	Productive Forest Land Base
PIB	Penticton Indian Band
SSS	Small Scale Salvage
TFL	Tree Farm Licence
THLB	Timber Harvesting Land Base
TIPSY	Table Interpolation of Stand Yields
TSR	Timber Supply Review
VDYP	Variable Density Yield Projection
VQO	Visual Quality Objective
VRI	Vegetation Resource Inventory
WHA	Wildlife Habitat Area
WTP	Wildlife Tree Patch
WTR	Wildlife Tree Retention

Document Revision History

Version	Date	Description
1.0	January 25, 2018	Initial Information Package
1.1	February 9, 2018	Revisions to address initial review by FLNRO prior to public review
1.2	March 9, 2018	Exclusion of additional hydro line right-of-way in land base summary, inclusion of managed stand site indices and growth and yield information (yield tables, existing volume check, and minimum harvest ages).
1.3	June 29, 2018	Updates to areas to reflect new resultant (watersheds and alternate stream buffers added). Minor text edits to reflect comments received.
1.4	September 21, 2018	Text updates to reflect changes made as result of completed analysis. <ul style="list-style-type: none"> • Landscape level biodiversity: Added reference to connectivity corridors and targets for mature plus old seral within connectivity corridors • Old seral sensitivity analysis: Provided additional detail on approach used • Enhanced riparian management sensitivity analysis added • Watershed health section added • Equivalent clearcut area sensitivity analysis added
2.0	March, 2020	Significant update to incorporate input from Penticton Indian Band, updates for additional depletions, roads, silviculture, etc.

1 Introduction

This Information Package has been prepared by Forsite Consultants Ltd. on behalf of Interfor Corporation, Grand Forks Division. The Information Package (IP) describes the information and assumptions used to prepare the timber supply analysis that will become part of Management Plan #11 for Tree Farm Licence 8 (TFL 8).

A review of this type is normally completed at least once every ten years in order to capture changes in data, practices, policy or legislation influencing forest management in the TFL. The previous analysis for TFL 8 was completed in 2007 with an Annual Allowable Cut (AAC) determination on April 1, 2009. An initial Information Package for MP #11 was completed and underwent public review beginning in February 2018 and was accepted by the Ministry of Forests, Lands, Natural Resource Operations & Rural Development (FLNRO) in late April, 2018.

In late September 2018 the Chief Forester approved a two-year postponement of the AAC determination for TFL 8 as a result of comments received from First Nations and a desire by Interfor to incorporate First Nations interests into the timber supply analysis. Accordingly, this Information Package includes revisions that reflect Interfor's work with First Nations since 2018.

The timber supply analysis will model timber harvest over a 300 year planning horizon. It will use forest inventory information that has been updated to reflect previous harvesting and reforestation activities, Interfor's current understanding of the land base where harvesting is likely to occur, and projected growth rates as the forest ages. The modelling will also consider non-timber objectives for the TFL, including indigenous food, social and ceremonial values, wildlife, biodiversity, visual quality, and requirements of the Kootenay Boundary Higher Level Plan Order (KBHLPO). The Base Case scenario will represent current management practices, legal requirements, and additional requirements from Interfor's environmental certification program that influence timber supply. Additional scenarios will examine sensitivity to factors where there is uncertainty, such as growth and yield estimates.

Once completed the timber supply analysis will provide information to assist the Chief Forester of BC in determining the Allowable Annual Cut (AAC) for TFL 8 which is expected to be in place by April 1, 2021.

1.1 TFL 8 LOCATION

TFL 8 consists of approximately 77,189 hectares of crown land and has two distinct units. The south block is located north of Greenwood in the Boundary Creek area, and the north block is located in the Trapping Creek and Carmi Creek drainages north of Beaverdell (Figure 1). The forests are predominately mixtures of Douglas-fir, larch, lodgepole pine and ponderosa pine types at lower and mid elevations, and lodgepole pine and spruce/balsam types at the higher elevations. Biogeoclimatic zones include the Montane Spruce, Interior Douglas-fir, Interior Cedar Hemlock, and Engelmann Spruce Subalpine Fir zones.

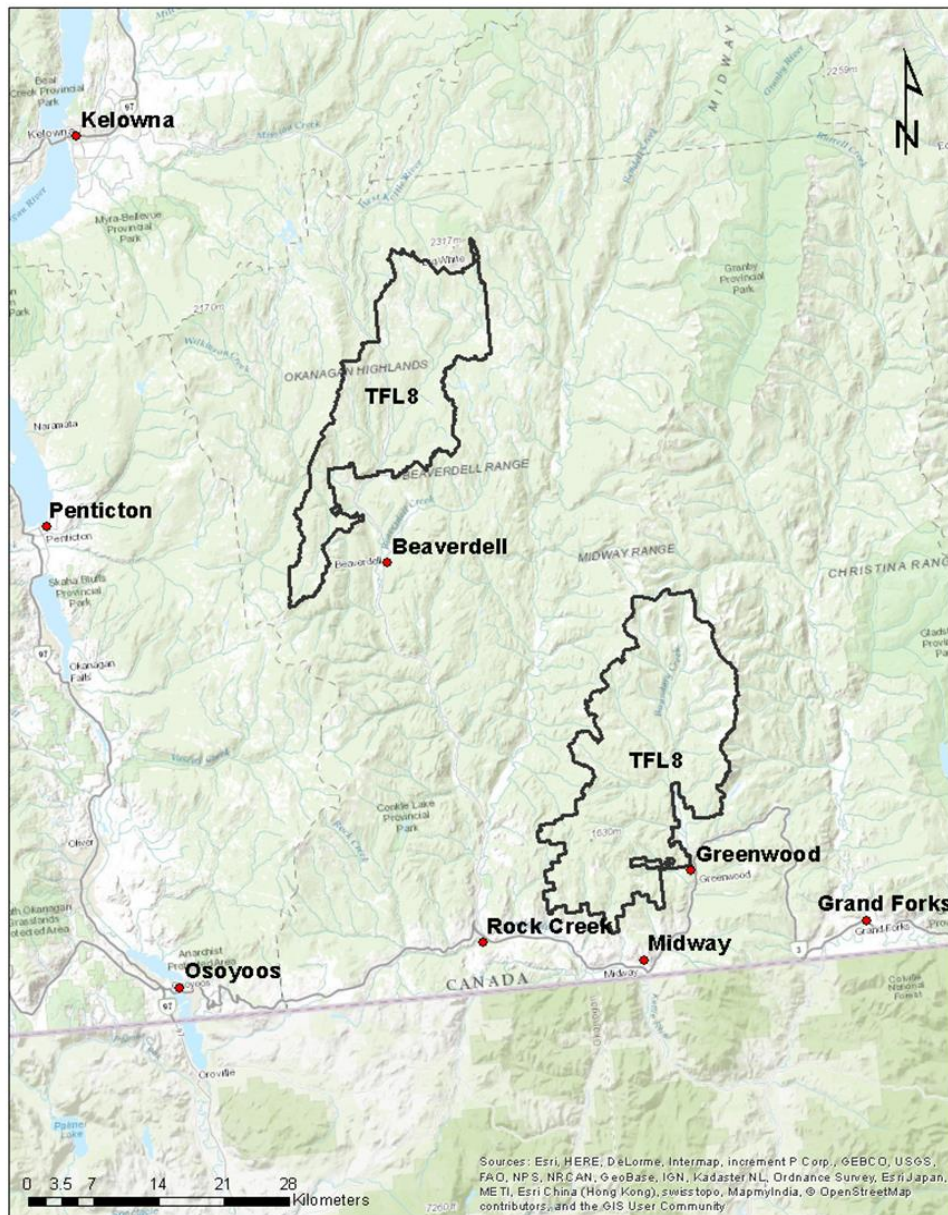


Figure 1 TFL 8 overview map

2 Process

This information package has been prepared to meet the requirements outlined in the draft “*Provincial Guide for the Submission of Timber Supply Analysis, Information Packages for Tree Farm Licences, Version 5, June 2013*” document. Current forest and non-forest inventories, legal requirements, and non-legal management direction were used to categorize the land base and outline proposed modelling parameters that will be used to complete a Base Case scenario and additional sensitivity analyses.

2.1 MISSING DATA

There is no missing data for this version of the data package.

3 Response to 2009 AAC Determination Implementation Requests

The Deputy Chief Forester requested that Interfor undertake a number of items in the April 1st, 2009 Rationale for Allowable Annual Cut (AAC) Determination. The responses to these requests are outlined below.

3.1 MOUNTAIN PINE BEETLE INFESTATION

Request: Track and report harvesting performance in Mountain Pine Beetle (MPB) infested stands.

Response: MPB infestation has not been a serious issue on TFL 8. Provincial beetle overview surveys from 2009 to 2018 were summarized and compared with harvested and planned blocks to determine the degree to which infestation in the THLB has been addressed through harvesting. Areas where the age of the trees is less than 40 years were assumed to be too young for harvest. Therefore, for purposes of this analysis, infested areas in these young stands are also considered to be addressed. Table 1 provides an overview of this analysis, and it can be seen that almost 94% of infestations since 2009 have been categorized as Light or Trace, with 10% or fewer of the trees killed.

Table 1 MPB infestation summary (2007 – 2018)

Severity Class	Description	Infested THLB Area (ha)	Area addressed (ha)*
Severe	30 to 49% of trees killed	10	0
Moderate	11 to 29% of trees killed	338	137
Light	1 to 10% of trees killed	2,581	899
Trace	<1% of trees killed	2,456	845
Total		5,385	1,881

* Areas in logged or planned blocks, or where the age is less than 40 years

3.2 DENSE PINE STANDS

Request: Continue to track and record harvesting in dense pine stands that contribute to the timber harvesting land base and to make an informed assessment of which dense pine stands are economically operable in the short to long term.

Response: Interfor harvests in dense pine stands when market conditions allow, and has made significant progress in harvesting these stands and reforestation to current standards. The data set used for the 2007 timber supply analysis was used to summarize the harvesting history as of December 31, 2019 for pine stands that were defined as stocking class 3 and 4 in 2007. These stands represent the best estimate of dense stands on the landbase in 2007 that were old enough to be considered for harvest. Table 2 summarizes the total area of these stands, the area of these stands within the timber harvesting land base for the current analysis, and the area of these stands in the THLB that have been logged. It can be seen that over 38% of the mature dense pine stands in the inventory in 2007 that are part of the current THLB have now been harvested.

Table 3 summarizes the Grade 6 and Special Forest Products volumes delivered from TFL 8 since 2007. These volumes were primarily derived from dense pine stands and are another indicator of ongoing harvest.

Table 2 *Logging in mature dense pine stands*

Inventory Description in 2007	Total Area (ha)	2020 THLB Area (ha)	Logged Area (ha)	Proportion of THLB Logged
Stocking Class 3	2,399	2,111	745	35.2%
Stocking Class 4	697	555	276	49.7%
Total	3,096	2,666	1,021	38.3%

Table 3 *Summary of Grade 6 and Special Forest Products volume*

Year	Grade 6 (m ³)	Special Forest Products (m ³)
2007	3,277	
2008	1,386	
2009	0	
2010	371	
2011	798	
2012	5,530	
2013	14,994	
2014	8,080	13,827
2015	1,658	18,823
2016	1,100	6,267
2017	2,207	6,466
2018	5,327	27,762
2019	2,297	1,965
Total	47,025	75,110

Younger dense pine stands are more difficult to quantify accurately in the inventory. Using updated forest attributes with the same dense pine definition as that used in previous analyses results in a significant reduction to the dense pine estimates for younger stands (850 hectares versus 4,300 hectares). Therefore, the current analysis will use the same approach to account for dense pine stand as that documented in the 2011 data package for the Boundary TSA Timber Supply (see Section 8.12).

3.3 MANAGED STANDS

Request: Assess the assumptions regarding managed stands in support of the next timber supply analysis. This would include: (i) regeneration practices including reliance on natural regeneration, regeneration delay and stem density at time of planting and free-growing; (ii) quantity and quality of planting stock with genetic worth; and (iii) appropriate OAF reductions given root diseases and other pests in the TFL that impact managed stands.

Response: Silviculture records for from 2007 to 2017 were analyzed to determine proportions of natural and planted stock in stocking and free growing surveys, planting densities, and genetic worth. This information has been incorporated into the yield tables for managed stands established in the past 12 years. Interfor routinely uses stump removal as a means of addressing root disease. This practice supports the use of standard OAF reductions in the development of the yield tables.

3.4 AGGREGATION PROCEDURES – BLOCK SIZE

Request: Improve modelling approaches using stand aggregation to better represent actual harvest block sizes.

Response: The forest estate model used for this analysis will be configured to use cut block aggregation that reflects actual harvest block sizes. (See Section 12.3.2).

3.5 ADJACENCY AND GREEN-UP

Request: Model spatial adjacency for as long as possible (equal to or greater than 20 years) then use an aspatial approximation over the remainder of the planning horizon.

Response: The current analysis will implement adjacency using an aspatial approximation for the entire planning horizon (See Section 12.2.8), combined with the cut block size aggregation described above.

3.6 LANDSCAPE-LEVEL BIODIVERSITY

Request: Model attainment of the full older seral stage target for low biodiversity landscape units by the end of the third rotation or apply OGMA's if established at that time.

Response: Old Growth Management Areas have been identified within TFL 8 and will be removed from the THLB (see Sections 8.17 and 12.2.1) for the Base Case. A sensitivity analyses will evaluate the implementation of meeting full seral objectives by the end of the third rotation instead of removing Old Growth Management Areas from the THLB.

3.7 UNSALVAGED LOSSES

Request: Provide an up-to-date estimate of unsalvaged losses given any increases in the MPB, and an estimate regarding how small scale salvage is addressing unsalvaged losses and dead potential volumes.

Response: The allowance for unsalvaged losses has been estimated using aerial overview survey data and has increased from 984 m³/year to 1,575 m³/year. In addition, volume harvested under the Small Scale Salvage program that is not charged to the TFL 8 Allowable Annual Cut has been accounted for resulting in a total unsalvaged loss estimate of 3,646 m³/year.

4 Timber Supply Forecast / Options / Sensitivity Analyses

4.1 BASE CASE

The Base Case is considered to be representative of current management practice on TFL 8. Changes from TSR 3 completed in 2007 include:

- Incorporating Williamson's Sapsucker Wildlife Habitat Areas
- Incorporating Williamson's Sapsucker Best Management Practices
- Incorporating OGMA's for old seral requirements
- Revised silviculture regimes for managed stands
- Increased allowance for non-recoverable losses
- Use of a fully spatial model for the entire planning horizon

4.2 SENSITIVITY ANALYSES

Sensitivity analyses provide a measure of the reasonable upper and lower bounds of the harvest forecast, reflecting the uncertainty of assumptions made in the Base Case. The magnitude of the increase and decrease in the sensitivity variable reflects the degree of uncertainty surrounding the assumption associated with that given variable. By developing and testing a number of sensitivity analyses, it is possible to determine which variables most influence results. To allow meaningful comparison of sensitivity analyses, they are usually performed using the Base Case and varying only the assumption being tested. An overview of the sensitivity analyses that will be carried out are provided in Table 4, with further details found in Section 12.5.

Table 4 Sensitivity analyses

Category	Sensitivity
Land Base Definition	THLB Area +/- 10%
Growth and Yield	Natural Stand Yields +/- 10%
	Managed Stand Yields +/- 10%
	Managed Stand Site Index Source (Site Index Adjustment vs Provincial Site Productivity Layer)
	Minimum Harvest Ages +/- 10 years
Integrated Resource Management	Include Disturbance in the non-THLB
	Apply Old Seral Targets (BEC Version 4) instead of Old Growth Management Areas
	Apply Old Seral Targets (BEC Version 11) for Old Seral Targets instead Old Growth Management Areas
	Limit ECA within watershed units
Timber Harvesting	First Nations Interests – enhanced riparian protection and other culturally important features
	Turn off cutblock aggregation (no minimum cutblock size)

4.3 ALTERNATIVE HARVEST FLOWS

Forest cover constraints and the growth capacity of the THLB will determine the harvest flow options that will be considered. In general, the choice of harvest flow for the Base Case will strive to balance current and future harvest rates using the following objectives:

- Avoid any large or abrupt disruptions in timber supply during transitions from short to mid to long-term periods (generally increases and decreases in steps of 10% per 10 year period)
- Achieve a stable long-term harvest level over a 300 year planning horizon.
- Ensure that the growing stock on the THLB does not decline during the last 50 years of the planning horizon.

Options for alternative harvest flows will become more evident after the initial timber supply model is built and the timber supply dynamics for the TFL8 land base become evident. Examples of potential options include maintaining the current allowable annual cut for as long as possible or minimizing the length of a mid-term harvest reduction if one exists. Interfor will explore and include alternative harvest flow options in the analysis report, and present the recommended option as the Base Case.

4.4 OTHER OPTIONS

Penticton Indian Band, Osoyoos Indian Band, Westbank First Nation, and Splatshin have reviewed a number of Interfor's proposed cutblocks in the field and have provided comments regarding desired changes to block configurations or prescriptions to address site specific cultural values identified by community members. The feedback received from these field reviews has been used to develop a sensitivity analysis that explores the timber supply implications from implementing these changes.

5 Model

The PATCHWORKS™ modeling software will be used for forecasting and analysis. This suite of tools is sold and maintained by Spatial Planning Systems Inc. of Deep River, Ontario (www.spatial.ca).

PATCHWORKS is a fully spatial forest estate model that can incorporate real world operational considerations into a strategic planning framework. It utilizes a practical goal seeking approach to simulate forest growth and schedule activities such as harvesting and silviculture across the land base to find a solution that best balances the targets/goals defined by the user. Realistic spatial harvest allocations can be optimized over long-term planning horizons because PATCHWORKS integrates operational-scale decision making within a strategic analysis environment.

The PATCHWORKS model continually generates alternative solutions until the user decides a stable solution has been found. Solutions with attributes that fall outside of specified ranges (targets) are penalized and the goal seeking algorithm works to minimize these penalties, resulting in a solution that reflects the user objectives and priorities.

Targets can be applied to any aspect of the problem formulation. For example, the solution can be influenced by issues such as desired mature/old forest retention levels, young seral disturbance levels, patch size distributions, conifer harvest volume, growing stock levels, and visual quality objectives. For this analysis, PATCHWORKS will be configured to consider the range of non-timber values that exist on TFL 8 while evaluating possible harvest flows.

6 Data Sources

Table 5 lists the spatial data and sources used for this analysis. In general, data was either downloaded directly from the Land and Resource Data Warehouse maintained by the provincial government, sourced from datasets maintained in Interfor's Forest Management System, or downloaded from other government websites. Two files relating to the previous timber supply analysis were obtained from Ecora Resource Group.

Table 5 *Spatial data sources*

Description	Source File Name	Source	Year
TFL Boundary	WHSE_ADMIN_BOUNDARIES_FADM_TFL_polygon	LRDW	2016
BEC v4	qbecv4_bc	LRDW	2001
BEC v6	abecv6_bc	LRDW	2006
BEC v11	WHSE_FOREST_VEGETATION_BEC_BIOGEOCLIMATIC_POLY_polygon	LRDW	2019
Fresh Water Atlas Lakes	FreshwaterAtlasLakes	Interfor	2017
Streams (operational dataset)	Interfor_Streams	Interfor	2017
Streams (TSR dataset)	tfl_str	Ecora	
Private Land	WHSE_CADASTRE_PMBC_PARCEL_FABRIC_POLY_SVW	Interfor	2017
Classified Operational Roads	Interfor_Roads_21DEC2017	Interfor	2017
Non-operational Roads	NonOperational_Roads_Clip	Interfor	2017
Hydro line right-of-ways	Powerline_ROW	Interfor	2018
OGMAs	Interfor_OGMA	Interfor	2017
Forest cover inventory	tfl08_vegcomp_poly_lyr_r1_updated	Interfor	2017
Harvested blocks	Interfor_Blocks_Harvested	Interfor	2020
Reserves	INTERFOR_STRATA_RESERVES_TFL8_ALL	Interfor	2020
Fire Maintained Ecosystems	FireMaintainedEcosystems	Interfor	2006
Terrestrial Ecosystem Mapping/SIA	sia_res	Ecora	2006
Provincial site productivity layer	sprod_02	FLNRO	2020
Landscape Units	LandscapeUnit	Interfor	2017
Connectivity Corridors	RegionalConnectivity	Interfor	2017
Williamson's Sapsucker Habitat	Wisa_bdy_fc_suitability_30mar2009	ftp.geob	2009
Williamson's Sapsucker	Wisa_obs_199_2016b	ftp.geob	2016
Wildlife Habitat Areas	WHSE_WILDLIFE_MANAGMENT_WCP_WILDLIFE_HABITAT_AREA_P	LRDW	2017
Recreation Polygon Features	WHSE_FOREST_TENURE_FTEN_RECREATION_POLY_SVW_polygon	Interfor	2017
Recreation Linear Features	FTEN_REC_LN_line	Interfor	2017
Visual Landscape Inventory	REC_VISUAL_LANDSCAPE_INVENTORY	Interfor	2017
Environmentally Sensitive Areas	TFL_esa1	Interfor	2006
Terrain Mapping "C"	TerrainC	Interfor	2003
Terrain Mapping "D"	TerrainD	Interfor	2003
LiDAR slope	Slope	Interfor	2017
LiDAR aspect	Aspect	Interfor	2017
Elevation < 1000 metres (from	Elev_1000m.	Forsite	2017
Trans Canada Trail	TransCanadaTrail	Interfor	2017
Mule Deer (U-8-008)	tuwra_u-8-008	MOE	2006
Moose (U-8-007)	tuwra_u-8-007	MOE	2006

7 Current Forest Cover Inventory

The base forest cover inventory for TFL 8 was completed to Forest Cover (FC1) inventory standards in 1994 from colour 1:15,840 scale aerial photographs flown in 1992. This inventory has been maintained and updated periodically by Interfor for changes resulting from logging, fires, regeneration status and other disturbances. In 2017, Interfor provided this inventory to FLNRO for conversion to the provincial digital standard so that subsequent updates can be completed by the province using the annual RESULTS data for harvesting and silviculture submitted by Interfor. The inventory was projected to January 1st, 2016 during the conversion.

Following the data conversion, Interfor reviewed the new inventory and identified 67 openings with spatial errors. These errors were corrected by Interfor and a procedure was established with FLNRO to ensure that subsequent updates would not result in similar errors.

As a result of changes made to the mapped location of the TFL 8 boundary to match TRIM mapping, there are areas within the revised boundary that were not covered by the original forest inventory. This was discussed with Forest Analysis Branch and it was agreed that Interfor would use information such as recent imagery and adjacent polygon attributes to “fill-in” missing areas (approximately 530 hectares) for use in this timber supply analysis.

7.1 UPDATES FOR HARVESTING AND PLANNED BLOCKS

The date chosen for the start of the harvest forecasts is January 1, 2020. All harvested blocks and blocks planned for harvest prior to December 31st, 2019 were used to update the inventory for depletions not already included in the inventory. A regeneration delay of 2 years was assumed when assigning ages to the updated inventory for these depletions.

The ages for all other polygons in the inventory were incremented by 4 years to adjust them from the January 1st, 2016 projection date in the initial inventory to January 1st, 2020.

7.2 UPDATES FOR STANDS CODED AS NOT SATISFACTORILY RESTOCKED

The inventory has a number of stands (approximately 671 hectares) coded as Not Satisfactorily Restocked (NSR). This is an artifact from the original inventory and represents stands that were identified to be current NSR at the time the inventory was completed. In the 2009 AAC determination, the Deputy Chief Forester discussed these and indicated that they should be assumed to be fully stocked within the first five years of the planning horizon. A review of recent imagery for a subset of these stands confirmed that these stands are currently forested.

For the current analysis, any of these stands without an assigned age in the inventory were assumed to be fully stocked within 5 years of the reference year, and the age was updated accordingly.

7.3 UPDATES FOR FIRES

Historical provincial forest fire data was reviewed to check for recent fires that occurred within TFL 8, up to and including 2019. It was found that there was minimal forested area (approximately 62 hectares) burned since 2008. Of this, the majority of burned area overlaps with blocks harvested at roughly the same time as the fire. As there was only 23 hectares (5 hectares of Timber Harvesting Land Base) burned that was outside harvested blocks, it was decided not to make any age adjustments to account for fires.

8 Description of the Land Base

This section describes the land base data and assumptions used to define the productive forest land base (PFLB) and timber harvesting land base (THLB) in TFL 8. The THLB is designated to support timber harvesting while the PFLB includes all productive forest land in the TFL. PFLB areas that are not part of the THLB may not be available for harvest because of non-timber objectives or because the timber characteristics or site productivity is not aligned with Interfor's commercial requirements. Nevertheless, these PFLB areas along with non-forested areas such as wetlands are an important component of the TFL and its ecosystem health. For example, they contribute to biodiversity and may provide critical wildlife habitat, trees and plants important to First Nations communities, and recreation opportunities for the public.

8.1 TIMBER HARVESTING LAND BASE

Table 6 provides a summary of the area reductions made to the total area of TFL 8 to determine the Timber Harvesting Land Base. Reductions are applied in the order presented in the table using a step wise process to ensure that area is only removed once. In the table, gross area refers to the total area covered by the item, and net area refers to the incremental reduction after considering areas that were removed in previous lines in the table. Detailed descriptions of these reductions are provided in subsequent sections of this Information Package. A map showing the resulting land base classification is provided in Figure 2.

TFL 8 covers a total area of approximately 77,189 hectares after private land is excluded. Of this total area, approximately 92.6 % is considered to be PFLB and 77.3 % is considered to be the current THLB.

In comparison with the previous Information Package completed in 2006, the PFLB is 482 hectares smaller. This is largely due to an increase in the amount of private land reflecting improved ownership information, and an increase in the amount of road resulting from additional harvesting operations. However, the future THLB is almost 7,900 hectares less than in the previous Information Package. This is mainly due to reductions for Old Growth Management Areas and Wildlife Tree Retention which were modelled in the previous analysis but not treated as an explicit THLB reduction. There are also additional reductions for Wildlife Habitat Areas and live tree retention for Williamson's Sapsucker habitat.

Table 6 TFL 8 land base area summary

Land Base Element	Gross Area (ha)	Productive Area (ha)	Net Area (ha)	Percent of Total Area (%)	Percent of PFLB (%)
Total Land Base (incl. fresh water)	77,656		77,656	100.0%	
Less:					
Private land	467		467	0.6%	
Total TFL (incl. fresh water)			77,189	99.4%	
Less:					
Non-Forest	3,022		2,788	3.6%	
Non-Productive Forest	1,118		1,117	1.4%	
Existing Roads	1,420		1,347	1.7%	
Hydro line right-of-way	27		26	0.0%	
Productive Forest Land Base			71,911	92.6%	100.0%
Less:					
Non-commercial cover	212	208	208	0.3%	0.3%
Environmentally Sensitive Areas	1,619	1,474	1,474	1.9%	2.1%
Unstable Terrain	475	363	326	0.4%	0.5%
Low Site	1,030	755	383	0.5%	0.5%
Deciduous	236	231	229	0.3%	0.3%
Non-merchantable	473	397	335	0.4%	0.5%
Riparian Areas	2,326	2,050	1,919	2.5%	2.7%
Wildlife Habitat Areas	531	483	473	0.6%	0.7%
Recreation Sites/Reserves	209	118	89	0.1%	0.1%
Trans Canada Trail	48	11	7	0.0%	0.0%
Old Growth Management Areas	6,566	6,163	5,090	6.6%	7.1%
Existing Wildlife Tree Patches	1,187	1,130	892	1.1%	1.2%
Wildlife Tree Retention (Aspatial, Estimated)			419	0.5%	0.5%
Timber Harvesting Land Base - Current			60,065	77.3%	83.5%
Less:					
Future Wildlife Tree Retention (aspatial)			*1,943	2.5%	2.7%
Williamson's Sapsucker Retention (aspatial)			*305	0.4%	0.4%
Future Roads (aspatial)			**587	0.8%	0.8%
Future Timber Harvesting Land Base			57,230	73.7%	79.6%

* Aspatial netdowns applied in the model but are not reflected in the GIS dataset areas

** To be applied with a yield table reduction of 2.0% for future managed stands

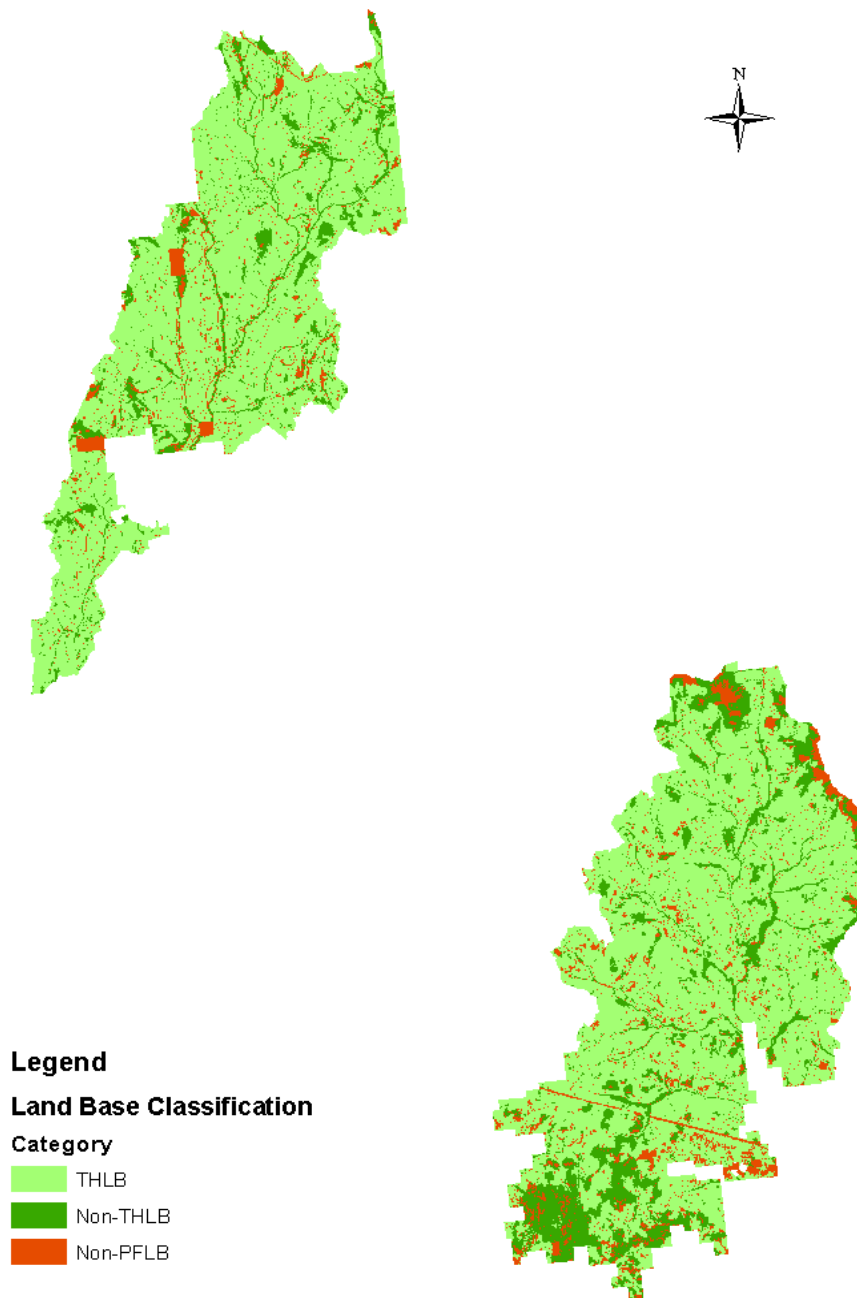


Figure 2 TFL 8 Land base classification

8.1.1 AGE CLASS DISTRIBUTION

The current age class distribution for TFL 8 is summarized in Table 7 and illustrated in Figure 3. Over half of the THLB (55%) is less than 50 years of age, reflecting the harvest history on the TFL. In contrast, almost half (47%) of the non-THLB is 200 years or older.

Table 7 Age class distribution

Age Class (years)	THLB Area (ha)*	Non-THLB Area (ha)	Total PFLB Area (ha)
< 10	8,464	357	8,821
10- 19	5,241	105	5,346
20- 29	7,604	253	7,857
30- 39	7,460	377	7,837
40- 49	4,302	239	4,542
50- 59	1,049	212	1,261
60- 69	740	161	902
70- 79	735	58	793
80- 89	3,897	589	4,486
90 – 99	3,515	421	3,936
100-109	1,896	203	2,098
110-119	1,254	220	1,474
120-129	1,588	247	1,835
130-139	1,645	441	2,086
140-149	1,085	301	1,385
150-159	638	312	950
160-169	774	371	1,144
170-179	862	648	1,510
180-189	650	280	930
190-199	892	311	1,203
200-209	835	653	1,488
210-219	678	400	1,077
220-229	1,712	1,563	3,275
230-239	576	288	864
240-249	833	556	1,389
>= 250	1,558	1,860	3,418
Total	60,484	11,426	71,910

* Prior to aspatial netdowns

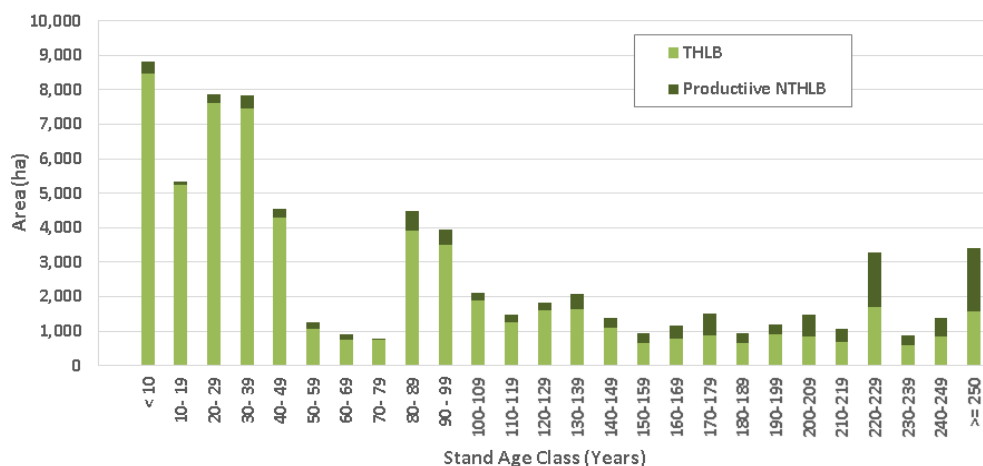


Figure 3 Age class distribution

8.1.2 SPECIES COMPOSITION

The individual species composition for the THLB and non-THLB are shown in Figure 4. The predominant species on the THLB is lodgepole pine (42.4%), with most of the remainder comprised of Douglas-fir, larch, spruce, and balsam. Minor proportions of cedar, ponderosa pine, and deciduous are also present. In comparison, the non-THLB is heavier to Douglas-fir.

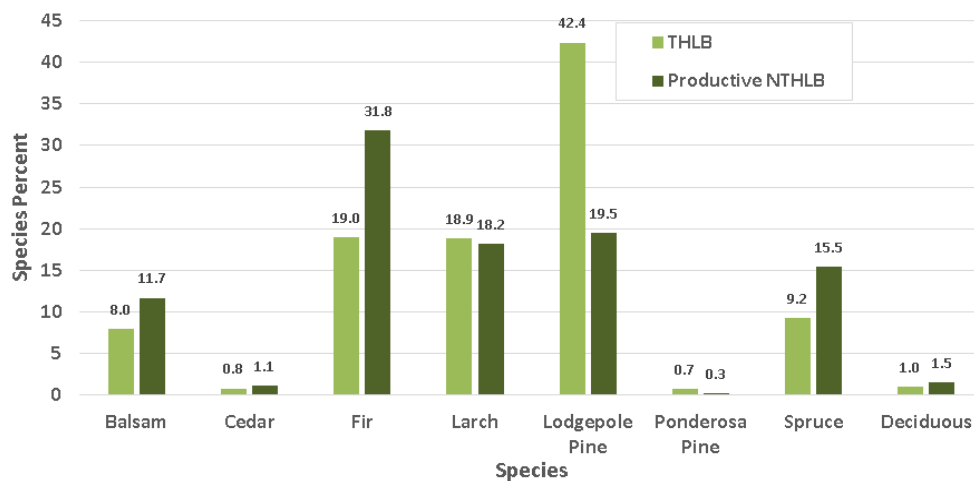


Figure 4 Overall species composition derived from individual stand composition percentages

8.1.3 BIOGEOCLIMATIC CLASSIFICATION

The distribution of the biogeoclimatic classifications (Version 11) for both the THLB and Non-THLB are shown in Figure 5. Almost half (49.6%) of TFL 8 is classified as MS dm1, followed by the IDF dm1 (19.2%), ICH mk1 (12.1%), ESSF dc1 (9.9%), ESSFmh (5.3%), ESSF dc2 (3.1%), and ESSF dcw (0.8%).

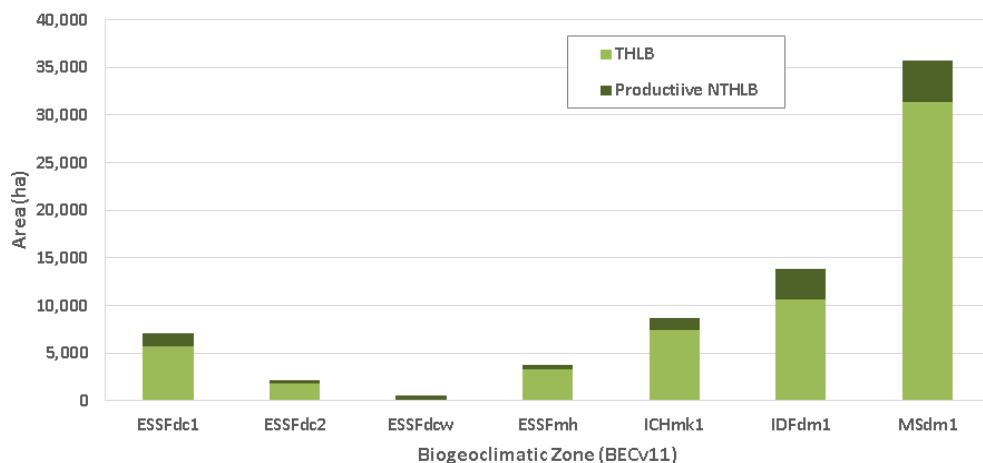


Figure 5 Area distribution of BEC variants

8.2 TOTAL AREA

The gross area within the mapped TFL 8 boundary is 77,656 hectares. There are 467 hectares of private land within this boundary that are not owned by Interfor and are not managed as part of the TFL (i.e. not Schedule A land). This results in a total TFL area of 77,189 hectares, all of which is Crown (Schedule B) land managed by Interfor.

8.3 NON-FOREST AND NON-PRODUCTIVE FOREST

Non-forest and non-productive forest was identified using the “Non_Productive_Cd” attribute contained in the VRI. Table 8 summarizes the areas removed from the land base for these categories. Some of these non-forest and non-productive forest polygons (e.g. meadows, swamps, etc.) may provide important indigenous or habitat values but are not considered to be forested for purposes of this timber supply analysis.

Table 8 Non-forest and non-productive forest area summary

Category	Description	Non_Productive_Cd	Gross Area (ha)	Removed Area (ha)
Non-forest	Alpine	2	27.3	27.3
	Clearing	42	4.6	4.6
	Gravel Bar	18	1.4	1.4
	Gravel Pit	6	6.4	6.4
	Lake	15	130.6	123.2
	Meadow	62	0.2	0.2
	Non-productive brush	11	101.5	101.5
	Open Range	63	1,360.8	1,341.4
	No Typing Available		243.0	91.9
	Rock	3	449.6	443.7
	River	25	46.8	41.4
	Swamp/wetland	35	288.3	288.3
	Urban	54	361.5	317.0
Non-forest Total			3,022.0	2,788.3
Non-productive forest	Alpine Forest	10	520.9	520.9
	Non-productive	12	597.6	595.8
Non-productive forest Total			1,118.5	1,116.7
Total			4,140.5	3,905.0

8.4 ROADS, TRAILS, AND LANDINGS

8.4.1 EXISTING ROADS, TRAILS AND LANDINGS

Permanent roads, trails and landings are not suitable for growing trees. Interfor maintains spatial data that identifies the location and classification of existing roads within TFL 8. Although wider roads are often delineated as polygons in the forest inventory, many roads are too narrow to be typed as non-forest. Therefore, buffers representing the right-of-way width of the roads are created and used to approximate the appropriate reduction to the forested land base.

In order to determine appropriate buffer widths to use for each road class, a Geographic Information System (GIS) was used by Interfor to display roads against a background of ortho-photo imagery and LiDAR hill shade and canopy height models. Sample roads were selected and average widths visually measured using the measuring tools within the GIS. Using this approach, highways ranged between 12 to 30 metres wide, Forest Service Roads between 7 to 15 metres wide, and Forest Roads between 5 to 13 metres wide. Average values for each road class were calculated based on the roads that were sampled. Table 9 summarizes the length, buffer widths, and area reductions for existing roads.

Almost all logging in TFL 8 is completed using roadside harvesting systems that do not require landings or trails. Therefore, no additional allowance for these features has been included in this Information Package.

Table 9 Existing road summary

Road Type	Length (km)	Road Width (m)	Gross Area (ha)	Removed Area (ha)
Highway	20.0	30	59.9	9.6
Forest Service Road	220.1	12	264.0	252.1
Forest Road	1,223.1	9	1,096.2	1,085.6
Total	1,463.2		1,420.1	1,347.3

8.4.2 FUTURE ROADS, TRAILS, AND LANDINGS

The permanent road network on TFL 8 is very well developed, with most of the TFL in close proximity to an existing road. Existing roads have been removed from the THLB, and it can be assumed that all managed stands (i.e. stands less than 45 years old) will need no further reduction made for future roads. These stands can be used as the basis for determining the approximate area required to account for future roads, as follows:

The current THLB area less than 45 years of age is 31,263 hectares. There are another 960 hectares within the permanent road buffers that do not overlap with another land base reduction and that have an indicated age less than 45 years. Therefore, the proportion of THLB removed for permanent roads in stands less than 45 years of age is 3.0%, calculated as:

$$\text{Permanent road proportion} = 960\text{ha} / (31,263\text{ ha} + 960\text{ ha}) = 3.0\%.$$

The remaining THLB area greater than or equal to 45 years of age is 29,221 hectares. However, there are already some existing access roads (i.e. roads between existing cut blocks) within this area. This area within permanent road buffers that does not overlap with another land base reduction and that has an indicated age greater than or equal to 45 years is 299 hectares. Therefore, the additional area required for future roads is 587 hectares calculated as:

$$\text{Total future roads} = 3.0\% * (29,221\text{ ha} + 299\text{ ha}), \text{ less } 299\text{ha} = 587\text{ ha}$$

This reduction will be applied as a yield table adjustment of 2.0% for future managed stands, calculated as:

$$\text{Reduction factor} = 587\text{ ha} / 29,221\text{ ha} = 2.0\%$$

8.5 HYDRO-LINE RIGHT-OF-WAY

There are two hydro lines that traverse TFL 8. One of these, located in the south TFL block has been delineated as a polygon feature classified as urban in the forest cover inventory and requires no further reduction to the land base. The other hydro line, located in the northern block of the TFL was constructed recently and is not accounted for in the inventory. A polygon feature representing the actual right-of-way boundary was obtained from the Land and Resource Data Warehouse and used to remove the right-of-way from the productive forest. The gross area of the right-of-way is 27.3 hectares, and the resulting net reduction after previous reductions are accounted for is 26.0 hectares.

8.6 NON-COMMERCIAL COVER

Non-commercial forest types are those parts of the productive forest land that are an important part of the forest ecosystem but do not contain trees to support industrial forestry. Non-commercial forest types were identified using the “NON_FOREST_DESCRIPTOR” attribute in the VRI. All “NCBR” (non-commercial brush) stands were removed from the THLB. The total area classified as non-commercial brush is 212.3 hectares, of which 207.6 hectares is considered to be within the PFLB. The net area removed from the THLB after account for areas removed as a result of previous netdown categories is 207.6 hectares.

8.7 INOPERABLE

Inoperable areas are those portions of the land base where harvesting is not feasible due to terrain or characteristics or lack of access. Interfor considers all of TFL 8 to be operable and accessible, so no reductions will be made.

8.8 ENVIRONMENTALLY SENSITIVE AREAS

Environmentally Sensitive Areas (ESAs) were identified within TFL 8 in 1993. These ESAs include P (potential regeneration problems), S (unstable soils), and SP (both unstable soils and regeneration). Harvesting in these areas could increase the risk of landslide (see Section 8.9) or make it difficult to achieve reforestation requirements.

Areas with high environmental sensitivity (ESA1) were fully excluded from the THLB, unless there was evidence of previous logging. Areas of moderate environmental sensitivity (ESA2) were not removed from the land base because terrain stability surveys (Section 8.9) are considered to be a more accurate representation of the areas of moderate environmental sensitivity with the TFL. Also, many previously harvested blocks intersect areas identified as ESA2 indicating that these areas are generally available for timber harvesting. Table 10 provides a summary of the reductions made for ESA1.

Table 10 Environmentally sensitive areas summary

ESA Code	Description	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
P	Potential regeneration problems	37.5	16.8	16.8
S	Unstable soils	612.9	574.2	574.2
SP	Unstable soils and potential regeneration problems	968.8	883.4	883.4
Total		1,619.2	1,474.4	1,474.4

8.9 UNSTABLE TERRAIN

Section 37 of the Forest Planning and Practices Regulation requires that a primary forest activity does not cause a landslide that has a material adverse effect. One of the tools that forest companies use to address this requirement is terrain stability mapping that identifies areas where there is potential for landslides.

Terrain stability mapping has been completed for the entire TFL 8 land base. This includes Level D (reconnaissance) mapping completed in 2003 and Level C (detailed) mapping completed in 2003. Areas with a reconnaissance mapping classification of Unstable (U) and detailed mapping classification of V (High likelihood of landslide initiation following timber harvesting) were fully deleted from the THLB unless there was evidence of

previous harvesting. These areas, summarized in Table 11 are in addition to the ESA1 reductions made for unstable soil types.

Areas with a reconnaissance mapping classification of Potentially Unstable (P) and detailed mapping classification of IV (Moderate likelihood of landslide initiation following timber harvesting) were not excluded from the THLB because harvesting often occurs within these polygons. Detailed terrain assessments completed during cutblock layout identify the specific areas that have terrain stability concerns. These areas are typically addressed through in-block retention or alternative harvesting approaches.

Table 11 Terrain stability area summary

Terrain Class	Description	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
U (from Level D)	Unstable	240.0	133.1	99.8
V (from Level C)	High likelihood of landslide initiation following harvesting	234.8	230.0	226.1
Total		474.8	363.1	325.9

8.10 LOW SITE

Site index in the VRI was used to identify low productivity stands, as outlined in Table 12. These site index values are consistent with historical limits of low site in the Boundary Timber Supply Area (TSA), and approximate the upper site index limit of the “Low” site class used in older inventories. These stands are not expected to achieve sufficient volume or piece size to be economically viable for harvest, and were removed from the THLB unless there was previous logging history. As discussed in Section 8, these stands may be very important for other values besides commercial forestry.

Table 12 Low site reductions

Leading Species Code	Description	VRI Site Index	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
PL, PLI, PA, PY, LW	Pine or larch leading	<7.5	50.0	40.7	26.3
SE, SX, S, B, BA, BL	Spruce or balsam leading	<8.0	972.2	706.5	349.6
FD, FDI	Douglas-fir leading	<8.5	7.6	7.6	7.6
Total			1,029.8	754.8	383.5

8.11 DECIDUOUS

Interfor does not currently utilize deciduous species from TFL 8 in its industrial facilities. Therefore, all deciduous leading stands (i.e. aspen, cottonwood, and birch) were deleted from the THLB unless there was previous logging history. However, these stands are an important, integral part of the forested land base as discussed in Section 8.

There are 235.6 hectares of deciduous stands in TFL 8, of which 230.8 hectares are productive forest land. There were 229.3 hectares removed from the THLB after accounting for stands previously removed from the land base for other reasons.

8.12 NON-MERCHANTABLE

Non-merchantable forest types have characteristics that make them unlikely to be economically viable for harvest by Interfor. As discussed in Section 8, they contribute to other values and are an important component of the overall forest in the TFL.

A review of the non-merchantable definitions used in the 2006 Information Package indicated that they did not accurately reflect stands that weren't being harvested on TFL 8. For example, many pine stands previously identified as stocking class 4 have been harvested.

Therefore, for this analysis, non-merchantable stands were defined using the same criteria used in the 2011 Boundary Timber Supply Review Data Package, and is intended to address high density pine stands. Natural stands containing greater than 70% pine that will not achieve 100 m³/hectare by age 120 were removed from the THLB unless there was previous logging history. The gross area of stands meeting this criteria is 472.5 hectares, of which 396.9 hectares is productive forest land base. After accounting for stands previously removed from the land base for other reasons, the net area removed from the THLB was 335.4 hectares.

8.13 RIPARIAN MANAGEMENT AREAS

Riparian management areas are designed to minimize the impacts of harvesting in areas immediately adjacent to water bodies, including streams, lakes, and wetlands. The Forest Planning and Practices Regulation (Sections 50, 51, and 52) specify the management restrictions for riparian areas.

A riparian management area consists of a riparian management zone in which harvesting activity is restricted through basal area retention requirements, and, depending on the water body classification may also include a riparian reserve zone immediately adjacent to the the water body. Harvesting is fully excluded within the reserve zone.

An equivalent riparian management area width was calculated for each riparian class by considering the widths of the riparian reserve zone and riparian management zone, along with the percentage basal area retention within the management zone. Buffers were then generated around the riparian features and removed from the THLB.

Current operational practice on TFL 8 results in a range of basal area retention levels in riparian management zones, from 0 to 60%, with a resulting average retention level of 25%. The average retention level was applied to all riparian management zones regardless of riparian classification.

Table 13 summarizes the buffer widths and area reductions for riparian features. Further details about the source riparian data and classification details is provided in Section 8.13.1 and Section 8.13.2.

Table 13 Riparian management area summary

Feature	Class	Feature Area or Length	RRZ* Width (m)	RMZ* Width (m)	RMZ Basal Area Retention (%)	Buffer Width for Modelling (m)	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
Lake	L1-B	99.1 ha	10	0	25	10	115.6	10.7	10.7
	L3	22.1 ha	0	30	25	7.5	26.8	3.1	3.1
Wetlands	W1	91.7 ha	10	40	25	20	51.3	44.5	44.4
	W3	104.2 ha	0	30	25	7.5	34.6	32.1	31.6
	W5	37.7 ha	10	40	25	20	27.5	26.0	25.7
Streams	S1-B	16.1 km	50	20	25	55	93.8	76.2	75.8
	S2	74.1 km	30	20	25	35	467.2	432.9	406.0
	S3	162.7 km	20	20	25	25	784.2	737.0	667.7
	S4	241.0 km	0	30	25	7.5	343.4	323.1	304.3
	S5	27.6 km	0	30	25	7.5	40.6	38.6	38.0
	S6	346.0 km	0	20	25	5	340.6	326.0	311.8
Total							2,325.6	2,050.2	1,919.1

* RRZ = Riparian Reserve Zone, RMZ = Riparian Management Zone

8.13.1 LAKES AND WETLANDS

Lakes and wetlands were extracted from the forest cover layer by selecting polygons classified as lakes or swamps (i.e. non-productive code equal to 15 for lakes and non-productive code equal to 35 for swamps). These polygons were compared with lakes from the provincial Fresh Water Atlas to ensure that all lakes were captured. Lakes or wetlands greater than or equal to one hectare in size were classified using the definitions provided in the Forest Planning and Practices Regulation. Table 14 summarizes the criteria used for classification of lakes and wetlands.

Table 14 Classification criteria for lakes and wetlands

Feature	Class	Criteria
Lake	L1-B	> 5 ha and < 1000 ha
	L3	>= 1 ha and <= 5 ha
Wetlands	W1	> 5 ha
	W3	>=1 ha and <= 5 ha
	W5	Two or more wetlands with overlapping riparian management zones and combined area >= 5 ha

8.13.2 STREAMS

Streams are classified using the definitions provided in the Forest Planning and Practices Regulation, based on their width in combination with the presence or absence of fish. Table 15 summarizes these criteria.

In 2000, a stream layer for timber supply review purposes was developed by Interfor and Forsite that retained all known stream classifications, and inferred a classification for all other streams using relevant data sources and the expertise of a fisheries specialist. Interfor also maintains a stream layer for operational purposes that has updated stream classifications and locations based on additional field work or studies. For purposes of this timber supply analysis, the operational stream layer was supplemented with information from the 2000 project to assign stream classes to all streams in the operational layer.

Table 15 Classification criteria for streams

Class	Fish Present	Width
S1-B	Yes	> 20 m and < 100 m
S2	Yes	>= 5 m and <= 20 m
S3	Yes	>= 1.5 m and < 5 m
S4	Yes	< 1.5 m
S5	No	> 3 m

8.14 WILDLIFE HABITAT AREAS

Sections 9 and 10 of the Government Action Regulation permit the government to establish General Wildlife Measures and Wildlife Habitat Areas (WHA). Section 69 of the Forest Planning and Practices Regulation specifies that primary forest activities on an area must comply with each General Wildlife Measure that applies to the area.

WHAs within TFL 8 were identified and excluded from the THLB where harvesting would not be possible. This included a very small portion of a WHA for Lewis's Woodpecker, and fifteen WHAs for Williamson's Sapsucker.

Although there is a WHA and Government Actions Regulation (#8-373) for Grizzly Bear within TFL 8, it is expected that the General Wildlife Measures (timing of operations, road screening, protection of habitat features, coarse woody debris requirements, stocking standards) can be met operationally without requiring a reduction to the timber harvesting land base or timber supply. The General Wildlife Measures for Badger and the implications for timber supply are discussed in Section 12.2.4.

Table 16 summarizes the areas and land base reductions due to WHAs.

Table 16 Wildlife habitat area summary

Species	WHA Identifiers	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
Lewis's Woodpecker	8-301	0.6	0.6	0.6
Williamson's Sapsucker	8-215, 8-216, 8-217, 8-218, 8-219, 8-220, 8-221, 8-222, 8-223, 8-224, 8-225, 8-315, 8-316, 8-366, 8-392	530.1	482.8	472.4
Grizzly Bear*	8-373	8,352.7	7,628.4	
Badger*	8-329	29.0	27.4	
Total		8,912.4	8,139.2	473.0

* No area was deleted for Grizzly Bear or Badger. The WHA identifier and gross area are included here for completeness of documentation

8.15 RECREATION SITES AND RESERVES

Section 16 of the Forest Recreation Regulation specifies that recreations sites, trails, or interpretive forest sites must not be used for industrial activities unless authorized by a recreation officer. Five recreation sites/reserves located within TFL 8 that were removed from the land base, as summarized in Table 17.

Table 17 Recreation sites and reserves

Name	Type	Gross Area (ha)	Productive Area (ha)	Removed Area (ha)
Arlington Lakes	Recreation Site	64.8	36.4	28.9
Buck Lake	Recreation Site	4.8	3.5	3.0
Solitude Lake	Recreation Reserve	134.7	74.0	53.8
Trapping Creek	Recreation Site	0.5	0.5	0.5
Windfall Creek	Recreation Reserve	4.0	3.6	3.0
Total		208.8	118.0	89.2

8.16 TRANS-CANADA TRAIL

Approximately 20 kilometres of the Trans-Canada trail intersects the northern block of the TFL. Section 16 of the Forest Recreation Regulation specifies that recreations sites, trails, or interpretive forest sites must not be used for industrial activities unless authorized by a recreation officer for industrial activities. Therefore, a twelve metre buffer was applied to each side of the trail and excluded from the land base. The total area contained within the buffer is 48.1 hectares of which 10.8 hectares is productive forest. After accounting for other reductions to the land base, the net area removed from the THLB was 6.9 hectares.

8.17 OLD GROWTH MANAGEMENT AREAS

Non-legal, spatial Old Growth Management Areas (OGMAs) have been established in order to manage for the old growth requirements outlined in the Kootenay Boundary Higher Level Plan Order. All OGMAs within the TFL 8 boundary were excluded from the THLB. The gross area of OGMAs within TFL 8 is 6,566.4 hectares, of which

6,163.3 hectares is productive forest. After accounting for other reductions to the land base, the net area removed from the THLB was 5,090.4 hectares.

8.18 WILDLIFE TREE RETENTION

Section 66 of the Forest Planning and Practices regulation requires that on average, 7% of the total cutblock area harvested must be retained as wildlife tree retention (WTR). Wildlife tree patches (WTPs) are defined during layout and are maintained spatially in Interfor's forestry management system. Existing WTPs with a gross area of 1,187 hectares within this dataset were excluded from the THLB. Of this, 1,130 hectares were productive forest, with a resulting net reduction to the THLB of 892 hectares after previous land base reductions are considered. Approximately 75.1% (i.e. 892ha / 1,187 ha) of the gross WTP area is considered to be THLB.

Interfor's Forest Stewardship Plan (FSP) is consistent with the FPPR and specifies that on average, 7% of each harvested cutblock will be retained as wildlife trees, either in single trees or patches. When the non-THLB component of WTPs is taken into account this means that on average, 5.3% (i.e. 75.1% x 7%) of the THLB in each cutblock will be designated as wildlife tree retention.

For this analysis, it is assumed that existing WTPs are associated with previously harvested stands that are currently 32 years or younger in age (24,722 ha). Therefore, it is necessary to apply an additional aspatial netdown of 419 hectares to achieve the total 5.3% reduction for existing WTPs.

For the remainder of the THLB that is greater than 32 years old (36,654 ha), an aspatial netdown of 5.3%, (1,943 ha) will be applied in the model.

8.19 WILLIAMSON'S SAPSUCKER HABITAT BEST MANAGEMENT PRACTICES

Williamson's Sapsucker (WISA) is listed under Schedule 1 of the federal *Species at Risk Act*, and is on the provincial Blue list in British Columbia. WHAs have been created for Williamson's Sapsucker and have been excluded from the THLB as outlined in Section 8.14. This analysis will include additional requirements for WISA as follows.

Best Management Practices (BMP) have been identified as an essential action in the provincial recovery plan. These BMPs apply nest tree retention and recruitment targets within low, moderate and high suitability habitat classes and within 500 metres of known nest sites in very low suitability habitat. These retention targets range between 85 and 225+ live trees per hectare as outlined in Table 18.

Table 19 summarizes the calculation of equivalent THLB retention areas required to meet the live tree retention targets. After allowing for 5.3% wildlife tree retention, an additional 32.8% retention is required in High Suitability habitat, and 8.2% additional retention is required in Low/Moderate suitability habitat or Very Low Suitability habitat within 500 metres of a nest. This will be addressed in the timber supply model as an aspatial netdown.

Table 18 WISA habitat suitability area summary

Habitat Suitability Rating	Average Live Tree Retention Target (sph)	% Area of New Cutblocks
High	225	100
Low/Moderate, plus	85-125	5-15
Very Low within 500 metres	126-175	25-35
Of a nest	176-225	40-50
	>225	10-20
Low/Moderate Weighted Average	180	

Table 19 WISA retention requirements

Habitat Suitability Rating	Gross Area (ha)	Productive Area (ha)	THLB Area (ha)	THLB SPH from VRI*	Overall Retention %	Adjusted Retention %	Retention Area (ha)
High	307.4	296.2	70.4	591	38.1	32.8	23.1
Low/Moderate or Very Low within 500 metres of a nest	6,626.8	6,194.3	3,438.4	1,329	13.5	8.2	281.9
Total	6,934.2	6,490.5	3,508.8	1,314	14.0	8.7	305.0

* Stands \geq 80 years old

9 Inventory Aggregation

Aggregation of individual forest stands is used to reduce complexity of the inventories for purposes of timber supply modelling.

9.1 ANALYSIS UNITS

Stands are grouped into analysis units (AUs) to reduce the number of yield tables required within the model. For this analysis, base AUs were assigned using ecological units (i.e. combinations of BEC and leading site series) corresponding to those where silviculture information is available for regeneration activities occurring in the past 10 years. The source of the ecological units is the 2006 TEM used for the site index adjustment project. Table 20 summarizes these base analysis units.

Analysis units within the model will be assigned by considering these base AUs and whether the stand is natural or managed and its land base status (THLB/Non-THLB). Table 21 summarizes the analysis units that will be used in the model.

Table 20 Base analysis units

Base Analysis Unit	Description (BEC & Site Series)	THLB Area (ha)	Non-THLB Area (ha)
1	ESSFdc1/dcu1 – 01	4,622	717
2	ESSFdc1/dcu1 – 03	3,561	707
3	ESSFdc1/dcu1 – 04	952	188
4	ESSFdc1/dcu1 – Others	521	771
5	ICHmk1/mw2 – 01	1,782	196
6	ICHmk1/mw2 – 03	1,493	137
7	ICHmk1/mw2 – 04	1,377	95
8	ICHmk1/mw2 – Others	382	193
9	IDFdm1 – 01	3,879	670
10	IDFdm1 – 04	2,818	526
11	IDFdm1 – 05	473	235
12	IDFdm1 – Others	521	382
13	MSdm1 – 01	19,540	2,128
14	MSdm1 – 03	2,143	456
15	MSdm1 – 04	12,124	2,143
16	MSdm1 – 05	685	228
17	MSdm1 – Others	2,826	1,533
18	MSdm1a - All	784	122

Table 21 Modelling analysis units

Analysis Units	Description	Land Base	Regeneration Analysis Unit
1 – 18	Existing Natural Stands (>= 45 yrs)	THLB	1001 – 1018
101 – 118	Existing Managed Stands (33 to 44 yrs)	THLB	2001 – 2018
201 – 218	Existing Managed Stands (19 to 32 yrs)	THLB	2001 – 2018
301 – 318	Existing Managed Stands (13 to 18 yrs)	THLB	2001 – 2018
401 – 418	Existing Managed Stands (≤ 12 yrs)	THLB	2001 – 2018
1001 – 1018	Future Managed Stands (with road Reduction)	THLB	1001 - 1018
2001 – 2018	Future Managed Stands (no road reduction)	THLB	2001 - 2018
3001 – 3018	Existing Stands	THLB	3001 – 3018*

9.2 NON-TIMBER RESOURCES

The forest estate model used for this analysis (PATCHWORKS™) does not require that unique, mutually exclusive zones be established to model non-timber resource requirements. Rather, stands are assigned to non-timber values based on their geographic location to allow constraints to be formulated for those values in the modeling framework. In general, a single stand will often belong and contribute to the status of more than one non-timber resource.

Table 22 provides an overview summary of the aggregations that will be used in this analysis to model non-timber resource objectives. Further details concerning the aggregation and model formulation are found in the sections of this report cross referenced in the table.

Table 22 Aggregation for non-timber resources

Non-timber Resource	Aggregation Level	Objective Type	Section Cross Reference
Williamson's Sapsucker	Habitat Suitability/Nest Buffers	Aspatial retention	Section 8.19
Landscape-Level Biodiversity	Landscape Unit, BEO, BEC, Connectivity Corridor	Min. Retention/Max. Disturbance	Section 12.2.1
Visual Quality	Visual Landscape Inv. Polygon	Max. Disturbance	Section 12.2.3
Mule Deer Winter Range	Mule Deer Planning Cell	Min. Retention/ Max. Disturbance	Section 12.2.4
Moose Winter Range	Moose Planning Cell	Min. Retention/Max. Disturbance	Section 12.2.5
Badger	Badger WHA	Future Harvest Limitation	Section 12.2.6
Watershed health	Surrogate Watersheds	Max. Disturbance (ECA)	Section 12.2.9

10 Growth and Yield

Forest estate modelling requires estimates for attributes such as net volume, species composition, and diameter for different stand types over time as the stands age. Growth and yield assumptions describe how these attributes are developed and incorporated in the model for natural and managed stands.

This section describes the information, data sources, assumptions, and methods for generating growth and yield estimates for TFL8.

10.1 SITE INDEX

Site index is an estimate of site productivity for tree growth and provides a common base for comparing the productivity of different sites. Site index is species-specific and is expressed as the height of the dominant trees at the reference age of 50 years.

A site index adjustment project was completed by J.S. Thrower & Associates Ltd. in 2006. This project provides ground-based estimates of potential site index for second growth stands of Lodgepole pine and western larch using data localized to TFL 8. Site index estimates for spruce, balsam and Douglas-fir are also provided using Ministry of Forests, Lands, Natural Resource Operations & Rural Development (FLNRO) site index conversion equations. The results from this 2006 Site Index Adjustment project will be used for managed stands in the Base Case.

A site productivity layer containing managed stand site index estimates throughout British Columbia is maintained by FLNRO, and includes data for the TFL 8 area. This provides an alternate estimate of managed stand site index, and will be used to complete a sensitivity analysis.

Figure 6 provides a comparison of inventory site index with the 2006 site index adjustment project site index and the provincial site productivity tile site index.

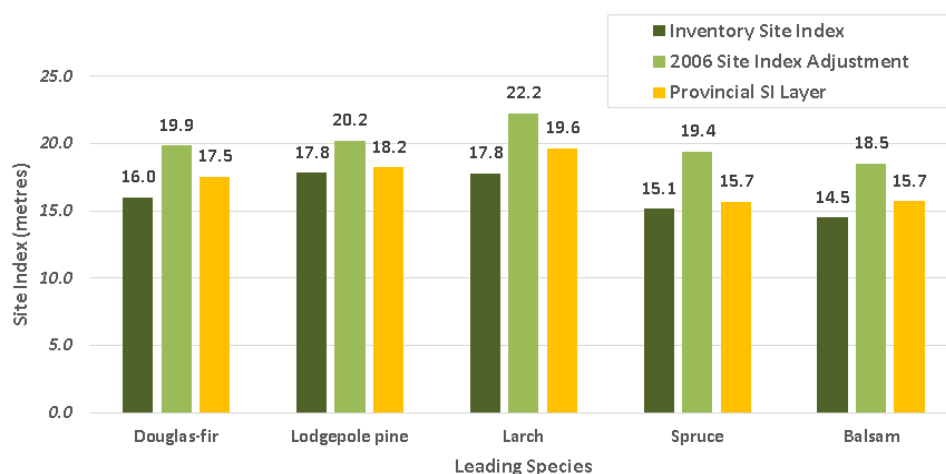


Figure 6 Site index comparison by species

10.2 UTILIZATION LEVELS

Utilization levels define the portion of the tree that is considered to be merchantable volume. Standards for utilization are specified in the cutting authority for the licence, and volume that meets these standards is charged against the allowable annual cut. The minimum merchantable timber specifications for TFL 8 are shown in Table 23. These will be used for all species and analysis units (natural and managed) when developing the yield tables for this analysis.

Table 23 Utilization levels

Species	Minimum Diameter at Breast Height	Maximum Stump Height	Minimum Top Diameter Inside Bark
Lodgepole pine	12.5 cm	30.0 cm	10.0 cm
Other conifer	17.5 cm	30.0 cm	10.0 cm

10.3 DECAY, WASTE, AND BREAKAGE

For natural stands, default reductions to stand volume for decay, waste and breakage will be applied in the Variable Density Yield Projection (VDYP 7) model. Within the TIPSy model used for managed stands, the default Operational Adjustment Factor 2 (OAF2) will be applied to account for merchantable volume losses due to decay, waste, and breakage (Section 10.4).

10.4 OPERATIONAL ADJUSTMENT FACTORS FOR MANAGED STANDS

The TIPSYP projection model reports the potential yield of a specific site, species and management regime.

Operational adjustment factors (OAFs) were applied to reflect the operational environment accordingly:

- OAF1 of 15% to address a constant reduction for unmapped stocking gaps (e.g., non-productive areas, management effects, and losses due to forest health and random risk factors).
- OAF2 of 5% to address dynamic reductions over the life of the stand such as decay, waste and breakage and some forest health concerns.

10.5 VOLUME REDUCTIONS

Deciduous volumes were removed from all yield tables. For natural stands, this was done directly using the VDYP output by not including reported deciduous volumes in total merchantable volume. For managed stands, a percent reduction to total volume was applied based on the proportion of deciduous in the TIPSYP inputs.

In addition, future managed stand yield tables for existing natural stands will be reduced by 2.0% in the model to account for future roads (see Section 8.4.2).

10.6 YIELD TABLES FOR NATURAL STANDS

Natural stands for purposes of this analysis are stands that are greater than 44 years of age, which reflects an approximation of the year (1975) when planting and density control were commonly implemented. Yield tables for natural stands were generated as follows:

- VDYP 7 was used to create a yield table for each individual natural stand in the inventory
- The individual yield tables that represent the stands in an analysis unit were area-weighted to create a composite table for the analysis unit

The required attributes for input into the VDYP 7 model were obtained from FLNRO as part of the project to convert the TFL 8 inventory to the provincial digital standard. Table 24 provides a summary of the natural stand inventory attributes, and the full yield tables are provided in Appendix 1.

Table 24 Average natural stand attributes by AU

AU	Description	Area (ha)	Inventory SI	Species Composition
1	ESSFdc1/dcu1 – 01	2,032	14.5	PI40 BI30 Sx26 Lw3 Fd 1
2	ESSFdc1/dcu1 – 03	1,890	14.0	PI66 BI17 Sx13 Lw2 Fd2
3	ESSFdc1/dcu1 – 04	672	13.5	Sx44 BI41 PI15
4	ESSFdc1/dcu1 – Others	356	12.9	PI48 BI26 Sx23 Lw2 Pa1
5	ICHmk1/mw2 – 01	948	15.8	Fd29 Lw22 Sx16 Cw11 BI11 PI10 At1
6	ICHmk1/mw2 – 03	967	14.9	Fd40 Lw33 PI14 BI5 Sx4 Cw4
7	ICHmk1/mw2 – 04	849	15.3	Lw35 Fd24 PI21 Sx7 BI7 Cw5 At1
8	ICHmk1/mw2 – Others	201	15.2	Fd28 Lw20 Sx19 Cw14 PI9 BI8 At2
9	IDFdm1 – 01	1,793	16.7	Fd48 PI23 Lw23 Sx4 Cw1 At1
10	IDFdm1 – 04	1,686	15.9	Fd52 PI24 Lw21 Sx2 At1
11	IDFdm1 – 05	289	16.6	Fd43 Lw22 PI19 Sx12 BI2 At1 Ac1
12	IDFdm1 – Others	310	15.7	Fd53 Lw19 PI14 Sx7 Py5 BI1 At1
13	MSdm1 – 01	7,099	16.4	PI40 Lw26 Fd20 Sx7 BI6 Cw1
14	MSdm1 – 03	1,587	15.1	PI49 Lw24 Fd21 Sx3 BI3
15	MSdm1 – 04	6,442	15.6	PI40 Fd29 Lw26 Sx3 BI2
16	MSdm1 – 05	271	17.7	PI 43 Sx17 Lw16 Fd 15 BI8 At1
17	MSdm1 – Others	1,528	16.2	Fd32 Lw26 PI25 Sx10 BI6 Cw1
18	MSdm1a - All	301	16.8	Lw31 PI31 Fd23 Sx9 BI4 Cw2
Total		29,221		

10.6.1 EXISTING TIMBER VOLUME COMPARISON

The total volume of the current inventory using polygon specific inventory volumes was compared to the total volume using the natural stand (i.e. generated by VDYP) yield table volumes assigned on the basis of age and analysis unit. This step is undertaken to ensure that no errors were made in aggregation and that no significant aggregation bias exists. Managed stand analysis units were not included in this comparison because volume comparisons with VDYP have little value. Table 25 shows the results of this comparison for the timber harvesting land base. It can be seen that there is very good agreement between the inventory volumes and yield table volumes for existing natural stands. Although there is less agreement for managed stands, they will be modelled using different yield tables generated by TIPSy.

Table 25 Existing timber volume check for the THLB

Polygon Description	AU Range	Inventory Volume (m ³)	Yield Table Volume (m ³)	Percent Agreement (yield table/inventory)
Existing Natural Stands (>= 45 yrs)	1 – 18	5,994,971	6,016,555	100.4
Existing Managed Stands (33 to 44 yrs)	101 – 118	171,116	172,616	100.9
Existing Managed Stands (19 to 32 yrs)	201 – 218	44,121	22,987	52.1
Existing Managed Stands (13 to 18 yrs)	301 – 318	-	-	100.0
Existing Managed Stands (<= 12 yrs)	401 – 418	-	-	100.0
Total		6,210,208	6,212,158	100.0

10.7 YIELD TABLES FOR MANAGED STANDS

Managed stands for this analysis are all stands that are 44 years of age and younger. TFL 8 has a rich history of artificial reforestation efforts dating back to the late 1950s, including research into Douglas-fir and larch restocking, and fertilization of Lodgepole pine sites that were clearcut harvested and mechanically treated. (Tree Farm Licence No. 11 (Carmi) - Working Plan Number Three – Olinger Lumber Company Ltd.). Spruce seed collection programs were initiated in 1965 and planting was commonly used on the TFL by the late 1970's. Density control treatments originated in the early to mid- 1980's on stands harvested in the preceding decades. Yield tables were created for these stands using the Table Interpolation for Stand Yields (TIPSY) model, version 4.4.

10.7.1 SILVICULTURE MANAGEMENT REGIMES

Managed stands were divided into four historic eras that reflect changes in silviculture practices and available data sources for the required TIPSY inputs (i.e. regeneration method, species, density, and genetic gain), plus an additional era for future managed stands. The age of existing stands will be used as a surrogate for the silviculture era. Table 26 lists the silviculture eras and age ranges that were used for this analysis.

Table 26 Silviculture eras

Silviculture Era	Age Range	Area (ha)
1975 – 1986	33 to 44 years	7,433
1987 – 2000	19 to 32 years	10,632
2001 – 2006	13 to 18 years	3,475
2007 – 2019	<= 12 years	9,723
Future Managed		60,484

10.7.1.1 SILVICULTURE ERA (1975 TO 1986)

Between 1975 and 1986, planting was used in small proportions in the ESSF, IDF, and MS zones. For these stands, information provided in the November 2001 report “Yield Tables for Natural and Managed Stands: Management Plan 10 on TFL 8” by J.S. Thrower and Associates Ltd. was used to create the regimes by area weighting the regimes listed in the report by the areas in each analysis unit. Table 27 summarizes the regimes that will be used in the current analysis for this silviculture era.

Table 27 Silviculture regimes for Era 1 stands (1975 to 1986)

AU	Description	Area (ha)	Site Index	Regen Method	Density	Species Composition	Regen Delay
101	ESSF – 01	453	19.1	Plant: 15%	850	Pl100	2
				Nat: 85%	4,150	Bl38 Pl33 Sx26 Cw3	5
102	ESSF – 03	290	17.9	Nat: 100%	6,600	Pl69 Bl26 Sx4 Lw1	5
103	ESSF – 04	10	19.3	Plant: 15%	750	Pl100	2
				Nat: 85%	4,150	Bl38 Pl33 Sx24 Cw5	5
104	ESSF – Others	17	18.3	Plant: 50%	700	Pl100	2
				Nat: 50%	5,170	Bl67 Pl20 Sx13	5
105	ICH – 01	232	21.8	Nat: 100%	1,950	Fd44 Pl29 Lw21 Sx6	5
106	ICH – 03	31	21.4	Nat: 100%	3,100	Pl38 Bl34 Sx18 Fd 9 Lw1	5
107	ICH – 04	86	21.8	Nat: 100%	4,050	Pl40 Bl40 Sx20	5
108	ICH – Others	33	22.6	Nat: 100%	1,800	Pl40 Sx26 Fd 16 Lw10 Bl8	5
109	IDF – 01	695	21.3	Plant: 8%	700	Pl74 Sx21 Lw5	2
				Nat: 92%	4,100	Pl66 Fd19 Lw9 Sx4 At2	5
110	IDF – 04	376	19.9	Plant: 12%	1,035	Pl62 Fd35 Sx3	2
				Nat: 88%	3,800	Pl70 Fd13 Lw10 Sx4 Cw3	5
111	IDF – 05	65	21.6	Plant: 20%	785	Pl66 Sx33 Fd1	2
				Nat: 80%	3,480	Pl57 Sx14 Lw13 Fd12 At4	5
112	IDF – Others	56	20.7	Plant: 7%	1,035	Pl62 Fd35 Sx3	2
				Nat: 93%	4,250	Pl53 Fd19 Sx12 Lw12 Bl2 Cw2	5
113	MSdm1 – 01	3,208	21.0	Plant: 12%	1,000	Pl83 Sx14 Lw3	2
				Nat: 88%	3,650	Pl70 Lw11 Fd7 Bl6 Sx5 At1	5
114	MSdm1 – 03	58	20.4	Plant: 16%	550	Pl91 Sx9	2
				Nat: 84%	3,850	Pl84 Lw7 Fd6 Sx3	5
115	MSdm1 – 04	1,248	20.8	Plant: 8%	700	Pl77 Sx22 Fd1	2
				Nat: 92%	3,800	Pl69 Fd11 Lw7 Sx6 Bl6 Ac1	5
116	MSdm1 – 05	217	21.3	Plant: 3%	800	Pl100	2
				Nat: 97%	4,570	Pl67 Bl12 Lw11 Fd7 Ac3	5
117	MSdm1 – Others	357	21.6	Plant: 12%	700	Pl60 Sx40	2
				Nat: 88%	3,950	Pl85 Sx7 Bl3 Lw3 Fd1 At1	5
118	MSdm1a – All	1	22.5	Nat: 100%	2,075	Fd33 Pl30 Lw28 Sx7 Bl2	5
Total		7,433					

10.7.1.2 SILVICULTURE ERA 2 (1987 TO 2000)

The proportion of planting increased in all biogeoclimatic zones between 1987 and 2000. Genetically improved stock was also available, but was planted in relatively small proportions resulting in an overall gain of 0.9 (spruce), 0.3 (Douglas-fir), and 0.1 (pine). Similar to Era 1 stands, information provided in the November 2001 report “*Yield Tables for Natural and Managed Stands: Management Plan 10 on TFL 8*” was used to create the regimes by area weighting the regimes listed in the report by the areas in each analysis unit. Table 28 summarizes the regimes that will be used in the current analysis for this silviculture era.

Table 28 Silviculture regimes for Era 2 stands (1987 to 2000)

AU	Description	Area (ha)	Site Index	Regen Method	Density	Species Composition	Regen Delay
201	ESSF – 01	1,038	18.7	Plant: 50%	1,050	PI52 Sx48	2
				Nat: 50%	6,400	PI44 Sx28 BI22 Lw6	5
202	ESSF – 03	676	17.6	Plant: 50%	800	PI77 Sx22 Lw1	2
				Nat: 50%	6,200	PI69 Sx19 BI11 Lw1	5
203	ESSF – 04	101	18.9	Plant: 50%	1,200	PI70 Sx29 Lw1	2
				Nat: 50%	4,500	PI54 BI25 Sx21	5
204	ESSF – Others	49	16.7	Plant: 50%	900	PI52 Sx45 Lw3	2
				Nat: 50%	4,650	PI46 Sx29 BI20 Lw5	5
205	ICH – 01	158	22.0	Plant: 36%	1,065	PI64 Lw21 Sx14 Py1	2
				Nat: 64%	4,375	PI42 Sx14 BI13 Fd13 Lw13 Cw5	5
206	ICH – 03	156	20.6	Plant: 50%	1,070	PI 58 Lw28 Sx8 Py6	2
				Nat: 50%	5,350	PI54 Lw27 Fd9 Sx7 Py3	5
207	ICH – 04	95	21.9	Plant: 50%	1,130	PI57 Sx23 Lw20	2
				Nat: 50%	2,950	PI51 Lw26 Sx19 At3 BI1	5
208	ICH – Others	32	21.8	Plant: 50%	559	PI58 Sx27 Lw14 Py1	2
				Nat: 50%	3,900	PI48 Sx27 Lw12 BI8 Fd5	5
209	IDF – 01	428	21.2	Plant: 28%	950	PI55 Lw30 Py8 Sx4 Fd3	2
				Nat: 72%	4,150	PI53 Fd27 Lw14 Sx3 Py2 Ac1	5
210	IDF – 04	197	19.7	Plant: 30%	900	Lw39 PI33 Py14 Fd11 Sx3	2
				Nat: 70%	3,000	PI42 Fd28 Lw23 Sx4 Py3	5
211	IDF – 05	32	22.8	Plant: 50%	900	Lw49 PI48 Sx3	2
				Nat: 50%	1,650	Lw47 PI43 Fd7 BI3	5
212	IDF – Others	83	22.8	Plant: 50%	775	Lw48 PI46 Sx3 Py2 Fd1	2
				Nat: 50%	1,550	PI44 Lw44 Fd8 BI2 Sx1 Py1	5
213	MSdm1 – 01	4,921	21.0	Plant: 35%	925	PI67 Sx25 Lw8	2
				Nat: 65%	4,900	PI69 Sx14 Lw10 BI4 Fd3	5
214	MSdm1 – 03	170	20.1	Plant: 33%	650	PI65 Sx26 Lw9	2
				Nat: 67%	5,900	PI54 Lw17 Fd11 BI9 Sx7 Ac2	5
215	MSdm1 – 04	1,706	20.7	Plant: 35%	900	PI58 Lw22 Sx19 Fd1	2
				Nat: 65%	6,875	PI64 Lw21 Sx7 BI3 At3 Fd2	5
216	MSdm1 – 05	126	21.1	Plant: 50%	950	PI66 Sx33 Lw1	2
				Nat: 50%	2,850	PI60 Sx26 Lw5 BI7 Fd1 Ac1	5
217	MSdm1 – Others	427	21.4	Plant: 11%	725	PI63 Sx33 Lw4	2
				Nat: 89%	7,575	PI91 Lw6 Sx1 BI1 Fd1	5
218	MSdm1a – All	236	22.6	Plant: 36%	2,075	PI64 Lw20 Sx15 Py1	2
				Nat: 64%	4,350	PI42 Sx15 Fd13 Lw13 BI12 Cw5	5
Total		10,632					

10.7.1.3 SILVICULTURE ERA 3 (2001 TO 2006)

There is limited information available for silviculture practices during this period as a result of changes to Interfor's forest management system. The information package completed in 2006 for the previous timber supply analysis assumed that 100% of stands were planted. However, based on the work completed by Interfor for Era 4 stands (see Section 10.7.1.4), and the assumptions for future managed stands provided in the November 2001 report "Yield Tables for Natural and Managed Stands: Management Plan 10 on TFL 8" it appears that there was likely still a reliance on natural regeneration. Therefore, this analysis will assume the same silviculture regimes as those used for Era 4 (2007 to 2019) stands. Table 29 summarizes the silviculture regimes that will be used in the current analysis for this silviculture era.

Table 29 Silviculture regimes for Era 3 stands (2001 to 2006)

AU	Description	Area (ha)	Site Index	Regen Method	Density	Species Composition	Regen Delay
301	ESSF – 01	259	18.0	Plant: 64% Nat: 36%	1,200 3,600	Sx46 Pl41 Bl13 Pl56 Bl41 Sx3	2 5
302	ESSF – 03	238	17.0	Plant: 60% Nat: 40%	1,250 5,000	Pl55 Sx42 Bl3 Pl69 Bl26 Sx4 Lw1	2 5
303	ESSF – 04	35	18.1	Plant: 84% Nat: 16%	1,200 2,800	Sx60 Pl38 Bl2 Bl52 Pl25 Sx23	2 5
304	ESSF – Others	33	16.4	Plant: 64% Nat: 36%	1,230 4,100	Pl46 Sx46 Bl8 Pl61 Bl34 Sx5	2 5
305	ICH – 01	105	22.2	Plant: 100%	1,300	Sx34 Fd33 Lw31 Cw1 Py1	2
306	ICH – 03	73	20.5	Plant: 100%	1,300	Fd54 Pl39 Sx7	2
307	ICH – 04	78	21.0	Plant: 100%	1,400	Fd39 Lw27 Pl12 Sx11 Py10 Cw1	2
308	ICH – Others	29	21.4	Plant: 100%	1,350	Fd37 Lw27 Sx26 Pl6 Py3 Cw1	2
309	IDF – 01	365	20.2	Plant: 100%	1,250	Fd53 Lw22 Pl11 Sx10 Py4	2
310	IDF – 04	239	19.4	Plant: 100%	1,250	Fd49 Py32 Pl15 Lw3 Sx1	2
311	IDF – 05	52	20.8	Plant: 100%	1,200	Sx33 Lw26 Fd23 Pl18	2
312	IDF – Others	29	19.0	Plant: 100%	1,300	Fd53 Lw20 Pl12 Sx9 Py6	2
313	MSdm1 – 01	892	20.9	Plant: 69% Nat: 31%	1,250 3,200	Fd34 Lw30 Sx26 Pl9 Py1 Pl69 Bl14 Lw11 Fd4 Sx1 Ac1	2 5
314	MSdm1 – 03	71	20.4	Plant: 56% Nat: 44%	1,250 6,700	Pl76 Sx24 Pl67 Bl33	2 5
315	MSdm1 – 04	706	20.6	Plant: 51% Nat: 49%	1,250 3,100	Lw33 Fd32 Pl27 Sx8 Pl83 Bl9 Lw5 Fd3	2 5
316	MSdm1 – 05	3	21.2	Plant: 33% Nat: 67%	1,250 9,000	Sx36 Fd31 Lw23 Pl6 Py4 Pl87 Bl10 Fd1 Lw1 Sx1	2 5
317	MSdm1 – Others	157	21.1	Plant: 62% Nat: 38%	1,250 3,700	Fd33 Lw31 Sx19 Pl17 Pl76 Bl11 Lw7 Fd3 Sx1 Ac1 At1	2 5
318	MSdm1a – All	113	22.7	Plant: 100%	1,100	Sx52 Fd36 Lw6 Cw6	2
Total		3,475					

10.7.1.4 SILVICULTURE ERA 4 (2007 TO 2019)

Interfor analyzed silviculture records from 2007 to 2017 to develop the inputs for existing managed stands less than or equal to 12 years of age. All ICH, IDF, and MSdm1a stands were planted, with a combination of planting and natural regeneration on ESSF and MSdm1 stands. Table 30 lists the silviculture regimes used to develop the yield tables for existing era 4 managed stands (AUs 401 to 418). These regimes will also be used for all future managed stands.

Table 30 Silviculture regimes for Era 4 stands (2007 to 2019)

AU	Description	Area (ha)	Site Index	Regen Method	Density	Species Composition	Regen Delay
401	ESSF – 01	841	17.8	Plant: 64% Nat: 36%	1,200 3,600	Sx46 Pl41 Bl13 Pl56 Bl41 Sx3	2 5
402	ESSF – 03	468	17.8	Plant: 60% Nat: 40%	1,250 5,000	Pl55 Sx42 Bl3 Pl69 Bl26 Sx4 Lw1	2 5
403	ESSF – 04	133	18.2	Plant: 84% Nat: 16%	1,200 2,800	Sx60 Pl38 Bl2 Bl52 Pl25 Sx23	2 5
404	ESSF – Others	65	17.3	Plant: 64% Nat: 36%	1,230 4,100	Pl46 Sx46 Bl8 Pl61 Bl34 Sx5	2 5
405	ICH – 01	338	21.8	Plant: 100%	1,300	Sx34 Fd33 Lw31 Cw1 Py1	2
406	ICH – 03	266	20.2	Plant: 100%	1,300	Fd54 Pl39 Sx7	2
407	ICH – 04	270	20.7	Plant: 100%	1,400	Fd39 Lw27 Pl12 Sx11 Py10 Cw1	2
408	ICH – Others	87	20.8	Plant: 100%	1,350	Fd37 Lw27 Sx26 Pl6 Py3 Cw1	2
409	IDF – 01	599	20.4	Plant: 100%	1,250	Fd53 Lw22 Pl11 Sx10 Py4	2
410	IDF – 04	321	19.1	Plant: 100%	1,250	Fd49 Py32 Pl15 Lw3 Sx1	2
411	IDF – 05	35	21.2	Plant: 100%	1,200	Sx33 Lw26 Fd23 Pl18	2
412	IDF – Others	43	19.1	Plant: 100%	1,300	Fd53 Lw20 Pl12 Sx9 Py6	2
413	MSdm1 – 01	3,420	20.9	Plant: 69% Nat: 31%	1,250 3,200	Fd34 Lw30 Sx26 Pl9 Py1 Pl69 Bl14 Lw11 Fd4 Sx1 Ac1	2 5
414	MSdm1 – 03	257	19.9	Plant: 56% Nat: 44%	1,250 6,700	Pl76 Sx24 Pl67 Bl33	2 5
415	MSdm1 – 04	2,022	20.5	Plant: 51% Nat: 49%	1,250 3,100	Lw33 Fd32 Pl27 Sx8 Pl83 Bl9 Lw5 Fd3	2 5
416	MSdm1 – 05	69	20.9	Plant: 33% Nat: 67%	1,250 9,000	Sx36 Fd31 Lw23 Pl6 Py4 Pl87 Bl10 Fd1 Lw1 Sx1	2 5
417	MSdm1 – Others	357	21.0	Plant: 62% Nat: 38%	1,250 3,700	Fd33 Lw31 Sx19 Pl17 Pl76 Bl11 Lw7 Fd3 Sx1 Ac1 At1	2 5
418	MSdm1a – All	132	22.6	Plant: 100%	1,100	Sx52 Fd36 Lw6 Cw6	2
Total		9,723					

10.7.1.5 FUTURE MANAGED STANDS

Future managed stands will use the silviculture regimes outlined in Table 30 for existing managed stands less than or equal to 12 years of age. AUs 1001 to 1018 will be used when existing natural stands (AUs 1 to 18) are harvested and will have a reduction applied for future roads as outlined in Section 8.4.2. AUs 2001 to 2018 will be used when existing managed stands are harvested and will not have a reduction for future roads applied. Table 31 summarizes the area and site index for the future managed stands.

Table 31 Areas and site index for future managed stands

Description	Analysis Units 1001 to 1018			Analysis Units 2001 to 2018		
	AU	Area (ha)	Site Index	AU	Area (ha)	Site Index
ESSFdc1/dcu1 – 01	1001	2,032	17.9	2001	2,590	18.1
ESSFdc1/dcu1 – 03	1002	1,890	17.1	2002	1,671	17.6
ESSFdc1/dcu1 – 04	1003	672	18.3	2003	279	18.4
ESSFdc1/dcu1 – Others	1004	356	16.0	2004	165	17.0
ICHmk1/mw2 – 01	1005	948	22.0	2005	834	22.0
ICHmk1/mw2 – 03	1006	967	19.9	2006	526	20.2
ICHmk1/mw2 – 04	1007	849	20.8	2007	529	20.9
ICHmk1/mw2 – Others	1008	201	21.5	2008	181	21.2
IDFdm1 – 01	1009	1,793	20.3	2009	2,086	20.5
IDFdm1 – 04	1010	1,686	18.7	2010	1,133	19.3
IDFdm1 – 05	1011	289	21.3	2011	184	21.2
IDFdm1 – Others	1012	310	18.1	2012	211	20.1
MSdm1 – 01	1013	7,099	20.8	2013	12,441	21.0
MSdm1 – 03	1014	1,587	19.5	2014	555	20.1
MSdm1 – 04	1015	6,442	20.4	2015	5,682	20.7
MSdm1 – 05	1016	271	21.1	2016	415	21.2
MSdm1 – Others	1017	1,528	20.7	2017	1,298	21.3
MSdm1a – All	1018	301	22.0	2018	483	22.6
Total		29,221			31,263	

10.7.2 REGENERATION DELAY

Regeneration delay is the time elapsed between harvesting and the establishment of a new stand of trees, taking into account the age of the planted trees. For this analysis, regeneration delays will be applied in the yield tables when they are created using TIPSYS. Interfor typically experiences regeneration delays of 2 years or less for planted stands, and 5 years when stands regenerate naturally. These regeneration delays will be used for this analysis.

10.7.3 REGENERATION ASSUMPTIONS

As discussed in Section 9.1, analysis units are based on ecological units (BEC/leading site series) from the 2006 TEM used for the site index adjustment project. Existing stands will regenerate to the corresponding future managed stand analysis unit with the species composition and other regeneration parameters outlined previously.

Natural stands (AUs 1 to 18) will regenerate to future managed stands (AUs 1001 to 1018) with a volume reduction for future roads. Existing managed stands (AUs 101 to 118, 201 to 218, 301 to 318, and 401 to 418) will regenerate to future managed stands (AUs 2001 to 2018) that do not have a reduction for future roads. Yield tables for future managed stands will use the area weighted managed stand site indices for the individual regenerated species within the analysis unit.

10.7.4 GENETIC IMPROVEMENT

Genetic gains for Era 2 (1987 to 2000) were determined from the analysis completed in the November 2001 report *“Yield Tables for Natural and Managed Stands: Management Plan 10 on TFL 8”* by area weighting the reported genetic gain for planted stock in each analysis unit.

Genetic gains for Era 3 (2001-2006) were determined from the information package produced in 2006, unless they were greater than those calculated for Era 4 (2007-2017) in which case the Era 4 numbers were used.

Planting records from 2007 to 2017 were combined with the genetic gain for each seedlot to produce weighted estimates of genetic gain for Era 4 and future managed stands. Table 32 summarizes the genetic gain that will be used in this analysis for planted stock

Table 32 Genetic gain

Silviculture Era	Spruce	Pine	Douglas-fir	Larch
Era 1 (1975 – 1986)	0.0	0.0	0.0	0.0
Era 2 (1987 – 2000)	0.9	0.1	0.3	0.0
Era 3 (2001 – 2006)	10.0	7.0	0.0	21.5
Era 4 (2007 – 2019)	12.7	7.0	6.5	21.5
Future	12.7	7.0	6.5	21.5

10.7.5 NOT SATISFACTORILY RESTOCKED

Not satisfactorily restocked (NSR) is defined as a forested area that does not have a sufficient number of well-spaced trees of desirable species. Backlog NSR refers to stands disturbed prior to 1987 that are not declared as satisfactorily restocked. Backlog NSR is not considered to be an issue in TFL8 and was therefore not addressed in this analysis. Current NSR typically refers to stands recently disturbed (i.e., since 1987) that are not yet declared as being stocked.

Current NSR is addressed in the analysis as part of the regular regeneration assumptions described in Section 10.7.1, and through the inventory update undertaken during the data preparation for the analysis as described in Section 7.2.

11 Protection

Damage to timber caused by fire, wind, insects, diseases and other pests contribute to loss in harvestable volumes. This volume loss is difficult to quantify, although losses to insect and disease that are normally found in stands (i.e. endemic losses) are accounted for in yield table estimates. Depending on the type of damage and stand accessibility, losses due to catastrophic or epidemic events may be either salvageable or unsalvageable, and are not accounted for in the yield tables.

TFL 8 has good road access virtually throughout which allow occurrences of catastrophic stand damage to easily be detected and accessible for salvage harvesting. Salvage operations are normally carried out using amendments to existing cutting authorities, developing new cutting permits, or through the FLNRO Small Scale Salvage (SSS) program. Stands within the THLB that are damaged and not recovered are usually small, isolated, or of marginal quality.

11.1 UNSALVAGED LOSSES

There is a very effective Small Scale Salvage (SSS) program that salvages damaged timber from within TFL 8, particularly during periods of low lumber prices that make it difficult for Interfor to salvage the timber economically. In the past, volume harvested under the SSS program was charged to the Forest Service Reserve attached to the Boundary TSA. If not harvested, this volume would normally be considered as part of the TFL 8 unsalvaged losses. Although it has been harvested, the volume was not charged to the TFL 8 AAC and should be still be considered as an unsalvaged loss for purposes of the TFL 8 timber supply analysis.

Table 33 summarizes the SSS and other volumes charged to the Forest Service Reserve from 2007 to 2019 based on Harvest Billing System records for timber marks within TFL 8. Interfor had reduced harvest activity during the period from 2009 to 2012, a portion of the volume harvested in 2007 was to clear a hydro right-of-way by Fortis BC, and a portion of the volume harvested in 2019 was to clear a right-of-way for a sewer project at Big White. Because these harvest volumes are not representative of the ongoing salvage within TFL 8, they have been excluded from the annual average volumes to be used in this analysis. Therefore, the SSS harvest volume that is not charged to the TFL 8 AAC is estimated to be 2,071 m³/year (i.e. 1,414 m³ + 17,229 m³ divided by 9 years).

There is also damaged timber that is not salvaged by either Interfor or the SSS program. Provincial aerial overview survey (AOS) was used to estimate that these annual losses are 1,575 m³/year as summarized in Table 34. Additional information describing the process used to determine these estimates is provided in Appendix 2. Accordingly, the total allowance for unsalvaged losses for this analysis will be 3,646 m³/year. Annual harvest volumes resulting from the timber supply model will be reduced by this amount for reporting harvest flows.

Table 33 Volume charged to Forest Service Reserve

Period/Description	Total Volume (m ³)	Annual Volume (m ³)
2007 (Hydro-line)*	4,265	-
2007-2008 (Salvage)	1,414	707
2009-2012 (Salvage, Interfor Reduced Activity)*	34,870	-
2013-2019 (Salvage)	17,229	2,461
2019 (Big White Sewer Utility)*	835	-
Total	58,613	2,071

* Not considered for average annual volume calculations

Table 34 Unsalvaged losses

Loss Category	Annual Volume (m ³ /year)
Mountain pine beetle	1,358
Balsam bark beetle	71
Douglas-fir bark beetle	41
Wildfire	81
Windthrow	0
Slides	24
Total	1,575

11.2 GRADE 4 CREDIT

Grade 4 logs are low quality logs that are generally not suitable for lumber production. Under the Cut Control Regulation, Grade 4 volume delivered to a facility other than a sawmill or veneer plant (i.e. pulp, bioenergy, etc.) is not counted against cut control (i.e. AAC) if an application is submitted to and approved by the government. This is known as the Grade 4 credit and the intent is to increase the utilization of low quality logs. The Grade 4 credit on TFL 8 has been minimal since 2007, as summarized in Table 35.

Table 35 Grade 4 credit

Period	Grade 4 Credit (m ³)
2007-2014	-
2015	684
2016-2017	-
2018	3,598
Annual Average	357

12 Integrated Resource Management

This section describes the criteria and considerations used to model non-timber resources.

12.1 FOREST RESOURCE INVENTORIES

The status of the non-timber resource inventories used in this analysis has previously be described in Section 6. If required, additional details will be provided in the individual sections below.

12.2 NON-TIMBER FOREST RESOURCE MANAGEMENT

Forest cover requirements and maximum disturbance objectives are applied within the timber supply model to recognize timber and non-timber resource objectives. These requirements maintain appropriate levels of specific

forest types needed to satisfy the objectives for wildlife habitat, biological diversity, etc. Forest cover requirements are used by the model to limit harvesting within the THLB.

12.2.1 LANDSCAPE-LEVEL BIODIVERSITY

The Kootenay-Boundary Higher Level Plan Order signed October 26, 2002 specifies the required retention of old seral stage by landscape unit, biodiversity emphasis option, and biogeoclimatic zone. The BEC version in place at the time of the Order (BEC V4) is used for the purpose of determining the old seral requirements. Table 36 summarizes the old seral requirements specified in the Order. Note that for units with a low biodiversity emphasis option, the initial KBHLPO old seral targets are based on a 2/3 drawn as per the Landscape Unit Planning Guidebook. The full targets must be met by the end of the third rotation, or 240 years from the date of the Order.

Spatial OGMA's have been developed cooperatively by Interfor and government as a means to meet the old seral requirements operationally. These OGMA's have been removed from the THLB as outlined in Section 8.17, and no additional seral requirements will be implemented for the Base Case. However, a sensitivity analysis will explore the effect of implementing the requirements outlined in Table 36 as forest cover objectives.

Table 36 Old seral requirements

LU	Bio-diversity Emphasis	BEC (v4)	Productive Forest Area (ha)	Old Seral Age (years)	Initial Old Seral Required (%)	Old Required by End of 3 rd Rotation (%)
BO1	High	IDFdm1	2,954	>250	19	19
	Intermediate	ICHmk1	832	>140	14	14
		MSdm1	2,531	>140	14	14
BO7	Low	ESSF dc1	7,232	>140	4.7*	14
		ICH mk1	8,239	>140	4.7*	14
		ICH mw2	88	>250	3*	9
		IDF dm1	4,110	>250	4.3*	13
		MS dm1	14,693	>140	4.7*	14
BO8	Low	ESSF dc1	3,119	>140	4.7*	14
		IDF dm1	7,877	>250	4.3*	13
		MS dm1	19,931	>140	4.7*	14

* Initial target drawn down by 2/3

12.2.2 STAND-LEVEL BIODIVERSITY

Wildlife tree retention targets consistent with Interfor's FSP have been addressed through a THLB reduction as specified in Section 8.18. Therefore, no additional requirements will be implemented in the analysis.

12.2.3 VISUAL QUALITY

Section 7 of the Government Actions Regulation permits the government to establish scenic areas and Visual Quality Objectives (VQOs), and Section 1.1 of the Forest Planning and Practices Regulation prescribes the extent of alteration resulting from the size, shape and location of cutblocks and roads within each VQO category.

A Visual Landscape Inventory (VLI) has been completed for TFL 8, and establishes VQOs that must be met for each VLI polygon. Visually effective green-up (VEG) heights and plan-2-perspective (P2P) ratios will be used to determine the maximum disturbance allowed for each polygon within the model.

The area by 5 percent slope classes within each VLI polygon was determined using LiDAR data. These areas were then used to calculate an area weighted P2P ratio and VEG height for each VLI polygon using the specified values by slope class provided in Table 37. The P2P ratios were then multiplied by the allowable disturbance in perspective view to determine the maximum proportion of the polygon that can be below the VEG height. For purposes of this analysis, the maximum allowable disturbance in perspective view is assumed to be equivalent to that for polygons with a high Visual Absorption Capability (VAC).

Table 38 summarizes the results of the calculations, and provides the maximum proportion of each VLI polygon that can be less than the indicated VEG height at any given time.

Table 37 Slope classes for calculating P2P ratio and VEG height

	0- 5%	5- 10%	10- 15%	15- 20%	20- 25%	25- 30%	30- 35%	35- 40%	40- 45%	45- 50%	50- 55%	55- 60%	60- 65%	65- 70%	75+ %
P2P	4.68	4.23	3.77	3.41	3.04	2.75	2.45	2.22	1.98	1.79	1.60	1.45	1.29	1.17	1.04
VEG	3.00	3.50	4.0	4.50	5.00	5.50	6.00	6.50	6.50	7.00	7.50	8.00	8.50	8.05	8.50

Table 38 Maximum allowable proportion below VEG height by VLI polygon

VLI Polygon	VQO	Productive Forest Area (ha)	Maximum Perspective Disturbance (%)	P2P Ratio	Maximum Planimetric Disturbance (%)	VEG Height (m)	Average Slope (%)
34	Modification	223.1	18	3.23	58.1	4.9	21.8
37	Modification	3,882.1	18	2.95	53.1	5.3	27.1
51	Partial Retention	71.8	7	2.60	18.2	5.9	34.9
72	Modification	887.1	18	2.69	48.4	5.7	32.3
84	Modification	415.3	18	2.34	42.1	6.3	37.9
95	Partial Retention	102.9	7	2.03	14.2	6.9	46.4
99	Modification	9.6	18	3.77	67.9	4.1	14.2
103	Modification	137.9	18	2.67	48.0	5.7	32.0
109	Modification	75.6	18	2.34	42.2	6.2	37.6
118	Modification	230.1	18	2.27	40.8	6.4	39.4
254	Partial Retention	192.6	7	2.71	18.9	5.7	31.2
331	Partial Retention	174.5	7	2.60	18.2	5.8	33.0
345	Partial Retention	19.6	7	2.25	15.8	6.4	40.6
366	Retention	3.4	1.5	4.00	6.0	3.8	10.5
424	Partial Retention	11.4	7	2.59	18.2	5.9	33.6
428	Retention	2.9	1.5	2.55	3.8	6.0	35.2
438	Partial Retention	3.9	7	3.97	27.8	3.8	10.8
441	Modification	73.8	18	2.38	42.9	6.2	36.5
459	Modification	28.2	18	2.63	47.3	5.7	30.7
477	Partial Retention	4.4	7	3.22	22.5	4.8	21.4
Total		6,550.3					

12.2.4 MULE DEER WINTER RANGE

Government Actions Regulation (GAR) Order #u-8-008 signed May 8th, 2006 outlines the requirements for management of mule deer winter range within TFL 8. This includes limits on the amount of road construction and open road access, maintenance of snow interception cover by planning cell and snowpack zone, as well as limits on the amount of forest less than 21 years in moderate snowpack zone planning cells. Road requirements of the GAR Order are addressed operationally and are not included in the timber supply modelling as they do not influence timber supply.

12.2.4.1 SNOW INTERCEPTION COVER

Snow interception cover (SIC) is specified in the GAR Order as a minimum stand age by snowpack zone, with snowpack zones defined using biogeoclimatic zone, elevation, and aspect. BEC version 6 was published in January 2006 and was used to determine the snowpack zones for the MDWR areas within TFL 8 using the definitions in Table 39.

The GAR Order provides the percent retention above SIC age by planning cell, and also indicates that the SIC requirements only apply to the productive forest area outside areas identified as fire maintained ecosystems (FER). Area weighted minimum SIC ages were calculated for each planning cell using the definitions from Table 39. The results of these calculations, along with the minimum retention requirements are summarized in Table 40. These retention requirements will be applied in the analysis for the productive forest land (excluding FMER areas) for each MDWR planning cell.

Table 39 Snowpack zone and SIC definition

Snowpack Zone	Biogeoclimatic Zone (Version 6)	Minimum Stand Age (years)
Shallow	PP xh	101
	IDF xh	101
	IDF dm1*	101
Moderate	ICH dw	121
	IDF dm1**	101
	MS (all)	101
Deep	ICH mk1	121
	ICH mw2	121
	ESSF (all)	121

* < 1000 m elevation with aspects 135-275 °

** All other IDF dm1

Table 40 MDWR SIC requirements summary

MDWR Planning Cell	Productive Forest Area (ha)	FMER Area (ha)	Shallow Snowpack Area (ha)	Moderate Snowpack Area (ha)	Deep Snowpack Area (ha)	Total MDWR Productive Area (ha)	Average SIC AGE (years)	Retention (%)
4	739.2	176.1	13.1	550.0	-	563.1	101	19.5
5	1,806.9	715.6	21.1	1,070.1	-	1,091.3	101	20.0
8	53.7	22.5	-	31.2	-	31.2	101	16.8
38	173.6	53.4	-	120.2	-	120.2	101	20.0
40	145.0	87.6	0.1	57.3	-	57.4	101	20.0
41	426.8	199.1	4.2	223.5	-	227.7	101	18.0
42	435.7	190.0	10.6	235.2	-	245.8	101	20.0
43	430.8	162.5	34.1	234.2	-	268.3	101	18.2
46	831.9	290.7	64.0	458.5	18.7	541.2	102	20.0
47	574.9	97.3	44.0	394.5	39.1	477.6	103	21.5
48	513.8	-	-	513.8	-	513.8	101	20.0
49	700.9	111.0	183.4	406.6	-	590.0	101	17.9
50	161.0	36.4	57.5	67.2	-	124.6	101	17.3
52	796.7	308.2	128.4	287.3	72.8	488.5	104	19.9
Total	7,790.9	2,450.3	560.4	4,649.6	130.6	5,340.7		

12.2.4.2 MDWR MAXIMUM DISTURBANCE

GAR Order #u-8-008 also specifies that within the Moderate Snowpack Zone, a maximum of 33% of the net MDWR area within each planning cell can be less than 21 years of age. Table 41 summarizes the area weighted maximum disturbance that will be applied to each MDWR planning cell in the analysis.

Table 41 MDWR maximum disturbance levels

MDWR Planning Cell	Shallow Snowpack Area (ha)	Moderate Snowpack Area (ha)	Deep Snowpack Area (ha)	Total MDWR Productive Area (ha)	Maximum Proportion < 21 years*
4	13.1	550.0	-	563.1	32.2%
5	21.1	1,070.1	-	1,091.3	32.4%
8	-	31.2	-	31.2	33.0%
38	-	120.2	-	120.2	33.0%
40	0.1	57.3	-	57.4	32.9%
41	4.2	223.5	-	227.7	32.4%
42	10.6	235.2	-	245.8	31.6%
43	34.1	234.2	-	268.3	28.8%
46	64.0	458.5	18.7	541.2	28.0%
47	44.0	394.5	39.1	477.6	27.3%
48	-	513.8	-	513.8	33.0%
49	183.4	406.6	-	590.0	22.7%
50	57.5	67.2	-	124.6	17.8%
52	128.4	287.3	72.8	488.5	19.4%
Total	560.5	4,649.6	130.6	5,340.7	

* Calculated as (Moderate Snowpack Area * 0.33)/ Total Area

12.2.5 MOOSE WINTER RANGE

GAR Order #u-8-007 signed May 8th, 2006 outlines the requirements for management of moose winter range within TFL 8. It does not apply to areas that are identified as mule deer winter range as specified in Section 12.2.4. Table 42 summarizes the areas where the GAR Order applies.

The GAR Order includes retention and disturbance objectives for planning cells that will be modelled for this timber supply analysis. At least 20% of each planning cell must be greater than 16 metres in height, and no more than 40% of each planning cell can be less than 31 years of age. For this analysis, the age at which stands achieve 16 metres in height will be determined for each analysis unit individually, and the model will be configured to ensure that 20% of each planning cell is greater than the required age.

A third objective that specifies minimum retention within riparian management areas of S1, S2, S3 and S5 streams and W1, W3 and W5 wetlands will not be directly modelled as it is assumed that the land base reduction for riparian management outlined in Section 8.13 combined with the wildlife tree retention outlined in Section 8.18 will address these requirements.

Table 42 Moose winter range areas

Moose Planning Cell	Productive Forest Area (ha)
1	3,476.2
2	5,821.6
3	314.4
4	2,846.7
7	7,239.7
8	1,451.7
10	1,934.4
12	4,895.1
Total	27,979.7

12.2.6 BADGER

The General Wildlife Measures for the Badger WHA (WHA #8-329) only allow harvesting for purposes of ecological restoration to create future stands with a target density of 20 stems per hectare. Therefore, this analysis will allow a one-time harvest within the WHA, with the regenerated stand not being available for subsequent harvest.

12.2.7 OTHER RESOURCE FEATURES

Although there are no known archaeological sites requiring reserves with the TFL, reserves will be established if sites are encountered. There are approximately 70 permanent sample plot or growth and yield installations within the TFL that are typically buffered by 50 metres from the outer radius of the plot. Additional resource features include nine Map Notations for uses ranging from research site to Ministry of Transportation and Infrastructure gravel pits.

Protection for these features is normally accomplished within reserve areas (i.e. wildlife tree retention) during operational planning. Accordingly, no further modelling assumptions will be applied for other resource features in this analysis.

12.2.8 CUTBLOCK ADJACENCY

The KBHLPO specifies that the required green-up height before adjacent cut blocks can be harvested is 2.5 metres. This requirement will be modelled by ensuring that no more than 25% of the THLB area not overlapping another constraint (e.g. ungulate winter range, visual quality, etc.) in each landscape unit can be less than 2.5 metres in height at any time.

12.2.9 CULTURAL HERITAGE RESOURCES

A cultural heritage resource is defined in the Forest Act as an object, site, or location of a traditional societal practice that is of historical, cultural or archaeological significance to the province, a community, or an aboriginal people. Cultural heritage resources are post-1846 and include archaeological sites, structural features, heritage

landscape features and traditional use sites. Older cultural heritage resources are considered to be an archaeological resource and are protected under the Heritage Conservation Act.

First Nations have indicated that TFL 8 contains culturally important plants, animals, lands, waters and other areas. Interfor has been working with First Nations to identify these areas on a site specific basis during the field review of proposed cutblocks, as discussed in Section 12.2.9.1 below. A sensitivity analysis will be included that explores the implications for timber supply to provide increased protection for these culturally important resources (see Section 13.3.5).

12.2.9.1 FIRST NATIONS INTERESTS IDENTIFIED DURING FIELD REVIEWS

Penticton Indian Band (PIB) reviewed a large number of Interfor's proposed cutblocks during the 2018 and 2019 field seasons. Interfor recognizes that PIB does not speak for all First Nations. However, it is believed that information from these field reviews can be used to gain an understanding of First Nations interests on the land base.

Although most of the field reviewed blocks were on Interfor's Forest Licence tenure, they are believed to be representative for cutblocks in TFL 8. The field review reports for 48 blocks totalling 1,159 hectares were reviewed and the PIB comments used to develop estimates of desired riparian retention and other areas recommended to be reserved for features such as wildlife, food, social, or ceremonial purposes. PIB also indicated that a number of these blocks should be dropped. Approximately 8.6% of the total block area fell into this category, but the impact of this recommendation was not considered for this analysis as it is not known if these blocks would be available for harvest in the future. These blocks were also not considered in calculation of the retention requirements.

There was increased retention identified for all waterbodies, wetlands and streams including non-classified drainages when compared with FRPA and the Interfor FSP requirements. It is also evident that there are differences in the retention requirements between the ESSF biogeoclimatic zone and the lower elevation MS, ICH, and IDF zones. Table 43 summarizes the retention levels for the blocks that were field reviewed, as well as an adjustment to account for potential overlap with wildlife tree retention as discussed below.

These retention areas are gross reductions to the productive forest land base area within the cutblock. In practice, there will be some overlap with areas considered to be non-THLB for other reasons. It was not possible to quantify this overlap as a THLB layer was not available for the cutblocks that were in the Forest Licence tenure. However, areas within proposed cutblocks likely have a higher THLB to non-THLB ratio than the land base as a whole because many of the non-THLB areas should already be considered and excluded when designing the cutblocks. This may result in an underestimation of the true THLB impact in this analysis.

As indicated in Section 8.18, a 5.3% THLB reduction was included in the Base Case to account for wildlife tree retention. It is likely that the wildlife tree retention can be co-located with "other" retention areas to some degree. For this analysis, it is assumed that up to 80% of the "other" retention can be addressed through the 5.3% THLB reduction for WTR.

It is less likely that riparian retention can be co-located with wildlife tree retention given that many of the riparian retention areas will be in the form of relatively thin buffers running through the cutblocks, and that many of the riparian areas were observed to be scattered throughout the blocks during the data review. Because of this, and the potential that the true THLB impact of the riparian retention is underestimated as discussed above, no allowance will be made for overlap of riparian areas with WTR.

Table 43 Retention identified during PIB field reviews

Biogeoclimatic Zone	Gross Block Area (ha)	Riparian Retention (%)	Other Retention (%)	Other Retention after WTR Adjustment (%)	Total Retention after WTR Adjustment (%)
ESSF	501	11.0	1.4	-	11.0
MS/IDF/ICH	522	7.5	6.5	1.3	8.7
Total	1,023				

The following approach was used In order to develop parameters that can be used in the proposed sensitivity analysis:

- Lakes and wetlands were buffered based on size according to information provided by PIB.
- All streams in Interfor's stream database, including non-classified drainages, were buffered using widths determined during the review of the PIB field reports.
- The area within the above buffers was considered as an incremental spatial netdown the Base Case and removed from the THLB if it had not been previously removed in the Base Case. This spatial netdown will account for overlap with areas removed from the THLB for other reasons.
- An additional aspatial netdown will be applied by BEC zone in order to meet the total values outlined in Table 43, with an allowance for co-location with wildlife tree retention.

Table 44 summarizes the riparian buffer widths used for the spatial component of the FN interests sensitivity analysis in comparison with those used for the Base Case.

The resulting spatial retention and additional aspatial retention after accounting for the area contained within the spatial riparian buffers is summarized in Table 45.

Table 44 Buffer widths for the spatial riparian component of the FN interests sensitivity analysis

Feature	FRPA Classification	Base Case Buffer Width for Modelling (m)	FN Sensitivity Buffer Width for Modelling (m)
Lake	L1-B	10	20
	L3	7.5	14
Wetlands	W1	20	45 or 50*
	W3	7.5	25 or 30*
	W5	20	25, 30, 45, or 55*
	Unclassified	-	15
Streams	S2	35	50
	S3	25	30
	S4	7.5	20
	S5	7.5	20
	S6	5	14
	NCD	5	14

* Widths depend on PIB wetland size classifications that do not match FRPA classifications

Table 45 Summary of spatial and aspatial retention for the FN interests sensitivity analysis

BEC Zone	PFLB Area (ha)	THLB Area* (ha)	FN Interests Riparian Required in PFLB (ha)	FN Interests Spatial Riparian in PFLB (ha)	Incremental Aspatial Riparian Required in THLB (ha)	Incremental Aspatial Retention for Other Values in THLB (ha)**
ESSF	13,713	11,049	1,508	1,021	487	-
MS/IDF/ICH	58,197	49,435	4,365	4,310	55	643
Total	71,910	60,484	5,654	5,331	542	643

* THLB area prior to aspatial netdown

** Calculated as required % from Table 43 multiplied by THLB area

Table 46 summarizes the change to the the current timber harvesting land base area relative to the Base Case (see Table 6 in Section 8.1) when the spatial riparian buffers and additional aspatial factors to account for riparian and other features are applied. Although there are 5,331 hectares of productive forest within the spatial FN enhanced riparian buffers, there is a net THLB reduction of 2,751 hectares as a result of overlap with areas already removed from the timber harvesting land base for other reasons. As indicated in Table 45, additional aspatial reductions to the THLB for riparian (542 hectares) and other values (643 hectares) area required, resulting in an overall THLB reduction of 3,936 hectares (6.6%) when compared with the Base Case.

Table 46 Change to the THLB as a result of including First Nations interests

Land Base Element	Productive Area (ha)	Net Area (ha)	Percent of Total TFL Area (%)	Percent of PFLB Area (%)
Productive Forest Land Base	71,911	71,911	92.6%	100.0%
Current Timber Harvesting Land Base – Base Case		60,065	77.3%	83.5%
Less:				
FN enhanced riparian buffers (spatial)	5,331	2,751	3.5%	3.8%
FN enhanced riparian (aspatial)		542	0.7%	0.8%
FN other values (e.g. food, ceremonial, social, wildlife)		643	0.8%	0.9%
Current Timber Harvesting Land Base – FN Interests		56,129	72.7%	78.1%

12.2.10 WATERSHED HEALTH

The level of disturbance in a watershed can impact stream flows, sediment delivery, channel stability, riparian function and aquatic habitat. Assessing equivalent clearcut areas (ECA) is a coarse-level indicator of forest disturbance and recovery in a watershed. ECAs can help identify when a professional hydrologist should be consulted for management recommendations, and individual watersheds often have different ECA disturbance limits before harvesting is affected.

Interfor used the provincial Watershed Atlas Third Order and Greater watersheds as the initial starting point for watersheds in TFL 8. Because most of these watersheds also have significant portions of the watershed outside TFL 8, adjacent portions of watersheds were grouped to form twelve surrogate watershed units ranging in size between 2,334 hectares and 15,017 hectares for this analysis. ECA will be evaluated for these units, and sensitivity analyses will be completed to test the effect of limiting ECA (Section 13.3.4).

ECA is a function of stand height, and will be calculated using the following equation (Winkler and Boon 2017):

$$\text{ECA percent} = 100 - (100 * (1 - \exp(-0.24 * (\text{height} - 2))) * 2.909)$$

In accordance with standard practice, ECA calculations will be based on the gross area of the watershed unit, with adjustments made for permanent ECA due to anthropogenic disturbances in the non-forested land base.

12.2.11 ROAD ACCESS

Reductions have been made to the timber harvesting land base to account for the loss of forest productivity due to permanent roads (see Section 8.4). In addition, road networks provide important access for forest protection and access to the land base for non-industrial users. While this access increases recreation opportunities for the public, it is recognized that there can also be adverse implications for wildlife values and potential damage to sensitive ecosystems. GAR Order #u-8-008 for mule deer (see Section 12.2.4) and GAR Order #3-373 for grizzly bear (see Section 8.14) include provisions related to road access that are dealt with operationally by Interfor and are therefore outside the scope of this analysis. In addition, site specific issues related to access raised by First Nations and stakeholders are discussed and addressed operationally as they arise. For example, screening of roads to reduce visibility of wildlife may be included in the design of in-block retention, and roads may be de-activated to prevent access to sensitive sites.

12.3 TIMBER HARVESTING

12.3.1 MINIMUM HARVESTABLE AGE / MERCHANTABILITY CRITERIA

Minimum harvest criteria are used to determine the age when stands become available for harvesting. A minimum harvest age will be assigned to each analysis unit, based on meeting all of the following criteria:

- Minimum volume of 150 m³/hectare
- The age at which the mean annual increment (MAI) reaches 95% of its value at culmination age. MAI at a given age is calculated as the stand volume less decay, waste and breakage divided by the stand age, and represents the average volume growth per year to that age. Culmination age is defined as the age at which MAI is maximized
- Minimum age of 60 years (managed stands only)

Within the timber supply model, a stand can be considered for harvesting once it meets the defined minimum harvest age. Note that these are minimum criteria, not the actual ages at which stands are forecast for harvest. Some stands may be harvested at the minimum thresholds to meet forest-level objectives (e.g., maintaining overall harvest levels for a short period of time or avoiding large fluctuations in harvest levels). However, other stands may not be harvested until past these "optimal" timber production ages due to management objectives for other resource values.

Table 47 summarizes the minimum harvest ages for existing natural and existing managed stands, while Table 48 summarizes the minimum harvest ages for future managed stands.

Table 47 Minimum harvest ages for existing natural and existing managed stands

AU*	Description	MHA	MAI	DBH	Volume	AU*	Description	MHA	MAI	DBH	Volume
1	ESSF – 01	104	1.98	24.4	206	101	ESSF – 01	89	3.32	23.8	296
2	ESSF – 03	98	1.70	20.8	167	102	ESSF – 03	87	3.23	19.9	281
3	ESSF – 04	113	1.99	26.8	225	103	ESSF – 04	88	3.39	24.0	299
4	ESSF – Other	111	1.60	23.0	177	104	ESSF – Other	91	2.91	26.1	265
5	ICH – 01	105	2.37	26.2	248	105	ICH – 01	85	3.38	26.1	287
6	ICH – 03	109	1.64	25.3	179	106	ICH – 03	79	3.78	23.7	299
7	ICH – 04	105	1.95	23.9	204	107	ICH – 04	76	4.08	23.0	310
8	ICH – Other	110	2.33	27.1	256	108	ICH – Other	75	3.94	25.8	295
9	IDF – 01	101	1.76	25.0	178	109	IDF – 01	71	3.90	21.6	277
10	IDF – 04	105	1.60	25.0	168	110	IDF – 04	76	3.63	21.3	276
11	IDF – 05	102	1.91	25.2	195	111	IDF – 05	72	3.97	23.5	286
12	IDF – Other	106	1.60	26.8	169	112	IDF – Other	78	3.59	22.1	280
13	MSdm1 – 01	91	2.01	22.1	183	113	MSdm1 – 01	72	4.14	21.8	298
14	MSdm1 – 03	92	1.73	20.9	159	114	MSdm1 – 03	71	4.03	21.7	286
15	MSdm1 – 04	94	1.77	22.0	166	115	MSdm1 – 04	73	3.99	21.8	291
16	MSdm1 – 05	86	2.41	22.0	208	116	MSdm1 – 05	71	4.13	21.1	293
17	MSdm1 - Other	98	1.89	23.9	185	117	MSdm1 - Other	66	4.60	21.2	303
18	MSdm1a - All	94	2.14	22.4	202	118	MSdm1a - All	80	3.73	26.0	299
201	ESSF – 01	86	3.35	24.2	288	301	ESSF – 01	84	3.29	24.1	276
202	ESSF – 03	87	3.05	23.7	265	302	ESSF – 03	87	3.09	22.8	269
203	ESSF – 04	81	3.58	23.2	290	303	ESSF – 04	80	3.56	25.6	285
204	ESSF – Other	97	2.73	24.5	264	304	ESSF – Other	93	2.82	23.4	262
205	ICH – 01	72	4.07	23.9	293	305	ICH – 01	76	4.00	27.8	304
206	ICH – 03	76	3.73	23.7	283	306	ICH – 03	68	3.61	24.7	246
207	ICH – 04	69	4.28	24.4	295	307	ICH – 04	78	3.64	26.4	284
208	ICH – Other	74	3.86	27.8	286	308	ICH – Other	76	3.83	27.1	291
209	IDF – 01	75	3.62	23.2	271	309	IDF – 01	83	3.05	26.5	254
210	IDF – 04	87	2.84	24.3	247	310	IDF – 04	95	2.76	26.4	262
211	IDF – 05	75	3.56	26.4	267	311	IDF – 05	72	3.71	26.5	267
212	IDF – Other	75	3.45	27.2	258	312	IDF – Other	87	2.69	25.9	234
213	MSdm1 – 01	71	4.19	23.0	298	313	MSdm1 – 01	75	3.66	25.2	275
214	MSdm1 – 03	79	3.46	24.4	273	314	MSdm1 – 03	69	4.40	22.8	304
215	MSdm1 – 04	74	3.83	23.0	283	315	MSdm1 – 04	71	3.86	23.1	274
216	MSdm1 – 05	72	4.23	24.9	305	316	MSdm1 – 05	67	4.34	21.1	291
217	MSdm1 - Other	63	4.74	19.4	299	317	MSdm1 - Other	71	3.87	24.1	275
218	MSdm1a - All	67	4.57	22.7	306	318	MSdm1a - All	72	4.26	28.7	307
401	ESSF – 01	82	3.40	24.2	279						
402	ESSF – 03	82	3.37	22.9	276						
403	ESSF – 04	79	3.63	25.7	286						
404	ESSF – Other	87	3.13	23.6	272						
405	ICH – 01	76	3.98	27.7	302						
406	ICH – 03	69	3.58	24.7	247						
407	ICH – 04	78	3.58	26.3	279						
408	ICH – Other	77	3.67	26.9	282						
409	IDF – 01	81	3.20	26.6	259						
410	IDF – 04	94	2.72	26.3	255						
411	IDF – 05	70	3.96	26.7	277						
412	IDF – Other	86	2.83	26.0	244						
413	MSdm1 – 01	74	3.72	25.1	275						
414	MSdm1 – 03	71	4.20	22.7	298						
415	MSdm1 – 04	71	3.84	23.1	273						
416	MSdm1 – 05	68	4.26	21.1	290						
417	MSdm1 - Other	71	3.85	24.1	273						
418	MSdm1a - All	72	4.36	28.9	314						

* AUs 1-18: EN ; AUs 101-118: EM Era 1; AUs 201-218: EM Era 2; AUs 301-318: EM Era 3; AUs 401-418: EM Era 4

Table 48 Minimum harvest ages for future managed stands

AU	Description	MHA	MAI	DBH	Volume	AU	Description	MHA	MAI*	DBH	Volume
1001	ESSF – 01	82	3.44	24.3	282	2001	ESSF – 01	81	3.50	24.3	284
1002	ESSF – 03	86	3.17	22.8	272	2002	ESSF – 03	83	3.31	22.9	275
1003	ESSF – 04	78	3.65	25.6	284	2003	ESSF – 04	78	3.66	25.6	286
1004	ESSF – Other	94	2.70	23.3	254	2004	ESSF – Other	88	3.03	23.5	266
1005	ICH – 01	76	4.04	27.8	307	2005	ICH – 01	75	4.05	27.7	303
1006	ICH – 03	70	3.48	24.6	244	2006	ICH – 03	70	3.62	24.9	253
1007	ICH – 04	78	3.62	26.4	282	2007	ICH – 04	77	3.67	26.4	282
1008	ICH – Other	75	3.97	27.2	298	2008	ICH – Other	76	3.83	27.0	291
1009	IDF – 01	82	3.17	26.6	260	2009	IDF – 01	81	3.23	26.6	262
1010	IDF – 04	96	2.61	26.2	250	2010	IDF – 04	94	2.76	26.4	259
1011	IDF – 05	70	3.96	26.7	278	2011	IDF – 05	70	3.94	26.7	276
1012	IDF – Other	89	2.49	25.6	221	2012	IDF – Other	82	3.15	26.3	258
1013	MSdm1 – 01	75	3.73	25.2	279	2013	MSdm1 – 01	74	3.76	25.2	278
1014	MSdm1 – 03	73	4.07	22.7	297	2014	MSdm1 – 03	71	4.30	22.9	305
1015	MSdm1 – 04	72	3.79	23.1	273	2015	MSdm1 – 04	71	3.90	23.2	277
1016	MSdm1 – 05	67	4.33	21.1	290	2016	MSdm1 – 05	67	4.36	21.1	292
1017	MSdm1 -	73	3.74	24.1	273	2017	MSdm1 - Other	71	4.01	24.3	285
1018	MSdm1a - All	73	4.18	28.7	305	2018	MSdm1a - All	71	4.34	28.7	308

* Prior to reduction for future roads (AUs 2001 to 2018)

12.3.2 CUT BLOCK AGGREGATION

Cut block aggregation will be used so that the analysis reflects operational reality by avoiding harvesting of small isolated units, or “slivers”. Two forms of aggregation will be implemented.

1. The individual polygons (“fragments”) created by overlaying the various data input layers into the “resultant” layer will be aggregated into larger units called “blocks” prior to modelling. Within the model, blocks are the units that get harvested. Individual fragments that are adjacent, have the same analysis unit and are within 5 years of age are potential candidates to be combined into blocks. The target size for these blocks will be 10 hectares, which may not be achieved in all cases due to the differing attributes of the initial fragments.
2. During the model runs, the patching capabilities of the model will be used to control the spatial distribution of the harvested blocks. The model will be configured to prevent creating harvest patches less than 1 hectare in size, and avoid creating harvest patches less than 5 hectares in size if possible.

12.3.3 SILVICULTURE SYSTEMS

There has been virtually no partial cut harvesting in TFL 8 in recent years. Therefore, clear cut harvesting with reserves is the only silviculture system that will be modelled. The reserves for wildlife tree retention and Williamson’s Sapsucker habitat will be accounted for using THLB reductions as outlined in Sections 8.18 and 8.19.

12.3.4 INITIAL HARVEST RATE

The current AAC for TFL 8 is 186,000 m³ per year. The initial gross harvest level for the Base Case scenario will be set to 186,000 m³ per year plus the allowance for non-recoverable losses. This level may be adjusted depending on the modelling results.

12.3.5 HARVEST RULES

The model used for this analysis does not explicitly use rules such as “oldest first” to rank stands for harvest. Rather, targets are set for harvest levels and individual non-timber resource requirements (e.g. maximum disturbance in a visual polygon, etc.). Each target in the model is assigned a relative weight that is used by the model to balance the achievement of the targets. Non-timber resource targets are typically assigned a very high weight so that the model will ensure they are achieved. Harvest volume is assigned a lower weight so that harvest is only attractive to the model when all other targets have been addressed.

The model will prioritize harvest of individual blocks to best achieve the overall harvest target subject to the non-timber resource targets being met. Stands will be harvested at the age that balances the requirements of all targets, including harvest.

12.3.6 HARVEST FLOW OBJECTIVES

Forest cover objectives and the growth capacity of the THLB will determine the harvest level options that will be considered. In general, the choice of harvest flow will reflect the following objectives:

- Avoid any large or abrupt disruptions in timber supply during transitions from short to mid to long-term periods (generally increases and decreases in steps of 10% per 10 year period)
- Achieve a stable long-term harvest level over a 300 year planning horizon
- Ensure that the growing stock on the THLB does not decline during the last 50 years of the planning horizon

12.4 NATURAL DISTURBANCE ASSUMPTIONS

Natural disturbance assumptions define the extent and frequency of natural disturbances such as fire or epidemic insect infestations across the land base. Within the THLB, natural disturbances are typically addressed through harvesting, with any unsalvaged areas contributing to the allowance for unsalvaged losses as outlined in Section 11.1.

For areas outside the THLB, stands will continuously age throughout the planning horizon unless disturbances are explicitly modelled. This can lead to the non-THLB fulfilling an unrealistic portion of the forest cover requirements for non-timber resources values such as landscape-level biodiversity, visual quality, etc.

Disturbance in the non-THLB will not be considered in the Base Case scenario because the options available for modeling natural disturbance (i.e. randomly assigning stands to be disturbed) can lead to inconsistent results, particularly on smaller land bases such as TFL 8. However, a sensitivity analysis will examine the effect of introducing natural disturbance on the non-THLB. The assumptions used to model this disturbance for the sensitivity analysis are explained below.

For this analysis, a constant area was disturbed annually within each landscape unit, biogeoclimatic zone and natural disturbance type (NDT). BEC version 4 was used for determining natural disturbance as this was the current version at the time the landscape-level biodiversity targets were set. The area of disturbance varied based on the biogeoclimatic variants present, their associated natural disturbance intervals and old seral definitions, as outlined in the Biodiversity Guidebook (BC Ministry of Forests, 1995): In summary, the process used to calculate the annual disturbed area is:

- Calculate the % Area that is greater than old using the equation

$$\% \text{ area old} = \exp(-[\text{old age} / \text{disturbance interval}])$$

- Calculate the effective rotation age using the equation

$$\text{Effective rotation age} = \text{old age} / (1 - \% \text{ area old})$$

- Calculate the annual area disturbed using the equation

$$\text{Area disturbed} = \text{non-THLB area} / \text{effective rotation age}$$

Table 49 summarizes the calculations used to determine the annual disturbance limits applied in the forested non-THLB. Within the model, these areas will be allocated to the individual landscape unit/BEC combination according to the relative proportion of the landscape unit within the BEC. Across the Non-THLB, approximately 43 ha (0.39%) is disturbed each year, resulting in an average disturbance turn-over of the non-THLB approximately every 274 years (range is 231 to 395 years).

Table 49 Annual natural disturbance areas in the forested non-THLB

BGC Zone	NDT	Disturbance Interval (yrs)	"OLD" Defn (yrs)	% Area > OLD*	Effective Rotation Age (yrs)*	Contributing Non-THLB Area (ha)	Annual Area Disturbed (ha)**
ICH	2	200	250	29%	350	12	0
ICH	3	150	140	39%	231	1,166	5
ESSF	3	150	140	39%	231	1,931	8
MS	3	150	140	39%	231	5,115	22
IDF	4	250	250	37%	395	2,959	7
AT	5	N/A	N/A	N/A	N/A	243	N/A
Total					274	11,426	43

* % area old = $\exp(-[\text{old age} / \text{disturbance interval}])$, Effective rotation age = $\text{old age} / (1 - \% \text{ area old})$

** Annual area disturbed = $(\text{non-THLB area} / \text{effective rotation age})$

12.5 CLIMATE CHANGE

Within BC, climate change is expected to include a general increase in temperature, change in precipitation patterns, and an increase in the magnitude, frequency and intensity of extreme weather events. While the trends are generally consistent, the specific magnitude of these changes, and their spatial and temporal distribution, are uncertain. Many adaptation strategies are being assessed, considered and implemented across the province. Within TFL 8, examples of adaptation strategies that Interfor are adopting to establish resilient forests include:

- Planting a mix of species on most sites
- Increased use of ponderosa pine in regeneration of drier sites

Climate change may result in either increases or decreases in productivity of forests in the future. While these changes are largely unknown at this time, sensitivity analyses related to productivity of stands have been

incorporated into this analysis and can be used to understand the implications for timber supply if stand productivity changes from current understanding.

The Base Case does not include natural disturbance in the non-THLB (see Section 12.4). However a sensitivity analysis has been included that will explore the degree to which timber supply is influenced by potential disturbances in the non-THLB.

Potential changes in the rate of natural disturbance in the timber harvesting land base will either be captured as part of the indicated harvest flow through Interfor's ongoing salvage operations, or through the allowance for unsalvaged losses as discussed in Section 11.1. The non-recoverable losses used for this analysis are derived from recent (i.e. past 10 years) historic levels and represent our best understanding of the current losses on the land base. Any future changes in these losses will be captured as part of the next timber supply review which will be completed ten years from now.

13 Sensitivity Analyses

This section briefly describes the sensitivity analyses that will be performed against the Base Case scenario. These analyses explore the stability of the Base Case relative to the uncertainty surrounding specific analysis assumptions. They also reflect the impact of alternative management or potential changes in forest practices.

13.1 LAND BASE DEFINITION

13.1.1 TIMBER HARVESTING LAND BASE +/- 10%

This sensitivity analysis will test the effect of moving land between the non-THLB and the THLB. This will be accomplished by increasing/decreasing the area of each THLB polygon by 10% when it is entered into the model. The area of each productive non-THLB polygon will have a corresponding proportional adjustment applied so that the total land base area remains the same, and that the area for each non-timber resource value remains the same.

13.2 GROWTH AND YIELD ASSUMPTIONS

13.2.1 NATURAL STAND YIELDS +/-10%

This sensitivity analysis will test the uncertainty in the yields predicted by the VDYP 7 model used to generate natural stand yield tables. The volumes for each natural stand analysis unit will be increased/decreased by 10%. Other yield parameters used by the model (e.g. height, minimum harvest age) will remain unchanged.

13.2.2 MANAGED STAND YIELDS +/- 10%

This sensitivity analysis will test the effect of changes to the yield tables for managed stands. The volumes for each managed stand yield table will be increased/decreased by 10%. Other yield parameters used by the model will remain unchanged.

13.2.3 MANAGED STAND SITE INDEX

This sensitivity analysis will test the effect of using the provincial site productivity layer for managed stand site indices.

13.2.4 MINIMUM HARVEST AGES +/- 10 YEARS

This sensitivity analysis will test the effect of increasing/decreasing minimum harvest ages by 10 years for each analysis unit.

13.3 INTEGRATED RESOURCE MANAGEMENT ASSUMPTIONS

13.3.1 INCLUDE DISTURBANCES IN THE NON-THLB

This sensitivity analysis will test the effect of introducing natural disturbance into the non-THLB, as outlined in Section 12.4. Three different model runs will be completed, using a different random number sequence to assign the year of disturbance to the non-THLB polygons.

13.3.2 APPLY OLD SERAL TARGETS

This sensitivity analysis will test the effect of adding the spatial OGMA's back into the THLB and applying the targets for old seral outlined in Section 12.2.1 (Table 36) to account for landscape-level biodiversity. For those units with a low biodiversity emphasis, only 1/3 of the target will be required initially, with 2/3 of the target to be achieved by 120 years and the full target to be achieved by the end of the third rotation (240 years).

13.3.3 BEC VERSION 11 FOR OLD SERAL TARGETS

This sensitivity analysis will test the effect of using BEC Version 11 for the old seral targets instead of the existing OGMA's that are based on BEC Version 4. Because the BEC labels and NDT types are different than those in BEC 4, the NDTs for BEC Version 11 will be used to determine the appropriate ages and targets for seral stage by BEC zone/subzone. This sensitivity will not consider revisiting the spatial location of other items related to BEC such as biodiversity emphasis option, mule deer winter range/snow pack zones, etc.

13.3.4 EQUIVALENT CLEARCUT AREA

This sensitivity analysis will test the effect of limiting ECA within the surrogate watershed units described in Section 13.3.4 to a maximum of 30% and 40%.

13.3.5 FIRST NATIONS INTERESTS IDENTIFIED DURING FIELD REVIEWS

This sensitivity analysis will test the effect of including additional retention for riparian and other features based on analysis field reviews of cutblocks by Penticton Indian Band as outlined in Section 12.2.9.1.

13.4 TIMBER HARVESTING ASSUMPTIONS

13.4.1 TURN OFF CUTBLOCK AGGREGATION

This sensitivity analysis will test the effect of relaxing the requirements for cutblock aggregation at the time of harvest so that there is no minimum cutblock size. The aggregation undertaken during data preparation prior to modelling will remain unchanged.

14 References

- BC Ministry of Forests; BC Ministry of Sustainable Resource Management; BC Ministry of Energy and Mines. (2002). *Kootenay-Boundary Higher Level Plan Order*. Ministry of Forests.
- BC Ministry of Environment. (2006). *Order - Ungulate Winter Range #U-8-007*. Ministry of Environment.
- BC Ministry of Environment. (2006). *Order - Ungulate Winter Range #U-8-008*. Ministry of Environment.
- BC Ministry of Forests. (1995). *Biodiversity Guidebook*.
- BC Ministry of Forests and Range. (2009). *Tree Farm Licence 8 Rationale for Allowable Annual Cut (AAC) Determination Effective April 1, 2009*. Ministry of Forests and Range.
- BC Ministry of Forests, Lands and Natural Resource Operations. (2011). *Boundary Timber Supply Area Timber Supply Review Data Package*. BC Ministry of Forests, Lands and Natural Resource Operations.
- BC Ministry of Forests, Lands and Natural Resource Operations. (2014). *Best Management Practices for Timber Harvesting, Roads, and Silviculture for Williamson's Sapsucker in British Columbia: Okanagan-Boundary Area of Occupancy*. Ministry of Forests, Lands and Natural Resource Operations.
- Forest Analysis Branch. (2004). *Modeling Options for Disturbance of Areas Outside of the Timber Harvesting Land Base. Draft Working Paper, Victoria: Ministry of Forests*.
- J.S. Thrower & Associates Ltd. (2001). *Yield Tables for Natural and Managed Stands: Management Plan 10 on TFL 8*. Report.
- J.S. Thrower & Associates Ltd. (2006). *Potential Site Index Estimates for the Major Commercial Tree Species on TFL 8 - Final Report*.
- Ministry of Forests. (1999). *Landscape Unit Planning Guide*. Retrieved from <https://www.for.gov.bc.ca/tasb/slrp/policies-guides/LUGuide.pdf>
- Olinger Lumber Company Ltd. (n.d.). *Tree Farm Licence No. 11 (Carmi) - Working Plan Number Three*.
- Timberline Forest Inventory Consultants Ltd. (2006). *Timber Supply Analysis Information Package - Tree Farm License 8, TSR 3*. Pope and Talbot Ltd. Boundary Divisions.
- Winkler, R. a. (2017). *Equivalent clearcut area as an indicator of hydrologic change in snow dominated watersheds of southern British Columbia*. Victoria: Province of BC.

Appendix 1 Yield Tables

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1	EN:ESSFdc1/dcu1-01	10	-	-	-	2	2.4	1.2	173
1	EN:ESSFdc1/dcu1-01	20	-	-	-	2	2.4	3.6	111
1	EN:ESSFdc1/dcu1-01	30	1.6	-	1.6	2	4.2	6.3	117
1	EN:ESSFdc1/dcu1-01	40	9.4	-	9.4	3	7.9	9.2	165
1	EN:ESSFdc1/dcu1-01	50	27.3	-	27.2	7	12.4	11.8	282
1	EN:ESSFdc1/dcu1-01	60	56.0	-	56.0	11	17.7	14.1	408
1	EN:ESSFdc1/dcu1-01	70	90.2	-	90.2	16	19.8	16.1	514
1	EN:ESSFdc1/dcu1-01	80	126.3	-	126.3	20	21.7	17.9	583
1	EN:ESSFdc1/dcu1-01	90	161.4	-	161.3	24	22.9	19.5	627
1	EN:ESSFdc1/dcu1-01	100	193.9	-	193.8	27	24.0	20.8	652
1	EN:ESSFdc1/dcu1-01	110	222.5	0.1	222.4	30	25.0	22.0	660
1	EN:ESSFdc1/dcu1-01	120	248.1	0.1	248.0	32	25.9	23.0	661
1	EN:ESSFdc1/dcu1-01	130	270.8	0.1	270.7	34	26.8	23.9	657
1	EN:ESSFdc1/dcu1-01	140	290.7	0.1	290.6	35	27.5	24.7	652
1	EN:ESSFdc1/dcu1-01	150	306.2	0.1	306.1	36	28.1	25.4	646
1	EN:ESSFdc1/dcu1-01	160	317.0	0.1	316.9	37	28.5	26.0	642
1	EN:ESSFdc1/dcu1-01	170	324.4	0.1	324.4	38	28.9	26.5	639
1	EN:ESSFdc1/dcu1-01	180	328.5	0.1	328.4	38	29.1	27.0	635
1	EN:ESSFdc1/dcu1-01	190	330.6	0.1	330.6	39	29.3	27.5	631
1	EN:ESSFdc1/dcu1-01	200	331.7	0.1	331.6	39	29.4	27.9	627
1	EN:ESSFdc1/dcu1-01	210	330.7	0.1	330.7	39	29.5	28.2	624
1	EN:ESSFdc1/dcu1-01	220	329.8	0.1	329.8	39	29.6	28.6	621
1	EN:ESSFdc1/dcu1-01	230	328.9	-	328.9	39	29.7	28.9	618
1	EN:ESSFdc1/dcu1-01	240	328.0	-	328.0	39	29.8	29.1	615
1	EN:ESSFdc1/dcu1-01	250	327.2	-	327.1	39	29.9	29.4	612
1	EN:ESSFdc1/dcu1-01	260	326.2	-	326.1	39	30.0	29.6	609
1	EN:ESSFdc1/dcu1-01	270	325.2	-	325.2	39	30.0	29.8	606
1	EN:ESSFdc1/dcu1-01	280	324.3	-	324.3	39	30.1	30.0	604
1	EN:ESSFdc1/dcu1-01	290	323.4	-	323.4	40	30.2	30.2	601
1	EN:ESSFdc1/dcu1-01	300	322.5	-	322.5	40	30.2	30.4	599
1	EN:ESSFdc1/dcu1-01	310	321.6	-	321.6	40	30.3	30.5	597
1	EN:ESSFdc1/dcu1-01	320	320.7	-	320.6	40	30.3	30.7	597
1	EN:ESSFdc1/dcu1-01	330	319.8	-	319.7	40	30.3	30.8	597
1	EN:ESSFdc1/dcu1-01	340	318.9	-	318.8	40	30.3	30.9	597
1	EN:ESSFdc1/dcu1-01	350	318.0	-	318.0	40	30.3	31.1	597

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2	EN:ESSFdc1/dcu1-03	10	-	-	-	1	1.4	1.6	84
2	EN:ESSFdc1/dcu1-03	20	0.1	-	0.1	1	1.6	4.3	38
2	EN:ESSFdc1/dcu1-03	30	2.0	-	2.0	1	3.5	7.2	64
2	EN:ESSFdc1/dcu1-03	40	11.7	-	11.7	4	9.7	9.9	184
2	EN:ESSFdc1/dcu1-03	50	31.5	-	31.5	8	13.6	12.2	366
2	EN:ESSFdc1/dcu1-03	60	58.9	-	58.9	12	16.7	14.2	542
2	EN:ESSFdc1/dcu1-03	70	88.7	-	88.7	17	18.2	15.9	661
2	EN:ESSFdc1/dcu1-03	80	118.3	-	118.3	20	19.2	17.3	738
2	EN:ESSFdc1/dcu1-03	90	146.1	-	146.1	23	20.1	18.5	784
2	EN:ESSFdc1/dcu1-03	100	171.4	-	171.4	26	21.0	19.6	809
2	EN:ESSFdc1/dcu1-03	110	193.8	-	193.8	28	21.8	20.4	816
2	EN:ESSFdc1/dcu1-03	120	213.8	-	213.8	30	22.5	21.2	816
2	EN:ESSFdc1/dcu1-03	130	231.7	-	231.7	32	23.2	21.9	813
2	EN:ESSFdc1/dcu1-03	140	247.6	-	247.6	33	23.8	22.5	810
2	EN:ESSFdc1/dcu1-03	150	260.2	-	260.2	34	24.3	23.0	807
2	EN:ESSFdc1/dcu1-03	160	269.3	-	269.3	35	24.6	23.4	807
2	EN:ESSFdc1/dcu1-03	170	275.7	-	275.7	36	24.9	23.8	806
2	EN:ESSFdc1/dcu1-03	180	279.6	-	279.6	36	25.1	24.2	804
2	EN:ESSFdc1/dcu1-03	190	282.0	-	282.0	37	25.3	24.5	801
2	EN:ESSFdc1/dcu1-03	200	283.2	-	283.2	37	25.4	24.8	798
2	EN:ESSFdc1/dcu1-03	210	282.7	-	282.7	37	25.5	25.1	794
2	EN:ESSFdc1/dcu1-03	220	282.0	-	282.0	37	25.7	25.3	789
2	EN:ESSFdc1/dcu1-03	230	281.3	-	281.3	38	25.8	25.5	785
2	EN:ESSFdc1/dcu1-03	240	280.6	-	280.6	38	25.9	25.7	781
2	EN:ESSFdc1/dcu1-03	250	279.8	-	279.8	38	25.9	25.9	778
2	EN:ESSFdc1/dcu1-03	260	279.0	-	279.0	38	26.0	26.1	774
2	EN:ESSFdc1/dcu1-03	270	278.1	-	278.1	38	26.1	26.2	770
2	EN:ESSFdc1/dcu1-03	280	277.3	-	277.3	38	26.2	26.4	767
2	EN:ESSFdc1/dcu1-03	290	276.4	-	276.4	38	26.3	26.5	763
2	EN:ESSFdc1/dcu1-03	300	275.6	-	275.6	38	26.4	26.6	760
2	EN:ESSFdc1/dcu1-03	310	274.7	-	274.7	38	26.4	26.8	757
2	EN:ESSFdc1/dcu1-03	320	273.6	-	273.6	38	26.4	26.9	757
2	EN:ESSFdc1/dcu1-03	330	272.6	-	272.6	38	26.4	27.0	757
2	EN:ESSFdc1/dcu1-03	340	271.6	-	271.6	38	26.4	27.1	757
2	EN:ESSFdc1/dcu1-03	350	270.5	-	270.5	38	26.4	27.1	757

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
3	EN:ESSFdc1/dcu1-04	10	-	-	-	1	0.6	0.8	28
3	EN:ESSFdc1/dcu1-04	20	-	-	-	1	0.6	2.4	17
3	EN:ESSFdc1/dcu1-04	30	0.4	-	0.4	0	1.1	4.7	21
3	EN:ESSFdc1/dcu1-04	40	3.1	-	3.1	1	2.8	7.4	52
3	EN:ESSFdc1/dcu1-04	50	11.0	-	11.0	3	6.7	10.0	106
3	EN:ESSFdc1/dcu1-04	60	32.4	-	32.4	7	17.7	12.5	224
3	EN:ESSFdc1/dcu1-04	70	64.2	-	64.2	12	20.9	14.8	334
3	EN:ESSFdc1/dcu1-04	80	102.8	-	102.8	17	22.3	16.8	420
3	EN:ESSFdc1/dcu1-04	90	143.4	-	143.4	22	24.1	18.5	490
3	EN:ESSFdc1/dcu1-04	100	181.5	-	181.5	26	25.4	20.1	528
3	EN:ESSFdc1/dcu1-04	110	215.4	-	215.4	29	26.5	21.5	545
3	EN:ESSFdc1/dcu1-04	120	245.1	-	245.1	32	27.6	22.7	549
3	EN:ESSFdc1/dcu1-04	130	271.0	-	271.0	34	28.6	23.7	547
3	EN:ESSFdc1/dcu1-04	140	293.3	-	293.3	36	29.4	24.7	540
3	EN:ESSFdc1/dcu1-04	150	310.4	-	310.4	37	30.2	25.5	533
3	EN:ESSFdc1/dcu1-04	160	321.8	-	321.8	38	30.7	26.3	527
3	EN:ESSFdc1/dcu1-04	170	329.3	-	329.3	38	31.1	26.9	521
3	EN:ESSFdc1/dcu1-04	180	333.9	-	333.9	39	31.4	27.5	517
3	EN:ESSFdc1/dcu1-04	190	336.1	-	336.1	39	31.6	28.1	512
3	EN:ESSFdc1/dcu1-04	200	337.1	-	337.1	39	31.8	28.5	509
3	EN:ESSFdc1/dcu1-04	210	335.8	-	335.8	39	31.8	29.0	506
3	EN:ESSFdc1/dcu1-04	220	334.8	-	334.8	39	31.9	29.4	504
3	EN:ESSFdc1/dcu1-04	230	333.7	-	333.7	39	32.0	29.7	502
3	EN:ESSFdc1/dcu1-04	240	332.7	-	332.7	39	32.0	30.1	501
3	EN:ESSFdc1/dcu1-04	250	331.7	-	331.7	39	32.1	30.4	499
3	EN:ESSFdc1/dcu1-04	260	330.6	-	330.6	39	32.1	30.6	498
3	EN:ESSFdc1/dcu1-04	270	329.7	-	329.7	39	32.2	30.9	496
3	EN:ESSFdc1/dcu1-04	280	328.8	-	328.8	39	32.2	31.1	495
3	EN:ESSFdc1/dcu1-04	290	327.9	-	327.9	39	32.3	31.3	494
3	EN:ESSFdc1/dcu1-04	300	327.1	-	327.1	39	32.3	31.5	492
3	EN:ESSFdc1/dcu1-04	310	326.4	-	326.4	39	32.3	31.7	491
3	EN:ESSFdc1/dcu1-04	320	325.6	-	325.6	39	32.4	31.9	491
3	EN:ESSFdc1/dcu1-04	330	325.0	-	325.0	39	32.4	32.1	491
3	EN:ESSFdc1/dcu1-04	340	324.4	-	324.4	39	32.4	32.2	491
3	EN:ESSFdc1/dcu1-04	350	323.8	-	323.8	39	32.4	32.4	491

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
4	EN:ESSFdc1/dcu1-Oth	10	-	-	-	2	1.8	1.2	145
4	EN:ESSFdc1/dcu1-Oth	20	-	-	-	2	2.0	3.4	127
4	EN:ESSFdc1/dcu1-Oth	30	1.4	-	1.4	1	3.1	5.9	123
4	EN:ESSFdc1/dcu1-Oth	40	7.2	-	7.2	3	5.4	8.3	189
4	EN:ESSFdc1/dcu1-Oth	50	20.9	-	20.9	6	10.5	10.6	297
4	EN:ESSFdc1/dcu1-Oth	60	41.3	-	41.3	9	14.9	12.6	428
4	EN:ESSFdc1/dcu1-Oth	70	66.5	-	66.5	13	18.6	14.4	535
4	EN:ESSFdc1/dcu1-Oth	80	94.1	-	94.1	17	20.0	16.0	575
4	EN:ESSFdc1/dcu1-Oth	90	122.5	-	122.5	20	21.0	17.3	633
4	EN:ESSFdc1/dcu1-Oth	100	149.9	-	149.8	24	22.0	18.5	669
4	EN:ESSFdc1/dcu1-Oth	110	174.9	-	174.9	26	22.9	19.6	686
4	EN:ESSFdc1/dcu1-Oth	120	197.6	-	197.5	28	23.8	20.5	693
4	EN:ESSFdc1/dcu1-Oth	130	217.8	-	217.7	30	24.5	21.3	694
4	EN:ESSFdc1/dcu1-Oth	140	235.7	-	235.6	32	25.2	22.0	694
4	EN:ESSFdc1/dcu1-Oth	150	249.8	0.1	249.7	33	25.8	22.7	692
4	EN:ESSFdc1/dcu1-Oth	160	259.7	0.1	259.6	34	26.2	23.2	691
4	EN:ESSFdc1/dcu1-Oth	170	266.5	0.1	266.5	35	26.5	23.7	690
4	EN:ESSFdc1/dcu1-Oth	180	271.1	0.1	271.1	36	26.7	24.2	689
4	EN:ESSFdc1/dcu1-Oth	190	274.1	-	274.0	36	26.9	24.6	686
4	EN:ESSFdc1/dcu1-Oth	200	275.8	-	275.7	36	27.1	25.0	684
4	EN:ESSFdc1/dcu1-Oth	210	275.3	-	275.3	36	27.2	25.3	681
4	EN:ESSFdc1/dcu1-Oth	220	274.8	-	274.8	36	27.3	25.6	678
4	EN:ESSFdc1/dcu1-Oth	230	274.3	-	274.2	36	27.4	25.9	675
4	EN:ESSFdc1/dcu1-Oth	240	273.7	-	273.6	37	27.4	26.1	673
4	EN:ESSFdc1/dcu1-Oth	250	273.0	-	273.0	37	27.5	26.4	670
4	EN:ESSFdc1/dcu1-Oth	260	272.3	-	272.3	37	27.6	26.6	668
4	EN:ESSFdc1/dcu1-Oth	270	271.6	-	271.6	37	27.7	26.8	665
4	EN:ESSFdc1/dcu1-Oth	280	270.9	-	270.9	37	27.7	27.0	663
4	EN:ESSFdc1/dcu1-Oth	290	270.2	-	270.2	37	27.8	27.1	661
4	EN:ESSFdc1/dcu1-Oth	300	269.6	-	269.5	37	27.9	27.3	659
4	EN:ESSFdc1/dcu1-Oth	310	268.9	-	268.9	37	27.9	27.5	657
4	EN:ESSFdc1/dcu1-Oth	320	268.1	-	268.1	37	27.9	27.6	657
4	EN:ESSFdc1/dcu1-Oth	330	267.3	-	267.3	37	27.9	27.7	657
4	EN:ESSFdc1/dcu1-Oth	340	266.5	-	266.5	37	27.9	27.8	657
4	EN:ESSFdc1/dcu1-Oth	350	265.7	-	265.7	37	27.9	28.0	657

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
5	EN:ICHmk1/mw2-01	10	-	-	-	1	1.6	1.2	261
5	EN:ICHmk1/mw2-01	20	-	-	-	1	1.6	4.0	262
5	EN:ICHmk1/mw2-01	30	1.6	-	1.6	1	6.6	7.2	111
5	EN:ICHmk1/mw2-01	40	12.5	0.1	12.4	3	13.4	10.4	106
5	EN:ICHmk1/mw2-01	50	37.4	0.4	37.0	7	18.5	13.2	224
5	EN:ICHmk1/mw2-01	60	72.4	1.1	71.3	12	21.2	15.7	339
5	EN:ICHmk1/mw2-01	70	112.6	1.9	110.8	18	22.7	17.9	434
5	EN:ICHmk1/mw2-01	80	154.8	2.6	152.2	22	23.7	19.9	507
5	EN:ICHmk1/mw2-01	90	196.0	3.2	192.8	27	24.7	21.6	558
5	EN:ICHmk1/mw2-01	100	234.3	3.8	230.5	31	25.7	23.1	592
5	EN:ICHmk1/mw2-01	110	269.5	4.2	265.3	34	26.7	24.4	613
5	EN:ICHmk1/mw2-01	120	300.2	4.5	295.8	37	27.6	25.5	623
5	EN:ICHmk1/mw2-01	130	326.9	4.7	322.2	39	28.4	26.6	625
5	EN:ICHmk1/mw2-01	140	349.5	4.8	344.8	41	29.2	27.5	622
5	EN:ICHmk1/mw2-01	150	366.3	4.8	361.5	43	29.9	28.3	616
5	EN:ICHmk1/mw2-01	160	376.7	4.7	372.0	44	30.4	29.0	608
5	EN:ICHmk1/mw2-01	170	382.8	4.6	378.2	44	30.8	29.7	601
5	EN:ICHmk1/mw2-01	180	386.1	4.4	381.7	45	31.1	30.3	594
5	EN:ICHmk1/mw2-01	190	387.6	4.3	383.3	45	31.4	30.8	587
5	EN:ICHmk1/mw2-01	200	387.9	4.1	383.8	46	31.7	31.3	580
5	EN:ICHmk1/mw2-01	210	385.7	3.9	381.7	46	31.9	31.8	574
5	EN:ICHmk1/mw2-01	220	383.6	3.8	379.8	46	32.1	32.2	568
5	EN:ICHmk1/mw2-01	230	381.5	3.6	377.9	46	32.3	32.6	563
5	EN:ICHmk1/mw2-01	240	379.4	3.5	375.9	46	32.5	32.9	558
5	EN:ICHmk1/mw2-01	250	377.2	3.4	373.9	46	32.6	33.2	553
5	EN:ICHmk1/mw2-01	260	375.1	3.2	371.9	46	32.8	33.5	548
5	EN:ICHmk1/mw2-01	270	372.9	3.1	369.8	46	33.0	33.8	543
5	EN:ICHmk1/mw2-01	280	370.8	3.0	367.8	47	33.1	34.1	539
5	EN:ICHmk1/mw2-01	290	368.6	2.9	365.7	47	33.3	34.3	535
5	EN:ICHmk1/mw2-01	300	366.4	2.8	363.6	47	33.5	34.5	530
5	EN:ICHmk1/mw2-01	310	364.2	2.7	361.6	47	33.6	34.7	527
5	EN:ICHmk1/mw2-01	320	362.2	2.6	359.6	47	33.6	34.9	526
5	EN:ICHmk1/mw2-01	330	360.2	2.5	357.7	47	33.6	35.1	526
5	EN:ICHmk1/mw2-01	340	358.2	2.4	355.8	47	33.6	35.3	526
5	EN:ICHmk1/mw2-01	350	356.2	2.3	353.9	47	33.6	35.5	526

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
6	EN:ICHmk1/mw2-03	10	-	-	-	1	2.0	1.3	94
6	EN:ICHmk1/mw2-03	20	-	-	-	1	2.0	4.1	94
6	EN:ICHmk1/mw2-03	30	1.1	-	1.0	1	4.4	7.2	38
6	EN:ICHmk1/mw2-03	40	8.6	0.1	8.5	2	11.9	10.1	86
6	EN:ICHmk1/mw2-03	50	25.0	0.2	24.8	6	19.2	12.7	184
6	EN:ICHmk1/mw2-03	60	47.2	0.5	46.7	9	20.7	14.9	275
6	EN:ICHmk1/mw2-03	70	73.5	0.7	72.8	13	21.9	16.9	355
6	EN:ICHmk1/mw2-03	80	102.0	1.0	101.0	17	22.8	18.6	420
6	EN:ICHmk1/mw2-03	90	130.4	1.2	129.2	20	23.7	20.1	469
6	EN:ICHmk1/mw2-03	100	157.4	1.4	156.0	23	24.6	21.4	505
6	EN:ICHmk1/mw2-03	110	182.9	1.5	181.4	26	25.4	22.6	529
6	EN:ICHmk1/mw2-03	120	205.8	1.6	204.1	28	26.1	23.6	544
6	EN:ICHmk1/mw2-03	130	225.6	1.7	223.9	30	26.8	24.5	552
6	EN:ICHmk1/mw2-03	140	242.6	1.8	240.8	32	27.4	25.3	554
6	EN:ICHmk1/mw2-03	150	255.3	1.8	253.5	33	27.9	26.0	553
6	EN:ICHmk1/mw2-03	160	263.6	1.8	261.8	34	28.3	26.7	551
6	EN:ICHmk1/mw2-03	170	268.7	1.7	266.9	34	28.6	27.2	547
6	EN:ICHmk1/mw2-03	180	271.8	1.7	270.1	35	28.9	27.8	543
6	EN:ICHmk1/mw2-03	190	273.3	1.7	271.6	35	29.2	28.2	538
6	EN:ICHmk1/mw2-03	200	273.9	1.6	272.3	35	29.4	28.7	533
6	EN:ICHmk1/mw2-03	210	272.5	1.6	270.9	36	29.6	29.0	529
6	EN:ICHmk1/mw2-03	220	271.2	1.5	269.6	36	29.7	29.4	524
6	EN:ICHmk1/mw2-03	230	269.8	1.5	268.3	36	29.9	29.7	520
6	EN:ICHmk1/mw2-03	240	268.5	1.5	267.0	36	30.1	30.0	515
6	EN:ICHmk1/mw2-03	250	267.1	1.4	265.7	36	30.3	30.3	511
6	EN:ICHmk1/mw2-03	260	265.7	1.4	264.3	36	30.4	30.5	507
6	EN:ICHmk1/mw2-03	270	264.3	1.4	262.9	36	30.6	30.8	503
6	EN:ICHmk1/mw2-03	280	262.9	1.3	261.5	36	30.7	31.0	499
6	EN:ICHmk1/mw2-03	290	261.4	1.3	260.1	36	30.9	31.2	495
6	EN:ICHmk1/mw2-03	300	259.9	1.3	258.7	36	31.0	31.4	491
6	EN:ICHmk1/mw2-03	310	258.4	1.2	257.2	37	31.2	31.6	488
6	EN:ICHmk1/mw2-03	320	256.9	1.2	255.7	37	31.2	31.7	488
6	EN:ICHmk1/mw2-03	330	255.3	1.2	254.1	37	31.2	31.9	488
6	EN:ICHmk1/mw2-03	340	253.6	1.1	252.5	37	31.2	32.0	488
6	EN:ICHmk1/mw2-03	350	252.0	1.1	250.9	37	31.2	32.2	488

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
7	EN:ICHmk1/mw2-04	10	-	-	-	0	0.3	1.4	138
7	EN:ICHmk1/mw2-04	20	-	-	-	0	0.3	4.3	138
7	EN:ICHmk1/mw2-04	30	1.5	-	1.5	1	6.5	7.5	47
7	EN:ICHmk1/mw2-04	40	10.8	0.1	10.7	3	11.7	10.5	96
7	EN:ICHmk1/mw2-04	50	31.6	0.5	31.1	7	18.2	13.1	222
7	EN:ICHmk1/mw2-04	60	60.2	1.2	59.0	11	19.9	15.4	336
7	EN:ICHmk1/mw2-04	70	93.4	2.2	91.2	15	21.1	17.5	437
7	EN:ICHmk1/mw2-04	80	128.2	3.1	125.1	20	21.9	19.2	517
7	EN:ICHmk1/mw2-04	90	162.1	3.8	158.3	23	22.7	20.7	575
7	EN:ICHmk1/mw2-04	100	193.9	4.4	189.5	27	23.5	22.0	616
7	EN:ICHmk1/mw2-04	110	223.3	4.9	218.4	30	24.3	23.2	641
7	EN:ICHmk1/mw2-04	120	249.4	5.3	244.1	32	25.0	24.2	655
7	EN:ICHmk1/mw2-04	130	271.5	5.5	266.0	34	25.7	25.1	659
7	EN:ICHmk1/mw2-04	140	290.0	5.6	284.4	36	26.4	25.9	658
7	EN:ICHmk1/mw2-04	150	303.1	5.6	297.5	37	27.0	26.6	653
7	EN:ICHmk1/mw2-04	160	311.0	5.5	305.5	37	27.4	27.2	647
7	EN:ICHmk1/mw2-04	170	315.3	5.3	310.0	38	27.7	27.8	640
7	EN:ICHmk1/mw2-04	180	317.7	5.1	312.6	38	28.0	28.2	633
7	EN:ICHmk1/mw2-04	190	318.6	4.9	313.7	38	28.2	28.7	626
7	EN:ICHmk1/mw2-04	200	318.7	4.8	313.9	39	28.5	29.1	619
7	EN:ICHmk1/mw2-04	210	316.5	4.6	311.9	39	28.7	29.5	613
7	EN:ICHmk1/mw2-04	220	314.4	4.4	310.0	39	28.9	29.8	606
7	EN:ICHmk1/mw2-04	230	312.3	4.2	308.1	39	29.0	30.1	600
7	EN:ICHmk1/mw2-04	240	310.2	4.0	306.2	39	29.2	30.3	594
7	EN:ICHmk1/mw2-04	250	308.1	3.9	304.2	39	29.4	30.6	589
7	EN:ICHmk1/mw2-04	260	306.0	3.7	302.3	39	29.6	30.8	583
7	EN:ICHmk1/mw2-04	270	303.9	3.6	300.3	39	29.7	31.0	578
7	EN:ICHmk1/mw2-04	280	301.8	3.4	298.3	39	29.9	31.2	573
7	EN:ICHmk1/mw2-04	290	299.6	3.3	296.3	39	30.0	31.4	568
7	EN:ICHmk1/mw2-04	300	297.4	3.2	294.3	39	30.2	31.6	563
7	EN:ICHmk1/mw2-04	310	295.3	3.0	292.3	39	30.3	31.7	559
7	EN:ICHmk1/mw2-04	320	293.4	2.9	290.5	39	30.3	31.9	558
7	EN:ICHmk1/mw2-04	330	291.5	2.8	288.7	39	30.3	32.0	558
7	EN:ICHmk1/mw2-04	340	289.6	2.7	286.8	39	30.3	32.1	558
7	EN:ICHmk1/mw2-04	350	287.6	2.6	285.0	39	30.3	32.3	558

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
8	EN:ICHmk1/mw2-Oth	10	-	-	-	1	1.5	1.1	117
8	EN:ICHmk1/mw2-Oth	20	-	-	-	1	1.5	3.7	117
8	EN:ICHmk1/mw2-Oth	30	1.6	-	1.6	1	6.3	6.7	64
8	EN:ICHmk1/mw2-Oth	40	10.8	0.1	10.7	3	10.1	9.7	86
8	EN:ICHmk1/mw2-Oth	50	31.6	0.5	31.1	6	16.8	12.5	185
8	EN:ICHmk1/mw2-Oth	60	64.2	1.2	63.0	11	21.5	15.0	297
8	EN:ICHmk1/mw2-Oth	70	102.3	1.9	100.4	16	23.0	17.3	393
8	EN:ICHmk1/mw2-Oth	80	143.3	2.8	140.6	21	24.0	19.3	470
8	EN:ICHmk1/mw2-Oth	90	184.4	3.6	180.8	25	25.1	21.1	526
8	EN:ICHmk1/mw2-Oth	100	223.8	4.3	219.5	29	26.1	22.7	564
8	EN:ICHmk1/mw2-Oth	110	260.6	4.9	255.8	33	27.1	24.2	589
8	EN:ICHmk1/mw2-Oth	120	293.4	5.3	288.1	36	28.0	25.4	601
8	EN:ICHmk1/mw2-Oth	130	322.4	5.7	316.7	39	28.9	26.6	605
8	EN:ICHmk1/mw2-Oth	140	347.5	6.0	341.6	41	29.7	27.6	603
8	EN:ICHmk1/mw2-Oth	150	366.6	6.1	360.5	42	30.4	28.5	597
8	EN:ICHmk1/mw2-Oth	160	378.8	6.1	372.7	44	31.0	29.4	589
8	EN:ICHmk1/mw2-Oth	170	385.9	6.0	379.9	44	31.4	30.1	582
8	EN:ICHmk1/mw2-Oth	180	390.2	5.9	384.4	45	31.8	30.8	574
8	EN:ICHmk1/mw2-Oth	190	392.3	5.7	386.6	45	32.2	31.4	567
8	EN:ICHmk1/mw2-Oth	200	393.0	5.5	387.5	46	32.5	32.0	560
8	EN:ICHmk1/mw2-Oth	210	390.9	5.3	385.6	46	32.7	32.5	554
8	EN:ICHmk1/mw2-Oth	220	388.9	5.1	383.8	46	32.9	33.0	549
8	EN:ICHmk1/mw2-Oth	230	386.9	4.9	382.0	46	33.1	33.5	543
8	EN:ICHmk1/mw2-Oth	240	384.9	4.8	380.1	46	33.3	33.9	538
8	EN:ICHmk1/mw2-Oth	250	382.8	4.6	378.2	46	33.5	34.3	533
8	EN:ICHmk1/mw2-Oth	260	380.8	4.4	376.3	47	33.7	34.6	529
8	EN:ICHmk1/mw2-Oth	270	378.7	4.3	374.4	47	33.9	34.9	524
8	EN:ICHmk1/mw2-Oth	280	376.6	4.1	372.5	47	34.1	35.2	520
8	EN:ICHmk1/mw2-Oth	290	374.4	4.0	370.5	47	34.2	35.5	515
8	EN:ICHmk1/mw2-Oth	300	372.3	3.8	368.4	47	34.4	35.8	511
8	EN:ICHmk1/mw2-Oth	310	370.1	3.7	366.4	47	34.6	36.1	508
8	EN:ICHmk1/mw2-Oth	320	368.1	3.5	364.5	47	34.6	36.3	507
8	EN:ICHmk1/mw2-Oth	330	366.0	3.4	362.6	47	34.6	36.5	507
8	EN:ICHmk1/mw2-Oth	340	363.9	3.3	360.7	47	34.6	36.7	507
8	EN:ICHmk1/mw2-Oth	350	361.9	3.2	358.7	47	34.6	36.9	507

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
9	EN:IDFdm1-01	10	-	-	-	2	2.7	1.6	731
9	EN:IDFdm1-01	20	0.1	-	0.1	2	3.1	5.1	716
9	EN:IDFdm1-01	30	3.6	-	3.6	3	8.4	8.7	220
9	EN:IDFdm1-01	40	16.9	0.1	16.8	4	17.0	11.9	166
9	EN:IDFdm1-01	50	37.5	0.2	37.3	7	19.5	14.6	256
9	EN:IDFdm1-01	60	63.4	0.4	63.0	11	20.8	17.0	341
9	EN:IDFdm1-01	70	92.0	0.6	91.4	14	21.9	19.1	408
9	EN:IDFdm1-01	80	121.3	0.8	120.5	18	22.9	20.8	457
9	EN:IDFdm1-01	90	149.7	1.1	148.6	21	23.9	22.4	490
9	EN:IDFdm1-01	100	176.4	1.3	175.2	23	24.9	23.7	511
9	EN:IDFdm1-01	110	201.2	1.5	199.8	26	25.8	24.9	522
9	EN:IDFdm1-01	120	223.3	1.6	221.7	28	26.8	25.9	525
9	EN:IDFdm1-01	130	242.3	1.8	240.6	30	27.7	26.9	521
9	EN:IDFdm1-01	140	258.4	1.8	256.6	31	28.5	27.7	513
9	EN:IDFdm1-01	150	270.1	1.9	268.2	32	29.3	28.4	503
9	EN:IDFdm1-01	160	277.2	1.9	275.3	33	29.9	29.1	492
9	EN:IDFdm1-01	170	281.4	1.8	279.6	33	30.4	29.7	481
9	EN:IDFdm1-01	180	283.9	1.8	282.1	33	30.8	30.2	472
9	EN:IDFdm1-01	190	285.3	1.7	283.6	34	31.2	30.7	463
9	EN:IDFdm1-01	200	285.9	1.7	284.2	34	31.6	31.1	455
9	EN:IDFdm1-01	210	285.0	1.6	283.4	34	31.9	31.5	448
9	EN:IDFdm1-01	220	284.1	1.6	282.6	34	32.2	31.9	441
9	EN:IDFdm1-01	230	283.2	1.5	281.7	34	32.5	32.3	435
9	EN:IDFdm1-01	240	282.3	1.5	280.8	34	32.8	32.6	429
9	EN:IDFdm1-01	250	281.3	1.4	279.9	34	33.1	32.9	424
9	EN:IDFdm1-01	260	280.3	1.4	279.0	35	33.3	33.1	419
9	EN:IDFdm1-01	270	279.3	1.3	278.0	35	33.6	33.4	414
9	EN:IDFdm1-01	280	278.3	1.3	277.0	35	33.8	33.6	409
9	EN:IDFdm1-01	290	277.3	1.2	276.0	35	34.0	33.8	404
9	EN:IDFdm1-01	300	276.2	1.2	275.0	35	34.2	34.0	400
9	EN:IDFdm1-01	310	275.2	1.1	274.0	35	34.4	34.2	397
9	EN:IDFdm1-01	320	274.1	1.1	273.0	35	34.4	34.4	397
9	EN:IDFdm1-01	330	273.1	1.1	272.0	35	34.4	34.6	397
9	EN:IDFdm1-01	340	272.1	1.0	271.0	35	34.4	34.7	397
9	EN:IDFdm1-01	350	271.0	1.0	270.0	35	34.4	34.9	397

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
10	EN:IDFdm1-04	10	-	-	-	2	1.9	1.5	305
10	EN:IDFdm1-04	20	-	-	-	2	1.9	4.8	302
10	EN:IDFdm1-04	30	2.1	-	2.1	2	5.9	8.2	74
10	EN:IDFdm1-04	40	12.8	-	12.7	3	15.1	11.2	148
10	EN:IDFdm1-04	50	30.2	0.1	30.1	6	19.0	13.8	231
10	EN:IDFdm1-04	60	52.6	0.2	52.4	10	20.4	16.1	314
10	EN:IDFdm1-04	70	78.4	0.3	78.1	13	21.6	18.1	383
10	EN:IDFdm1-04	80	105.3	0.4	104.9	16	22.6	19.8	434
10	EN:IDFdm1-04	90	131.8	0.6	131.2	19	23.6	21.3	470
10	EN:IDFdm1-04	100	156.9	0.7	156.2	22	24.5	22.6	493
10	EN:IDFdm1-04	110	180.1	0.8	179.4	24	25.4	23.8	505
10	EN:IDFdm1-04	120	201.2	0.9	200.3	26	26.3	24.8	510
10	EN:IDFdm1-04	130	219.6	0.9	218.7	28	27.2	25.7	508
10	EN:IDFdm1-04	140	235.5	1.0	234.5	29	28.1	26.5	501
10	EN:IDFdm1-04	150	247.4	1.0	246.4	30	28.8	27.2	491
10	EN:IDFdm1-04	160	254.8	1.0	253.8	31	29.4	27.8	481
10	EN:IDFdm1-04	170	259.4	1.0	258.4	31	30.0	28.4	471
10	EN:IDFdm1-04	180	262.3	1.0	261.4	32	30.4	28.9	461
10	EN:IDFdm1-04	190	263.9	0.9	263.0	32	30.8	29.4	452
10	EN:IDFdm1-04	200	264.7	0.9	263.8	32	31.2	29.8	444
10	EN:IDFdm1-04	210	263.9	0.9	263.1	32	31.5	30.2	437
10	EN:IDFdm1-04	220	263.2	0.8	262.3	32	31.8	30.6	431
10	EN:IDFdm1-04	230	262.4	0.8	261.6	32	32.1	30.9	425
10	EN:IDFdm1-04	240	261.5	0.8	260.8	32	32.4	31.3	419
10	EN:IDFdm1-04	250	260.7	0.7	259.9	33	32.7	31.5	413
10	EN:IDFdm1-04	260	259.8	0.7	259.1	33	33.0	31.8	408
10	EN:IDFdm1-04	270	258.9	0.7	258.2	33	33.2	32.1	402
10	EN:IDFdm1-04	280	258.0	0.7	257.3	33	33.5	32.3	397
10	EN:IDFdm1-04	290	257.1	0.6	256.4	33	33.7	32.5	393
10	EN:IDFdm1-04	300	256.1	0.6	255.5	33	33.9	32.7	389
10	EN:IDFdm1-04	310	255.2	0.6	254.6	33	34.1	32.9	385
10	EN:IDFdm1-04	320	254.2	0.6	253.6	33	34.1	33.1	385
10	EN:IDFdm1-04	330	253.2	0.6	252.7	33	34.1	33.2	385
10	EN:IDFdm1-04	340	252.2	0.5	251.7	33	34.1	33.4	385
10	EN:IDFdm1-04	350	251.2	0.5	250.7	33	34.1	33.5	385

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
11	EN:IDFdm1-05	10	-	-	-	1	1.2	1.5	631
11	EN:IDFdm1-05	20	-	-	-	1	1.2	4.8	621
11	EN:IDFdm1-05	30	2.4	-	2.4	1	7.0	8.3	82
11	EN:IDFdm1-05	40	15.2	0.1	15.1	4	17.3	11.5	150
11	EN:IDFdm1-05	50	36.3	0.4	35.9	7	19.8	14.3	250
11	EN:IDFdm1-05	60	64.2	0.8	63.3	11	21.0	16.8	342
11	EN:IDFdm1-05	70	96.2	1.4	94.8	15	22.0	18.9	416
11	EN:IDFdm1-05	80	129.4	1.9	127.5	19	23.0	20.7	470
11	EN:IDFdm1-05	90	161.5	2.4	159.0	22	24.0	22.3	507
11	EN:IDFdm1-05	100	191.8	2.9	188.8	25	25.0	23.7	530
11	EN:IDFdm1-05	110	219.6	3.4	216.2	27	25.9	24.9	542
11	EN:IDFdm1-05	120	244.1	3.7	240.4	29	26.8	26.0	544
11	EN:IDFdm1-05	130	265.1	4.0	261.1	31	27.7	26.9	539
11	EN:IDFdm1-05	140	282.8	4.2	278.6	33	28.6	27.7	528
11	EN:IDFdm1-05	150	295.4	4.3	291.1	34	29.4	28.5	514
11	EN:IDFdm1-05	160	302.9	4.3	298.6	34	30.0	29.2	501
11	EN:IDFdm1-05	170	307.2	4.3	302.9	35	30.6	29.8	488
11	EN:IDFdm1-05	180	309.4	4.2	305.2	35	31.1	30.3	477
11	EN:IDFdm1-05	190	310.2	4.1	306.1	35	31.5	30.8	467
11	EN:IDFdm1-05	200	310.3	4.0	306.4	35	31.9	31.3	458
11	EN:IDFdm1-05	210	308.8	3.8	305.0	35	32.2	31.7	451
11	EN:IDFdm1-05	220	307.4	3.7	303.7	35	32.5	32.1	444
11	EN:IDFdm1-05	230	306.0	3.6	302.4	35	32.8	32.4	437
11	EN:IDFdm1-05	240	304.6	3.5	301.1	35	33.0	32.8	431
11	EN:IDFdm1-05	250	303.1	3.4	299.8	35	33.3	33.1	424
11	EN:IDFdm1-05	260	301.7	3.3	298.4	35	33.6	33.3	419
11	EN:IDFdm1-05	270	300.3	3.2	297.1	36	33.8	33.6	413
11	EN:IDFdm1-05	280	298.9	3.1	295.8	36	34.1	33.8	408
11	EN:IDFdm1-05	290	297.4	3.0	294.4	36	34.3	34.1	403
11	EN:IDFdm1-05	300	296.0	2.9	293.1	36	34.5	34.3	398
11	EN:IDFdm1-05	310	294.7	2.8	291.9	36	34.7	34.5	395
11	EN:IDFdm1-05	320	293.5	2.8	290.8	36	34.7	34.7	394
11	EN:IDFdm1-05	330	292.4	2.7	289.7	36	34.7	34.8	394
11	EN:IDFdm1-05	340	291.3	2.6	288.7	36	34.7	35.0	394
11	EN:IDFdm1-05	350	290.3	2.6	287.7	36	34.7	35.1	394

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
12	EN:IDFdm1-Oth	10	-	-	-	1	0.9	1.3	416
12	EN:IDFdm1-Oth	20	-	-	-	1	1.1	4.3	350
12	EN:IDFdm1-Oth	30	2.0	-	2.0	1	4.4	7.6	161
12	EN:IDFdm1-Oth	40	11.6	0.1	11.5	3	13.6	10.7	103
12	EN:IDFdm1-Oth	50	29.1	0.2	28.9	6	19.7	13.4	189
12	EN:IDFdm1-Oth	60	51.7	0.5	51.3	9	21.4	15.8	261
12	EN:IDFdm1-Oth	70	77.5	0.8	76.7	12	22.6	17.9	318
12	EN:IDFdm1-Oth	80	104.4	1.1	103.4	15	23.7	19.7	361
12	EN:IDFdm1-Oth	90	131.0	1.4	129.6	18	24.9	21.3	391
12	EN:IDFdm1-Oth	100	156.3	1.6	154.8	20	26.1	22.7	411
12	EN:IDFdm1-Oth	110	180.0	1.8	178.2	23	27.3	23.9	423
12	EN:IDFdm1-Oth	120	201.4	1.9	199.4	25	28.4	25.0	429
12	EN:IDFdm1-Oth	130	219.9	2.0	217.9	26	29.2	26.0	429
12	EN:IDFdm1-Oth	140	236.0	2.1	233.9	28	30.1	26.9	425
12	EN:IDFdm1-Oth	150	248.0	2.1	245.8	29	30.8	27.7	418
12	EN:IDFdm1-Oth	160	255.5	2.1	253.4	29	31.4	28.4	409
12	EN:IDFdm1-Oth	170	260.1	2.0	258.1	30	32.0	29.0	402
12	EN:IDFdm1-Oth	180	262.9	2.0	260.9	30	32.4	29.6	394
12	EN:IDFdm1-Oth	190	264.5	1.9	262.6	30	32.8	30.1	387
12	EN:IDFdm1-Oth	200	265.4	1.8	263.6	30	33.2	30.6	381
12	EN:IDFdm1-Oth	210	264.4	1.7	262.6	30	33.5	31.1	375
12	EN:IDFdm1-Oth	220	263.2	1.7	261.5	31	33.8	31.5	370
12	EN:IDFdm1-Oth	230	262.0	1.6	260.4	31	34.1	31.9	365
12	EN:IDFdm1-Oth	240	260.9	1.6	259.3	31	34.4	32.2	360
12	EN:IDFdm1-Oth	250	259.7	1.5	258.2	31	34.6	32.5	355
12	EN:IDFdm1-Oth	260	258.6	1.4	257.2	31	34.9	32.8	351
12	EN:IDFdm1-Oth	270	257.6	1.4	256.2	31	35.1	33.1	347
12	EN:IDFdm1-Oth	280	256.5	1.3	255.2	31	35.4	33.4	343
12	EN:IDFdm1-Oth	290	255.5	1.3	254.2	31	35.6	33.6	339
12	EN:IDFdm1-Oth	300	254.5	1.2	253.2	31	35.8	33.9	336
12	EN:IDFdm1-Oth	310	253.5	1.2	252.3	31	36.0	34.1	333
12	EN:IDFdm1-Oth	320	252.4	1.2	251.3	31	36.0	34.3	332
12	EN:IDFdm1-Oth	330	251.5	1.1	250.4	31	36.0	34.5	332
12	EN:IDFdm1-Oth	340	250.5	1.1	249.5	31	36.0	34.6	332
12	EN:IDFdm1-Oth	350	249.6	1.1	248.6	31	36.0	34.8	332

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
13	EN:MSdm1-01	10	-	-	-	2	1.8	1.7	574
13	EN:MSdm1-01	20	0.1	-	0.1	2	2.4	5.1	423
13	EN:MSdm1-01	30	4.2	-	4.2	3	7.9	8.6	147
13	EN:MSdm1-01	40	20.3	0.1	20.2	5	14.4	11.7	223
13	EN:MSdm1-01	50	47.5	0.2	47.3	9	17.6	14.4	359
13	EN:MSdm1-01	60	81.3	0.3	81.0	13	19.3	16.7	481
13	EN:MSdm1-01	70	116.3	0.4	115.8	17	20.3	18.7	572
13	EN:MSdm1-01	80	149.9	0.6	149.3	21	21.2	20.4	630
13	EN:MSdm1-01	90	180.8	0.6	180.2	24	22.0	21.8	665
13	EN:MSdm1-01	100	208.4	0.7	207.7	26	22.8	23.1	682
13	EN:MSdm1-01	110	232.6	0.8	231.8	29	23.7	24.1	686
13	EN:MSdm1-01	120	253.6	0.8	252.8	30	24.5	25.1	683
13	EN:MSdm1-01	130	271.8	0.9	270.9	32	25.2	25.9	677
13	EN:MSdm1-01	140	287.3	0.9	286.5	33	25.8	26.6	669
13	EN:MSdm1-01	150	299.1	0.9	298.2	34	26.4	27.2	662
13	EN:MSdm1-01	160	306.8	0.9	306.0	35	26.8	27.8	656
13	EN:MSdm1-01	170	311.7	0.9	310.8	35	27.1	28.2	649
13	EN:MSdm1-01	180	314.6	0.8	313.7	36	27.4	28.7	643
13	EN:MSdm1-01	190	316.0	0.8	315.2	36	27.7	29.1	635
13	EN:MSdm1-01	200	316.5	0.8	315.7	36	27.9	29.4	628
13	EN:MSdm1-01	210	315.2	0.8	314.4	36	28.1	29.7	621
13	EN:MSdm1-01	220	313.8	0.8	313.1	36	28.3	30.0	614
13	EN:MSdm1-01	230	312.4	0.7	311.7	36	28.5	30.3	607
13	EN:MSdm1-01	240	311.0	0.7	310.2	36	28.7	30.5	601
13	EN:MSdm1-01	250	309.5	0.7	308.8	36	28.8	30.7	594
13	EN:MSdm1-01	260	308.0	0.7	307.4	36	29.0	30.9	588
13	EN:MSdm1-01	270	306.6	0.7	305.9	36	29.1	31.1	582
13	EN:MSdm1-01	280	305.1	0.7	304.4	37	29.3	31.2	577
13	EN:MSdm1-01	290	303.6	0.6	303.0	37	29.4	31.4	571
13	EN:MSdm1-01	300	302.1	0.6	301.5	37	29.6	31.5	566
13	EN:MSdm1-01	310	300.8	0.6	300.2	37	29.7	31.7	562
13	EN:MSdm1-01	320	299.8	0.6	299.2	37	29.7	31.8	562
13	EN:MSdm1-01	330	298.8	0.6	298.2	37	29.7	31.9	562
13	EN:MSdm1-01	340	297.8	0.6	297.2	37	29.7	32.0	562
13	EN:MSdm1-01	350	296.8	0.6	296.3	37	29.7	32.1	562

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
14	EN:MSdm1-03	10	-	-	-	0	0.2	1.7	69
14	EN:MSdm1-03	20	-	-	-	0	0.2	4.8	69
14	EN:MSdm1-03	30	2.5	-	2.5	1	4.6	8.0	82
14	EN:MSdm1-03	40	15.0	-	15.0	4	13.1	10.9	185
14	EN:MSdm1-03	50	38.4	-	38.4	8	16.5	13.4	347
14	EN:MSdm1-03	60	67.8	-	67.8	12	18.4	15.5	491
14	EN:MSdm1-03	70	97.7	-	97.7	16	19.2	17.3	587
14	EN:MSdm1-03	80	126.9	-	126.9	19	20.0	18.8	651
14	EN:MSdm1-03	90	154.0	-	154.0	22	20.7	20.1	690
14	EN:MSdm1-03	100	178.3	-	178.3	24	21.5	21.2	710
14	EN:MSdm1-03	110	199.8	-	199.7	26	22.2	22.1	716
14	EN:MSdm1-03	120	218.5	-	218.5	28	22.9	23.0	715
14	EN:MSdm1-03	130	235.1	-	235.1	29	23.6	23.7	711
14	EN:MSdm1-03	140	249.5	-	249.5	31	24.2	24.3	706
14	EN:MSdm1-03	150	260.8	-	260.8	32	24.6	24.9	701
14	EN:MSdm1-03	160	268.6	-	268.6	32	25.0	25.4	697
14	EN:MSdm1-03	170	273.8	-	273.8	33	25.3	25.8	693
14	EN:MSdm1-03	180	277.1	-	277.0	33	25.5	26.2	688
14	EN:MSdm1-03	190	278.9	-	278.9	33	25.7	26.6	682
14	EN:MSdm1-03	200	279.8	-	279.8	34	26.0	26.9	675
14	EN:MSdm1-03	210	278.9	-	278.9	34	26.1	27.2	669
14	EN:MSdm1-03	220	277.9	-	277.9	34	26.3	27.4	662
14	EN:MSdm1-03	230	276.8	-	276.8	34	26.4	27.7	655
14	EN:MSdm1-03	240	275.7	-	275.7	34	26.6	27.9	649
14	EN:MSdm1-03	250	274.6	-	274.6	34	26.8	28.1	642
14	EN:MSdm1-03	260	273.5	-	273.5	34	26.9	28.2	636
14	EN:MSdm1-03	270	272.3	-	272.3	34	27.0	28.4	631
14	EN:MSdm1-03	280	271.2	-	271.1	34	27.2	28.6	625
14	EN:MSdm1-03	290	270.0	-	270.0	34	27.3	28.7	619
14	EN:MSdm1-03	300	268.8	-	268.8	34	27.4	28.8	614
14	EN:MSdm1-03	310	267.7	-	267.7	34	27.6	28.9	610
14	EN:MSdm1-03	320	266.8	-	266.8	34	27.6	29.1	610
14	EN:MSdm1-03	330	265.9	-	265.9	34	27.6	29.2	610
14	EN:MSdm1-03	340	264.9	-	264.9	34	27.6	29.3	610
14	EN:MSdm1-03	350	264.0	-	264.0	34	27.6	29.3	610

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
15	EN:MSdm1-04	10	-	-	-	1	1.1	1.6	163
15	EN:MSdm1-04	20	-	-	-	1	1.3	4.9	131
15	EN:MSdm1-04	30	2.9	-	2.9	2	5.7	8.2	94
15	EN:MSdm1-04	40	16.2	-	16.2	4	14.2	11.2	191
15	EN:MSdm1-04	50	39.4	-	39.4	8	17.7	13.8	334
15	EN:MSdm1-04	60	68.5	0.1	68.5	12	19.1	16.0	459
15	EN:MSdm1-04	70	98.9	0.1	98.8	16	20.0	17.8	548
15	EN:MSdm1-04	80	128.6	0.1	128.4	19	20.8	19.4	609
15	EN:MSdm1-04	90	156.1	0.2	155.9	22	21.7	20.8	646
15	EN:MSdm1-04	100	181.1	0.2	180.9	24	22.5	22.0	666
15	EN:MSdm1-04	110	203.4	0.2	203.2	27	23.2	23.0	673
15	EN:MSdm1-04	120	223.2	0.2	223.0	28	24.0	23.9	672
15	EN:MSdm1-04	130	240.6	0.2	240.3	30	24.7	24.7	669
15	EN:MSdm1-04	140	255.7	0.2	255.5	31	25.3	25.4	664
15	EN:MSdm1-04	150	267.4	0.2	267.2	32	25.9	26.0	658
15	EN:MSdm1-04	160	275.4	0.2	275.1	33	26.3	26.6	653
15	EN:MSdm1-04	170	280.6	0.2	280.3	33	26.6	27.1	648
15	EN:MSdm1-04	180	283.8	0.2	283.6	34	26.9	27.5	642
15	EN:MSdm1-04	190	285.6	0.2	285.4	34	27.1	27.9	636
15	EN:MSdm1-04	200	286.5	0.2	286.3	34	27.4	28.2	629
15	EN:MSdm1-04	210	285.6	0.2	285.4	34	27.6	28.6	622
15	EN:MSdm1-04	220	284.6	0.2	284.4	35	27.8	28.8	615
15	EN:MSdm1-04	230	283.5	0.2	283.4	35	28.0	29.1	608
15	EN:MSdm1-04	240	282.5	0.2	282.3	35	28.1	29.3	602
15	EN:MSdm1-04	250	281.4	0.2	281.2	35	28.3	29.6	596
15	EN:MSdm1-04	260	280.3	0.2	280.1	35	28.5	29.8	590
15	EN:MSdm1-04	270	279.1	0.2	279.0	35	28.7	30.0	584
15	EN:MSdm1-04	280	278.0	0.1	277.9	35	28.8	30.1	579
15	EN:MSdm1-04	290	276.9	0.1	276.7	35	29.0	30.3	573
15	EN:MSdm1-04	300	275.7	0.1	275.6	35	29.1	30.4	568
15	EN:MSdm1-04	310	274.7	0.1	274.6	35	29.3	30.6	564
15	EN:MSdm1-04	320	273.8	0.1	273.7	35	29.3	30.7	564
15	EN:MSdm1-04	330	272.9	0.1	272.8	35	29.3	30.8	564
15	EN:MSdm1-04	340	272.0	0.1	271.8	35	29.3	30.9	564
15	EN:MSdm1-04	350	271.0	0.1	270.9	35	29.3	31.0	564

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
16	EN:MSdm1-05	10	-	-	-	0	0.1	1.8	1252
16	EN:MSdm1-05	20	0.2	-	0.2	0	1.7	5.4	959
16	EN:MSdm1-05	30	6.3	0.1	6.2	2	9.1	9.1	427
16	EN:MSdm1-05	40	27.1	0.4	26.8	5	14.8	12.5	347
16	EN:MSdm1-05	50	62.2	0.8	61.3	10	17.5	15.5	513
16	EN:MSdm1-05	60	104.9	1.4	103.5	15	19.2	18.0	550
16	EN:MSdm1-05	70	148.1	2.1	146.0	19	20.3	20.1	629
16	EN:MSdm1-05	80	188.4	2.7	185.7	23	21.4	21.9	673
16	EN:MSdm1-05	90	224.3	3.2	221.2	26	22.4	23.4	692
16	EN:MSdm1-05	100	255.5	3.6	251.9	29	23.3	24.7	693
16	EN:MSdm1-05	110	282.1	3.9	278.1	31	24.2	25.8	684
16	EN:MSdm1-05	120	304.4	4.2	300.3	32	25.1	26.8	670
16	EN:MSdm1-05	130	323.5	4.3	319.2	34	26.0	27.6	654
16	EN:MSdm1-05	140	339.4	4.5	335.0	35	26.8	28.3	638
16	EN:MSdm1-05	150	351.0	4.5	346.5	36	27.5	29.0	623
16	EN:MSdm1-05	160	358.0	4.4	353.6	36	28.0	29.5	610
16	EN:MSdm1-05	170	362.0	4.4	357.6	37	28.4	30.0	599
16	EN:MSdm1-05	180	363.9	4.3	359.7	37	28.8	30.5	589
16	EN:MSdm1-05	190	364.5	4.1	360.4	37	29.1	30.8	579
16	EN:MSdm1-05	200	364.1	4.0	360.1	37	29.3	31.2	570
16	EN:MSdm1-05	210	361.8	3.9	357.9	37	29.5	31.5	563
16	EN:MSdm1-05	220	359.5	3.7	355.8	37	29.7	31.8	556
16	EN:MSdm1-05	230	357.2	3.6	353.7	37	29.9	32.1	550
16	EN:MSdm1-05	240	354.9	3.4	351.5	37	30.1	32.3	543
16	EN:MSdm1-05	250	352.6	3.3	349.3	37	30.3	32.5	537
16	EN:MSdm1-05	260	350.4	3.2	347.2	37	30.4	32.7	532
16	EN:MSdm1-05	270	348.1	3.1	345.0	37	30.6	32.9	526
16	EN:MSdm1-05	280	345.9	3.0	342.9	37	30.7	33.1	521
16	EN:MSdm1-05	290	343.7	2.9	340.8	37	30.9	33.2	515
16	EN:MSdm1-05	300	341.5	2.8	338.7	37	31.0	33.4	511
16	EN:MSdm1-05	310	339.6	2.7	336.9	37	31.2	33.5	507
16	EN:MSdm1-05	320	338.1	2.6	335.5	37	31.2	33.6	507
16	EN:MSdm1-05	330	336.7	2.5	334.2	37	31.2	33.7	507
16	EN:MSdm1-05	340	335.4	2.5	332.9	37	31.2	33.8	507
16	EN:MSdm1-05	350	334.0	2.4	331.6	37	31.2	33.9	507

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
17	EN:MSdm1-Oth	10	-	-	-	1	1.3	1.5	191
17	EN:MSdm1-Oth	20	0.1	-	0.1	1	1.5	4.7	177
17	EN:MSdm1-Oth	30	3.1	-	3.1	2	6.9	8.1	117
17	EN:MSdm1-Oth	40	15.8	-	15.8	4	14.5	11.2	155
17	EN:MSdm1-Oth	50	38.4	0.1	38.3	8	18.2	14.0	272
17	EN:MSdm1-Oth	60	67.9	0.2	67.6	12	20.2	16.4	379
17	EN:MSdm1-Oth	70	99.9	0.3	99.5	16	21.3	18.5	461
17	EN:MSdm1-Oth	80	132.2	0.5	131.7	19	22.2	20.3	519
17	EN:MSdm1-Oth	90	162.8	0.6	162.2	22	23.1	21.8	556
17	EN:MSdm1-Oth	100	190.7	0.7	190.1	25	24.0	23.2	577
17	EN:MSdm1-Oth	110	215.8	0.8	215.1	27	24.9	24.4	587
17	EN:MSdm1-Oth	120	237.8	0.8	237.0	29	25.7	25.4	588
17	EN:MSdm1-Oth	130	257.0	0.9	256.2	31	26.5	26.3	586
17	EN:MSdm1-Oth	140	273.6	0.9	272.7	32	27.2	27.1	581
17	EN:MSdm1-Oth	150	286.3	0.9	285.3	33	27.8	27.8	575
17	EN:MSdm1-Oth	160	294.8	0.9	293.9	34	28.3	28.4	570
17	EN:MSdm1-Oth	170	300.3	0.9	299.4	35	28.7	29.0	565
17	EN:MSdm1-Oth	180	303.7	0.9	302.8	35	29.0	29.5	559
17	EN:MSdm1-Oth	190	305.6	0.9	304.8	35	29.3	29.9	553
17	EN:MSdm1-Oth	200	306.6	0.8	305.8	36	29.5	30.3	547
17	EN:MSdm1-Oth	210	305.5	0.8	304.7	36	29.7	30.7	542
17	EN:MSdm1-Oth	220	304.3	0.8	303.6	36	29.9	31.0	536
17	EN:MSdm1-Oth	230	303.2	0.7	302.5	36	30.1	31.3	531
17	EN:MSdm1-Oth	240	302.1	0.7	301.4	36	30.3	31.6	525
17	EN:MSdm1-Oth	250	301.0	0.7	300.3	36	30.5	31.8	520
17	EN:MSdm1-Oth	260	299.8	0.7	299.2	36	30.7	32.1	516
17	EN:MSdm1-Oth	270	298.7	0.6	298.1	36	30.9	32.3	511
17	EN:MSdm1-Oth	280	297.6	0.6	297.0	36	31.0	32.5	506
17	EN:MSdm1-Oth	290	296.5	0.6	295.9	36	31.2	32.7	502
17	EN:MSdm1-Oth	300	295.4	0.6	294.8	36	31.3	32.8	498
17	EN:MSdm1-Oth	310	294.4	0.5	293.9	36	31.5	33.0	494
17	EN:MSdm1-Oth	320	293.6	0.5	293.0	36	31.5	33.1	494
17	EN:MSdm1-Oth	330	292.7	0.5	292.2	36	31.5	33.3	494
17	EN:MSdm1-Oth	340	291.9	0.5	291.4	36	31.5	33.4	494
17	EN:MSdm1-Oth	350	291.1	0.5	290.6	36	31.5	33.5	494

Yield Tables for Existing Natural Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
18	EN:Msdm1a-All	10	-	-	-	1	0.5	1.7	19
18	EN:Msdm1a-All	20	-	-	-	1	0.6	5.2	20
18	EN:Msdm1a-All	30	3.5	-	3.5	2	8.1	8.7	69
18	EN:Msdm1a-All	40	19.7	-	19.7	5	16.5	11.9	205
18	EN:Msdm1a-All	50	46.4	-	46.4	9	18.2	14.7	338
18	EN:Msdm1a-All	60	81.1	-	81.1	13	19.7	17.1	469
18	EN:Msdm1a-All	70	118.6	-	118.6	18	20.5	19.2	568
18	EN:Msdm1a-All	80	155.0	-	155.0	21	21.3	20.9	634
18	EN:Msdm1a-All	90	188.9	-	188.9	24	22.1	22.4	674
18	EN:Msdm1a-All	100	219.6	-	219.6	27	22.9	23.8	696
18	EN:Msdm1a-All	110	246.7	-	246.7	29	23.7	24.9	703
18	EN:Msdm1a-All	120	270.4	-	270.4	31	24.4	25.9	703
18	EN:Msdm1a-All	130	291.0	-	291.0	33	25.1	26.7	699
18	EN:Msdm1a-All	140	308.7	-	308.7	34	25.8	27.5	692
18	EN:Msdm1a-All	150	322.1	-	322.1	35	26.3	28.2	684
18	EN:Msdm1a-All	160	331.3	-	331.3	36	26.8	28.7	678
18	EN:Msdm1a-All	170	337.4	-	337.4	37	27.1	29.3	671
18	EN:Msdm1a-All	180	341.1	-	341.1	37	27.4	29.7	665
18	EN:Msdm1a-All	190	343.3	-	343.3	37	27.7	30.2	658
18	EN:Msdm1a-All	200	344.1	-	344.1	38	27.9	30.6	651
18	EN:Msdm1a-All	210	343.1	-	343.1	38	28.1	30.9	644
18	EN:Msdm1a-All	220	342.0	-	342.0	38	28.3	31.2	637
18	EN:Msdm1a-All	230	340.9	-	340.9	38	28.4	31.5	630
18	EN:Msdm1a-All	240	339.7	-	339.7	38	28.6	31.7	623
18	EN:Msdm1a-All	250	338.5	-	338.5	38	28.8	32.0	617
18	EN:Msdm1a-All	260	337.2	-	337.2	38	29.0	32.2	610
18	EN:Msdm1a-All	270	335.9	-	335.9	38	29.1	32.4	604
18	EN:Msdm1a-All	280	334.5	-	334.5	38	29.3	32.6	597
18	EN:Msdm1a-All	290	333.2	-	333.2	38	29.5	32.7	591
18	EN:Msdm1a-All	300	331.8	-	331.8	38	29.6	32.9	586
18	EN:Msdm1a-All	310	330.7	-	330.7	38	29.8	33.0	581
18	EN:Msdm1a-All	320	329.8	-	329.8	38	29.8	33.2	581
18	EN:Msdm1a-All	330	329.0	-	329.0	38	29.8	33.3	581
18	EN:Msdm1a-All	340	328.1	-	328.1	38	29.8	33.4	581
18	EN:Msdm1a-All	350	327.3	-	327.3	38	29.8	33.5	581

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
101	EM1:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.5	0
101	EM1:ESSFdc1/dcu1-01	20	-	-	-	0	2.2	2.6	0
101	EM1:ESSFdc1/dcu1-01	30	1.4	-	1.4	0	17.9	6.1	27
101	EM1:ESSFdc1/dcu1-01	40	11.7	-	11.7	3	18.3	9.6	135
101	EM1:ESSFdc1/dcu1-01	50	41.6	-	41.6	7	19.2	12.9	360
101	EM1:ESSFdc1/dcu1-01	60	98.2	-	98.2	14	20.3	15.9	652
101	EM1:ESSFdc1/dcu1-01	70	167.1	-	167.1	21	21.5	18.4	851
101	EM1:ESSFdc1/dcu1-01	80	232.6	-	232.6	27	22.6	20.6	946
101	EM1:ESSFdc1/dcu1-01	90	288.1	-	288.1	32	23.7	22.4	972
101	EM1:ESSFdc1/dcu1-01	100	331.9	-	331.9	36	24.6	23.9	960
101	EM1:ESSFdc1/dcu1-01	110	366.6	-	366.6	39	25.4	25.2	934
101	EM1:ESSFdc1/dcu1-01	120	394.0	-	394.0	41	26.1	26.3	906
101	EM1:ESSFdc1/dcu1-01	130	415.4	-	415.4	43	26.7	27.3	878
101	EM1:ESSFdc1/dcu1-01	140	432.8	-	432.8	44	27.3	28.1	853
101	EM1:ESSFdc1/dcu1-01	150	447.6	-	447.6	44	27.7	28.9	831
101	EM1:ESSFdc1/dcu1-01	160	459.5	-	459.5	45	28.1	29.5	810
101	EM1:ESSFdc1/dcu1-01	170	469.3	-	469.3	46	28.6	30.1	791
101	EM1:ESSFdc1/dcu1-01	180	477.9	-	477.9	47	28.8	30.6	776
101	EM1:ESSFdc1/dcu1-01	190	484.7	-	484.7	46	29.1	31.0	762
101	EM1:ESSFdc1/dcu1-01	200	490.6	-	490.6	47	29.3	31.4	749
101	EM1:ESSFdc1/dcu1-01	210	495.6	-	495.6	47	29.6	31.8	737
101	EM1:ESSFdc1/dcu1-01	220	499.9	-	499.9	47	29.8	32.0	727
101	EM1:ESSFdc1/dcu1-01	230	503.1	-	503.1	47	30.0	32.4	717
101	EM1:ESSFdc1/dcu1-01	240	505.4	-	505.4	47	30.1	32.6	708
101	EM1:ESSFdc1/dcu1-01	250	507.2	-	507.2	47	30.3	32.9	699
101	EM1:ESSFdc1/dcu1-01	260	508.8	-	508.8	47	30.4	33.1	691
101	EM1:ESSFdc1/dcu1-01	270	509.9	-	509.9	47	30.6	33.3	683
101	EM1:ESSFdc1/dcu1-01	280	510.7	-	510.7	47	30.6	33.4	677
101	EM1:ESSFdc1/dcu1-01	290	511.1	-	511.1	47	30.7	33.6	670
101	EM1:ESSFdc1/dcu1-01	300	511.5	-	511.5	47	30.8	33.8	663
101	EM1:ESSFdc1/dcu1-01	310	511.5	-	511.5	47	30.8	33.8	661
101	EM1:ESSFdc1/dcu1-01	320	511.5	-	511.5	47	30.8	33.8	661
101	EM1:ESSFdc1/dcu1-01	330	511.5	-	511.5	47	30.8	33.8	661
101	EM1:ESSFdc1/dcu1-01	340	511.5	-	511.5	47	30.8	33.8	661
101	EM1:ESSFdc1/dcu1-01	350	511.5	-	511.5	47	30.8	33.8	661

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
102	EM1:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.5	0
102	EM1:ESSFdc1/dcu1-03	20	-	-	-	0	10.4	2.9	0
102	EM1:ESSFdc1/dcu1-03	30	0.1	-	0.1	0	16.8	6.3	3
102	EM1:ESSFdc1/dcu1-03	40	7.1	-	7.1	2	16.7	9.6	124
102	EM1:ESSFdc1/dcu1-03	50	42.8	-	42.8	10	17.0	12.6	552
102	EM1:ESSFdc1/dcu1-03	60	102.8	-	102.8	20	17.5	15.2	1012
102	EM1:ESSFdc1/dcu1-03	70	170.0	-	170.0	27	18.2	17.4	1273
102	EM1:ESSFdc1/dcu1-03	80	229.9	-	229.9	31	19.0	19.3	1355
102	EM1:ESSFdc1/dcu1-03	90	278.8	-	278.8	34	19.9	20.9	1343
102	EM1:ESSFdc1/dcu1-03	100	317.0	-	317.0	36	20.6	22.2	1290
102	EM1:ESSFdc1/dcu1-03	110	347.0	-	347.0	38	21.3	23.3	1235
102	EM1:ESSFdc1/dcu1-03	120	370.4	-	370.4	39	22.0	24.2	1181
102	EM1:ESSFdc1/dcu1-03	130	388.9	-	388.9	39	22.5	25.0	1134
102	EM1:ESSFdc1/dcu1-03	140	403.9	-	403.9	40	23.0	25.7	1095
102	EM1:ESSFdc1/dcu1-03	150	415.2	-	415.2	41	23.4	26.3	1060
102	EM1:ESSFdc1/dcu1-03	160	424.9	-	424.9	41	23.8	26.9	1030
102	EM1:ESSFdc1/dcu1-03	170	431.7	-	431.7	41	24.0	27.3	1002
102	EM1:ESSFdc1/dcu1-03	180	437.4	-	437.4	42	24.3	27.8	977
102	EM1:ESSFdc1/dcu1-03	190	442.4	-	442.4	42	24.6	28.1	956
102	EM1:ESSFdc1/dcu1-03	200	446.0	-	446.0	42	24.8	28.5	937
102	EM1:ESSFdc1/dcu1-03	210	448.4	-	448.4	41	25.0	28.8	919
102	EM1:ESSFdc1/dcu1-03	220	450.5	-	450.5	41	25.1	29.0	902
102	EM1:ESSFdc1/dcu1-03	230	452.4	-	452.4	42	25.3	29.3	888
102	EM1:ESSFdc1/dcu1-03	240	453.9	-	453.9	42	25.4	29.5	875
102	EM1:ESSFdc1/dcu1-03	250	454.5	-	454.5	42	25.6	29.7	862
102	EM1:ESSFdc1/dcu1-03	260	454.1	-	454.1	41	25.7	29.9	850
102	EM1:ESSFdc1/dcu1-03	270	453.8	-	453.8	41	25.8	30.0	838
102	EM1:ESSFdc1/dcu1-03	280	453.3	-	453.3	41	25.9	30.2	828
102	EM1:ESSFdc1/dcu1-03	290	452.6	-	452.6	41	26.0	30.3	818
102	EM1:ESSFdc1/dcu1-03	300	452.0	-	452.0	40	26.1	30.5	808
102	EM1:ESSFdc1/dcu1-03	310	451.9	-	451.9	40	26.1	30.5	806
102	EM1:ESSFdc1/dcu1-03	320	451.9	-	451.9	40	26.1	30.5	806
102	EM1:ESSFdc1/dcu1-03	330	451.9	-	451.9	40	26.1	30.5	806
102	EM1:ESSFdc1/dcu1-03	340	451.9	-	451.9	40	26.1	30.5	806
102	EM1:ESSFdc1/dcu1-03	350	451.9	-	451.9	40	26.1	30.5	806

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
103	EM1:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.5	0
103	EM1:ESSFdc1/dcu1-04	20	-	-	-	0	2.2	2.6	0
103	EM1:ESSFdc1/dcu1-04	30	1.5	-	1.5	0	17.9	6.1	28
103	EM1:ESSFdc1/dcu1-04	40	11.9	-	11.9	3	18.4	9.7	133
103	EM1:ESSFdc1/dcu1-04	50	44.1	-	44.1	8	19.4	13.0	371
103	EM1:ESSFdc1/dcu1-04	60	103.4	-	103.4	14	20.6	16.0	662
103	EM1:ESSFdc1/dcu1-04	70	174.5	-	174.5	22	21.8	18.6	853
103	EM1:ESSFdc1/dcu1-04	80	240.6	-	240.6	28	22.9	20.7	939
103	EM1:ESSFdc1/dcu1-04	90	296.4	-	296.4	32	24.0	22.5	960
103	EM1:ESSFdc1/dcu1-04	100	340.1	-	340.1	37	25.0	24.0	943
103	EM1:ESSFdc1/dcu1-04	110	375.0	-	375.0	39	25.8	25.3	917
103	EM1:ESSFdc1/dcu1-04	120	402.3	-	402.3	42	26.5	26.5	888
103	EM1:ESSFdc1/dcu1-04	130	423.7	-	423.7	43	27.2	27.4	861
103	EM1:ESSFdc1/dcu1-04	140	441.8	-	441.8	44	27.7	28.2	835
103	EM1:ESSFdc1/dcu1-04	150	456.9	-	456.9	45	28.2	28.9	813
103	EM1:ESSFdc1/dcu1-04	160	469.2	-	469.2	46	28.6	29.5	793
103	EM1:ESSFdc1/dcu1-04	170	479.7	-	479.7	46	29.0	30.1	775
103	EM1:ESSFdc1/dcu1-04	180	488.4	-	488.4	47	29.3	30.6	760
103	EM1:ESSFdc1/dcu1-04	190	495.8	-	495.8	47	29.6	31.0	746
103	EM1:ESSFdc1/dcu1-04	200	502.2	-	502.2	48	29.8	31.4	734
103	EM1:ESSFdc1/dcu1-04	210	507.5	-	507.5	48	30.1	31.8	723
103	EM1:ESSFdc1/dcu1-04	220	511.7	-	511.7	48	30.3	32.2	712
103	EM1:ESSFdc1/dcu1-04	230	515.2	-	515.2	48	30.5	32.4	703
103	EM1:ESSFdc1/dcu1-04	240	517.9	-	517.9	48	30.6	32.6	694
103	EM1:ESSFdc1/dcu1-04	250	520.2	-	520.2	48	30.8	32.9	686
103	EM1:ESSFdc1/dcu1-04	260	522.1	-	522.1	48	30.9	33.1	678
103	EM1:ESSFdc1/dcu1-04	270	523.5	-	523.5	48	31.0	33.3	670
103	EM1:ESSFdc1/dcu1-04	280	524.3	-	524.3	48	31.1	33.5	664
103	EM1:ESSFdc1/dcu1-04	290	524.0	-	524.0	48	31.3	33.7	656
103	EM1:ESSFdc1/dcu1-04	300	523.5	-	523.5	47	31.4	33.8	648
103	EM1:ESSFdc1/dcu1-04	310	523.4	-	523.4	47	31.4	33.8	646
103	EM1:ESSFdc1/dcu1-04	320	523.4	-	523.4	47	31.4	33.8	646
103	EM1:ESSFdc1/dcu1-04	330	523.4	-	523.4	47	31.4	33.8	646
103	EM1:ESSFdc1/dcu1-04	340	523.4	-	523.4	47	31.4	33.8	646
103	EM1:ESSFdc1/dcu1-04	350	523.4	-	523.4	47	31.4	33.8	646

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
104	EM1:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	1.0	0
104	EM1:ESSFdc1/dcu1-Oth	20	-	-	-	0	-	3.7	0
104	EM1:ESSFdc1/dcu1-Oth	30	2.2	-	2.2	1	9.0	7.3	50
104	EM1:ESSFdc1/dcu1-Oth	40	20.4	-	20.4	5	18.1	10.6	224
104	EM1:ESSFdc1/dcu1-Oth	50	49.0	-	49.0	9	19.7	13.6	335
104	EM1:ESSFdc1/dcu1-Oth	60	92.5	-	92.5	14	21.6	16.3	484
104	EM1:ESSFdc1/dcu1-Oth	70	145.6	-	145.6	19	23.1	18.5	618
104	EM1:ESSFdc1/dcu1-Oth	80	199.0	-	199.0	24	24.4	20.4	704
104	EM1:ESSFdc1/dcu1-Oth	90	245.6	-	245.6	29	25.5	22.0	748
104	EM1:ESSFdc1/dcu1-Oth	100	284.4	-	284.4	32	26.4	23.3	762
104	EM1:ESSFdc1/dcu1-Oth	110	315.4	-	315.4	35	27.2	24.4	758
104	EM1:ESSFdc1/dcu1-Oth	120	340.0	-	340.0	37	27.8	25.4	746
104	EM1:ESSFdc1/dcu1-Oth	130	360.2	-	360.2	39	28.4	26.2	732
104	EM1:ESSFdc1/dcu1-Oth	140	376.3	-	376.3	40	28.9	27.0	718
104	EM1:ESSFdc1/dcu1-Oth	150	389.5	-	389.5	41	29.4	27.6	704
104	EM1:ESSFdc1/dcu1-Oth	160	400.0	-	400.0	42	29.7	28.1	690
104	EM1:ESSFdc1/dcu1-Oth	170	408.9	-	408.9	42	30.0	28.6	678
104	EM1:ESSFdc1/dcu1-Oth	180	416.3	-	416.3	43	30.3	29.0	668
104	EM1:ESSFdc1/dcu1-Oth	190	422.4	-	422.4	43	30.5	29.4	657
104	EM1:ESSFdc1/dcu1-Oth	200	427.6	-	427.6	43	30.7	29.7	649
104	EM1:ESSFdc1/dcu1-Oth	210	432.1	-	432.1	43	30.9	30.0	641
104	EM1:ESSFdc1/dcu1-Oth	220	435.8	-	435.8	44	31.1	30.3	634
104	EM1:ESSFdc1/dcu1-Oth	230	438.2	-	438.2	44	31.3	30.6	626
104	EM1:ESSFdc1/dcu1-Oth	240	440.1	-	440.1	44	31.4	30.8	619
104	EM1:ESSFdc1/dcu1-Oth	250	441.9	-	441.9	44	31.5	31.0	613
104	EM1:ESSFdc1/dcu1-Oth	260	443.5	-	443.5	44	31.6	31.2	607
104	EM1:ESSFdc1/dcu1-Oth	270	444.5	-	444.5	44	31.8	31.4	601
104	EM1:ESSFdc1/dcu1-Oth	280	445.4	-	445.4	44	31.8	31.6	596
104	EM1:ESSFdc1/dcu1-Oth	290	446.0	-	446.0	44	32.0	31.6	590
104	EM1:ESSFdc1/dcu1-Oth	300	445.2	-	445.2	44	32.0	31.8	585
104	EM1:ESSFdc1/dcu1-Oth	310	445.2	-	445.2	44	32.0	31.8	584
104	EM1:ESSFdc1/dcu1-Oth	320	445.2	-	445.2	44	32.0	31.8	584
104	EM1:ESSFdc1/dcu1-Oth	330	445.2	-	445.2	44	32.0	31.8	584
104	EM1:ESSFdc1/dcu1-Oth	340	445.2	-	445.2	44	32.0	31.8	584
104	EM1:ESSFdc1/dcu1-Oth	350	445.2	-	445.2	44	32.0	31.8	584

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
105	EM1:ICHmk1/mw2-01	10	-	-	-	0	-	0.2	0
105	EM1:ICHmk1/mw2-01	20	-	-	-	0	4.4	4.0	0
105	EM1:ICHmk1/mw2-01	30	1.9	-	1.9	1	19.8	8.3	37
105	EM1:ICHmk1/mw2-01	40	25.5	-	25.5	4	19.9	12.4	239
105	EM1:ICHmk1/mw2-01	50	79.9	-	79.9	10	21.1	16.1	465
105	EM1:ICHmk1/mw2-01	60	143.4	-	143.4	17	22.6	19.2	600
105	EM1:ICHmk1/mw2-01	70	204.0	-	204.0	24	24.0	21.9	663
105	EM1:ICHmk1/mw2-01	80	258.0	-	258.0	28	25.3	24.2	689
105	EM1:ICHmk1/mw2-01	90	305.7	-	305.7	33	26.4	26.2	697
105	EM1:ICHmk1/mw2-01	100	347.6	-	347.6	37	27.4	27.8	700
105	EM1:ICHmk1/mw2-01	110	384.5	-	384.5	39	28.3	29.3	694
105	EM1:ICHmk1/mw2-01	120	417.6	-	417.6	42	29.0	30.5	688
105	EM1:ICHmk1/mw2-01	130	447.9	-	447.9	44	29.7	31.6	682
105	EM1:ICHmk1/mw2-01	140	474.7	-	474.7	46	30.3	32.6	674
105	EM1:ICHmk1/mw2-01	150	498.1	-	498.1	47	30.9	33.5	664
105	EM1:ICHmk1/mw2-01	160	519.5	-	519.5	48	31.4	34.3	655
105	EM1:ICHmk1/mw2-01	170	537.9	-	537.9	49	31.9	35.0	645
105	EM1:ICHmk1/mw2-01	180	554.2	-	554.2	50	32.3	35.6	634
105	EM1:ICHmk1/mw2-01	190	568.3	-	568.3	50	32.7	36.1	623
105	EM1:ICHmk1/mw2-01	200	580.6	-	580.6	51	33.1	36.6	612
105	EM1:ICHmk1/mw2-01	210	590.8	-	590.8	51	33.4	37.1	601
105	EM1:ICHmk1/mw2-01	220	599.8	-	599.8	52	33.8	37.5	591
105	EM1:ICHmk1/mw2-01	230	608.2	-	608.2	52	34.1	37.9	582
105	EM1:ICHmk1/mw2-01	240	615.9	-	615.9	52	34.4	38.2	574
105	EM1:ICHmk1/mw2-01	250	621.8	-	621.8	52	34.7	38.5	565
105	EM1:ICHmk1/mw2-01	260	626.6	-	626.6	52	34.9	38.8	558
105	EM1:ICHmk1/mw2-01	270	630.1	-	630.1	52	35.1	39.1	549
105	EM1:ICHmk1/mw2-01	280	632.9	-	632.9	52	35.3	39.4	541
105	EM1:ICHmk1/mw2-01	290	635.5	-	635.5	52	35.5	39.6	534
105	EM1:ICHmk1/mw2-01	300	637.6	-	637.6	52	35.7	39.8	526
105	EM1:ICHmk1/mw2-01	310	638.2	-	638.2	52	35.7	39.9	524
105	EM1:ICHmk1/mw2-01	320	638.2	-	638.2	52	35.7	39.9	524
105	EM1:ICHmk1/mw2-01	330	638.2	-	638.2	52	35.7	39.9	524
105	EM1:ICHmk1/mw2-01	340	638.2	-	638.2	52	35.7	39.9	524
105	EM1:ICHmk1/mw2-01	350	638.2	-	638.2	52	35.7	39.9	524

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
106	EM1:ICHmk1/mw2-03	10	-	-	-	0	-	0.4	0
106	EM1:ICHmk1/mw2-03	20	-	-	-	0	-	3.0	0
106	EM1:ICHmk1/mw2-03	30	0.9	-	0.9	0	18.4	6.9	17
106	EM1:ICHmk1/mw2-03	40	18.6	-	18.6	3	18.7	11.0	216
106	EM1:ICHmk1/mw2-03	50	76.5	-	76.5	11	19.6	14.7	587
106	EM1:ICHmk1/mw2-03	60	157.3	-	157.3	19	20.9	18.0	841
106	EM1:ICHmk1/mw2-03	70	235.0	-	235.0	27	22.4	20.8	940
106	EM1:ICHmk1/mw2-03	80	297.7	-	297.7	33	23.7	23.0	952
106	EM1:ICHmk1/mw2-03	90	345.9	-	345.9	38	24.8	24.9	927
106	EM1:ICHmk1/mw2-03	100	383.9	-	383.9	41	25.8	26.5	896
106	EM1:ICHmk1/mw2-03	110	413.2	-	413.2	43	26.6	27.9	863
106	EM1:ICHmk1/mw2-03	120	436.0	-	436.0	44	27.4	29.0	833
106	EM1:ICHmk1/mw2-03	130	454.6	-	454.6	46	28.0	30.0	808
106	EM1:ICHmk1/mw2-03	140	470.1	-	470.1	47	28.5	30.9	785
106	EM1:ICHmk1/mw2-03	150	483.0	-	483.0	47	28.9	31.6	766
106	EM1:ICHmk1/mw2-03	160	494.3	-	494.3	48	29.4	32.3	751
106	EM1:ICHmk1/mw2-03	170	502.6	-	502.6	48	29.7	32.9	735
106	EM1:ICHmk1/mw2-03	180	509.9	-	509.9	49	30.0	33.4	721
106	EM1:ICHmk1/mw2-03	190	516.3	-	516.3	49	30.2	33.8	709
106	EM1:ICHmk1/mw2-03	200	521.7	-	521.7	49	30.4	34.2	698
106	EM1:ICHmk1/mw2-03	210	525.5	-	525.5	49	30.6	34.6	687
106	EM1:ICHmk1/mw2-03	220	528.8	-	528.8	49	30.9	34.9	677
106	EM1:ICHmk1/mw2-03	230	531.6	-	531.6	49	31.1	35.2	668
106	EM1:ICHmk1/mw2-03	240	533.6	-	533.6	49	31.2	35.4	659
106	EM1:ICHmk1/mw2-03	250	535.2	-	535.2	49	31.4	35.7	651
106	EM1:ICHmk1/mw2-03	260	535.9	-	535.9	48	31.5	35.9	642
106	EM1:ICHmk1/mw2-03	270	536.2	-	536.2	48	31.6	36.1	634
106	EM1:ICHmk1/mw2-03	280	536.4	-	536.4	48	31.8	36.3	628
106	EM1:ICHmk1/mw2-03	290	536.1	-	536.1	48	31.9	36.5	621
106	EM1:ICHmk1/mw2-03	300	535.7	-	535.7	48	32.0	36.6	613
106	EM1:ICHmk1/mw2-03	310	535.5	-	535.5	48	32.0	36.7	611
106	EM1:ICHmk1/mw2-03	320	535.5	-	535.5	48	32.0	36.7	611
106	EM1:ICHmk1/mw2-03	330	535.5	-	535.5	48	32.0	36.7	611
106	EM1:ICHmk1/mw2-03	340	535.5	-	535.5	48	32.0	36.7	611
106	EM1:ICHmk1/mw2-03	350	535.5	-	535.5	48	32.0	36.7	611

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
107	EM1:ICHmk1/mw2-04	10	-	-	-	0	-	0.4	0
107	EM1:ICHmk1/mw2-04	20	-	-	-	0	-	2.9	0
107	EM1:ICHmk1/mw2-04	30	1.0	-	1.0	0	18.0	7.0	21
107	EM1:ICHmk1/mw2-04	40	21.8	-	21.8	4	18.5	11.3	256
107	EM1:ICHmk1/mw2-04	50	88.3	-	88.3	13	19.4	15.2	687
107	EM1:ICHmk1/mw2-04	60	177.9	-	177.9	22	20.7	18.5	971
107	EM1:ICHmk1/mw2-04	70	262.2	-	262.2	29	22.0	21.3	1065
107	EM1:ICHmk1/mw2-04	80	327.4	-	327.4	35	23.3	23.6	1054
107	EM1:ICHmk1/mw2-04	90	375.4	-	375.4	39	24.5	25.5	1009
107	EM1:ICHmk1/mw2-04	100	411.0	-	411.0	42	25.5	27.1	959
107	EM1:ICHmk1/mw2-04	110	436.9	-	436.9	44	26.4	28.5	912
107	EM1:ICHmk1/mw2-04	120	456.9	-	456.9	46	27.1	29.6	872
107	EM1:ICHmk1/mw2-04	130	473.2	-	473.2	46	27.7	30.6	840
107	EM1:ICHmk1/mw2-04	140	486.5	-	486.5	47	28.1	31.4	816
107	EM1:ICHmk1/mw2-04	150	497.7	-	497.7	47	28.5	32.1	795
107	EM1:ICHmk1/mw2-04	160	505.6	-	505.6	48	28.9	32.7	775
107	EM1:ICHmk1/mw2-04	170	512.2	-	512.2	48	29.2	33.2	758
107	EM1:ICHmk1/mw2-04	180	517.6	-	517.6	48	29.5	33.7	743
107	EM1:ICHmk1/mw2-04	190	521.4	-	521.4	49	29.8	34.1	730
107	EM1:ICHmk1/mw2-04	200	524.2	-	524.2	49	30.0	34.5	716
107	EM1:ICHmk1/mw2-04	210	526.5	-	526.5	49	30.2	34.8	705
107	EM1:ICHmk1/mw2-04	220	528.3	-	528.3	48	30.4	35.1	694
107	EM1:ICHmk1/mw2-04	230	528.9	-	528.9	48	30.5	35.4	685
107	EM1:ICHmk1/mw2-04	240	529.2	-	529.2	48	30.6	35.6	675
107	EM1:ICHmk1/mw2-04	250	529.2	-	529.2	48	30.7	35.8	667
107	EM1:ICHmk1/mw2-04	260	529.3	-	529.3	47	30.8	36.0	659
107	EM1:ICHmk1/mw2-04	270	528.7	-	528.7	47	30.9	36.2	652
107	EM1:ICHmk1/mw2-04	280	528.1	-	528.1	47	31.0	36.4	645
107	EM1:ICHmk1/mw2-04	290	527.3	-	527.3	47	31.1	36.5	638
107	EM1:ICHmk1/mw2-04	300	526.5	-	526.5	47	31.2	36.7	632
107	EM1:ICHmk1/mw2-04	310	526.0	-	526.0	47	31.2	36.7	630
107	EM1:ICHmk1/mw2-04	320	526.0	-	526.0	47	31.2	36.7	630
107	EM1:ICHmk1/mw2-04	330	526.0	-	526.0	47	31.2	36.7	630
107	EM1:ICHmk1/mw2-04	340	526.0	-	526.0	47	31.2	36.7	630
107	EM1:ICHmk1/mw2-04	350	526.0	-	526.0	47	31.2	36.7	630

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
108	EM1:ICHmk1/mw2-Oth	10	-	-	-	0	-	0.4	0
108	EM1:ICHmk1/mw2-Oth	20	-	-	-	0	6.0	3.7	0
108	EM1:ICHmk1/mw2-Oth	30	2.2	-	2.2	1	18.9	8.0	41
108	EM1:ICHmk1/mw2-Oth	40	33.0	-	33.0	5	19.4	12.4	300
108	EM1:ICHmk1/mw2-Oth	50	104.0	-	104.0	14	20.9	16.4	591
108	EM1:ICHmk1/mw2-Oth	60	186.4	-	186.4	23	22.9	19.7	723
108	EM1:ICHmk1/mw2-Oth	70	258.9	-	258.9	31	24.8	22.5	753
108	EM1:ICHmk1/mw2-Oth	80	317.7	-	317.7	37	26.4	24.9	743
108	EM1:ICHmk1/mw2-Oth	90	364.5	-	364.5	40	27.7	26.8	722
108	EM1:ICHmk1/mw2-Oth	100	401.8	-	401.8	42	28.8	28.4	700
108	EM1:ICHmk1/mw2-Oth	110	432.9	-	432.9	45	29.7	29.8	681
108	EM1:ICHmk1/mw2-Oth	120	459.1	-	459.1	47	30.5	31.0	664
108	EM1:ICHmk1/mw2-Oth	130	482.0	-	482.0	48	31.1	32.0	650
108	EM1:ICHmk1/mw2-Oth	140	500.9	-	500.9	49	31.7	32.9	636
108	EM1:ICHmk1/mw2-Oth	150	517.4	-	517.4	49	32.3	33.6	625
108	EM1:ICHmk1/mw2-Oth	160	531.4	-	531.4	50	32.7	34.3	614
108	EM1:ICHmk1/mw2-Oth	170	543.2	-	543.2	51	33.1	34.9	604
108	EM1:ICHmk1/mw2-Oth	180	553.5	-	553.5	51	33.4	35.4	594
108	EM1:ICHmk1/mw2-Oth	190	561.9	-	561.9	51	33.7	35.9	585
108	EM1:ICHmk1/mw2-Oth	200	568.7	-	568.7	52	34.0	36.3	576
108	EM1:ICHmk1/mw2-Oth	210	574.6	-	574.6	52	34.3	36.7	568
108	EM1:ICHmk1/mw2-Oth	220	579.7	-	579.7	52	34.5	37.0	560
108	EM1:ICHmk1/mw2-Oth	230	583.9	-	583.9	52	34.7	37.3	553
108	EM1:ICHmk1/mw2-Oth	240	587.1	-	587.1	51	34.9	37.6	546
108	EM1:ICHmk1/mw2-Oth	250	589.4	-	589.4	51	35.1	37.9	540
108	EM1:ICHmk1/mw2-Oth	260	590.9	-	590.9	51	35.2	38.1	533
108	EM1:ICHmk1/mw2-Oth	270	591.9	-	591.9	51	35.4	38.3	526
108	EM1:ICHmk1/mw2-Oth	280	592.9	-	592.9	51	35.5	38.5	521
108	EM1:ICHmk1/mw2-Oth	290	593.6	-	593.6	51	35.6	38.7	515
108	EM1:ICHmk1/mw2-Oth	300	593.0	-	593.0	50	35.7	38.8	510
108	EM1:ICHmk1/mw2-Oth	310	592.8	-	592.8	50	35.8	38.8	508
108	EM1:ICHmk1/mw2-Oth	320	592.8	-	592.8	50	35.8	38.8	508
108	EM1:ICHmk1/mw2-Oth	330	592.8	-	592.8	50	35.8	38.8	508
108	EM1:ICHmk1/mw2-Oth	340	592.8	-	592.8	50	35.8	38.8	508
108	EM1:ICHmk1/mw2-Oth	350	592.8	-	592.8	50	35.8	38.8	508

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
109	EM1:IDFdm1-01	10	-	-	-	0	-	0.7	0
109	EM1:IDFdm1-01	20	-	-	-	0	10.4	4.5	0
109	EM1:IDFdm1-01	30	3.8	-	3.8	2	16.8	8.9	71
109	EM1:IDFdm1-01	40	44.4	-	44.4	9	17.5	12.8	512
109	EM1:IDFdm1-01	50	122.3	-	122.3	19	18.7	16.2	909
109	EM1:IDFdm1-01	60	201.0	-	201.0	26	20.0	19.0	1042
109	EM1:IDFdm1-01	70	265.4	-	265.4	31	21.3	21.3	1047
109	EM1:IDFdm1-01	80	315.6	-	315.6	34	22.6	23.2	1015
109	EM1:IDFdm1-01	90	354.8	-	354.8	37	23.5	24.8	978
109	EM1:IDFdm1-01	100	385.2	-	385.2	39	24.4	26.0	942
109	EM1:IDFdm1-01	110	409.6	-	409.6	41	25.1	27.2	908
109	EM1:IDFdm1-01	120	428.5	-	428.5	41	25.8	28.1	877
109	EM1:IDFdm1-01	130	444.4	-	444.4	43	26.3	29.0	850
109	EM1:IDFdm1-01	140	456.4	-	456.4	43	26.7	29.6	825
109	EM1:IDFdm1-01	150	464.0	-	464.0	43	27.1	29.9	803
109	EM1:IDFdm1-01	160	472.5	-	472.5	44	27.5	30.3	785
109	EM1:IDFdm1-01	170	480.4	-	480.4	44	27.8	30.8	769
109	EM1:IDFdm1-01	180	487.0	-	487.0	44	28.1	31.2	754
109	EM1:IDFdm1-01	190	492.9	-	492.9	44	28.4	31.6	741
109	EM1:IDFdm1-01	200	497.9	-	497.9	44	28.6	31.9	728
109	EM1:IDFdm1-01	210	501.1	-	501.1	44	28.8	32.3	715
109	EM1:IDFdm1-01	220	503.6	-	503.6	44	29.0	32.5	702
109	EM1:IDFdm1-01	230	505.6	-	505.6	44	29.2	32.8	690
109	EM1:IDFdm1-01	240	507.2	-	507.2	44	29.4	33.0	679
109	EM1:IDFdm1-01	250	508.7	-	508.7	44	29.6	33.3	668
109	EM1:IDFdm1-01	260	509.8	-	509.8	44	29.7	33.5	658
109	EM1:IDFdm1-01	270	509.4	-	509.4	44	29.9	33.6	647
109	EM1:IDFdm1-01	280	509.0	-	509.0	43	30.0	33.8	638
109	EM1:IDFdm1-01	290	508.6	-	508.6	43	30.1	34.0	630
109	EM1:IDFdm1-01	300	508.3	-	508.3	43	30.2	34.1	623
109	EM1:IDFdm1-01	310	508.2	-	508.2	43	30.3	34.2	621
109	EM1:IDFdm1-01	320	508.2	-	508.2	43	30.3	34.2	621
109	EM1:IDFdm1-01	330	508.2	-	508.2	43	30.3	34.2	621
109	EM1:IDFdm1-01	340	508.2	-	508.2	43	30.3	34.2	621
109	EM1:IDFdm1-01	350	508.2	-	508.2	43	30.3	34.2	621

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
110	EM1:IDFdm1-04	10	-	-	-	0	-	0.6	0
110	EM1:IDFdm1-04	20	-	-	-	0	2.0	3.9	0
110	EM1:IDFdm1-04	30	1.3	-	1.3	0	16.8	7.9	27
110	EM1:IDFdm1-04	40	25.1	-	25.1	7	17.1	11.5	352
110	EM1:IDFdm1-04	50	89.7	-	89.7	16	18.1	14.7	795
110	EM1:IDFdm1-04	60	164.3	-	164.3	24	19.1	17.3	1023
110	EM1:IDFdm1-04	70	230.6	-	230.6	29	20.4	19.5	1074
110	EM1:IDFdm1-04	80	284.2	-	284.2	33	21.5	21.4	1059
110	EM1:IDFdm1-04	90	327.0	-	327.0	36	22.5	22.9	1028
110	EM1:IDFdm1-04	100	360.6	-	360.6	38	23.3	24.2	994
110	EM1:IDFdm1-04	110	387.8	-	387.8	39	24.0	25.3	962
110	EM1:IDFdm1-04	120	409.9	-	409.9	41	24.7	26.2	933
110	EM1:IDFdm1-04	130	428.7	-	428.7	42	25.2	27.0	908
110	EM1:IDFdm1-04	140	443.7	-	443.7	43	25.7	27.7	883
110	EM1:IDFdm1-04	150	456.1	-	456.1	43	26.2	28.3	861
110	EM1:IDFdm1-04	160	466.7	-	466.7	44	26.5	28.8	841
110	EM1:IDFdm1-04	170	475.6	-	475.6	44	26.9	29.3	824
110	EM1:IDFdm1-04	180	483.7	-	483.7	45	27.2	29.7	809
110	EM1:IDFdm1-04	190	490.4	-	490.4	45	27.5	30.1	795
110	EM1:IDFdm1-04	200	495.9	-	495.9	45	27.7	30.4	783
110	EM1:IDFdm1-04	210	500.7	-	500.7	45	27.9	30.7	771
110	EM1:IDFdm1-04	220	505.0	-	505.0	45	28.1	31.0	761
110	EM1:IDFdm1-04	230	508.7	-	508.7	45	28.3	31.3	752
110	EM1:IDFdm1-04	240	510.6	-	510.6	45	28.4	31.5	741
110	EM1:IDFdm1-04	250	511.8	-	511.8	45	28.6	31.7	731
110	EM1:IDFdm1-04	260	512.5	-	512.5	45	28.7	31.9	720
110	EM1:IDFdm1-04	270	513.0	-	513.0	45	28.9	32.0	711
110	EM1:IDFdm1-04	280	513.4	-	513.4	45	29.0	32.2	702
110	EM1:IDFdm1-04	290	513.8	-	513.8	45	29.1	32.3	694
110	EM1:IDFdm1-04	300	514.0	-	514.0	44	29.2	32.5	686
110	EM1:IDFdm1-04	310	514.0	-	514.0	44	29.2	32.5	684
110	EM1:IDFdm1-04	320	514.0	-	514.0	44	29.2	32.5	684
110	EM1:IDFdm1-04	330	514.0	-	514.0	44	29.2	32.5	684
110	EM1:IDFdm1-04	340	514.0	-	514.0	44	29.2	32.5	684
110	EM1:IDFdm1-04	350	514.0	-	514.0	44	29.2	32.5	684

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
111	EM1:IDFdm1-05	10	-	-	-	0	-	0.8	0
111	EM1:IDFdm1-05	20	-	-	-	0	10.2	4.5	0
111	EM1:IDFdm1-05	30	5.2	-	5.2	2	17.4	9.0	89
111	EM1:IDFdm1-05	40	46.2	-	46.2	9	18.4	13.1	449
111	EM1:IDFdm1-05	50	121.1	-	121.1	18	19.9	16.6	766
111	EM1:IDFdm1-05	60	199.5	-	199.5	26	21.6	19.5	901
111	EM1:IDFdm1-05	70	267.1	-	267.1	31	23.0	22.0	924
111	EM1:IDFdm1-05	80	319.6	-	319.6	36	24.4	24.0	903
111	EM1:IDFdm1-05	90	360.8	-	360.8	39	25.5	25.6	873
111	EM1:IDFdm1-05	100	393.2	-	393.2	41	26.4	27.1	843
111	EM1:IDFdm1-05	110	418.2	-	418.2	43	27.2	28.3	812
111	EM1:IDFdm1-05	120	438.2	-	438.2	44	27.8	29.3	785
111	EM1:IDFdm1-05	130	455.0	-	455.0	45	28.5	30.1	764
111	EM1:IDFdm1-05	140	465.2	-	465.2	46	28.9	30.7	741
111	EM1:IDFdm1-05	150	470.2	-	470.2	46	29.3	30.8	720
111	EM1:IDFdm1-05	160	476.6	-	476.6	46	29.6	31.1	703
111	EM1:IDFdm1-05	170	483.9	-	483.9	46	29.9	31.5	690
111	EM1:IDFdm1-05	180	490.7	-	490.7	46	30.2	32.0	678
111	EM1:IDFdm1-05	190	496.1	-	496.1	46	30.4	32.4	667
111	EM1:IDFdm1-05	200	499.8	-	499.8	46	30.7	32.7	655
111	EM1:IDFdm1-05	210	503.1	-	503.1	46	30.9	33.0	645
111	EM1:IDFdm1-05	220	505.7	-	505.7	46	31.1	33.3	635
111	EM1:IDFdm1-05	230	507.8	-	507.8	46	31.3	33.6	625
111	EM1:IDFdm1-05	240	509.0	-	509.0	46	31.5	33.8	616
111	EM1:IDFdm1-05	250	509.3	-	509.3	46	31.6	34.0	608
111	EM1:IDFdm1-05	260	509.5	-	509.5	46	31.7	34.2	600
111	EM1:IDFdm1-05	270	509.6	-	509.6	45	31.8	34.4	593
111	EM1:IDFdm1-05	280	509.7	-	509.7	45	31.9	34.5	586
111	EM1:IDFdm1-05	290	509.6	-	509.6	45	32.0	34.7	580
111	EM1:IDFdm1-05	300	509.4	-	509.4	45	32.1	34.8	574
111	EM1:IDFdm1-05	310	509.4	-	509.4	45	32.2	34.9	572
111	EM1:IDFdm1-05	320	509.4	-	509.4	45	32.2	34.9	572
111	EM1:IDFdm1-05	330	509.4	-	509.4	45	32.2	34.9	572
111	EM1:IDFdm1-05	340	509.4	-	509.4	45	32.2	34.9	572
111	EM1:IDFdm1-05	350	509.4	-	509.4	45	32.2	34.9	572

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
112	EM1:IDFdm1-Oth	10	-	-	-	0	-	0.6	0
112	EM1:IDFdm1-Oth	20	-	-	-	0	1.2	3.9	0
112	EM1:IDFdm1-Oth	30	2.1	-	2.1	1	17.5	7.9	41
112	EM1:IDFdm1-Oth	40	27.3	-	27.3	6	18.0	11.8	337
112	EM1:IDFdm1-Oth	50	86.9	-	86.9	14	18.7	15.2	720
112	EM1:IDFdm1-Oth	60	160.5	-	160.5	21	19.9	18.0	928
112	EM1:IDFdm1-Oth	70	227.1	-	227.1	26	21.0	20.4	997
112	EM1:IDFdm1-Oth	80	282.4	-	282.4	31	22.1	22.4	1002
112	EM1:IDFdm1-Oth	90	325.9	-	325.9	34	23.1	24.1	983
112	EM1:IDFdm1-Oth	100	361.0	-	361.0	36	23.9	25.6	957
112	EM1:IDFdm1-Oth	110	389.4	-	389.4	38	24.6	26.7	930
112	EM1:IDFdm1-Oth	120	412.6	-	412.6	40	25.3	27.8	903
112	EM1:IDFdm1-Oth	130	431.3	-	431.3	42	25.8	28.7	878
112	EM1:IDFdm1-Oth	140	447.5	-	447.5	42	26.3	29.5	856
112	EM1:IDFdm1-Oth	150	461.7	-	461.7	43	26.7	30.2	838
112	EM1:IDFdm1-Oth	160	473.8	-	473.8	44	27.1	30.8	821
112	EM1:IDFdm1-Oth	170	484.2	-	484.2	44	27.4	31.4	806
112	EM1:IDFdm1-Oth	180	493.4	-	493.4	45	27.7	31.8	793
112	EM1:IDFdm1-Oth	190	501.2	-	501.2	45	28.0	32.3	780
112	EM1:IDFdm1-Oth	200	507.1	-	507.1	45	28.2	32.6	768
112	EM1:IDFdm1-Oth	210	512.2	-	512.2	45	28.4	33.0	757
112	EM1:IDFdm1-Oth	220	516.6	-	516.6	46	28.7	33.3	746
112	EM1:IDFdm1-Oth	230	520.4	-	520.4	46	28.8	33.6	735
112	EM1:IDFdm1-Oth	240	523.1	-	523.1	46	29.0	33.8	725
112	EM1:IDFdm1-Oth	250	524.4	-	524.4	46	29.1	34.1	713
112	EM1:IDFdm1-Oth	260	525.3	-	525.3	45	29.3	34.3	703
112	EM1:IDFdm1-Oth	270	526.1	-	526.1	45	29.4	34.5	692
112	EM1:IDFdm1-Oth	280	526.7	-	526.7	45	29.6	34.7	683
112	EM1:IDFdm1-Oth	290	527.1	-	527.1	45	29.7	34.8	675
112	EM1:IDFdm1-Oth	300	527.5	-	527.5	45	29.8	35.0	666
112	EM1:IDFdm1-Oth	310	527.5	-	527.5	45	29.9	35.0	664
112	EM1:IDFdm1-Oth	320	527.5	-	527.5	45	29.9	35.0	664
112	EM1:IDFdm1-Oth	330	527.5	-	527.5	45	29.9	35.0	664
112	EM1:IDFdm1-Oth	340	527.5	-	527.5	45	29.9	35.0	664
112	EM1:IDFdm1-Oth	350	527.5	-	527.5	45	29.9	35.0	664

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
113	EM1:MSdm1-01	10	-	-	-	0	-	0.7	0
113	EM1:MSdm1-01	20	-	-	-	0	11.2	4.5	0
113	EM1:MSdm1-01	30	4.4	-	4.4	1	16.7	8.8	81
113	EM1:MSdm1-01	40	45.8	-	45.8	10	17.3	12.7	521
113	EM1:MSdm1-01	50	125.8	-	125.8	21	18.6	16.1	936
113	EM1:MSdm1-01	60	209.4	-	209.4	28	20.0	19.0	1081
113	EM1:MSdm1-01	70	279.2	-	279.2	33	21.3	21.2	1086
113	EM1:MSdm1-01	80	333.1	-	333.1	37	22.6	23.1	1047
113	EM1:MSdm1-01	90	373.8	-	373.8	39	23.7	24.7	998
113	EM1:MSdm1-01	100	405.5	-	405.5	41	24.6	26.0	955
113	EM1:MSdm1-01	110	430.1	-	430.1	43	25.3	27.1	917
113	EM1:MSdm1-01	120	449.0	-	449.0	44	26.0	28.0	883
113	EM1:MSdm1-01	130	464.2	-	464.2	45	26.6	28.9	853
113	EM1:MSdm1-01	140	476.4	-	476.4	45	27.1	29.6	829
113	EM1:MSdm1-01	150	487.0	-	487.0	45	27.4	30.2	808
113	EM1:MSdm1-01	160	495.3	-	495.3	46	27.8	30.7	791
113	EM1:MSdm1-01	170	502.6	-	502.6	46	28.1	31.1	775
113	EM1:MSdm1-01	180	508.0	-	508.0	46	28.4	31.5	760
113	EM1:MSdm1-01	190	511.7	-	511.7	46	28.6	31.8	746
113	EM1:MSdm1-01	200	515.0	-	515.0	46	28.8	32.2	734
113	EM1:MSdm1-01	210	517.5	-	517.5	46	29.0	32.4	722
113	EM1:MSdm1-01	220	519.6	-	519.6	46	29.2	32.7	711
113	EM1:MSdm1-01	230	519.9	-	519.9	46	29.3	32.9	699
113	EM1:MSdm1-01	240	519.7	-	519.7	45	29.5	33.1	689
113	EM1:MSdm1-01	250	519.6	-	519.6	45	29.6	33.3	679
113	EM1:MSdm1-01	260	519.3	-	519.3	45	29.8	33.5	670
113	EM1:MSdm1-01	270	519.0	-	519.0	45	29.9	33.7	661
113	EM1:MSdm1-01	280	518.7	-	518.7	45	30.0	33.8	654
113	EM1:MSdm1-01	290	518.4	-	518.4	45	30.1	34.0	647
113	EM1:MSdm1-01	300	516.8	-	516.8	44	30.1	34.1	639
113	EM1:MSdm1-01	310	516.2	-	516.2	44	30.2	34.1	637
113	EM1:MSdm1-01	320	516.2	-	516.2	44	30.2	34.1	637
113	EM1:MSdm1-01	330	516.2	-	516.2	44	30.2	34.1	637
113	EM1:MSdm1-01	340	516.2	-	516.2	44	30.2	34.1	637
113	EM1:MSdm1-01	350	516.2	-	516.2	44	30.2	34.1	637

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
114	EM1:MSdm1-03	10	-	-	-	0	-	0.9	0
114	EM1:MSdm1-03	20	-	-	-	0	2.2	4.7	0
114	EM1:MSdm1-03	30	3.7	-	3.7	1	16.0	9.0	69
114	EM1:MSdm1-03	40	45.5	-	45.5	11	16.8	12.9	554
114	EM1:MSdm1-03	50	126.7	-	126.7	23	18.2	16.0	1029
114	EM1:MSdm1-03	60	209.0	-	209.0	30	19.7	18.7	1164
114	EM1:MSdm1-03	70	274.1	-	274.1	34	21.3	20.8	1137
114	EM1:MSdm1-03	80	324.2	-	324.2	37	22.6	22.5	1073
114	EM1:MSdm1-03	90	360.2	-	360.2	39	23.7	23.9	1011
114	EM1:MSdm1-03	100	388.7	-	388.7	41	24.7	25.1	959
114	EM1:MSdm1-03	110	410.7	-	410.7	42	25.4	26.1	917
114	EM1:MSdm1-03	120	428.0	-	428.0	42	26.1	26.9	880
114	EM1:MSdm1-03	130	440.9	-	440.9	43	26.6	27.6	850
114	EM1:MSdm1-03	140	451.4	-	451.4	43	27.0	28.2	823
114	EM1:MSdm1-03	150	459.6	-	459.6	44	27.4	28.8	800
114	EM1:MSdm1-03	160	466.9	-	466.9	44	27.8	29.3	781
114	EM1:MSdm1-03	170	472.4	-	472.4	44	28.1	29.7	765
114	EM1:MSdm1-03	180	477.0	-	477.0	44	28.4	30.1	751
114	EM1:MSdm1-03	190	481.1	-	481.1	44	28.6	30.4	738
114	EM1:MSdm1-03	200	484.3	-	484.3	44	28.8	30.6	726
114	EM1:MSdm1-03	210	485.5	-	485.5	44	29.0	30.9	714
114	EM1:MSdm1-03	220	486.6	-	486.6	44	29.1	31.1	703
114	EM1:MSdm1-03	230	487.3	-	487.3	44	29.3	31.3	693
114	EM1:MSdm1-03	240	488.0	-	488.0	44	29.4	31.5	684
114	EM1:MSdm1-03	250	488.5	-	488.5	43	29.5	31.7	675
114	EM1:MSdm1-03	260	487.9	-	487.9	43	29.6	31.8	666
114	EM1:MSdm1-03	270	486.3	-	486.3	43	29.7	32.0	657
114	EM1:MSdm1-03	280	484.8	-	484.8	42	29.8	32.1	648
114	EM1:MSdm1-03	290	483.4	-	483.4	42	29.9	32.2	640
114	EM1:MSdm1-03	300	482.0	-	482.0	42	30.0	32.4	632
114	EM1:MSdm1-03	310	481.7	-	481.7	42	30.0	32.4	631
114	EM1:MSdm1-03	320	481.7	-	481.7	42	30.0	32.4	631
114	EM1:MSdm1-03	330	481.7	-	481.7	42	30.0	32.4	631
114	EM1:MSdm1-03	340	481.7	-	481.7	42	30.0	32.4	631
114	EM1:MSdm1-03	350	481.7	-	481.7	42	30.0	32.4	631

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
115	EM1:MSdm1-04	10	-	-	-	0	-	0.7	0
115	EM1:MSdm1-04	20	-	-	-	0	1.3	4.3	0
115	EM1:MSdm1-04	30	2.9	-	2.9	1	16.7	8.5	56
115	EM1:MSdm1-04	40	39.3	-	39.3	9	17.3	12.4	476
115	EM1:MSdm1-04	50	115.5	-	115.5	19	18.4	15.8	918
115	EM1:MSdm1-04	60	198.0	-	198.0	26	19.8	18.6	1080
115	EM1:MSdm1-04	70	267.0	-	267.0	32	21.2	21.0	1092
115	EM1:MSdm1-04	80	320.9	-	320.9	35	22.5	22.8	1054
115	EM1:MSdm1-04	90	361.3	-	361.3	38	23.5	24.3	1006
115	EM1:MSdm1-04	100	392.9	-	392.9	40	24.4	25.7	963
115	EM1:MSdm1-04	110	417.7	-	417.7	42	25.1	26.8	926
115	EM1:MSdm1-04	120	437.1	-	437.1	43	25.8	27.7	892
115	EM1:MSdm1-04	130	452.4	-	452.4	44	26.3	28.6	862
115	EM1:MSdm1-04	140	465.0	-	465.0	44	26.8	29.3	837
115	EM1:MSdm1-04	150	475.9	-	475.9	45	27.3	29.9	816
115	EM1:MSdm1-04	160	484.6	-	484.6	45	27.6	30.5	798
115	EM1:MSdm1-04	170	492.2	-	492.2	45	27.9	30.9	782
115	EM1:MSdm1-04	180	498.8	-	498.8	45	28.2	31.3	768
115	EM1:MSdm1-04	190	503.4	-	503.4	46	28.4	31.7	754
115	EM1:MSdm1-04	200	507.0	-	507.0	46	28.7	32.0	742
115	EM1:MSdm1-04	210	510.1	-	510.1	46	28.9	32.3	730
115	EM1:MSdm1-04	220	512.6	-	512.6	46	29.1	32.5	718
115	EM1:MSdm1-04	230	514.8	-	514.8	46	29.2	32.8	708
115	EM1:MSdm1-04	240	515.0	-	515.0	45	29.3	33.0	697
115	EM1:MSdm1-04	250	515.0	-	515.0	45	29.5	33.2	686
115	EM1:MSdm1-04	260	514.8	-	514.8	45	29.6	33.4	676
115	EM1:MSdm1-04	270	514.7	-	514.7	45	29.7	33.6	667
115	EM1:MSdm1-04	280	514.4	-	514.4	44	29.8	33.7	659
115	EM1:MSdm1-04	290	514.1	-	514.1	44	30.0	33.9	651
115	EM1:MSdm1-04	300	513.9	-	513.9	44	30.1	34.0	645
115	EM1:MSdm1-04	310	513.8	-	513.8	44	30.1	34.0	642
115	EM1:MSdm1-04	320	513.8	-	513.8	44	30.1	34.0	642
115	EM1:MSdm1-04	330	513.8	-	513.8	44	30.1	34.0	642
115	EM1:MSdm1-04	340	513.8	-	513.8	44	30.1	34.0	642
115	EM1:MSdm1-04	350	513.8	-	513.8	44	30.1	34.0	642

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
116	EM1:MSdm1-05	10	-	-	-	0	-	0.7	0
116	EM1:MSdm1-05	20	-	-	-	0	10.2	4.4	0
116	EM1:MSdm1-05	30	3.8	-	3.8	2	16.8	8.8	73
116	EM1:MSdm1-05	40	46.2	0.4	45.8	10	17.3	12.9	548
116	EM1:MSdm1-05	50	131.1	2.1	129.0	21	18.2	16.4	1008
116	EM1:MSdm1-05	60	218.1	4.7	213.4	28	19.5	19.2	1163
116	EM1:MSdm1-05	70	288.6	7.1	281.5	32	20.8	21.6	1157
116	EM1:MSdm1-05	80	342.6	9.1	333.5	36	22.0	23.4	1106
116	EM1:MSdm1-05	90	383.0	10.5	372.5	39	23.1	25.0	1050
116	EM1:MSdm1-05	100	412.9	11.6	401.3	40	23.9	26.3	997
116	EM1:MSdm1-05	110	435.8	12.3	423.5	42	24.6	27.5	951
116	EM1:MSdm1-05	120	452.9	12.9	440.0	42	25.3	28.4	911
116	EM1:MSdm1-05	130	466.7	13.3	453.4	43	25.8	29.2	877
116	EM1:MSdm1-05	140	478.5	13.7	464.8	43	26.3	29.9	850
116	EM1:MSdm1-05	150	488.1	14.0	474.1	44	26.7	30.5	828
116	EM1:MSdm1-05	160	496.6	14.3	482.3	44	27.0	31.1	809
116	EM1:MSdm1-05	170	496.7	14.3	482.4	44	27.1	31.1	809
116	EM1:MSdm1-05	180	496.8	14.3	482.5	44	27.1	31.1	809
116	EM1:MSdm1-05	190	496.9	14.3	482.6	44	27.1	31.1	809
116	EM1:MSdm1-05	200	497.0	14.3	482.7	44	27.1	31.1	809
116	EM1:MSdm1-05	210	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	220	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	230	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	240	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	250	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	260	497.0	14.3	482.7	44	27.1	31.1	808
116	EM1:MSdm1-05	270	496.9	14.3	482.6	44	27.1	31.2	807
116	EM1:MSdm1-05	280	496.8	14.3	482.6	44	27.1	31.2	807
116	EM1:MSdm1-05	290	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	300	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	310	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	320	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	330	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	340	496.8	14.3	482.5	44	27.1	31.2	807
116	EM1:MSdm1-05	350	496.8	14.3	482.5	44	27.1	31.2	807

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
117	EM1:MSdm1-Oth	10	-	-	-	0	-	0.8	0
117	EM1:MSdm1-Oth	20	-	-	-	0	12.3	4.7	0
117	EM1:MSdm1-Oth	30	5.3	-	5.3	2	16.1	9.2	99
117	EM1:MSdm1-Oth	40	64.6	-	64.6	14	16.9	13.4	722
117	EM1:MSdm1-Oth	50	165.8	-	165.8	27	18.4	16.9	1181
117	EM1:MSdm1-Oth	60	256.8	-	256.8	35	20.1	19.7	1256
117	EM1:MSdm1-Oth	70	325.5	-	325.5	39	21.7	22.0	1181
117	EM1:MSdm1-Oth	80	374.6	-	374.6	42	23.1	23.9	1090
117	EM1:MSdm1-Oth	90	410.8	-	410.8	43	24.3	25.4	1014
117	EM1:MSdm1-Oth	100	437.4	-	437.4	44	25.2	26.6	953
117	EM1:MSdm1-Oth	110	456.9	-	456.9	45	25.9	27.6	903
117	EM1:MSdm1-Oth	120	471.4	-	471.4	45	26.6	28.5	863
117	EM1:MSdm1-Oth	130	483.1	-	483.1	45	27.1	29.2	831
117	EM1:MSdm1-Oth	140	492.4	-	492.4	46	27.6	29.8	805
117	EM1:MSdm1-Oth	150	500.0	-	500.0	46	28.0	30.4	784
117	EM1:MSdm1-Oth	160	505.8	-	505.8	46	28.3	30.9	765
117	EM1:MSdm1-Oth	170	509.3	-	509.3	46	28.6	31.3	748
117	EM1:MSdm1-Oth	180	512.3	-	512.3	46	28.8	31.6	733
117	EM1:MSdm1-Oth	190	514.5	-	514.5	46	29.1	32.0	719
117	EM1:MSdm1-Oth	200	515.0	-	515.0	45	29.2	32.3	704
117	EM1:MSdm1-Oth	210	515.3	-	515.3	45	29.4	32.6	692
117	EM1:MSdm1-Oth	220	515.4	-	515.4	45	29.6	32.8	681
117	EM1:MSdm1-Oth	230	515.5	-	515.5	45	29.7	33.1	670
117	EM1:MSdm1-Oth	240	515.2	-	515.2	45	29.8	33.2	660
117	EM1:MSdm1-Oth	250	513.4	-	513.4	45	29.9	33.4	651
117	EM1:MSdm1-Oth	260	511.5	-	511.5	45	30.0	33.6	642
117	EM1:MSdm1-Oth	270	509.6	-	509.6	44	30.1	33.7	633
117	EM1:MSdm1-Oth	280	507.8	-	507.8	44	30.2	33.9	625
117	EM1:MSdm1-Oth	290	506.0	-	506.0	44	30.3	34.0	618
117	EM1:MSdm1-Oth	300	504.3	-	504.3	43	30.3	34.1	611
117	EM1:MSdm1-Oth	310	503.9	-	503.9	43	30.3	34.1	610
117	EM1:MSdm1-Oth	320	503.9	-	503.9	43	30.3	34.1	610
117	EM1:MSdm1-Oth	330	503.9	-	503.9	43	30.3	34.1	610
117	EM1:MSdm1-Oth	340	503.9	-	503.9	43	30.3	34.1	610
117	EM1:MSdm1-Oth	350	503.9	-	503.9	43	30.3	34.1	610

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
118	EM1:Msdm1a-All	10	-	-	-	0	-	0.3	0
118	EM1:Msdm1a-All	20	-	-	-	0	4.5	4.3	0
118	EM1:Msdm1a-All	30	3.0	-	3.0	1	19.6	8.8	54
118	EM1:Msdm1a-All	40	36.0	-	36.0	6	20.0	13.1	302
118	EM1:Msdm1a-All	50	101.5	-	101.5	12	21.4	16.9	536
118	EM1:Msdm1a-All	60	173.6	-	173.6	20	23.0	20.2	657
118	EM1:Msdm1a-All	70	238.0	-	238.0	27	24.5	23.0	703
118	EM1:Msdm1a-All	80	294.9	-	294.9	32	25.9	25.4	719
118	EM1:Msdm1a-All	90	343.5	-	343.5	36	27.0	27.4	721
118	EM1:Msdm1a-All	100	386.0	-	386.0	39	28.0	29.0	715
118	EM1:Msdm1a-All	110	424.0	-	424.0	42	28.8	30.5	707
118	EM1:Msdm1a-All	120	457.8	-	457.8	44	29.6	31.7	698
118	EM1:Msdm1a-All	130	487.5	-	487.5	46	30.2	32.9	688
118	EM1:Msdm1a-All	140	513.5	-	513.5	47	30.8	33.8	676
118	EM1:Msdm1a-All	150	536.6	-	536.6	49	31.4	34.7	664
118	EM1:Msdm1a-All	160	556.5	-	556.5	50	32.0	35.4	652
118	EM1:Msdm1a-All	170	573.3	-	573.3	51	32.5	36.1	639
118	EM1:Msdm1a-All	180	587.9	-	587.9	51	32.9	36.7	627
118	EM1:Msdm1a-All	190	600.3	-	600.3	52	33.3	37.2	614
118	EM1:Msdm1a-All	200	610.8	-	610.8	52	33.7	37.7	602
118	EM1:Msdm1a-All	210	620.3	-	620.3	52	34.1	38.2	592
118	EM1:Msdm1a-All	220	628.3	-	628.3	53	34.4	38.5	583
118	EM1:Msdm1a-All	230	635.4	-	635.4	53	34.6	38.9	574
118	EM1:Msdm1a-All	240	641.4	-	641.4	53	34.9	39.2	565
118	EM1:Msdm1a-All	250	645.5	-	645.5	53	35.1	39.5	558
118	EM1:Msdm1a-All	260	646.8	-	646.8	53	35.3	39.7	549
118	EM1:Msdm1a-All	270	647.0	-	647.0	52	35.4	39.9	540
118	EM1:Msdm1a-All	280	647.4	-	647.4	52	35.6	40.1	533
118	EM1:Msdm1a-All	290	648.0	-	648.0	52	35.7	40.2	527
118	EM1:Msdm1a-All	300	648.6	-	648.6	52	35.8	40.4	521
118	EM1:Msdm1a-All	310	648.9	-	648.9	52	35.9	40.4	519
118	EM1:Msdm1a-All	320	648.9	-	648.9	52	35.9	40.4	519
118	EM1:Msdm1a-All	330	648.9	-	648.9	52	35.9	40.4	519
118	EM1:Msdm1a-All	340	648.9	-	648.9	52	35.9	40.4	519
118	EM1:Msdm1a-All	350	648.9	-	648.9	52	35.9	40.4	519

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
201	EM2:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.8	0
201	EM2:ESSFdc1/dcu1-01	20	-	-	-	0	3.3	3.5	0
201	EM2:ESSFdc1/dcu1-01	30	0.9	-	0.9	0	17.9	7.2	21
201	EM2:ESSFdc1/dcu1-01	40	17.3	-	17.3	4	18.4	10.8	218
201	EM2:ESSFdc1/dcu1-01	50	59.5	-	59.5	10	19.4	14.0	487
201	EM2:ESSFdc1/dcu1-01	60	119.2	-	119.2	18	20.8	17.0	722
201	EM2:ESSFdc1/dcu1-01	70	183.4	-	183.4	25	22.1	19.4	866
201	EM2:ESSFdc1/dcu1-01	80	242.9	-	242.9	31	23.2	21.5	927
201	EM2:ESSFdc1/dcu1-01	90	293.2	-	293.2	35	24.3	23.2	934
201	EM2:ESSFdc1/dcu1-01	100	334.2	-	334.2	38	25.2	24.7	920
201	EM2:ESSFdc1/dcu1-01	110	367.0	-	367.0	40	26.0	26.0	895
201	EM2:ESSFdc1/dcu1-01	120	393.5	-	393.5	42	26.7	27.0	871
201	EM2:ESSFdc1/dcu1-01	130	414.9	-	414.9	44	27.3	28.0	847
201	EM2:ESSFdc1/dcu1-01	140	432.2	-	432.2	45	27.8	28.8	825
201	EM2:ESSFdc1/dcu1-01	150	445.8	-	445.8	45	28.2	29.5	805
201	EM2:ESSFdc1/dcu1-01	160	457.6	-	457.6	46	28.6	30.1	787
201	EM2:ESSFdc1/dcu1-01	170	467.2	-	467.2	46	29.0	30.7	771
201	EM2:ESSFdc1/dcu1-01	180	475.0	-	475.0	47	29.3	31.2	756
201	EM2:ESSFdc1/dcu1-01	190	481.7	-	481.7	47	29.5	31.6	743
201	EM2:ESSFdc1/dcu1-01	200	487.0	-	487.0	47	29.7	32.0	731
201	EM2:ESSFdc1/dcu1-01	210	491.0	-	491.0	47	29.9	32.4	720
201	EM2:ESSFdc1/dcu1-01	220	494.4	-	494.4	47	30.1	32.7	710
201	EM2:ESSFdc1/dcu1-01	230	497.2	-	497.2	47	30.3	32.9	701
201	EM2:ESSFdc1/dcu1-01	240	499.5	-	499.5	47	30.5	33.2	693
201	EM2:ESSFdc1/dcu1-01	250	501.4	-	501.4	47	30.6	33.4	685
201	EM2:ESSFdc1/dcu1-01	260	502.3	-	502.3	47	30.7	33.6	677
201	EM2:ESSFdc1/dcu1-01	270	502.5	-	502.5	47	30.8	33.8	670
201	EM2:ESSFdc1/dcu1-01	280	502.6	-	502.6	47	30.9	34.0	662
201	EM2:ESSFdc1/dcu1-01	290	502.5	-	502.5	47	31.0	34.2	656
201	EM2:ESSFdc1/dcu1-01	300	502.3	-	502.3	47	31.1	34.3	650
201	EM2:ESSFdc1/dcu1-01	310	502.2	-	502.2	47	31.1	34.3	649
201	EM2:ESSFdc1/dcu1-01	320	502.2	-	502.2	47	31.1	34.3	649
201	EM2:ESSFdc1/dcu1-01	330	502.2	-	502.2	47	31.1	34.3	649
201	EM2:ESSFdc1/dcu1-01	340	502.2	-	502.2	47	31.1	34.3	649
201	EM2:ESSFdc1/dcu1-01	350	502.2	-	502.2	47	31.1	34.3	649

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
202	EM2:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.8	0
202	EM2:ESSFdc1/dcu1-03	20	-	-	-	0	13.5	3.8	0
202	EM2:ESSFdc1/dcu1-03	30	0.7	-	0.7	0	16.7	7.3	16
202	EM2:ESSFdc1/dcu1-03	40	14.6	-	14.6	4	17.0	10.6	209
202	EM2:ESSFdc1/dcu1-03	50	53.2	-	53.2	11	18.2	13.6	504
202	EM2:ESSFdc1/dcu1-03	60	106.6	-	106.6	19	19.8	16.1	757
202	EM2:ESSFdc1/dcu1-03	70	163.6	-	163.6	25	21.2	18.2	907
202	EM2:ESSFdc1/dcu1-03	80	215.7	-	215.7	30	22.4	20.0	963
202	EM2:ESSFdc1/dcu1-03	90	260.3	-	260.3	34	23.5	21.6	964
202	EM2:ESSFdc1/dcu1-03	100	296.4	-	296.4	36	24.5	22.8	936
202	EM2:ESSFdc1/dcu1-03	110	326.1	-	326.1	38	25.3	23.9	907
202	EM2:ESSFdc1/dcu1-03	120	349.8	-	349.8	39	26.0	24.8	877
202	EM2:ESSFdc1/dcu1-03	130	369.2	-	369.2	41	26.5	25.6	851
202	EM2:ESSFdc1/dcu1-03	140	385.5	-	385.5	41	27.0	26.3	829
202	EM2:ESSFdc1/dcu1-03	150	398.4	-	398.4	42	27.5	26.9	808
202	EM2:ESSFdc1/dcu1-03	160	409.1	-	409.1	42	27.8	27.4	790
202	EM2:ESSFdc1/dcu1-03	170	418.3	-	418.3	43	28.1	27.8	775
202	EM2:ESSFdc1/dcu1-03	180	425.2	-	425.2	43	28.4	28.3	760
202	EM2:ESSFdc1/dcu1-03	190	431.3	-	431.3	43	28.7	28.6	747
202	EM2:ESSFdc1/dcu1-03	200	436.7	-	436.7	44	28.9	29.0	736
202	EM2:ESSFdc1/dcu1-03	210	440.9	-	440.9	44	29.1	29.2	725
202	EM2:ESSFdc1/dcu1-03	220	443.7	-	443.7	44	29.3	29.6	715
202	EM2:ESSFdc1/dcu1-03	230	446.2	-	446.2	44	29.5	29.8	706
202	EM2:ESSFdc1/dcu1-03	240	448.3	-	448.3	44	29.6	30.0	697
202	EM2:ESSFdc1/dcu1-03	250	450.1	-	450.1	44	29.7	30.2	689
202	EM2:ESSFdc1/dcu1-03	260	451.6	-	451.6	44	29.8	30.4	682
202	EM2:ESSFdc1/dcu1-03	270	452.5	-	452.5	44	29.9	30.6	675
202	EM2:ESSFdc1/dcu1-03	280	451.9	-	451.9	44	30.0	30.8	667
202	EM2:ESSFdc1/dcu1-03	290	451.4	-	451.4	43	30.1	30.8	659
202	EM2:ESSFdc1/dcu1-03	300	450.7	-	450.7	43	30.2	31.0	653
202	EM2:ESSFdc1/dcu1-03	310	450.6	-	450.6	43	30.2	31.0	651
202	EM2:ESSFdc1/dcu1-03	320	450.6	-	450.6	43	30.2	31.0	651
202	EM2:ESSFdc1/dcu1-03	330	450.6	-	450.6	43	30.2	31.0	651
202	EM2:ESSFdc1/dcu1-03	340	450.6	-	450.6	43	30.2	31.0	651
202	EM2:ESSFdc1/dcu1-03	350	450.6	-	450.6	43	30.2	31.0	651

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
203	EM2:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.8	0
203	EM2:ESSFdc1/dcu1-04	20	-	-	-	0	8.4	3.8	0
203	EM2:ESSFdc1/dcu1-04	30	1.8	-	1.8	1	17.0	7.6	40
203	EM2:ESSFdc1/dcu1-04	40	25.7	-	25.7	6	17.6	11.2	314
203	EM2:ESSFdc1/dcu1-04	50	77.0	-	77.0	14	18.8	14.4	622
203	EM2:ESSFdc1/dcu1-04	60	143.7	-	143.7	22	20.2	17.2	856
203	EM2:ESSFdc1/dcu1-04	70	210.5	-	210.5	28	21.6	19.5	972
203	EM2:ESSFdc1/dcu1-04	80	269.2	-	269.2	34	22.7	21.4	1004
203	EM2:ESSFdc1/dcu1-04	90	316.9	-	316.9	37	23.8	23.0	990
203	EM2:ESSFdc1/dcu1-04	100	354.7	-	354.7	40	24.7	24.4	962
203	EM2:ESSFdc1/dcu1-04	110	383.9	-	383.9	42	25.5	25.5	929
203	EM2:ESSFdc1/dcu1-04	120	407.4	-	407.4	43	26.1	26.6	900
203	EM2:ESSFdc1/dcu1-04	130	425.9	-	425.9	44	26.7	27.4	873
203	EM2:ESSFdc1/dcu1-04	140	440.0	-	440.0	45	27.2	28.1	848
203	EM2:ESSFdc1/dcu1-04	150	451.9	-	451.9	46	27.6	28.8	826
203	EM2:ESSFdc1/dcu1-04	160	461.4	-	461.4	46	28.0	29.3	806
203	EM2:ESSFdc1/dcu1-04	170	469.1	-	469.1	46	28.3	29.8	789
203	EM2:ESSFdc1/dcu1-04	180	475.7	-	475.7	47	28.6	30.2	774
203	EM2:ESSFdc1/dcu1-04	190	480.5	-	480.5	47	28.9	30.6	760
203	EM2:ESSFdc1/dcu1-04	200	484.4	-	484.4	47	29.1	31.0	748
203	EM2:ESSFdc1/dcu1-04	210	487.6	-	487.6	47	29.3	31.2	736
203	EM2:ESSFdc1/dcu1-04	220	490.4	-	490.4	47	29.4	31.6	726
203	EM2:ESSFdc1/dcu1-04	230	492.7	-	492.7	47	29.6	31.8	718
203	EM2:ESSFdc1/dcu1-04	240	493.7	-	493.7	47	29.7	32.0	708
203	EM2:ESSFdc1/dcu1-04	250	494.2	-	494.2	47	29.8	32.2	700
203	EM2:ESSFdc1/dcu1-04	260	494.6	-	494.6	47	29.9	32.4	692
203	EM2:ESSFdc1/dcu1-04	270	494.8	-	494.8	46	30.1	32.6	684
203	EM2:ESSFdc1/dcu1-04	280	494.9	-	494.9	46	30.2	32.8	677
203	EM2:ESSFdc1/dcu1-04	290	494.8	-	494.8	46	30.2	33.0	670
203	EM2:ESSFdc1/dcu1-04	300	494.6	-	494.6	46	30.3	33.0	665
203	EM2:ESSFdc1/dcu1-04	310	494.6	-	494.6	46	30.3	33.0	664
203	EM2:ESSFdc1/dcu1-04	320	494.6	-	494.6	46	30.3	33.0	664
203	EM2:ESSFdc1/dcu1-04	330	494.6	-	494.6	46	30.3	33.0	664
203	EM2:ESSFdc1/dcu1-04	340	494.6	-	494.6	46	30.3	33.0	664
203	EM2:ESSFdc1/dcu1-04	350	494.6	-	494.6	46	30.3	33.0	664

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
204	EM2:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	0.7	0
204	EM2:ESSFdc1/dcu1-Oth	20	-	-	-	0	12.3	3.0	1
204	EM2:ESSFdc1/dcu1-Oth	30	0.4	-	0.4	0	18.3	6.2	8
204	EM2:ESSFdc1/dcu1-Oth	40	7.0	-	7.0	2	18.3	9.4	107
204	EM2:ESSFdc1/dcu1-Oth	50	30.8	-	30.8	6	18.9	12.3	316
204	EM2:ESSFdc1/dcu1-Oth	60	72.1	-	72.1	13	20.1	15.0	537
204	EM2:ESSFdc1/dcu1-Oth	70	121.2	-	121.2	19	21.3	17.2	710
204	EM2:ESSFdc1/dcu1-Oth	80	172.4	-	172.4	24	22.4	19.2	815
204	EM2:ESSFdc1/dcu1-Oth	90	219.7	-	219.7	29	23.5	21.0	861
204	EM2:ESSFdc1/dcu1-Oth	100	260.9	-	260.9	32	24.5	22.4	877
204	EM2:ESSFdc1/dcu1-Oth	110	295.5	-	295.5	35	25.2	23.7	870
204	EM2:ESSFdc1/dcu1-Oth	120	324.4	-	324.4	37	26.0	24.8	855
204	EM2:ESSFdc1/dcu1-Oth	130	348.3	-	348.3	39	26.6	25.8	837
204	EM2:ESSFdc1/dcu1-Oth	140	368.3	-	368.3	41	27.1	26.6	819
204	EM2:ESSFdc1/dcu1-Oth	150	384.9	-	384.9	42	27.6	27.3	803
204	EM2:ESSFdc1/dcu1-Oth	160	398.9	-	398.9	42	28.0	28.0	787
204	EM2:ESSFdc1/dcu1-Oth	170	410.8	-	410.8	43	28.4	28.6	773
204	EM2:ESSFdc1/dcu1-Oth	180	420.4	-	420.4	44	28.7	29.0	759
204	EM2:ESSFdc1/dcu1-Oth	190	428.7	-	428.7	44	29.0	29.5	747
204	EM2:ESSFdc1/dcu1-Oth	200	436.0	-	436.0	44	29.2	29.9	736
204	EM2:ESSFdc1/dcu1-Oth	210	442.0	-	442.0	45	29.5	30.3	725
204	EM2:ESSFdc1/dcu1-Oth	220	446.6	-	446.6	45	29.7	30.6	716
204	EM2:ESSFdc1/dcu1-Oth	230	450.6	-	450.6	45	29.8	30.9	707
204	EM2:ESSFdc1/dcu1-Oth	240	454.1	-	454.1	45	30.0	31.2	698
204	EM2:ESSFdc1/dcu1-Oth	250	457.1	-	457.1	45	30.2	31.4	690
204	EM2:ESSFdc1/dcu1-Oth	260	459.8	-	459.8	45	30.3	31.6	683
204	EM2:ESSFdc1/dcu1-Oth	270	461.6	-	461.6	45	30.4	31.8	676
204	EM2:ESSFdc1/dcu1-Oth	280	462.4	-	462.4	45	30.5	32.0	669
204	EM2:ESSFdc1/dcu1-Oth	290	463.1	-	463.1	45	30.6	32.2	662
204	EM2:ESSFdc1/dcu1-Oth	300	463.4	-	463.4	45	30.7	32.4	656
204	EM2:ESSFdc1/dcu1-Oth	310	463.4	-	463.4	45	30.7	32.4	654
204	EM2:ESSFdc1/dcu1-Oth	320	463.4	-	463.4	45	30.7	32.4	654
204	EM2:ESSFdc1/dcu1-Oth	330	463.4	-	463.4	45	30.7	32.4	654
204	EM2:ESSFdc1/dcu1-Oth	340	463.4	-	463.4	45	30.7	32.4	654
204	EM2:ESSFdc1/dcu1-Oth	350	463.4	-	463.4	45	30.7	32.4	654

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
205	EM2:ICHmk1/mw2-01	10	-	-	-	0	-	1.2	0
205	EM2:ICHmk1/mw2-01	20	0.2	-	0.2	0	6.2	5.0	6
205	EM2:ICHmk1/mw2-01	30	11.1	-	11.1	3	18.0	9.4	148
205	EM2:ICHmk1/mw2-01	40	54.7	-	54.7	9	19.2	13.5	434
205	EM2:ICHmk1/mw2-01	50	127.5	-	127.5	18	20.7	17.1	705
205	EM2:ICHmk1/mw2-01	60	206.2	-	206.2	25	22.2	20.1	853
205	EM2:ICHmk1/mw2-01	70	275.8	-	275.8	32	23.6	22.6	897
205	EM2:ICHmk1/mw2-01	80	331.1	-	331.1	36	24.7	24.6	893
205	EM2:ICHmk1/mw2-01	90	374.4	-	374.4	39	25.8	26.4	873
205	EM2:ICHmk1/mw2-01	100	408.8	-	408.8	42	26.6	27.8	848
205	EM2:ICHmk1/mw2-01	110	435.9	-	435.9	44	27.4	29.0	823
205	EM2:ICHmk1/mw2-01	120	458.4	-	458.4	45	28.0	30.1	800
205	EM2:ICHmk1/mw2-01	130	477.5	-	477.5	46	28.5	30.9	781
205	EM2:ICHmk1/mw2-01	140	493.8	-	493.8	47	29.0	31.8	765
205	EM2:ICHmk1/mw2-01	150	506.9	-	506.9	48	29.4	32.4	749
205	EM2:ICHmk1/mw2-01	160	517.6	-	517.6	48	29.8	33.1	734
205	EM2:ICHmk1/mw2-01	170	526.8	-	526.8	48	30.1	33.5	721
205	EM2:ICHmk1/mw2-01	180	533.9	-	533.9	49	30.4	34.0	709
205	EM2:ICHmk1/mw2-01	190	539.7	-	539.7	49	30.6	34.4	697
205	EM2:ICHmk1/mw2-01	200	544.4	-	544.4	49	30.8	34.8	685
205	EM2:ICHmk1/mw2-01	210	548.3	-	548.3	49	31.1	35.1	675
205	EM2:ICHmk1/mw2-01	220	550.5	-	550.5	49	31.3	35.3	663
205	EM2:ICHmk1/mw2-01	230	552.0	-	552.0	49	31.5	35.6	653
205	EM2:ICHmk1/mw2-01	240	553.3	-	553.3	48	31.6	35.9	643
205	EM2:ICHmk1/mw2-01	250	554.5	-	554.5	48	31.8	36.0	635
205	EM2:ICHmk1/mw2-01	260	555.3	-	555.3	48	31.9	36.2	628
205	EM2:ICHmk1/mw2-01	270	556.0	-	556.0	48	32.0	36.4	620
205	EM2:ICHmk1/mw2-01	280	556.2	-	556.2	48	32.1	36.6	614
205	EM2:ICHmk1/mw2-01	290	555.4	-	555.4	48	32.2	36.7	607
205	EM2:ICHmk1/mw2-01	300	554.4	-	554.4	48	32.3	36.8	601
205	EM2:ICHmk1/mw2-01	310	554.4	-	554.4	47	32.3	36.9	600
205	EM2:ICHmk1/mw2-01	320	554.4	-	554.4	47	32.3	36.9	600
205	EM2:ICHmk1/mw2-01	330	554.4	-	554.4	47	32.3	36.9	600
205	EM2:ICHmk1/mw2-01	340	554.4	-	554.4	47	32.3	36.9	600
205	EM2:ICHmk1/mw2-01	350	554.4	-	554.4	47	32.3	36.9	600

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
206	EM2:ICHmk1/mw2-03	10	-	-	-	0	-	1.2	0
206	EM2:ICHmk1/mw2-03	20	0.1	-	0.1	0	8.6	5.2	4
206	EM2:ICHmk1/mw2-03	30	7.1	-	7.1	2	17.7	9.4	119
206	EM2:ICHmk1/mw2-03	40	45.4	-	45.4	9	18.7	13.4	431
206	EM2:ICHmk1/mw2-03	50	109.3	-	109.3	17	20.1	16.6	703
206	EM2:ICHmk1/mw2-03	60	179.0	-	179.0	24	21.5	19.4	828
206	EM2:ICHmk1/mw2-03	70	241.2	-	241.2	29	22.8	21.7	872
206	EM2:ICHmk1/mw2-03	80	293.7	-	293.7	33	24.0	23.6	877
206	EM2:ICHmk1/mw2-03	90	336.6	-	336.6	37	25.0	25.2	868
206	EM2:ICHmk1/mw2-03	100	372.1	-	372.1	39	25.7	26.6	853
206	EM2:ICHmk1/mw2-03	110	400.6	-	400.6	41	26.5	27.7	835
206	EM2:ICHmk1/mw2-03	120	424.4	-	424.4	43	27.1	28.7	817
206	EM2:ICHmk1/mw2-03	130	444.2	-	444.2	44	27.6	29.6	800
206	EM2:ICHmk1/mw2-03	140	460.7	-	460.7	45	28.1	30.3	785
206	EM2:ICHmk1/mw2-03	150	474.8	-	474.8	46	28.5	30.9	771
206	EM2:ICHmk1/mw2-03	160	486.6	-	486.6	46	28.8	31.4	757
206	EM2:ICHmk1/mw2-03	170	496.4	-	496.4	47	29.1	32.0	745
206	EM2:ICHmk1/mw2-03	180	505.0	-	505.0	47	29.4	32.4	735
206	EM2:ICHmk1/mw2-03	190	511.9	-	511.9	48	29.7	32.8	725
206	EM2:ICHmk1/mw2-03	200	516.6	-	516.6	48	29.9	33.1	714
206	EM2:ICHmk1/mw2-03	210	520.6	-	520.6	48	30.0	33.4	705
206	EM2:ICHmk1/mw2-03	220	523.8	-	523.8	48	30.2	33.6	696
206	EM2:ICHmk1/mw2-03	230	526.2	-	526.2	48	30.4	33.8	687
206	EM2:ICHmk1/mw2-03	240	528.1	-	528.1	48	30.5	34.0	678
206	EM2:ICHmk1/mw2-03	250	528.6	-	528.6	47	30.7	34.2	669
206	EM2:ICHmk1/mw2-03	260	528.9	-	528.9	47	30.8	34.4	662
206	EM2:ICHmk1/mw2-03	270	529.1	-	529.1	47	30.9	34.6	654
206	EM2:ICHmk1/mw2-03	280	529.2	-	529.2	47	31.0	34.8	647
206	EM2:ICHmk1/mw2-03	290	529.3	-	529.3	47	31.1	34.9	641
206	EM2:ICHmk1/mw2-03	300	529.2	-	529.2	47	31.2	35.0	636
206	EM2:ICHmk1/mw2-03	310	529.2	-	529.2	47	31.2	35.0	634
206	EM2:ICHmk1/mw2-03	320	529.2	-	529.2	47	31.2	35.0	634
206	EM2:ICHmk1/mw2-03	330	529.2	-	529.2	47	31.2	35.0	634
206	EM2:ICHmk1/mw2-03	340	529.2	-	529.2	47	31.2	35.0	634
206	EM2:ICHmk1/mw2-03	350	529.2	-	529.2	47	31.2	35.0	634

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
207	EM2:ICHmk1/mw2-04	10	-	-	-	0	-	1.2	0
207	EM2:ICHmk1/mw2-04	20	0.1	-	0.1	0	12.5	5.4	5
207	EM2:ICHmk1/mw2-04	30	11.3	-	11.3	3	18.0	10.0	167
207	EM2:ICHmk1/mw2-04	40	64.2	-	64.2	11	19.2	14.2	508
207	EM2:ICHmk1/mw2-04	50	144.2	-	144.2	20	21.1	17.8	745
207	EM2:ICHmk1/mw2-04	60	224.4	-	224.4	28	22.8	20.8	844
207	EM2:ICHmk1/mw2-04	70	293.4	-	293.4	35	24.4	23.2	864
207	EM2:ICHmk1/mw2-04	80	346.9	-	346.9	39	25.7	25.2	847
207	EM2:ICHmk1/mw2-04	90	389.9	-	389.9	42	26.8	26.9	823
207	EM2:ICHmk1/mw2-04	100	423.3	-	423.3	45	27.7	28.3	797
207	EM2:ICHmk1/mw2-04	110	449.9	-	449.9	47	28.5	29.5	773
207	EM2:ICHmk1/mw2-04	120	471.1	-	471.1	48	29.1	30.6	751
207	EM2:ICHmk1/mw2-04	130	488.8	-	488.8	48	29.7	31.4	732
207	EM2:ICHmk1/mw2-04	140	501.4	-	501.4	49	30.1	32.0	714
207	EM2:ICHmk1/mw2-04	150	509.8	-	509.8	49	30.5	32.4	698
207	EM2:ICHmk1/mw2-04	160	517.4	-	517.4	50	30.8	32.8	684
207	EM2:ICHmk1/mw2-04	170	524.8	-	524.8	50	31.2	33.4	672
207	EM2:ICHmk1/mw2-04	180	530.4	-	530.4	50	31.4	33.8	661
207	EM2:ICHmk1/mw2-04	190	534.9	-	534.9	50	31.7	34.1	651
207	EM2:ICHmk1/mw2-04	200	538.4	-	538.4	50	31.9	34.4	641
207	EM2:ICHmk1/mw2-04	210	541.1	-	541.1	50	32.1	34.7	632
207	EM2:ICHmk1/mw2-04	220	542.5	-	542.5	50	32.2	35.0	623
207	EM2:ICHmk1/mw2-04	230	542.8	-	542.8	50	32.3	35.2	614
207	EM2:ICHmk1/mw2-04	240	542.4	-	542.4	49	32.5	35.4	606
207	EM2:ICHmk1/mw2-04	250	541.9	-	541.9	49	32.6	35.6	598
207	EM2:ICHmk1/mw2-04	260	541.5	-	541.5	49	32.7	35.8	592
207	EM2:ICHmk1/mw2-04	270	541.0	-	541.0	49	32.8	35.9	586
207	EM2:ICHmk1/mw2-04	280	540.3	-	540.3	49	32.9	36.0	580
207	EM2:ICHmk1/mw2-04	290	539.0	-	539.0	48	33.0	36.2	574
207	EM2:ICHmk1/mw2-04	300	537.2	-	537.2	48	33.0	36.2	569
207	EM2:ICHmk1/mw2-04	310	536.9	-	536.9	48	33.0	36.2	568
207	EM2:ICHmk1/mw2-04	320	536.9	-	536.9	48	33.0	36.2	568
207	EM2:ICHmk1/mw2-04	330	536.9	-	536.9	48	33.0	36.2	568
207	EM2:ICHmk1/mw2-04	340	536.9	-	536.9	48	33.0	36.2	568
207	EM2:ICHmk1/mw2-04	350	536.9	-	536.9	48	33.0	36.2	568

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
208	EM2:ICHmk1/mw2-Oth	10	-	-	-	0	-	1.3	0
208	EM2:ICHmk1/mw2-Oth	20	0.1	-	0.1	0	12.6	5.2	4
208	EM2:ICHmk1/mw2-Oth	30	9.0	-	9.0	2	18.2	9.7	114
208	EM2:ICHmk1/mw2-Oth	40	48.9	-	48.9	9	20.2	13.8	351
208	EM2:ICHmk1/mw2-Oth	50	116.2	-	116.2	17	22.8	17.4	576
208	EM2:ICHmk1/mw2-Oth	60	190.2	-	190.2	25	25.0	20.4	694
208	EM2:ICHmk1/mw2-Oth	70	256.8	-	256.8	31	26.9	22.9	726
208	EM2:ICHmk1/mw2-Oth	80	310.3	-	310.3	36	28.5	25.0	716
208	EM2:ICHmk1/mw2-Oth	90	353.0	-	353.0	39	29.7	26.6	694
208	EM2:ICHmk1/mw2-Oth	100	386.7	-	386.7	41	30.7	28.0	672
208	EM2:ICHmk1/mw2-Oth	110	413.6	-	413.6	43	31.6	29.2	650
208	EM2:ICHmk1/mw2-Oth	120	435.5	-	435.5	45	32.3	30.3	632
208	EM2:ICHmk1/mw2-Oth	130	454.1	-	454.1	46	32.9	31.2	616
208	EM2:ICHmk1/mw2-Oth	140	469.5	-	469.5	47	33.4	31.9	604
208	EM2:ICHmk1/mw2-Oth	150	482.6	-	482.6	47	33.8	32.6	593
208	EM2:ICHmk1/mw2-Oth	160	493.0	-	493.0	48	34.1	33.1	582
208	EM2:ICHmk1/mw2-Oth	170	501.7	-	501.7	48	34.5	33.6	573
208	EM2:ICHmk1/mw2-Oth	180	509.0	-	509.0	48	34.8	34.0	564
208	EM2:ICHmk1/mw2-Oth	190	514.4	-	514.4	48	35.0	34.4	555
208	EM2:ICHmk1/mw2-Oth	200	518.9	-	518.9	48	35.2	34.8	547
208	EM2:ICHmk1/mw2-Oth	210	522.5	-	522.5	48	35.4	35.1	540
208	EM2:ICHmk1/mw2-Oth	220	525.6	-	525.6	49	35.6	35.4	533
208	EM2:ICHmk1/mw2-Oth	230	527.4	-	527.4	49	35.8	35.6	526
208	EM2:ICHmk1/mw2-Oth	240	528.4	-	528.4	49	35.9	35.8	520
208	EM2:ICHmk1/mw2-Oth	250	528.8	-	528.8	48	36.0	36.0	513
208	EM2:ICHmk1/mw2-Oth	260	529.1	-	529.1	48	36.1	36.2	508
208	EM2:ICHmk1/mw2-Oth	270	529.1	-	529.1	48	36.2	36.4	502
208	EM2:ICHmk1/mw2-Oth	280	529.0	-	529.0	48	36.3	36.6	498
208	EM2:ICHmk1/mw2-Oth	290	528.7	-	528.7	48	36.4	36.6	493
208	EM2:ICHmk1/mw2-Oth	300	528.3	-	528.3	48	36.5	36.8	489
208	EM2:ICHmk1/mw2-Oth	310	528.2	-	528.2	48	36.5	36.8	488
208	EM2:ICHmk1/mw2-Oth	320	528.2	-	528.2	48	36.5	36.8	488
208	EM2:ICHmk1/mw2-Oth	330	528.2	-	528.2	48	36.5	36.8	488
208	EM2:ICHmk1/mw2-Oth	340	528.2	-	528.2	48	36.5	36.8	488
208	EM2:ICHmk1/mw2-Oth	350	528.2	-	528.2	48	36.5	36.8	488

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
209	EM2:IDFdm1-01	10	-	-	-	0	-	0.9	0
209	EM2:IDFdm1-01	20	0.1	-	0.1	0	4.9	4.8	2
209	EM2:IDFdm1-01	30	5.2	-	5.2	1	17.7	9.0	88
209	EM2:IDFdm1-01	40	40.6	-	40.6	8	18.6	12.9	406
209	EM2:IDFdm1-01	50	105.4	-	105.4	16	19.8	16.3	697
209	EM2:IDFdm1-01	60	175.1	-	175.1	22	21.2	19.1	830
209	EM2:IDFdm1-01	70	236.6	-	236.6	27	22.5	21.5	872
209	EM2:IDFdm1-01	80	287.7	-	287.7	31	23.6	23.4	878
209	EM2:IDFdm1-01	90	330.0	-	330.0	35	24.5	25.1	870
209	EM2:IDFdm1-01	100	364.8	-	364.8	37	25.3	26.4	856
209	EM2:IDFdm1-01	110	394.2	-	394.2	39	26.0	27.7	839
209	EM2:IDFdm1-01	120	418.1	-	418.1	41	26.7	28.7	821
209	EM2:IDFdm1-01	130	439.0	-	439.0	43	27.2	29.6	803
209	EM2:IDFdm1-01	140	457.4	-	457.4	44	27.8	30.4	788
209	EM2:IDFdm1-01	150	473.3	-	473.3	45	28.2	31.1	774
209	EM2:IDFdm1-01	160	487.2	-	487.2	46	28.6	31.7	761
209	EM2:IDFdm1-01	170	499.0	-	499.0	46	28.9	32.2	749
209	EM2:IDFdm1-01	180	508.6	-	508.6	46	29.2	32.7	736
209	EM2:IDFdm1-01	190	517.1	-	517.1	46	29.5	33.2	724
209	EM2:IDFdm1-01	200	524.5	-	524.5	47	29.8	33.6	713
209	EM2:IDFdm1-01	210	530.2	-	530.2	47	30.0	33.9	702
209	EM2:IDFdm1-01	220	534.6	-	534.6	47	30.2	34.2	690
209	EM2:IDFdm1-01	230	538.1	-	538.1	47	30.4	34.5	679
209	EM2:IDFdm1-01	240	541.1	-	541.1	47	30.6	34.7	668
209	EM2:IDFdm1-01	250	543.7	-	543.7	47	30.8	34.9	657
209	EM2:IDFdm1-01	260	546.0	-	546.0	47	31.0	35.2	648
209	EM2:IDFdm1-01	270	547.5	-	547.5	47	31.1	35.4	639
209	EM2:IDFdm1-01	280	548.1	-	548.1	47	31.3	35.6	631
209	EM2:IDFdm1-01	290	548.6	-	548.6	47	31.4	35.8	622
209	EM2:IDFdm1-01	300	549.0	-	549.0	47	31.6	35.9	616
209	EM2:IDFdm1-01	310	549.2	-	549.2	47	31.6	35.9	614
209	EM2:IDFdm1-01	320	549.2	-	549.2	47	31.6	35.9	614
209	EM2:IDFdm1-01	330	549.2	-	549.2	47	31.6	35.9	614
209	EM2:IDFdm1-01	340	549.2	-	549.2	47	31.6	35.9	614
209	EM2:IDFdm1-01	350	549.2	-	549.2	47	31.6	35.9	614

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
210	EM2:IDFdm1-04	10	-	-	-	0	-	0.8	0
210	EM2:IDFdm1-04	20	-	-	-	0	5.5	4.1	1
210	EM2:IDFdm1-04	30	1.7	-	1.7	0	18.7	7.9	31
210	EM2:IDFdm1-04	40	17.0	-	17.0	4	19.1	11.4	200
210	EM2:IDFdm1-04	50	56.5	-	56.5	9	20.0	14.5	435
210	EM2:IDFdm1-04	60	107.6	-	107.6	14	21.2	17.3	603
210	EM2:IDFdm1-04	70	159.7	-	159.7	20	22.3	19.6	694
210	EM2:IDFdm1-04	80	207.6	-	207.6	24	23.4	21.6	740
210	EM2:IDFdm1-04	90	249.1	-	249.1	28	24.3	23.3	761
210	EM2:IDFdm1-04	100	284.0	-	284.0	31	25.1	24.7	765
210	EM2:IDFdm1-04	110	314.8	-	314.8	34	25.8	26.0	766
210	EM2:IDFdm1-04	120	341.7	-	341.7	36	26.5	27.1	763
210	EM2:IDFdm1-04	130	364.8	-	364.8	38	27.0	28.0	757
210	EM2:IDFdm1-04	140	384.7	-	384.7	39	27.5	28.8	749
210	EM2:IDFdm1-04	150	401.8	-	401.8	41	28.0	29.5	741
210	EM2:IDFdm1-04	160	417.1	-	417.1	42	28.3	30.2	732
210	EM2:IDFdm1-04	170	430.1	-	430.1	42	28.7	30.7	724
210	EM2:IDFdm1-04	180	441.7	-	441.7	43	28.9	31.3	716
210	EM2:IDFdm1-04	190	452.0	-	452.0	44	29.2	31.7	708
210	EM2:IDFdm1-04	200	460.5	-	460.5	44	29.5	32.1	700
210	EM2:IDFdm1-04	210	467.9	-	467.9	45	29.7	32.4	692
210	EM2:IDFdm1-04	220	474.3	-	474.3	45	29.9	32.7	685
210	EM2:IDFdm1-04	230	480.0	-	480.0	45	30.1	33.0	678
210	EM2:IDFdm1-04	240	485.0	-	485.0	45	30.3	33.3	672
210	EM2:IDFdm1-04	250	489.0	-	489.0	46	30.5	33.6	665
210	EM2:IDFdm1-04	260	492.0	-	492.0	46	30.7	33.8	658
210	EM2:IDFdm1-04	270	495.0	-	495.0	46	30.8	34.0	651
210	EM2:IDFdm1-04	280	497.4	-	497.4	46	30.9	34.2	645
210	EM2:IDFdm1-04	290	499.6	-	499.6	46	31.0	34.4	639
210	EM2:IDFdm1-04	300	501.4	-	501.4	46	31.2	34.6	633
210	EM2:IDFdm1-04	310	501.9	-	501.9	46	31.2	34.6	632
210	EM2:IDFdm1-04	320	501.9	-	501.9	46	31.2	34.6	632
210	EM2:IDFdm1-04	330	501.9	-	501.9	46	31.2	34.6	632
210	EM2:IDFdm1-04	340	501.9	-	501.9	46	31.2	34.6	632
210	EM2:IDFdm1-04	350	501.9	-	501.9	46	31.2	34.6	632

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
211	EM2:IDFdm1-05	10	-	-	-	0	-	1.4	0
211	EM2:IDFdm1-05	20	0.2	-	0.2	0	12.1	5.8	8
211	EM2:IDFdm1-05	30	9.2	-	9.2	3	18.9	10.2	130
211	EM2:IDFdm1-05	40	49.7	-	49.7	8	20.0	14.2	373
211	EM2:IDFdm1-05	50	111.4	-	111.4	15	22.0	17.6	532
211	EM2:IDFdm1-05	60	174.9	-	174.9	23	23.9	20.5	607
211	EM2:IDFdm1-05	70	232.7	-	232.7	29	25.5	22.9	638
211	EM2:IDFdm1-05	80	282.1	-	282.1	33	26.9	24.9	647
211	EM2:IDFdm1-05	90	324.4	-	324.4	37	28.0	26.6	649
211	EM2:IDFdm1-05	100	359.6	-	359.6	40	29.0	28.0	643
211	EM2:IDFdm1-05	110	389.2	-	389.2	42	29.8	29.2	637
211	EM2:IDFdm1-05	120	414.9	-	414.9	44	30.4	30.2	631
211	EM2:IDFdm1-05	130	437.0	-	437.0	45	31.0	31.0	625
211	EM2:IDFdm1-05	140	455.8	-	455.8	47	31.5	31.8	617
211	EM2:IDFdm1-05	150	471.7	-	471.7	48	31.9	32.5	611
211	EM2:IDFdm1-05	160	484.9	-	484.9	48	32.3	33.0	603
211	EM2:IDFdm1-05	170	495.9	-	495.9	49	32.6	33.5	597
211	EM2:IDFdm1-05	180	505.3	-	505.3	49	32.9	34.0	592
211	EM2:IDFdm1-05	190	512.5	-	512.5	49	33.2	34.3	584
211	EM2:IDFdm1-05	200	518.6	-	518.6	50	33.4	34.7	578
211	EM2:IDFdm1-05	210	523.2	-	523.2	50	33.6	34.9	571
211	EM2:IDFdm1-05	220	527.1	-	527.1	50	33.8	35.2	566
211	EM2:IDFdm1-05	230	530.0	-	530.0	50	34.0	35.4	560
211	EM2:IDFdm1-05	240	531.4	-	531.4	50	34.1	35.6	554
211	EM2:IDFdm1-05	250	531.2	-	531.2	49	34.2	35.8	548
211	EM2:IDFdm1-05	260	531.0	-	531.0	49	34.3	35.9	541
211	EM2:IDFdm1-05	270	530.7	-	530.7	49	34.5	36.0	536
211	EM2:IDFdm1-05	280	530.4	-	530.4	49	34.6	36.2	531
211	EM2:IDFdm1-05	290	530.2	-	530.2	49	34.6	36.2	527
211	EM2:IDFdm1-05	300	530.0	-	530.0	48	34.7	36.4	523
211	EM2:IDFdm1-05	310	530.1	-	530.1	48	34.7	36.4	522
211	EM2:IDFdm1-05	320	530.1	-	530.1	48	34.7	36.4	522
211	EM2:IDFdm1-05	330	530.1	-	530.1	48	34.7	36.4	522
211	EM2:IDFdm1-05	340	530.1	-	530.1	48	34.7	36.4	522
211	EM2:IDFdm1-05	350	530.1	-	530.1	48	34.7	36.4	522

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
212	EM2:IDFdm1-Oth	10	-	-	-	0	-	1.4	0
212	EM2:IDFdm1-Oth	20	0.2	-	0.2	0	12.3	5.8	7
212	EM2:IDFdm1-Oth	30	8.8	-	8.8	2	19.0	10.2	118
212	EM2:IDFdm1-Oth	40	47.6	-	47.6	8	20.3	14.2	346
212	EM2:IDFdm1-Oth	50	107.2	-	107.2	15	22.5	17.7	493
212	EM2:IDFdm1-Oth	60	168.9	-	168.9	22	24.5	20.5	563
212	EM2:IDFdm1-Oth	70	225.2	-	225.2	28	26.2	23.0	591
212	EM2:IDFdm1-Oth	80	273.6	-	273.6	33	27.6	25.0	599
212	EM2:IDFdm1-Oth	90	315.0	-	315.0	36	28.8	26.6	601
212	EM2:IDFdm1-Oth	100	349.7	-	349.7	39	29.8	28.1	596
212	EM2:IDFdm1-Oth	110	379.1	-	379.1	41	30.7	29.2	590
212	EM2:IDFdm1-Oth	120	404.7	-	404.7	43	31.3	30.2	585
212	EM2:IDFdm1-Oth	130	426.8	-	426.8	45	31.9	31.2	580
212	EM2:IDFdm1-Oth	140	445.7	-	445.7	46	32.5	31.9	574
212	EM2:IDFdm1-Oth	150	461.6	-	461.6	47	32.9	32.6	568
212	EM2:IDFdm1-Oth	160	475.2	-	475.2	48	33.3	33.2	562
212	EM2:IDFdm1-Oth	170	486.8	-	486.8	48	33.7	33.7	556
212	EM2:IDFdm1-Oth	180	496.1	-	496.1	49	34.0	34.0	550
212	EM2:IDFdm1-Oth	190	503.8	-	503.8	49	34.2	34.4	545
212	EM2:IDFdm1-Oth	200	510.4	-	510.4	49	34.5	34.8	539
212	EM2:IDFdm1-Oth	210	515.6	-	515.6	49	34.7	35.1	533
212	EM2:IDFdm1-Oth	220	519.4	-	519.4	49	34.9	35.3	528
212	EM2:IDFdm1-Oth	230	522.3	-	522.3	49	35.0	35.6	523
212	EM2:IDFdm1-Oth	240	524.7	-	524.7	49	35.2	35.8	518
212	EM2:IDFdm1-Oth	250	525.1	-	525.1	49	35.3	35.9	512
212	EM2:IDFdm1-Oth	260	525.0	-	525.0	49	35.4	36.1	506
212	EM2:IDFdm1-Oth	270	524.9	-	524.9	49	35.5	36.2	501
212	EM2:IDFdm1-Oth	280	524.6	-	524.6	49	35.6	36.4	496
212	EM2:IDFdm1-Oth	290	524.1	-	524.1	48	35.7	36.4	492
212	EM2:IDFdm1-Oth	300	523.5	-	523.5	48	35.8	36.5	490
212	EM2:IDFdm1-Oth	310	523.3	-	523.3	48	35.8	36.6	489
212	EM2:IDFdm1-Oth	320	523.3	-	523.3	48	35.8	36.6	489
212	EM2:IDFdm1-Oth	330	523.3	-	523.3	48	35.8	36.6	489
212	EM2:IDFdm1-Oth	340	523.3	-	523.3	48	35.8	36.6	489
212	EM2:IDFdm1-Oth	350	523.3	-	523.3	48	35.8	36.6	489

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
213	EM2:MSdm1-01	10	-	-	-	0	-	1.0	0
213	EM2:MSdm1-01	20	-	-	-	0	12.7	4.8	1
213	EM2:MSdm1-01	30	6.5	-	6.5	2	16.9	9.2	110
213	EM2:MSdm1-01	40	52.0	-	52.0	11	18.0	13.3	520
213	EM2:MSdm1-01	50	131.7	-	131.7	21	19.5	16.7	891
213	EM2:MSdm1-01	60	214.6	-	214.6	29	21.2	19.6	1032
213	EM2:MSdm1-01	70	284.2	-	284.2	34	22.6	21.9	1037
213	EM2:MSdm1-01	80	338.7	-	338.7	38	23.9	23.8	997
213	EM2:MSdm1-01	90	380.6	-	380.6	41	25.0	25.4	950
213	EM2:MSdm1-01	100	412.5	-	412.5	43	26.0	26.8	907
213	EM2:MSdm1-01	110	437.2	-	437.2	44	26.7	27.8	870
213	EM2:MSdm1-01	120	456.3	-	456.3	45	27.4	28.8	837
213	EM2:MSdm1-01	130	471.8	-	471.8	46	27.9	29.7	810
213	EM2:MSdm1-01	140	484.5	-	484.5	46	28.4	30.4	787
213	EM2:MSdm1-01	150	495.1	-	495.1	47	28.7	30.9	769
213	EM2:MSdm1-01	160	503.6	-	503.6	47	29.1	31.4	752
213	EM2:MSdm1-01	170	510.8	-	510.8	47	29.4	31.9	739
213	EM2:MSdm1-01	180	515.8	-	515.8	47	29.6	32.3	725
213	EM2:MSdm1-01	190	519.4	-	519.4	47	29.8	32.7	712
213	EM2:MSdm1-01	200	522.3	-	522.3	48	30.1	33.0	700
213	EM2:MSdm1-01	210	524.7	-	524.7	48	30.3	33.3	690
213	EM2:MSdm1-01	220	525.9	-	525.9	48	30.5	33.5	679
213	EM2:MSdm1-01	230	525.8	-	525.8	47	30.6	33.8	668
213	EM2:MSdm1-01	240	525.7	-	525.7	47	30.7	34.0	659
213	EM2:MSdm1-01	250	525.4	-	525.4	47	30.8	34.2	650
213	EM2:MSdm1-01	260	525.1	-	525.1	47	30.9	34.3	641
213	EM2:MSdm1-01	270	524.7	-	524.7	46	31.0	34.5	634
213	EM2:MSdm1-01	280	524.3	-	524.3	46	31.1	34.7	627
213	EM2:MSdm1-01	290	523.2	-	523.2	46	31.2	34.8	620
213	EM2:MSdm1-01	300	521.0	-	521.0	46	31.3	34.9	613
213	EM2:MSdm1-01	310	520.6	-	520.6	46	31.3	34.9	611
213	EM2:MSdm1-01	320	520.6	-	520.6	46	31.3	34.9	611
213	EM2:MSdm1-01	330	520.6	-	520.6	46	31.3	34.9	611
213	EM2:MSdm1-01	340	520.6	-	520.6	46	31.3	34.9	611
213	EM2:MSdm1-01	350	520.6	-	520.6	46	31.3	34.9	611

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
214	EM2:MSdm1-03	10	-	-	-	0	-	0.7	0
214	EM2:MSdm1-03	20	-	-	-	0	5.7	4.1	1
214	EM2:MSdm1-03	30	2.5	-	2.5	1	17.6	8.3	46
214	EM2:MSdm1-03	40	26.0	-	26.0	6	18.3	12.1	290
214	EM2:MSdm1-03	50	80.6	-	80.6	14	19.9	15.4	604
214	EM2:MSdm1-03	60	147.7	-	147.7	21	21.4	18.2	805
214	EM2:MSdm1-03	70	212.0	-	212.0	27	22.9	20.5	878
214	EM2:MSdm1-03	80	266.1	-	266.1	31	24.2	22.5	885
214	EM2:MSdm1-03	90	310.1	-	310.1	34	25.2	24.1	871
214	EM2:MSdm1-03	100	345.9	-	345.9	37	26.2	25.5	850
214	EM2:MSdm1-03	110	374.7	-	374.7	38	26.9	26.6	829
214	EM2:MSdm1-03	120	397.7	-	397.7	40	27.5	27.6	808
214	EM2:MSdm1-03	130	416.9	-	416.9	41	28.1	28.5	788
214	EM2:MSdm1-03	140	432.3	-	432.3	42	28.6	29.2	770
214	EM2:MSdm1-03	150	445.5	-	445.5	43	29.0	29.9	753
214	EM2:MSdm1-03	160	456.3	-	456.3	44	29.3	30.4	739
214	EM2:MSdm1-03	170	465.6	-	465.6	44	29.6	30.9	726
214	EM2:MSdm1-03	180	473.4	-	473.4	45	29.9	31.3	714
214	EM2:MSdm1-03	190	479.6	-	479.6	45	30.2	31.7	703
214	EM2:MSdm1-03	200	485.1	-	485.1	45	30.4	32.1	693
214	EM2:MSdm1-03	210	489.9	-	489.9	45	30.6	32.4	685
214	EM2:MSdm1-03	220	493.7	-	493.7	45	30.7	32.6	677
214	EM2:MSdm1-03	230	495.8	-	495.8	45	30.9	32.9	668
214	EM2:MSdm1-03	240	497.5	-	497.5	45	31.1	33.1	660
214	EM2:MSdm1-03	250	499.0	-	499.0	45	31.2	33.3	652
214	EM2:MSdm1-03	260	500.0	-	500.0	45	31.3	33.5	644
214	EM2:MSdm1-03	270	501.0	-	501.0	45	31.4	33.7	637
214	EM2:MSdm1-03	280	501.9	-	501.9	45	31.5	33.9	631
214	EM2:MSdm1-03	290	502.4	-	502.4	45	31.6	34.0	625
214	EM2:MSdm1-03	300	501.5	-	501.5	45	31.7	34.1	618
214	EM2:MSdm1-03	310	501.2	-	501.2	45	31.7	34.1	616
214	EM2:MSdm1-03	320	501.2	-	501.2	45	31.7	34.1	616
214	EM2:MSdm1-03	330	501.2	-	501.2	45	31.7	34.1	616
214	EM2:MSdm1-03	340	501.2	-	501.2	45	31.7	34.1	616
214	EM2:MSdm1-03	350	501.2	-	501.2	45	31.7	34.1	616

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
215	EM2:MSdm1-04	10	-	-	-	0	-	1.1	0
215	EM2:MSdm1-04	20	0.1	-	0.1	0	12.3	5.0	3
215	EM2:MSdm1-04	30	5.4	-	5.4	2	17.4	9.3	92
215	EM2:MSdm1-04	40	44.0	-	44.0	9	18.2	13.3	457
215	EM2:MSdm1-04	50	113.5	-	113.5	19	19.5	16.7	817
215	EM2:MSdm1-04	60	188.9	-	188.9	26	21.0	19.5	970
215	EM2:MSdm1-04	70	253.4	-	253.4	31	22.3	21.7	996
215	EM2:MSdm1-04	80	305.3	-	305.3	34	23.5	23.7	972
215	EM2:MSdm1-04	90	346.4	-	346.4	37	24.5	25.3	937
215	EM2:MSdm1-04	100	379.1	-	379.1	40	25.4	26.6	903
215	EM2:MSdm1-04	110	404.5	-	404.5	41	26.2	27.6	872
215	EM2:MSdm1-04	120	424.7	-	424.7	42	26.8	28.6	843
215	EM2:MSdm1-04	130	440.9	-	440.9	43	27.4	29.4	817
215	EM2:MSdm1-04	140	451.2	-	451.2	44	27.7	29.9	792
215	EM2:MSdm1-04	150	457.0	-	457.0	44	28.1	30.1	768
215	EM2:MSdm1-04	160	463.1	-	463.1	44	28.5	30.4	750
215	EM2:MSdm1-04	170	469.9	-	469.9	45	28.8	30.8	736
215	EM2:MSdm1-04	180	476.0	-	476.0	45	29.0	31.2	724
215	EM2:MSdm1-04	190	480.6	-	480.6	45	29.2	31.6	713
215	EM2:MSdm1-04	200	483.6	-	483.6	45	29.4	31.9	702
215	EM2:MSdm1-04	210	485.7	-	485.7	45	29.6	32.2	691
215	EM2:MSdm1-04	220	487.6	-	487.6	45	29.8	32.4	681
215	EM2:MSdm1-04	230	489.0	-	489.0	45	29.9	32.6	673
215	EM2:MSdm1-04	240	489.2	-	489.2	45	30.0	32.8	664
215	EM2:MSdm1-04	250	488.2	-	488.2	44	30.1	33.0	654
215	EM2:MSdm1-04	260	487.1	-	487.1	44	30.2	33.1	646
215	EM2:MSdm1-04	270	486.2	-	486.2	44	30.3	33.3	638
215	EM2:MSdm1-04	280	485.2	-	485.2	44	30.4	33.4	631
215	EM2:MSdm1-04	290	484.2	-	484.2	44	30.5	33.5	625
215	EM2:MSdm1-04	300	483.4	-	483.4	43	30.6	33.6	619
215	EM2:MSdm1-04	310	483.2	-	483.2	43	30.6	33.6	617
215	EM2:MSdm1-04	320	483.2	-	483.2	43	30.6	33.6	617
215	EM2:MSdm1-04	330	483.2	-	483.2	43	30.6	33.6	617
215	EM2:MSdm1-04	340	483.2	-	483.2	43	30.6	33.6	617
215	EM2:MSdm1-04	350	483.2	-	483.2	43	30.6	33.6	617

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
216	EM2:MSdm1-05	10	-	-	-	0	-	1.1	0
216	EM2:MSdm1-05	20	-	-	-	0	13.0	4.8	1
216	EM2:MSdm1-05	30	7.6	-	7.6	2	17.2	9.2	126
216	EM2:MSdm1-05	40	54.3	-	54.3	10	18.7	13.4	467
216	EM2:MSdm1-05	50	130.7	-	130.7	20	20.7	16.8	730
216	EM2:MSdm1-05	60	211.9	-	211.9	29	22.7	19.8	844
216	EM2:MSdm1-05	70	283.0	-	283.0	35	24.4	22.2	866
216	EM2:MSdm1-05	80	339.3	-	339.3	40	25.8	24.2	847
216	EM2:MSdm1-05	90	382.5	-	382.5	42	27.0	25.8	816
216	EM2:MSdm1-05	100	416.4	-	416.4	45	28.0	27.2	788
216	EM2:MSdm1-05	110	442.7	-	442.7	47	28.8	28.4	761
216	EM2:MSdm1-05	120	463.0	-	463.0	48	29.5	29.4	738
216	EM2:MSdm1-05	130	479.1	-	479.1	48	30.0	30.2	717
216	EM2:MSdm1-05	140	492.3	-	492.3	49	30.5	31.0	700
216	EM2:MSdm1-05	150	502.6	-	502.6	49	30.9	31.6	684
216	EM2:MSdm1-05	160	511.5	-	511.5	50	31.3	32.2	672
216	EM2:MSdm1-05	170	518.7	-	518.7	50	31.6	32.7	660
216	EM2:MSdm1-05	180	523.7	-	523.7	51	31.9	33.0	650
216	EM2:MSdm1-05	190	527.9	-	527.9	50	32.1	33.4	639
216	EM2:MSdm1-05	200	531.4	-	531.4	50	32.3	33.8	631
216	EM2:MSdm1-05	210	534.0	-	534.0	50	32.5	34.0	622
216	EM2:MSdm1-05	220	535.3	-	535.3	50	32.6	34.3	613
216	EM2:MSdm1-05	230	536.2	-	536.2	50	32.8	34.6	606
216	EM2:MSdm1-05	240	536.8	-	536.8	50	32.9	34.8	599
216	EM2:MSdm1-05	250	537.4	-	537.4	50	33.0	35.0	592
216	EM2:MSdm1-05	260	537.6	-	537.6	49	33.1	35.2	586
216	EM2:MSdm1-05	270	537.6	-	537.6	49	33.2	35.3	581
216	EM2:MSdm1-05	280	536.3	-	536.3	49	33.3	35.5	574
216	EM2:MSdm1-05	290	534.6	-	534.6	49	33.4	35.6	568
216	EM2:MSdm1-05	300	533.0	-	533.0	48	33.4	35.8	562
216	EM2:MSdm1-05	310	532.8	-	532.8	48	33.4	35.8	561
216	EM2:MSdm1-05	320	532.8	-	532.8	48	33.4	35.8	561
216	EM2:MSdm1-05	330	532.8	-	532.8	48	33.4	35.8	561
216	EM2:MSdm1-05	340	532.8	-	532.8	48	33.4	35.8	561
216	EM2:MSdm1-05	350	532.8	-	532.8	48	33.4	35.8	561

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
217	EM2:MSdm1-Oth	10	-	-	-	0	-	0.9	0
217	EM2:MSdm1-Oth	20	-	-	-	0	14.0	5.0	0
217	EM2:MSdm1-Oth	30	5.7	-	5.7	2	15.8	9.7	106
217	EM2:MSdm1-Oth	40	71.7	-	71.7	16	16.5	13.8	847
217	EM2:MSdm1-Oth	50	182.8	-	182.8	31	17.6	17.2	1432
217	EM2:MSdm1-Oth	60	276.3	-	276.3	37	19.0	19.9	1485
217	EM2:MSdm1-Oth	70	340.2	-	340.2	40	20.4	22.1	1351
217	EM2:MSdm1-Oth	80	385.2	-	385.2	42	21.8	23.8	1217
217	EM2:MSdm1-Oth	90	418.3	-	418.3	42	22.8	25.3	1118
217	EM2:MSdm1-Oth	100	442.6	-	442.6	44	23.7	26.5	1046
217	EM2:MSdm1-Oth	110	460.2	-	460.2	44	24.4	27.5	989
217	EM2:MSdm1-Oth	120	473.5	-	473.5	43	25.0	28.3	942
217	EM2:MSdm1-Oth	130	483.0	-	483.0	44	25.5	29.0	904
217	EM2:MSdm1-Oth	140	490.8	-	490.8	44	26.0	29.6	873
217	EM2:MSdm1-Oth	150	496.8	-	496.8	44	26.3	30.1	847
217	EM2:MSdm1-Oth	160	502.0	-	502.0	44	26.7	30.5	824
217	EM2:MSdm1-Oth	170	504.5	-	504.5	44	26.9	30.9	804
217	EM2:MSdm1-Oth	180	506.4	-	506.4	43	27.2	31.3	785
217	EM2:MSdm1-Oth	190	508.1	-	508.1	43	27.4	31.6	769
217	EM2:MSdm1-Oth	200	508.4	-	508.4	43	27.6	31.9	753
217	EM2:MSdm1-Oth	210	508.0	-	508.0	43	27.8	32.1	738
217	EM2:MSdm1-Oth	220	507.5	-	507.5	43	27.9	32.3	725
217	EM2:MSdm1-Oth	230	507.1	-	507.1	43	28.1	32.6	714
217	EM2:MSdm1-Oth	240	506.6	-	506.6	43	28.2	32.8	703
217	EM2:MSdm1-Oth	250	505.5	-	505.5	43	28.3	33.0	693
217	EM2:MSdm1-Oth	260	502.5	-	502.5	42	28.4	33.1	681
217	EM2:MSdm1-Oth	270	499.8	-	499.8	42	28.5	33.2	671
217	EM2:MSdm1-Oth	280	497.3	-	497.3	42	28.5	33.4	662
217	EM2:MSdm1-Oth	290	494.8	-	494.8	41	28.6	33.5	654
217	EM2:MSdm1-Oth	300	492.7	-	492.7	41	28.7	33.6	646
217	EM2:MSdm1-Oth	310	492.1	-	492.1	41	28.7	33.6	644
217	EM2:MSdm1-Oth	320	492.1	-	492.1	41	28.7	33.6	644
217	EM2:MSdm1-Oth	330	492.1	-	492.1	41	28.7	33.6	644
217	EM2:MSdm1-Oth	340	492.1	-	492.1	41	28.7	33.6	644
217	EM2:MSdm1-Oth	350	492.1	-	492.1	41	28.7	33.6	644

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
218	EM2:Msdm1a-All	10	-	-	-	0	3.5	1.2	0
218	EM2:Msdm1a-All	20	0.4	-	0.4	0	10.4	5.2	12
218	EM2:Msdm1a-All	30	18.3	-	18.3	4	18.0	9.9	237
218	EM2:Msdm1a-All	40	77.6	-	77.6	13	18.9	14.2	609
218	EM2:Msdm1a-All	50	165.3	-	165.3	21	20.1	18.0	897
218	EM2:Msdm1a-All	60	251.6	-	251.6	29	21.6	21.1	1000
218	EM2:Msdm1a-All	70	322.2	-	322.2	34	23.1	23.6	1004
218	EM2:Msdm1a-All	80	376.4	-	376.4	38	24.3	25.7	972
218	EM2:Msdm1a-All	90	417.0	-	417.0	41	25.3	27.5	932
218	EM2:Msdm1a-All	100	449.1	-	449.1	44	26.2	28.9	893
218	EM2:Msdm1a-All	110	474.9	-	474.9	45	26.9	30.2	858
218	EM2:Msdm1a-All	120	496.8	-	496.8	46	27.6	31.2	830
218	EM2:Msdm1a-All	130	515.4	-	515.4	47	28.2	32.1	806
218	EM2:Msdm1a-All	140	530.2	-	530.2	48	28.7	32.9	785
218	EM2:Msdm1a-All	150	542.3	-	542.3	48	29.1	33.6	765
218	EM2:Msdm1a-All	160	552.0	-	552.0	49	29.5	34.2	746
218	EM2:Msdm1a-All	170	559.9	-	559.9	49	29.8	34.7	729
218	EM2:Msdm1a-All	180	566.1	-	566.1	49	30.1	35.1	712
218	EM2:Msdm1a-All	190	570.6	-	570.6	49	30.4	35.6	696
218	EM2:Msdm1a-All	200	574.2	-	574.2	49	30.7	35.9	683
218	EM2:Msdm1a-All	210	576.9	-	576.9	49	30.9	36.2	670
218	EM2:Msdm1a-All	220	579.2	-	579.2	48	31.1	36.5	659
218	EM2:Msdm1a-All	230	580.8	-	580.8	48	31.3	36.7	648
218	EM2:Msdm1a-All	240	581.0	-	581.0	48	31.4	37.0	638
218	EM2:Msdm1a-All	250	580.8	-	580.8	48	31.6	37.2	629
218	EM2:Msdm1a-All	260	580.4	-	580.4	48	31.7	37.3	621
218	EM2:Msdm1a-All	270	580.0	-	580.0	48	31.8	37.5	613
218	EM2:Msdm1a-All	280	579.4	-	579.4	47	31.9	37.7	606
218	EM2:Msdm1a-All	290	578.6	-	578.6	47	32.0	37.8	600
218	EM2:Msdm1a-All	300	577.8	-	577.8	47	32.1	37.9	594
218	EM2:Msdm1a-All	310	577.6	-	577.6	47	32.1	37.9	594
218	EM2:Msdm1a-All	320	577.6	-	577.6	47	32.1	37.9	594
218	EM2:Msdm1a-All	330	577.6	-	577.6	47	32.1	37.9	594
218	EM2:Msdm1a-All	340	577.6	-	577.6	47	32.1	37.9	594
218	EM2:Msdm1a-All	350	577.6	-	577.6	47	32.1	37.9	594

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
301	EM3:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.8	0
301	EM3:ESSFdc1/dcu1-01	20	-	-	-	0	-	3.6	0
301	EM3:ESSFdc1/dcu1-01	30	0.8	-	0.8	0	14.5	7.3	20
301	EM3:ESSFdc1/dcu1-01	40	18.0	-	18.0	4	18.3	11.0	223
301	EM3:ESSFdc1/dcu1-01	50	64.7	-	64.7	11	19.5	14.2	520
301	EM3:ESSFdc1/dcu1-01	60	126.2	-	126.2	19	20.9	16.9	740
301	EM3:ESSFdc1/dcu1-01	70	188.6	-	188.6	26	22.2	19.3	857
301	EM3:ESSFdc1/dcu1-01	80	244.4	-	244.4	32	23.5	21.3	900
301	EM3:ESSFdc1/dcu1-01	90	291.2	-	291.2	36	24.5	23.0	904
301	EM3:ESSFdc1/dcu1-01	100	329.6	-	329.6	39	25.5	24.4	889
301	EM3:ESSFdc1/dcu1-01	110	360.3	-	360.3	41	26.2	25.7	868
301	EM3:ESSFdc1/dcu1-01	120	385.0	-	385.0	44	26.9	26.7	845
301	EM3:ESSFdc1/dcu1-01	130	405.3	-	405.3	44	27.5	27.6	823
301	EM3:ESSFdc1/dcu1-01	140	421.9	-	421.9	45	28.0	28.4	805
301	EM3:ESSFdc1/dcu1-01	150	435.2	-	435.2	46	28.4	29.0	787
301	EM3:ESSFdc1/dcu1-01	160	446.2	-	446.2	47	28.8	29.6	771
301	EM3:ESSFdc1/dcu1-01	170	455.3	-	455.3	47	29.2	30.1	757
301	EM3:ESSFdc1/dcu1-01	180	462.6	-	462.6	48	29.5	30.6	743
301	EM3:ESSFdc1/dcu1-01	190	468.7	-	468.7	48	29.7	31.0	730
301	EM3:ESSFdc1/dcu1-01	200	473.5	-	473.5	48	29.9	31.3	719
301	EM3:ESSFdc1/dcu1-01	210	477.5	-	477.5	48	30.1	31.7	710
301	EM3:ESSFdc1/dcu1-01	220	480.9	-	480.9	48	30.3	31.9	701
301	EM3:ESSFdc1/dcu1-01	230	483.2	-	483.2	48	30.5	32.2	692
301	EM3:ESSFdc1/dcu1-01	240	484.6	-	484.6	48	30.6	32.5	683
301	EM3:ESSFdc1/dcu1-01	250	485.5	-	485.5	48	30.7	32.7	675
301	EM3:ESSFdc1/dcu1-01	260	486.3	-	486.3	48	30.8	32.9	667
301	EM3:ESSFdc1/dcu1-01	270	486.8	-	486.8	47	30.9	33.0	661
301	EM3:ESSFdc1/dcu1-01	280	486.9	-	486.9	47	31.0	33.2	654
301	EM3:ESSFdc1/dcu1-01	290	486.8	-	486.8	47	31.1	33.4	648
301	EM3:ESSFdc1/dcu1-01	300	486.8	-	486.8	47	31.2	33.5	643
301	EM3:ESSFdc1/dcu1-01	310	486.7	-	486.7	47	31.2	33.5	642
301	EM3:ESSFdc1/dcu1-01	320	486.7	-	486.7	47	31.2	33.5	642
301	EM3:ESSFdc1/dcu1-01	330	486.7	-	486.7	47	31.2	33.5	642
301	EM3:ESSFdc1/dcu1-01	340	486.7	-	486.7	47	31.2	33.5	642
301	EM3:ESSFdc1/dcu1-01	350	486.7	-	486.7	47	31.2	33.5	642

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
302	EM3:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.8	0
302	EM3:ESSFdc1/dcu1-03	20	-	-	-	0	-	3.6	0
302	EM3:ESSFdc1/dcu1-03	30	0.5	-	0.5	0	17.0	7.2	12
302	EM3:ESSFdc1/dcu1-03	40	14.2	-	14.2	4	17.4	10.4	210
302	EM3:ESSFdc1/dcu1-03	50	54.4	-	54.4	10	18.4	13.4	519
302	EM3:ESSFdc1/dcu1-03	60	110.1	-	110.1	18	19.6	16.0	783
302	EM3:ESSFdc1/dcu1-03	70	168.6	-	168.6	25	20.8	18.2	939
302	EM3:ESSFdc1/dcu1-03	80	221.9	-	221.9	31	21.8	20.0	1010
302	EM3:ESSFdc1/dcu1-03	90	267.3	-	267.3	35	22.8	21.5	1017
302	EM3:ESSFdc1/dcu1-03	100	304.6	-	304.6	37	23.6	22.8	1004
302	EM3:ESSFdc1/dcu1-03	110	334.9	-	334.9	39	24.4	23.9	977
302	EM3:ESSFdc1/dcu1-03	120	359.8	-	359.8	41	25.0	24.9	950
302	EM3:ESSFdc1/dcu1-03	130	379.6	-	379.6	42	25.6	25.7	924
302	EM3:ESSFdc1/dcu1-03	140	395.9	-	395.9	43	26.1	26.4	900
302	EM3:ESSFdc1/dcu1-03	150	409.3	-	409.3	44	26.4	27.1	879
302	EM3:ESSFdc1/dcu1-03	160	420.5	-	420.5	44	26.8	27.6	861
302	EM3:ESSFdc1/dcu1-03	170	429.6	-	429.6	45	27.1	28.1	843
302	EM3:ESSFdc1/dcu1-03	180	437.2	-	437.2	45	27.4	28.6	828
302	EM3:ESSFdc1/dcu1-03	190	443.0	-	443.0	45	27.7	29.0	813
302	EM3:ESSFdc1/dcu1-03	200	447.7	-	447.7	46	27.9	29.3	800
302	EM3:ESSFdc1/dcu1-03	210	451.6	-	451.6	46	28.1	29.6	787
302	EM3:ESSFdc1/dcu1-03	220	454.8	-	454.8	46	28.2	29.9	776
302	EM3:ESSFdc1/dcu1-03	230	457.6	-	457.6	46	28.4	30.1	766
302	EM3:ESSFdc1/dcu1-03	240	459.3	-	459.3	45	28.6	30.3	756
302	EM3:ESSFdc1/dcu1-03	250	460.4	-	460.4	45	28.7	30.5	746
302	EM3:ESSFdc1/dcu1-03	260	460.9	-	460.9	45	28.8	30.7	737
302	EM3:ESSFdc1/dcu1-03	270	461.4	-	461.4	45	28.9	30.9	729
302	EM3:ESSFdc1/dcu1-03	280	461.5	-	461.5	45	29.0	31.1	721
302	EM3:ESSFdc1/dcu1-03	290	461.4	-	461.4	45	29.1	31.2	713
302	EM3:ESSFdc1/dcu1-03	300	461.2	-	461.2	45	29.2	31.3	708
302	EM3:ESSFdc1/dcu1-03	310	461.2	-	461.2	45	29.2	31.3	707
302	EM3:ESSFdc1/dcu1-03	320	461.2	-	461.2	45	29.2	31.3	707
302	EM3:ESSFdc1/dcu1-03	330	461.2	-	461.2	45	29.2	31.3	707
302	EM3:ESSFdc1/dcu1-03	340	461.2	-	461.2	45	29.2	31.3	707
302	EM3:ESSFdc1/dcu1-03	350	461.2	-	461.2	45	29.2	31.3	707

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
303	EM3:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.9	0
303	EM3:ESSFdc1/dcu1-04	20	-	-	-	0	-	4.2	0
303	EM3:ESSFdc1/dcu1-04	30	1.7	-	1.7	1	15.9	8.1	38
303	EM3:ESSFdc1/dcu1-04	40	27.4	-	27.4	5	19.1	11.9	300
303	EM3:ESSFdc1/dcu1-04	50	85.8	-	85.8	13	20.8	15.4	554
303	EM3:ESSFdc1/dcu1-04	60	153.2	-	153.2	21	22.5	18.3	704
303	EM3:ESSFdc1/dcu1-04	70	218.3	-	218.3	28	24.1	20.9	777
303	EM3:ESSFdc1/dcu1-04	80	275.0	-	275.0	35	25.4	23.0	803
303	EM3:ESSFdc1/dcu1-04	90	322.0	-	322.0	39	26.5	24.8	801
303	EM3:ESSFdc1/dcu1-04	100	360.4	-	360.4	42	27.5	26.3	788
303	EM3:ESSFdc1/dcu1-04	110	391.1	-	391.1	45	28.3	27.6	769
303	EM3:ESSFdc1/dcu1-04	120	416.5	-	416.5	46	29.1	28.7	752
303	EM3:ESSFdc1/dcu1-04	130	437.1	-	437.1	48	29.6	29.7	736
303	EM3:ESSFdc1/dcu1-04	140	453.5	-	453.5	49	30.1	30.5	719
303	EM3:ESSFdc1/dcu1-04	150	467.5	-	467.5	49	30.6	31.2	706
303	EM3:ESSFdc1/dcu1-04	160	478.9	-	478.9	50	31.0	31.8	694
303	EM3:ESSFdc1/dcu1-04	170	488.2	-	488.2	50	31.3	32.3	681
303	EM3:ESSFdc1/dcu1-04	180	495.9	-	495.9	51	31.6	32.8	670
303	EM3:ESSFdc1/dcu1-04	190	502.0	-	502.0	51	31.8	33.3	660
303	EM3:ESSFdc1/dcu1-04	200	506.7	-	506.7	51	32.1	33.7	651
303	EM3:ESSFdc1/dcu1-04	210	510.8	-	510.8	51	32.2	34.0	644
303	EM3:ESSFdc1/dcu1-04	220	514.0	-	514.0	51	32.4	34.3	637
303	EM3:ESSFdc1/dcu1-04	230	516.3	-	516.3	51	32.6	34.5	629
303	EM3:ESSFdc1/dcu1-04	240	518.4	-	518.4	51	32.7	34.8	623
303	EM3:ESSFdc1/dcu1-04	250	519.6	-	519.6	51	32.9	35.0	616
303	EM3:ESSFdc1/dcu1-04	260	519.7	-	519.7	51	33.0	35.2	609
303	EM3:ESSFdc1/dcu1-04	270	519.7	-	519.7	51	33.1	35.4	603
303	EM3:ESSFdc1/dcu1-04	280	519.7	-	519.7	50	33.1	35.6	598
303	EM3:ESSFdc1/dcu1-04	290	519.6	-	519.6	50	33.2	35.8	592
303	EM3:ESSFdc1/dcu1-04	300	519.5	-	519.5	50	33.3	35.9	589
303	EM3:ESSFdc1/dcu1-04	310	519.5	-	519.5	50	33.3	35.9	588
303	EM3:ESSFdc1/dcu1-04	320	519.5	-	519.5	50	33.3	35.9	588
303	EM3:ESSFdc1/dcu1-04	330	519.5	-	519.5	50	33.3	35.9	588
303	EM3:ESSFdc1/dcu1-04	340	519.5	-	519.5	50	33.3	35.9	588
303	EM3:ESSFdc1/dcu1-04	350	519.5	-	519.5	50	33.3	35.9	588

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
304	EM3:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	0.7	0
304	EM3:ESSFdc1/dcu1-Oth	20	-	-	-	0	-	2.8	0
304	EM3:ESSFdc1/dcu1-Oth	30	0.2	-	0.2	0	12.8	5.5	5
304	EM3:ESSFdc1/dcu1-Oth	40	7.6	-	7.6	2	14.3	8.0	123
304	EM3:ESSFdc1/dcu1-Oth	50	34.4	-	34.4	6	15.0	10.4	344
304	EM3:ESSFdc1/dcu1-Oth	60	75.0	-	75.0	12	16.1	12.5	521
304	EM3:ESSFdc1/dcu1-Oth	70	117.9	-	117.9	17	17.1	14.3	630
304	EM3:ESSFdc1/dcu1-Oth	80	158.5	-	158.5	21	18.1	15.8	682
304	EM3:ESSFdc1/dcu1-Oth	90	194.1	-	194.1	25	18.9	17.1	702
304	EM3:ESSFdc1/dcu1-Oth	100	224.4	-	224.4	28	19.6	18.2	703
304	EM3:ESSFdc1/dcu1-Oth	110	249.6	-	249.6	30	20.3	19.1	694
304	EM3:ESSFdc1/dcu1-Oth	120	270.6	-	270.6	32	20.8	20.0	681
304	EM3:ESSFdc1/dcu1-Oth	130	288.2	-	288.2	33	21.3	20.7	668
304	EM3:ESSFdc1/dcu1-Oth	140	302.7	-	302.7	34	21.7	21.3	654
304	EM3:ESSFdc1/dcu1-Oth	150	314.6	-	314.6	35	22.0	21.8	641
304	EM3:ESSFdc1/dcu1-Oth	160	324.7	-	324.7	36	22.4	22.3	630
304	EM3:ESSFdc1/dcu1-Oth	170	333.2	-	333.2	36	22.6	22.8	620
304	EM3:ESSFdc1/dcu1-Oth	180	340.2	-	340.2	36	22.9	23.2	610
304	EM3:ESSFdc1/dcu1-Oth	190	346.2	-	346.2	37	23.1	23.5	601
304	EM3:ESSFdc1/dcu1-Oth	200	351.4	-	351.4	37	23.2	23.8	593
304	EM3:ESSFdc1/dcu1-Oth	210	355.6	-	355.6	37	23.4	24.0	585
304	EM3:ESSFdc1/dcu1-Oth	220	358.6	-	358.6	37	23.6	24.3	577
304	EM3:ESSFdc1/dcu1-Oth	230	361.2	-	361.2	37	23.7	24.5	569
304	EM3:ESSFdc1/dcu1-Oth	240	363.1	-	363.1	37	23.8	24.7	562
304	EM3:ESSFdc1/dcu1-Oth	250	364.8	-	364.8	37	24.0	24.9	556
304	EM3:ESSFdc1/dcu1-Oth	260	366.2	-	366.2	37	24.0	25.1	550
304	EM3:ESSFdc1/dcu1-Oth	270	367.4	-	367.4	37	24.1	25.2	545
304	EM3:ESSFdc1/dcu1-Oth	280	368.3	-	368.3	37	24.2	25.3	540
304	EM3:ESSFdc1/dcu1-Oth	290	368.7	-	368.7	37	24.3	25.5	535
304	EM3:ESSFdc1/dcu1-Oth	300	368.7	-	368.7	37	24.3	25.6	531
304	EM3:ESSFdc1/dcu1-Oth	310	368.6	-	368.6	37	24.3	25.6	531
304	EM3:ESSFdc1/dcu1-Oth	320	368.6	-	368.6	37	24.3	25.6	531
304	EM3:ESSFdc1/dcu1-Oth	330	368.6	-	368.6	37	24.3	25.6	531
304	EM3:ESSFdc1/dcu1-Oth	340	368.6	-	368.6	37	24.3	25.6	531
304	EM3:ESSFdc1/dcu1-Oth	350	368.6	-	368.6	37	24.3	25.6	531

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
305	EM3:ICHmk1/mw2-01	10	-	-	-	0	20.0	2.9	0
305	EM3:ICHmk1/mw2-01	20	1.7	-	1.7	0	20.7	7.6	19
305	EM3:ICHmk1/mw2-01	30	19.6	-	19.6	2	21.5	12.3	154
305	EM3:ICHmk1/mw2-01	40	73.4	-	73.4	8	22.7	16.6	406
305	EM3:ICHmk1/mw2-01	50	143.0	-	143.0	17	24.3	20.3	564
305	EM3:ICHmk1/mw2-01	60	211.5	-	211.5	25	25.9	23.5	642
305	EM3:ICHmk1/mw2-01	70	274.8	-	274.8	32	27.2	26.2	676
305	EM3:ICHmk1/mw2-01	80	330.7	-	330.7	37	28.3	28.5	689
305	EM3:ICHmk1/mw2-01	90	380.6	-	380.6	41	29.3	30.4	695
305	EM3:ICHmk1/mw2-01	100	424.9	-	424.9	45	30.1	32.0	695
305	EM3:ICHmk1/mw2-01	110	463.7	-	463.7	47	30.8	33.5	693
305	EM3:ICHmk1/mw2-01	120	496.9	-	496.9	49	31.4	34.7	688
305	EM3:ICHmk1/mw2-01	130	526.0	-	526.0	51	32.0	35.7	682
305	EM3:ICHmk1/mw2-01	140	551.1	-	551.1	53	32.5	36.7	675
305	EM3:ICHmk1/mw2-01	150	572.2	-	572.2	54	32.9	37.4	667
305	EM3:ICHmk1/mw2-01	160	590.1	-	590.1	54	33.3	38.1	658
305	EM3:ICHmk1/mw2-01	170	605.5	-	605.5	55	33.7	38.7	650
305	EM3:ICHmk1/mw2-01	180	618.5	-	618.5	56	34.0	39.3	641
305	EM3:ICHmk1/mw2-01	190	629.5	-	629.5	56	34.3	39.8	633
305	EM3:ICHmk1/mw2-01	200	638.4	-	638.4	56	34.6	40.2	625
305	EM3:ICHmk1/mw2-01	210	646.1	-	646.1	57	34.9	40.6	616
305	EM3:ICHmk1/mw2-01	220	652.5	-	652.5	57	35.1	40.9	607
305	EM3:ICHmk1/mw2-01	230	657.6	-	657.6	57	35.3	41.2	600
305	EM3:ICHmk1/mw2-01	240	661.7	-	661.7	57	35.5	41.5	593
305	EM3:ICHmk1/mw2-01	250	665.5	-	665.5	57	35.6	41.7	587
305	EM3:ICHmk1/mw2-01	260	668.9	-	668.9	57	35.8	42.0	582
305	EM3:ICHmk1/mw2-01	270	671.9	-	671.9	57	35.9	42.2	576
305	EM3:ICHmk1/mw2-01	280	674.0	-	674.0	57	36.1	42.4	571
305	EM3:ICHmk1/mw2-01	290	674.5	-	674.5	56	36.2	42.5	565
305	EM3:ICHmk1/mw2-01	300	674.7	-	674.7	56	36.3	42.6	561
305	EM3:ICHmk1/mw2-01	310	674.7	-	674.7	56	36.3	42.6	561
305	EM3:ICHmk1/mw2-01	320	674.7	-	674.7	56	36.3	42.6	561
305	EM3:ICHmk1/mw2-01	330	674.7	-	674.7	56	36.3	42.6	561
305	EM3:ICHmk1/mw2-01	340	674.7	-	674.7	56	36.3	42.6	561
305	EM3:ICHmk1/mw2-01	350	674.7	-	674.7	56	36.3	42.6	561

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
306	EM3:ICHmk1/mw2-03	10	-	-	-	0	-	2.1	0
306	EM3:ICHmk1/mw2-03	20	-	-	-	0	18.1	6.6	4
306	EM3:ICHmk1/mw2-03	30	14.4	-	14.4	3	18.7	10.9	203
306	EM3:ICHmk1/mw2-03	40	68.8	-	68.8	10	20.2	14.7	487
306	EM3:ICHmk1/mw2-03	50	135.8	-	135.8	18	21.9	17.8	641
306	EM3:ICHmk1/mw2-03	60	197.0	-	197.0	24	23.4	20.5	709
306	EM3:ICHmk1/mw2-03	70	249.5	-	249.5	30	24.8	22.7	733
306	EM3:ICHmk1/mw2-03	80	293.6	-	293.6	35	25.8	24.6	742
306	EM3:ICHmk1/mw2-03	90	331.5	-	331.5	38	26.7	26.2	744
306	EM3:ICHmk1/mw2-03	100	363.4	-	363.4	41	27.4	27.5	743
306	EM3:ICHmk1/mw2-03	110	392.2	-	392.2	43	28.1	28.7	738
306	EM3:ICHmk1/mw2-03	120	416.8	-	416.8	44	28.7	29.7	732
306	EM3:ICHmk1/mw2-03	130	438.5	-	438.5	46	29.1	30.7	727
306	EM3:ICHmk1/mw2-03	140	458.4	-	458.4	47	29.5	31.5	721
306	EM3:ICHmk1/mw2-03	150	476.6	-	476.6	48	29.9	32.2	715
306	EM3:ICHmk1/mw2-03	160	492.2	-	492.2	49	30.3	32.9	707
306	EM3:ICHmk1/mw2-03	170	506.2	-	506.2	50	30.6	33.5	700
306	EM3:ICHmk1/mw2-03	180	519.0	-	519.0	51	31.0	34.0	693
306	EM3:ICHmk1/mw2-03	190	530.0	-	530.0	51	31.3	34.5	686
306	EM3:ICHmk1/mw2-03	200	539.8	-	539.8	51	31.5	35.0	677
306	EM3:ICHmk1/mw2-03	210	548.7	-	548.7	52	31.8	35.4	669
306	EM3:ICHmk1/mw2-03	220	556.8	-	556.8	52	32.1	35.7	661
306	EM3:ICHmk1/mw2-03	230	564.1	-	564.1	52	32.3	36.1	653
306	EM3:ICHmk1/mw2-03	240	570.3	-	570.3	52	32.6	36.4	643
306	EM3:ICHmk1/mw2-03	250	576.0	-	576.0	52	32.8	36.7	634
306	EM3:ICHmk1/mw2-03	260	579.8	-	579.8	52	33.0	37.0	625
306	EM3:ICHmk1/mw2-03	270	583.2	-	583.2	52	33.2	37.2	615
306	EM3:ICHmk1/mw2-03	280	585.8	-	585.8	52	33.4	37.5	607
306	EM3:ICHmk1/mw2-03	290	588.1	-	588.1	52	33.6	37.7	598
306	EM3:ICHmk1/mw2-03	300	589.9	-	589.9	52	33.7	37.9	592
306	EM3:ICHmk1/mw2-03	310	589.9	-	589.9	52	33.7	37.9	592
306	EM3:ICHmk1/mw2-03	320	589.9	-	589.9	52	33.7	37.9	592
306	EM3:ICHmk1/mw2-03	330	589.9	-	589.9	52	33.7	37.9	592
306	EM3:ICHmk1/mw2-03	340	589.9	-	589.9	52	33.7	37.9	592
306	EM3:ICHmk1/mw2-03	350	589.9	-	589.9	52	33.7	37.9	592

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
307	EM3:ICHmk1/mw2-04	10	-	-	-	0	-	2.4	0
307	EM3:ICHmk1/mw2-04	20	0.6	-	0.6	0	19.9	6.9	14
307	EM3:ICHmk1/mw2-04	30	14.6	-	14.6	2	20.6	11.3	146
307	EM3:ICHmk1/mw2-04	40	60.1	-	60.1	7	21.6	15.3	383
307	EM3:ICHmk1/mw2-04	50	120.8	-	120.8	14	23.0	18.7	550
307	EM3:ICHmk1/mw2-04	60	181.8	-	181.8	22	24.3	21.7	642
307	EM3:ICHmk1/mw2-04	70	239.0	-	239.0	27	25.5	24.2	689
307	EM3:ICHmk1/mw2-04	80	290.7	-	290.7	32	26.5	26.4	713
307	EM3:ICHmk1/mw2-04	90	337.2	-	337.2	37	27.4	28.3	727
307	EM3:ICHmk1/mw2-04	100	379.1	-	379.1	40	28.1	29.8	734
307	EM3:ICHmk1/mw2-04	110	416.4	-	416.4	43	28.8	31.2	735
307	EM3:ICHmk1/mw2-04	120	449.2	-	449.2	45	29.4	32.4	733
307	EM3:ICHmk1/mw2-04	130	478.3	-	478.3	47	29.9	33.5	729
307	EM3:ICHmk1/mw2-04	140	504.0	-	504.0	49	30.4	34.4	724
307	EM3:ICHmk1/mw2-04	150	526.6	-	526.6	50	30.9	35.2	717
307	EM3:ICHmk1/mw2-04	160	546.2	-	546.2	51	31.3	35.9	710
307	EM3:ICHmk1/mw2-04	170	562.9	-	562.9	52	31.7	36.6	700
307	EM3:ICHmk1/mw2-04	180	577.2	-	577.2	53	32.1	37.1	691
307	EM3:ICHmk1/mw2-04	190	589.9	-	589.9	53	32.4	37.6	681
307	EM3:ICHmk1/mw2-04	200	596.0	-	596.0	53	32.7	38.1	667
307	EM3:ICHmk1/mw2-04	210	601.4	-	601.4	53	33.0	38.5	653
307	EM3:ICHmk1/mw2-04	220	606.0	-	606.0	53	33.2	38.8	641
307	EM3:ICHmk1/mw2-04	230	610.2	-	610.2	53	33.5	39.2	629
307	EM3:ICHmk1/mw2-04	240	613.8	-	613.8	52	33.7	39.5	617
307	EM3:ICHmk1/mw2-04	250	617.6	-	617.6	52	33.9	39.7	607
307	EM3:ICHmk1/mw2-04	260	621.0	-	621.0	52	34.1	40.0	599
307	EM3:ICHmk1/mw2-04	270	624.1	-	624.1	52	34.3	40.2	591
307	EM3:ICHmk1/mw2-04	280	626.8	-	626.8	52	34.5	40.4	584
307	EM3:ICHmk1/mw2-04	290	629.2	-	629.2	52	34.6	40.7	577
307	EM3:ICHmk1/mw2-04	300	631.0	-	631.0	52	34.7	40.8	571
307	EM3:ICHmk1/mw2-04	310	631.0	-	631.0	52	34.7	40.8	571
307	EM3:ICHmk1/mw2-04	320	631.0	-	631.0	52	34.7	40.8	571
307	EM3:ICHmk1/mw2-04	330	631.0	-	631.0	52	34.7	40.8	571
307	EM3:ICHmk1/mw2-04	340	631.0	-	631.0	52	34.7	40.8	571
307	EM3:ICHmk1/mw2-04	350	631.0	-	631.0	52	34.7	40.8	571

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
308	EM3:ICHmk1/mw2-Oth	10	-	-	-	0	-	2.3	0
308	EM3:ICHmk1/mw2-Oth	20	0.7	-	0.7	0	20.2	6.9	12
308	EM3:ICHmk1/mw2-Oth	30	14.7	-	14.7	2	20.9	11.5	136
308	EM3:ICHmk1/mw2-Oth	40	63.4	-	63.4	7	22.1	15.7	385
308	EM3:ICHmk1/mw2-Oth	50	129.2	-	129.2	16	23.5	19.4	555
308	EM3:ICHmk1/mw2-Oth	60	194.9	-	194.9	24	25.1	22.5	643
308	EM3:ICHmk1/mw2-Oth	70	255.6	-	255.6	30	26.3	25.2	684
308	EM3:ICHmk1/mw2-Oth	80	309.7	-	309.7	35	27.4	27.4	701
308	EM3:ICHmk1/mw2-Oth	90	357.8	-	357.8	39	28.4	29.3	710
308	EM3:ICHmk1/mw2-Oth	100	400.8	-	400.8	42	29.1	31.0	712
308	EM3:ICHmk1/mw2-Oth	110	438.6	-	438.6	45	29.8	32.4	712
308	EM3:ICHmk1/mw2-Oth	120	471.2	-	471.2	47	30.4	33.6	707
308	EM3:ICHmk1/mw2-Oth	130	500.2	-	500.2	49	31.0	34.7	703
308	EM3:ICHmk1/mw2-Oth	140	525.5	-	525.5	50	31.5	35.6	696
308	EM3:ICHmk1/mw2-Oth	150	547.3	-	547.3	51	31.9	36.4	690
308	EM3:ICHmk1/mw2-Oth	160	565.8	-	565.8	52	32.3	37.2	681
308	EM3:ICHmk1/mw2-Oth	170	581.6	-	581.6	53	32.7	37.8	671
308	EM3:ICHmk1/mw2-Oth	180	595.2	-	595.2	54	33.0	38.3	662
308	EM3:ICHmk1/mw2-Oth	190	607.1	-	607.1	54	33.4	38.8	654
308	EM3:ICHmk1/mw2-Oth	200	617.2	-	617.2	55	33.6	39.3	645
308	EM3:ICHmk1/mw2-Oth	210	623.7	-	623.7	55	33.9	39.7	634
308	EM3:ICHmk1/mw2-Oth	220	629.8	-	629.8	55	34.2	40.0	623
308	EM3:ICHmk1/mw2-Oth	230	635.2	-	635.2	55	34.4	40.3	614
308	EM3:ICHmk1/mw2-Oth	240	639.8	-	639.8	55	34.7	40.6	606
308	EM3:ICHmk1/mw2-Oth	250	643.4	-	643.4	55	34.9	40.9	598
308	EM3:ICHmk1/mw2-Oth	260	646.6	-	646.6	55	35.1	41.2	590
308	EM3:ICHmk1/mw2-Oth	270	649.4	-	649.4	55	35.2	41.4	583
308	EM3:ICHmk1/mw2-Oth	280	652.0	-	652.0	55	35.4	41.6	577
308	EM3:ICHmk1/mw2-Oth	290	653.8	-	653.8	55	35.5	41.8	570
308	EM3:ICHmk1/mw2-Oth	300	654.7	-	654.7	54	35.6	42.0	565
308	EM3:ICHmk1/mw2-Oth	310	654.7	-	654.7	54	35.6	42.0	565
308	EM3:ICHmk1/mw2-Oth	320	654.7	-	654.7	54	35.6	42.0	565
308	EM3:ICHmk1/mw2-Oth	330	654.7	-	654.7	54	35.6	42.0	565
308	EM3:ICHmk1/mw2-Oth	340	654.7	-	654.7	54	35.6	42.0	565
308	EM3:ICHmk1/mw2-Oth	350	654.7	-	654.7	54	35.6	42.0	565

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
309	EM3:IDFdm1-01	10	-	-	-	0	-	2.2	0
309	EM3:IDFdm1-01	20	0.2	-	0.2	0	19.8	6.5	6
309	EM3:IDFdm1-01	30	9.0	-	9.0	1	20.3	10.7	103
309	EM3:IDFdm1-01	40	43.6	-	43.6	5	21.3	14.4	311
309	EM3:IDFdm1-01	50	93.0	-	93.0	11	22.7	17.6	472
309	EM3:IDFdm1-01	60	144.4	-	144.4	17	23.9	20.4	568
309	EM3:IDFdm1-01	70	193.4	-	193.4	23	25.2	22.7	620
309	EM3:IDFdm1-01	80	238.6	-	238.6	28	26.1	24.8	652
309	EM3:IDFdm1-01	90	280.0	-	280.0	33	27.0	26.6	669
309	EM3:IDFdm1-01	100	317.5	-	317.5	36	27.8	28.1	683
309	EM3:IDFdm1-01	110	351.1	-	351.1	39	28.4	29.5	689
309	EM3:IDFdm1-01	120	381.3	-	381.3	41	29.0	30.6	691
309	EM3:IDFdm1-01	130	408.3	-	408.3	43	29.5	31.7	693
309	EM3:IDFdm1-01	140	432.5	-	432.5	45	30.0	32.6	692
309	EM3:IDFdm1-01	150	454.1	-	454.1	46	30.4	33.4	691
309	EM3:IDFdm1-01	160	473.8	-	473.8	48	30.8	34.1	687
309	EM3:IDFdm1-01	170	490.8	-	490.8	49	31.1	34.7	684
309	EM3:IDFdm1-01	180	505.9	-	505.9	49	31.4	35.3	679
309	EM3:IDFdm1-01	190	519.2	-	519.2	50	31.7	35.8	675
309	EM3:IDFdm1-01	200	530.6	-	530.6	50	31.9	36.3	669
309	EM3:IDFdm1-01	210	540.3	-	540.3	51	32.2	36.7	662
309	EM3:IDFdm1-01	220	549.1	-	549.1	51	32.4	37.1	656
309	EM3:IDFdm1-01	230	556.9	-	556.9	51	32.7	37.4	650
309	EM3:IDFdm1-01	240	564.0	-	564.0	51	32.9	37.8	644
309	EM3:IDFdm1-01	250	570.0	-	570.0	52	33.1	38.0	635
309	EM3:IDFdm1-01	260	575.4	-	575.4	52	33.3	38.3	628
309	EM3:IDFdm1-01	270	580.1	-	580.1	52	33.4	38.6	621
309	EM3:IDFdm1-01	280	584.4	-	584.4	52	33.6	38.8	614
309	EM3:IDFdm1-01	290	588.3	-	588.3	52	33.8	39.0	608
309	EM3:IDFdm1-01	300	590.6	-	590.6	52	33.9	39.2	602
309	EM3:IDFdm1-01	310	590.6	-	590.6	52	33.9	39.2	602
309	EM3:IDFdm1-01	320	590.6	-	590.6	52	33.9	39.2	602
309	EM3:IDFdm1-01	330	590.6	-	590.6	52	33.9	39.2	602
309	EM3:IDFdm1-01	340	590.6	-	590.6	52	33.9	39.2	602
309	EM3:IDFdm1-01	350	590.6	-	590.6	52	33.9	39.2	602

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
310	EM3:IDFdm1-04	10	-	-	-	0	-	1.6	0
310	EM3:IDFdm1-04	20	-	-	-	0	19.5	5.3	1
310	EM3:IDFdm1-04	30	3.5	-	3.5	1	19.8	9.0	53
310	EM3:IDFdm1-04	40	25.9	-	25.9	4	20.5	12.5	222
310	EM3:IDFdm1-04	50	64.7	-	64.7	8	21.7	15.6	393
310	EM3:IDFdm1-04	60	108.8	-	108.8	13	22.8	18.4	511
310	EM3:IDFdm1-04	70	152.8	-	152.8	19	24.0	20.8	580
310	EM3:IDFdm1-04	80	195.5	-	195.5	24	25.0	22.9	624
310	EM3:IDFdm1-04	90	235.6	-	235.6	28	25.9	24.7	654
310	EM3:IDFdm1-04	100	273.4	-	273.4	32	26.6	26.3	675
310	EM3:IDFdm1-04	110	308.2	-	308.2	35	27.4	27.7	687
310	EM3:IDFdm1-04	120	340.3	-	340.3	38	28.0	29.0	694
310	EM3:IDFdm1-04	130	369.8	-	369.8	40	28.6	30.1	698
310	EM3:IDFdm1-04	140	396.7	-	396.7	42	29.1	31.1	700
310	EM3:IDFdm1-04	150	421.3	-	421.3	44	29.5	32.0	700
310	EM3:IDFdm1-04	160	443.9	-	443.9	45	29.9	32.8	698
310	EM3:IDFdm1-04	170	464.2	-	464.2	46	30.3	33.5	696
310	EM3:IDFdm1-04	180	483.0	-	483.0	48	30.6	34.2	691
310	EM3:IDFdm1-04	190	499.8	-	499.8	49	31.0	34.8	686
310	EM3:IDFdm1-04	200	514.8	-	514.8	50	31.3	35.3	681
310	EM3:IDFdm1-04	210	528.1	-	528.1	50	31.6	35.8	673
310	EM3:IDFdm1-04	220	539.7	-	539.7	51	32.0	36.3	666
310	EM3:IDFdm1-04	230	550.3	-	550.3	51	32.2	36.7	658
310	EM3:IDFdm1-04	240	559.8	-	559.8	52	32.4	37.1	651
310	EM3:IDFdm1-04	250	568.6	-	568.6	52	32.7	37.5	644
310	EM3:IDFdm1-04	260	576.2	-	576.2	52	33.0	37.9	636
310	EM3:IDFdm1-04	270	583.2	-	583.2	52	33.2	38.2	629
310	EM3:IDFdm1-04	280	589.5	-	589.5	52	33.4	38.5	623
310	EM3:IDFdm1-04	290	594.1	-	594.1	52	33.6	38.8	613
310	EM3:IDFdm1-04	300	597.5	-	597.5	52	33.8	39.0	606
310	EM3:IDFdm1-04	310	597.5	-	597.5	52	33.8	39.0	606
310	EM3:IDFdm1-04	320	597.5	-	597.5	52	33.8	39.0	606
310	EM3:IDFdm1-04	330	597.5	-	597.5	52	33.8	39.0	606
310	EM3:IDFdm1-04	340	597.5	-	597.5	52	33.8	39.0	606
310	EM3:IDFdm1-04	350	597.5	-	597.5	52	33.8	39.0	606

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
311	EM3:IDFdm1-05	10	-	-	-	0	2.7	2.6	0
311	EM3:IDFdm1-05	20	0.6	-	0.6	0	19.5	7.0	14
311	EM3:IDFdm1-05	30	14.6	-	14.6	2	20.1	11.5	161
311	EM3:IDFdm1-05	40	67.1	-	67.1	9	21.5	15.5	436
311	EM3:IDFdm1-05	50	135.1	-	135.1	17	23.3	19.0	596
311	EM3:IDFdm1-05	60	200.6	-	200.6	25	24.9	21.9	667
311	EM3:IDFdm1-05	70	258.7	-	258.7	32	26.3	24.4	695
311	EM3:IDFdm1-05	80	308.4	-	308.4	36	27.5	26.5	702
311	EM3:IDFdm1-05	90	350.8	-	350.8	40	28.4	28.3	701
311	EM3:IDFdm1-05	100	386.5	-	386.5	43	29.2	29.8	698
311	EM3:IDFdm1-05	110	417.4	-	417.4	45	29.9	31.0	691
311	EM3:IDFdm1-05	120	443.9	-	443.9	47	30.5	32.1	686
311	EM3:IDFdm1-05	130	466.3	-	466.3	49	31.0	33.1	679
311	EM3:IDFdm1-05	140	485.4	-	485.4	50	31.5	33.9	672
311	EM3:IDFdm1-05	150	501.9	-	501.9	51	31.8	34.6	666
311	EM3:IDFdm1-05	160	515.7	-	515.7	51	32.1	35.2	660
311	EM3:IDFdm1-05	170	527.0	-	527.0	52	32.4	35.7	654
311	EM3:IDFdm1-05	180	536.8	-	536.8	52	32.7	36.2	648
311	EM3:IDFdm1-05	190	544.9	-	544.9	53	32.9	36.6	642
311	EM3:IDFdm1-05	200	551.9	-	551.9	53	33.1	37.0	636
311	EM3:IDFdm1-05	210	557.8	-	557.8	53	33.3	37.3	631
311	EM3:IDFdm1-05	220	562.2	-	562.2	53	33.5	37.6	625
311	EM3:IDFdm1-05	230	566.1	-	566.1	53	33.6	37.8	621
311	EM3:IDFdm1-05	240	569.2	-	569.2	53	33.7	38.1	615
311	EM3:IDFdm1-05	250	571.5	-	571.5	53	33.9	38.3	609
311	EM3:IDFdm1-05	260	573.6	-	573.6	53	34.0	38.5	604
311	EM3:IDFdm1-05	270	575.4	-	575.4	53	34.1	38.6	599
311	EM3:IDFdm1-05	280	576.5	-	576.5	53	34.2	38.8	594
311	EM3:IDFdm1-05	290	577.4	-	577.4	53	34.3	39.0	588
311	EM3:IDFdm1-05	300	577.6	-	577.6	52	34.3	39.1	585
311	EM3:IDFdm1-05	310	577.6	-	577.6	52	34.3	39.1	585
311	EM3:IDFdm1-05	320	577.6	-	577.6	52	34.3	39.1	585
311	EM3:IDFdm1-05	330	577.6	-	577.6	52	34.3	39.1	585
311	EM3:IDFdm1-05	340	577.6	-	577.6	52	34.3	39.1	585
311	EM3:IDFdm1-05	350	577.6	-	577.6	52	34.3	39.1	585

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
312	EM3:IDFdm1-Oth	10	-	-	-	0	-	2.4	0
312	EM3:IDFdm1-Oth	20	0.2	-	0.2	0	20.0	6.3	5
312	EM3:IDFdm1-Oth	30	6.6	-	6.6	1	20.2	10.1	84
312	EM3:IDFdm1-Oth	40	33.5	-	33.5	4	21.0	13.5	266
312	EM3:IDFdm1-Oth	50	76.1	-	76.1	9	22.1	16.5	435
312	EM3:IDFdm1-Oth	60	122.0	-	122.0	15	23.2	19.1	542
312	EM3:IDFdm1-Oth	70	166.1	-	166.1	20	24.2	21.4	604
312	EM3:IDFdm1-Oth	80	207.4	-	207.4	25	25.3	23.3	642
312	EM3:IDFdm1-Oth	90	244.9	-	244.9	29	26.1	25.0	666
312	EM3:IDFdm1-Oth	100	279.0	-	279.0	32	26.8	26.5	681
312	EM3:IDFdm1-Oth	110	310.1	-	310.1	35	27.4	27.7	692
312	EM3:IDFdm1-Oth	120	337.5	-	337.5	37	27.9	28.8	698
312	EM3:IDFdm1-Oth	130	362.3	-	362.3	39	28.4	29.8	700
312	EM3:IDFdm1-Oth	140	384.7	-	384.7	41	28.8	30.7	701
312	EM3:IDFdm1-Oth	150	404.2	-	404.2	43	29.2	31.5	700
312	EM3:IDFdm1-Oth	160	422.1	-	422.1	44	29.5	32.2	698
312	EM3:IDFdm1-Oth	170	437.9	-	437.9	45	29.8	32.8	697
312	EM3:IDFdm1-Oth	180	452.1	-	452.1	46	30.1	33.3	693
312	EM3:IDFdm1-Oth	190	464.9	-	464.9	46	30.4	33.8	690
312	EM3:IDFdm1-Oth	200	476.2	-	476.2	47	30.7	34.3	685
312	EM3:IDFdm1-Oth	210	486.2	-	486.2	48	30.9	34.7	681
312	EM3:IDFdm1-Oth	220	495.0	-	495.0	48	31.1	35.1	675
312	EM3:IDFdm1-Oth	230	502.8	-	502.8	48	31.3	35.4	671
312	EM3:IDFdm1-Oth	240	509.5	-	509.5	49	31.5	35.7	666
312	EM3:IDFdm1-Oth	250	515.6	-	515.6	49	31.6	36.0	661
312	EM3:IDFdm1-Oth	260	521.1	-	521.1	49	31.8	36.3	655
312	EM3:IDFdm1-Oth	270	526.2	-	526.2	49	32.0	36.6	650
312	EM3:IDFdm1-Oth	280	530.7	-	530.7	49	32.1	36.8	645
312	EM3:IDFdm1-Oth	290	534.7	-	534.7	49	32.3	37.0	640
312	EM3:IDFdm1-Oth	300	537.4	-	537.4	49	32.4	37.2	637
312	EM3:IDFdm1-Oth	310	537.4	-	537.4	49	32.4	37.2	637
312	EM3:IDFdm1-Oth	320	537.4	-	537.4	49	32.4	37.2	637
312	EM3:IDFdm1-Oth	330	537.4	-	537.4	49	32.4	37.2	637
312	EM3:IDFdm1-Oth	340	537.4	-	537.4	49	32.4	37.2	637
312	EM3:IDFdm1-Oth	350	537.4	-	537.4	49	32.4	37.2	637

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
313	EM3:MSdm1-01	10	-	-	-	0	-	1.6	0
313	EM3:MSdm1-01	20	0.4	-	0.4	0	17.0	5.9	7
313	EM3:MSdm1-01	30	8.6	-	8.6	1	19.5	10.3	95
313	EM3:MSdm1-01	40	48.7	-	48.7	7	20.3	14.2	390
313	EM3:MSdm1-01	50	114.0	-	114.0	16	21.7	17.7	647
313	EM3:MSdm1-01	60	182.4	-	182.4	23	23.1	20.7	762
313	EM3:MSdm1-01	70	243.6	-	243.6	29	24.5	23.1	796
313	EM3:MSdm1-01	80	295.6	-	295.6	34	25.6	25.1	799
313	EM3:MSdm1-01	90	339.0	-	339.0	37	26.6	27.0	790
313	EM3:MSdm1-01	100	376.0	-	376.0	41	27.4	28.5	779
313	EM3:MSdm1-01	110	407.6	-	407.6	43	28.1	29.7	766
313	EM3:MSdm1-01	120	434.3	-	434.3	45	28.7	30.8	754
313	EM3:MSdm1-01	130	456.8	-	456.8	46	29.3	31.8	742
313	EM3:MSdm1-01	140	475.9	-	475.9	47	29.8	32.6	731
313	EM3:MSdm1-01	150	492.6	-	492.6	48	30.2	33.3	721
313	EM3:MSdm1-01	160	507.0	-	507.0	49	30.5	33.9	712
313	EM3:MSdm1-01	170	518.9	-	518.9	50	30.8	34.5	702
313	EM3:MSdm1-01	180	529.2	-	529.2	50	31.1	34.9	694
313	EM3:MSdm1-01	190	537.6	-	537.6	50	31.4	35.4	686
313	EM3:MSdm1-01	200	541.0	-	541.0	51	31.6	35.8	674
313	EM3:MSdm1-01	210	544.3	-	544.3	50	31.8	36.1	663
313	EM3:MSdm1-01	220	547.2	-	547.2	50	32.0	36.4	653
313	EM3:MSdm1-01	230	549.6	-	549.6	50	32.2	36.7	644
313	EM3:MSdm1-01	240	551.7	-	551.7	50	32.3	36.9	636
313	EM3:MSdm1-01	250	553.4	-	553.4	50	32.4	37.1	628
313	EM3:MSdm1-01	260	555.0	-	555.0	50	32.6	37.3	621
313	EM3:MSdm1-01	270	556.3	-	556.3	50	32.7	37.5	614
313	EM3:MSdm1-01	280	557.4	-	557.4	50	32.8	37.7	608
313	EM3:MSdm1-01	290	558.5	-	558.5	50	32.9	37.8	601
313	EM3:MSdm1-01	300	559.0	-	559.0	49	33.0	38.0	596
313	EM3:MSdm1-01	310	558.9	-	558.9	49	33.0	38.0	596
313	EM3:MSdm1-01	320	558.9	-	558.9	49	33.0	38.0	596
313	EM3:MSdm1-01	330	558.9	-	558.9	49	33.0	38.0	596
313	EM3:MSdm1-01	340	558.9	-	558.9	49	33.0	38.0	596
313	EM3:MSdm1-01	350	558.9	-	558.9	49	33.0	38.0	596

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
314	EM3:MSdm1-03	10	-	-	-	0	-	1.3	0
314	EM3:MSdm1-03	20	-	-	-	0	6.4	5.2	0
314	EM3:MSdm1-03	30	12.1	-	12.1	4	16.7	9.6	195
314	EM3:MSdm1-03	40	67.6	-	67.6	13	18.1	13.7	587
314	EM3:MSdm1-03	50	149.4	-	149.4	24	19.8	17.0	909
314	EM3:MSdm1-03	60	233.1	-	233.1	32	21.3	19.7	1052
314	EM3:MSdm1-03	70	302.8	-	302.8	37	22.8	21.9	1068
314	EM3:MSdm1-03	80	356.4	-	356.4	41	24.0	23.7	1030
314	EM3:MSdm1-03	90	396.0	-	396.0	43	25.0	25.2	981
314	EM3:MSdm1-03	100	425.9	-	425.9	45	25.9	26.4	936
314	EM3:MSdm1-03	110	447.8	-	447.8	46	26.6	27.4	897
314	EM3:MSdm1-03	120	464.7	-	464.7	47	27.2	28.3	864
314	EM3:MSdm1-03	130	477.3	-	477.3	47	27.7	29.0	836
314	EM3:MSdm1-03	140	486.8	-	486.8	48	28.2	29.7	810
314	EM3:MSdm1-03	150	494.2	-	494.2	48	28.5	30.2	790
314	EM3:MSdm1-03	160	500.1	-	500.1	48	28.8	30.7	772
314	EM3:MSdm1-03	170	504.9	-	504.9	48	29.1	31.1	757
314	EM3:MSdm1-03	180	508.7	-	508.7	48	29.3	31.4	743
314	EM3:MSdm1-03	190	510.7	-	510.7	48	29.5	31.7	731
314	EM3:MSdm1-03	200	512.2	-	512.2	48	29.7	32.0	719
314	EM3:MSdm1-03	210	512.9	-	512.9	48	29.8	32.3	708
314	EM3:MSdm1-03	220	513.4	-	513.4	48	29.9	32.5	699
314	EM3:MSdm1-03	230	513.7	-	513.7	48	30.1	32.7	690
314	EM3:MSdm1-03	240	513.4	-	513.4	47	30.2	32.9	681
314	EM3:MSdm1-03	250	512.3	-	512.3	47	30.3	33.1	673
314	EM3:MSdm1-03	260	511.0	-	511.0	47	30.4	33.3	665
314	EM3:MSdm1-03	270	509.2	-	509.2	47	30.5	33.4	657
314	EM3:MSdm1-03	280	507.1	-	507.1	46	30.6	33.5	649
314	EM3:MSdm1-03	290	505.3	-	505.3	46	30.6	33.6	642
314	EM3:MSdm1-03	300	503.8	-	503.8	46	30.7	33.7	636
314	EM3:MSdm1-03	310	503.6	-	503.6	46	30.7	33.7	635
314	EM3:MSdm1-03	320	503.6	-	503.6	46	30.7	33.7	635
314	EM3:MSdm1-03	330	503.6	-	503.6	46	30.7	33.7	635
314	EM3:MSdm1-03	340	503.6	-	503.6	46	30.7	33.7	635
314	EM3:MSdm1-03	350	503.6	-	503.6	46	30.7	33.7	635

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
315	EM3:MSdm1-04	10	-	-	-	0	-	1.5	0
315	EM3:MSdm1-04	20	0.4	-	0.4	0	9.7	5.7	9
315	EM3:MSdm1-04	30	8.6	-	8.6	2	17.9	10.0	117
315	EM3:MSdm1-04	40	54.0	-	54.0	10	18.8	13.9	503
315	EM3:MSdm1-04	50	127.8	-	127.8	20	20.1	17.2	828
315	EM3:MSdm1-04	60	201.4	-	201.4	27	21.5	19.9	932
315	EM3:MSdm1-04	70	263.4	-	263.4	32	22.9	22.1	938
315	EM3:MSdm1-04	80	313.7	-	313.7	36	24.1	24.0	916
315	EM3:MSdm1-04	90	352.9	-	352.9	39	25.1	25.5	885
315	EM3:MSdm1-04	100	385.1	-	385.1	41	25.9	26.8	859
315	EM3:MSdm1-04	110	411.8	-	411.8	43	26.6	27.9	836
315	EM3:MSdm1-04	120	434.0	-	434.0	44	27.2	28.9	815
315	EM3:MSdm1-04	130	451.4	-	451.4	45	27.7	29.7	796
315	EM3:MSdm1-04	140	466.2	-	466.2	46	28.2	30.4	780
315	EM3:MSdm1-04	150	478.6	-	478.6	47	28.6	31.0	766
315	EM3:MSdm1-04	160	489.3	-	489.3	47	28.9	31.6	752
315	EM3:MSdm1-04	170	498.1	-	498.1	48	29.2	32.0	741
315	EM3:MSdm1-04	180	505.3	-	505.3	48	29.4	32.5	730
315	EM3:MSdm1-04	190	511.3	-	511.3	48	29.7	32.8	720
315	EM3:MSdm1-04	200	513.5	-	513.5	48	29.9	33.1	708
315	EM3:MSdm1-04	210	515.8	-	515.8	48	30.1	33.4	697
315	EM3:MSdm1-04	220	517.9	-	517.9	48	30.2	33.7	688
315	EM3:MSdm1-04	230	519.4	-	519.4	48	30.4	33.9	678
315	EM3:MSdm1-04	240	520.8	-	520.8	48	30.6	34.1	670
315	EM3:MSdm1-04	250	521.5	-	521.5	48	30.7	34.3	662
315	EM3:MSdm1-04	260	521.9	-	521.9	48	30.8	34.5	654
315	EM3:MSdm1-04	270	522.2	-	522.2	47	30.9	34.7	647
315	EM3:MSdm1-04	280	522.4	-	522.4	47	31.0	34.8	640
315	EM3:MSdm1-04	290	522.6	-	522.6	47	31.1	34.9	633
315	EM3:MSdm1-04	300	522.6	-	522.6	47	31.2	35.0	628
315	EM3:MSdm1-04	310	522.4	-	522.4	47	31.2	35.0	627
315	EM3:MSdm1-04	320	522.4	-	522.4	47	31.2	35.0	627
315	EM3:MSdm1-04	330	522.4	-	522.4	47	31.2	35.0	627
315	EM3:MSdm1-04	340	522.4	-	522.4	47	31.2	35.0	627
315	EM3:MSdm1-04	350	522.4	-	522.4	47	31.2	35.0	627

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
316	EM3:MSdm1-05	10	-	-	-	0	-	1.2	0
316	EM3:MSdm1-05	20	0.2	-	0.2	0	15.4	5.2	3
316	EM3:MSdm1-05	30	6.0	-	6.0	1	17.4	9.7	81
316	EM3:MSdm1-05	40	59.6	-	59.6	12	18.0	13.8	646
316	EM3:MSdm1-05	50	153.6	-	153.6	25	18.9	17.3	1180
316	EM3:MSdm1-05	60	241.0	-	241.0	32	20.2	20.2	1305
316	EM3:MSdm1-05	70	306.1	-	306.1	36	21.4	22.6	1237
316	EM3:MSdm1-05	80	354.8	-	354.8	39	22.6	24.5	1138
316	EM3:MSdm1-05	90	392.7	-	392.7	41	23.7	26.1	1059
316	EM3:MSdm1-05	100	422.4	-	422.4	42	24.6	27.5	1001
316	EM3:MSdm1-05	110	445.3	-	445.3	43	25.3	28.6	954
316	EM3:MSdm1-05	120	463.6	-	463.6	44	25.9	29.5	915
316	EM3:MSdm1-05	130	477.8	-	477.8	45	26.4	30.3	883
316	EM3:MSdm1-05	140	489.8	-	489.8	45	26.8	31.0	856
316	EM3:MSdm1-05	150	499.5	-	499.5	45	27.2	31.6	833
316	EM3:MSdm1-05	160	507.7	-	507.7	46	27.5	32.2	813
316	EM3:MSdm1-05	170	514.2	-	514.2	46	27.8	32.7	795
316	EM3:MSdm1-05	180	519.0	-	519.0	46	28.1	33.1	779
316	EM3:MSdm1-05	190	522.6	-	522.6	46	28.3	33.5	763
316	EM3:MSdm1-05	200	525.4	-	525.4	46	28.5	33.8	749
316	EM3:MSdm1-05	210	527.1	-	527.1	46	28.7	34.1	736
316	EM3:MSdm1-05	220	528.3	-	528.3	45	28.9	34.3	724
316	EM3:MSdm1-05	230	529.4	-	529.4	45	29.1	34.6	713
316	EM3:MSdm1-05	240	530.1	-	530.1	45	29.3	34.8	702
316	EM3:MSdm1-05	250	530.7	-	530.7	45	29.4	35.0	692
316	EM3:MSdm1-05	260	531.2	-	531.2	45	29.5	35.1	684
316	EM3:MSdm1-05	270	530.6	-	530.6	45	29.6	35.3	675
316	EM3:MSdm1-05	280	529.3	-	529.3	45	29.7	35.5	666
316	EM3:MSdm1-05	290	528.0	-	528.0	44	29.8	35.6	658
316	EM3:MSdm1-05	300	526.5	-	526.5	44	29.8	35.7	650
316	EM3:MSdm1-05	310	526.0	-	526.0	44	29.8	35.8	649
316	EM3:MSdm1-05	320	526.0	-	526.0	44	29.8	35.8	649
316	EM3:MSdm1-05	330	526.0	-	526.0	44	29.8	35.8	649
316	EM3:MSdm1-05	340	526.0	-	526.0	44	29.8	35.8	649
316	EM3:MSdm1-05	350	526.0	-	526.0	44	29.8	35.8	649

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
317	EM3:MSdm1-Oth	10	-	-	-	0	1.6	2.0	0
317	EM3:MSdm1-Oth	20	0.7	-	0.7	0	16.5	6.2	14
317	EM3:MSdm1-Oth	30	12.0	-	12.0	2	18.9	10.6	134
317	EM3:MSdm1-Oth	40	60.5	-	60.5	9	19.8	14.6	488
317	EM3:MSdm1-Oth	50	134.0	-	134.0	19	21.2	18.0	768
317	EM3:MSdm1-Oth	60	206.3	-	206.3	26	22.6	20.8	868
317	EM3:MSdm1-Oth	70	268.3	-	268.3	32	24.0	23.2	880
317	EM3:MSdm1-Oth	80	318.9	-	318.9	36	25.1	25.2	863
317	EM3:MSdm1-Oth	90	360.4	-	360.4	39	26.1	26.9	841
317	EM3:MSdm1-Oth	100	394.8	-	394.8	42	26.9	28.3	821
317	EM3:MSdm1-Oth	110	423.9	-	423.9	44	27.6	29.4	801
317	EM3:MSdm1-Oth	120	447.5	-	447.5	45	28.3	30.5	783
317	EM3:MSdm1-Oth	130	467.5	-	467.5	47	28.8	31.4	767
317	EM3:MSdm1-Oth	140	484.6	-	484.6	47	29.2	32.2	753
317	EM3:MSdm1-Oth	150	499.3	-	499.3	48	29.6	32.8	741
317	EM3:MSdm1-Oth	160	511.7	-	511.7	49	29.9	33.4	730
317	EM3:MSdm1-Oth	170	522.2	-	522.2	49	30.3	33.9	720
317	EM3:MSdm1-Oth	180	530.6	-	530.6	49	30.5	34.4	709
317	EM3:MSdm1-Oth	190	536.2	-	536.2	50	30.8	34.8	699
317	EM3:MSdm1-Oth	200	540.1	-	540.1	50	31.0	35.1	687
317	EM3:MSdm1-Oth	210	543.7	-	543.7	50	31.2	35.4	677
317	EM3:MSdm1-Oth	220	546.3	-	546.3	50	31.4	35.7	667
317	EM3:MSdm1-Oth	230	548.7	-	548.7	50	31.6	35.9	658
317	EM3:MSdm1-Oth	240	550.8	-	550.8	50	31.7	36.2	649
317	EM3:MSdm1-Oth	250	552.6	-	552.6	49	31.8	36.4	642
317	EM3:MSdm1-Oth	260	554.0	-	554.0	49	32.0	36.6	635
317	EM3:MSdm1-Oth	270	555.1	-	555.1	49	32.1	36.7	628
317	EM3:MSdm1-Oth	280	555.6	-	555.6	49	32.2	36.9	622
317	EM3:MSdm1-Oth	290	555.6	-	555.6	49	32.3	37.0	615
317	EM3:MSdm1-Oth	300	555.2	-	555.2	49	32.3	37.1	610
317	EM3:MSdm1-Oth	310	554.9	-	554.9	49	32.4	37.1	609
317	EM3:MSdm1-Oth	320	554.9	-	554.9	49	32.4	37.1	609
317	EM3:MSdm1-Oth	330	554.9	-	554.9	49	32.4	37.1	609
317	EM3:MSdm1-Oth	340	554.9	-	554.9	49	32.4	37.1	609
317	EM3:MSdm1-Oth	350	554.9	-	554.9	49	32.4	37.1	609

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
318	EM3:Msdm1a-All	10	-	-	-	0	-	2.2	0
318	EM3:Msdm1a-All	20	0.4	-	0.4	0	20.6	6.7	4
318	EM3:Msdm1a-All	30	15.8	-	15.8	1	21.0	11.6	136
318	EM3:Msdm1a-All	40	80.2	-	80.2	10	23.0	16.1	433
318	EM3:Msdm1a-All	50	159.1	-	159.1	20	25.0	20.0	580
318	EM3:Msdm1a-All	60	232.2	-	232.2	29	27.0	23.3	635
318	EM3:Msdm1a-All	70	298.3	-	298.3	36	28.5	26.0	651
318	EM3:Msdm1a-All	80	356.0	-	356.0	41	29.9	28.3	653
318	EM3:Msdm1a-All	90	405.3	-	405.3	45	30.9	30.3	652
318	EM3:Msdm1a-All	100	449.2	-	449.2	48	31.9	31.9	646
318	EM3:Msdm1a-All	110	487.8	-	487.8	51	32.7	33.4	642
318	EM3:Msdm1a-All	120	520.6	-	520.6	53	33.4	34.6	635
318	EM3:Msdm1a-All	130	549.4	-	549.4	54	33.9	35.7	629
318	EM3:Msdm1a-All	140	574.3	-	574.3	55	34.4	36.6	622
318	EM3:Msdm1a-All	150	596.5	-	596.5	57	34.9	37.4	616
318	EM3:Msdm1a-All	160	616.0	-	616.0	58	35.3	38.2	611
318	EM3:Msdm1a-All	170	632.9	-	632.9	58	35.6	38.8	605
318	EM3:Msdm1a-All	180	647.7	-	647.7	59	36.0	39.4	599
318	EM3:Msdm1a-All	190	659.7	-	659.7	59	36.3	39.9	591
318	EM3:Msdm1a-All	200	670.1	-	670.1	60	36.6	40.3	583
318	EM3:Msdm1a-All	210	679.3	-	679.3	60	36.9	40.8	575
318	EM3:Msdm1a-All	220	687.0	-	687.0	60	37.1	41.1	568
318	EM3:Msdm1a-All	230	693.9	-	693.9	60	37.4	41.5	561
318	EM3:Msdm1a-All	240	699.9	-	699.9	60	37.6	41.8	554
318	EM3:Msdm1a-All	250	705.5	-	705.5	60	37.8	42.1	549
318	EM3:Msdm1a-All	260	708.0	-	708.0	60	37.9	42.4	542
318	EM3:Msdm1a-All	270	709.1	-	709.1	60	38.1	42.5	535
318	EM3:Msdm1a-All	280	709.6	-	709.6	60	38.2	42.7	529
318	EM3:Msdm1a-All	290	710.0	-	710.0	59	38.4	42.8	523
318	EM3:Msdm1a-All	300	710.3	-	710.3	59	38.5	42.9	520
318	EM3:Msdm1a-All	310	710.3	-	710.3	59	38.5	42.9	520
318	EM3:Msdm1a-All	320	710.3	-	710.3	59	38.5	42.9	520
318	EM3:Msdm1a-All	330	710.3	-	710.3	59	38.5	42.9	520
318	EM3:Msdm1a-All	340	710.3	-	710.3	59	38.5	42.9	520
318	EM3:Msdm1a-All	350	710.3	-	710.3	59	38.5	42.9	520

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
401	EM4:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.8	0
401	EM4:ESSFdc1/dcu1-01	20	-	-	-	0	-	3.7	0
401	EM4:ESSFdc1/dcu1-01	30	1.0	-	1.0	1	14.5	7.6	24
401	EM4:ESSFdc1/dcu1-01	40	20.4	-	20.4	4	18.3	11.2	245
401	EM4:ESSFdc1/dcu1-01	50	70.3	-	70.3	12	19.6	14.5	545
401	EM4:ESSFdc1/dcu1-01	60	134.0	-	134.0	20	21.1	17.3	761
401	EM4:ESSFdc1/dcu1-01	70	197.7	-	197.7	27	22.5	19.7	868
401	EM4:ESSFdc1/dcu1-01	80	254.0	-	254.0	33	23.7	21.7	903
401	EM4:ESSFdc1/dcu1-01	90	300.6	-	300.6	37	24.8	23.4	902
401	EM4:ESSFdc1/dcu1-01	100	338.6	-	338.6	40	25.7	24.8	885
401	EM4:ESSFdc1/dcu1-01	110	368.7	-	368.7	42	26.5	26.0	863
401	EM4:ESSFdc1/dcu1-01	120	393.0	-	393.0	44	27.1	27.0	839
401	EM4:ESSFdc1/dcu1-01	130	412.9	-	412.9	45	27.7	27.9	818
401	EM4:ESSFdc1/dcu1-01	140	429.0	-	429.0	46	28.2	28.6	799
401	EM4:ESSFdc1/dcu1-01	150	441.9	-	441.9	47	28.6	29.3	781
401	EM4:ESSFdc1/dcu1-01	160	452.7	-	452.7	47	29.0	29.9	766
401	EM4:ESSFdc1/dcu1-01	170	461.3	-	461.3	48	29.3	30.4	751
401	EM4:ESSFdc1/dcu1-01	180	468.4	-	468.4	48	29.6	30.8	738
401	EM4:ESSFdc1/dcu1-01	190	474.1	-	474.1	48	29.9	31.2	726
401	EM4:ESSFdc1/dcu1-01	200	478.8	-	478.8	48	30.1	31.6	715
401	EM4:ESSFdc1/dcu1-01	210	482.6	-	482.6	48	30.3	31.9	705
401	EM4:ESSFdc1/dcu1-01	220	485.4	-	485.4	48	30.5	32.2	696
401	EM4:ESSFdc1/dcu1-01	230	487.2	-	487.2	48	30.6	32.4	687
401	EM4:ESSFdc1/dcu1-01	240	488.5	-	488.5	48	30.7	32.7	679
401	EM4:ESSFdc1/dcu1-01	250	489.6	-	489.6	48	30.8	32.9	671
401	EM4:ESSFdc1/dcu1-01	260	490.5	-	490.5	48	31.0	33.1	664
401	EM4:ESSFdc1/dcu1-01	270	490.8	-	490.8	48	31.1	33.2	657
401	EM4:ESSFdc1/dcu1-01	280	490.9	-	490.9	47	31.2	33.4	651
401	EM4:ESSFdc1/dcu1-01	290	491.0	-	491.0	47	31.2	33.6	644
401	EM4:ESSFdc1/dcu1-01	300	490.6	-	490.6	47	31.3	33.7	640
401	EM4:ESSFdc1/dcu1-01	310	490.6	-	490.6	47	31.3	33.7	639
401	EM4:ESSFdc1/dcu1-01	320	490.6	-	490.6	47	31.3	33.7	639
401	EM4:ESSFdc1/dcu1-01	330	490.6	-	490.6	47	31.3	33.7	639
401	EM4:ESSFdc1/dcu1-01	340	490.6	-	490.6	47	31.3	33.7	639
401	EM4:ESSFdc1/dcu1-01	350	490.6	-	490.6	47	31.3	33.7	639

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
402	EM4:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.8	0
402	EM4:ESSFdc1/dcu1-03	20	-	-	-	0	-	3.9	0
402	EM4:ESSFdc1/dcu1-03	30	1.3	-	1.3	1	17.1	7.7	31
402	EM4:ESSFdc1/dcu1-03	40	22.5	-	22.5	5	17.6	11.3	288
402	EM4:ESSFdc1/dcu1-03	50	73.9	-	73.9	13	18.8	14.4	620
402	EM4:ESSFdc1/dcu1-03	60	138.6	-	138.6	22	20.1	17.1	866
402	EM4:ESSFdc1/dcu1-03	70	202.6	-	202.6	28	21.4	19.3	987
402	EM4:ESSFdc1/dcu1-03	80	258.0	-	258.0	34	22.5	21.2	1021
402	EM4:ESSFdc1/dcu1-03	90	303.5	-	303.5	37	23.5	22.7	1011
402	EM4:ESSFdc1/dcu1-03	100	340.0	-	340.0	40	24.5	24.0	981
402	EM4:ESSFdc1/dcu1-03	110	369.2	-	369.2	42	25.2	25.1	950
402	EM4:ESSFdc1/dcu1-03	120	392.1	-	392.1	43	25.8	26.1	920
402	EM4:ESSFdc1/dcu1-03	130	410.7	-	410.7	44	26.4	26.9	893
402	EM4:ESSFdc1/dcu1-03	140	426.0	-	426.0	45	26.8	27.6	870
402	EM4:ESSFdc1/dcu1-03	150	438.0	-	438.0	45	27.3	28.2	849
402	EM4:ESSFdc1/dcu1-03	160	447.7	-	447.7	46	27.6	28.8	830
402	EM4:ESSFdc1/dcu1-03	170	455.4	-	455.4	46	27.9	29.2	812
402	EM4:ESSFdc1/dcu1-03	180	461.7	-	461.7	47	28.2	29.6	796
402	EM4:ESSFdc1/dcu1-03	190	466.8	-	466.8	47	28.4	30.0	782
402	EM4:ESSFdc1/dcu1-03	200	470.8	-	470.8	47	28.6	30.3	769
402	EM4:ESSFdc1/dcu1-03	210	474.0	-	474.0	47	28.8	30.6	758
402	EM4:ESSFdc1/dcu1-03	220	476.7	-	476.7	47	29.0	30.9	747
402	EM4:ESSFdc1/dcu1-03	230	478.7	-	478.7	47	29.2	31.1	738
402	EM4:ESSFdc1/dcu1-03	240	479.5	-	479.5	46	29.3	31.3	728
402	EM4:ESSFdc1/dcu1-03	250	479.8	-	479.8	46	29.4	31.5	719
402	EM4:ESSFdc1/dcu1-03	260	479.8	-	479.8	46	29.5	31.7	710
402	EM4:ESSFdc1/dcu1-03	270	479.8	-	479.8	46	29.6	31.9	703
402	EM4:ESSFdc1/dcu1-03	280	479.6	-	479.6	46	29.7	32.0	695
402	EM4:ESSFdc1/dcu1-03	290	479.0	-	479.0	46	29.8	32.2	688
402	EM4:ESSFdc1/dcu1-03	300	478.6	-	478.6	46	29.8	32.3	683
402	EM4:ESSFdc1/dcu1-03	310	478.5	-	478.5	46	29.8	32.3	682
402	EM4:ESSFdc1/dcu1-03	320	478.5	-	478.5	46	29.8	32.3	682
402	EM4:ESSFdc1/dcu1-03	330	478.5	-	478.5	46	29.8	32.3	682
402	EM4:ESSFdc1/dcu1-03	340	478.5	-	478.5	46	29.8	32.3	682
402	EM4:ESSFdc1/dcu1-03	350	478.5	-	478.5	46	29.8	32.3	682

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
403	EM4:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.9	0
403	EM4:ESSFdc1/dcu1-04	20	-	-	-	0	-	4.2	0
403	EM4:ESSFdc1/dcu1-04	30	1.7	-	1.7	1	15.9	8.1	38
403	EM4:ESSFdc1/dcu1-04	40	27.9	-	27.9	5	19.1	12.0	304
403	EM4:ESSFdc1/dcu1-04	50	86.4	-	86.4	13	20.8	15.4	556
403	EM4:ESSFdc1/dcu1-04	60	153.9	-	153.9	21	22.5	18.4	703
403	EM4:ESSFdc1/dcu1-04	70	218.9	-	218.9	28	24.0	20.9	776
403	EM4:ESSFdc1/dcu1-04	80	275.6	-	275.6	35	25.5	23.1	801
403	EM4:ESSFdc1/dcu1-04	90	322.5	-	322.5	39	26.6	24.8	799
403	EM4:ESSFdc1/dcu1-04	100	361.0	-	361.0	43	27.5	26.3	787
403	EM4:ESSFdc1/dcu1-04	110	391.7	-	391.7	45	28.3	27.6	768
403	EM4:ESSFdc1/dcu1-04	120	416.9	-	416.9	46	29.0	28.7	751
403	EM4:ESSFdc1/dcu1-04	130	437.7	-	437.7	48	29.7	29.6	736
403	EM4:ESSFdc1/dcu1-04	140	453.9	-	453.9	49	30.1	30.5	720
403	EM4:ESSFdc1/dcu1-04	150	467.8	-	467.8	49	30.6	31.2	707
403	EM4:ESSFdc1/dcu1-04	160	479.0	-	479.0	50	31.0	31.8	694
403	EM4:ESSFdc1/dcu1-04	170	488.2	-	488.2	50	31.3	32.3	681
403	EM4:ESSFdc1/dcu1-04	180	495.7	-	495.7	51	31.6	32.8	671
403	EM4:ESSFdc1/dcu1-04	190	502.0	-	502.0	51	31.8	33.2	661
403	EM4:ESSFdc1/dcu1-04	200	506.5	-	506.5	51	32.0	33.7	653
403	EM4:ESSFdc1/dcu1-04	210	510.4	-	510.4	51	32.2	34.0	645
403	EM4:ESSFdc1/dcu1-04	220	513.3	-	513.3	51	32.4	34.3	637
403	EM4:ESSFdc1/dcu1-04	230	515.4	-	515.4	51	32.5	34.5	630
403	EM4:ESSFdc1/dcu1-04	240	517.3	-	517.3	51	32.7	34.7	624
403	EM4:ESSFdc1/dcu1-04	250	519.0	-	519.0	51	32.8	34.9	618
403	EM4:ESSFdc1/dcu1-04	260	518.9	-	518.9	51	32.9	35.1	611
403	EM4:ESSFdc1/dcu1-04	270	518.7	-	518.7	51	33.0	35.3	604
403	EM4:ESSFdc1/dcu1-04	280	518.4	-	518.4	50	33.1	35.5	599
403	EM4:ESSFdc1/dcu1-04	290	518.1	-	518.1	50	33.2	35.7	593
403	EM4:ESSFdc1/dcu1-04	300	517.9	-	517.9	50	33.2	35.8	589
403	EM4:ESSFdc1/dcu1-04	310	517.8	-	517.8	50	33.2	35.8	589
403	EM4:ESSFdc1/dcu1-04	320	517.8	-	517.8	50	33.2	35.8	589
403	EM4:ESSFdc1/dcu1-04	330	517.8	-	517.8	50	33.2	35.8	589
403	EM4:ESSFdc1/dcu1-04	340	517.8	-	517.8	50	33.2	35.8	589
403	EM4:ESSFdc1/dcu1-04	350	517.8	-	517.8	50	33.2	35.8	589

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
404	EM4:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	0.6	0
404	EM4:ESSFdc1/dcu1-Oth	20	-	-	-	0	-	2.7	0
404	EM4:ESSFdc1/dcu1-Oth	30	0.2	-	0.2	0	12.8	5.5	5
404	EM4:ESSFdc1/dcu1-Oth	40	8.1	-	8.1	2	14.3	8.1	130
404	EM4:ESSFdc1/dcu1-Oth	50	35.7	-	35.7	6	15.1	10.5	348
404	EM4:ESSFdc1/dcu1-Oth	60	76.6	-	76.6	12	16.2	12.6	523
404	EM4:ESSFdc1/dcu1-Oth	70	119.7	-	119.7	17	17.2	14.4	631
404	EM4:ESSFdc1/dcu1-Oth	80	160.8	-	160.8	22	18.1	15.9	681
404	EM4:ESSFdc1/dcu1-Oth	90	196.4	-	196.4	26	19.0	17.2	701
404	EM4:ESSFdc1/dcu1-Oth	100	226.7	-	226.7	28	19.7	18.3	702
404	EM4:ESSFdc1/dcu1-Oth	110	252.0	-	252.0	30	20.3	19.2	693
404	EM4:ESSFdc1/dcu1-Oth	120	272.9	-	272.9	32	20.9	20.1	679
404	EM4:ESSFdc1/dcu1-Oth	130	290.3	-	290.3	33	21.3	20.8	666
404	EM4:ESSFdc1/dcu1-Oth	140	304.9	-	304.9	34	21.8	21.4	654
404	EM4:ESSFdc1/dcu1-Oth	150	316.7	-	316.7	35	22.1	22.0	641
404	EM4:ESSFdc1/dcu1-Oth	160	326.6	-	326.6	36	22.4	22.4	629
404	EM4:ESSFdc1/dcu1-Oth	170	335.0	-	335.0	36	22.7	22.9	619
404	EM4:ESSFdc1/dcu1-Oth	180	341.9	-	341.9	36	22.9	23.2	609
404	EM4:ESSFdc1/dcu1-Oth	190	347.8	-	347.8	37	23.1	23.5	601
404	EM4:ESSFdc1/dcu1-Oth	200	352.8	-	352.8	37	23.3	23.9	593
404	EM4:ESSFdc1/dcu1-Oth	210	357.0	-	357.0	37	23.5	24.1	584
404	EM4:ESSFdc1/dcu1-Oth	220	360.0	-	360.0	38	23.6	24.3	577
404	EM4:ESSFdc1/dcu1-Oth	230	362.3	-	362.3	37	23.7	24.6	569
404	EM4:ESSFdc1/dcu1-Oth	240	364.1	-	364.1	37	23.9	24.7	562
404	EM4:ESSFdc1/dcu1-Oth	250	365.7	-	365.7	37	23.9	25.0	556
404	EM4:ESSFdc1/dcu1-Oth	260	366.9	-	366.9	37	24.1	25.1	550
404	EM4:ESSFdc1/dcu1-Oth	270	367.8	-	367.8	37	24.1	25.2	545
404	EM4:ESSFdc1/dcu1-Oth	280	368.6	-	368.6	37	24.2	25.4	540
404	EM4:ESSFdc1/dcu1-Oth	290	369.3	-	369.3	37	24.3	25.5	535
404	EM4:ESSFdc1/dcu1-Oth	300	369.6	-	369.6	37	24.3	25.6	532
404	EM4:ESSFdc1/dcu1-Oth	310	369.7	-	369.7	37	24.3	25.6	532
404	EM4:ESSFdc1/dcu1-Oth	320	369.7	-	369.7	37	24.3	25.6	532
404	EM4:ESSFdc1/dcu1-Oth	330	369.7	-	369.7	37	24.3	25.6	532
404	EM4:ESSFdc1/dcu1-Oth	340	369.7	-	369.7	37	24.3	25.6	532
404	EM4:ESSFdc1/dcu1-Oth	350	369.7	-	369.7	37	24.3	25.6	532

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
405	EM4:ICHmk1/mw2-01	10	-	-	-	0	-	2.7	0
405	EM4:ICHmk1/mw2-01	20	1.1	-	1.1	0	20.6	7.5	14
405	EM4:ICHmk1/mw2-01	30	18.3	-	18.3	2	21.3	12.2	150
405	EM4:ICHmk1/mw2-01	40	71.7	-	71.7	8	22.6	16.5	405
405	EM4:ICHmk1/mw2-01	50	140.9	-	140.9	17	24.2	20.2	565
405	EM4:ICHmk1/mw2-01	60	209.0	-	209.0	25	25.8	23.4	642
405	EM4:ICHmk1/mw2-01	70	271.9	-	271.9	32	27.1	26.1	677
405	EM4:ICHmk1/mw2-01	80	327.8	-	327.8	37	28.2	28.4	690
405	EM4:ICHmk1/mw2-01	90	377.1	-	377.1	41	29.2	30.3	696
405	EM4:ICHmk1/mw2-01	100	420.8	-	420.8	44	30.0	31.9	696
405	EM4:ICHmk1/mw2-01	110	459.1	-	459.1	47	30.7	33.3	694
405	EM4:ICHmk1/mw2-01	120	492.0	-	492.0	49	31.3	34.6	689
405	EM4:ICHmk1/mw2-01	130	520.6	-	520.6	51	31.9	35.6	684
405	EM4:ICHmk1/mw2-01	140	545.3	-	545.3	52	32.4	36.5	677
405	EM4:ICHmk1/mw2-01	150	566.2	-	566.2	53	32.8	37.3	670
405	EM4:ICHmk1/mw2-01	160	583.7	-	583.7	54	33.2	37.9	662
405	EM4:ICHmk1/mw2-01	170	598.5	-	598.5	55	33.5	38.5	653
405	EM4:ICHmk1/mw2-01	180	611.2	-	611.2	55	33.9	39.1	645
405	EM4:ICHmk1/mw2-01	190	622.0	-	622.0	56	34.2	39.5	638
405	EM4:ICHmk1/mw2-01	200	630.5	-	630.5	56	34.4	39.9	629
405	EM4:ICHmk1/mw2-01	210	636.0	-	636.0	56	34.7	40.3	619
405	EM4:ICHmk1/mw2-01	220	641.0	-	641.0	56	34.9	40.6	610
405	EM4:ICHmk1/mw2-01	230	645.5	-	645.5	56	35.1	40.9	602
405	EM4:ICHmk1/mw2-01	240	649.0	-	649.0	56	35.2	41.1	595
405	EM4:ICHmk1/mw2-01	250	652.0	-	652.0	56	35.4	41.4	588
405	EM4:ICHmk1/mw2-01	260	654.4	-	654.4	56	35.6	41.6	582
405	EM4:ICHmk1/mw2-01	270	656.7	-	656.7	56	35.7	41.8	576
405	EM4:ICHmk1/mw2-01	280	658.7	-	658.7	56	35.8	42.0	570
405	EM4:ICHmk1/mw2-01	290	660.1	-	660.1	56	36.0	42.2	565
405	EM4:ICHmk1/mw2-01	300	661.0	-	661.0	56	36.0	42.3	561
405	EM4:ICHmk1/mw2-01	310	661.0	-	661.0	56	36.0	42.3	561
405	EM4:ICHmk1/mw2-01	320	661.0	-	661.0	56	36.0	42.3	561
405	EM4:ICHmk1/mw2-01	330	661.0	-	661.0	56	36.0	42.3	561
405	EM4:ICHmk1/mw2-01	340	661.0	-	661.0	56	36.0	42.3	561
405	EM4:ICHmk1/mw2-01	350	661.0	-	661.0	56	36.0	42.3	561

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable	Deciduous	Conifer	Basal Area		Density	
			Volume (m3/ha)	Volume (m3/ha)	Volume (m3/ha)	(m2/ha)	Diameter (cm)	Height (m)	(stems/ha)
406	EM4:ICHmk1/mw2-03	10	-	-	-	0	-	2.1	0
406	EM4:ICHmk1/mw2-03	20	0.2	-	0.2	0	18.5	6.7	8
406	EM4:ICHmk1/mw2-03	30	15.6	-	15.6	4	18.8	11.2	216
406	EM4:ICHmk1/mw2-03	40	71.5	-	71.5	10	20.3	15.0	503
406	EM4:ICHmk1/mw2-03	50	139.9	-	139.9	18	22.0	18.2	654
406	EM4:ICHmk1/mw2-03	60	202.2	-	202.2	25	23.5	20.8	717
406	EM4:ICHmk1/mw2-03	70	256.0	-	256.0	31	24.9	23.0	740
406	EM4:ICHmk1/mw2-03	80	300.8	-	300.8	36	26.0	24.9	748
406	EM4:ICHmk1/mw2-03	90	339.4	-	339.4	38	26.8	26.5	750
406	EM4:ICHmk1/mw2-03	100	371.8	-	371.8	41	27.5	27.8	747
406	EM4:ICHmk1/mw2-03	110	400.5	-	400.5	43	28.2	29.0	740
406	EM4:ICHmk1/mw2-03	120	425.0	-	425.0	45	28.8	30.0	735
406	EM4:ICHmk1/mw2-03	130	446.9	-	446.9	46	29.3	30.9	729
406	EM4:ICHmk1/mw2-03	140	466.5	-	466.5	48	29.6	31.7	723
406	EM4:ICHmk1/mw2-03	150	484.5	-	484.5	49	30.0	32.5	715
406	EM4:ICHmk1/mw2-03	160	499.7	-	499.7	50	30.4	33.1	708
406	EM4:ICHmk1/mw2-03	170	513.2	-	513.2	50	30.8	33.7	700
406	EM4:ICHmk1/mw2-03	180	525.3	-	525.3	51	31.1	34.2	692
406	EM4:ICHmk1/mw2-03	190	536.1	-	536.1	51	31.4	34.7	685
406	EM4:ICHmk1/mw2-03	200	545.3	-	545.3	52	31.6	35.1	676
406	EM4:ICHmk1/mw2-03	210	553.5	-	553.5	52	31.9	35.5	668
406	EM4:ICHmk1/mw2-03	220	561.0	-	561.0	52	32.1	35.9	660
406	EM4:ICHmk1/mw2-03	230	567.4	-	567.4	52	32.4	36.2	651
406	EM4:ICHmk1/mw2-03	240	573.1	-	573.1	52	32.6	36.5	642
406	EM4:ICHmk1/mw2-03	250	578.1	-	578.1	52	32.8	36.7	633
406	EM4:ICHmk1/mw2-03	260	582.0	-	582.0	52	33.1	37.0	625
406	EM4:ICHmk1/mw2-03	270	585.0	-	585.0	52	33.2	37.2	615
406	EM4:ICHmk1/mw2-03	280	586.8	-	586.8	52	33.4	37.5	607
406	EM4:ICHmk1/mw2-03	290	588.6	-	588.6	52	33.6	37.7	599
406	EM4:ICHmk1/mw2-03	300	589.9	-	589.9	52	33.7	37.9	592
406	EM4:ICHmk1/mw2-03	310	589.9	-	589.9	52	33.7	37.9	592
406	EM4:ICHmk1/mw2-03	320	589.9	-	589.9	52	33.7	37.9	592
406	EM4:ICHmk1/mw2-03	330	589.9	-	589.9	52	33.7	37.9	592
406	EM4:ICHmk1/mw2-03	340	589.9	-	589.9	52	33.7	37.9	592
406	EM4:ICHmk1/mw2-03	350	589.9	-	589.9	52	33.7	37.9	592

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
407	EM4:ICHmk1/mw2-04	10	-	-	-	0	-	2.3	0
407	EM4:ICHmk1/mw2-04	20	0.5	-	0.5	0	20.0	6.9	14
407	EM4:ICHmk1/mw2-04	30	13.9	-	13.9	2	20.5	11.3	145
407	EM4:ICHmk1/mw2-04	40	58.7	-	58.7	7	21.5	15.3	382
407	EM4:ICHmk1/mw2-04	50	118.8	-	118.8	14	22.9	18.7	550
407	EM4:ICHmk1/mw2-04	60	179.4	-	179.4	22	24.2	21.7	643
407	EM4:ICHmk1/mw2-04	70	236.0	-	236.0	27	25.4	24.2	689
407	EM4:ICHmk1/mw2-04	80	287.0	-	287.0	32	26.4	26.3	714
407	EM4:ICHmk1/mw2-04	90	333.0	-	333.0	36	27.3	28.1	729
407	EM4:ICHmk1/mw2-04	100	374.0	-	374.0	40	28.0	29.7	735
407	EM4:ICHmk1/mw2-04	110	410.8	-	410.8	43	28.7	31.0	737
407	EM4:ICHmk1/mw2-04	120	442.7	-	442.7	45	29.3	32.2	736
407	EM4:ICHmk1/mw2-04	130	471.3	-	471.3	47	29.8	33.2	732
407	EM4:ICHmk1/mw2-04	140	496.4	-	496.4	48	30.2	34.1	727
407	EM4:ICHmk1/mw2-04	150	518.3	-	518.3	50	30.7	34.9	721
407	EM4:ICHmk1/mw2-04	160	537.2	-	537.2	51	31.1	35.6	713
407	EM4:ICHmk1/mw2-04	170	553.5	-	553.5	52	31.5	36.3	705
407	EM4:ICHmk1/mw2-04	180	567.4	-	567.4	52	31.8	36.8	697
407	EM4:ICHmk1/mw2-04	190	577.9	-	577.9	52	32.1	37.3	685
407	EM4:ICHmk1/mw2-04	200	585.3	-	585.3	52	32.4	37.7	673
407	EM4:ICHmk1/mw2-04	210	592.1	-	592.1	52	32.7	38.1	663
407	EM4:ICHmk1/mw2-04	220	598.2	-	598.2	52	33.0	38.5	651
407	EM4:ICHmk1/mw2-04	230	603.4	-	603.4	52	33.2	38.8	641
407	EM4:ICHmk1/mw2-04	240	607.6	-	607.6	52	33.4	39.0	631
407	EM4:ICHmk1/mw2-04	250	611.8	-	611.8	52	33.6	39.3	623
407	EM4:ICHmk1/mw2-04	260	615.5	-	615.5	52	33.8	39.5	615
407	EM4:ICHmk1/mw2-04	270	618.4	-	618.4	52	33.9	39.7	608
407	EM4:ICHmk1/mw2-04	280	620.9	-	620.9	52	34.1	39.9	601
407	EM4:ICHmk1/mw2-04	290	623.1	-	623.1	52	34.2	40.1	595
407	EM4:ICHmk1/mw2-04	300	624.5	-	624.5	52	34.3	40.3	590
407	EM4:ICHmk1/mw2-04	310	624.5	-	624.5	52	34.3	40.3	590
407	EM4:ICHmk1/mw2-04	320	624.5	-	624.5	52	34.3	40.3	590
407	EM4:ICHmk1/mw2-04	330	624.5	-	624.5	52	34.3	40.3	590
407	EM4:ICHmk1/mw2-04	340	624.5	-	624.5	52	34.3	40.3	590
407	EM4:ICHmk1/mw2-04	350	624.5	-	624.5	52	34.3	40.3	590

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
408	EM4:ICHmk1/mw2-Oth	10	-	-	-	0	-	2.3	0
408	EM4:ICHmk1/mw2-Oth	20	0.6	-	0.6	0	20.2	7.0	11
408	EM4:ICHmk1/mw2-Oth	30	15.2	-	15.2	2	20.8	11.7	142
408	EM4:ICHmk1/mw2-Oth	40	65.4	-	65.4	8	22.1	15.9	397
408	EM4:ICHmk1/mw2-Oth	50	132.1	-	132.1	16	23.6	19.6	566
408	EM4:ICHmk1/mw2-Oth	60	198.4	-	198.4	24	25.1	22.7	648
408	EM4:ICHmk1/mw2-Oth	70	259.3	-	259.3	31	26.4	25.4	688
408	EM4:ICHmk1/mw2-Oth	80	313.6	-	313.6	36	27.5	27.6	704
408	EM4:ICHmk1/mw2-Oth	90	361.6	-	361.6	39	28.4	29.5	713
408	EM4:ICHmk1/mw2-Oth	100	404.3	-	404.3	42	29.2	31.1	713
408	EM4:ICHmk1/mw2-Oth	110	441.8	-	441.8	45	29.9	32.5	712
408	EM4:ICHmk1/mw2-Oth	120	474.2	-	474.2	47	30.5	33.8	708
408	EM4:ICHmk1/mw2-Oth	130	502.8	-	502.8	49	31.0	34.8	704
408	EM4:ICHmk1/mw2-Oth	140	527.8	-	527.8	50	31.5	35.7	697
408	EM4:ICHmk1/mw2-Oth	150	549.0	-	549.0	52	31.9	36.5	690
408	EM4:ICHmk1/mw2-Oth	160	567.0	-	567.0	53	32.3	37.2	682
408	EM4:ICHmk1/mw2-Oth	170	582.3	-	582.3	53	32.7	37.8	673
408	EM4:ICHmk1/mw2-Oth	180	595.6	-	595.6	54	33.0	38.4	663
408	EM4:ICHmk1/mw2-Oth	190	606.7	-	606.7	54	33.3	38.8	655
408	EM4:ICHmk1/mw2-Oth	200	616.0	-	616.0	55	33.6	39.3	646
408	EM4:ICHmk1/mw2-Oth	210	623.7	-	623.7	55	33.9	39.6	636
408	EM4:ICHmk1/mw2-Oth	220	630.4	-	630.4	55	34.1	40.0	627
408	EM4:ICHmk1/mw2-Oth	230	636.0	-	636.0	55	34.4	40.3	618
408	EM4:ICHmk1/mw2-Oth	240	640.2	-	640.2	55	34.6	40.5	611
408	EM4:ICHmk1/mw2-Oth	250	643.8	-	643.8	55	34.8	40.8	604
408	EM4:ICHmk1/mw2-Oth	260	646.8	-	646.8	55	34.9	41.0	597
408	EM4:ICHmk1/mw2-Oth	270	649.4	-	649.4	55	35.1	41.2	591
408	EM4:ICHmk1/mw2-Oth	280	651.8	-	651.8	55	35.2	41.4	586
408	EM4:ICHmk1/mw2-Oth	290	653.5	-	653.5	55	35.3	41.6	580
408	EM4:ICHmk1/mw2-Oth	300	654.6	-	654.6	55	35.4	41.8	575
408	EM4:ICHmk1/mw2-Oth	310	654.6	-	654.6	55	35.4	41.8	575
408	EM4:ICHmk1/mw2-Oth	320	654.6	-	654.6	55	35.4	41.8	575
408	EM4:ICHmk1/mw2-Oth	330	654.6	-	654.6	55	35.4	41.8	575
408	EM4:ICHmk1/mw2-Oth	340	654.6	-	654.6	55	35.4	41.8	575
408	EM4:ICHmk1/mw2-Oth	350	654.6	-	654.6	55	35.4	41.8	575

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
409	EM4:IDFdm1-01	10	-	-	-	0	-	2.2	0
409	EM4:IDFdm1-01	20	0.2	-	0.2	0	19.9	6.8	8
409	EM4:IDFdm1-01	30	11.2	-	11.2	2	20.4	11.1	123
409	EM4:IDFdm1-01	40	49.7	-	49.7	6	21.5	14.9	339
409	EM4:IDFdm1-01	50	102.6	-	102.6	13	22.9	18.2	497
409	EM4:IDFdm1-01	60	156.4	-	156.4	19	24.2	21.0	586
409	EM4:IDFdm1-01	70	207.8	-	207.8	25	25.5	23.4	634
409	EM4:IDFdm1-01	80	254.8	-	254.8	30	26.5	25.5	662
409	EM4:IDFdm1-01	90	297.6	-	297.6	34	27.3	27.3	679
409	EM4:IDFdm1-01	100	335.9	-	335.9	38	28.1	28.8	690
409	EM4:IDFdm1-01	110	370.6	-	370.6	40	28.7	30.2	694
409	EM4:IDFdm1-01	120	401.3	-	401.3	43	29.3	31.3	696
409	EM4:IDFdm1-01	130	428.7	-	428.7	45	29.9	32.4	696
409	EM4:IDFdm1-01	140	453.2	-	453.2	46	30.3	33.3	695
409	EM4:IDFdm1-01	150	475.4	-	475.4	48	30.7	34.1	691
409	EM4:IDFdm1-01	160	494.5	-	494.5	49	31.1	34.8	688
409	EM4:IDFdm1-01	170	511.4	-	511.4	50	31.4	35.4	683
409	EM4:IDFdm1-01	180	526.1	-	526.1	51	31.7	36.0	678
409	EM4:IDFdm1-01	190	539.0	-	539.0	51	32.0	36.4	673
409	EM4:IDFdm1-01	200	550.5	-	550.5	51	32.3	36.9	666
409	EM4:IDFdm1-01	210	560.7	-	560.7	52	32.6	37.3	660
409	EM4:IDFdm1-01	220	569.1	-	569.1	52	32.8	37.7	654
409	EM4:IDFdm1-01	230	576.5	-	576.5	52	33.0	38.0	647
409	EM4:IDFdm1-01	240	582.7	-	582.7	52	33.2	38.3	639
409	EM4:IDFdm1-01	250	588.4	-	588.4	53	33.4	38.6	632
409	EM4:IDFdm1-01	260	593.2	-	593.2	53	33.6	38.8	625
409	EM4:IDFdm1-01	270	597.4	-	597.4	53	33.8	39.0	618
409	EM4:IDFdm1-01	280	600.8	-	600.8	53	33.9	39.3	611
409	EM4:IDFdm1-01	290	603.7	-	603.7	53	34.1	39.5	603
409	EM4:IDFdm1-01	300	605.8	-	605.8	53	34.2	39.7	598
409	EM4:IDFdm1-01	310	605.8	-	605.8	53	34.2	39.7	598
409	EM4:IDFdm1-01	320	605.8	-	605.8	53	34.2	39.7	598
409	EM4:IDFdm1-01	330	605.8	-	605.8	53	34.2	39.7	598
409	EM4:IDFdm1-01	340	605.8	-	605.8	53	34.2	39.7	598
409	EM4:IDFdm1-01	350	605.8	-	605.8	53	34.2	39.7	598

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
410	EM4:IDFdm1-04	10	-	-	-	0	-	1.7	0
410	EM4:IDFdm1-04	20	-	-	-	0	19.5	5.5	2
410	EM4:IDFdm1-04	30	4.8	-	4.8	1	19.9	9.4	67
410	EM4:IDFdm1-04	40	30.5	-	30.5	4	20.7	12.9	247
410	EM4:IDFdm1-04	50	71.8	-	71.8	9	21.9	16.1	415
410	EM4:IDFdm1-04	60	117.7	-	117.7	14	23.0	18.9	528
410	EM4:IDFdm1-04	70	163.1	-	163.1	20	24.2	21.3	593
410	EM4:IDFdm1-04	80	207.1	-	207.1	26	25.2	23.4	635
410	EM4:IDFdm1-04	90	248.1	-	248.1	30	26.1	25.3	662
410	EM4:IDFdm1-04	100	286.9	-	286.9	33	26.9	26.8	683
410	EM4:IDFdm1-04	110	322.3	-	322.3	36	27.6	28.2	692
410	EM4:IDFdm1-04	120	354.6	-	354.6	39	28.3	29.5	698
410	EM4:IDFdm1-04	130	384.5	-	384.5	41	28.8	30.6	701
410	EM4:IDFdm1-04	140	411.5	-	411.5	43	29.3	31.6	702
410	EM4:IDFdm1-04	150	436.3	-	436.3	45	29.7	32.5	702
410	EM4:IDFdm1-04	160	458.9	-	458.9	46	30.1	33.3	699
410	EM4:IDFdm1-04	170	479.3	-	479.3	47	30.5	34.0	696
410	EM4:IDFdm1-04	180	497.9	-	497.9	49	30.9	34.7	691
410	EM4:IDFdm1-04	190	514.6	-	514.6	50	31.2	35.3	686
410	EM4:IDFdm1-04	200	529.3	-	529.3	50	31.6	35.8	679
410	EM4:IDFdm1-04	210	542.0	-	542.0	51	31.9	36.3	672
410	EM4:IDFdm1-04	220	553.4	-	553.4	52	32.2	36.7	664
410	EM4:IDFdm1-04	230	563.8	-	563.8	52	32.4	37.1	656
410	EM4:IDFdm1-04	240	573.1	-	573.1	52	32.7	37.5	648
410	EM4:IDFdm1-04	250	581.2	-	581.2	52	33.0	37.9	640
410	EM4:IDFdm1-04	260	588.5	-	588.5	53	33.2	38.2	633
410	EM4:IDFdm1-04	270	594.5	-	594.5	53	33.5	38.6	625
410	EM4:IDFdm1-04	280	599.4	-	599.4	52	33.7	38.8	616
410	EM4:IDFdm1-04	290	603.8	-	603.8	52	33.9	39.1	607
410	EM4:IDFdm1-04	300	606.9	-	606.9	52	34.0	39.3	601
410	EM4:IDFdm1-04	310	606.9	-	606.9	52	34.0	39.3	601
410	EM4:IDFdm1-04	320	606.9	-	606.9	52	34.0	39.3	601
410	EM4:IDFdm1-04	330	606.9	-	606.9	52	34.0	39.3	601
410	EM4:IDFdm1-04	340	606.9	-	606.9	52	34.0	39.3	601
410	EM4:IDFdm1-04	350	606.9	-	606.9	52	34.0	39.3	601

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
411	EM4:IDFdm1-05	10	-	-	-	0	2.7	2.6	0
411	EM4:IDFdm1-05	20	0.7	-	0.7	0	19.5	7.2	16
411	EM4:IDFdm1-05	30	17.3	-	17.3	3	20.1	11.9	184
411	EM4:IDFdm1-05	40	75.6	-	75.6	10	21.8	16.0	466
411	EM4:IDFdm1-05	50	147.4	-	147.4	19	23.5	19.6	616
411	EM4:IDFdm1-05	60	215.2	-	215.2	27	25.2	22.6	679
411	EM4:IDFdm1-05	70	274.8	-	274.8	34	26.7	25.1	701
411	EM4:IDFdm1-05	80	325.3	-	325.3	38	27.8	27.2	704
411	EM4:IDFdm1-05	90	368.3	-	368.3	42	28.8	29.0	703
411	EM4:IDFdm1-05	100	404.8	-	404.8	44	29.6	30.5	697
411	EM4:IDFdm1-05	110	436.0	-	436.0	47	30.3	31.7	691
411	EM4:IDFdm1-05	120	462.5	-	462.5	49	30.9	32.8	684
411	EM4:IDFdm1-05	130	485.1	-	485.1	50	31.4	33.8	677
411	EM4:IDFdm1-05	140	504.3	-	504.3	51	31.8	34.6	670
411	EM4:IDFdm1-05	150	520.6	-	520.6	52	32.2	35.3	664
411	EM4:IDFdm1-05	160	533.8	-	533.8	53	32.5	35.9	657
411	EM4:IDFdm1-05	170	545.3	-	545.3	53	32.8	36.4	650
411	EM4:IDFdm1-05	180	554.9	-	554.9	54	33.0	36.8	644
411	EM4:IDFdm1-05	190	561.6	-	561.6	54	33.3	37.2	637
411	EM4:IDFdm1-05	200	567.0	-	567.0	54	33.5	37.6	630
411	EM4:IDFdm1-05	210	571.8	-	571.8	54	33.7	37.9	624
411	EM4:IDFdm1-05	220	576.0	-	576.0	54	33.8	38.2	617
411	EM4:IDFdm1-05	230	579.0	-	579.0	54	34.0	38.4	611
411	EM4:IDFdm1-05	240	581.3	-	581.3	54	34.1	38.6	605
411	EM4:IDFdm1-05	250	583.0	-	583.0	53	34.2	38.8	600
411	EM4:IDFdm1-05	260	584.6	-	584.6	53	34.3	39.0	595
411	EM4:IDFdm1-05	270	585.6	-	585.6	53	34.4	39.1	590
411	EM4:IDFdm1-05	280	586.2	-	586.2	53	34.5	39.3	584
411	EM4:IDFdm1-05	290	586.7	-	586.7	53	34.6	39.4	580
411	EM4:IDFdm1-05	300	587.0	-	587.0	53	34.6	39.5	577
411	EM4:IDFdm1-05	310	587.0	-	587.0	53	34.6	39.5	577
411	EM4:IDFdm1-05	320	587.0	-	587.0	53	34.6	39.5	577
411	EM4:IDFdm1-05	330	587.0	-	587.0	53	34.6	39.5	577
411	EM4:IDFdm1-05	340	587.0	-	587.0	53	34.6	39.5	577
411	EM4:IDFdm1-05	350	587.0	-	587.0	53	34.6	39.5	577

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
412	EM4:IDFdm1-Oth	10	-	-	-	0	-	2.2	0
412	EM4:IDFdm1-Oth	20	0.3	-	0.3	0	19.9	6.7	8
412	EM4:IDFdm1-Oth	30	10.7	-	10.7	2	20.4	10.9	121
412	EM4:IDFdm1-Oth	40	48.6	-	48.6	6	21.4	14.7	338
412	EM4:IDFdm1-Oth	50	101.3	-	101.3	13	22.7	18.0	501
412	EM4:IDFdm1-Oth	60	155.2	-	155.2	19	24.0	20.8	594
412	EM4:IDFdm1-Oth	70	206.4	-	206.4	24	25.2	23.2	644
412	EM4:IDFdm1-Oth	80	253.3	-	253.3	29	26.2	25.3	674
412	EM4:IDFdm1-Oth	90	296.2	-	296.2	34	27.1	27.1	692
412	EM4:IDFdm1-Oth	100	334.5	-	334.5	37	27.8	28.6	703
412	EM4:IDFdm1-Oth	110	369.1	-	369.1	40	28.4	29.9	708
412	EM4:IDFdm1-Oth	120	400.1	-	400.1	42	29.0	31.1	709
412	EM4:IDFdm1-Oth	130	427.4	-	427.4	44	29.5	32.1	710
412	EM4:IDFdm1-Oth	140	452.0	-	452.0	46	29.9	33.0	708
412	EM4:IDFdm1-Oth	150	474.2	-	474.2	47	30.4	33.8	704
412	EM4:IDFdm1-Oth	160	493.7	-	493.7	49	30.8	34.5	700
412	EM4:IDFdm1-Oth	170	510.6	-	510.6	50	31.1	35.1	696
412	EM4:IDFdm1-Oth	180	525.6	-	525.6	50	31.4	35.7	689
412	EM4:IDFdm1-Oth	190	538.6	-	538.6	51	31.7	36.2	684
412	EM4:IDFdm1-Oth	200	550.4	-	550.4	51	32.0	36.7	677
412	EM4:IDFdm1-Oth	210	559.4	-	559.4	52	32.3	37.1	669
412	EM4:IDFdm1-Oth	220	567.4	-	567.4	52	32.5	37.5	661
412	EM4:IDFdm1-Oth	230	574.8	-	574.8	52	32.8	37.8	654
412	EM4:IDFdm1-Oth	240	580.9	-	580.9	52	33.0	38.1	646
412	EM4:IDFdm1-Oth	250	586.4	-	586.4	52	33.2	38.4	638
412	EM4:IDFdm1-Oth	260	591.2	-	591.2	52	33.4	38.6	630
412	EM4:IDFdm1-Oth	270	595.4	-	595.4	52	33.5	38.9	622
412	EM4:IDFdm1-Oth	280	599.3	-	599.3	52	33.7	39.1	614
412	EM4:IDFdm1-Oth	290	602.1	-	602.1	52	33.9	39.3	607
412	EM4:IDFdm1-Oth	300	604.0	-	604.0	52	34.0	39.5	601
412	EM4:IDFdm1-Oth	310	604.0	-	604.0	52	34.0	39.5	601
412	EM4:IDFdm1-Oth	320	604.0	-	604.0	52	34.0	39.5	601
412	EM4:IDFdm1-Oth	330	604.0	-	604.0	52	34.0	39.5	601
412	EM4:IDFdm1-Oth	340	604.0	-	604.0	52	34.0	39.5	601
412	EM4:IDFdm1-Oth	350	604.0	-	604.0	52	34.0	39.5	601

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
413	EM4:MSdm1-01	10	-	-	-	0	-	1.8	0
413	EM4:MSdm1-01	20	0.4	-	0.4	0	17.0	6.0	8
413	EM4:MSdm1-01	30	9.6	-	9.6	1	19.5	10.4	104
413	EM4:MSdm1-01	40	51.5	-	51.5	8	20.4	14.5	405
413	EM4:MSdm1-01	50	118.5	-	118.5	17	21.8	17.9	659
413	EM4:MSdm1-01	60	188.0	-	188.0	24	23.2	20.9	769
413	EM4:MSdm1-01	70	250.2	-	250.2	30	24.6	23.4	802
413	EM4:MSdm1-01	80	302.6	-	302.6	35	25.7	25.5	802
413	EM4:MSdm1-01	90	346.5	-	346.5	38	26.8	27.2	792
413	EM4:MSdm1-01	100	383.8	-	383.8	42	27.6	28.8	780
413	EM4:MSdm1-01	110	415.6	-	415.6	43	28.3	30.0	767
413	EM4:MSdm1-01	120	442.4	-	442.4	45	28.9	31.1	755
413	EM4:MSdm1-01	130	464.9	-	464.9	46	29.4	32.0	742
413	EM4:MSdm1-01	140	484.0	-	484.0	47	29.8	32.9	731
413	EM4:MSdm1-01	150	500.6	-	500.6	49	30.2	33.6	720
413	EM4:MSdm1-01	160	514.8	-	514.8	50	30.6	34.2	711
413	EM4:MSdm1-01	170	526.5	-	526.5	50	30.9	34.8	702
413	EM4:MSdm1-01	180	536.6	-	536.6	50	31.2	35.2	694
413	EM4:MSdm1-01	190	543.8	-	543.8	51	31.4	35.6	684
413	EM4:MSdm1-01	200	550.3	-	550.3	51	31.7	36.0	674
413	EM4:MSdm1-01	210	555.7	-	555.7	51	31.9	36.3	667
413	EM4:MSdm1-01	220	560.3	-	560.3	51	32.1	36.6	659
413	EM4:MSdm1-01	230	564.1	-	564.1	51	32.3	36.8	651
413	EM4:MSdm1-01	240	567.0	-	567.0	51	32.4	37.1	644
413	EM4:MSdm1-01	250	569.1	-	569.1	51	32.6	37.3	637
413	EM4:MSdm1-01	260	570.9	-	570.9	51	32.7	37.5	631
413	EM4:MSdm1-01	270	572.5	-	572.5	51	32.8	37.6	625
413	EM4:MSdm1-01	280	574.0	-	574.0	51	32.9	37.8	619
413	EM4:MSdm1-01	290	575.0	-	575.0	51	33.0	38.0	614
413	EM4:MSdm1-01	300	575.5	-	575.5	50	33.1	38.1	609
413	EM4:MSdm1-01	310	575.3	-	575.3	50	33.1	38.1	608
413	EM4:MSdm1-01	320	575.3	-	575.3	50	33.1	38.1	608
413	EM4:MSdm1-01	330	575.3	-	575.3	50	33.1	38.1	608
413	EM4:MSdm1-01	340	575.3	-	575.3	50	33.1	38.1	608
413	EM4:MSdm1-01	350	575.3	-	575.3	50	33.1	38.1	608

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
414	EM4:MSdm1-03	10	-	-	-	0	-	1.0	0
414	EM4:MSdm1-03	20	-	-	-	0	6.4	4.7	0
414	EM4:MSdm1-03	30	7.7	-	7.7	3	16.6	9.0	134
414	EM4:MSdm1-03	40	53.0	-	53.0	11	17.7	12.9	509
414	EM4:MSdm1-03	50	127.0	-	127.0	21	19.4	16.2	838
414	EM4:MSdm1-03	60	207.1	-	207.1	29	20.8	18.9	1025
414	EM4:MSdm1-03	70	277.1	-	277.1	35	22.3	21.1	1074
414	EM4:MSdm1-03	80	332.3	-	332.3	39	23.5	23.0	1049
414	EM4:MSdm1-03	90	374.3	-	374.3	42	24.5	24.5	1005
414	EM4:MSdm1-03	100	406.2	-	406.2	44	25.3	25.7	962
414	EM4:MSdm1-03	110	430.3	-	430.3	45	26.1	26.7	923
414	EM4:MSdm1-03	120	448.5	-	448.5	46	26.7	27.6	889
414	EM4:MSdm1-03	130	462.4	-	462.4	47	27.2	28.3	861
414	EM4:MSdm1-03	140	473.4	-	473.4	47	27.6	29.0	835
414	EM4:MSdm1-03	150	481.2	-	481.2	47	28.0	29.5	812
414	EM4:MSdm1-03	160	487.6	-	487.6	47	28.3	30.0	793
414	EM4:MSdm1-03	170	492.8	-	492.8	47	28.6	30.4	778
414	EM4:MSdm1-03	180	496.5	-	496.5	48	28.8	30.8	763
414	EM4:MSdm1-03	190	499.4	-	499.4	47	29.1	31.1	750
414	EM4:MSdm1-03	200	501.6	-	501.6	47	29.2	31.3	738
414	EM4:MSdm1-03	210	503.4	-	503.4	48	29.4	31.6	728
414	EM4:MSdm1-03	220	504.2	-	504.2	47	29.5	31.9	718
414	EM4:MSdm1-03	230	504.2	-	504.2	47	29.6	32.0	708
414	EM4:MSdm1-03	240	503.8	-	503.8	47	29.7	32.2	699
414	EM4:MSdm1-03	250	502.7	-	502.7	47	29.8	32.4	690
414	EM4:MSdm1-03	260	501.7	-	501.7	47	30.0	32.6	682
414	EM4:MSdm1-03	270	500.8	-	500.8	46	30.0	32.7	675
414	EM4:MSdm1-03	280	499.9	-	499.9	46	30.1	32.8	668
414	EM4:MSdm1-03	290	499.1	-	499.1	46	30.2	32.9	662
414	EM4:MSdm1-03	300	498.1	-	498.1	46	30.2	33.1	657
414	EM4:MSdm1-03	310	498.0	-	498.0	46	30.2	33.1	655
414	EM4:MSdm1-03	320	498.0	-	498.0	46	30.2	33.1	655
414	EM4:MSdm1-03	330	498.0	-	498.0	46	30.2	33.1	655
414	EM4:MSdm1-03	340	498.0	-	498.0	46	30.2	33.1	655
414	EM4:MSdm1-03	350	498.0	-	498.0	46	30.2	33.1	655

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
415	EM4:MSdm1-04	10	-	-	-	0	-	1.5	0
415	EM4:MSdm1-04	20	0.3	-	0.3	0	9.7	5.7	9
415	EM4:MSdm1-04	30	8.7	-	8.7	2	17.9	10.1	117
415	EM4:MSdm1-04	40	53.4	-	53.4	10	18.7	13.9	499
415	EM4:MSdm1-04	50	126.9	-	126.9	19	20.0	17.2	828
415	EM4:MSdm1-04	60	200.4	-	200.4	27	21.5	19.9	934
415	EM4:MSdm1-04	70	262.4	-	262.4	32	22.9	22.1	941
415	EM4:MSdm1-04	80	313.0	-	313.0	36	24.0	24.0	919
415	EM4:MSdm1-04	90	352.2	-	352.2	39	25.1	25.5	889
415	EM4:MSdm1-04	100	384.5	-	384.5	42	25.9	26.8	863
415	EM4:MSdm1-04	110	411.2	-	411.2	43	26.6	27.9	840
415	EM4:MSdm1-04	120	433.5	-	433.5	44	27.2	28.9	819
415	EM4:MSdm1-04	130	450.8	-	450.8	45	27.7	29.7	800
415	EM4:MSdm1-04	140	465.5	-	465.5	46	28.1	30.4	783
415	EM4:MSdm1-04	150	477.8	-	477.8	47	28.5	31.0	768
415	EM4:MSdm1-04	160	488.4	-	488.4	47	28.8	31.5	755
415	EM4:MSdm1-04	170	497.0	-	497.0	48	29.1	32.0	743
415	EM4:MSdm1-04	180	504.1	-	504.1	48	29.4	32.4	732
415	EM4:MSdm1-04	190	510.0	-	510.0	48	29.6	32.8	722
415	EM4:MSdm1-04	200	514.6	-	514.6	48	29.8	33.1	713
415	EM4:MSdm1-04	210	517.4	-	517.4	48	30.0	33.3	703
415	EM4:MSdm1-04	220	519.8	-	519.8	48	30.2	33.6	694
415	EM4:MSdm1-04	230	521.8	-	521.8	48	30.3	33.8	686
415	EM4:MSdm1-04	240	523.3	-	523.3	48	30.5	34.0	678
415	EM4:MSdm1-04	250	524.3	-	524.3	48	30.6	34.2	670
415	EM4:MSdm1-04	260	524.5	-	524.5	48	30.7	34.4	662
415	EM4:MSdm1-04	270	524.5	-	524.5	48	30.9	34.6	654
415	EM4:MSdm1-04	280	524.4	-	524.4	47	30.9	34.7	646
415	EM4:MSdm1-04	290	524.3	-	524.3	47	31.0	34.8	640
415	EM4:MSdm1-04	300	524.2	-	524.2	47	31.1	34.9	634
415	EM4:MSdm1-04	310	524.0	-	524.0	47	31.1	34.9	633
415	EM4:MSdm1-04	320	524.0	-	524.0	47	31.1	34.9	633
415	EM4:MSdm1-04	330	524.0	-	524.0	47	31.1	34.9	633
415	EM4:MSdm1-04	340	524.0	-	524.0	47	31.1	34.9	633
415	EM4:MSdm1-04	350	524.0	-	524.0	47	31.1	34.9	633

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
416	EM4:MSdm1-05	10	-	-	-	0	-	1.2	0
416	EM4:MSdm1-05	20	0.1	-	0.1	0	15.4	5.2	3
416	EM4:MSdm1-05	30	5.5	-	5.5	1	17.4	9.6	75
416	EM4:MSdm1-05	40	54.6	-	54.6	11	18.0	13.7	598
416	EM4:MSdm1-05	50	144.2	-	144.2	24	18.8	17.1	1153
416	EM4:MSdm1-05	60	231.7	-	231.7	32	20.0	20.0	1310
416	EM4:MSdm1-05	70	297.9	-	297.9	36	21.2	22.3	1260
416	EM4:MSdm1-05	80	347.0	-	347.0	38	22.4	24.2	1164
416	EM4:MSdm1-05	90	385.2	-	385.2	41	23.5	25.8	1083
416	EM4:MSdm1-05	100	415.6	-	415.6	42	24.3	27.1	1021
416	EM4:MSdm1-05	110	439.0	-	439.0	43	25.1	28.2	973
416	EM4:MSdm1-05	120	457.6	-	457.6	44	25.7	29.2	934
416	EM4:MSdm1-05	130	472.7	-	472.7	45	26.2	30.0	900
416	EM4:MSdm1-05	140	484.3	-	484.3	45	26.6	30.7	873
416	EM4:MSdm1-05	150	494.3	-	494.3	45	26.9	31.3	849
416	EM4:MSdm1-05	160	502.2	-	502.2	46	27.3	31.9	828
416	EM4:MSdm1-05	170	508.8	-	508.8	46	27.5	32.3	810
416	EM4:MSdm1-05	180	514.5	-	514.5	46	27.8	32.7	794
416	EM4:MSdm1-05	190	518.0	-	518.0	46	28.0	33.1	779
416	EM4:MSdm1-05	200	521.1	-	521.1	46	28.3	33.4	765
416	EM4:MSdm1-05	210	523.6	-	523.6	46	28.5	33.7	752
416	EM4:MSdm1-05	220	525.8	-	525.8	45	28.6	34.0	741
416	EM4:MSdm1-05	230	527.2	-	527.2	45	28.8	34.2	730
416	EM4:MSdm1-05	240	527.4	-	527.4	45	28.9	34.4	719
416	EM4:MSdm1-05	250	527.4	-	527.4	45	29.0	34.6	709
416	EM4:MSdm1-05	260	527.4	-	527.4	45	29.2	34.8	700
416	EM4:MSdm1-05	270	527.3	-	527.3	45	29.3	34.9	691
416	EM4:MSdm1-05	280	527.2	-	527.2	45	29.4	35.1	683
416	EM4:MSdm1-05	290	526.9	-	526.9	45	29.5	35.2	676
416	EM4:MSdm1-05	300	526.5	-	526.5	45	29.6	35.3	669
416	EM4:MSdm1-05	310	526.3	-	526.3	44	29.6	35.3	668
416	EM4:MSdm1-05	320	526.3	-	526.3	44	29.6	35.3	668
416	EM4:MSdm1-05	330	526.3	-	526.3	44	29.6	35.3	668
416	EM4:MSdm1-05	340	526.3	-	526.3	44	29.6	35.3	668
416	EM4:MSdm1-05	350	526.3	-	526.3	44	29.6	35.3	668

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
417	EM4:MSdm1-Oth	10	-	-	-	0	1.6	2.0	0
417	EM4:MSdm1-Oth	20	0.6	-	0.6	0	16.5	6.2	13
417	EM4:MSdm1-Oth	30	11.7	-	11.7	2	18.9	10.6	132
417	EM4:MSdm1-Oth	40	58.8	-	58.8	9	19.8	14.5	479
417	EM4:MSdm1-Oth	50	131.2	-	131.2	19	21.1	17.9	764
417	EM4:MSdm1-Oth	60	203.0	-	203.0	26	22.6	20.7	868
417	EM4:MSdm1-Oth	70	264.8	-	264.8	32	23.9	23.2	883
417	EM4:MSdm1-Oth	80	315.4	-	315.4	36	25.0	25.1	868
417	EM4:MSdm1-Oth	90	356.9	-	356.9	39	26.0	26.8	846
417	EM4:MSdm1-Oth	100	391.1	-	391.1	42	26.8	28.1	825
417	EM4:MSdm1-Oth	110	419.7	-	419.7	44	27.6	29.3	806
417	EM4:MSdm1-Oth	120	443.4	-	443.4	45	28.2	30.3	788
417	EM4:MSdm1-Oth	130	463.2	-	463.2	46	28.7	31.3	771
417	EM4:MSdm1-Oth	140	480.0	-	480.0	47	29.1	32.0	757
417	EM4:MSdm1-Oth	150	494.5	-	494.5	48	29.5	32.6	745
417	EM4:MSdm1-Oth	160	506.5	-	506.5	49	29.8	33.2	734
417	EM4:MSdm1-Oth	170	516.7	-	516.7	49	30.1	33.7	724
417	EM4:MSdm1-Oth	180	525.0	-	525.0	49	30.4	34.1	714
417	EM4:MSdm1-Oth	190	531.6	-	531.6	49	30.6	34.5	704
417	EM4:MSdm1-Oth	200	537.3	-	537.3	50	30.8	34.9	696
417	EM4:MSdm1-Oth	210	542.0	-	542.0	50	31.0	35.1	687
417	EM4:MSdm1-Oth	220	545.9	-	545.9	50	31.2	35.4	679
417	EM4:MSdm1-Oth	230	548.5	-	548.5	50	31.4	35.7	671
417	EM4:MSdm1-Oth	240	550.4	-	550.4	50	31.5	35.9	663
417	EM4:MSdm1-Oth	250	552.1	-	552.1	49	31.6	36.1	655
417	EM4:MSdm1-Oth	260	553.4	-	553.4	49	31.7	36.3	648
417	EM4:MSdm1-Oth	270	554.5	-	554.5	49	31.8	36.4	641
417	EM4:MSdm1-Oth	280	555.6	-	555.6	49	32.0	36.6	636
417	EM4:MSdm1-Oth	290	556.0	-	556.0	49	32.1	36.7	629
417	EM4:MSdm1-Oth	300	555.8	-	555.8	49	32.1	36.8	624
417	EM4:MSdm1-Oth	310	555.5	-	555.5	49	32.1	36.9	623
417	EM4:MSdm1-Oth	320	555.5	-	555.5	49	32.1	36.9	623
417	EM4:MSdm1-Oth	330	555.5	-	555.5	49	32.1	36.9	623
417	EM4:MSdm1-Oth	340	555.5	-	555.5	49	32.1	36.9	623
417	EM4:MSdm1-Oth	350	555.5	-	555.5	49	32.1	36.9	623

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
418	EM4:Msdm1a-All	10	-	-	-	0	-	2.2	0
418	EM4:Msdm1a-All	20	0.4	-	0.4	0	20.5	6.9	5
418	EM4:Msdm1a-All	30	16.9	-	16.9	1	21.0	11.8	146
418	EM4:Msdm1a-All	40	83.2	-	83.2	10	23.0	16.3	445
418	EM4:Msdm1a-All	50	163.2	-	163.2	21	25.1	20.3	589
418	EM4:Msdm1a-All	60	237.0	-	237.0	30	27.1	23.5	640
418	EM4:Msdm1a-All	70	303.5	-	303.5	37	28.6	26.3	654
418	EM4:Msdm1a-All	80	361.4	-	361.4	42	30.0	28.6	656
418	EM4:Msdm1a-All	90	410.6	-	410.6	46	31.0	30.5	653
418	EM4:Msdm1a-All	100	454.2	-	454.2	49	32.0	32.2	647
418	EM4:Msdm1a-All	110	492.6	-	492.6	51	32.8	33.6	642
418	EM4:Msdm1a-All	120	524.9	-	524.9	53	33.4	34.8	635
418	EM4:Msdm1a-All	130	553.3	-	553.3	54	34.0	35.8	629
418	EM4:Msdm1a-All	140	577.7	-	577.7	56	34.5	36.8	622
418	EM4:Msdm1a-All	150	599.3	-	599.3	57	34.9	37.6	616
418	EM4:Msdm1a-All	160	618.4	-	618.4	58	35.3	38.2	611
418	EM4:Msdm1a-All	170	634.6	-	634.6	59	35.7	38.9	605
418	EM4:Msdm1a-All	180	648.8	-	648.8	59	36.0	39.4	600
418	EM4:Msdm1a-All	190	660.0	-	660.0	60	36.3	39.9	591
418	EM4:Msdm1a-All	200	669.6	-	669.6	60	36.6	40.3	583
418	EM4:Msdm1a-All	210	678.1	-	678.1	60	36.9	40.7	575
418	EM4:Msdm1a-All	220	684.9	-	684.9	60	37.1	41.1	568
418	EM4:Msdm1a-All	230	691.1	-	691.1	60	37.3	41.5	561
418	EM4:Msdm1a-All	240	696.5	-	696.5	60	37.5	41.8	555
418	EM4:Msdm1a-All	250	701.5	-	701.5	60	37.7	42.0	549
418	EM4:Msdm1a-All	260	704.9	-	704.9	60	37.9	42.3	543
418	EM4:Msdm1a-All	270	705.7	-	705.7	60	38.0	42.4	536
418	EM4:Msdm1a-All	280	705.9	-	705.9	60	38.2	42.6	530
418	EM4:Msdm1a-All	290	705.8	-	705.8	59	38.3	42.7	525
418	EM4:Msdm1a-All	300	705.7	-	705.7	59	38.4	42.8	521
418	EM4:Msdm1a-All	310	705.7	-	705.7	59	38.4	42.8	521
418	EM4:Msdm1a-All	320	705.7	-	705.7	59	38.4	42.8	521
418	EM4:Msdm1a-All	330	705.7	-	705.7	59	38.4	42.8	521
418	EM4:Msdm1a-All	340	705.7	-	705.7	59	38.4	42.8	521
418	EM4:Msdm1a-All	350	705.7	-	705.7	59	38.4	42.8	521

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1001	FM1:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.8	0
1001	FM1:ESSFdc1/dcu1-01	20	-	-	-	0	-	3.9	0
1001	FM1:ESSFdc1/dcu1-01	30	1.2	-	1.2	1	14.5	7.7	27
1001	FM1:ESSFdc1/dcu1-01	40	22.2	-	22.2	4	18.3	11.4	260
1001	FM1:ESSFdc1/dcu1-01	50	74.3	-	74.3	12	19.7	14.6	560
1001	FM1:ESSFdc1/dcu1-01	60	139.7	-	139.7	20	21.2	17.5	772
1001	FM1:ESSFdc1/dcu1-01	70	204.3	-	204.3	28	22.6	19.9	874
1001	FM1:ESSFdc1/dcu1-01	80	260.8	-	260.8	33	23.8	21.9	905
1001	FM1:ESSFdc1/dcu1-01	90	307.4	-	307.4	38	24.9	23.6	900
1001	FM1:ESSFdc1/dcu1-01	100	345.4	-	345.4	40	25.9	25.0	883
1001	FM1:ESSFdc1/dcu1-01	110	374.9	-	374.9	42	26.6	26.2	858
1001	FM1:ESSFdc1/dcu1-01	120	399.0	-	399.0	44	27.3	27.2	835
1001	FM1:ESSFdc1/dcu1-01	130	418.8	-	418.8	45	27.9	28.1	814
1001	FM1:ESSFdc1/dcu1-01	140	434.2	-	434.2	46	28.4	28.8	794
1001	FM1:ESSFdc1/dcu1-01	150	447.1	-	447.1	47	28.8	29.5	777
1001	FM1:ESSFdc1/dcu1-01	160	457.6	-	457.6	48	29.2	30.1	761
1001	FM1:ESSFdc1/dcu1-01	170	466.1	-	466.1	48	29.5	30.6	746
1001	FM1:ESSFdc1/dcu1-01	180	472.9	-	472.9	48	29.8	31.0	733
1001	FM1:ESSFdc1/dcu1-01	190	478.6	-	478.6	48	30.0	31.4	721
1001	FM1:ESSFdc1/dcu1-01	200	483.0	-	483.0	48	30.3	31.8	710
1001	FM1:ESSFdc1/dcu1-01	210	486.5	-	486.5	49	30.4	32.1	700
1001	FM1:ESSFdc1/dcu1-01	220	489.2	-	489.2	48	30.6	32.4	691
1001	FM1:ESSFdc1/dcu1-01	230	491.0	-	491.0	48	30.7	32.6	683
1001	FM1:ESSFdc1/dcu1-01	240	492.5	-	492.5	48	30.9	32.9	675
1001	FM1:ESSFdc1/dcu1-01	250	493.9	-	493.9	48	31.0	33.1	667
1001	FM1:ESSFdc1/dcu1-01	260	494.8	-	494.8	48	31.1	33.3	661
1001	FM1:ESSFdc1/dcu1-01	270	494.8	-	494.8	48	31.2	33.4	653
1001	FM1:ESSFdc1/dcu1-01	280	494.5	-	494.5	48	31.3	33.6	646
1001	FM1:ESSFdc1/dcu1-01	290	493.7	-	493.7	48	31.4	33.8	640
1001	FM1:ESSFdc1/dcu1-01	300	493.1	-	493.1	48	31.5	33.9	634
1001	FM1:ESSFdc1/dcu1-01	310	493.0	-	493.0	47	31.5	33.9	633
1001	FM1:ESSFdc1/dcu1-01	320	493.0	-	493.0	47	31.5	33.9	633
1001	FM1:ESSFdc1/dcu1-01	330	493.0	-	493.0	47	31.5	33.9	633
1001	FM1:ESSFdc1/dcu1-01	340	493.0	-	493.0	47	31.5	33.9	633
1001	FM1:ESSFdc1/dcu1-01	350	493.0	-	493.0	47	31.5	33.9	633

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1002	FM1:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.8	0
1002	FM1:ESSFdc1/dcu1-03	20	-	-	-	0	-	3.6	0
1002	FM1:ESSFdc1/dcu1-03	30	0.7	-	0.7	0	17.1	7.3	17
1002	FM1:ESSFdc1/dcu1-03	40	16.0	-	16.0	4	17.5	10.7	230
1002	FM1:ESSFdc1/dcu1-03	50	59.1	-	59.1	11	18.5	13.7	543
1002	FM1:ESSFdc1/dcu1-03	60	117.0	-	117.0	19	19.7	16.2	801
1002	FM1:ESSFdc1/dcu1-03	70	176.8	-	176.8	26	20.9	18.4	950
1002	FM1:ESSFdc1/dcu1-03	80	230.7	-	230.7	31	22.0	20.3	1014
1002	FM1:ESSFdc1/dcu1-03	90	276.3	-	276.3	35	23.0	21.9	1018
1002	FM1:ESSFdc1/dcu1-03	100	313.3	-	313.3	38	23.8	23.2	999
1002	FM1:ESSFdc1/dcu1-03	110	343.4	-	343.4	40	24.6	24.3	971
1002	FM1:ESSFdc1/dcu1-03	120	368.0	-	368.0	42	25.2	25.2	944
1002	FM1:ESSFdc1/dcu1-03	130	387.3	-	387.3	43	25.8	26.1	917
1002	FM1:ESSFdc1/dcu1-03	140	403.3	-	403.3	44	26.3	26.8	894
1002	FM1:ESSFdc1/dcu1-03	150	416.4	-	416.4	44	26.7	27.4	873
1002	FM1:ESSFdc1/dcu1-03	160	427.4	-	427.4	45	27.0	27.9	854
1002	FM1:ESSFdc1/dcu1-03	170	436.3	-	436.3	45	27.4	28.4	838
1002	FM1:ESSFdc1/dcu1-03	180	443.2	-	443.2	45	27.6	28.8	821
1002	FM1:ESSFdc1/dcu1-03	190	448.8	-	448.8	46	27.9	29.2	806
1002	FM1:ESSFdc1/dcu1-03	200	453.2	-	453.2	46	28.1	29.5	793
1002	FM1:ESSFdc1/dcu1-03	210	457.0	-	457.0	46	28.2	29.8	781
1002	FM1:ESSFdc1/dcu1-03	220	460.2	-	460.2	46	28.4	30.1	771
1002	FM1:ESSFdc1/dcu1-03	230	462.3	-	462.3	46	28.6	30.3	760
1002	FM1:ESSFdc1/dcu1-03	240	463.7	-	463.7	46	28.7	30.5	750
1002	FM1:ESSFdc1/dcu1-03	250	464.6	-	464.6	46	28.9	30.7	741
1002	FM1:ESSFdc1/dcu1-03	260	465.4	-	465.4	45	29.0	30.9	732
1002	FM1:ESSFdc1/dcu1-03	270	465.6	-	465.6	45	29.1	31.1	724
1002	FM1:ESSFdc1/dcu1-03	280	465.8	-	465.8	45	29.2	31.2	717
1002	FM1:ESSFdc1/dcu1-03	290	466.0	-	466.0	45	29.3	31.4	710
1002	FM1:ESSFdc1/dcu1-03	300	466.1	-	466.1	45	29.3	31.5	704
1002	FM1:ESSFdc1/dcu1-03	310	466.1	-	466.1	45	29.3	31.5	703
1002	FM1:ESSFdc1/dcu1-03	320	466.1	-	466.1	45	29.3	31.5	703
1002	FM1:ESSFdc1/dcu1-03	330	466.1	-	466.1	45	29.3	31.5	703
1002	FM1:ESSFdc1/dcu1-03	340	466.1	-	466.1	45	29.3	31.5	703
1002	FM1:ESSFdc1/dcu1-03	350	466.1	-	466.1	45	29.3	31.5	703

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1003	FM1:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.9	0
1003	FM1:ESSFdc1/dcu1-04	20	-	-	-	0	-	4.3	0
1003	FM1:ESSFdc1/dcu1-04	30	2.2	-	2.2	1	18.3	8.3	45
1003	FM1:ESSFdc1/dcu1-04	40	31.0	-	31.0	5	19.2	12.2	324
1003	FM1:ESSFdc1/dcu1-04	50	92.7	-	92.7	14	21.0	15.7	573
1003	FM1:ESSFdc1/dcu1-04	60	162.4	-	162.4	22	22.8	18.7	714
1003	FM1:ESSFdc1/dcu1-04	70	228.3	-	228.3	30	24.3	21.2	783
1003	FM1:ESSFdc1/dcu1-04	80	285.3	-	285.3	35	25.6	23.4	803
1003	FM1:ESSFdc1/dcu1-04	90	332.2	-	332.2	40	26.8	25.2	799
1003	FM1:ESSFdc1/dcu1-04	100	370.1	-	370.1	43	27.8	26.7	783
1003	FM1:ESSFdc1/dcu1-04	110	400.6	-	400.6	46	28.5	28.0	765
1003	FM1:ESSFdc1/dcu1-04	120	425.7	-	425.7	47	29.3	29.1	748
1003	FM1:ESSFdc1/dcu1-04	130	445.4	-	445.4	48	29.9	30.0	730
1003	FM1:ESSFdc1/dcu1-04	140	461.7	-	461.7	49	30.4	30.9	715
1003	FM1:ESSFdc1/dcu1-04	150	475.3	-	475.3	50	30.8	31.5	702
1003	FM1:ESSFdc1/dcu1-04	160	486.2	-	486.2	50	31.2	32.1	688
1003	FM1:ESSFdc1/dcu1-04	170	495.2	-	495.2	51	31.5	32.6	676
1003	FM1:ESSFdc1/dcu1-04	180	502.2	-	502.2	51	31.8	33.1	666
1003	FM1:ESSFdc1/dcu1-04	190	507.9	-	507.9	51	32.0	33.6	656
1003	FM1:ESSFdc1/dcu1-04	200	512.5	-	512.5	51	32.2	34.0	648
1003	FM1:ESSFdc1/dcu1-04	210	516.5	-	516.5	51	32.4	34.3	640
1003	FM1:ESSFdc1/dcu1-04	220	519.3	-	519.3	51	32.6	34.6	633
1003	FM1:ESSFdc1/dcu1-04	230	521.2	-	521.2	51	32.7	34.8	625
1003	FM1:ESSFdc1/dcu1-04	240	522.5	-	522.5	51	32.9	35.0	618
1003	FM1:ESSFdc1/dcu1-04	250	523.0	-	523.0	51	33.0	35.2	612
1003	FM1:ESSFdc1/dcu1-04	260	523.4	-	523.4	51	33.1	35.4	605
1003	FM1:ESSFdc1/dcu1-04	270	523.6	-	523.6	51	33.2	35.6	600
1003	FM1:ESSFdc1/dcu1-04	280	523.8	-	523.8	51	33.3	35.8	595
1003	FM1:ESSFdc1/dcu1-04	290	523.9	-	523.9	51	33.3	36.0	590
1003	FM1:ESSFdc1/dcu1-04	300	523.6	-	523.6	50	33.4	36.0	587
1003	FM1:ESSFdc1/dcu1-04	310	523.6	-	523.6	50	33.4	36.0	586
1003	FM1:ESSFdc1/dcu1-04	320	523.6	-	523.6	50	33.4	36.0	586
1003	FM1:ESSFdc1/dcu1-04	330	523.6	-	523.6	50	33.4	36.0	586
1003	FM1:ESSFdc1/dcu1-04	340	523.6	-	523.6	50	33.4	36.0	586
1003	FM1:ESSFdc1/dcu1-04	350	523.6	-	523.6	50	33.4	36.0	586

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1004	FM1:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	0.6	0
1004	FM1:ESSFdc1/dcu1-Oth	20	-	-	-	0	-	2.7	0
1004	FM1:ESSFdc1/dcu1-Oth	30	0.2	-	0.2	0	12.8	5.4	4
1004	FM1:ESSFdc1/dcu1-Oth	40	7.2	-	7.2	2	14.3	8.0	117
1004	FM1:ESSFdc1/dcu1-Oth	50	32.4	-	32.4	6	15.0	10.3	332
1004	FM1:ESSFdc1/dcu1-Oth	60	71.7	-	71.7	11	16.0	12.4	508
1004	FM1:ESSFdc1/dcu1-Oth	70	113.7	-	113.7	17	17.1	14.2	620
1004	FM1:ESSFdc1/dcu1-Oth	80	154.0	-	154.0	21	18.0	15.7	675
1004	FM1:ESSFdc1/dcu1-Oth	90	189.3	-	189.3	25	18.8	16.9	699
1004	FM1:ESSFdc1/dcu1-Oth	100	219.6	-	219.6	28	19.5	18.1	702
1004	FM1:ESSFdc1/dcu1-Oth	110	245.0	-	245.0	30	20.2	19.0	695
1004	FM1:ESSFdc1/dcu1-Oth	120	266.0	-	266.0	32	20.7	19.8	683
1004	FM1:ESSFdc1/dcu1-Oth	130	283.6	-	283.6	33	21.2	20.5	670
1004	FM1:ESSFdc1/dcu1-Oth	140	298.4	-	298.4	34	21.6	21.2	657
1004	FM1:ESSFdc1/dcu1-Oth	150	310.6	-	310.6	35	21.9	21.7	645
1004	FM1:ESSFdc1/dcu1-Oth	160	320.6	-	320.6	35	22.3	22.2	633
1004	FM1:ESSFdc1/dcu1-Oth	170	329.1	-	329.1	36	22.5	22.7	623
1004	FM1:ESSFdc1/dcu1-Oth	180	336.3	-	336.3	36	22.8	23.0	613
1004	FM1:ESSFdc1/dcu1-Oth	190	342.3	-	342.3	36	23.0	23.4	604
1004	FM1:ESSFdc1/dcu1-Oth	200	347.4	-	347.4	37	23.1	23.6	596
1004	FM1:ESSFdc1/dcu1-Oth	210	351.6	-	351.6	37	23.3	23.9	588
1004	FM1:ESSFdc1/dcu1-Oth	220	355.2	-	355.2	37	23.5	24.2	581
1004	FM1:ESSFdc1/dcu1-Oth	230	358.0	-	358.0	37	23.6	24.3	573
1004	FM1:ESSFdc1/dcu1-Oth	240	359.7	-	359.7	37	23.7	24.6	566
1004	FM1:ESSFdc1/dcu1-Oth	250	361.2	-	361.2	37	23.8	24.7	560
1004	FM1:ESSFdc1/dcu1-Oth	260	362.3	-	362.3	37	23.9	24.9	554
1004	FM1:ESSFdc1/dcu1-Oth	270	363.1	-	363.1	37	24.0	25.1	548
1004	FM1:ESSFdc1/dcu1-Oth	280	363.7	-	363.7	37	24.1	25.2	542
1004	FM1:ESSFdc1/dcu1-Oth	290	364.1	-	364.1	37	24.1	25.3	538
1004	FM1:ESSFdc1/dcu1-Oth	300	364.4	-	364.4	36	24.2	25.4	534
1004	FM1:ESSFdc1/dcu1-Oth	310	364.4	-	364.4	36	24.2	25.4	534
1004	FM1:ESSFdc1/dcu1-Oth	320	364.4	-	364.4	36	24.2	25.4	534
1004	FM1:ESSFdc1/dcu1-Oth	330	364.4	-	364.4	36	24.2	25.4	534
1004	FM1:ESSFdc1/dcu1-Oth	340	364.4	-	364.4	36	24.2	25.4	534
1004	FM1:ESSFdc1/dcu1-Oth	350	364.4	-	364.4	36	24.2	25.4	534

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1005	FM1:ICHmk1/mw2-01	10	-	-	-	0	-	2.9	0
1005	FM1:ICHmk1/mw2-01	20	1.6	-	1.6	0	20.7	7.7	19
1005	FM1:ICHmk1/mw2-01	30	20.2	-	20.2	2	21.4	12.4	160
1005	FM1:ICHmk1/mw2-01	40	75.2	-	75.2	9	22.7	16.7	415
1005	FM1:ICHmk1/mw2-01	50	145.5	-	145.5	18	24.3	20.5	572
1005	FM1:ICHmk1/mw2-01	60	214.4	-	214.4	26	25.9	23.6	646
1005	FM1:ICHmk1/mw2-01	70	277.8	-	277.8	32	27.2	26.3	679
1005	FM1:ICHmk1/mw2-01	80	334.0	-	334.0	38	28.4	28.6	692
1005	FM1:ICHmk1/mw2-01	90	383.7	-	383.7	42	29.3	30.5	697
1005	FM1:ICHmk1/mw2-01	100	427.6	-	427.6	45	30.1	32.2	696
1005	FM1:ICHmk1/mw2-01	110	466.0	-	466.0	47	30.9	33.6	694
1005	FM1:ICHmk1/mw2-01	120	498.9	-	498.9	49	31.5	34.8	689
1005	FM1:ICHmk1/mw2-01	130	527.7	-	527.7	51	32.0	35.8	683
1005	FM1:ICHmk1/mw2-01	140	552.4	-	552.4	53	32.5	36.7	676
1005	FM1:ICHmk1/mw2-01	150	573.1	-	573.1	54	32.9	37.5	668
1005	FM1:ICHmk1/mw2-01	160	590.6	-	590.6	54	33.3	38.2	659
1005	FM1:ICHmk1/mw2-01	170	605.4	-	605.4	55	33.7	38.8	650
1005	FM1:ICHmk1/mw2-01	180	618.1	-	618.1	56	34.0	39.3	643
1005	FM1:ICHmk1/mw2-01	190	625.9	-	625.9	56	34.3	39.7	632
1005	FM1:ICHmk1/mw2-01	200	631.2	-	631.2	56	34.6	40.1	620
1005	FM1:ICHmk1/mw2-01	210	635.9	-	635.9	56	34.8	40.5	610
1005	FM1:ICHmk1/mw2-01	220	640.2	-	640.2	56	35.0	40.8	600
1005	FM1:ICHmk1/mw2-01	230	643.9	-	643.9	56	35.2	41.1	591
1005	FM1:ICHmk1/mw2-01	240	647.1	-	647.1	56	35.4	41.4	584
1005	FM1:ICHmk1/mw2-01	250	650.3	-	650.3	56	35.6	41.6	579
1005	FM1:ICHmk1/mw2-01	260	653.1	-	653.1	56	35.7	41.8	574
1005	FM1:ICHmk1/mw2-01	270	655.7	-	655.7	56	35.8	42.0	569
1005	FM1:ICHmk1/mw2-01	280	657.6	-	657.6	55	35.9	42.2	564
1005	FM1:ICHmk1/mw2-01	290	659.1	-	659.1	55	36.1	42.3	559
1005	FM1:ICHmk1/mw2-01	300	659.2	-	659.2	55	36.1	42.4	556
1005	FM1:ICHmk1/mw2-01	310	659.2	-	659.2	55	36.1	42.4	556
1005	FM1:ICHmk1/mw2-01	320	659.2	-	659.2	55	36.1	42.4	556
1005	FM1:ICHmk1/mw2-01	330	659.2	-	659.2	55	36.1	42.4	556
1005	FM1:ICHmk1/mw2-01	340	659.2	-	659.2	55	36.1	42.4	556
1005	FM1:ICHmk1/mw2-01	350	659.2	-	659.2	55	36.1	42.4	556

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1006	FM1:ICHmk1/mw2-03	10	-	-	-	0	-	2.1	0
1006	FM1:ICHmk1/mw2-03	20	0.1	-	0.1	0	18.4	6.5	5
1006	FM1:ICHmk1/mw2-03	30	12.1	-	12.1	3	18.7	10.8	187
1006	FM1:ICHmk1/mw2-03	40	61.6	-	61.6	9	20.0	14.5	470
1006	FM1:ICHmk1/mw2-03	50	125.9	-	125.9	17	21.7	17.6	633
1006	FM1:ICHmk1/mw2-03	60	186.0	-	186.0	23	23.2	20.2	707
1006	FM1:ICHmk1/mw2-03	70	238.1	-	238.1	29	24.5	22.3	735
1006	FM1:ICHmk1/mw2-03	80	282.5	-	282.5	34	25.5	24.2	747
1006	FM1:ICHmk1/mw2-03	90	320.0	-	320.0	37	26.4	25.7	750
1006	FM1:ICHmk1/mw2-03	100	352.4	-	352.4	40	27.1	27.1	750
1006	FM1:ICHmk1/mw2-03	110	380.2	-	380.2	42	27.7	28.2	745
1006	FM1:ICHmk1/mw2-03	120	404.8	-	404.8	43	28.3	29.2	739
1006	FM1:ICHmk1/mw2-03	130	425.8	-	425.8	45	28.8	30.1	734
1006	FM1:ICHmk1/mw2-03	140	444.7	-	444.7	46	29.2	30.9	728
1006	FM1:ICHmk1/mw2-03	150	461.5	-	461.5	47	29.6	31.6	722
1006	FM1:ICHmk1/mw2-03	160	476.9	-	476.9	48	29.9	32.2	715
1006	FM1:ICHmk1/mw2-03	170	490.6	-	490.6	49	30.2	32.8	707
1006	FM1:ICHmk1/mw2-03	180	502.5	-	502.5	50	30.5	33.3	701
1006	FM1:ICHmk1/mw2-03	190	512.7	-	512.7	50	30.8	33.8	694
1006	FM1:ICHmk1/mw2-03	200	521.6	-	521.6	51	31.1	34.2	687
1006	FM1:ICHmk1/mw2-03	210	529.9	-	529.9	51	31.3	34.6	680
1006	FM1:ICHmk1/mw2-03	220	537.5	-	537.5	51	31.5	35.0	672
1006	FM1:ICHmk1/mw2-03	230	544.3	-	544.3	51	31.8	35.3	665
1006	FM1:ICHmk1/mw2-03	240	549.3	-	549.3	51	32.0	35.6	658
1006	FM1:ICHmk1/mw2-03	250	553.8	-	553.8	51	32.2	35.9	650
1006	FM1:ICHmk1/mw2-03	260	557.4	-	557.4	51	32.3	36.1	641
1006	FM1:ICHmk1/mw2-03	270	560.8	-	560.8	51	32.5	36.3	633
1006	FM1:ICHmk1/mw2-03	280	563.6	-	563.6	51	32.7	36.5	625
1006	FM1:ICHmk1/mw2-03	290	566.0	-	566.0	51	32.9	36.7	618
1006	FM1:ICHmk1/mw2-03	300	567.8	-	567.8	51	33.0	36.9	612
1006	FM1:ICHmk1/mw2-03	310	567.8	-	567.8	51	33.0	36.9	612
1006	FM1:ICHmk1/mw2-03	320	567.8	-	567.8	51	33.0	36.9	612
1006	FM1:ICHmk1/mw2-03	330	567.8	-	567.8	51	33.0	36.9	612
1006	FM1:ICHmk1/mw2-03	340	567.8	-	567.8	51	33.0	36.9	612
1006	FM1:ICHmk1/mw2-03	350	567.8	-	567.8	51	33.0	36.9	612

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1007	FM1:ICHmk1/mw2-04	10	-	-	-	0	-	2.4	0
1007	FM1:ICHmk1/mw2-04	20	0.6	-	0.6	0	20.0	6.9	14
1007	FM1:ICHmk1/mw2-04	30	14.2	-	14.2	2	20.5	11.4	147
1007	FM1:ICHmk1/mw2-04	40	59.6	-	59.6	7	21.6	15.3	385
1007	FM1:ICHmk1/mw2-04	50	120.2	-	120.2	14	22.9	18.8	553
1007	FM1:ICHmk1/mw2-04	60	181.0	-	181.0	22	24.2	21.7	643
1007	FM1:ICHmk1/mw2-04	70	237.9	-	237.9	27	25.5	24.2	690
1007	FM1:ICHmk1/mw2-04	80	289.1	-	289.1	32	26.5	26.4	715
1007	FM1:ICHmk1/mw2-04	90	335.2	-	335.2	37	27.3	28.2	730
1007	FM1:ICHmk1/mw2-04	100	376.6	-	376.6	40	28.1	29.8	735
1007	FM1:ICHmk1/mw2-04	110	413.4	-	413.4	43	28.8	31.1	737
1007	FM1:ICHmk1/mw2-04	120	445.5	-	445.5	45	29.3	32.3	735
1007	FM1:ICHmk1/mw2-04	130	474.2	-	474.2	47	29.8	33.3	731
1007	FM1:ICHmk1/mw2-04	140	499.3	-	499.3	48	30.3	34.2	726
1007	FM1:ICHmk1/mw2-04	150	521.3	-	521.3	50	30.8	35.0	720
1007	FM1:ICHmk1/mw2-04	160	540.2	-	540.2	51	31.2	35.7	712
1007	FM1:ICHmk1/mw2-04	170	556.6	-	556.6	52	31.6	36.4	704
1007	FM1:ICHmk1/mw2-04	180	570.6	-	570.6	52	31.9	36.9	696
1007	FM1:ICHmk1/mw2-04	190	582.1	-	582.1	53	32.2	37.4	685
1007	FM1:ICHmk1/mw2-04	200	592.2	-	592.2	53	32.5	37.8	676
1007	FM1:ICHmk1/mw2-04	210	601.1	-	601.1	53	32.8	38.2	667
1007	FM1:ICHmk1/mw2-04	220	608.7	-	608.7	53	33.0	38.6	657
1007	FM1:ICHmk1/mw2-04	230	615.1	-	615.1	53	33.3	38.9	648
1007	FM1:ICHmk1/mw2-04	240	620.1	-	620.1	53	33.5	39.1	640
1007	FM1:ICHmk1/mw2-04	250	624.6	-	624.6	53	33.6	39.4	632
1007	FM1:ICHmk1/mw2-04	260	628.2	-	628.2	53	33.8	39.6	625
1007	FM1:ICHmk1/mw2-04	270	631.2	-	631.2	53	34.0	39.8	617
1007	FM1:ICHmk1/mw2-04	280	633.9	-	633.9	53	34.1	40.0	610
1007	FM1:ICHmk1/mw2-04	290	636.1	-	636.1	53	34.2	40.2	604
1007	FM1:ICHmk1/mw2-04	300	637.7	-	637.7	53	34.4	40.4	600
1007	FM1:ICHmk1/mw2-04	310	637.7	-	637.7	53	34.4	40.4	600
1007	FM1:ICHmk1/mw2-04	320	637.7	-	637.7	53	34.4	40.4	600
1007	FM1:ICHmk1/mw2-04	330	637.7	-	637.7	53	34.4	40.4	600
1007	FM1:ICHmk1/mw2-04	340	637.7	-	637.7	53	34.4	40.4	600
1007	FM1:ICHmk1/mw2-04	350	637.7	-	637.7	53	34.4	40.4	600

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1008	FM1:ICHmk1/mw2-Oth	10	-	-	-	0	-	2.3	0
1008	FM1:ICHmk1/mw2-Oth	20	0.6	-	0.6	0	20.2	7.1	12
1008	FM1:ICHmk1/mw2-Oth	30	15.7	-	15.7	2	20.8	11.7	145
1008	FM1:ICHmk1/mw2-Oth	40	66.7	-	66.7	8	22.1	16.0	401
1008	FM1:ICHmk1/mw2-Oth	50	134.1	-	134.1	16	23.6	19.7	568
1008	FM1:ICHmk1/mw2-Oth	60	200.9	-	200.9	24	25.2	22.8	650
1008	FM1:ICHmk1/mw2-Oth	70	262.4	-	262.4	31	26.4	25.5	690
1008	FM1:ICHmk1/mw2-Oth	80	317.0	-	317.0	36	27.5	27.7	705
1008	FM1:ICHmk1/mw2-Oth	90	365.4	-	365.4	39	28.5	29.6	713
1008	FM1:ICHmk1/mw2-Oth	100	408.5	-	408.5	43	29.3	31.3	714
1008	FM1:ICHmk1/mw2-Oth	110	446.2	-	446.2	45	30.0	32.7	712
1008	FM1:ICHmk1/mw2-Oth	120	478.8	-	478.8	47	30.6	33.9	708
1008	FM1:ICHmk1/mw2-Oth	130	507.6	-	507.6	49	31.1	35.0	703
1008	FM1:ICHmk1/mw2-Oth	140	532.7	-	532.7	51	31.6	35.9	696
1008	FM1:ICHmk1/mw2-Oth	150	554.0	-	554.0	52	32.0	36.7	689
1008	FM1:ICHmk1/mw2-Oth	160	571.9	-	571.9	53	32.4	37.4	679
1008	FM1:ICHmk1/mw2-Oth	170	587.4	-	587.4	54	32.8	38.0	670
1008	FM1:ICHmk1/mw2-Oth	180	600.6	-	600.6	54	33.1	38.5	661
1008	FM1:ICHmk1/mw2-Oth	190	611.9	-	611.9	55	33.4	39.0	653
1008	FM1:ICHmk1/mw2-Oth	200	621.5	-	621.5	55	33.7	39.4	644
1008	FM1:ICHmk1/mw2-Oth	210	627.5	-	627.5	55	34.0	39.8	632
1008	FM1:ICHmk1/mw2-Oth	220	632.8	-	632.8	55	34.3	40.1	621
1008	FM1:ICHmk1/mw2-Oth	230	637.6	-	637.6	55	34.5	40.4	613
1008	FM1:ICHmk1/mw2-Oth	240	641.2	-	641.2	55	34.7	40.7	604
1008	FM1:ICHmk1/mw2-Oth	250	644.4	-	644.4	55	34.9	41.0	596
1008	FM1:ICHmk1/mw2-Oth	260	647.0	-	647.0	55	35.1	41.2	589
1008	FM1:ICHmk1/mw2-Oth	270	649.2	-	649.2	55	35.2	41.4	582
1008	FM1:ICHmk1/mw2-Oth	280	651.1	-	651.1	55	35.4	41.6	576
1008	FM1:ICHmk1/mw2-Oth	290	652.5	-	652.5	54	35.5	41.8	569
1008	FM1:ICHmk1/mw2-Oth	300	653.0	-	653.0	54	35.6	42.0	564
1008	FM1:ICHmk1/mw2-Oth	310	653.0	-	653.0	54	35.6	42.0	564
1008	FM1:ICHmk1/mw2-Oth	320	653.0	-	653.0	54	35.6	42.0	564
1008	FM1:ICHmk1/mw2-Oth	330	653.0	-	653.0	54	35.6	42.0	564
1008	FM1:ICHmk1/mw2-Oth	340	653.0	-	653.0	54	35.6	42.0	564
1008	FM1:ICHmk1/mw2-Oth	350	653.0	-	653.0	54	35.6	42.0	564

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1009	FM1:IDFdm1-01	10	-	-	-	0	-	2.2	0
1009	FM1:IDFdm1-01	20	0.2	-	0.2	0	19.9	6.8	8
1009	FM1:IDFdm1-01	30	10.4	-	10.4	2	20.4	11.0	116
1009	FM1:IDFdm1-01	40	47.5	-	47.5	5	21.5	14.7	331
1009	FM1:IDFdm1-01	50	99.1	-	99.1	12	22.8	18.0	490
1009	FM1:IDFdm1-01	60	152.1	-	152.1	18	24.1	20.8	580
1009	FM1:IDFdm1-01	70	202.5	-	202.5	25	25.4	23.2	629
1009	FM1:IDFdm1-01	80	248.8	-	248.8	30	26.3	25.3	659
1009	FM1:IDFdm1-01	90	291.1	-	291.1	34	27.2	27.0	677
1009	FM1:IDFdm1-01	100	328.8	-	328.8	37	27.9	28.6	688
1009	FM1:IDFdm1-01	110	362.9	-	362.9	40	28.6	29.9	692
1009	FM1:IDFdm1-01	120	393.3	-	393.3	42	29.2	31.1	695
1009	FM1:IDFdm1-01	130	420.2	-	420.2	44	29.7	32.1	695
1009	FM1:IDFdm1-01	140	444.4	-	444.4	46	30.2	33.0	694
1009	FM1:IDFdm1-01	150	466.1	-	466.1	47	30.6	33.8	692
1009	FM1:IDFdm1-01	160	485.3	-	485.3	48	30.9	34.5	688
1009	FM1:IDFdm1-01	170	501.8	-	501.8	49	31.3	35.1	683
1009	FM1:IDFdm1-01	180	516.6	-	516.6	50	31.6	35.6	679
1009	FM1:IDFdm1-01	190	528.4	-	528.4	50	31.8	36.1	674
1009	FM1:IDFdm1-01	200	537.6	-	537.6	51	32.1	36.6	664
1009	FM1:IDFdm1-01	210	545.9	-	545.9	51	32.4	37.0	657
1009	FM1:IDFdm1-01	220	553.3	-	553.3	51	32.6	37.4	649
1009	FM1:IDFdm1-01	230	560.0	-	560.0	51	32.8	37.7	642
1009	FM1:IDFdm1-01	240	565.8	-	565.8	51	33.0	38.0	634
1009	FM1:IDFdm1-01	250	571.2	-	571.2	51	33.2	38.2	626
1009	FM1:IDFdm1-01	260	575.9	-	575.9	51	33.4	38.5	620
1009	FM1:IDFdm1-01	270	580.1	-	580.1	52	33.6	38.7	613
1009	FM1:IDFdm1-01	280	583.9	-	583.9	52	33.7	38.9	607
1009	FM1:IDFdm1-01	290	586.9	-	586.9	52	33.9	39.1	601
1009	FM1:IDFdm1-01	300	588.8	-	588.8	51	34.0	39.3	595
1009	FM1:IDFdm1-01	310	588.8	-	588.8	51	34.0	39.3	595
1009	FM1:IDFdm1-01	320	588.8	-	588.8	51	34.0	39.3	595
1009	FM1:IDFdm1-01	330	588.8	-	588.8	51	34.0	39.3	595
1009	FM1:IDFdm1-01	340	588.8	-	588.8	51	34.0	39.3	595
1009	FM1:IDFdm1-01	350	588.8	-	588.8	51	34.0	39.3	595

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1010	FM1:IDFdm1-04	10	-	-	-	0	-	1.6	0
1010	FM1:IDFdm1-04	20	-	-	-	0	19.4	5.2	1
1010	FM1:IDFdm1-04	30	3.1	-	3.1	1	19.9	8.9	50
1010	FM1:IDFdm1-04	40	22.4	-	22.4	2	20.4	12.3	204
1010	FM1:IDFdm1-04	50	58.4	-	58.4	7	21.5	15.3	373
1010	FM1:IDFdm1-04	60	100.1	-	100.1	12	22.6	17.9	496
1010	FM1:IDFdm1-04	70	142.0	-	142.0	18	23.7	20.3	569
1010	FM1:IDFdm1-04	80	182.8	-	182.8	23	24.7	22.3	615
1010	FM1:IDFdm1-04	90	221.2	-	221.2	27	25.5	24.1	647
1010	FM1:IDFdm1-04	100	257.1	-	257.1	30	26.3	25.7	668
1010	FM1:IDFdm1-04	110	290.6	-	290.6	33	27.0	27.1	683
1010	FM1:IDFdm1-04	120	321.2	-	321.2	36	27.6	28.3	691
1010	FM1:IDFdm1-04	130	348.8	-	348.8	38	28.2	29.3	696
1010	FM1:IDFdm1-04	140	374.4	-	374.4	40	28.7	30.3	698
1010	FM1:IDFdm1-04	150	397.6	-	397.6	42	29.1	31.2	699
1010	FM1:IDFdm1-04	160	419.0	-	419.0	43	29.5	32.0	698
1010	FM1:IDFdm1-04	170	438.1	-	438.1	45	29.8	32.7	696
1010	FM1:IDFdm1-04	180	455.6	-	455.6	46	30.1	33.3	693
1010	FM1:IDFdm1-04	190	471.5	-	471.5	47	30.5	33.9	689
1010	FM1:IDFdm1-04	200	485.5	-	485.5	48	30.8	34.4	684
1010	FM1:IDFdm1-04	210	498.0	-	498.0	48	31.0	34.9	679
1010	FM1:IDFdm1-04	220	509.2	-	509.2	49	31.3	35.3	673
1010	FM1:IDFdm1-04	230	519.4	-	519.4	49	31.6	35.7	665
1010	FM1:IDFdm1-04	240	528.3	-	528.3	50	31.8	36.1	659
1010	FM1:IDFdm1-04	250	536.4	-	536.4	50	32.0	36.5	652
1010	FM1:IDFdm1-04	260	543.7	-	543.7	50	32.2	36.8	646
1010	FM1:IDFdm1-04	270	550.0	-	550.0	51	32.4	37.1	640
1010	FM1:IDFdm1-04	280	555.6	-	555.6	51	32.6	37.4	632
1010	FM1:IDFdm1-04	290	560.3	-	560.3	51	32.8	37.6	626
1010	FM1:IDFdm1-04	300	563.2	-	563.2	51	33.0	37.8	621
1010	FM1:IDFdm1-04	310	563.2	-	563.2	51	33.0	37.8	621
1010	FM1:IDFdm1-04	320	563.2	-	563.2	51	33.0	37.8	621
1010	FM1:IDFdm1-04	330	563.2	-	563.2	51	33.0	37.8	621
1010	FM1:IDFdm1-04	340	563.2	-	563.2	51	33.0	37.8	621
1010	FM1:IDFdm1-04	350	563.2	-	563.2	51	33.0	37.8	621

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1011	FM1:IDFdm1-05	10	-	-	-	0	2.7	2.6	0
1011	FM1:IDFdm1-05	20	0.8	-	0.8	0	19.6	7.3	18
1011	FM1:IDFdm1-05	30	18.3	-	18.3	3	20.2	12.0	192
1011	FM1:IDFdm1-05	40	78.3	-	78.3	10	21.8	16.2	474
1011	FM1:IDFdm1-05	50	151.2	-	151.2	19	23.6	19.8	621
1011	FM1:IDFdm1-05	60	219.8	-	219.8	28	25.4	22.8	682
1011	FM1:IDFdm1-05	70	280.0	-	280.0	34	26.8	25.3	703
1011	FM1:IDFdm1-05	80	331.0	-	331.0	38	27.9	27.4	705
1011	FM1:IDFdm1-05	90	374.2	-	374.2	42	28.9	29.2	702
1011	FM1:IDFdm1-05	100	411.0	-	411.0	45	29.7	30.7	698
1011	FM1:IDFdm1-05	110	442.5	-	442.5	47	30.4	32.0	690
1011	FM1:IDFdm1-05	120	469.2	-	469.2	49	31.0	33.1	683
1011	FM1:IDFdm1-05	130	491.8	-	491.8	50	31.5	34.0	676
1011	FM1:IDFdm1-05	140	511.3	-	511.3	51	31.9	34.8	670
1011	FM1:IDFdm1-05	150	527.4	-	527.4	52	32.3	35.5	663
1011	FM1:IDFdm1-05	160	540.9	-	540.9	53	32.6	36.1	656
1011	FM1:IDFdm1-05	170	552.5	-	552.5	54	32.9	36.6	649
1011	FM1:IDFdm1-05	180	561.8	-	561.8	54	33.2	37.1	643
1011	FM1:IDFdm1-05	190	569.7	-	569.7	54	33.4	37.5	637
1011	FM1:IDFdm1-05	200	576.5	-	576.5	54	33.6	37.8	631
1011	FM1:IDFdm1-05	210	580.6	-	580.6	54	33.8	38.2	623
1011	FM1:IDFdm1-05	220	583.7	-	583.7	54	34.0	38.4	616
1011	FM1:IDFdm1-05	230	585.8	-	585.8	54	34.1	38.7	608
1011	FM1:IDFdm1-05	240	587.4	-	587.4	54	34.3	38.9	601
1011	FM1:IDFdm1-05	250	589.0	-	589.0	54	34.4	39.1	595
1011	FM1:IDFdm1-05	260	590.3	-	590.3	53	34.5	39.3	588
1011	FM1:IDFdm1-05	270	590.7	-	590.7	53	34.6	39.4	582
1011	FM1:IDFdm1-05	280	591.0	-	591.0	53	34.7	39.6	577
1011	FM1:IDFdm1-05	290	591.2	-	591.2	53	34.8	39.7	571
1011	FM1:IDFdm1-05	300	591.3	-	591.3	53	34.9	39.8	568
1011	FM1:IDFdm1-05	310	591.3	-	591.3	53	34.9	39.8	568
1011	FM1:IDFdm1-05	320	591.3	-	591.3	53	34.9	39.8	568
1011	FM1:IDFdm1-05	330	591.3	-	591.3	53	34.9	39.8	568
1011	FM1:IDFdm1-05	340	591.3	-	591.3	53	34.9	39.8	568
1011	FM1:IDFdm1-05	350	591.3	-	591.3	53	34.9	39.8	568

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1012	FM1:IDFdm1-Oth	10	-	-	-	0	-	1.8	0
1012	FM1:IDFdm1-Oth	20	-	-	-	0	20.0	5.8	3
1012	FM1:IDFdm1-Oth	30	4.3	-	4.3	1	20.1	9.4	61
1012	FM1:IDFdm1-Oth	40	24.2	-	24.2	3	20.7	12.8	218
1012	FM1:IDFdm1-Oth	50	61.6	-	61.6	8	21.7	15.7	391
1012	FM1:IDFdm1-Oth	60	104.2	-	104.2	13	22.8	18.3	510
1012	FM1:IDFdm1-Oth	70	146.0	-	146.0	18	23.8	20.5	583
1012	FM1:IDFdm1-Oth	80	185.1	-	185.1	22	24.7	22.4	625
1012	FM1:IDFdm1-Oth	90	221.1	-	221.1	26	25.6	24.0	652
1012	FM1:IDFdm1-Oth	100	253.6	-	253.6	30	26.2	25.5	671
1012	FM1:IDFdm1-Oth	110	282.9	-	282.9	32	26.8	26.7	683
1012	FM1:IDFdm1-Oth	120	309.2	-	309.2	35	27.3	27.8	692
1012	FM1:IDFdm1-Oth	130	332.7	-	332.7	37	27.8	28.7	696
1012	FM1:IDFdm1-Oth	140	353.3	-	353.3	39	28.2	29.6	697
1012	FM1:IDFdm1-Oth	150	372.1	-	372.1	40	28.6	30.3	697
1012	FM1:IDFdm1-Oth	160	388.3	-	388.3	41	28.9	31.0	696
1012	FM1:IDFdm1-Oth	170	402.9	-	402.9	42	29.2	31.6	695
1012	FM1:IDFdm1-Oth	180	416.2	-	416.2	43	29.5	32.1	693
1012	FM1:IDFdm1-Oth	190	426.7	-	426.7	44	29.7	32.6	689
1012	FM1:IDFdm1-Oth	200	436.1	-	436.1	44	29.9	33.0	684
1012	FM1:IDFdm1-Oth	210	444.9	-	444.9	45	30.1	33.4	680
1012	FM1:IDFdm1-Oth	220	452.7	-	452.7	45	30.3	33.8	674
1012	FM1:IDFdm1-Oth	230	459.7	-	459.7	46	30.5	34.1	671
1012	FM1:IDFdm1-Oth	240	466.1	-	466.1	46	30.7	34.4	667
1012	FM1:IDFdm1-Oth	250	471.5	-	471.5	46	30.8	34.6	663
1012	FM1:IDFdm1-Oth	260	476.4	-	476.4	46	31.0	34.9	658
1012	FM1:IDFdm1-Oth	270	480.6	-	480.6	47	31.1	35.1	654
1012	FM1:IDFdm1-Oth	280	484.4	-	484.4	47	31.2	35.3	650
1012	FM1:IDFdm1-Oth	290	487.8	-	487.8	47	31.3	35.5	647
1012	FM1:IDFdm1-Oth	300	490.2	-	490.2	47	31.4	35.6	644
1012	FM1:IDFdm1-Oth	310	490.2	-	490.2	47	31.4	35.6	644
1012	FM1:IDFdm1-Oth	320	490.2	-	490.2	47	31.4	35.6	644
1012	FM1:IDFdm1-Oth	330	490.2	-	490.2	47	31.4	35.6	644
1012	FM1:IDFdm1-Oth	340	490.2	-	490.2	47	31.4	35.6	644
1012	FM1:IDFdm1-Oth	350	490.2	-	490.2	47	31.4	35.6	644

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1013	FM1:MSdm1-01	10	-	-	-	0	-	1.8	0
1013	FM1:MSdm1-01	20	0.4	-	0.4	0	17.0	6.0	8
1013	FM1:MSdm1-01	30	9.3	-	9.3	1	19.5	10.4	102
1013	FM1:MSdm1-01	40	50.7	-	50.7	7	20.4	14.4	401
1013	FM1:MSdm1-01	50	117.2	-	117.2	16	21.8	17.9	656
1013	FM1:MSdm1-01	60	186.3	-	186.3	24	23.2	20.8	768
1013	FM1:MSdm1-01	70	248.3	-	248.3	30	24.5	23.3	801
1013	FM1:MSdm1-01	80	300.8	-	300.8	35	25.7	25.4	803
1013	FM1:MSdm1-01	90	344.6	-	344.6	38	26.7	27.2	793
1013	FM1:MSdm1-01	100	381.8	-	381.8	41	27.5	28.7	781
1013	FM1:MSdm1-01	110	413.5	-	413.5	43	28.2	29.9	768
1013	FM1:MSdm1-01	120	440.3	-	440.3	45	28.9	31.0	756
1013	FM1:MSdm1-01	130	462.7	-	462.7	46	29.4	32.0	743
1013	FM1:MSdm1-01	140	481.9	-	481.9	47	29.8	32.8	732
1013	FM1:MSdm1-01	150	498.4	-	498.4	48	30.2	33.5	721
1013	FM1:MSdm1-01	160	512.6	-	512.6	49	30.6	34.1	712
1013	FM1:MSdm1-01	170	524.2	-	524.2	50	30.9	34.7	703
1013	FM1:MSdm1-01	180	534.3	-	534.3	50	31.1	35.1	694
1013	FM1:MSdm1-01	190	541.6	-	541.6	50	31.4	35.5	685
1013	FM1:MSdm1-01	200	545.9	-	545.9	51	31.6	35.9	674
1013	FM1:MSdm1-01	210	550.0	-	550.0	50	31.8	36.3	664
1013	FM1:MSdm1-01	220	553.4	-	553.4	50	32.0	36.5	656
1013	FM1:MSdm1-01	230	556.3	-	556.3	50	32.2	36.8	648
1013	FM1:MSdm1-01	240	558.4	-	558.4	50	32.4	37.0	639
1013	FM1:MSdm1-01	250	560.4	-	560.4	50	32.5	37.2	631
1013	FM1:MSdm1-01	260	561.9	-	561.9	50	32.6	37.4	624
1013	FM1:MSdm1-01	270	563.2	-	563.2	50	32.8	37.6	618
1013	FM1:MSdm1-01	280	564.5	-	564.5	50	32.9	37.7	612
1013	FM1:MSdm1-01	290	565.5	-	565.5	50	33.0	37.9	607
1013	FM1:MSdm1-01	300	566.0	-	566.0	50	33.1	38.0	602
1013	FM1:MSdm1-01	310	566.0	-	566.0	50	33.1	38.0	601
1013	FM1:MSdm1-01	320	566.0	-	566.0	50	33.1	38.0	601
1013	FM1:MSdm1-01	330	566.0	-	566.0	50	33.1	38.0	601
1013	FM1:MSdm1-01	340	566.0	-	566.0	50	33.1	38.0	601
1013	FM1:MSdm1-01	350	566.0	-	566.0	50	33.1	38.0	601

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
1014	FM1:MSdm1-03	10	-	-	-	0	-	1.0	0
1014	FM1:MSdm1-03	20	-	-	-	0	6.4	4.6	0
1014	FM1:MSdm1-03	30	6.5	-	6.5	2	16.6	8.8	118
1014	FM1:MSdm1-03	40	48.8	-	48.8	10	17.6	12.7	488
1014	FM1:MSdm1-03	50	119.6	-	119.6	20	19.2	16.0	814
1014	FM1:MSdm1-03	60	197.5	-	197.5	29	20.7	18.6	1012
1014	FM1:MSdm1-03	70	266.8	-	266.8	35	22.1	20.9	1072
1014	FM1:MSdm1-03	80	322.2	-	322.2	39	23.2	22.7	1056
1014	FM1:MSdm1-03	90	364.9	-	364.9	41	24.2	24.2	1015
1014	FM1:MSdm1-03	100	397.2	-	397.2	43	25.1	25.3	972
1014	FM1:MSdm1-03	110	422.5	-	422.5	45	25.9	26.4	934
1014	FM1:MSdm1-03	120	440.7	-	440.7	46	26.5	27.3	901
1014	FM1:MSdm1-03	130	455.1	-	455.1	46	27.0	28.0	871
1014	FM1:MSdm1-03	140	466.6	-	466.6	47	27.4	28.7	846
1014	FM1:MSdm1-03	150	475.1	-	475.1	47	27.8	29.2	823
1014	FM1:MSdm1-03	160	481.5	-	481.5	47	28.1	29.7	803
1014	FM1:MSdm1-03	170	486.8	-	486.8	47	28.4	30.1	787
1014	FM1:MSdm1-03	180	491.0	-	491.0	47	28.6	30.4	773
1014	FM1:MSdm1-03	190	493.9	-	493.9	47	28.8	30.7	759
1014	FM1:MSdm1-03	200	496.1	-	496.1	47	29.0	31.0	747
1014	FM1:MSdm1-03	210	497.6	-	497.6	47	29.1	31.3	736
1014	FM1:MSdm1-03	220	498.8	-	498.8	47	29.3	31.5	726
1014	FM1:MSdm1-03	230	499.7	-	499.7	47	29.4	31.7	717
1014	FM1:MSdm1-03	240	500.2	-	500.2	47	29.5	31.9	708
1014	FM1:MSdm1-03	250	499.5	-	499.5	47	29.6	32.1	699
1014	FM1:MSdm1-03	260	498.3	-	498.3	47	29.8	32.3	691
1014	FM1:MSdm1-03	270	496.7	-	496.7	46	29.8	32.4	683
1014	FM1:MSdm1-03	280	495.1	-	495.1	46	29.9	32.5	675
1014	FM1:MSdm1-03	290	493.7	-	493.7	46	30.0	32.6	668
1014	FM1:MSdm1-03	300	492.5	-	492.5	46	30.0	32.8	662
1014	FM1:MSdm1-03	310	492.3	-	492.3	46	30.1	32.8	661
1014	FM1:MSdm1-03	320	492.3	-	492.3	46	30.1	32.8	661
1014	FM1:MSdm1-03	330	492.3	-	492.3	46	30.1	32.8	661
1014	FM1:MSdm1-03	340	492.3	-	492.3	46	30.1	32.8	661
1014	FM1:MSdm1-03	350	492.3	-	492.3	46	30.1	32.8	661

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1015	FM1:MSdm1-04	10	-	-	-	0	-	1.5	0
1015	FM1:MSdm1-04	20	0.3	-	0.3	0	9.8	5.7	9
1015	FM1:MSdm1-04	30	8.2	-	8.2	2	17.9	10.0	111
1015	FM1:MSdm1-04	40	51.0	-	51.0	9	18.7	13.8	484
1015	FM1:MSdm1-04	50	123.0	-	123.0	19	20.0	17.0	815
1015	FM1:MSdm1-04	60	195.6	-	195.6	26	21.4	19.7	932
1015	FM1:MSdm1-04	70	257.1	-	257.1	32	22.7	21.9	942
1015	FM1:MSdm1-04	80	307.8	-	307.8	36	23.9	23.8	922
1015	FM1:MSdm1-04	90	346.8	-	346.8	39	24.9	25.3	892
1015	FM1:MSdm1-04	100	379.2	-	379.2	41	25.8	26.6	866
1015	FM1:MSdm1-04	110	405.9	-	405.9	42	26.5	27.7	844
1015	FM1:MSdm1-04	120	427.9	-	427.9	44	27.0	28.7	823
1015	FM1:MSdm1-04	130	445.6	-	445.6	45	27.6	29.5	804
1015	FM1:MSdm1-04	140	460.3	-	460.3	46	28.0	30.2	787
1015	FM1:MSdm1-04	150	472.5	-	472.5	46	28.4	30.8	772
1015	FM1:MSdm1-04	160	482.9	-	482.9	47	28.7	31.3	759
1015	FM1:MSdm1-04	170	491.6	-	491.6	47	29.0	31.8	747
1015	FM1:MSdm1-04	180	498.8	-	498.8	48	29.3	32.2	736
1015	FM1:MSdm1-04	190	504.4	-	504.4	48	29.5	32.5	726
1015	FM1:MSdm1-04	200	509.2	-	509.2	48	29.7	32.9	717
1015	FM1:MSdm1-04	210	512.7	-	512.7	48	29.9	33.1	708
1015	FM1:MSdm1-04	220	515.8	-	515.8	48	30.0	33.3	699
1015	FM1:MSdm1-04	230	518.4	-	518.4	48	30.2	33.6	692
1015	FM1:MSdm1-04	240	520.4	-	520.4	48	30.3	33.8	684
1015	FM1:MSdm1-04	250	521.8	-	521.8	48	30.4	34.0	678
1015	FM1:MSdm1-04	260	522.9	-	522.9	48	30.6	34.1	670
1015	FM1:MSdm1-04	270	522.8	-	522.8	48	30.7	34.3	663
1015	FM1:MSdm1-04	280	522.8	-	522.8	47	30.8	34.4	656
1015	FM1:MSdm1-04	290	522.5	-	522.5	47	30.9	34.6	649
1015	FM1:MSdm1-04	300	522.1	-	522.1	47	30.9	34.7	644
1015	FM1:MSdm1-04	310	521.9	-	521.9	47	30.9	34.7	643
1015	FM1:MSdm1-04	320	521.9	-	521.9	47	30.9	34.7	643
1015	FM1:MSdm1-04	330	521.9	-	521.9	47	30.9	34.7	643
1015	FM1:MSdm1-04	340	521.9	-	521.9	47	30.9	34.7	643
1015	FM1:MSdm1-04	350	521.9	-	521.9	47	30.9	34.7	643

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1016	FM1:MSdm1-05	10	-	-	-	0	-	1.2	0
1016	FM1:MSdm1-05	20	0.1	-	0.1	0	15.4	5.3	3
1016	FM1:MSdm1-05	30	6.0	-	6.0	1	17.4	9.8	81
1016	FM1:MSdm1-05	40	58.9	-	58.9	12	18.0	13.8	637
1016	FM1:MSdm1-05	50	152.1	-	152.1	25	18.9	17.3	1175
1016	FM1:MSdm1-05	60	239.8	-	239.8	33	20.1	20.2	1309
1016	FM1:MSdm1-05	70	305.4	-	305.4	37	21.4	22.5	1245
1016	FM1:MSdm1-05	80	354.2	-	354.2	39	22.6	24.5	1145
1016	FM1:MSdm1-05	90	392.4	-	392.4	41	23.7	26.1	1066
1016	FM1:MSdm1-05	100	422.3	-	422.3	42	24.6	27.5	1007
1016	FM1:MSdm1-05	110	445.3	-	445.3	44	25.3	28.5	959
1016	FM1:MSdm1-05	120	463.5	-	463.5	44	25.9	29.5	921
1016	FM1:MSdm1-05	130	478.0	-	478.0	45	26.4	30.3	888
1016	FM1:MSdm1-05	140	489.7	-	489.7	45	26.8	31.0	861
1016	FM1:MSdm1-05	150	499.5	-	499.5	45	27.2	31.6	838
1016	FM1:MSdm1-05	160	507.4	-	507.4	46	27.5	32.2	818
1016	FM1:MSdm1-05	170	514.2	-	514.2	46	27.8	32.6	799
1016	FM1:MSdm1-05	180	518.8	-	518.8	46	28.0	33.0	783
1016	FM1:MSdm1-05	190	522.8	-	522.8	46	28.2	33.4	768
1016	FM1:MSdm1-05	200	526.0	-	526.0	46	28.5	33.7	754
1016	FM1:MSdm1-05	210	528.3	-	528.3	46	28.7	34.0	742
1016	FM1:MSdm1-05	220	529.4	-	529.4	45	28.9	34.3	729
1016	FM1:MSdm1-05	230	530.2	-	530.2	45	29.0	34.5	718
1016	FM1:MSdm1-05	240	530.8	-	530.8	45	29.2	34.7	708
1016	FM1:MSdm1-05	250	531.1	-	531.1	45	29.3	34.9	698
1016	FM1:MSdm1-05	260	531.4	-	531.4	45	29.4	35.1	689
1016	FM1:MSdm1-05	270	531.5	-	531.5	45	29.5	35.3	680
1016	FM1:MSdm1-05	280	530.7	-	530.7	45	29.6	35.4	672
1016	FM1:MSdm1-05	290	529.0	-	529.0	45	29.7	35.5	663
1016	FM1:MSdm1-05	300	527.2	-	527.2	44	29.8	35.6	655
1016	FM1:MSdm1-05	310	526.6	-	526.6	44	29.8	35.6	654
1016	FM1:MSdm1-05	320	526.6	-	526.6	44	29.8	35.6	654
1016	FM1:MSdm1-05	330	526.6	-	526.6	44	29.8	35.6	654
1016	FM1:MSdm1-05	340	526.6	-	526.6	44	29.8	35.6	654
1016	FM1:MSdm1-05	350	526.6	-	526.6	44	29.8	35.6	654

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1017	FM1:MSdm1-Oth	10	-	-	-	0	1.6	2.0	0
1017	FM1:MSdm1-Oth	20	0.5	-	0.5	0	12.1	6.1	12
1017	FM1:MSdm1-Oth	30	10.6	-	10.6	2	18.8	10.4	123
1017	FM1:MSdm1-Oth	40	54.9	-	54.9	9	19.7	14.3	458
1017	FM1:MSdm1-Oth	50	124.7	-	124.7	18	21.0	17.7	751
1017	FM1:MSdm1-Oth	60	195.4	-	195.4	25	22.4	20.5	864
1017	FM1:MSdm1-Oth	70	256.6	-	256.6	32	23.7	22.8	884
1017	FM1:MSdm1-Oth	80	307.1	-	307.1	36	24.8	24.8	872
1017	FM1:MSdm1-Oth	90	348.3	-	348.3	38	25.8	26.5	850
1017	FM1:MSdm1-Oth	100	382.2	-	382.2	41	26.7	27.8	830
1017	FM1:MSdm1-Oth	110	410.7	-	410.7	43	27.3	29.0	810
1017	FM1:MSdm1-Oth	120	434.8	-	434.8	44	27.9	30.0	793
1017	FM1:MSdm1-Oth	130	454.2	-	454.2	46	28.4	30.9	777
1017	FM1:MSdm1-Oth	140	470.9	-	470.9	47	28.9	31.6	763
1017	FM1:MSdm1-Oth	150	485.2	-	485.2	47	29.3	32.3	750
1017	FM1:MSdm1-Oth	160	497.3	-	497.3	48	29.6	32.8	739
1017	FM1:MSdm1-Oth	170	507.4	-	507.4	49	29.9	33.4	729
1017	FM1:MSdm1-Oth	180	515.9	-	515.9	49	30.2	33.8	719
1017	FM1:MSdm1-Oth	190	523.0	-	523.0	49	30.4	34.2	710
1017	FM1:MSdm1-Oth	200	527.9	-	527.9	49	30.6	34.5	701
1017	FM1:MSdm1-Oth	210	532.0	-	532.0	49	30.8	34.8	692
1017	FM1:MSdm1-Oth	220	535.5	-	535.5	49	31.0	35.1	683
1017	FM1:MSdm1-Oth	230	538.3	-	538.3	50	31.1	35.3	676
1017	FM1:MSdm1-Oth	240	540.6	-	540.6	50	31.3	35.5	668
1017	FM1:MSdm1-Oth	250	542.0	-	542.0	49	31.4	35.7	660
1017	FM1:MSdm1-Oth	260	543.1	-	543.1	49	31.5	35.9	652
1017	FM1:MSdm1-Oth	270	544.0	-	544.0	49	31.6	36.1	645
1017	FM1:MSdm1-Oth	280	544.7	-	544.7	49	31.7	36.3	639
1017	FM1:MSdm1-Oth	290	545.4	-	545.4	49	31.8	36.4	633
1017	FM1:MSdm1-Oth	300	545.6	-	545.6	48	31.9	36.5	628
1017	FM1:MSdm1-Oth	310	545.5	-	545.5	48	31.9	36.5	627
1017	FM1:MSdm1-Oth	320	545.5	-	545.5	48	31.9	36.5	627
1017	FM1:MSdm1-Oth	330	545.5	-	545.5	48	31.9	36.5	627
1017	FM1:MSdm1-Oth	340	545.5	-	545.5	48	31.9	36.5	627
1017	FM1:MSdm1-Oth	350	545.5	-	545.5	48	31.9	36.5	627

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
1018	FM1:Msdm1a-All	10	-	-	-	0	-	2.2	0
1018	FM1:Msdm1a-All	20	0.3	-	0.3	0	20.5	6.8	4
1018	FM1:Msdm1a-All	30	14.9	-	14.9	1	20.9	11.6	132
1018	FM1:Msdm1a-All	40	78.2	-	78.2	9	22.9	16.1	430
1018	FM1:Msdm1a-All	50	156.2	-	156.2	20	24.9	19.9	580
1018	FM1:Msdm1a-All	60	228.5	-	228.5	29	26.9	23.2	635
1018	FM1:Msdm1a-All	70	294.2	-	294.2	36	28.4	25.9	653
1018	FM1:Msdm1a-All	80	351.4	-	351.4	41	29.7	28.2	655
1018	FM1:Msdm1a-All	90	400.3	-	400.3	45	30.8	30.1	654
1018	FM1:Msdm1a-All	100	442.9	-	442.9	48	31.8	31.8	647
1018	FM1:Msdm1a-All	110	481.0	-	481.0	50	32.6	33.2	643
1018	FM1:Msdm1a-All	120	513.4	-	513.4	52	33.2	34.4	636
1018	FM1:Msdm1a-All	130	541.4	-	541.4	54	33.8	35.4	630
1018	FM1:Msdm1a-All	140	565.8	-	565.8	55	34.3	36.4	624
1018	FM1:Msdm1a-All	150	587.1	-	587.1	56	34.7	37.2	618
1018	FM1:Msdm1a-All	160	605.8	-	605.8	57	35.1	37.8	613
1018	FM1:Msdm1a-All	170	622.2	-	622.2	58	35.4	38.5	607
1018	FM1:Msdm1a-All	180	636.2	-	636.2	58	35.8	39.0	602
1018	FM1:Msdm1a-All	190	648.4	-	648.4	59	36.1	39.5	596
1018	FM1:Msdm1a-All	200	657.8	-	657.8	59	36.4	39.9	587
1018	FM1:Msdm1a-All	210	666.2	-	666.2	59	36.6	40.3	580
1018	FM1:Msdm1a-All	220	673.7	-	673.7	60	36.9	40.7	572
1018	FM1:Msdm1a-All	230	679.7	-	679.7	60	37.1	41.0	565
1018	FM1:Msdm1a-All	240	684.9	-	684.9	60	37.3	41.3	559
1018	FM1:Msdm1a-All	250	689.4	-	689.4	60	37.4	41.6	553
1018	FM1:Msdm1a-All	260	693.6	-	693.6	60	37.6	41.9	548
1018	FM1:Msdm1a-All	270	697.2	-	697.2	59	37.8	42.1	542
1018	FM1:Msdm1a-All	280	699.5	-	699.5	59	37.9	42.3	537
1018	FM1:Msdm1a-All	290	699.5	-	699.5	59	38.0	42.4	531
1018	FM1:Msdm1a-All	300	699.3	-	699.3	59	38.1	42.5	527
1018	FM1:Msdm1a-All	310	699.3	-	699.3	59	38.1	42.5	527
1018	FM1:Msdm1a-All	320	699.3	-	699.3	59	38.1	42.5	527
1018	FM1:Msdm1a-All	330	699.3	-	699.3	59	38.1	42.5	527
1018	FM1:Msdm1a-All	340	699.3	-	699.3	59	38.1	42.5	527
1018	FM1:Msdm1a-All	350	699.3	-	699.3	59	38.1	42.5	527

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
2001	FM2:ESSFdc1/dcu1-01	10	-	-	-	0	-	0.8	0
2001	FM2:ESSFdc1/dcu1-01	20	-	-	-	0	-	3.9	0
2001	FM2:ESSFdc1/dcu1-01	30	1.5	-	1.5	1	14.6	7.8	31
2001	FM2:ESSFdc1/dcu1-01	40	24.0	-	24.0	5	18.4	11.5	275
2001	FM2:ESSFdc1/dcu1-01	50	78.3	-	78.3	13	19.8	14.8	577
2001	FM2:ESSFdc1/dcu1-01	60	145.5	-	145.5	21	21.3	17.7	782
2001	FM2:ESSFdc1/dcu1-01	70	210.9	-	210.9	28	22.7	20.1	879
2001	FM2:ESSFdc1/dcu1-01	80	267.7	-	267.7	34	23.9	22.1	907
2001	FM2:ESSFdc1/dcu1-01	90	314.2	-	314.2	38	25.0	23.8	899
2001	FM2:ESSFdc1/dcu1-01	100	351.8	-	351.8	41	26.0	25.2	879
2001	FM2:ESSFdc1/dcu1-01	110	381.2	-	381.2	43	26.8	26.4	854
2001	FM2:ESSFdc1/dcu1-01	120	405.2	-	405.2	44	27.4	27.4	831
2001	FM2:ESSFdc1/dcu1-01	130	424.4	-	424.4	46	28.0	28.3	809
2001	FM2:ESSFdc1/dcu1-01	140	439.7	-	439.7	47	28.5	29.1	789
2001	FM2:ESSFdc1/dcu1-01	150	452.4	-	452.4	48	28.9	29.8	772
2001	FM2:ESSFdc1/dcu1-01	160	462.6	-	462.6	48	29.3	30.3	755
2001	FM2:ESSFdc1/dcu1-01	170	471.0	-	471.0	48	29.6	30.8	741
2001	FM2:ESSFdc1/dcu1-01	180	477.6	-	477.6	48	29.9	31.3	728
2001	FM2:ESSFdc1/dcu1-01	190	483.1	-	483.1	48	30.2	31.7	716
2001	FM2:ESSFdc1/dcu1-01	200	487.2	-	487.2	49	30.4	32.0	706
2001	FM2:ESSFdc1/dcu1-01	210	490.6	-	490.6	49	30.6	32.3	696
2001	FM2:ESSFdc1/dcu1-01	220	493.1	-	493.1	49	30.7	32.6	687
2001	FM2:ESSFdc1/dcu1-01	230	495.1	-	495.1	48	30.9	32.9	679
2001	FM2:ESSFdc1/dcu1-01	240	496.9	-	496.9	48	31.0	33.1	671
2001	FM2:ESSFdc1/dcu1-01	250	497.9	-	497.9	48	31.1	33.3	663
2001	FM2:ESSFdc1/dcu1-01	260	498.0	-	498.0	48	31.2	33.5	656
2001	FM2:ESSFdc1/dcu1-01	270	497.7	-	497.7	48	31.3	33.6	649
2001	FM2:ESSFdc1/dcu1-01	280	497.3	-	497.3	48	31.4	33.8	642
2001	FM2:ESSFdc1/dcu1-01	290	497.0	-	497.0	48	31.5	34.0	636
2001	FM2:ESSFdc1/dcu1-01	300	496.6	-	496.6	48	31.6	34.1	631
2001	FM2:ESSFdc1/dcu1-01	310	496.5	-	496.5	48	31.6	34.1	630
2001	FM2:ESSFdc1/dcu1-01	320	496.5	-	496.5	48	31.6	34.1	630
2001	FM2:ESSFdc1/dcu1-01	330	496.5	-	496.5	48	31.6	34.1	630
2001	FM2:ESSFdc1/dcu1-01	340	496.5	-	496.5	48	31.6	34.1	630
2001	FM2:ESSFdc1/dcu1-01	350	496.5	-	496.5	48	31.6	34.1	630

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
2002	FM2:ESSFdc1/dcu1-03	10	-	-	-	0	-	0.8	0
2002	FM2:ESSFdc1/dcu1-03	20	-	-	-	0	4.1	3.8	0
2002	FM2:ESSFdc1/dcu1-03	30	1.0	-	1.0	0	17.1	7.5	25
2002	FM2:ESSFdc1/dcu1-03	40	19.4	-	19.4	5	17.6	11.0	261
2002	FM2:ESSFdc1/dcu1-03	50	67.4	-	67.4	12	18.6	14.0	588
2002	FM2:ESSFdc1/dcu1-03	60	129.4	-	129.4	21	20.0	16.7	840
2002	FM2:ESSFdc1/dcu1-03	70	191.8	-	191.8	27	21.2	18.9	972
2002	FM2:ESSFdc1/dcu1-03	80	246.6	-	246.6	33	22.3	20.8	1019
2002	FM2:ESSFdc1/dcu1-03	90	292.4	-	292.4	37	23.3	22.4	1018
2002	FM2:ESSFdc1/dcu1-03	100	329.0	-	329.0	39	24.2	23.7	989
2002	FM2:ESSFdc1/dcu1-03	110	358.7	-	358.7	41	25.0	24.8	960
2002	FM2:ESSFdc1/dcu1-03	120	382.1	-	382.1	43	25.6	25.7	930
2002	FM2:ESSFdc1/dcu1-03	130	401.1	-	401.1	44	26.1	26.6	903
2002	FM2:ESSFdc1/dcu1-03	140	416.7	-	416.7	44	26.6	27.3	880
2002	FM2:ESSFdc1/dcu1-03	150	429.4	-	429.4	45	27.0	27.9	859
2002	FM2:ESSFdc1/dcu1-03	160	439.5	-	439.5	45	27.4	28.4	840
2002	FM2:ESSFdc1/dcu1-03	170	447.7	-	447.7	46	27.7	28.9	823
2002	FM2:ESSFdc1/dcu1-03	180	454.1	-	454.1	46	28.0	29.3	807
2002	FM2:ESSFdc1/dcu1-03	190	459.7	-	459.7	46	28.2	29.6	792
2002	FM2:ESSFdc1/dcu1-03	200	463.8	-	463.8	46	28.4	30.0	779
2002	FM2:ESSFdc1/dcu1-03	210	467.3	-	467.3	46	28.6	30.3	767
2002	FM2:ESSFdc1/dcu1-03	220	469.6	-	469.6	46	28.8	30.5	756
2002	FM2:ESSFdc1/dcu1-03	230	471.6	-	471.6	46	28.9	30.8	746
2002	FM2:ESSFdc1/dcu1-03	240	473.4	-	473.4	46	29.1	31.0	737
2002	FM2:ESSFdc1/dcu1-03	250	474.8	-	474.8	46	29.2	31.2	729
2002	FM2:ESSFdc1/dcu1-03	260	475.1	-	475.1	46	29.3	31.4	720
2002	FM2:ESSFdc1/dcu1-03	270	475.0	-	475.0	46	29.4	31.6	712
2002	FM2:ESSFdc1/dcu1-03	280	474.3	-	474.3	46	29.5	31.7	704
2002	FM2:ESSFdc1/dcu1-03	290	473.6	-	473.6	45	29.6	31.9	696
2002	FM2:ESSFdc1/dcu1-03	300	472.8	-	472.8	45	29.6	31.9	690
2002	FM2:ESSFdc1/dcu1-03	310	472.7	-	472.7	45	29.6	31.9	689
2002	FM2:ESSFdc1/dcu1-03	320	472.7	-	472.7	45	29.6	31.9	689
2002	FM2:ESSFdc1/dcu1-03	330	472.7	-	472.7	45	29.6	31.9	689
2002	FM2:ESSFdc1/dcu1-03	340	472.7	-	472.7	45	29.6	31.9	689
2002	FM2:ESSFdc1/dcu1-03	350	472.7	-	472.7	45	29.6	31.9	689

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2003	FM2:ESSFdc1/dcu1-04	10	-	-	-	0	-	0.9	0
2003	FM2:ESSFdc1/dcu1-04	20	-	-	-	0	-	4.4	0
2003	FM2:ESSFdc1/dcu1-04	30	2.3	-	2.3	1	18.3	8.4	47
2003	FM2:ESSFdc1/dcu1-04	40	31.9	-	31.9	5	19.2	12.3	330
2003	FM2:ESSFdc1/dcu1-04	50	94.4	-	94.4	14	21.1	15.8	578
2003	FM2:ESSFdc1/dcu1-04	60	164.7	-	164.7	22	22.8	18.8	717
2003	FM2:ESSFdc1/dcu1-04	70	230.9	-	230.9	30	24.4	21.3	784
2003	FM2:ESSFdc1/dcu1-04	80	288.0	-	288.0	36	25.7	23.5	804
2003	FM2:ESSFdc1/dcu1-04	90	335.0	-	335.0	40	26.8	25.3	798
2003	FM2:ESSFdc1/dcu1-04	100	372.7	-	372.7	43	27.8	26.7	782
2003	FM2:ESSFdc1/dcu1-04	110	403.2	-	403.2	46	28.6	28.1	764
2003	FM2:ESSFdc1/dcu1-04	120	428.2	-	428.2	47	29.4	29.2	746
2003	FM2:ESSFdc1/dcu1-04	130	447.8	-	447.8	48	29.9	30.1	729
2003	FM2:ESSFdc1/dcu1-04	140	464.0	-	464.0	49	30.4	31.0	714
2003	FM2:ESSFdc1/dcu1-04	150	477.5	-	477.5	50	30.8	31.6	701
2003	FM2:ESSFdc1/dcu1-04	160	488.3	-	488.3	51	31.2	32.2	687
2003	FM2:ESSFdc1/dcu1-04	170	497.2	-	497.2	51	31.6	32.7	675
2003	FM2:ESSFdc1/dcu1-04	180	504.2	-	504.2	51	31.8	33.2	665
2003	FM2:ESSFdc1/dcu1-04	190	509.8	-	509.8	51	32.1	33.6	655
2003	FM2:ESSFdc1/dcu1-04	200	514.5	-	514.5	52	32.3	34.1	647
2003	FM2:ESSFdc1/dcu1-04	210	518.2	-	518.2	52	32.5	34.4	639
2003	FM2:ESSFdc1/dcu1-04	220	521.1	-	521.1	52	32.6	34.6	632
2003	FM2:ESSFdc1/dcu1-04	230	522.8	-	522.8	51	32.8	34.9	624
2003	FM2:ESSFdc1/dcu1-04	240	524.0	-	524.0	51	32.9	35.1	617
2003	FM2:ESSFdc1/dcu1-04	250	524.5	-	524.5	51	33.0	35.3	611
2003	FM2:ESSFdc1/dcu1-04	260	525.0	-	525.0	51	33.1	35.5	605
2003	FM2:ESSFdc1/dcu1-04	270	525.3	-	525.3	51	33.2	35.7	600
2003	FM2:ESSFdc1/dcu1-04	280	525.6	-	525.6	51	33.3	35.8	594
2003	FM2:ESSFdc1/dcu1-04	290	525.4	-	525.4	51	33.4	36.0	590
2003	FM2:ESSFdc1/dcu1-04	300	524.9	-	524.9	51	33.4	36.1	586
2003	FM2:ESSFdc1/dcu1-04	310	524.9	-	524.9	51	33.4	36.1	586
2003	FM2:ESSFdc1/dcu1-04	320	524.9	-	524.9	51	33.4	36.1	586
2003	FM2:ESSFdc1/dcu1-04	330	524.9	-	524.9	51	33.4	36.1	586
2003	FM2:ESSFdc1/dcu1-04	340	524.9	-	524.9	51	33.4	36.1	586
2003	FM2:ESSFdc1/dcu1-04	350	524.9	-	524.9	51	33.4	36.1	586

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
2004	FM2:ESSFdc1/dcu1-Oth	10	-	-	-	0	-	0.7	0
2004	FM2:ESSFdc1/dcu1-Oth	20	-	-	-	0	-	2.9	0
2004	FM2:ESSFdc1/dcu1-Oth	30	0.3	-	0.3	0	12.8	5.7	7
2004	FM2:ESSFdc1/dcu1-Oth	40	10.3	-	10.3	3	14.3	8.4	153
2004	FM2:ESSFdc1/dcu1-Oth	50	41.9	-	41.9	8	15.3	10.8	380
2004	FM2:ESSFdc1/dcu1-Oth	60	85.6	-	85.6	13	16.4	13.0	551
2004	FM2:ESSFdc1/dcu1-Oth	70	131.0	-	131.0	19	17.4	14.8	647
2004	FM2:ESSFdc1/dcu1-Oth	80	172.6	-	172.6	23	18.4	16.3	693
2004	FM2:ESSFdc1/dcu1-Oth	90	208.7	-	208.7	26	19.2	17.6	704
2004	FM2:ESSFdc1/dcu1-Oth	100	239.0	-	239.0	30	20.0	18.8	702
2004	FM2:ESSFdc1/dcu1-Oth	110	263.9	-	263.9	32	20.6	19.6	689
2004	FM2:ESSFdc1/dcu1-Oth	120	284.5	-	284.5	33	21.1	20.5	674
2004	FM2:ESSFdc1/dcu1-Oth	130	301.6	-	301.6	34	21.6	21.2	661
2004	FM2:ESSFdc1/dcu1-Oth	140	315.4	-	315.4	35	22.0	21.8	646
2004	FM2:ESSFdc1/dcu1-Oth	150	326.9	-	326.9	36	22.4	22.4	634
2004	FM2:ESSFdc1/dcu1-Oth	160	336.5	-	336.5	36	22.7	22.8	623
2004	FM2:ESSFdc1/dcu1-Oth	170	344.7	-	344.7	37	22.9	23.2	612
2004	FM2:ESSFdc1/dcu1-Oth	180	351.5	-	351.5	37	23.1	23.6	602
2004	FM2:ESSFdc1/dcu1-Oth	190	357.2	-	357.2	38	23.4	23.9	594
2004	FM2:ESSFdc1/dcu1-Oth	200	361.3	-	361.3	38	23.5	24.2	585
2004	FM2:ESSFdc1/dcu1-Oth	210	364.9	-	364.9	38	23.7	24.5	576
2004	FM2:ESSFdc1/dcu1-Oth	220	367.7	-	367.7	38	23.9	24.7	569
2004	FM2:ESSFdc1/dcu1-Oth	230	370.2	-	370.2	38	24.0	24.9	562
2004	FM2:ESSFdc1/dcu1-Oth	240	372.4	-	372.4	38	24.1	25.1	556
2004	FM2:ESSFdc1/dcu1-Oth	250	373.8	-	373.8	38	24.2	25.3	550
2004	FM2:ESSFdc1/dcu1-Oth	260	374.5	-	374.5	38	24.3	25.5	544
2004	FM2:ESSFdc1/dcu1-Oth	270	375.0	-	375.0	38	24.4	25.6	538
2004	FM2:ESSFdc1/dcu1-Oth	280	375.3	-	375.3	37	24.5	25.7	532
2004	FM2:ESSFdc1/dcu1-Oth	290	375.2	-	375.2	37	24.6	25.9	527
2004	FM2:ESSFdc1/dcu1-Oth	300	375.0	-	375.0	37	24.6	25.9	523
2004	FM2:ESSFdc1/dcu1-Oth	310	375.0	-	375.0	37	24.6	26.0	523
2004	FM2:ESSFdc1/dcu1-Oth	320	375.0	-	375.0	37	24.6	26.0	523
2004	FM2:ESSFdc1/dcu1-Oth	330	375.0	-	375.0	37	24.6	26.0	523
2004	FM2:ESSFdc1/dcu1-Oth	340	375.0	-	375.0	37	24.6	26.0	523
2004	FM2:ESSFdc1/dcu1-Oth	350	375.0	-	375.0	37	24.6	26.0	523

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2005	FM2:ICHmk1/mw2-01	10	-	-	-	0	-	2.9	0
2005	FM2:ICHmk1/mw2-01	20	1.7	-	1.7	0	20.7	7.7	19
2005	FM2:ICHmk1/mw2-01	30	20.7	-	20.7	2	21.4	12.5	163
2005	FM2:ICHmk1/mw2-01	40	76.5	-	76.5	9	22.8	16.8	419
2005	FM2:ICHmk1/mw2-01	50	147.4	-	147.4	18	24.4	20.6	575
2005	FM2:ICHmk1/mw2-01	60	216.9	-	216.9	26	25.9	23.8	648
2005	FM2:ICHmk1/mw2-01	70	280.8	-	280.8	33	27.3	26.4	681
2005	FM2:ICHmk1/mw2-01	80	337.2	-	337.2	38	28.4	28.7	693
2005	FM2:ICHmk1/mw2-01	90	387.4	-	387.4	42	29.4	30.6	698
2005	FM2:ICHmk1/mw2-01	100	431.7	-	431.7	45	30.2	32.3	697
2005	FM2:ICHmk1/mw2-01	110	470.2	-	470.2	48	30.9	33.7	694
2005	FM2:ICHmk1/mw2-01	120	503.5	-	503.5	50	31.5	34.9	689
2005	FM2:ICHmk1/mw2-01	130	532.5	-	532.5	51	32.1	36.0	682
2005	FM2:ICHmk1/mw2-01	140	557.2	-	557.2	53	32.6	36.9	676
2005	FM2:ICHmk1/mw2-01	150	578.0	-	578.0	54	33.0	37.6	667
2005	FM2:ICHmk1/mw2-01	160	595.4	-	595.4	55	33.4	38.3	658
2005	FM2:ICHmk1/mw2-01	170	610.5	-	610.5	55	33.8	38.9	649
2005	FM2:ICHmk1/mw2-01	180	623.0	-	623.0	56	34.1	39.4	641
2005	FM2:ICHmk1/mw2-01	190	633.4	-	633.4	56	34.4	39.9	632
2005	FM2:ICHmk1/mw2-01	200	641.8	-	641.8	57	34.7	40.3	623
2005	FM2:ICHmk1/mw2-01	210	648.9	-	648.9	57	34.9	40.7	614
2005	FM2:ICHmk1/mw2-01	220	655.0	-	655.0	57	35.2	41.0	606
2005	FM2:ICHmk1/mw2-01	230	659.5	-	659.5	57	35.3	41.3	599
2005	FM2:ICHmk1/mw2-01	240	663.2	-	663.2	57	35.5	41.5	592
2005	FM2:ICHmk1/mw2-01	250	666.4	-	666.4	57	35.7	41.8	586
2005	FM2:ICHmk1/mw2-01	260	669.4	-	669.4	57	35.8	42.0	581
2005	FM2:ICHmk1/mw2-01	270	671.8	-	671.8	57	35.9	42.2	576
2005	FM2:ICHmk1/mw2-01	280	673.8	-	673.8	57	36.1	42.4	571
2005	FM2:ICHmk1/mw2-01	290	674.9	-	674.9	56	36.2	42.5	566
2005	FM2:ICHmk1/mw2-01	300	675.0	-	675.0	56	36.2	42.6	562
2005	FM2:ICHmk1/mw2-01	310	675.0	-	675.0	56	36.2	42.6	562
2005	FM2:ICHmk1/mw2-01	320	675.0	-	675.0	56	36.2	42.6	562
2005	FM2:ICHmk1/mw2-01	330	675.0	-	675.0	56	36.2	42.6	562
2005	FM2:ICHmk1/mw2-01	340	675.0	-	675.0	56	36.2	42.6	562
2005	FM2:ICHmk1/mw2-01	350	675.0	-	675.0	56	36.2	42.6	562

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2006	FM2:ICHmk1/mw2-03	10	-	-	-	0	-	2.1	0
2006	FM2:ICHmk1/mw2-03	20	0.2	-	0.2	0	18.5	6.7	8
2006	FM2:ICHmk1/mw2-03	30	14.3	-	14.3	4	18.7	11.0	207
2006	FM2:ICHmk1/mw2-03	40	68.2	-	68.2	10	20.2	14.8	493
2006	FM2:ICHmk1/mw2-03	50	135.4	-	135.4	18	21.9	18.0	648
2006	FM2:ICHmk1/mw2-03	60	196.9	-	196.9	24	23.4	20.6	714
2006	FM2:ICHmk1/mw2-03	70	250.2	-	250.2	30	24.7	22.8	739
2006	FM2:ICHmk1/mw2-03	80	294.9	-	294.9	35	25.8	24.7	748
2006	FM2:ICHmk1/mw2-03	90	333.4	-	333.4	38	26.7	26.2	750
2006	FM2:ICHmk1/mw2-03	100	365.5	-	365.5	41	27.4	27.6	748
2006	FM2:ICHmk1/mw2-03	110	393.9	-	393.9	43	28.1	28.7	742
2006	FM2:ICHmk1/mw2-03	120	418.5	-	418.5	44	28.7	29.8	736
2006	FM2:ICHmk1/mw2-03	130	440.0	-	440.0	46	29.1	30.7	731
2006	FM2:ICHmk1/mw2-03	140	459.3	-	459.3	47	29.5	31.5	724
2006	FM2:ICHmk1/mw2-03	150	476.9	-	476.9	48	29.9	32.2	717
2006	FM2:ICHmk1/mw2-03	160	492.7	-	492.7	49	30.2	32.8	710
2006	FM2:ICHmk1/mw2-03	170	505.8	-	505.8	50	30.6	33.4	702
2006	FM2:ICHmk1/mw2-03	180	517.8	-	517.8	51	30.9	33.9	695
2006	FM2:ICHmk1/mw2-03	190	528.3	-	528.3	51	31.2	34.4	688
2006	FM2:ICHmk1/mw2-03	200	538.1	-	538.1	51	31.4	34.8	680
2006	FM2:ICHmk1/mw2-03	210	546.0	-	546.0	52	31.7	35.2	672
2006	FM2:ICHmk1/mw2-03	220	553.1	-	553.1	52	31.9	35.6	664
2006	FM2:ICHmk1/mw2-03	230	559.6	-	559.6	52	32.2	35.9	656
2006	FM2:ICHmk1/mw2-03	240	564.9	-	564.9	52	32.4	36.2	648
2006	FM2:ICHmk1/mw2-03	250	569.9	-	569.9	52	32.6	36.4	639
2006	FM2:ICHmk1/mw2-03	260	574.1	-	574.1	52	32.8	36.7	630
2006	FM2:ICHmk1/mw2-03	270	577.8	-	577.8	52	33.0	36.9	623
2006	FM2:ICHmk1/mw2-03	280	581.4	-	581.4	52	33.2	37.1	615
2006	FM2:ICHmk1/mw2-03	290	582.8	-	582.8	52	33.4	37.4	607
2006	FM2:ICHmk1/mw2-03	300	583.7	-	583.7	52	33.5	37.5	600
2006	FM2:ICHmk1/mw2-03	310	583.7	-	583.7	52	33.5	37.5	600
2006	FM2:ICHmk1/mw2-03	320	583.7	-	583.7	52	33.5	37.5	600
2006	FM2:ICHmk1/mw2-03	330	583.7	-	583.7	52	33.5	37.5	600
2006	FM2:ICHmk1/mw2-03	340	583.7	-	583.7	52	33.5	37.5	600
2006	FM2:ICHmk1/mw2-03	350	583.7	-	583.7	52	33.5	37.5	600

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
2007	FM2:ICHmk1/mw2-04	10	-	-	-	0	-	2.4	0
2007	FM2:ICHmk1/mw2-04	20	0.6	-	0.6	0	20.0	7.0	15
2007	FM2:ICHmk1/mw2-04	30	15.1	-	15.1	2	20.6	11.5	153
2007	FM2:ICHmk1/mw2-04	40	62.0	-	62.0	7	21.6	15.5	394
2007	FM2:ICHmk1/mw2-04	50	123.9	-	123.9	15	23.0	19.0	560
2007	FM2:ICHmk1/mw2-04	60	185.6	-	185.6	22	24.3	21.9	648
2007	FM2:ICHmk1/mw2-04	70	243.2	-	243.2	28	25.6	24.5	694
2007	FM2:ICHmk1/mw2-04	80	295.2	-	295.2	33	26.6	26.6	717
2007	FM2:ICHmk1/mw2-04	90	341.7	-	341.7	37	27.5	28.4	731
2007	FM2:ICHmk1/mw2-04	100	383.8	-	383.8	41	28.2	30.0	736
2007	FM2:ICHmk1/mw2-04	110	421.0	-	421.0	43	28.9	31.4	737
2007	FM2:ICHmk1/mw2-04	120	453.6	-	453.6	46	29.5	32.6	735
2007	FM2:ICHmk1/mw2-04	130	482.5	-	482.5	47	30.0	33.6	731
2007	FM2:ICHmk1/mw2-04	140	508.0	-	508.0	49	30.5	34.5	725
2007	FM2:ICHmk1/mw2-04	150	530.2	-	530.2	50	31.0	35.3	718
2007	FM2:ICHmk1/mw2-04	160	549.2	-	549.2	52	31.4	36.0	710
2007	FM2:ICHmk1/mw2-04	170	565.6	-	565.6	52	31.7	36.6	702
2007	FM2:ICHmk1/mw2-04	180	579.4	-	579.4	53	32.1	37.2	692
2007	FM2:ICHmk1/mw2-04	190	591.5	-	591.5	53	32.4	37.7	681
2007	FM2:ICHmk1/mw2-04	200	602.1	-	602.1	53	32.7	38.1	672
2007	FM2:ICHmk1/mw2-04	210	609.6	-	609.6	53	33.0	38.5	661
2007	FM2:ICHmk1/mw2-04	220	615.6	-	615.6	53	33.2	38.8	650
2007	FM2:ICHmk1/mw2-04	230	620.9	-	620.9	53	33.5	39.1	640
2007	FM2:ICHmk1/mw2-04	240	625.4	-	625.4	53	33.7	39.4	631
2007	FM2:ICHmk1/mw2-04	250	629.5	-	629.5	53	33.9	39.7	621
2007	FM2:ICHmk1/mw2-04	260	632.6	-	632.6	53	34.1	39.9	613
2007	FM2:ICHmk1/mw2-04	270	635.4	-	635.4	53	34.2	40.2	605
2007	FM2:ICHmk1/mw2-04	280	637.7	-	637.7	53	34.4	40.4	597
2007	FM2:ICHmk1/mw2-04	290	639.7	-	639.7	53	34.5	40.6	590
2007	FM2:ICHmk1/mw2-04	300	641.2	-	641.2	53	34.7	40.8	585
2007	FM2:ICHmk1/mw2-04	310	641.2	-	641.2	53	34.7	40.8	585
2007	FM2:ICHmk1/mw2-04	320	641.2	-	641.2	53	34.7	40.8	585
2007	FM2:ICHmk1/mw2-04	330	641.2	-	641.2	53	34.7	40.8	585
2007	FM2:ICHmk1/mw2-04	340	641.2	-	641.2	53	34.7	40.8	585
2007	FM2:ICHmk1/mw2-04	350	641.2	-	641.2	53	34.7	40.8	585

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2008	FM2:ICHmk1/mw2-Oth	10	-	-	-	0	-	2.3	0
2008	FM2:ICHmk1/mw2-Oth	20	0.7	-	0.7	0	20.2	7.1	12
2008	FM2:ICHmk1/mw2-Oth	30	16.0	-	16.0	2	20.8	11.8	147
2008	FM2:ICHmk1/mw2-Oth	40	67.7	-	67.7	8	22.1	16.1	404
2008	FM2:ICHmk1/mw2-Oth	50	135.5	-	135.5	16	23.6	19.7	570
2008	FM2:ICHmk1/mw2-Oth	60	202.6	-	202.6	25	25.2	22.9	652
2008	FM2:ICHmk1/mw2-Oth	70	264.4	-	264.4	31	26.5	25.6	691
2008	FM2:ICHmk1/mw2-Oth	80	319.3	-	319.3	36	27.6	27.8	706
2008	FM2:ICHmk1/mw2-Oth	90	367.8	-	367.8	40	28.5	29.7	714
2008	FM2:ICHmk1/mw2-Oth	100	411.1	-	411.1	43	29.3	31.4	714
2008	FM2:ICHmk1/mw2-Oth	110	449.0	-	449.0	46	30.0	32.8	712
2008	FM2:ICHmk1/mw2-Oth	120	481.7	-	481.7	48	30.6	34.0	708
2008	FM2:ICHmk1/mw2-Oth	130	510.7	-	510.7	49	31.1	35.1	702
2008	FM2:ICHmk1/mw2-Oth	140	535.8	-	535.8	51	31.6	36.0	696
2008	FM2:ICHmk1/mw2-Oth	150	557.2	-	557.2	52	32.1	36.8	689
2008	FM2:ICHmk1/mw2-Oth	160	575.1	-	575.1	53	32.5	37.5	678
2008	FM2:ICHmk1/mw2-Oth	170	590.5	-	590.5	54	32.9	38.1	669
2008	FM2:ICHmk1/mw2-Oth	180	603.9	-	603.9	54	33.2	38.6	660
2008	FM2:ICHmk1/mw2-Oth	190	615.3	-	615.3	55	33.5	39.1	652
2008	FM2:ICHmk1/mw2-Oth	200	624.0	-	624.0	55	33.8	39.5	641
2008	FM2:ICHmk1/mw2-Oth	210	630.5	-	630.5	55	34.1	39.9	630
2008	FM2:ICHmk1/mw2-Oth	220	636.3	-	636.3	55	34.3	40.2	620
2008	FM2:ICHmk1/mw2-Oth	230	641.3	-	641.3	55	34.6	40.5	611
2008	FM2:ICHmk1/mw2-Oth	240	645.2	-	645.2	55	34.8	40.8	603
2008	FM2:ICHmk1/mw2-Oth	250	648.6	-	648.6	55	35.0	41.1	595
2008	FM2:ICHmk1/mw2-Oth	260	651.4	-	651.4	55	35.2	41.3	588
2008	FM2:ICHmk1/mw2-Oth	270	654.1	-	654.1	55	35.3	41.6	582
2008	FM2:ICHmk1/mw2-Oth	280	656.1	-	656.1	55	35.5	41.8	575
2008	FM2:ICHmk1/mw2-Oth	290	657.6	-	657.6	55	35.6	42.0	569
2008	FM2:ICHmk1/mw2-Oth	300	658.1	-	658.1	55	35.7	42.1	564
2008	FM2:ICHmk1/mw2-Oth	310	658.1	-	658.1	55	35.7	42.1	564
2008	FM2:ICHmk1/mw2-Oth	320	658.1	-	658.1	55	35.7	42.1	564
2008	FM2:ICHmk1/mw2-Oth	330	658.1	-	658.1	55	35.7	42.1	564
2008	FM2:ICHmk1/mw2-Oth	340	658.1	-	658.1	55	35.7	42.1	564
2008	FM2:ICHmk1/mw2-Oth	350	658.1	-	658.1	55	35.7	42.1	564

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area		Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)			(m2/ha)	Diameter (cm)		
2009	FM2:IDFdm1-01	10	-	-	-	0	-	2.2	0
2009	FM2:IDFdm1-01	20	0.2	-	0.2	0	19.9	6.8	8
2009	FM2:IDFdm1-01	30	11.2	-	11.2	2	20.4	11.1	123
2009	FM2:IDFdm1-01	40	50.0	-	50.0	6	21.5	14.9	340
2009	FM2:IDFdm1-01	50	103.0	-	103.0	13	22.9	18.2	498
2009	FM2:IDFdm1-01	60	157.1	-	157.1	19	24.3	21.0	587
2009	FM2:IDFdm1-01	70	208.5	-	208.5	25	25.5	23.5	634
2009	FM2:IDFdm1-01	80	255.6	-	255.6	30	26.5	25.6	663
2009	FM2:IDFdm1-01	90	298.5	-	298.5	34	27.4	27.3	679
2009	FM2:IDFdm1-01	100	336.9	-	336.9	38	28.1	28.9	690
2009	FM2:IDFdm1-01	110	371.7	-	371.7	41	28.8	30.2	694
2009	FM2:IDFdm1-01	120	402.4	-	402.4	43	29.4	31.4	696
2009	FM2:IDFdm1-01	130	429.9	-	429.9	45	29.9	32.4	696
2009	FM2:IDFdm1-01	140	454.5	-	454.5	46	30.3	33.3	695
2009	FM2:IDFdm1-01	150	476.7	-	476.7	48	30.8	34.1	691
2009	FM2:IDFdm1-01	160	495.8	-	495.8	49	31.1	34.8	688
2009	FM2:IDFdm1-01	170	512.9	-	512.9	50	31.5	35.4	683
2009	FM2:IDFdm1-01	180	527.5	-	527.5	51	31.8	36.0	678
2009	FM2:IDFdm1-01	190	540.5	-	540.5	51	32.0	36.5	672
2009	FM2:IDFdm1-01	200	551.9	-	551.9	52	32.3	36.9	666
2009	FM2:IDFdm1-01	210	562.1	-	562.1	52	32.6	37.4	660
2009	FM2:IDFdm1-01	220	571.0	-	571.0	52	32.8	37.7	654
2009	FM2:IDFdm1-01	230	578.2	-	578.2	52	33.1	38.0	646
2009	FM2:IDFdm1-01	240	584.6	-	584.6	53	33.3	38.3	638
2009	FM2:IDFdm1-01	250	590.2	-	590.2	53	33.5	38.6	631
2009	FM2:IDFdm1-01	260	594.9	-	594.9	53	33.6	38.9	624
2009	FM2:IDFdm1-01	270	599.2	-	599.2	53	33.8	39.1	617
2009	FM2:IDFdm1-01	280	602.5	-	602.5	53	34.0	39.3	611
2009	FM2:IDFdm1-01	290	605.4	-	605.4	53	34.1	39.5	603
2009	FM2:IDFdm1-01	300	607.7	-	607.7	53	34.2	39.7	598
2009	FM2:IDFdm1-01	310	607.7	-	607.7	53	34.2	39.7	598
2009	FM2:IDFdm1-01	320	607.7	-	607.7	53	34.2	39.7	598
2009	FM2:IDFdm1-01	330	607.7	-	607.7	53	34.2	39.7	598
2009	FM2:IDFdm1-01	340	607.7	-	607.7	53	34.2	39.7	598
2009	FM2:IDFdm1-01	350	607.7	-	607.7	53	34.2	39.7	598

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2010	FM2:IDFdm1-04	10	-	-	-	0	-	1.6	0
2010	FM2:IDFdm1-04	20	-	-	-	0	19.5	5.4	1
2010	FM2:IDFdm1-04	30	4.1	-	4.1	1	19.9	9.2	60
2010	FM2:IDFdm1-04	40	27.2	-	27.2	4	20.6	12.7	231
2010	FM2:IDFdm1-04	50	66.8	-	66.8	8	21.7	15.8	403
2010	FM2:IDFdm1-04	60	111.7	-	111.7	14	22.9	18.6	518
2010	FM2:IDFdm1-04	70	156.3	-	156.3	19	24.1	21.0	587
2010	FM2:IDFdm1-04	80	199.4	-	199.4	25	25.1	23.1	629
2010	FM2:IDFdm1-04	90	239.8	-	239.8	28	25.9	24.9	657
2010	FM2:IDFdm1-04	100	277.8	-	277.8	32	26.7	26.5	678
2010	FM2:IDFdm1-04	110	312.7	-	312.7	35	27.4	27.9	690
2010	FM2:IDFdm1-04	120	344.5	-	344.5	38	28.1	29.1	696
2010	FM2:IDFdm1-04	130	373.7	-	373.7	40	28.6	30.2	700
2010	FM2:IDFdm1-04	140	400.2	-	400.2	42	29.1	31.2	702
2010	FM2:IDFdm1-04	150	424.7	-	424.7	44	29.5	32.1	702
2010	FM2:IDFdm1-04	160	446.9	-	446.9	45	29.9	32.9	700
2010	FM2:IDFdm1-04	170	467.0	-	467.0	47	30.3	33.6	697
2010	FM2:IDFdm1-04	180	485.2	-	485.2	48	30.7	34.3	692
2010	FM2:IDFdm1-04	190	501.6	-	501.6	49	31.0	34.9	687
2010	FM2:IDFdm1-04	200	516.1	-	516.1	50	31.3	35.4	682
2010	FM2:IDFdm1-04	210	529.1	-	529.1	50	31.6	35.9	674
2010	FM2:IDFdm1-04	220	540.1	-	540.1	51	32.0	36.3	667
2010	FM2:IDFdm1-04	230	550.2	-	550.2	51	32.2	36.7	659
2010	FM2:IDFdm1-04	240	559.3	-	559.3	52	32.4	37.1	651
2010	FM2:IDFdm1-04	250	567.5	-	567.5	52	32.7	37.5	644
2010	FM2:IDFdm1-04	260	574.6	-	574.6	52	33.0	37.8	636
2010	FM2:IDFdm1-04	270	581.0	-	581.0	52	33.2	38.1	630
2010	FM2:IDFdm1-04	280	587.0	-	587.0	52	33.4	38.4	624
2010	FM2:IDFdm1-04	290	591.5	-	591.5	52	33.6	38.7	615
2010	FM2:IDFdm1-04	300	594.8	-	594.8	52	33.7	38.9	609
2010	FM2:IDFdm1-04	310	594.8	-	594.8	52	33.7	38.9	609
2010	FM2:IDFdm1-04	320	594.8	-	594.8	52	33.7	38.9	609
2010	FM2:IDFdm1-04	330	594.8	-	594.8	52	33.7	38.9	609
2010	FM2:IDFdm1-04	340	594.8	-	594.8	52	33.7	38.9	609
2010	FM2:IDFdm1-04	350	594.8	-	594.8	52	33.7	38.9	609

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)						
2011	FM2:IDFdm1-05	10	-	-	-	0	2.7	2.6	0
2011	FM2:IDFdm1-05	20	0.7	-	0.7	0	19.5	7.3	17
2011	FM2:IDFdm1-05	30	17.8	-	17.8	3	20.2	12.0	189
2011	FM2:IDFdm1-05	40	77.1	-	77.1	10	21.8	16.1	471
2011	FM2:IDFdm1-05	50	149.4	-	149.4	19	23.6	19.7	619
2011	FM2:IDFdm1-05	60	217.6	-	217.6	28	25.3	22.7	680
2011	FM2:IDFdm1-05	70	277.5	-	277.5	34	26.7	25.2	702
2011	FM2:IDFdm1-05	80	328.3	-	328.3	38	27.9	27.3	705
2011	FM2:IDFdm1-05	90	371.4	-	371.4	42	28.9	29.1	702
2011	FM2:IDFdm1-05	100	408.0	-	408.0	45	29.7	30.6	697
2011	FM2:IDFdm1-05	110	439.3	-	439.3	47	30.3	31.8	690
2011	FM2:IDFdm1-05	120	465.9	-	465.9	49	30.9	33.0	684
2011	FM2:IDFdm1-05	130	488.5	-	488.5	50	31.5	33.9	676
2011	FM2:IDFdm1-05	140	507.9	-	507.9	51	31.9	34.7	670
2011	FM2:IDFdm1-05	150	524.0	-	524.0	52	32.2	35.4	663
2011	FM2:IDFdm1-05	160	537.4	-	537.4	53	32.6	36.0	657
2011	FM2:IDFdm1-05	170	549.0	-	549.0	53	32.9	36.5	649
2011	FM2:IDFdm1-05	180	558.3	-	558.3	54	33.1	37.0	644
2011	FM2:IDFdm1-05	190	566.1	-	566.1	54	33.3	37.4	637
2011	FM2:IDFdm1-05	200	572.5	-	572.5	54	33.5	37.7	632
2011	FM2:IDFdm1-05	210	578.2	-	578.2	54	33.7	38.0	626
2011	FM2:IDFdm1-05	220	582.7	-	582.7	54	33.9	38.3	620
2011	FM2:IDFdm1-05	230	585.7	-	585.7	54	34.0	38.5	613
2011	FM2:IDFdm1-05	240	587.7	-	587.7	54	34.2	38.8	607
2011	FM2:IDFdm1-05	250	589.6	-	589.6	54	34.3	38.9	601
2011	FM2:IDFdm1-05	260	591.2	-	591.2	54	34.4	39.1	596
2011	FM2:IDFdm1-05	270	592.1	-	592.1	54	34.5	39.3	590
2011	FM2:IDFdm1-05	280	592.8	-	592.8	53	34.6	39.4	586
2011	FM2:IDFdm1-05	290	593.3	-	593.3	53	34.7	39.6	581
2011	FM2:IDFdm1-05	300	593.6	-	593.6	53	34.7	39.7	578
2011	FM2:IDFdm1-05	310	593.6	-	593.6	53	34.7	39.7	578
2011	FM2:IDFdm1-05	320	593.6	-	593.6	53	34.7	39.7	578
2011	FM2:IDFdm1-05	330	593.6	-	593.6	53	34.7	39.7	578
2011	FM2:IDFdm1-05	340	593.6	-	593.6	53	34.7	39.7	578
2011	FM2:IDFdm1-05	350	593.6	-	593.6	53	34.7	39.7	578

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area		Height (m)	Density (stems/ha)
			Merchantable Volume (m3/ha)			(m2/ha)	Diameter (cm)		
2012	FM2:IDFdm1-Oth	10	-	-	-	0	-	2.2	0
2012	FM2:IDFdm1-Oth	20	0.2	-	0.2	0	20.0	6.7	8
2012	FM2:IDFdm1-Oth	30	10.8	-	10.8	2	20.4	11.0	123
2012	FM2:IDFdm1-Oth	40	49.3	-	49.3	6	21.4	14.8	342
2012	FM2:IDFdm1-Oth	50	102.3	-	102.3	13	22.8	18.0	503
2012	FM2:IDFdm1-Oth	60	156.4	-	156.4	19	24.0	20.9	596
2012	FM2:IDFdm1-Oth	70	207.8	-	207.8	25	25.2	23.3	645
2012	FM2:IDFdm1-Oth	80	254.7	-	254.7	30	26.2	25.3	674
2012	FM2:IDFdm1-Oth	90	297.7	-	297.7	34	27.1	27.1	692
2012	FM2:IDFdm1-Oth	100	336.1	-	336.1	37	27.8	28.7	704
2012	FM2:IDFdm1-Oth	110	370.8	-	370.8	40	28.5	30.0	708
2012	FM2:IDFdm1-Oth	120	401.7	-	401.7	43	29.0	31.2	709
2012	FM2:IDFdm1-Oth	130	429.3	-	429.3	44	29.5	32.2	709
2012	FM2:IDFdm1-Oth	140	454.0	-	454.0	46	30.0	33.1	708
2012	FM2:IDFdm1-Oth	150	476.4	-	476.4	47	30.4	33.9	704
2012	FM2:IDFdm1-Oth	160	495.7	-	495.7	49	30.8	34.6	700
2012	FM2:IDFdm1-Oth	170	512.9	-	512.9	50	31.2	35.2	695
2012	FM2:IDFdm1-Oth	180	527.8	-	527.8	51	31.5	35.8	689
2012	FM2:IDFdm1-Oth	190	540.8	-	540.8	51	31.8	36.3	683
2012	FM2:IDFdm1-Oth	200	552.3	-	552.3	51	32.1	36.8	675
2012	FM2:IDFdm1-Oth	210	562.6	-	562.6	52	32.3	37.2	669
2012	FM2:IDFdm1-Oth	220	571.6	-	571.6	52	32.6	37.6	662
2012	FM2:IDFdm1-Oth	230	579.2	-	579.2	52	32.8	37.9	654
2012	FM2:IDFdm1-Oth	240	585.7	-	585.7	52	33.0	38.2	646
2012	FM2:IDFdm1-Oth	250	591.5	-	591.5	52	33.2	38.5	639
2012	FM2:IDFdm1-Oth	260	596.5	-	596.5	52	33.4	38.7	631
2012	FM2:IDFdm1-Oth	270	600.9	-	600.9	53	33.6	39.0	624
2012	FM2:IDFdm1-Oth	280	604.4	-	604.4	53	33.8	39.2	616
2012	FM2:IDFdm1-Oth	290	607.3	-	607.3	52	33.9	39.4	610
2012	FM2:IDFdm1-Oth	300	609.4	-	609.4	52	34.0	39.6	604
2012	FM2:IDFdm1-Oth	310	609.4	-	609.4	52	34.0	39.6	604
2012	FM2:IDFdm1-Oth	320	609.4	-	609.4	52	34.0	39.6	604
2012	FM2:IDFdm1-Oth	330	609.4	-	609.4	52	34.0	39.6	604
2012	FM2:IDFdm1-Oth	340	609.4	-	609.4	52	34.0	39.6	604
2012	FM2:IDFdm1-Oth	350	609.4	-	609.4	52	34.0	39.6	604

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2013	FM2:MSdm1-01	10	-	-	-	0	-	1.8	0
2013	FM2:MSdm1-01	20	0.4	-	0.4	0	17.0	6.0	8
2013	FM2:MSdm1-01	30	9.9	-	9.9	1	19.5	10.5	106
2013	FM2:MSdm1-01	40	52.5	-	52.5	8	20.4	14.5	410
2013	FM2:MSdm1-01	50	120.2	-	120.2	17	21.8	18.0	662
2013	FM2:MSdm1-01	60	190.0	-	190.0	24	23.3	21.0	771
2013	FM2:MSdm1-01	70	252.5	-	252.5	30	24.6	23.5	803
2013	FM2:MSdm1-01	80	305.1	-	305.1	35	25.8	25.6	802
2013	FM2:MSdm1-01	90	349.2	-	349.2	39	26.8	27.3	792
2013	FM2:MSdm1-01	100	386.7	-	386.7	42	27.6	28.8	780
2013	FM2:MSdm1-01	110	418.6	-	418.6	44	28.3	30.1	766
2013	FM2:MSdm1-01	120	445.4	-	445.4	46	29.0	31.2	754
2013	FM2:MSdm1-01	130	468.0	-	468.0	47	29.5	32.2	741
2013	FM2:MSdm1-01	140	487.3	-	487.3	48	29.9	33.0	730
2013	FM2:MSdm1-01	150	504.0	-	504.0	49	30.3	33.7	720
2013	FM2:MSdm1-01	160	518.0	-	518.0	50	30.7	34.3	710
2013	FM2:MSdm1-01	170	530.0	-	530.0	50	31.0	34.9	701
2013	FM2:MSdm1-01	180	539.7	-	539.7	50	31.3	35.3	691
2013	FM2:MSdm1-01	190	547.6	-	547.6	51	31.5	35.7	683
2013	FM2:MSdm1-01	200	554.5	-	554.5	51	31.8	36.1	674
2013	FM2:MSdm1-01	210	560.4	-	560.4	51	32.0	36.4	666
2013	FM2:MSdm1-01	220	565.1	-	565.1	52	32.2	36.7	658
2013	FM2:MSdm1-01	230	568.6	-	568.6	52	32.3	37.0	651
2013	FM2:MSdm1-01	240	571.4	-	571.4	52	32.5	37.2	644
2013	FM2:MSdm1-01	250	573.6	-	573.6	52	32.7	37.4	636
2013	FM2:MSdm1-01	260	575.4	-	575.4	51	32.8	37.6	630
2013	FM2:MSdm1-01	270	577.2	-	577.2	51	32.9	37.8	623
2013	FM2:MSdm1-01	280	578.6	-	578.6	51	33.0	37.9	618
2013	FM2:MSdm1-01	290	579.6	-	579.6	51	33.1	38.1	612
2013	FM2:MSdm1-01	300	579.8	-	579.8	51	33.2	38.2	606
2013	FM2:MSdm1-01	310	579.6	-	579.6	50	33.2	38.2	606
2013	FM2:MSdm1-01	320	579.6	-	579.6	50	33.2	38.2	606
2013	FM2:MSdm1-01	330	579.6	-	579.6	50	33.2	38.2	606
2013	FM2:MSdm1-01	340	579.6	-	579.6	50	33.2	38.2	606
2013	FM2:MSdm1-01	350	579.6	-	579.6	50	33.2	38.2	606

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2014	FM2:MSdm1-03	10	-	-	-	0	-	1.0	0
2014	FM2:MSdm1-03	20	-	-	-	0	6.4	4.8	0
2014	FM2:MSdm1-03	30	8.7	-	8.7	3	16.6	9.2	148
2014	FM2:MSdm1-03	40	56.6	-	56.6	11	17.8	13.2	528
2014	FM2:MSdm1-03	50	134.1	-	134.1	22	19.5	16.5	865
2014	FM2:MSdm1-03	60	216.3	-	216.3	30	21.0	19.2	1040
2014	FM2:MSdm1-03	70	286.7	-	286.7	36	22.4	21.5	1075
2014	FM2:MSdm1-03	80	341.6	-	341.6	40	23.7	23.3	1042
2014	FM2:MSdm1-03	90	382.8	-	382.8	42	24.7	24.8	996
2014	FM2:MSdm1-03	100	414.3	-	414.3	44	25.6	26.0	952
2014	FM2:MSdm1-03	110	437.4	-	437.4	45	26.3	27.0	913
2014	FM2:MSdm1-03	120	454.9	-	454.9	46	26.9	27.9	880
2014	FM2:MSdm1-03	130	468.8	-	468.8	47	27.4	28.6	851
2014	FM2:MSdm1-03	140	478.7	-	478.7	47	27.8	29.3	825
2014	FM2:MSdm1-03	150	486.6	-	486.6	47	28.2	29.8	803
2014	FM2:MSdm1-03	160	492.9	-	492.9	48	28.5	30.3	786
2014	FM2:MSdm1-03	170	497.5	-	497.5	48	28.8	30.7	769
2014	FM2:MSdm1-03	180	501.4	-	501.4	48	29.0	31.0	755
2014	FM2:MSdm1-03	190	504.2	-	504.2	47	29.2	31.3	742
2014	FM2:MSdm1-03	200	506.6	-	506.6	48	29.4	31.6	732
2014	FM2:MSdm1-03	210	507.4	-	507.4	48	29.5	31.9	720
2014	FM2:MSdm1-03	220	507.9	-	507.9	47	29.7	32.1	710
2014	FM2:MSdm1-03	230	507.6	-	507.6	47	29.8	32.3	700
2014	FM2:MSdm1-03	240	507.2	-	507.2	47	29.9	32.5	692
2014	FM2:MSdm1-03	250	506.6	-	506.6	47	30.0	32.7	684
2014	FM2:MSdm1-03	260	506.1	-	506.1	47	30.1	32.8	676
2014	FM2:MSdm1-03	270	505.6	-	505.6	47	30.2	33.0	669
2014	FM2:MSdm1-03	280	505.0	-	505.0	46	30.3	33.1	663
2014	FM2:MSdm1-03	290	503.0	-	503.0	46	30.3	33.2	656
2014	FM2:MSdm1-03	300	500.6	-	500.6	46	30.4	33.3	649
2014	FM2:MSdm1-03	310	500.3	-	500.3	46	30.4	33.3	647
2014	FM2:MSdm1-03	320	500.3	-	500.3	46	30.4	33.3	647
2014	FM2:MSdm1-03	330	500.3	-	500.3	46	30.4	33.3	647
2014	FM2:MSdm1-03	340	500.3	-	500.3	46	30.4	33.3	647
2014	FM2:MSdm1-03	350	500.3	-	500.3	46	30.4	33.3	647

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2015	FM2:MSdm1-04	10	-	-	-	0	-	1.5	0
2015	FM2:MSdm1-04	20	0.4	-	0.4	0	9.7	5.8	10
2015	FM2:MSdm1-04	30	9.2	-	9.2	2	17.9	10.1	123
2015	FM2:MSdm1-04	40	55.6	-	55.6	10	18.8	14.0	512
2015	FM2:MSdm1-04	50	130.6	-	130.6	20	20.1	17.3	834
2015	FM2:MSdm1-04	60	204.6	-	204.6	27	21.6	20.0	935
2015	FM2:MSdm1-04	70	267.1	-	267.1	33	23.0	22.3	940
2015	FM2:MSdm1-04	80	317.6	-	317.6	37	24.1	24.1	917
2015	FM2:MSdm1-04	90	357.1	-	357.1	40	25.2	25.7	886
2015	FM2:MSdm1-04	100	389.5	-	389.5	42	26.0	27.0	860
2015	FM2:MSdm1-04	110	416.2	-	416.2	43	26.7	28.1	836
2015	FM2:MSdm1-04	120	438.4	-	438.4	44	27.3	29.0	815
2015	FM2:MSdm1-04	130	455.7	-	455.7	46	27.8	29.9	796
2015	FM2:MSdm1-04	140	470.5	-	470.5	46	28.3	30.6	779
2015	FM2:MSdm1-04	150	482.9	-	482.9	47	28.6	31.2	764
2015	FM2:MSdm1-04	160	493.5	-	493.5	47	29.0	31.7	752
2015	FM2:MSdm1-04	170	502.1	-	502.1	48	29.3	32.2	740
2015	FM2:MSdm1-04	180	509.3	-	509.3	48	29.6	32.6	729
2015	FM2:MSdm1-04	190	514.3	-	514.3	48	29.8	32.9	718
2015	FM2:MSdm1-04	200	517.0	-	517.0	48	30.0	33.2	707
2015	FM2:MSdm1-04	210	519.6	-	519.6	48	30.2	33.5	696
2015	FM2:MSdm1-04	220	521.7	-	521.7	48	30.3	33.8	687
2015	FM2:MSdm1-04	230	523.4	-	523.4	48	30.5	34.0	677
2015	FM2:MSdm1-04	240	524.7	-	524.7	48	30.7	34.2	669
2015	FM2:MSdm1-04	250	525.3	-	525.3	48	30.8	34.4	661
2015	FM2:MSdm1-04	260	525.8	-	525.8	48	30.9	34.6	654
2015	FM2:MSdm1-04	270	526.1	-	526.1	47	31.0	34.8	647
2015	FM2:MSdm1-04	280	526.3	-	526.3	47	31.1	34.8	640
2015	FM2:MSdm1-04	290	526.5	-	526.5	47	31.1	34.9	635
2015	FM2:MSdm1-04	300	526.5	-	526.5	47	31.2	35.1	629
2015	FM2:MSdm1-04	310	526.4	-	526.4	47	31.2	35.2	628
2015	FM2:MSdm1-04	320	526.4	-	526.4	47	31.2	35.2	628
2015	FM2:MSdm1-04	330	526.4	-	526.4	47	31.2	35.2	628
2015	FM2:MSdm1-04	340	526.4	-	526.4	47	31.2	35.2	628
2015	FM2:MSdm1-04	350	526.4	-	526.4	47	31.2	35.2	628

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2016	FM2:MSdm1-05	10	-	-	-	0	-	1.2	0
2016	FM2:MSdm1-05	20	0.1	-	0.1	0	15.4	5.3	3
2016	FM2:MSdm1-05	30	6.2	-	6.2	1	17.4	9.8	84
2016	FM2:MSdm1-05	40	60.4	-	60.4	12	18.0	13.9	650
2016	FM2:MSdm1-05	50	154.8	-	154.8	25	19.0	17.4	1183
2016	FM2:MSdm1-05	60	242.5	-	242.5	33	20.2	20.3	1308
2016	FM2:MSdm1-05	70	307.9	-	307.9	37	21.5	22.6	1240
2016	FM2:MSdm1-05	80	356.7	-	356.7	39	22.7	24.6	1140
2016	FM2:MSdm1-05	90	394.7	-	394.7	41	23.8	26.2	1062
2016	FM2:MSdm1-05	100	424.4	-	424.4	42	24.6	27.6	1002
2016	FM2:MSdm1-05	110	447.5	-	447.5	44	25.3	28.6	955
2016	FM2:MSdm1-05	120	465.5	-	465.5	44	25.9	29.6	916
2016	FM2:MSdm1-05	130	479.9	-	479.9	45	26.4	30.4	884
2016	FM2:MSdm1-05	140	491.7	-	491.7	45	26.8	31.1	857
2016	FM2:MSdm1-05	150	501.3	-	501.3	45	27.2	31.7	834
2016	FM2:MSdm1-05	160	509.4	-	509.4	46	27.6	32.3	814
2016	FM2:MSdm1-05	170	515.9	-	515.9	46	27.8	32.7	795
2016	FM2:MSdm1-05	180	520.5	-	520.5	46	28.1	33.1	779
2016	FM2:MSdm1-05	190	524.5	-	524.5	46	28.3	33.5	765
2016	FM2:MSdm1-05	200	526.5	-	526.5	46	28.5	33.8	750
2016	FM2:MSdm1-05	210	527.4	-	527.4	46	28.7	34.1	735
2016	FM2:MSdm1-05	220	527.9	-	527.9	45	29.0	34.4	723
2016	FM2:MSdm1-05	230	528.1	-	528.1	45	29.1	34.6	711
2016	FM2:MSdm1-05	240	528.3	-	528.3	45	29.2	34.8	700
2016	FM2:MSdm1-05	250	528.3	-	528.3	45	29.4	35.0	690
2016	FM2:MSdm1-05	260	528.5	-	528.5	44	29.5	35.2	681
2016	FM2:MSdm1-05	270	527.9	-	527.9	44	29.6	35.4	673
2016	FM2:MSdm1-05	280	526.3	-	526.3	44	29.7	35.5	663
2016	FM2:MSdm1-05	290	524.7	-	524.7	44	29.8	35.6	655
2016	FM2:MSdm1-05	300	523.0	-	523.0	44	29.9	35.7	647
2016	FM2:MSdm1-05	310	522.4	-	522.4	44	29.9	35.7	646
2016	FM2:MSdm1-05	320	522.4	-	522.4	44	29.9	35.7	646
2016	FM2:MSdm1-05	330	522.4	-	522.4	44	29.9	35.7	646
2016	FM2:MSdm1-05	340	522.4	-	522.4	44	29.9	35.7	646
2016	FM2:MSdm1-05	350	522.4	-	522.4	44	29.9	35.7	646

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2017	FM2:MSdm1-Oth	10	-	-	-	0	1.6	2.1	0
2017	FM2:MSdm1-Oth	20	0.8	-	0.8	0	16.5	6.3	15
2017	FM2:MSdm1-Oth	30	13.5	-	13.5	2	18.9	10.9	148
2017	FM2:MSdm1-Oth	40	65.4	-	65.4	10	19.9	14.9	513
2017	FM2:MSdm1-Oth	50	141.6	-	141.6	20	21.3	18.3	785
2017	FM2:MSdm1-Oth	60	215.5	-	215.5	27	22.8	21.3	876
2017	FM2:MSdm1-Oth	70	278.4	-	278.4	33	24.2	23.6	883
2017	FM2:MSdm1-Oth	80	329.4	-	329.4	37	25.4	25.7	863
2017	FM2:MSdm1-Oth	90	371.2	-	371.2	40	26.4	27.3	840
2017	FM2:MSdm1-Oth	100	405.9	-	405.9	43	27.2	28.7	819
2017	FM2:MSdm1-Oth	110	435.0	-	435.0	44	27.9	29.9	798
2017	FM2:MSdm1-Oth	120	458.7	-	458.7	46	28.5	31.0	780
2017	FM2:MSdm1-Oth	130	478.8	-	478.8	47	29.0	31.8	764
2017	FM2:MSdm1-Oth	140	496.1	-	496.1	48	29.4	32.5	750
2017	FM2:MSdm1-Oth	150	510.7	-	510.7	49	29.8	33.3	737
2017	FM2:MSdm1-Oth	160	522.9	-	522.9	49	30.2	33.8	726
2017	FM2:MSdm1-Oth	170	533.0	-	533.0	50	30.5	34.3	715
2017	FM2:MSdm1-Oth	180	540.9	-	540.9	50	30.8	34.7	705
2017	FM2:MSdm1-Oth	190	547.7	-	547.7	51	31.0	35.1	694
2017	FM2:MSdm1-Oth	200	553.4	-	553.4	51	31.2	35.5	685
2017	FM2:MSdm1-Oth	210	557.9	-	557.9	50	31.4	35.8	676
2017	FM2:MSdm1-Oth	220	561.2	-	561.2	50	31.6	36.1	667
2017	FM2:MSdm1-Oth	230	563.7	-	563.7	50	31.8	36.3	658
2017	FM2:MSdm1-Oth	240	565.7	-	565.7	50	31.9	36.5	650
2017	FM2:MSdm1-Oth	250	567.3	-	567.3	50	32.1	36.7	642
2017	FM2:MSdm1-Oth	260	568.4	-	568.4	50	32.2	36.9	635
2017	FM2:MSdm1-Oth	270	568.8	-	568.8	50	32.3	37.1	628
2017	FM2:MSdm1-Oth	280	569.1	-	569.1	50	32.4	37.2	621
2017	FM2:MSdm1-Oth	290	569.1	-	569.1	50	32.5	37.4	614
2017	FM2:MSdm1-Oth	300	568.9	-	568.9	50	32.6	37.5	609
2017	FM2:MSdm1-Oth	310	568.7	-	568.7	50	32.6	37.5	608
2017	FM2:MSdm1-Oth	320	568.7	-	568.7	50	32.6	37.5	608
2017	FM2:MSdm1-Oth	330	568.7	-	568.7	50	32.6	37.5	608
2017	FM2:MSdm1-Oth	340	568.7	-	568.7	50	32.6	37.5	608
2017	FM2:MSdm1-Oth	350	568.7	-	568.7	50	32.6	37.5	608

Yield Tables for Managed Stands

Analysis Unit	Description	Stand Age	Total Merchantable Volume (m3/ha)	Deciduous Volume (m3/ha)	Conifer Volume (m3/ha)	Basal Area (m2/ha)	Diameter (cm)	Height (m)	Density (stems/ha)
2018	FM2:Msdm1a-All	10	-	-	-	0	-	2.2	0
2018	FM2:Msdm1a-All	20	0.4	-	0.4	0	20.5	6.9	5
2018	FM2:Msdm1a-All	30	17.3	-	17.3	1	21.0	11.8	149
2018	FM2:Msdm1a-All	40	84.4	-	84.4	10	23.0	16.4	449
2018	FM2:Msdm1a-All	50	164.8	-	164.8	21	25.1	20.3	590
2018	FM2:Msdm1a-All	60	238.9	-	238.9	30	27.1	23.6	641
2018	FM2:Msdm1a-All	70	305.6	-	305.6	37	28.7	26.4	654
2018	FM2:Msdm1a-All	80	363.7	-	363.7	42	30.0	28.7	656
2018	FM2:Msdm1a-All	90	413.1	-	413.1	46	31.1	30.6	653
2018	FM2:Msdm1a-All	100	456.8	-	456.8	49	32.0	32.3	648
2018	FM2:Msdm1a-All	110	495.3	-	495.3	51	32.8	33.7	642
2018	FM2:Msdm1a-All	120	527.6	-	527.6	53	33.5	34.9	635
2018	FM2:Msdm1a-All	130	556.2	-	556.2	55	34.0	35.9	629
2018	FM2:Msdm1a-All	140	580.6	-	580.6	56	34.5	36.9	622
2018	FM2:Msdm1a-All	150	602.2	-	602.2	57	35.0	37.6	616
2018	FM2:Msdm1a-All	160	621.3	-	621.3	58	35.4	38.3	611
2018	FM2:Msdm1a-All	170	637.5	-	637.5	59	35.7	39.0	605
2018	FM2:Msdm1a-All	180	651.8	-	651.8	59	36.1	39.5	599
2018	FM2:Msdm1a-All	190	662.7	-	662.7	60	36.4	40.0	590
2018	FM2:Msdm1a-All	200	672.5	-	672.5	60	36.7	40.4	582
2018	FM2:Msdm1a-All	210	681.1	-	681.1	60	36.9	40.8	574
2018	FM2:Msdm1a-All	220	688.1	-	688.1	60	37.2	41.2	567
2018	FM2:Msdm1a-All	230	694.5	-	694.5	60	37.4	41.6	560
2018	FM2:Msdm1a-All	240	700.0	-	700.0	60	37.6	41.9	554
2018	FM2:Msdm1a-All	250	705.0	-	705.0	60	37.8	42.1	549
2018	FM2:Msdm1a-All	260	707.2	-	707.2	60	37.9	42.3	542
2018	FM2:Msdm1a-All	270	708.1	-	708.1	60	38.1	42.5	536
2018	FM2:Msdm1a-All	280	708.2	-	708.2	60	38.2	42.6	530
2018	FM2:Msdm1a-All	290	708.2	-	708.2	59	38.3	42.8	524
2018	FM2:Msdm1a-All	300	708.2	-	708.2	59	38.4	42.8	521
2018	FM2:Msdm1a-All	310	708.2	-	708.2	59	38.4	42.8	521
2018	FM2:Msdm1a-All	320	708.2	-	708.2	59	38.4	42.8	521
2018	FM2:Msdm1a-All	330	708.2	-	708.2	59	38.4	42.8	521
2018	FM2:Msdm1a-All	340	708.2	-	708.2	59	38.4	42.8	521
2018	FM2:Msdm1a-All	350	708.2	-	708.2	59	38.4	42.8	521

Appendix 2 Unsalvaged Losses

The estimate of unsalvaged losses was prepared using pest aerial overview survey (AOS) data downloaded from the BCGW website. The general approach used to estimate these losses was as follows:

- Data from the most recent 10 year period (2009 to 2018) was included in the analysis.
- Pests that were found within TFL 8 and were considered in the analysis included wildfire, mountain pine beetle, western balsam bark beetle, Douglas-fir beetle, windthrow, and slides.
- Fires in the AOS were compared with the provincial historic fire layer to confirm that all fires were accounted for.
- Although drought was also present in the data it was not considered as it mostly occurred in 2018 and was not felt to be representative of ongoing losses.
- The polygons for mountain pine beetle were manually examined and a few were not considered where it was evident that harvesting had occurred and addressed most of the polygon (i.e. any unlogged areas were likely the result of mapping errors in the overview data).
- The timber harvesting landbase that did not have a harvest history or was not within a planned cutblock and was over 40 years old was combined with the pest polygons
- Areas within small scale salvage polygons in the FTEN layer with a disturbance end date of 2009 or greater were also excluded to ensure there was no double counting between the NRL estimates and the SSS estimates. Note that excluding these polygons resulted in a very small reduction in NRL estimates.
- The pest severity ratings were used to estimate the proportion of volume loss within a polygon in each year (Very Severe = 75% loss, Severe = 30% loss, Moderate = 15% loss, Low = 5% loss, Endemic = 0.5% loss).
- Where polygons for a pest occurred in more than one year, the cumulative loss was determined by reducing the volume for the first year, then applying the reduction factor for the next year to the remaining volume. This process was repeated for all remaining years.
- The total volume loss over the 10 year period was summed for each pest, and then divided by 10 as an estimate of the annual loss.

The average annual loss to each forest health factor is summarized below:

Loss Category	Annual Volume (m ³ /year)
Mountain pine beetle	1,358
Balsam bark beetle	71
Douglas-fir bark beetle	41
Wildfire	81
Windthrow	0
Slides	24
Total	1,575

Jennifer Kuhn

From: is@rdkb.com
Sent: June 9, 2020 5:06 PM
To: Theresa Lenardon; Information Services; Jennifer Kuhn; Melissa Zahn
Subject: Grant-in-Aid Form submitted by Beaver Valley X-Country Ski Club , email address - dfrossbc@telus.net

Online Grant-in-Aid Application**Electoral Area(s) Applied to:**

Electoral Area 'A' Director Ali Grieve

Applicant Information:

Applicant: Beaver Valley X-Country Ski Club

Address: Box 668, Fruitvale, BC V0G 1L0

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Fax:

Email: dfrossbc@telus.net

Representative: Felicity Ross, Secretary-Treasurer

Make Cheque Payable To: Beaver Valley X-Country Ski Club

Other Expenses:

Total Cost of Project: \$\$9500

Amount Requested from
RDKB Director(s):

\$1500

Approved Director Gae
June 10, 2020

What is the Grant-in-Aid for?

To financially assist with the cost of renovating the sno-cat garage to make it a pull thro to increase

efficiency and safety for the volunteer groomers. Also replacing worn tracks on the sno-cat before they break at an inopportune time.

List of Other Organizations Applied to for Funding

Name of Organization Columbia Basin Trust

Amount Requested \$7000

Amount Secured \$7000

Name of Organization Kootenay Savings Community Foundation

Amount Requested \$1500

Amount Secured \$1000

Name of Organization

Amount Requested

Amount Secured

Documents uploaded with Submission?

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Jennifer Kuhn

From: is@rdkb.com
Sent: June 9, 2020 1:00 PM
To: Theresa Lenardon; Information Services; Jennifer Kuhn; Melissa Zahn
Subject: Grant-in-Aid Form submitted by Christina Lake Tourism Society, email address - cindy.chistinalake@gmail.com

Online Grant-in-Aid Application**Electoral Area(s) Applied to:**

Electoral Area 'C' / Christina Lake Director Grace McGregor

Applicant Information:

Applicant: Christina Lake Tourism Society

Address: 1675 Hwy #3

Phone: 250-447-6161

Fax:

Email: cindy.chistinalake@gmail.com

Representative: Cindy Alblas

Make Cheque Payable To: Christina Lake Tourism Society

Other Expenses:

Total Cost of Project: \$\$3212.00

Amount Requested from RDKB Director(s): \$\$2482.00 (170 hours x \$14.60 (min wage))

Approved Director McGregor June 10, 2020

What is the Grant-in-Aid for?

The Christina Lake Visitor Information Centre is vital to our Welcome Centre and to the community and visitors. We are at the front lines to connect customers with a myriad of questions and queries and do our best to be direct people to our stakeholders within our communities. Unfortunately, with the Covid

Pandemic, Canada Summer Jobs, re-opened the application process, which has watered down the available funds to help us sustain our hours. We would normally receive 3-4 students, 1 for 16 weeks, and the others for 8 weeks. We were only granted 1 student for 8 weeks, and has left us in a problem-solving situation, as we understand, so many are in, we sincerely appreciate the time in your consideration. Over last 6 years we have grown and maintained a strong volunteer base, which has allowed us to stay open, over 1400 hours were put in by our volunteers last year. With your support we were also able to maintain weekend hours throughout the fall of 2019. This was extremely helpful to our operations and allowed us to service our visitors and community as well as generating revenue during the fall, helping us to cover our rent and basic expenses. Unfortunately, with the Covid pandemic, it has left several of our volunteers unsure or unable to return until there is a vaccine. All our volunteers are seniors and many compromised, increasing the difficulty for coverage at the front desk. As the Covid lessens, we will continue to see the rise in travelers, and we already have, with only a week of open operations at the Welcome Centre, we are seeing an average of 30 people a day, with a third of them coming in to use the restrooms. We have been a welcome stop for many. Being able to stay open longer will allow us to be recover the best we can through these challenges. Christina Lake Tourism will also pay for an additional shift a week, so that the centre will be guaranteed to be open for an additional day in the fall. Having staff for 7 days a week in the summer and 3 shifts a week in the fall will help to strengthen our operations after the loss we have experienced throughout the last four months. Our revenue is already down over \$5000 since last year. Increasing our hours to be available throughout the times when visitors are travelling will also increase the visitor's experiences, enabling us to inspire them about our community and services, with hopes that they will return again someday, and potentially move here. The time we take with visitors and community is extremely valuable even to the economic development side, we are true ambassadors who are filled with passion for this area, promoters of our community and all its services, such an important factor into drawing people into this region. We would proudly display your RDKB logo and picture at our desk during those days, to acknowledge your support and sponsorship. We sincerely hope you will see the value of being open 7 days a week in the summer and maintaining longer hours throughout the fall and winter at our Visitor Information Centre at The Christina Lake Welcome Centre, we truly appreciate your consideration of this and your support of tourism in our community, after such a truly devastating year in our industry.

List of Other Organizations Applied to for Funding

Name of Organization

Amount Requested

Amount Secured

Name of Organization

Amount Requested

Amount Secured

Name of Organization

Amount Requested

Amount Secured

Documents uploaded with Submission?

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Grant-in-Aid Form submitted by Joan Hiram (On behalf of Cops for Kids), email address - donna@christinagateway.ca

is@rdkb.com

Tue 2020-06-16 11:04 AM

To: Theresa Lenardon <tlenardon@rdkb.com>; Information Services <is@rdkb.com>; Jennifer Kuhn <jkuhn@rdkb.com>; Melissa Zahn <mzahn@rdkb.com>;

Online Grant-in-Aid Application

Electoral Area(s) Applied to:

Electoral Area 'C' / Christina Lake Director Grace McGregor

Applicant Information:

Applicant: Joan Hiram (On behalf of Cops for Kids)

Address: #12 - 1500 Neimi Road, Christina Lake, BC V0H 1E2

Phone: 250 447-6438

Fax:

Email: donna@christinagateway.ca

Representative: Donna Wilchynski at Gateway

Make Cheque Payable To: Joan Hiram

Other Expenses:

Total Cost of Project: \$1000.00

Amount Requested from RDKB Director(s): \$1000.00 Approved Director McGregor June 16 2020

What is the Grant-in-Aid for?

Lunch and "Copcakes" and donation for the RCMP Cops for Kids bicycle tour coming through the West Kootenays.

List of Other Organizations Applied to for Funding

Name of Organization

Amount Requested

Amount Secured

Name of Organization

Amount Requested

Amount Secured

Name of Organization

Amount Requested

Amount Secured

Documents uploaded with Submission?

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**Okanagan Film Commission
Filming Begins Using Proper Protocol
News Bulletin**

For Immediate Release

Kelowna BC – June 2, 2020 - **Jon Summerland, Okanagan Film Commissioner**, announces that filming will be beginning slowly later in June and that all productions will be using proper health safety protocol.

The film industry is getting back to work slowly and carefully in the South Okanagan as re-opening of business is beginning. If residents see filming in the near future they can be assured that the productions are taking all the required health and safety rules.

Jon continues, "The Okanagan Film Commission has been receiving extensive interest from film makers to come to our region to film, in fact with elevated expanded interest as we have more space for social distancing than in a lot of urban centres."

He summarizes, "The first company the public may see filming is a reputable, experienced and very professional company and it is a small production that will be shooting for 2 weeks. Details regarding this film are under wraps at this time, but tba.

-30-

For more information on the Okanagan Film Commission visit okanaganfilm.com

Media Contact: Jon Summerland, jon.summerland@cord.bc.ca, 250-717-0087

Board Report: OK Film Commission, Jun 25, 2020

Although production was shut down due to Covid, the Film Commissioner has been busy the whole time scouting and working on safety plans for resumption of production.

They've had Worksafe out to sites. They've changed processes (e.g. who is on set at a time).

Jon Summerland thinks that the Okanagan is the first area in Canada to resume production, and possibly the first area in all of North America.

It's a benefit of BC response to Covid, and our low infection rates.

They've been creative. One production company rented an empty hotel (shut down due to Covid) and self-isolated together doing filming.

Mostly it's been Canadian productions starting up.

Still challenges with some productions that depend on American talent. Actors can't be insured for Covid. Also, it's not feasible to self-isolate for 2 weeks.

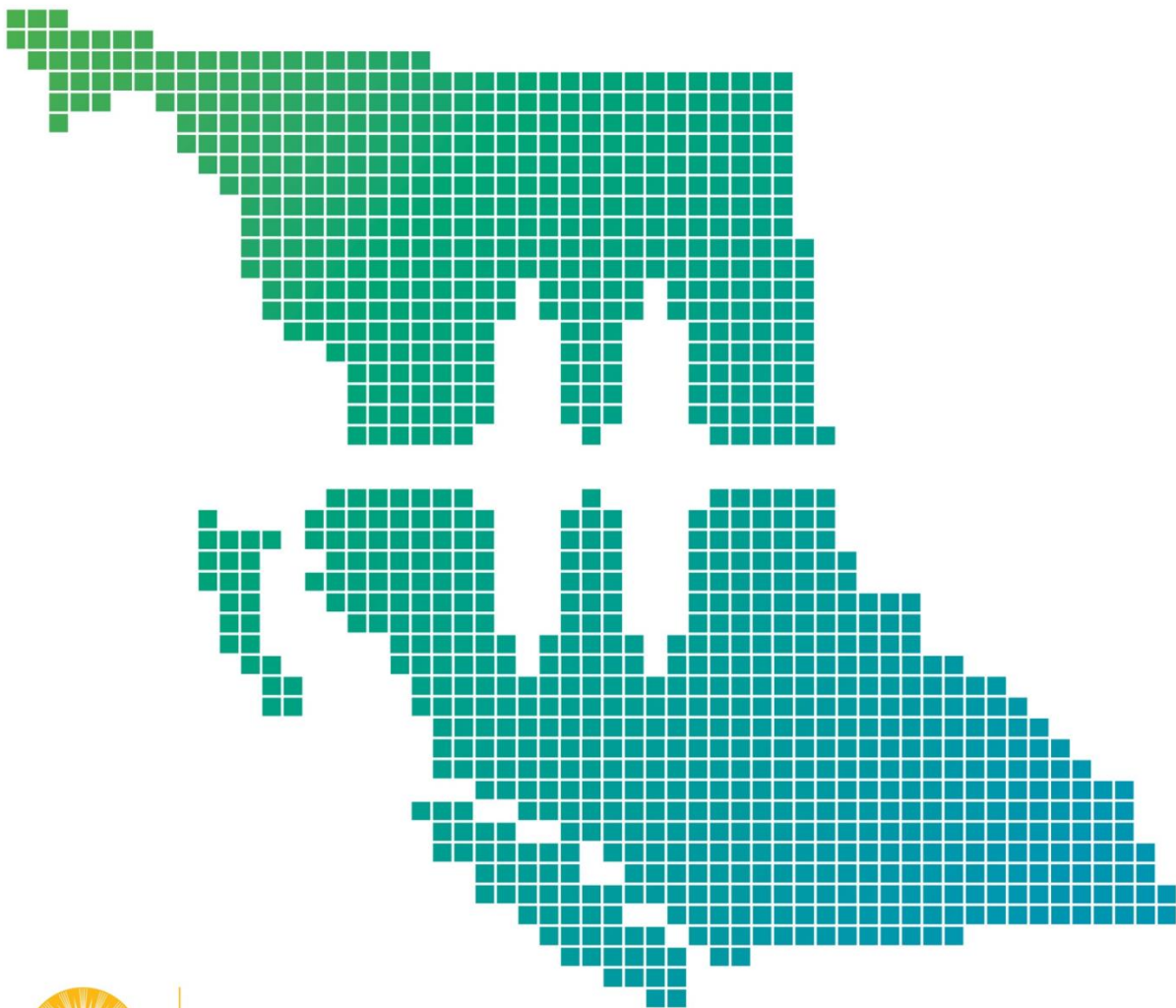
Challenges:

- Everything is harder and takes more time
- School districts, colleges & local government haven't been willing to rent premises for filming
- Province & Feds have changed process for applying to film on Crown land; it takes a month now (that's a lot of time to add to production costs on top of isolation time)
- They used to let Film Commissioner negotiate directly with First Nations; it used to happen really quickly, because they have a relationship

Concern about what will happen to tax credits in future, since the Province is spending so much money in response to Covid.

Creative BC budget has been cut by 25%.

COMPREHENSIVE REVIEW OF BC HYDRO: Phase 2 Interim Report



Ministry of
Energy, Mines and
Petroleum Resources

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COMPREHENSIVE REVIEW OF BC HYDRO:

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1. Purpose

The Government of British Columbia is committed to making life more affordable, delivering the services that people count on, and building a strong, sustainable and innovative economy. The Comprehensive Review of BC Hydro was launched in June 2018 to contain rate increases, control costs, and position BC Hydro for future success.

Completed in February 2019, [Phase 1 of the Comprehensive Review of BC Hydro](#) (Phase 1 Review) identified cost savings, efficiencies and other changes to keep electricity rates affordable and predictable over the long-term, while ensuring BC Hydro continues to provide clean, safe and reliable electricity. The Ministry of Energy, Mines and Petroleum Resources and the Ministry of Finance, along with BC Hydro, examined various aspects of the utility's costs including:

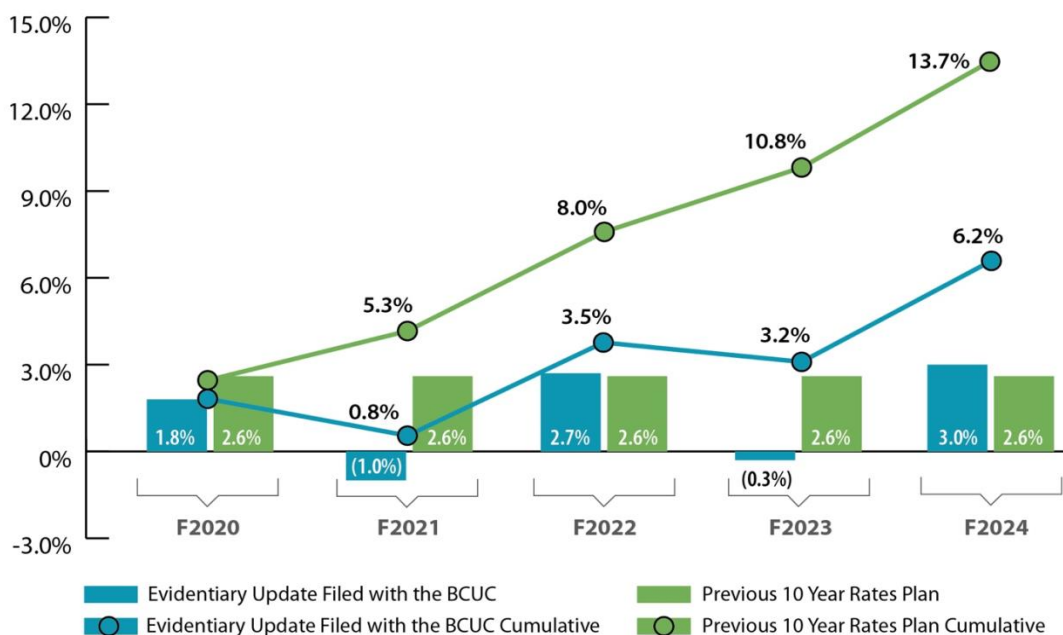
- affordability and rates;
- regulatory accounts;
- cost of energy acquisition;
- revenues;
- operating costs;
- 10-year capital plan; and
- payments to Government, including net income and dividends.

As a result of actions taken by government as part of the Phase 1 Review, particularly the \$1.1 billion write-off of the rate smoothing regulatory account, BC Hydro's updated 5-year rates forecast submitted to the B.C. Utilities Commission (BCUC) is approximately 55% lower than the 13.7% cumulative increase for the same period under the previous government's 10-year rates plan, and more than 40% lower than the 10.7% forecast rate of B.C. inflation over the same period. Critical to managing costs was the decision to curtail the purchase of power, at relatively high prices, from independent power producers during a period where BC Hydro is in surplus and does not need additional supply.

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Rate Comparison – Previous 10 Year Rates Plan and Phase 1 Updated Rates Forecast



Equally important, the Phase 1 Review focused on expanding sound financial and regulatory oversight of BC Hydro by the BCUC. BC Hydro is currently before the BCUC with a Revenue Requirements Application where its costs and expenditures are being reviewed by the BCUC. For the first time in decades, BC Hydro is requesting a rate decrease of 1% for April 1, 2020.

Also, as a result of the Phase 1 Review, the Auditor General of BC removed her qualification on the Province's Public Accounts in 2018/19, following qualifications in each of the prior two years. The Auditor General stated that "Government has made a number of changes to the regulatory framework, giving the regulator the ability to influence costs and rates. I believe the changes made to the regulatory framework are sufficient to allow me to remove my qualification on the use of rate-regulated accounting for the year ending March 31, 2019."

Following the completion of the Phase 1 Review, the [Terms of Reference](#) for Phase 2 of the Comprehensive Review (Phase 2 Review) were released in July 2019. The objective

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of the Phase 2 Review is to develop recommendations that will strategically position BC Hydro for long-term success, while meeting the province's climate goals, keeping rates affordable for British Columbians, furthering reconciliation with Indigenous Nations, and supporting quality economic development. The Phase 2 Review is a broad, transformational review that will consider some of the significant changes and shifts taking place in B.C. and continental energy sectors, in addition to evolving technologies and the changing needs of current and future BC Hydro customers.

The actions taken as part of the Phase 2 Review will support the government's CleanBC plan, including to expand the electrification of our growing economy over the coming decades. As we power more activities from electricity, people from across B.C. will benefit from a clean and reliable source of power, more comfortable buildings, reduced pollution, and cleaner transportation options. BC Hydro has a critical role to play in achieving the province's legislated greenhouse gas reduction targets.

The Phase 2 Review will address four areas of interest:

- Supporting CleanBC **(Section 3)**
- Thriving in an Evolving Electricity Sector **(Section 4)**
- Leveraging Our Strengths **(Section 5)**
- Opportunities for Indigenous Nations and Communities **(Section 6)**

This interim report is designed as a discussion paper. It takes into consideration analysis of emerging trends, feedback from preliminary engagement with Indigenous Nations and organizations, and input from stakeholders and expert advisors. Sections 3 through 6 outline the Phase 2 Review's preliminary work, information and ideas. Each section includes questions to gather further feedback from stakeholders, Indigenous Nations and customer groups. This feedback will support the development of final recommendations by the Ministry of Energy, Mines and Petroleum Resources, which will provide a pathway for BC Hydro's long-term success in the face of an evolving utility, technological, and energy landscape in British Columbia.

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2. Emerging Trends

Climate action, the evolution of energy markets, technological innovations and changes in energy consumption are fundamentally changing the way electrical utilities do business. Utilities are evolving their business models in order to expand their value proposition and stay relevant. This can include supplementing and changing their current offerings, or diversification and structural changes to their traditional operating model. In addition, customers are looking for more choices and flexibility in how they manage their energy use and are increasingly interested in clean and renewable energy.

Changes in Traditional Load Profile

The industrial sector traditionally makes up approximately one-third of BC Hydro's demand, also known as load. Today's industrial customer base is made up primarily of the forestry sector (approximately 50%), mining (approximately 30%) and the oil and gas industry (approximately 10%). Because commodity prices can impact traditional resource-based industries, BC Hydro's industrial load has a degree of uncertainty. Significant decreases in load would mean that more of BC Hydro's existing system costs would need to be recovered by other customers, which could have rate impacts. Through initial stakeholder engagement for the Phase 2 Review, industrial customers emphasized that their competitiveness depends on BC Hydro's ability to provide reliable, clean and cost-effective electricity to its customers. At the same time, government wants to leverage BC Hydro's strategic advantages to both maintain and grow industrial load in B.C.

A new and growing area of load is transportation. B.C. is currently leading North America in the sale of electric vehicles, reaching 10% of all new cars sold in the province during the third quarter of 2019. With the passing of the *Zero-Emission Vehicle Act*, by 2040 every new light-duty vehicle sold will be a zero-emission vehicle. Translink and BC Transit are both moving to replace their diesel buses with battery electric versions. Other opportunities for electric transport include medium and heavy duty on-road EVs, such as port drayage trucks and urban delivery trucks, as well as off-road transportation, such as ferries and other marine, airport ground support equipment, forklifts and mining conveyance. BC Hydro will be working with its customers to manage charging for transportation.

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New load presents an opportunity for BC Hydro and may mitigate the risk of declines in traditional load, but it also often requires new infrastructure to serve. BC Hydro needs to take steps to limit the costs of serving new or different load or ensure it receives sufficient revenues to offset these costs.

Evolving Technologies

Over the past several years the costs of solar and wind generation and small-scale battery storage have decreased significantly. This change in cost has at least two significant impacts on the utility industry. At the wholesale market level, the lower cost of adding new incremental clean energy coupled with production subsidies and renewable energy targets in various states has resulted in substantial additions of wind and solar generation. This is placing downward pressure on wholesale prices in western North America in the hours of the day (either sunny hours or more variable windy hours) when those resources are producing. This can impact the revenues that utilities recover when they sell excess generation in the wholesale market. At the retail level, the availability of consumer scale systems (e.g. rooftop solar) has led to customers self-generating and displacing utility sales and therefore revenues. This has led to challenges for traditional electrical utilities in the United States whose rates were designed to recover costs under historic business models (e.g. via energy sales). Utilities must maintain a reliable electricity system, including the costs of refurbishing and upgrading infrastructure. Though those customers that are self-generating still rely on many of the services from the system, they no longer fully contribute to fund the services they receive. This can create a situation where costs shift to remaining customers who end up disproportionately funding an electricity system that still provides benefits to self-generating customers.

While wind and solar generation do not have the operational flexibility of traditional generation resources – in that operators cannot ramp them up and down to follow changing demand on the grid – new technology is making it possible to control some of the demand to compensate for that. From a planning perspective, the traditional utility model of forecasting demand and dispatching supply may need to be enhanced, where the enhanced model may include forecasting and dispatching both supply and demand. This means that another consideration as an emerging trend is demand-response technology – the ability to manage vehicle charging and home appliances like hot water

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heaters, air conditioners and refrigerators to reduce electricity demand. Demand-response is a growth area facilitated by technology, artificial intelligence and entrepreneurship, and could enable the management of demand rather than supply.

Changing Customer Preferences

Customers expect more from energy providers than merely a commodity service. Traditionally conservative utilities face the challenge of meeting customer expectations for customized services set by more agile and innovative industries such as online retail.

Factors affecting changing customer expectations include:

- The growth of digitization and the evolution of how customers interact with their energy provider (i.e. self-service via use of online tools), resulting in more technologically savvy customers with changing demands and expectations.
- Utilities must figure out their role (leaders, innovators, etc.) with new technologies like electric vehicles and charging, LED streetlights and advanced data management.
- New product and service offerings, including behind the meter services. Behind the meter refers to products or services offered by a utility that go beyond simply providing power for a price, usually with the goal of improving energy efficiency or reducing greenhouse gas emissions, such as hot water tank rentals or new home energy management services.
- Customers are increasingly concerned about the environmental impact of their energy choices.

It is important for the electricity sector to determine how to effectively engage customers given the advancement of new energy choices such as small-scale battery storage, self-generation and new ways to manage energy use. Further, integration of new technologies and services into the electricity system will be a key consideration for the future.

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Evolution of Electricity Trade

British Columbia's electricity grid is embedded in a much larger grid that covers B.C. and Alberta plus portions of 14 western U.S. states and a small part of Mexico. Trade is important both to B.C. and its neighbours for reliability and for lowering the costs to provide service.

Retiring coal fleets, increasingly available and cost-competitive intermittent renewables and low natural gas prices are some of the factors shaping the industry in the western U.S. and Canada. Senate Bill 100 approved in California in 2018 stipulates that eligible renewable energy resources and zero-carbon resources supply 100% of all retail sales of electricity to California end-use customers by 2045. Washington State passed its own 100% Clean Energy Bill in April 2019. In contrast to this focus on clean energy and decarbonization, some states are continuing to support coal generation.

While the cost of energy in the market may be relatively inexpensive, capacity and flexibility are increasingly valuable in a landscape where jurisdictions are adding more intermittent renewables to their supply mix. Capacity is produced by a firm, dependable source of power like hydroelectricity that can be relied upon to meet peak demand, unlike intermittent renewable sources like wind and solar which produce energy only when the wind is blowing or the sun is shining. Utilities with hydroelectric generation systems have a strategic advantage, as these types of systems provide clean, flexible power that operators can ramp up and down in response to fluctuations in demand and fluctuations in the availability of other renewables.

The increased penetration of renewables creates oversupply in some periods and regions, which has led to negative market prices and renewable resource curtailments. Given the output of many of these renewable resources is a function of environmental conditions, integrating these resources requires backstopping by other non-intermittent resources that provide the dependable capacity at peak times and the flexibility associated with storage.

Hydroelectric generation with short- or long-term storage (i.e., with a reservoir behind a dam or upstream of a dam) is a clean way of providing this backstop. Long-term storage hydro is also beneficial, as water can be stored during periods of high supply/low

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demand and used for generation in periods of low supply/high demand. B.C. is in an advantageous position given so much of BC Hydro's power is generated through storage hydroelectricity.

While small-scale battery storage technology has evolved and the cost has decreased significantly, grid scale batteries are still an emerging technology that has its challenges. Grid scale batteries can provide short-term storage and shifting of output from renewables into periods with more demand. However, grid scale battery technology remains relatively expensive and has limited storage duration. Though expectations are for grid scale battery technology to continue to improve, the future of this technology remains uncertain. In the short-to-medium term, utilities could avoid substantial costs if they have the ability to leverage their existing systems while grid-scale battery technology advances to a level that provides adequate storage at a lower cost.

3. Supporting B.C.'s Energy and Economic Development Goals through CleanBC

Released in December 2018, CleanBC is a pathway to a more prosperous, balanced and sustainable future. Over the next decade and beyond, the plan outlines how the increased use of clean and renewable energy in transportation, buildings and industry will make things better and more affordable for all British Columbians. CleanBC is central to reducing greenhouse gas emissions while meeting British Columbia's energy and economic development goals. British Columbia has a large, hydroelectric system where nearly 98% of the electricity BC Hydro generates is clean. BC Hydro has a critical role to play in achieving the electrification goals in CleanBC.

Achieving British Columbia's legislated greenhouse gas emission targets will require a major shift from fossil fuels to clean electricity generated by BC Hydro and other low-emission energy sources, such as hydrogen. The policies and strategies in the CleanBC plan are expected to require additional electricity over and above currently projected demand growth to electrify key segments of our economy.

Along with actions to reduce greenhouse gas emissions, CleanBC provides an effective blueprint to grow our economy. British Columbia already has among the cleanest industries in the world, and B.C. companies can be first movers and capture a larger

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share of the growing clean energy and low-carbon products market. As industry continues to work with the cleantech sector to develop innovative solutions to reduce emissions, British Columbia can market our products, services and technology to a world that is increasingly interested in clean solutions.

Rate Design

Under BC Hydro's tiered residential rate structure, customers pay a higher rate for electricity usage over a certain monthly volume. This rate structure was designed to provide an incentive for customers to conserve energy so that BC Hydro could avoid building or procuring new resources. This two-tier rate structure made sense when BC Hydro was in deficit and when the marginal cost of additional electricity supply was much higher than it is today. BC Hydro applied in February 2020 to extend the pricing principles for this rate by two years. Pricing principles determine how general rate increases are applied to the various charges under a rate schedule, in this case the Basic Charge, Step 1 Energy Charge and Step 2 Energy Charge. If BC Hydro were to make any changes to its default residential rate, it would file a rate design application for review and approval with the BCUC that would be informed by feedback from customers and stakeholders

Optional rates can provide customers with more choice, make electricity more affordable and reduce emissions. New rates, which customers would be able to opt-in to, can help shift demand to times when BC Hydro's system has more capacity to provide service. Making greater use of existing capacity can make it less expensive to expand the use of clean electricity in support of CleanBC. Optional rates can also help manage transmission and distribution-related costs. In the Phase 2 Review, stakeholders and experts have noted the importance of ensuring that rates send the right price signals to the market as well as the fact that load growth can benefit all ratepayers.

BC Hydro is conducting preliminary analysis on a number of optional rate designs as part of the Phase 2 Review. Based on feedback from the Phase 2 Review, with further analysis, and engagement with stakeholders and customers as part of a BCUC rate design application process, BC Hydro will determine which optional rates to pursue.

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For **residential** customers, optional rate designs could include (but are not limited to):

- An optional time-of-use rate that could use a variable rate based on when customers use electricity. This may appeal to customers who have an electric vehicle that they charge overnight, and also lower electricity usage during peak demand times of the day.
- An interruptible rate that could allow customers to receive a reduction in their bill in exchange for providing BC Hydro the ability to manage non-essential services, such as hot water heat and electric baseboards.
- A discounted rate for customers with heat pumps.

For **commercial** customers, BC Hydro is exploring optional rate designs including those that encourage workplace electric vehicle charging, that promote the conversion of district energy systems from natural gas to electricity, and that improve competitiveness of electricity as a fuel choice.

Most large **industrial** customers take service at the Transmission Service stepped rate. Eliminating the higher Tier 2 energy charge may increase the affordability of electricity and could be done by flattening the energy charge or increasing the demand charge. Industrial stakeholders have provided the feedback that the two-tier design successfully focused on long-term conservation and load reductions, but that many customers are now facing exposure to the second tier as recognition of their conservation investments reaches expiration. Flattening the two-tier industrial rate would also support CleanBC by making increased consumption of clean electricity more competitive, thereby removing a barrier for electrification.

Stakeholder sessions provided the feedback that competitiveness should be kept at the forefront of the Phase 2 Review, as an important issue facing both B.C.-based businesses and industry. These stakeholders noted that low cost electricity has always been an advantage in B.C. and that it is important that BC Hydro continue to focus on affordability because a strong private sector in B.C. can help to generate new economic development opportunities and improve the standard of living for British Columbians.

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Affordable rates are important for all customers. In particular, for industrial customers that operate in energy-intensive and trade-exposed resource industries, access to reliable and secure power at competitive, fair and stable rates is central to their ability to remain competitive. For certain sectors, energy can represent one of the largest operating costs and is often managed by shifting production and investment to the lowest cost jurisdictions. Lower electricity costs make more capital available for investment and enable job growth that benefits communities where these industries operate. Competitive electricity rates are important to the future success of industry in B.C. Stakeholders also provided the feedback that a rate that is competitive with alternative energy sources (i.e., fossil fuels) would allow companies to make strategic decisions on the electrification of future projects and encourage clean growth in B.C.

British Columbia also has the opportunity to attract new clean industries, such as hydrogen, renewable fuel production and carbon capture, which will help grow the economy and reduce or avoid emissions from existing industries. Attracting new BC Hydro customers could provide benefits to all ratepayers by increasing revenues to BC Hydro. BC Hydro could target potential new industrial customers through an economic development rate, including for energy-intensive low-carbon industries.

Time and Cost for Industrial Customers to Connect

Stakeholders noted that the time and cost for customers to connect to BC Hydro's system can be barriers to electrification, meaning that greenhouse gas emissions may not be reduced or avoided if customers choose more carbon-intensive energy sources. For those customers with a close, more carbon-intensive alternative, impediments to interconnecting can result in emissions being locked in for decades. Some industrial customers also noted that there is an economic barrier to the electrification of B.C.'s upstream oil and natural gas industry specifically, given the currently low gas prices that favour self-supply. As discussed above, there is also an opportunity for BC Hydro to offer a rate that incentivizes the use of electricity as an alternative to fossil fuels.

Also considering this feedback, BC Hydro's interconnection tariffs could be amended to streamline processes and reduce costs and risks for new customers. One option would be for BC Hydro to modify or eliminate its 150 MVA threshold.

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Under Tariff Supplement 6, system reinforcements to be funded by the customer do not include additions or alterations to generation plant and associated transmission, or transmission lines at 500 kV and over, unless the new or incremental loads exceed 150 MVA. The inclusion of the 150 MVA threshold is an attempt to insulate existing ratepayers from large rate increases should an extremely large industrial customer interconnect to the BC Hydro system, since bulk generation costs are the most significant costs for a utility (versus bulk transmission). However, the October 2013 final report from the Industrial Electricity Policy Review singled out the 150 MVA threshold, noting that it “presents a cost barrier not found in other jurisdictions, and sends a signal that new large electric loads are not supported in British Columbia.”

A timely build-out of the transmission system will be necessary to support electrification of industry. Customers have noted that additional electricity transmission infrastructure is critical to achieving industrial electrification, especially in areas that do not have access to the BC Hydro system. Under an August 2019 Memorandum of Understanding between the Province of British Columbia and the Government of Canada, a number of transmission projects were identified for co-funding that would support the electrification of the natural gas sector. In addition to funding, regulatory changes could help ensure BC Hydro can meet customer timelines, as well as removing the obligation for customers to bear the cost of infrastructure.

Diesel Reduction

To support the CleanBC plan, BC Hydro is partnering with the Province and the federal government to implement the Remote Community Clean Energy Strategy to help remote communities, with a focus on Indigenous communities, reduce or eliminate diesel generation and replace it with energy from cleaner sources. Diesel generated electricity represents less than 0.5% of all electricity generated in the Province.

Many Indigenous Nations have interests and goals focused around environmental stewardship, energy self-sufficiency and economic sustainability. There are Indigenous communities that continue to rely on diesel for their community’s energy needs as they do not have access to the integrated BC Hydro grid to receive clean electricity due to their geographic location. In these areas that are not integrated to the grid, the cost of clean and renewable resources can, in most cases, be substantially higher than in areas

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connected to the integrated system due to a combination of the remoteness of the sites, loss of economies of scale due to the size of the grid, and lower local capacity, including equipment availability to build and/or operate a facility.

Experts in the Phase 2 Review support a reduction of diesel consumption balanced with maintaining reliability in non-integrated areas, with an emphasis on investment in early engagement with Indigenous Nations to identify opportunities, and implementing clean generation resources that are less costly than BC Hydro's marginal cost of existing operations.

Demand Side Management and Fuel Switching Investments

Demand-side management refers to programs, investments or other actions taken to reduce energy demand or shift energy use to periods of lower demand. Demand-side management is an important part of BC Hydro's resource plan, providing the flexibility to meet future supply needs by reducing demand through conservation or shifting demand, depending on system needs. Demand-side management is a low-cost energy resource with little to no environmental impact.

BC Hydro has a successful history of conservation and energy management programs through Power Smart, including [programs specifically for income-qualifying customers](#). The *Clean Energy Act* contains an energy objective for BC Hydro to take demand-side measures to reduce its expected increase in demand for electricity by the year 2020 by at least 66%. BC Hydro has surpassed the objective and currently spends approximately \$85 million annually on its traditional demand-side management portfolio, which is approximately equivalent to 1.5% of BC Hydro's domestic revenues. This amount is a decrease from the \$120 million spent in 2014, as BC Hydro reduced its traditional demand-side management spending in order to manage upward pressure on rates during an energy surplus.

The current level of investment was deemed to be appropriate in both Phase 1 of the Comprehensive Review and in the Fiscal 2017 – Fiscal 2019 Revenue Requirements Application to the BCUC. Maintaining spending at this level preserves the ability to ramp up investment in the future if it is required. The BCUC will play a greater role in

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reviewing BC Hydro's demand-side investments through its review of future Integrated Resource Plans.

In addition to demand-side management, new programs to encourage electrification of transportation, buildings and industry will be required to achieve the greenhouse gas reduction goals set out in CleanBC. Some of these types of initiatives are currently enabled by the Greenhouse Gas Reduction (Clean Energy) Regulation under the *Clean Energy Act*. Future proposals for electrification initiatives will be reviewed by the BCUC.

Internal Carbon Pricing and Electrification

The future path of carbon pricing in B.C. will directly influence the cost-effectiveness of fuel-switching and the amount of electrification that will occur.

For the transportation sector, there are two key carbon price tools in B.C. that encourage a transition toward less carbon-intensive fuels like electricity. In B.C. the carbon tax is applied at the pump and applies to the emissions associated with the purchase or use of transportation fuels such as gasoline, diesel, natural gas, and propane unless a specific exemption applies. The effect of this is to increase the price of fossil fuels for transportation as compared to electricity.

The other pricing mechanism positively influencing the adoption of electric vehicles in B.C. is the Renewable and Low Carbon Fuel Requirements Regulation. This regulation requires fuel suppliers to reduce the carbon content of the fuels they supply to the transportation sector and is driving the adoption of low-emitting fuels like electricity, hydrogen and biofuels. The low- carbon fuel credit market established under that Regulation provides a significant incentive to use low-carbon electricity for transportation.

For industry, the intensity benchmarks that are currently being developed for the CleanBC Industrial Incentive Program will affect the cost-effectiveness of fuel switching, as the benchmarks will determine the eligibility and level of incentive payments, and therefore the effective carbon price faced by industry.

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An internal carbon price for BC Hydro could be used to guide decision-making on programs and investments that reduce greenhouse gas emissions. The City of Vancouver and Metro Vancouver have both adopted internal carbon prices, as have a number of U.S. electric utilities and private sector energy companies. Introducing an internal carbon price or value for greenhouse gas emission reductions for electric utilities would support development of programs to encourage customer fuel-switching to electricity. An internal carbon price for BC Hydro would also provide a stable and predictable price signal and allow a consistent and efficient approach to fuel switching across the economy.

Utilities in other jurisdictions such as Washington state and Minnesota are required to incorporate a cost of carbon into the development of their long-term resource plans.

What do you think?

What factors are important to consider when looking at optional rates to support electrification?

How can competitiveness for business and industry be prioritized in an electrified future?

How can BC Hydro reduce barriers to electrification for existing and new customers?

What are key considerations for programs to reduce reliance on diesel for non-integrated communities?

Are there new types of community projects or education programs that should be considered as part of an offering for new services either at or behind the meter?

How should BC Hydro use a value for greenhouse gas emission reductions (for example, a carbon price) in its evaluation of investments?

4. Thriving in an Evolving Electricity Sector

Phase 2 of the review is expected to identify trends in technology, changes in electricity markets and transformative approaches used by other electric utilities, for example

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distributed generation, microgrids and digital utilities. Recommendations of the Phase 2 Review will address how BC Hydro must adapt to a broad range of future scenarios and evolve to support long-term sustainability.

Grid modernization

The distribution system provides the greatest opportunity for innovation for utilities, since they can take advantage of infrastructure that is built into every neighbourhood and communication systems that operate it. To take advantage of smart and flexible end-use devices or community-based energy resources, BC Hydro's distribution infrastructure must continue to evolve its smart-grid technology. For example, demand forecasting tools, distributed energy management systems, communication and control technologies. The grid also needs to support flexibility such as automation of switches and other grid assets.

Defining a successful grid modernization strategy is complex because it has the potential to enable such a wide variety of objectives and business opportunities. For example, it can yield vast amounts of data that can be leveraged to provide tailored customer products and services, and can be used to optimize the grid to improve the reliability and cost of conventional service.

New products and services

New product and service offerings are emerging for electric utilities that provide benefits to ratepayers, including services behind the meter like demand-response for vehicle charging and water heating to shift demand for power to off-peak hours. The Phase 2 Review is looking at different roles that BC Hydro could play behind the meter. There could be an opportunity for BC Hydro to offer new products and enhance existing products. BC Hydro could provide customers a discount in exchange for managing non-essential services, such as hot water heating and electric baseboards, in order to shift demand to off-peak hours and therefore keep costs down.

BC Hydro could act as a platform for behind the meter activities which would enable other organizations to offer additional services. The use of BC Hydro's infrastructure and information technology could facilitate services behind the meter through partnerships.

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Innovation

BC Hydro must prepare itself for technological change that is already occurring in the electricity sector. Experts recommended looking to incentivize and encourage innovative thinking throughout the organization. Some other jurisdictions have created the concept of an innovation sandbox that advances pilots for programs and services. This would entail an annual budget to try new technologies or services that would not be subject to cost disallowance by the BCUC.

Resource Options

Phase 1 of the Comprehensive Review enhanced regulatory oversight of BC Hydro by the BCUC. This included the restoration of the BCUC's authority to review and approve BC Hydro's Integrated Resource Plan, which outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs, now and into the future.

BC Hydro's decisions on assets and resources to meet demand are central to the Integrated Resource Plan. There are currently constraints that limit BC Hydro's ability to maximize its integrated system to provide the most cost-effective clean supply to customers. In particular, the self-sufficiency provision in the *Clean Energy Act* restricts BC Hydro to planning to acquire resources within B.C. until self-sufficient, even in cases where clean and renewable resources in other jurisdictions could be more affordable. Eliminating the self-sufficiency requirement could provide BC Hydro the flexibility to meet future demand at the least cost, as BC Hydro would be able to meet demand not only through electricity generating facilities within British Columbia but also through importing power from clean and renewable resources. Self-sufficiency is a planning criterion for average water years; in low water years, BC Hydro already acquires cost-effective clean energy from the market to serve domestic needs. Eliminating the self-sufficiency provision would also have the benefit of lowering the cost of adding new generation due to timing flexibility. Further, it would also mean it would be unnecessary for BC Hydro to commit to long-term resources when facing only short-term energy deficits. When developing its Integrated Resource Plan, BC Hydro will look at the impact of the elimination of the self-sufficiency provision.

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Further, if both public and private entities could develop small-scale generation, BC Hydro would have more choice and flexibility when determining least cost solutions for meeting demand while still pursuing environmental and social benefits, all under the increased oversight of the BCUC.

What do you think?

What are important considerations to empower BC Hydro to make the most cost-effective decisions on resource options, under the oversight of the BCUC, with respect to clean electricity?

What should BC Hydro be aware of when considering partnerships for behind the meter services?

Other jurisdictions, including Ontario and Quebec, invest in research and development in the electricity space to expand their customer offerings. How can BC Hydro best position itself to drive innovation? What is the best way to fund these efforts?

5. Leveraging Our Strengths

The Phase 2 Review will consider whether opportunities exist to enable greater participation in external markets. The review will consider what legislative or regulatory constraints reduce Powerex's trading ability in the West now or in the future and how BC Hydro should consider cost-effective clean electricity outside of B.C. if it is available. The Phase 2 Review will also consider whether there are opportunities to own, operate or partner with others with respect to clean energy resources and services.

BC Hydro's integrated system is interconnected with the western U.S. and Alberta. Powerex Corp. – BC Hydro's wholly-owned subsidiary – was established to participate in energy markets throughout the western states and Alberta. More than 90% of Powerex's trade activity occurs with the three west coast states. The capability of BC Hydro's system can vary over time with the amount of precipitation that falls across the province. Currently, in most years, BC Hydro has surplus energy unless precipitation across the province is very low on an annual basis. If BC Hydro needs additional energy

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to meet its customers' needs, it purchases that energy from Powerex. Likewise, when BC Hydro has surplus energy above and beyond its customers' needs, it can sell that energy to Powerex. BC Hydro and Powerex can also transact if there is residual capability in BC Hydro's system after meeting customer needs.

B.C. is not alone in focusing on reducing greenhouse gas emissions associated with the generation of electricity. Many parties have an interest in reducing emissions and the relative value of clean resources has increased accordingly. Powerex has not directly contracted with coal or gas generation facilities outside the province for many years. Its portfolio today comes from a combination of low-carbon resources and wholesale market electricity. In the past decade, Powerex has been a net exporter of low-carbon resources from B.C. to external markets, which helps to lower emissions in those jurisdictions receiving the energy.

A number of B.C.'s neighbours are embarking on policies to achieve emission-free energy and clean economies. States such as California, Washington, Nevada, Colorado and New Mexico have all set targets to achieve 100% clean energy standards in the 2040/2050-time frame. With more jurisdictions pursuing 100% clean standards, emitting resources will have diminishing market opportunities compared to non-emitting resources.

Maintaining alignment of clean policy with trade partners in the West would leverage BC Hydro's strength as a clean supplier of energy, capacity and flexibility, thereby maintaining and potentially enhancing opportunities for Powerex to generate income. These jurisdictions generally have requirements to generate or import enough non-emitting energy to meet 100% of their domestic retail sales over a period of several years. Washington State, one of B.C.'s largest electricity trading partners, uses a four-year period to accommodate year-to-year variations in hydroelectric generation.

Maintaining alignment of clean policy also provides an opportunity to potentially lower costs of acquiring clean energy as other regions produce clean energy surplus to their needs or have lower cost clean resources available for development. For jurisdictions with large fuel (e.g. inflow) variability like that in the BC Hydro system, the

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requirements are generally for over a multi-year period so as to relax the requirement for unusual conditions such as low inflow years.

Year after year, BC Hydro continues to exceed the objective of the *Clean Energy Act* that at least 93% of electricity generation in the province be from clean or renewable resources. Last year, BC Hydro generated nearly 98% clean energy. Building on the *Clean Energy Act* and in line with neighbouring jurisdictions, BC Hydro could become the first jurisdiction to implement a 100% clean electricity standard. Therefore, BC Hydro will assume a 100% clean electricity standard for the integrated grid when developing its Integrated Resource Plan.

What do you think?

What are important considerations for a 100% clean electricity energy standard for BC Hydro's integrated system?

What factors should be considered if BC Hydro looks to expand its business interests including considering new opportunities outside of B.C. via Powerex or a new subsidiary?

6. Advancing Reconciliation through New Partnerships with Indigenous Nations

The provincial government passed legislation in November 2019 to implement the UN Declaration on the Rights of Indigenous Peoples. The B.C. [Declaration on the Rights of Indigenous Peoples Act](#) recognizes the human rights of Indigenous peoples and provides a path forward on reconciliation that will build a stronger B.C.

The Phase 2 Review is exploring future opportunities or new roles for Indigenous Nations in the development, ownership or operation of electrical infrastructure or services with the goal of enhancing Indigenous Nations' participation in the energy sector.

Over the last decade BC Hydro has made a strong commitment towards building and sustaining long-term relationships with Indigenous Nations, particularly with those

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communities where BC Hydro has a large infrastructure footprint. Despite the unresolved impacts from BC Hydro's historic infrastructure, BC Hydro and several Indigenous Nations have made progress to build a future together that reflects each other's mutual interests. As an organization, BC Hydro is guided by its [Statement of Indigenous Principles](#) and has made a commitment to incorporate the United Nations Declaration on the Rights of Indigenous Peoples and the Calls to Action of the Truth and Reconciliation Commission into its business.

Through various engagements with Indigenous Nations over the last several years, several themes have emerged that have been shared with both the Province and BC Hydro as relating to the energy sector. These themes are summarized as follows:

- Many Indigenous Nations have experienced significant impacts from BC Hydro's legacy infrastructure, most of which was built in the 1960s, 1970s and 1980s. BC Hydro has provided little in the way of benefits for the continued operation of this legacy infrastructure with the exception of a few agreements providing historic redress for small number of Indigenous Nations who are among the most impacted by BC Hydro's footprint. A major theme in discussions with Indigenous Nations over the last decade is the importance of sharing BC Hydro revenue with communities who experience the impacts of this historic infrastructure.
- For more than a decade, many Indigenous Nations across B.C. have embraced the opportunity to participate in the clean energy sector by pursuing independent power producer (IPP) opportunities selling electricity to BC Hydro. Successful IPPs can provide Indigenous Nations in B.C. a long-term stable source of revenue from clean energy development. Since BC Hydro currently has a surplus of electricity, new IPP opportunities are not available at this time. As a result, there is an increased interest in other energy sector opportunities – such as ownership in transmission assets, BC Hydro generation assets, or establishing Indigenous utilities to serve Indigenous members on reserve lands or to serve non-Indigenous customers beyond reserve lands.

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- To enable these types of energy sector opportunities, Indigenous Nations have provided the feedback that capacity (e.g. governance, financial, etc.) support would lead to more successful outcomes.
- Consistent with the United Nations Declaration on the Rights of Indigenous Peoples, Indigenous Nations have continued to emphasize:
 - The need for the Crown to consult and cooperate in good faith in order to obtain their free, prior and informed consent for building and operating electricity infrastructure in their territories.
 - Their own stewardship responsibilities and the importance of their involvement in decisions affecting lands and resources.
 - The importance of early engagement with Indigenous Nations on strategic level decisions and plans affecting them.
 - Concern around the impact of BC Hydro's projects and ongoing operations (particularly water operations) and more generally cumulative impacts in their territories and surrounding areas. As a result, Indigenous Nations have sought to co-plan or co-manage BC Hydro's use of resources in their territories.
 - There are opportunities for BC Hydro to take a more regional approach to its planning and engage Indigenous Nations earlier and more effectively on these issues.

Indigenous Nations have emphasized the importance of building relationships with BC Hydro that are founded on recognition of their rights, respect for their culture and protocols, and an appreciation for what Indigenous peoples, businesses and communities contribute to the province now and how they can contribute much more when they become full participants in British Columbia's economy.

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Engagement with Indigenous Nations and Organizations

The Phase 2 Review will undertake further engagement with Indigenous Nations and organizations on these topics, which will inform the content of the final report. The intent is to better understand what are considered to be opportunities and barriers on key areas of the Interim Report, and the potential impacts from an economic, social and cultural perspective.

What do you think?

What emerging issues and trends will BC Hydro need to address in the Phase 2 Review and beyond?

What are the key issues and trends for Indigenous and non-Indigenous communities related to electricity and BC Hydro?

7. Next Steps

This interim report is now available on the website for the Ministry of Energy, Mines and Petroleum Resources. The Ministry will continue to engage with stakeholders and seek more extensive feedback from Indigenous Nations and organizations to support the development of final recommendations of the Phase 2 Review.

A final report will be completed in Spring 2020 that will provide detailed recommendations on policy, governance and strategy to position BC Hydro for the future, while meeting provincial climate objectives, keeping rates affordable for British Columbians, furthering reconciliation with Indigenous peoples, and supporting quality economic development.

COLUMBIA River Treaty



To: Regional Districts, Boards of Directors
Valemount Town Council

Date: May 12, 2020

From: Linda Worley, Chair
Columbia River Treaty Local Governments Committee

Subject: Update on Committee Activities

Since our last update in February, the Committee has held its annual strategy session and two meetings.

Highlights for mid-February to April 2020

- **Annual strategy session** – The Columbia River Treaty Local Governments Committee (the Committee) meets face-to-face annually to prepare for the next fiscal year. This year the session was held on March 2 – 3 in *paqam*, near Cranbrook.

Jeremy Benson, Manager of Planning and Licensing in Generation Resource Management with BC Hydro provided a presentation and answered questions about flood risk management under the Columbia River Treaty now and with Called Upon operations after 2024, as well as BC Hydro decision processes weekly, monthly, annually and for longer periods. The Committee agreed that this was one of the most informative presentations they've had on these topics.

There was also an open discussion with Lawrence Pillon, BC Hydro's Senior Manager of Communities and Capital Projects, as well as East Kootenay and Columbia Region Community Relations Managers, Diane Tammen and Dag Sharman respectively, about opportunities to improve communications and engagement with local governments. The Committee was very encouraged by this discussion.

The Committee spent several hours in discussions with Kathy Eichenberger, Executive Director and Brooke McMurchy, Policy Analyst with the BC Columbia River Treaty (CRT) Team. Actions to address community specific interests and issues related to the Treaty; thoughts about the governance framework needed with a modernized Treaty; and outreach plans to communities, local governments and youth during 2020-21 were discussed in detail. The Committee will continue to work with the BC CRT Team and others to seek solutions to priority community specific issues. The Committee has created a Task Group of Committee members to research and bring forward information to the Committee to contribute to the design of a governance framework under a modernized Treaty.

The Committee met for a half day on March 3rd to discuss appropriate roles for the Committee during the ongoing Treaty negotiations; the input received on their September 2019 draft recommendations and revisions or further information needed to respond to this input; priorities, actions and funding for the 2020-21 fiscal year; and plans for hosting a session on the Treaty at the AKBLG AGM in April – which has since been postponed.

- **March 12 and April 9 meetings** – The Committee met by telecon for these meetings. The March 12 meeting was focused on final discussions on the appropriate roles for the Committee during the ongoing Treaty negotiations, finalizing priorities and actions for the 2020-21 fiscal year, review of the Committee's communications strategy and discussion about CBT's upcoming Our Trust – Our Future

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engagement on their Management Plan – which has since been postponed. A Code of Conduct for the Committee, the Terms of Reference for a Finance Committee and activities during COVID-19 pandemic constraints were the primary topics for the April 9 meeting.

- **Continuing activities during COVID-19 pandemic** – As Committee members are located across the Basin the Committee has always functioned through remote communications, making the transition to distancing relatively easy. Other than some delays while everyone adjusted to changes from the COVID-19 pandemic, the Committee plans to continue its work.

Kathy Eichenberger, the Executive Director of the Provincial Columbia River Treaty Team has stated: *'Work on the Treaty is proceeding during the COVID-19 pandemic. Though the next round of Canada-U.S. negotiations has not yet been scheduled, Canada, B.C. and Columbia Basin Indigenous Nations are collaborating through remote technology to refine Canadian positions and advance ecosystem function work. The provincial Columbia River Treaty Team is focused on addressing Treaty-related community interests, finalizing the summary report for last fall's Columbia Basin community meetings, and exploring new ways of connecting with Basin residents.'* You can read her full statement at:

<https://engage.gov.bc.ca/columbiarivertreaty/>.

Ongoing

- **Negotiations** – The 9th round of negotiations was held on March 11 and 12 in Washington, D.C. The Committee was updated by the Lead Negotiator on March 17 and CBRAC was updated on March 18 – see the attached summary. You can also read Minister Conroy's statement at: <https://news.gov.bc.ca/21793>.
- **Updating our recommendations** – Input from the community meetings and direct input to the Committee on our [draft recommendations](#) has been compiled. Further information is being gathered to support the Committee to make final decisions on revisions to complete the update process over the summer. Final recommendations will be shared with local governments and regional Indigenous Nations, MLAs and MPs as well as made available to the public.

The Committee has initiated two task groups to: 1) explore options to include local governments and Basin residents in the governance structure for a modernized Treaty; and 2) work with the BC CRT Team to update information about the distribution of benefits in BC from the CRT and make this information easily accessible as a first step to understand the current sharing of benefits and, if needed, explore options for changes.

- **Community interests** – Committee members continue to follow-up with the province on actions requested by community members at the 2018 and 2019 community meetings.

One of the priorities is the CRT Heritage Project which is designed to recognize how implementation of the CRT impacted the Canadian Columbia Basin, including acknowledging what was lost as a result of the Treaty dams. The CRT Heritage Project proposes a touring route linking a series of information stops at key locations in the Columbia Basin communicating Indigenous and non-Indigenous place-based stories of impacts and loss due to the implementation of the Columbia River Treaty. Basin communities will decide on what stories they want to include in the project and how those stories will be expressed.

The CRT Heritage Project Steering Committee directs the CRT Heritage Project. The CRT Local Governments Committee Vice Chair Stan Doehle is the LGC representative on the Committee (Regional Director, RDEK director.doehle@rdek.bc.ca). Other Committee members are Columbia Basin heritage and tourism professionals (Revelstoke Museum, Kootenay Rockies Tourism), Indigenous Nations representatives (Ktunaxa Nation, Secwepemc/Shuswap Nation and Syilx/Okanagan Nation) and representatives from B.C. government agencies (Heritage Branch, Tourism Branch, Columbia River Treaty

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Branch, and Rural Development Unit). A representative of the Sinixt people from the Lakes Tribe of the Colville Confederated Tribes is monitoring the project.

The Steering Committee contracted with Denise Cook Design to develop a detailed project plan report. The report will be used to support applications to federal, provincial and regional funding programs. This work was made possible with funding from Community Futures East Kootenay and the Ministry of Energy, Mines and Petroleum Resources and is close to being completed. From February to April the contractor team, which includes Denise Cook, Eileen Delehanty Pearkes, Stephanie Fischer and Eden DuPont, has been communicating with key Columbia Basin stakeholders to gather information for the project plan. Heritage content for the project will be gathered during community consultations, planned for late 2020 and 2021.

- **Communications:** The Committee continues a dialogue with BC Hydro about improving communications and engagement with local governments and Basin residents about ongoing operations.
- **Columbia Basin Regional Advisory Committee (CBRAC)** – CBRAC and the LGC members participated in two webinars in February and March about the current CRT governance framework. A CBRAC meeting was scheduled for early May in Valemount but this has been postponed due to the COVID-19 pandemic. The CBRAC Secretariat and Steering Committee are working on a series of webinars with information on topics that had been scheduled for the meeting. The next face-to-face CBRAC meeting will depend on when COVID-19 pandemic constraints are lifted.

CBRAC terms of reference, membership and meeting summaries as well as presentations and reports discussed at these meetings are available on the [CBRAC webpage](#).

Upcoming

- Webinar on the [BC Hydro Review Phase 2 Interim Report](#). (May)
- Gather updated information on BC Hydro Payments/Grants in Lieu of Taxes, CBT Programs and other regional benefits followed by consideration of options to improve supports for smaller communities adjacent to impacted segments of the river. (May-September)

I encourage you to stay informed about CRT negotiations by visiting the [CRT engagement website](#) and signing up for the CRT e-letter. This site will be the source of accurate, updated information as negotiations progress.

The next Committee Update will be sent to you in September.

Committee Members

RDKB - Linda Worley, Regional Director (LGC Chair) and Diane Langman, Village of Warfield Mayor/RDKB Chair
 RDEK - Stan Doehle, Regional Director (LGC Vice Chair) and Jane Walter, Regional Director
 RDCK – Aimee Watson, Regional Director/RDCK Chair, Ramona Faust, Regional Director
 CSRD – David Brooks-Hill, Regional Director and Mayor Ron Oszust, Town of Golden
 Village of Valemount – Donnie MacLean, Councilor
 AKBLG – Ange Qualizza, Mayor of Fernie

[Committee Website](#)

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Columbia River Treaty Update

March 23, 2020

Columbia River Treaty Negotiations Update – Round 9

From Sylvain Fabi, Lead Negotiator for the Columbia River Treaty, Global Affairs Canada

- The 9th round of Columbia River Treaty negotiations took place in Washington, D. C. on March 11-12, 2020.
- Negotiations are starting to advance as the U.S. is beginning to share its options on the issues, such as Flood Risk Management, power and ecosystems.
- Discussions are becoming more sensitive and remain confidential, but we can provide a high-level update.
- More details will be shared once the Canadian negotiating team has specific choices or decisions to make.
- At this moment, the U.S. proposed options are not agreeable to the Canadian team.
- They prefer the current level of flood control.
- They continue to claim that the U.S. pays too much for hydroelectric power generation. We have heard this repeated at bilateral conferences and in U.S. media.
- The Canadian negotiating team does not agree with these claims and will continue defending Canadian interests.
- The next round of negotiations has not been scheduled yet due to the COVID-19 pandemic. Negotiators have considered video conference options, though nothing has been confirmed at this point.
- In the meantime, the Canadian negotiating team will work with B.C. and the Indigenous Nations over the coming months to articulate positions that are beneficial to Canada.
- The ecosystem work led by the Indigenous Nations is proceeding and we should be in a better position to define Canadian objectives on this important issue later this year.
- Canada will be pressing to increase flexibility in the Treaty to allow operations that meet domestic environmental, societal and economic needs more effectively, addressing a number of Columbia Basin residents' goals.



STAFF REPORT

Date: 25 June 2020

File

ES – SW Regulatory
Bylaw

**To: Chair Langman and Board of
Directors**

From: Janine Dougall, General Manager of
Environmental Services

Re: Solid Waste Management Facilities
Regulatory Bylaw

Issue Introduction

A Staff report from Janine Dougall, General Manager of Environmental Services regarding updates to the Solid Waste Management Facilities Regulatory Bylaw.

History/Background Factors

The current Solid Waste Management Facilities Regulatory Bylaw No. 1719 was adopted in April 2019. As updates to the Contaminated Soil Policy have been approved, the Solid Waste Management Facilities Regulatory Bylaw now requires updating to include/change definitions and update the tipping fees for the acceptance and disposal of soils.

Implications

The implications of updating the Solid Waste Management Facilities Regulatory Bylaw are that it will allow the RDKB to enact the requirements, protocols and fees as outlined in the Contaminated Soil Policy.

Attached is Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020. Changes to the bylaw have been highlighted in green for ease of reference and primarily includes the addition of definitions and the updating of tipping fees (Schedule "A"). In addition, the following is to be noted:

- The definition for "Clean Soil" has been removed and replaced with the definition of "Cover Soil".
- The definition for "Soil" has been removed and replaced with the definition of "Uncontaminated Soil".
- Other minor housekeeping changes have also been completed.

Language has been included in Bylaw No. 1729 which will repeal Bylaw No. 1719 as of June 30, 2020, which means that the new bylaw will be effective as of July 1, 2020.

Advancement of Strategic Planning Goals

The work associated with review and updating of the Contaminated Soil Policy and subsequently the Solid Waste management Facilities Regulatory Bylaw is related to the strategic goal of "Exceptional Cost Effective and Efficient Services".

Background Information Provided

- Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020

Alternatives

1. Receive the Staff report from Janine Dougall – General Manager of Environmental Services regarding changes to the Solid Waste Management Facilities Regulatory Bylaw and take no action.
2. Refer Solid Waste Management Facilities Regulatory Bylaw No. 1729 back to Staff for revisions.
3.
 - a) That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be given First, Second and Third Reading.
 - b) That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be Reconsidered and Adopted.

Recommendation(s)

- a) That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be given First, Second and Third Reading.
- b) That Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020 be Reconsidered and Adopted.

REGIONAL DISTRICT OF KOOTENAY BOUNDARY

BYLAW NO. 1729

A Bylaw to regulate and set fees for the use of Solid Waste Management Facilities in the Regional District of Kootenay Boundary.

WHEREAS a service has been established by the “Regional District of Kootenay Boundary Waste Management Local Service Area Establishment Bylaw No. 1090, 1999”;

AND WHEREAS it is deemed desirable to establish and impose charges for the use of refuse disposal sites operated by the Regional District of Kootenay Boundary and to regulate by bylaw the use of the various waste management facilities operated by the Regional District of Kootenay Boundary in keeping with the direction provided by the Regional Solid Waste Management Plan, and to provide for the enforcement of this bylaw;

AND WHEREAS the Solid Waste Management Plan of the Regional District of Kootenay Boundary, approved by the Minister of Environment, in 2006, sets policies and programs for the management of solid waste in the Regional District;

NOW THEREFORE the Regional District of Kootenay Boundary in open meeting assembled, enacts as follows:

1. APPLICATION

- 1.1 This Bylaw shall apply to all Solid Waste Management Facilities operated by the Regional District of Kootenay Boundary.

2. DEFINITIONS AND SCHEDULES

- 2.1 In this Bylaw, unless the context otherwise requires:

“Agricultural Waste” means materials originating on a farm including but not limited to dead animals, slaughter waste, waste from crops, spoiled crops, manure and large quantities of film plastics used in agricultural operations.

“Active Face” means that area of the disposal facility where active landfilling of solid waste takes place.

“Antifreeze” means a liquid, such as ethylene glycol or alcohol that may be mixed with water and has been used as a radiator fluid, but does not contain lubricating oil or petroleum products that falls under the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations under the *Environmental Management Act*. Effective July 1, 2011, the antifreeze product category consists of automotive antifreeze and includes empty containers for this antifreeze.

“Asbestos - Friable” means any material containing asbestos that when dry, can be easily crumbled or pulverized to powder by hand due to its nature is very difficult to handle, and therefore requires pre-approval by the Manager and may be subject to special handling fees as specified in Schedule “A”. If a friable asbestos-containing material is damaged or disturbed, it presents an inhalation risk because asbestos fibres are more easily released into the air. Examples of friable asbestos include: acoustic ceilings and

tiles, types of plasters, wallboard, joint compound and thermal insulation for water heaters and pipes. Content greater than 1% either at the time of manufacture, or as determined using a method specified in Section 40(1) of the provincial *Hazardous Waste Regulation* (B.C. Reg. 63/2009) and all amending regulations.

"Asbestos - Non-friable" means a non-friable asbestos product in which the asbestos fibres are bound or locked into the product matrix, so that the fibres are not readily released. Such a product would present a risk for fibre release only when it is subject to significant abrasion through activities such as sanding or cutting with electric power tools. Examples of non-friable asbestos products include vinyl asbestos floor tiles, acoustic ceiling tiles, and asbestos cement products.

"Ash & Soot" means the carbonaceous residue created by the thorough combustion of organic matter.

"Asphalt" means a petroleum by-product, mixed with gravel, crushed rock etc., used for paving roadways, driveways, parking areas etc.

"Auto Hulk" means a car, pickup truck or passenger van that is no longer used for transportation purposes and/or is not registered.

"Bag" means a container holding a volume up to 17 imperial gallon (77 litre) equivalents no larger than 26" x 36" (60 x 90 centimetres).

"Beverage Containers" means a product that falls under the 'Beverage Container' product category in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Bin Area" means that area of the Solid Waste Management Facility that has been designated to receive Municipal Solid Waste or Recyclable Materials brought to the Solid Waste Management Facility in Small loads.

"Biomedical Waste" is defined in the Guidelines for the Management of Biomedical Wastes in Canada (Canadian Council of Ministers of the Environment, February 1992).

"Biosolids" means stabilized, dewatered, municipal sewage treatment plant sludge designated for disposal at a landfill.

"Bulky Waste" means Municipal Solid Waste that, due to its nature is very difficult to handle, and therefore requires pre-approval by the Manager and may be subject to special handling fees as specified in Schedule "A" hereto. Bulky Waste means items with a volume greater than 2m³ (71 ft.³) including but not limited to recreational vehicles, pre-fabricated homes, trailers, watercraft, Preserved Wood (greater than 1.25m (4 ft.) in length and 6" in diameter) and other articles that the Manager determines require special handling and Disposal technique.

"Bulk Load" means a load that exceeds 500 kg. (1102 lb.) net weight at scaled sites or 5m³ (177 ft.³) at volume based sites.

"Cell Phone" means a portable telephone that uses wireless cellular technology to send and receive phone signals, and further includes Cell Phone handsets, batteries and chargers.

"CFC Appliances" means refrigeration or heating appliances designed to operate with a coolant or refrigerant containing Chlorofluorocarbon (CFC).

"Class 1 Facility" means a staffed RDKB Solid Waste Management Facility so designated in Schedule "D" hereto.

"Class 2 Facility" means a staffed RDKB Solid Waste Management Facility so designated in Schedule "D" hereto.

"Class 3 Facility" means an unstaffed RDKB Solid Waste Management Facility so designated in Schedule "D" hereto.

"Clean Wood Waste" means clean, organic wood material including but not necessarily limited to kiln dried dimensional lumber such as wood pallets, demolition wood waste and Composite Wood Waste, which:

- (a) is free of Preserved Wood, rocks, metals (other than nails and screws), wire, fiberglass, Asphalt roofing material, and other non-wood materials; and
- (b) if it is more than 61 cm (2') in width or diameter at any point, is no more than 2.4m (8') in length.

"Commercial Solid Waste" means any municipal solid waste produced by or originating from a trade or business premise. It includes municipal solid waste produced by, or originating from, institutional or governmental offices, as well as municipal solid waste produced by institutional administrative offices.

"Composite Wood Waste" means wood that has been manufactured into dimensional lumber using glue and/or adhesives, such as particleboard, oriented strand board, medium-density fiberboard (MDF), plywood etc.

"Concrete" means a hardened mixture of cement with sand, gravel and or rebar. Rebar projecting from cement cannot exceed 1 ft. in length.

"Condemned Foods" means any food or other edible matter that does not contain Free Liquids that have been deemed to be unfit for human consumption pursuant to the *Food Safety Act* and all amending regulations.

"Construction, Demolition and Renovation Waste" means mixed Municipal Solid Waste material resulting from the construction, demolition, renovation and repair of structures, roads, sidewalks and utilities. Waste may include, but is not limited to, Recyclable Materials, asphalt, bricks, concrete (with rebar projecting greater than 1 ft. in length) and other masonry materials, roofing materials, soil, rock, wood, wood products, wall coverings, plaster, gypsum board or wallboard, plumbing fixtures, electrical fixtures, electrical wiring, electrical components containing no hazardous materials and insulation that does not contain asbestos.

"Contaminated Sites Regulation" means the Contaminated Sites Regulation, (B.C. Reg. 375/96) enacted under the *Environmental Management Act* and all amending regulations.

"Contamination" or "Contaminated" means, the presence of another material in Source Separated Waste, which includes, but is not limited to: the commingling of different Recyclable Materials; the commingling of different Controlled Waste; or the commingling of Municipal Solid Waste and/or Recyclable Materials and/or Controlled Waste and/or

Prohibited Waste. Mixed Waste loads containing greater than 10% Recyclable Materials will be deemed to be contaminated and subject to additional user fees.

"Controlled Waste" means Source Separated Waste that is approved by the Manager for Disposal at a Solid Waste Management Facility but which, because of its inherent nature and quantity, may require special handling and storage techniques to avoid creating health hazards, nuisances or environmental pollution, as specified in Schedule "B" hereto. Special handling fees may apply as specified in Schedule "A" hereto.

"Controlled Waste Area" means an area of the Solid Waste Management Facility designated by the Manager for the disposal of Controlled Waste.

"Cover Soil" means soil, sediment or fill material containing contamination in concentrations less than the lowest applicable industrial (IL) land use standard in the Contaminated Sites Regulation, Schedule 3.1, or material that has been determined by the Manager to be suitable Cover Soil based on the Soil Questionnaire.

"Covered Area" means an area inside a Solid Waste Management Facility structure built and maintained by the RDKB.

"Covered/Secured Municipal Solid Waste" means a load of Municipal Solid Waste secured and covered on the vehicle by a tarpaulin or other overlays used to confine the load to the vehicle so that waste cannot blow off or fall off while in transit.

"Curbside Collection Area" means the residences designated by the Manager as those which will receive collection service as determined by the Manager in accordance with the Solid Waste Management Plan.

"Dead Animals and Parts" means any deceased pets, wildlife remains or offal thereof, including: bones, feathers, skin, blood and hair but are not a Specified Risk Material.

"Disposal" means the placement of Municipal Solid Waste into the landfill.

"Dusty Material" means material that can become airborne when being deposited or managed at the Solid Waste Management Facility and subsequently pose a health risk or impair visibility. Examples include but are not limited to sawdust, foundry dust and Ash & Soot.

"Electronic Waste" means a product that falls under the 'Electronics and Electrical' products category in the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations under the *Environmental Management Act*.

"Environmental Management Act" means the *Environmental Management Act* (B.C. 2003 c53) and all subsequent and future amendments and all amending regulations.

"Facility" means a facility designated by the RDKB as a collection, processing or disposal site for Solid Waste.

"Facility Attendant" means any RDKB employee at a Solid Waste Management Facility.

"Facility Class" means the Solid Waste Management Facility Class designation specified in Schedule "D" hereto.

"Fluorescent Tubes and Bulbs" means straight fluorescent lamps (various lengths); u-tubes and compact fluorescents; and mercury, high-pressure and sodium vapour lamps that fall under the 'Electronics and Electrical' products category in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Food Processing Waste" means food residues produced during agricultural, commercial and institutional operations. Waste must be double bagged and cannot contain Dead Animals and Parts. Quantities in excess of 2m³ (71 ft³) are subject to specifications as outlined in Schedule "B" hereto. Special handling fees may apply as specified in Schedule "A" hereto.

"Free Liquid" means any portion of material that passes through and drops from a paint filter using the USEPA Method 9095A Paint Filter Liquids Test (within a 5 minute test period).

"Fuel Tank" means flammable liquid storage tanks and combustible liquid storage tanks that are drained and free of liquids. Shall not exceed 1000 litres (264 gallons) in capacity and must be either cut in half or have a whole cut in the tank that will allow the Facility Attendant to inspect the interior of the tank.

"Gas Cylinders" means a refillable or non-refillable metal container rated at a capacity of less than 46 kg. (101 lb.) which is used to contain compressed gases.

"Gasoline" means that which falls under the 'Gasoline' product category in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Glass Containers" means all clear and coloured Glass Containers used to hold consumer products, but does NOT include: window glass, laminated glass, safety or tempered glass, mirrored glass, automotive glass, fiberglass, plexiglass, light bulbs, fluorescent tubes, kitchenware, ceramics, or containers that have contained Hazardous Waste.

"Hazardous or Reactive Chemicals" means gaseous, liquid or Municipal Solid Waste that:

- a) is explosive, oxidizing or so unstable that it readily undergoes a violent change in the presence of air or water;
- b) generates toxic gases, vapours or fumes by itself or when mixed with water; or
- c) is polymerized in whole or in part by chemical action and causes damage by generating heat or increasing in volume.

"Hazardous Waste" means gaseous, liquid or Municipal Solid Waste that, because of its inherent nature and quantity, may require special handling and storage techniques to avoid creating health hazards, nuisances or environmental pollution. Hazardous Waste includes, but is not limited to: toxins, poisons, corrosives, irritants, strong sensitizers, flammables, Ignitables, infectious wastes, condemned foods, etc.

"Hazardous Waste Regulation" means the Hazardous Waste Regulation (B.C. Reg. 63/2009) under the *Environmental Management Act* and all amending regulations.

"Hydrocarbon Contaminated Soil" means soil, sediment or fill material contaminated with a petroleum product, including but not limited to, gasoline, diesel, fuel oil, hydraulic

oil and lubricating oil. Hydrocarbon Contaminated Soil must not have concentrations that would classify the soil to be a hazardous waste, including but not limited to:

1. Soil contains Waste Containing Polycyclic Aromatic Hydrocarbon (PAH),
2. Soil contains Waste Oil
3. Soil parameters are Leachable Waste.

Odorous soil should be analyzed for soil vapour in accordance with CSR Technical Guidance 4 and the Science Advisory Board for Contaminated Sites in BC (SAB) Soil Vapour Guidance¹. Should the soil vapour concentrations be greater than CSR Schedule 3.3 IL standards, the soil is considered to be hydrocarbon contaminated soil even if the soil concentrations are less than CSR schedule 3.1 IL standards.

“Hydrocarbon Contaminated – Section 41.1 HWR Soil” means soil, sediment or fill material containing

1. A waste oil concentration between 3% and 10% by weight, or
2. Have Benzene, Toluene, Ethylbenzene, or Xylene (BTEX) at a concentration determined to be Leachable Waste and a concentration less than the standards specified in Hazardous Waste Regulation, Section 41.1 table, Column II.

“Ignitable” means having the properties of:

- a) flammable gas;
- b) flammable liquid; or
- c) flammable solids, substances liable to spontaneous combustion or substances that on contact with water emit flammable gases.

“Industrial Waste” means any waste originating from an industrial operation including, but not limited to: forestry, pulp and paper, mining, or fisheries.

“Infested Vegetation” means trees, shrubs, herbaceous plants or associated fruit that show the presence of Plant Disease, noxious insects, pathogens or related pests that have caused or are likely to cause significant damage to the trees, shrubs, herbaceous plants or associated fruit.

“Inspector” means any member of the Royal Canadian Mounted Police, City Police, Province of British Columbia Conservation office, the Regional District’s Bylaw Enforcement Officer or his or her designate appointed from time to time by the Manager to administer and enforce this Bylaw.

“Labour” means all work carried out by RDKB employees in the operation of a Product Stewardship Depot and includes but is not limited to operational and safety training, customer service, information dissemination, loading and unloading Product Stewardship Materials and equipment, sorting materials, cleaning, sweeping, snow and ice removal, salting walkways and completion of reports and manifests.

“Land Clearing Waste” means wood, branches and stumps generated from land clearing activity.

“Landfill” means a location for final Disposal of Municipal Solid Waste on land regulated by the Ministry of Environment. Municipal Solid Waste is spread and compacted; cover soil or alternate is applied daily so that effects on the environment (including public health and safety) are minimized.

¹ SAB, Guidance on Site Characterization for Evaluation of Soil Vapour Intrusion in Buildings, May 2011.

"Leachable Waste" means soil that is classified as Hazardous Waste and (is) prohibited from disposal as determined by the Toxicity Characteristic Leaching Procedure (TCLP) referenced in US EPA 40 CFR261 Appendix II Method 1311. Metals and Hydrocarbon contaminant concentrations in the extract produced by the TCLP must not exceed those identified in the Hazardous Waste Regulation, Schedule 4, Part 3, Table 1, Column 2.

The total contaminant concentration may be used as a screening tool for determining when leachability testing is required:

Using Mercury as an example:

$0.1 \text{ mg/L (Mercury TCLP criteria)} \times 20 \text{ L/kg (TCLP extraction ratio)} = 2 \text{ mg/kg total mercury}$

If the total concentration of a parameter exceeds the leachate quality standards by a factor of 20, then TCLP leachability testing is required. This is also referred to as the TCLP trigger concentration.

"Lead-acid Batteries" means a product that falls under the 'Lead-acid Battery' product category in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations. Effective July 1, 2011, the Lead-Acid battery category consists of Lead-Acid batteries weighing more than 2 kg. (4.4 lb.), and includes, without limitation, Lead-Acid batteries for automobiles, motorcycles, recreation vehicles, marine vehicles and locomotives.

"Load" means Municipal Solid Waste which arrives at the refuse disposal facility in a vehicle.

"Major Appliance Recycling Roundtable" and/or **"MARR Program"** means materials that fall under Schedule 3 of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*, including but not limited to fridges, freezers, washers, dryers and other large appliances.

"Manager" means the General Manager of Environmental Services of the Regional District or his/her designate.

"Marketable Waste" means Recyclable Materials that can be managed through locally available recycling programs and for which a commercial market exists.

"Metals Contaminated Soil" means soil, sediment or fill material which contains metals contamination in concentrations exceeding the lowest applicable industrial (IL) land use standard in the Contaminated Sites Regulation, Schedule 3. Metals Contaminated Soil must not have concentrations that would classify the soil to be a leachable waste (hazardous waste).

"Metal Containers" means any food or beverage container made of aluminum or tin-plated steel.

"Mixed Load" means a load combining two or more of the following wastes; Municipal Solid Waste, recyclable waste, yard & garden waste, or wood waste but does not include controlled waste or prohibited waste.

"Mixed Waste" means refuse generated by residential, commercial and institutional sources suitable for Disposal at a Solid Waste Management Facility but does NOT include Prohibited Waste.

"Mixed Waste Paper" includes but is not limited to: newspaper and inserts; office paper, including white and coloured ledger paper, computer paper, photocopy paper, writing pads, paperback books, hardcover books (cover removed), business forms, phone message notes, file folders, reports, envelopes, non-thermal fax paper, no carbon required (NCR) paper, calculator tape, 'post-it' type notes, business cards, and paper index cards; boxboard, including paper egg cartons, laundry and cereal boxes; junk mail; gift wrapping paper; packing paper; magazines; catalogues; calendars; directories; postcards; and shredded paper. Mixed Waste Paper does NOT include waxed paper fibre products; carbon paper; materials that are impregnated with blood, grease, oil, chemicals, or food residue; materials that have polyethylene, polystyrene, foil or other non-paper liners or attachments; and materials that are contaminated with a material that will render the Mixed Waste Paper non-marketable.

"Municipal Solid Waste" is material defined by the *Environmental Management Act* as:

- (a) Refuse that originates from residential, commercial, institutional, demolition, land clearing or construction sources, or
- (b) Refuse specified by a director to be included in a waste management plan.

"Noxious Weeds" means all weeds designated within the Provincial and Regional Noxious Weed lists of the Weed Control Regulation (B.C. Reg. 66/1985) and all amending regulations, and weeds that are classified by the Boundary Weed Management and Central Kootenay Invasive Plant Committees as priority species within the boundaries of the Regional District including, but not limited to: Annual Sowthistle (*Sonchus oleraceus*), Baby's Breath (*Gypsophila paniculata*), Black Knapweed (*Centaurea nigra*), Black Locust (*Robinia pseudoacacia*), Blueweed (*Echium vulgare*), Bohemian Knotweed (*Fallopia x bohemica*), Bristly locust (*Robinia hispida*), Brown Knapweed (*Centaurea jacea*), Bull Thistle (*Cirsium vulgare*), Bur Chervil (*Anthriscus caucalis*), Burdock (*Arctium minus*), Canada Thistle (*Cirsium arvense*), Common Bugloss (*Anchusa officinalis*), Common Reed (*Phragmites australis* subspecies *australis*), Common Tansy (*Tanacetum vulgare*), Common Toadflax (*Linaria vulgaris*), Crupina (*Crupina vulgaris*), Dalmatian Toadflax (*Linaria dalmatica*), Diffuse Knapweed (*Centaurea diffusa*), Dodder (*Cuscuta* spp.), Downy Brome (*Bromus tectorum*), Eurasian Water-Milfoil (*Myriophyllum spicatum*), Field Scabious (*Knautia arvensis*), Flowering Rush (*Butomus umbellatus*), Fuller's Teasel (*Dipsacus fullonum*), Garlic Mustard (*Alliaria petiolata*), Giant Hogweed (*Heracleum mantegazzianum*), Giant Knotweed (*Fallopia sachalinensis*), Giant Mannagrass/Reed Sweetgrass (*Glyceria maxima*), Gorse (*Ulex europaeus*), Hairy Cat's Ear (*Hypochaeris radica*), Himalayan Blackberry (*Rubus discolor*), Himalayan Knotweed (*Polygonum polystachyum*), Hoary Alyssum (*Berteroa incana*), Hoary Cress (*Cardaria draba*), Hound's-tongue (*Cynoglossum officinale*), Japanese Knotweed (*Fallopia japonica*), Jointed Goatgrass (*Aegilops cylindrical*), Leafy Spurge (*Euphorbia esula*), Marsh Thistle (*Cirsium palustre*), Meadow Knapweed (*Centaurea pratensis*), Milk Thistle (*Silybum marianum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Nodding Thistle (*Carduus nutans*), North Africa Grass (*Ventenata dubia*), Orange Hawkweed (*Hieracium aurantiacum*), Oxeye daisy (*Leucanthemum vulgare*), Perennial Pepperweed (*Lepidium latifolium*), Perennial Sowthistle (*Sonchus arvensis*), Plumeless Thistle (*Carduus acanthoides*), Policeman's Helmet/Himalayan Balsam (*Impatiens glandulifera*), Purple Loosestrife (*Lythrum salicaria*), Purple Nutsedge (*Cyperus rotundus*), Queen Anne's Lace (*Daucus carota*), Rush Skeltonweed (*Chondrilla juncea*), Russian Olive (*Elaeagnus angustifolia*), Russian Knapweed (*Acroptilon repens*), Salt Cedar (*Tamarix*

aphilla), Scentless Chamomile (*Matricaria maritima*), Scotch Broom (*Cytisus scoparius*), Scotch Thistle (*Onopordum acanthium*), Siberian Elm (*Ulmus pumila*), Spotted Knapweed (*Centaurea biebersteinii*), St. John's Wort (*Hypericum perforatum*), Sulphur Cinquefoil (*Potentilla recta*), Tansy Ragwort (*Senecio jacobaea*), Velvetleaf (*Abutilon theophrasti*), Wild Oats (*Avena fatua*), Wormwood (*Artemisia absinthium*), Yellow Bedstraw (*Galium verum*), Yellow Flag Iris (*Iris pseudocorus*), Yellow Hawkweed (*Hieracium* spp.), Yellow Nutsedge (*Cyperus esculentus*), Yellow Starthistle (*Centaurea solstitialis*), and Yellow Toadflax (*Linaria vulgaris*).

"Offense" means a contravention of this bylaw by a Person who does an act that this Bylaw forbids, or omits to do an act that this Bylaw requires to be done.

"Old Corrugated Cardboard (OCC)" means containers or materials used in containers consisting of three or more layers of kraft paper material and having smooth exterior liners and a corrugated or rippled core, but excluding containers which are impregnated with blood, grease, oil chemicals, food residue, wax; or have polyethylene, polystyrene, foil or other non-paper liners; or are contaminated with a material which will render the corrugated cardboard non-marketable.

"Organic Waste" means any plant and/or animal matter, originating in commercial or residential sources which can be processed by composting to produce a useable soil amendment product.

"Out-of-area Municipal Solid Waste" means Loads, or a portion thereof, of Municipal Solid Waste that originates from outside the boundaries of the Regional District.

"Ozone Depleting Substance" means a substance defined as such in the Ozone Depleting Substances and other Halocarbons Regulation, (B.C. Reg. 387/99) under the *Environmental Management Act* and all amending regulations.

"Person" means an individual, a body corporate, a firm partnership, association or any other legal entity or an employee or agent thereof.

"Paint Products" means a product that falls under the 'Paint' product category of the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Pesticide Products" means that which falls under the 'Pesticides' product category of the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Petroleum By-Products" means used lubricating oil that is contaminated with any other products, and any fluid or liquid or sludge containing fuel or petroleum-based products.

"Pharmaceutical Products" means that which falls under the 'Pharmaceuticals' product category in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

"Plant Disease" means a condition that exists in a plant or seed as the result of the action of virus, fungus, bacterium, or any other similar or allied organism and that injures or may injure the plant or any part thereof, and that may be spread to another plant or plants with economic, ornamental or aesthetic value, including, but not limited to Apple Scab (*Venturia inaequalis*), Anthracnose or Perennial Canker (*Cryptosporiopsis curvispora*; *C. perennans*), Bacterial Canker (*Pseudomonas syringae* pv. *syringae*; *P. syringae* pv.

morsprunorum), Blister spot (*Pseudomonas syringae* pv. *papulans*), Brown Rot (*Monilinia fructicola*), Coryneum Blight (*Wilsonomyces carpophilus*), Crown Gall, Root Gall and Hairy Root (*Agrobacterium tumefaciens*), Crown Rot (*Phytophthora cactorum*), Cytospora Canker (*Leucostoma cincta*), European Canker (*Nectria galligena*), Fire Blight (*Erwinia amylovora*), Little Cherry Virus, Powdery Mildew (*Podosphaera leucotricha*; *P. clandestina*; *Sphaerotheca pannosa*), Peach Leaf Curl (*Taphrina deformans*), and Verticillium Wilt (*Verticillium dahliae*).

"Plastic Containers" means clean mixed plastics marked with a Society of Plastic Industries (SPI) code #1 - #7 accepted at Regional District Recycling Depots. Plastic Container acceptance varies by Sub-region as described in Schedule "C" hereto. This includes but is not limited to toiletry and cleaning containers, margarine and yogurt containers, food and drink containers, and plastic milk jugs. Plastic Containers do NOT include Styrofoam, polystyrene items, or items that have contained Hazardous Waste.

"Preserved Wood" means wood waste previously treated with creosote or other chemical preservatives such as chromated copper arsenate (CCA), aromatic hydrocarbons (PAHs), and ammonium copper arsenate (ACA) to prevent rotting. This waste material is considered Controlled Waste.

"Product Stewardship Agency" means any individual, business, association, society or any combination thereof designated in a Stewardship Plan to manage any materials that fall under a product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Product Stewardship Depot" means an area designated to receive materials that fall under a product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Product Stewardship Materials" means materials that fall under a product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Product Stewardship Plan" means a plan approved by the Minister of the Environment to manage materials that fall under a product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Prohibited Waste" means gaseous, liquid or Municipal Solid Waste not accepted for Disposal at Solid Waste Management Facilities as specified in Schedule "F" hereto.

"Radioactive Material" means waste containing a prescribed substance as defined in the *Atomic Energy Control Act (Canada)* and all amending regulations in sufficient quantity or concentration to require a license for possession or use under that Act and regulations made under that Act.

"Rechargeable Batteries" means Nickel Cadmium (NiCd), Lithium Ion (Li-Ion), Nickel Metal Hydride (Ni-MH), or Small-Sealed Lead (Pb) batteries weighing no more than 5 kilograms (11 pounds) each.

"Recyclable Materials" means Marketable Wastes and Source Separated Wastes, substances or objects listed in Schedule "C" hereto.

"Recycling" means the practice of sorting, collecting and processing Marketable Waste for the purpose of creating new products and reducing the amount of Municipal Solid Waste being disposed of in Landfills.

"Recycling Area" means that area of the Solid Waste Management Facility that has been designated to receive Recyclable Materials.

"Recycling Depots" means any land or buildings leased owned and/or operated by the RDKB for receiving those materials listed in Part "C" of Schedule "C".

"Recycling Regulation" means the Recycling Waste Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Regional Board" means the Board of the Regional District of Kootenay Boundary.

"Regional District (RDKB)" means the Regional District of Kootenay Boundary as described under the *Local Government Act* and all amending regulations.

"Reusable Products" means any household item that is in usable working condition. Reusable Products does not include Bulky Items or Product Stewardship Materials. All items are accepted or refused at the discretion of the Facility Attendant.

"Reuse Buildings/Depots" means any land or buildings leased, owned and/or operated by the Regional District for receiving Reusable Products.

"Rubble" means gravel, brick, Concrete, Asphalt, and rock or a mixture thereof.

"Scale Weight Check Only" means the use of a Solid Waste Management Facility scale for the sole purpose of determining the gross weight of a Vehicle or trailer, where no material is to be deposited at the Solid Waste Management Facility.

"Scrap Metal" means recyclable ferrous and non-ferrous metallic materials, including, but not limited to: sheet metal, siding, roofing, rebar, flashings, pipes, window frames, doors, furnaces, duct work, wire, cable (cut into 1.25m (4 ft.) lengths or on a spool), bathtubs, fuel tanks, fencing, bicycle frames, automotive body parts, machinery, garbage cans, metal furniture, tire rims, appliances and fixtures. Does not include CFC Appliances unless properly certified as having refrigerants professionally removed.

"Service Personnel" means any person employed by or having a contract with the RDKB for performing work at a Solid Waste Management Facility.

"Site Operator" means that person employed by or having a contract with the Regional District for caretaker or attendant duties at a Solid Waste Management Facility and includes an agent of the Site Operator authorized personnel pursuant to the said caretaker's contract.

"Site Regulations" means regulations as described in Schedule "E" hereto, which must be adhered to by any person using a Solid Waste Management Facility.

"Sludge" means semi-solid material for Disposal in a landfill that contains no Free Liquids.

"Small Load" means Municipal Solid Waste to be disposed of at Solid Waste Management Facility not exceeding 500 kg. (1102 lb.) net weight at scaled sites or 5m³ (177 ft.³) at volume based sites per open day per credit account holder, or per vehicle (if

vehicle is not registered to a an RDKB credit account). Loads in excess of these quantities is considered a Bulk Load.

"Soil Questionnaire" means the series of pre-determined questions asked by the RDKB to determine the necessity of a Waste Soil Disposal Application.

"Solid Waste Management Facility" means a facility leased, owned and/or operated by the Regional District for which an 'Operational Certificate' or 'Permit' has been issued by the Ministry of Environment of the Province of British Columbia or a Transfer Station or Recycling Depot leased, owned and/or operated by the Regional District of Kootenay Boundary used for receiving Municipal Solid Waste or Recyclable Material described in Schedule "C" hereto.

"Solid Waste Management Plan" means the plan prepared for the management of Municipal Solid Waste within the Regional District pursuant to the *Environmental Management Act* and approved by the Minister of the Environment.

"Solvents and Flammable Liquids" means that which falls under the 'Solvents and Flammable Liquids' product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Source-Separated Organic Waste" means all manner of pre-sorted organic material originating in businesses and residences. This does not include Pet Waste, Wood Waste, Construction & Demolition material or Yard & Garden Waste.

"Source-Separated Waste" means pre-sorted waste including, but not limited to: Controlled Waste, Yard and Garden Waste, Recyclable Material, Scrap Metal or Wood Waste which is separated into clearly distinguishable accumulations of different types of materials, substances, or objects belonging in the particular class of waste being disposed of.

"Specified Risk Material (SRM)" means Special Waste Material as defined by the Canadian Food Inspection Agency (CFIA). Specified Risk Material are tissues that, in BSE-infected cattle, have been shown to contain the infective agent and transmit the disease. The following tissues are defined in Canadian regulation as SRM: skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord, and dorsal root ganglia (nerves attached to the spinal cord) of cattle aged 30 months or older, and the distal ileum (part of the small intestine) of cattle of all ages.

"TCLP Trigger Concentration" means should concentrations of a parameter be greater than a factor of 20 from the Table 1 Leachate Quality Standards, Schedule 4, Part 3 of the BC Hazardous Waste Regulation, then TCLP leachability testing is required.

"Tight-head Barrels" means any metal container with a non-removable top but does NOT include barrels that have contained Hazardous Waste.

"Tire Products" means a product that falls under the 'Tire' product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

"Transfer Station" means a Solid Waste Management Facility under the control of the Regional District for collecting Municipal Solid Waste in preparation for transportation to a Regional District Landfill.

“Treasurer” means the General Manager of Finance of the Regional District, or his or her designate.

“Tree Stumps” means that part of a plant, tree, or shrub that remains attached to the roots after the trunk is cut and may include non-organic materials such as rocks, sand and soil.

“Uncontaminated Soil” means native or clean soil with no signs or indications of contamination, typically sourced from a non-commercial, residential site, or undisturbed land, and which if analyzed for contaminants would yield results in concentrations less than the lowest applicable residential (RL) land use standard in the Contaminated Sites Regulation, Schedule 3.1.

“Uncovered Area” means an area of bare land at a Solid Waste Management Facility that is improved by the Product Stewardship Agency for the purposes of operating a Product Stewardship Depot where improvements could include but not be limited to covered structures, paving or lighting.

“Undesignated Area” means any area in a Solid Waste Management Facility other than the area a Person is directed by the Facility Attendant, Site Operator or Service Personnel or any on-site signage directs a Person to deposit a Load.

“Unsecured Loads” means a load of Municipal Solid Waste which is not secured and covered on a vehicle so that there is nothing to prevent it from blowing or falling off while in transit, except for those items, permitted onto the Solid Waste Management Facility without covers, as outlined in Schedule “E” hereto.

“Used Oil” means that which falls under the ‘Lubricating Oil’ product category as defined in the Recycling Regulation (B.C. Reg. 112/2010) of the *Environmental Management Act* and all amending regulations.

“Used Oil Containers” means any plastic container, as defined under ‘Empty Oil Containers’ under the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*, with a capacity of less than 30 litres (8 gallons) that was manufactured to hold lubricating oil.

“Used Oil Filters” means that which falls under the ‘Oil Filters’ product category of the Recycling Regulation (B.C. Reg. 112/2010) and all amending regulations of the *Environmental Management Act*.

“USEPA Method 9095A Paint Filter Liquids Test” means the method designed by the Environmental Protection Agency (EPA) to determine the presence of Free Liquids in a representative sample of waste. A representative sample of waste is placed in a paint filter (Mesh number: 60+/- 5%). If any portion of the material passes through and drops from the filter (within a 5 minute test period) the material is deemed to contain free liquids.

“Vehicle” means a Vehicle as defined by the provincial *Motor Vehicle Act* and all amending regulations.

“Visitor” means a person who arrives at the Solid Waste Management Facility for purposes other than to Dispose of Municipal Solid Waste.

“Waste Containing Polycyclic Aromatic Hydrocarbon” means waste containing polycyclic aromatic hydrocarbons (PAH) in a total concentration greater than 100 parts per

million calculated from adding the products of the measured concentrations of each listed PAH in Column 1 of Schedule 1.1 of the Hazardous Waste Regulation, multiplied by the toxicity equivalency factor (TEF). The concentration of the PAH constituents multiplied by the TEF summed together is also referred to as the PAH Toxicity Equivalence Quotient (PAH TEQ).

"Waste Oil" means any refined petroleum based oil or synthetic oil where the oils are in the waste in a total concentration greater than 3% by weight as determined by the Special Waste Oil and Grease (SWOG) analysis, and the oils through use have become unsuitable for their original purpose. As a screening tool, when the summation of the concentration for light extractable petroleum hydrocarbons (LEPH) and heavy extractable petroleum hydrocarbons (HEPH) in soil is greater than 30,000 ug/g then a SWOG analysis must be completed to determine if the soil will be classified as waste oil. A waste oil concentration up to 10% may be permitted for on-site treatment should prior written notification of treatment be provided to the Director of Waste Management and the treatment be carried out in accordance with the BC HWR hydrocarbon contaminated soil treatment requirements.

"Waste Sharps" means needles, syringes, blades or other materials capable of causing punctures or cuts, originating from residential, agricultural, institutional or commercial generators.

"Waste Soil" means contaminated soil, Hydrocarbon Contaminated Soil or Metals Contaminated Soil, that is not suitable for any land use specified in the Contaminated Sites Regulation. Soil that meets specifications defined by the Hazardous Waste Regulation is Hazardous Waste and not Waste Soil.

"Waste Soil Disposal Application" or "Application" means the document by which an owner of soil requests disposal of the soil, communicates information about the soil for disposal, and receives information back from the RDKB regarding its acceptance or rejection for disposal. The document must be completed in full and signed by the owner, a Qualified Professional, and the RDKB Manager.

"Wood Waste" means clean, organic material including, but not necessarily limited to:

- Kiln dried dimensional lumber such as wood pallets, and demolition wood waste;
- Composite Wood Waste

Material must be free of Preserved Wood, rocks, metals (other than nails and screws), wire, fiberglass, asphalt roofing material, and other non-wood materials. Material that is chipped may qualify for a discount as per Schedule "A" hereto.

"Yard and Garden Waste" means biodegradable, organic materials, substances or objects including, but not limited to: grass, lawn and hedge clippings, flowers, weeds, leaves, vegetable material, shrubs, and shrub and tree branches less than 1 centimetre (0.4") in diameter, but does NOT include:

- Tree Stumps; Noxious Weeds;
- Plants or growing media that may have been identified by the Canadian Food Inspection Agency from time to time as infectious or potentially infectious and of which notice has been sent to the Regional District or publicized by the Canadian Food Inspection Agency; or
- Plant and tree material in municipal street sweepings;
- Rocks, sand and soil;
- Bulk Loads of fruit or vegetable material.

2.2 The following schedules are hereby made and declared to be integral parts of this Bylaw:

Schedule "A"	User Fee Schedule
Schedule "B"	Controlled Waste
Schedule "C"	Recyclable Materials
Schedule "D"	Solid Waste Management Facilities Class
Schedule "E"	Site Regulations
Schedule "F"	Prohibited Waste
Schedule "G"	Product Stewardship Depot Hosting Conditions and Fees
Schedule "H"	Additional Surcharges and Conditions of Payment
Schedule "I"	Municipal Ticket Information Violations

3. CONDITIONS OF USE

The Regional District hereby authorizes the Facility Attendant, Site Operator or Service Personnel to enforce such rules governing the use of a Solid Waste Management Facility operated by the Site Operator and/or provide directions to users of the Solid Waste Management Facility which are consistent with this Bylaw and which are necessary or convenient for the efficient and lawful operation of the Solid Waste Management Facility.

- 3.1 Every person Disposing of Municipal Solid Waste at a Solid Waste Management Facility shall comply with and abide by all rules and directions of the Facility Attendant, Site Operator or Service Personnel, whether such rules or directions are in the form of signs or verbal instructions.
- 3.2 No person shall dispose of a waste at Solid Waste Management Facility in any location other than in location directed by the Facility Attendant, Site Operator or Service Personnel.
- 3.3 No person shall deposit refuse at a refuse disposal facility, nor enter any refuse disposal facility at any time other than the designated hours of operation, except by prior arrangement with the Manager or his or her designate.
- 3.4 Persons entering a Solid Waste Management Facility do so at their own risk. The Regional District accepts no responsibility (liability) for damage and/or injury to persons, property or vehicle.
- 3.5 Anyone who contravenes these regulations and/or fails to comply with the directions of the Facility Attendant, Site Operator or Service Personnel or with posted notices and signs on a Solid Waste Management Facility may be prohibited entry onto a Solid Waste Management Facility.
- 3.6 The Regional District hereby establishes and imposes the fees set out in Schedule "A" hereto and every person Disposing of Municipal Solid Waste at a Solid Waste Management Facility shall pay to the Regional District the applicable fees.
- 3.7 Any person who fails to pay fees imposed by this Bylaw may be prohibited entry onto a Solid Waste Management Facility and any accounts remaining unpaid on the 31st of December shall be sent to collections.
- 3.8 No person shall deposit Municipal Solid Waste at a Solid Waste Management Facility except in accordance with this Bylaw and the Site Regulations outlined in Schedule "E" hereto.

4. OFFENCES AND PENALTIES

- 4.1 No Person shall do any act or suffer or permit any act or thing to be done in contravention of this Bylaw.
- 4.2 Any Person who violates any of the provisions of this Bylaw will be guilty, upon summary conviction, of an offence under this Bylaw; and may be prohibited by the Manager from depositing Municipal Solid Waste at a Solid Waste Management Facility.
- 4.3 The penalties imposed under Schedule "A" shall be in addition to and not in substitution for any other penalty or remedy imposed by this Bylaw or any other statute, law or regulation.
- 4.4 A separate offence shall be deemed to be committed upon each day during and in which the contravention occurs or continues.
- 4.5 Every Person who contravenes any of the Site Regulations contained within this Bylaw shall be responsible for all costs associated with remediation of the Solid Waste Management Facility.
- 4.6 Any Person who contravenes this Bylaw and Site Regulations by doing any act which the Bylaw and Site Regulations forbid, or omits to do any act which this Bylaw and Site Regulations requires to be done, may be required, at the discretion of the Manager:
 - a) to pay double the applicable user fee for
 - Unsecured Loads;
 - Loads considered to be Contaminated, with the applicable user fee being determined as for the Municipal Solid Waste material included in the Load either with the highest charge as set out in Schedule "A", attached hereto, to pay for clean-up costs to remove and properly dispose of the Contamination identified in rejected Loads, or for clean-up costs to manage Loads of Municipal Solid Waste improperly disposed of at the Solid Waste Management Facility. Such costs would be in addition to those fees identified in Schedule "A" hereto;
 - b) to pay 5 times the applicable user fee for Loads containing Recyclable Material.
 - c) to pay for any damages or injury to Person or to property incurred by the Regional District as a result of a contravention of this Bylaw. Such costs would be in addition to those user fees identified in Schedule "A" hereto;
 - d) to be prohibited from depositing Municipal Solid Waste at the Solid Waste Management Facility; and
 - e) to be prohibited from entering or re-entering the Solid Waste Management Facility.

5. INSPECTIONS

An Inspector, Facility Attendant, Site Operator, Service Personnel or other Employee of the Regional District may inspect any or all loads entering or exiting the Solid Waste Management Facility for the purpose of determining compliance with this Bylaw.

6. SEVERABILITY

If any section, subsection or clause of this Bylaw is declared or held to be invalid by a Court of competent jurisdiction, then that invalid portion shall be severed and the remainder of this Bylaw shall be deemed to have been adopted without the invalid and severed section, subsection or clause.

7. PENALTIES

7.1 Any person who violates any provision of this Bylaw will be deemed to have committed an Offence and shall be liable upon summary conviction to the following penalties:

- a) a minimum fine of \$50.00;
- b) a maximum fine of \$10,000.00; and
- c) a fine as dictated in Schedule 'I'

7.2 In the case of a continuing Offense, for each day that the Offense continues, either or both of:

- a) a minimum fine under paragraph 9.1(a);
- b) a maximum fine under paragraph 9.2(b).

7.3 In a prosecution of an Offense against a Regional District Bylaw, the justice or court may impose all or part of the penalties applicable in relation to the Offense, together with the costs of prosecution.

7.4 Nothing in this Bylaw shall limit the Regional District from pursuing any other remedy that would otherwise be available to the Regional District at law.

7.5 Penalties are subject to the conditions of the Regional District Municipal Ticketing Information Bylaw No.1151, 2001, as amended from time to time by the Regional District.

8. VIOLATION

8.1 Any Person who:

- a) causes or permits any act to be done in contravention or violation of any of the provisions of this Bylaw; or
- b) neglects or omits to do anything required under this Bylaw; or
- c) carries out, causes, or permits to be carried out any use, or construction in a manner prohibited by or contrary to any of the provisions of this Bylaw; or
- d) fails to comply with an order, direction or notice given under this Bylaw;

will be guilty, upon summary conviction, of an Offence under this Bylaw.

9. MUNICIPAL TICKET INFORMATION

9.1 A notice or form commonly called Municipal Ticket Information (MTI) having printed wording approved by the Manager, may be issued by an Inspector or a Bylaw Enforcement Officer to any Person alleged to have breached any provision of this Bylaw, and the said notice shall require payment to the Regional District in the amount specified in this Bylaw.

- a) an MTI shall be deemed to be sufficiently served if served personally on the Person named in the MTI;
- b) in lieu of prosecution, the Person named in the MTI may elect to voluntarily pay the specified penalty set out therein by making payment to the Regional District in the amount of the specified penalty;
- c) if the payment specified in the MTI is not paid in accordance with the terms of the ticket and in the time required by the ticket, the Regional District may commence prosecution against the Person named in the MTI for the alleged contravention of this Bylaw;
- d) except as otherwise provided in this Bylaw, a person who is guilty of an Offence under this Bylaw for which a penalty is not otherwise provided, is liable to a fine of not less than \$100.00 and not more than \$10,000.00.

10. REPEAL

The Solid Waste Management Facilities Regulatory Bylaw No 1719, 2019, and all amendments thereto, is hereby repealed as of June 30, 2020.

11. EFFECTIVE DATE

This Bylaw comes into effect on July 1, 2020.

12. CITATION

This Bylaw may be cited for all purposes as the "Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020".

READ A FIRST AND SECOND TIME this 25th day of June, 2020.

READ A THIRD TIME this 25th day of June, 2020.

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer, do hereby certify the foregoing to be a true and correct copy of Bylaw No. 1729, cited as "Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020" as read a third time by the Regional District of Kootenay Boundary Board of Directors this 25th day of June, 2020.

Manager of Corporate Administration/Corporate Officer

RECONSIDERED AND ADOPTED this 25th day of June, 2020.

Chair

Manager of Corporate Administration/Corporate Officer

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer of the Regional District of Kootenay Boundary, do hereby certify that the foregoing this to be a true and correct copy of Bylaw No. 1729, cited as "Regional District of Kootenay Boundary Solid Waste Management Facilities Regulatory Bylaw No. 1729, 2020" as reconsidered and finally adopted this June 25, 2020.

Manager of Corporate Administration/Corporate Officer

SCHEDULE "A" TO BYLAW NO. 1729**WEIGHT BASED USER FEE SCHEDULE**

The following charges shall apply for the use of a Controlled (Attended) Refuse Disposal Site where scales are operational.

Municipal Solid Waste (Commercial & Domestic) excluding Controlled Waste

Material	Unit charge	Units	Minimum charge
Mixed Waste	\$110.00	per tonne	\$10.00
Mixed Waste per Bag (3 bag limit)	\$4.00	per bag	\$4.00
Source Separated Organic Waste	\$40.00	per tonne	\$2.00
¹ Construction/Demolition/Land Clearing Waste	\$175.00	per tonne	\$8.75
¹ Tar & Gravel Roofing, Asphalt Shingles	\$60.00	per tonne	\$3.00
^{1,2} Uncontaminated or Cover Soil – McKelvey Creek Landfill	\$20.00	per tonne	\$1.00
^{1,2} Uncontaminated or Cover Soil – West Boundary and Grand Forks Landfills	\$10.00	per tonne	\$0.50

Controlled Waste

Material	Unit charge	Units	Minimum charge
¹ Asbestos – Friable	\$175.00	per tonne	\$8.75
¹ Asbestos - Non-friable	\$110.00	per tonne	\$5.50
¹ Food Processing Waste	\$150.00	per tonne	\$7.50
^{1,2,3} Waste Soil (Hydrocarbon Contaminated)	\$20.00	per tonne	\$1.00
^{1,2,3} Hydrocarbon Contaminated-Section 41.1 HWR Soil	\$40.00	per tonne	\$2.00
Gas Cylinders (15 pounds and over)	\$2.00	per cylinder	\$2.00
Gas Cylinders (under 15 pounds)	No Charge	-	-
¹ Sludge	\$12.00	per tonne	\$12.00
¹ Dead Animals and Parts	\$175.00	per tonne	\$20.00
Noxious Weeds/Infested Vegetation	No Charge	-	-

Recyclable Material

Material	Unit charge	Units	Min charge
Yard & Garden Waste	\$5.00	per load	\$5.00
Clean Wood Waste	\$50.00	per tonne	\$2.50
^{1,3} Appliances requiring Ozone Depleting Substance removal (excluding MARR Products)	\$20.00	per unit	\$20.00
^{1,3} Auto Hulks	\$15.00	per tonne	\$0.75
Scrap Metal (excluding MARR Products)	\$30.00	per tonne	\$3.00
¹ Rubble	\$50.00	per tonne	\$2.50
⁴ Product Stewardship Materials	No Charge	-	-

Charges Applicable to all Categories

Loads of Mixed or Controlled Waste containing Recyclable Materials
Uncovered or Unsecured Loads

Five Times Charge
Double Charge

Other Charges

Scale Weight Check Only

\$5.00 per use

Waste Soil Disposal Application Fee

\$100.00 per application

¹ Only accepted at Class 1 Facilities ² Only accepted under provisions of RDKB contaminated soil policy

³ Not accepted at McKelvey Creek Landfill

⁴ Materials identified as Product Stewardship Materials where the facility is identified as a depot for that program

SCHEDULE "A" TO BYLAW NO. 1729**VOLUME BASED USER FEE SCHEDULE**

The following charges shall apply for the use of a Controlled (Attended) Refuse Disposal Site where scales are not operational.

Municipal Solid Waste (Commercial & Domestic) excluding Controlled Waste

Material	Unit charge	Units	Minimum charge
Mixed Waste Per Bag (3 bag limit)	\$4.00	per bag	\$4.00
Mixed Waste (more than 3 bags)	\$17.50	per m ³	\$10.00
Source Separated Organic Waste	\$8.00	per m ³	\$2.00
¹ Construction/Demolition/Land Clearing Waste	\$45.00	per m ³	\$8.75
¹ Tar & Gravel Roofing, Asphalt Shingles	\$12.00	per m ³	\$3.00
Mattresses & Box Springs	\$5.00	each	\$5.00
^{1,2} Uncontaminated or Cover Soil – McKelvey Creek Landfill	\$13.00	per m ³	\$1.00
^{1,2} Uncontaminated or Cover Soil – West Boundary and Grand Forks Landfills	\$6.50	per m ³	\$0.50

Controlled Waste

Material	Unit charge	Units	Minimum charge
¹ Asbestos – Friable	\$45.00	per m ³	\$8.75
¹ Asbestos - Non-friable	\$20.00	per m ³	\$5.50
¹ Food Processing Waste	\$50.00	per m ³	\$7.50
^{1,2,3} Waste Soil (Hydrocarbon Contaminated)	\$13.00	per m ³	\$1.00
^{1,2,3} Hydrocarbon Contaminated-Section 41.1 HWR Soil	\$26.00	per m ³	\$2.00
Gas Cylinders (15 pounds and over)	\$2.00	per cylinder	\$2.00
Gas Cylinders (under 15 pounds)	No Charge	-	-
¹ Sludge	\$0.012	per litre	\$12.00
	\$0.054	per gallon	\$12.00
¹ Dead Animals and Parts	\$30.00	per m ³	\$20.00
Noxious Weeds/Infested Vegetation	No Charge	-	-

Recyclable Material

Material	Unit charge	Units	Minimum charge
Yard & Garden Waste	\$5.00	per load	\$5.00
Clean Wood Waste	\$10.00	per m ³	\$2.50
^{1,3} Appliances requiring Ozone Depleting Substance removal (excluding MARR Products)	\$20.00	per unit	\$20.00
^{1,3} Auto Hulks	\$50.00	per unit	\$50.00
Scrap Metal (excluding MARR Products)	\$10.00	per m ³	\$3.00
¹ Rubble	\$75.00	per m ³	\$2.50
⁴ Product Stewardship Materials	No Charge		

Charges Applicable to all Categories

Loads of Mixed or Controlled Waste containing Recyclable Materials
Uncovered or Unsecured Loads

Five Times Charge
Double Charge

Other Charges

Waste Soil Disposal Application Fee \$100.00 per application

¹ Only accepted at Class 1 Facilities

² Only accepted under provisions of RDKB contaminated soil policy ³ Not accepted at McKelvey Creek Landfill

⁴ Materials identified as Product Stewardship Materials where the facility is identified as a depot for that program

SCHEDULE "B" TO BYLAW NO. 1729**CONTROLLED WASTE**

Material Type	Specifications/Restrictions	Accepted for Disposal at:
Animal feces	(1)	Class 1 and 2 Facilities
Asbestos- Friable	(1)(2)(3)(4)	Class 1 Facilities
Asbestos- Non friable	(3)	Class 1 and 2 Facilities
Ash & Soot	(1)	Class 1 Facilities
Biosolids	(3)	Class 1 Facilities
Bulk Load	(8)	Class 1 Facilities
Bulky Waste	(3)(4)(6)	Class 1 Facilities
Concrete	N/A	Class 1 Facilities
Condemned Foods	(1)	Class 1 Facilities
Contaminated Soil	(2) (3) (5) (9)	Class 1 Facilities
Preserved Wood	(3)	Class 1 and 2 Facilities
Dead Animals and Parts	(3)(4)	Class 1 Facilities
Dusty Material	(1)	Class 1 Facilities
Food Processing Waste	(3)	Class 1 Facilities
Fuel Tanks	(3) (7)	Class 1 and 2 Facilities
Gas Cylinders	(3) (7)	Class 1 and 2 Facilities
Infested Vegetation	(1)	Class 1 and 2 Facilities
Noxious Weeds	(1)	Class 1 and 2 Facilities
Rubble	N/A	Class 1 Facilities
Sludge	(4)	Class 1 Facilities
Soil (Commercial & Residential) Load size >1m ³	(3)(5)	Class 1 Facilities
Tree Stumps	N/A	Class 1 and 2 Facilities

Specifications & Restrictions

- 1) Material must be contained in a double bag system.
- 2) Material must be manifested or documented as required by the Regional District and by the British Columbia Ministry of Environment.
- 3) Forty-eight (48) hours advance notice must be given to the Regional District prior to disposal. *The Manager may at his/her discretion permit the Disposal of Controlled Waste without forty-eight (48) hours notice.*
- 4) Materials must be disposed of a minimum of 2 hours before delivery to the designated Solid Waste Management Facility.
- 5) Material must meet criteria and follow protocol in RDKB Contaminated Soil Policy.**
- 6) Special handling fees may apply.
- 7) Must be cut open so that the Facility Attendant, Site Operator or Service Personnel can inspect for liquids.
- 8) May be accepted at Transfer Stations at discretion of the Manager with advance notice.
- 9) Only accepted at Class 1 Facilities under contaminated soil policy provisions.**

SCHEDULE "C" TO BYLAW NO. 1729**RECYCLABLE MATERIALS**

- a) Recyclable Materials accepted at RDKB Solid Waste Management Facilities

Landfills and Transfer Stations (Class 1 and 2 Facilities) Only:

1. Scrap Metal
2. Wood Waste
3. Yard and Garden Waste
4. Gas Cylinders
5. Rubble

- b) Product Stewardship Materials

These materials may be accepted at select facilities where a partnership with Product Stewardship Program exists.

1. Gasoline
2. Lead-Acid Batteries
3. Paint Products
4. Pesticide Products
5. Solvents and Flammable Liquids
6. Major Appliances (MARR Products)
7. Printed Paper, Packaging and Glass

- c) Recycling Depots and Recycling Area (Class 3 Facilities):

1. Corrugated Cardboard
2. Metal Containers
3. Mixed Waste Paper
4. Newspaper
5. Plastic Containers

SCHEDULE “D” TO BYLAW NO. 1729**SOLID WASTE MANAGEMENT FACILITIES CLASS**

Class 1 (3 facilities)	Address/Location
McKelvey Creek Municipal Solid Waste Landfill and Recycling Depot	1900 Highway 3B - Trail
Grand Forks Municipal Solid Waste Landfill and Recycling Depot	8798 Granby Rd. – Grand Forks
West Boundary Municipal Solid Waste Landfill and Recycling Depot	2050 Motherlode Road - Greenwood
Class 2 (3 facilities)	
Christina Lake Municipal Solid Waste Transfer Station and Recycling Depot	834 Cascade Dump Rd.
Rock Creek Municipal Solid Waste Transfer Station and Recycling Depot	1610 Rock Creek Dump Rd.
Beaverdell Municipal Solid Waste Transfer Station and Recycling Depot	5300 Highway #33 (Beaverdell Dump Rd.)
Class 3 (4 facilities)	
Mt. Baldy Municipal Solid Waste Transfer Station and Recycling Depot	Mt. Baldy Rd.
Christian Valley Municipal Solid Waste Transfer Station	7949 Christian Valley Rd.
Idabel Lake Municipal Solid Waste Transfer Station and Recycling Depot	300 Idabel Lake Dr.
Big White Municipal Solid Waste Transfer Station and Recycling Depot	4500 Horsefly Rd. Big White

SCHEDULE "E" TO BYLAW NO. 1729**SITE REGULATIONS**

PURPOSE: To ensure a safe and orderly environment for the staff and public at Solid Waste Management Facilities.

POLICY: These Site Regulations shall be observed by all persons while at a Solid Waste Management Facility.

PROCEDURES:**1. VEHICLES**

1.1 The Facility Attendant, Site Operator or Service Personnel may prevent a vehicle from entering a Solid Waste Management Facility or require a vehicle to leave a Solid Waste Management Facility if:

- (a) The vehicle's Load exceeds the permitted weight limits set out in the regulations passed pursuant to the *Motor Vehicle Act*, or the *Commercial Transport Act*; or
- (b) The vehicle exceeds the speed limits posted at a Solid Waste Management Facility; or
- (c) The load is poorly secured as to be dangerous or to create litter.

2. LOADS

2.1 Loads Uncovered or Unsecured shall be subject to a fee in accordance with Schedule "A" hereto. A cover shall be defined as a tarpaulin or other overlay that is used to confine the load to the vehicle. The following loads of Municipal Solid Waste do not require covers and are only accepted at Regional District Class 1 Facilities:

- (a) Rubble - within the confines of a truck box (tailgates closed).
- (b) Bulky Waste -strapped on flat beds or within the confines of a truck box.

2.2 Loads of Yard and Garden Waste shall not include plastic bags, plastic containers or wire or metal fasteners.

2.3 The Facility Attendant, Site Operator or Service Personnel shall be authorized to inspect all loads entering the Solid Waste Management Facility. Any person depositing waste material may be required to remove the load cover upon request for inspection.

2.4 All loads of Municipal Solid Waste entering a Solid Waste Management Facility will be assessed the highest applicable fee. Loads may be sorted on site and re-weighed (where a scale exists) in order to reduce the fees where applicable.

2.5 Any Person entering a Municipal Solid Waste Solid Waste Management Facility with a load not meeting the requirements in Sections 2.1 and/or 2.2 shall pay double (2 times) the disposal fee required by Schedule "A" hereto and/or be subject to a fine associated with a ticketable offence (Section 11).

3. SOLID WASTE MANAGEMENT FACILITIES

- 3.1 The days and hours of operation of Solid Waste Management Facilities are to be established by Board resolution and may be amended by Board resolution when deemed necessary.
- 3.2 No Person while driving a vehicle at a Solid Waste Management Facility shall drive their vehicle on any part of the Municipal Solid Waste Solid Waste Management Facility other than on roads and areas designated by the Facility Attendant, Site Operator or Service Personnel.
- 3.2 No Person delivering Municipal Solid Waste or Recyclable Materials to a Solid Waste Management Facility shall Dispose of the Municipal Solid Waste or Recyclable Material except in such a place and in such a manner as directed by Facility Attendant, Site Operator or Service Personnel.
- 3.3 All Municipal Solid Waste Disposed of at a Solid Waste Management Facility shall become the property of the Regional District.
- 3.4 No Person shall remove or scavenge disposed of Municipal Solid Waste from a Solid Waste Management Facility except with prior written approval of the Manager.

4. SAFETY

- 4.1 Any Person entering a Solid Waste Management Facility does so at their own risk. The Regional District accepts no responsibility for damage or injury to property or Person.
- 4.2 Visitors are not permitted to smoke at Solid Waste Management Facilities.
- 4.3 Upon entering a Solid Waste Management Facility all Persons must check in with the Facility Attendant, Site Operator or Service Personnel.
- 4.4 Any Person delivering Municipal Solid Waste to a Solid Waste Management Facility shall discharge the waste in a manner that conforms to Worker's Compensation Board regulations.

5. GENERAL

- 5.1 These regulations are subject to change from time to time by the Regional District.
- 5.2 Any Person who contravenes these regulations fails to obey orders or directions given by the Regional District or contracted staff or fails to comply with the posted notices and signs at the Solid Waste Management Facility may be prohibited re-entry to the Solid Waste Management Facility.
- 5.3 No Person shall deposit Prohibited Waste at the Solid Waste Management Facility.
- 5.4 Controlled Waste may only be disposed of at a Solid Waste Management Facility in accordance with Schedule "B".
- 5.5 No person shall deposit Municipal Solid Waste at a Solid Waste Management Facility that does not originate from within the Regional District unless under contract with the Regional District.

- 5.6 No Person shall dispose of Municipal Solid Waste at a Solid Waste Management Facility nor enter any Solid Waste Management Facility at any time other than the designated hours of operation, except by approval of the Manager.
- 5.7 Recyclable Materials brought to a Solid Waste Management Facility in Small Loads will be accepted at no charge, unless:
 - (a) Such materials are specified in Schedule "A" of this Bylaw, in which case those charges will apply, or
 - (b) The Recyclable materials are listed as Prohibited Waste in Schedule "F" of this Bylaw.
- 5.8 No Person other than the Facility Attendant, Site Operator or Service Personnel or its Representative shall start any fires at any Solid Waste Management Facility.
- 5.9 No Person other than the Facility Attendant, Site Operator or Service Personnel or its Representative shall remove or alter any sign placed or erected at any Solid Waste Management Facility.
- 5.10 No Person other than the Facility Attendant, Site Operator or Service Personnel or its Representative shall discharge any firearm at any Solid Waste Management Facility.
- 5.11 Children under 13 and pets are not permitted at Solid Waste Management Facilities except when they are inside a vehicle. Children are permitted in Recycling Depots under the supervision of an adult.
- 5.12 No loitering is allowed at Solid Waste Management Facilities or at Recycling Depots. Vehicles must proceed directly to the Bin Area and then leave the Solid Waste Management Facility as soon as possible after unloading at the Bin Area.

SCHEDULE "F" TO BYLAW NO. 1729**PROHIBITED WASTE**

The following items are not accepted for Disposal at RDKB facilities:

- 1) Agricultural Waste
- 2) Antifreeze
- 3) Auto Hulks
- 4) Beverage containers
- 5) Biomedical Waste
- 6) CFC/HFC Appliances
- 7) Contaminated Soil *
- 8) Electronic Waste (E-Waste)
- 9) Fluorescent Tubes and Bulbs
- 10) Free Liquid
- 11) Gas Cylinders
- 12) Gasoline
- 13) Hazardous or Reactive Chemicals
- 14) Hazardous Waste
- 15) Ignitable Materials
- 16) Industrial Waste
- 17) Lead-acid Batteries
- 18) Metal
- 19) Loads containing materials that are smoldering or on fire
- 20) Out-of-Area Municipal Solid Waste
- 21) Paint Products
- 22) Pesticide Products
- 23) Petroleum By-products
- 24) Pharmaceutical Products
- 25) Product Stewardship Materials
- 26) Radioactive Waste
- 27) Rechargeable Batteries
- 28) Recyclable Materials
- 29) Sludge containing Free Liquids
- 30) Solvents and Flammable Liquids
- 31) Specified Risk Material
- 32) Tight-head barrels
- 33) Tires
- 34) Used Oil
- 35) Used Oil Containers
- 36) Used Oil Filters
- 37) Waste Sharps
- 38) Such other materials as are designated by the Manager from time to time to be inappropriate for Disposal at the Solid Waste Management Facility for environmental reasons or reasons related to the safe or efficient operation of the Solid Waste Management Facility.

* Except under RDKB Board approved under Contaminated Soil Policy provisions.

SCHEDULE “G” TO BYLAW NO. 1729

PRODUCT STEWARDSHIP DEPOT HOSTING CONDITIONS AND FEES

The Regional District of Kootenay Boundary shall comply with *Local Government Act* and ensure that local government facilities are not used to subsidize private business. A Product Stewardship Agency may apply to the Manager for approval to locate a Product Stewardship Depot at an RDKB Solid Waste Management Facility subject to the fees, terms and conditions contained herein. The RDKB at its sole discretion reserves the right to deny an application from a Product Stewardship Agency to host a Stewardship Depot for any reason.

1. CONDITIONS OF USE

- 1.1 There must be no direct or indirect costs to the RDKB resulting from hosting a Product stewardship Depot.
- 1.2 An application to host a Product Stewardship Depot must contain full details on space, infrastructure, equipment and labour requirements.
- 1.3 An application to host a Product Stewardship Depot must contain details on full indemnification to the RDKB for any liabilities that may arise through the operation of a Product Stewardship Depot.
- 1.4 An application to host a Product Stewardship Depot must contain details on insurance that the Product Stewardship Agency deems adequate for any liabilities that may arise through the operation of a Product Stewardship Depot.
- 1.5 Upon approval to site a Product Stewardship Depot at an RDKB Solid Waste Management Facility, a Product Stewardship Agency through the provision of appropriate insurance must fully indemnify and save harmless the RDKB from any liabilities That may arise through the operation of a Product Stewardship Depot.
- 1.6 The area required to host the Product Stewardship Depot will be determined by the Manager based on the application submitted by the Product Stewardship Agency.
- 1.7 All site preparation, infrastructure upgrades, buildings or structures, operational equipment, safety equipment, paving, utilities and any other changes to the RDKB Solid Waste Management Facility required to operate and maintain a Product Stewardship Depot shall be completed by, and at the sole cost to the Product Stewardship Agency.
- 1.8 All transportation, handling and tipping, receiving, processing or penalty fees for Product Stewardship Materials collected at a Product Stewardship Depot will be borne solely by the Product Stewardship Agency.
- 1.9 If the actual area required to host the Product Stewardship Depot exceeds the area indicated in the application the fees will be adjusted at the sole discretion of the Manager based on actual area used.
- 1.10 The area required to host the Product Stewardship Depot will include all areas that are used solely in the operation of the Product Stewardship Depot and include but are not limited to walkways, parking areas and loading/unloading areas.

- 1.11 Covered Areas are only available to host a Product Stewardship Depot if the RDKB has sufficient surplus Covered Area available and the RDKB will not construct additional Covered Area for the purpose of hosting a Product Stewardship Depot.
- 1.11 In the instance where a Product Stewardship Depot requires covered and uncovered areas, both covered area and uncovered area fees will be levied.
- 1.12 The RDKB in its sole discretion will determine the minimum value of insurance required to be provided by a Product Stewardship Agency to protect the RDKB against any liabilities that may arise through the operation of a Product Stewardship Depot in each instance.
- 1.13 Fees and charges contained herein must be paid within thirty (30) days of the first day of each month for the preceding month's rent, labour and any other costs related to the operation of a Product Stewardship Depot.
- 1.14 The RDKB Board in its sole discretion may change any or all fees contained herein and may cancel any agreement to host a Product Stewardship Depot.

2. FEES AND CHARGES

2.1 Monthly Rental:

At the discretion of the Manager, the following monthly rental rates shall apply to Product Stewardship Agencies for siting Product Stewardship Depots at RDKB Facilities and are based on the area required to operate the Product Stewardship Depot.

Class 1 Facility:

Uncovered Area up to 200m ²	\$500 per month
Covered Area up to 200 m ²	\$2000 per month
Uncovered Area greater than 200m ² but less than 300m ²	\$1000 per month
Covered Area greater than 200m ² but less than 300m ²	\$4000 per month
Area greater than 300m ²	per the determination of the RDKB

Class 2 Facility:

Uncovered Area up to 200m ²	\$200 per month
Covered Area up to 200m ²	\$800 per month
Uncovered Area greater than 200m ² but less than 300m ²	\$500 per month
Covered Area greater than 200m ² but less than 300m ²	\$1500 per month
Area greater than 300m ²	per the determination of the RDKB

Class 3 Facility:

No Product Stewardship Depots will be sited at Class 3 Facilities

2.2 Additional Cost Charges

Labour	\$30 per hour
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SCHEDULE "H" TO BYLAW NO. 1729

ADDITIONAL SURCHARGES AND CONDITIONS OF PAYMENT

1. SURCHARGES

- 1.1 A surcharge of \$50 must be paid to the Regional District if a person disposes solid waste in an undesignated area.
- 1.2 A surcharge of \$25 must be paid to the Regional District for a cheque returned for non-sufficient funds.
- 1.3 A surcharge of \$25 must be paid to the Regional District if a person fails to weigh out of a scaled facility and the Regional District must subsequently obtain vehicle tare weight and ownership information for subsequent billing. The registered tare weight of the vehicle will be subtracted from the scaled gross weight and the designated tipping fee will be allocated to the difference and will be invoiced to the registered vehicle owner in addition to the \$25 surcharge.
- 1.4 A surcharge of \$25 must be paid to the Regional District if a person fails to pay the required tipping fee in full and the Regional District must subsequently bill the person for the outstanding tipping fee or balance of the tipping fee.

2. GENERAL

- 2.1 Where a dollar amount per tonne is indicated, it is to be interpreted as allowing a proportionate charge for a portion of a tonne in 10 kg. increments.
- 2.1 In the event that the weigh scales provided at a refuse disposal facility are not operational, volume pricing will apply.
- 2.3 The RDKB shall make policy which sets out terms and conditions of payment for fees, charges and penalties described in this Bylaw.
- 2.4 The RDKB may refuse to grant credit to a firm or individual based on an assessment by the Manager and/or the General Manager of Finance.
- 2.5 The RDKB may immediately and indefinitely suspend user privilege to any firm or individual because of non-payment.
- 2.6 Accounts which are deemed to be in arrears by the General Manager of Finance may be subject to interest charges as defined by RDKB policy.
- 2.7 All Persons will be presented with a receipt for cash, credit and account transactions.

SCHEDULE "I" TO BYLAW NO. 1729**MUNICIPAL TICKET INFORMATION VIOLATIONS****1. Depositing Materials in Undesignated Areas**

- 1.1 Any Person who deposits Recyclable Materials indicated as permitted at a Class 3 Facility as per Schedule "C" anywhere other than within the bins provided including on the ground or walkways is guilty of Depositing Materials in Undesignated Areas and is subject to the following fines:

First Offence	\$50.00
Second Offence	\$100.00
Third and subsequent offences	\$200.00

- 1.2 Any Person who deposits any materials at a Solid Waste Management Facility other than as directed by the Facility Attendant, Site Operator or Service Personnel or any on-site signage directs including areas on the perimeter of the Solid Waste Facility a is guilty of Depositing Materials in Undesignated Areas and is subject to the following fines:

First Offence	\$50.00
Second Offence	\$100.00
Third and subsequent offences	\$200.00

2. Illegal Dumping

- 2.1 Any Person who deposits any materials in the recycling bins, on the ground or on the walkways at a Class 3 Facility other than those Recyclable Materials indicated as permitted at a Class 3 Facility as per Schedule "C" contained hereto is Guilty of Illegal Dumping and is subject to the following fines:

First Offence	\$100.00
Second Offence	\$200.00
Third and subsequent offences	\$500.00

- 2.2 Any Person who deposits Prohibited Waste at a Solid Waste Management Facility is guilty of Illegal Dumping and subject to the following fines:

First Offence	\$100.00
Second Offence	\$200.00
Third and subsequent offences	\$500.00

- 2.3 Any Person who deposits Controlled Waste at a Solid Waste Management Facility except as permitted in Schedule "B" contained hereto is guilty of Illegal Dumping and subject to the following fines:

First Offence	\$100.00
Second Offence	\$200.00
Third and subsequent offences	\$500.00

3. Unauthorized Removal of Materials

- 3.1 Any Person who removes any materials from a Solid Waste Management Facility without the express written approval of the Manager is guilty of Unauthorized Removal of Materials and is subject to the following fines:

First Offence	\$100.00
Second Offence	\$200.00
Third and subsequent offences	\$500.00

4. Vandalism and Trespassing

- 4.1 Any Person who willfully damages RDKB property at Solid Waste Management Facility including but not limited to damage to gates and fencing and lighting fires is guilty of Vandalism and is subject to the following fines:

First Offence	\$500.00
Second Offence	\$1000.00
Third and subsequent offences	\$2000.00

- 4.2 Any Person who enters a Solid Waste Management Facility at any time other than the hours that the Solid Waste Management Facility is open to the public as dictated by RDKB policy, signage at the Solid Waste Management Facility or verbal instructions given by the Facility Attendant, Site Operator or Service Personnel is guilty of Trespass and is subject to the following fines:

First Offence	\$500.00
Second Offence	\$1000.00
Third and subsequent offences	\$2000.00



STAFF REPORT

Date: 17 June 2020 **File**
To: **Chair Langman,**
and Members of the Board
From: Barb Ihlen,
 General Manager of Finance/CFO
Re: Director Remuneration Bylaw and Travel Policy

Issue Introduction

A staff report from Barb Ihlen, General Manager of Finance/CFO, summarizing the draft Director Remuneration Bylaw (Attachment 1) and proposed Director Travel & Expense Reimbursement policy (Attachment 2).

History/Background Factors

At the June 10, 2020 Board meeting, the Board provided staff with direction on drafting a Director Remuneration Bylaw that followed the following principles:

1. Simplify the calculation of Director remuneration and allowances by making it as straightforward as possible, easy to explain and easy to understand;
2. Maintain distinction between base remuneration and expense allowances for eligible expenses such as travel, office and technology and/or those that are specific to the role and reflect the unique local conditions;
3. Ensure all stipends and allowances have an annual increase based on the December BC CPI and be increased starting January 1 the following year;
4. Review stipends and allowances one year prior to the election using comparable regional district data similar to the Management Compensation policy and/or retain a consultant to provide recommendations;
5. Include an explicit list of the different meetings RDKB Directors attend over and above the RDKB Committee and Board meetings, such as Recreation Commission, APC, etc. that includes the compensation to be provided; and
6. That effective 2020 and moving forward, T2200-Declaration of Conditions of Employment forms be issued to all Directors.

Draft Bylaw

The attached draft Director Remuneration Bylaw No. 1736 specifically addresses the above principles with one exception; what month to use for the BC CPI increase. Discussion of this issue is further down in the report under Principle 3.

Principle 1, 2, and 6

The draft bylaw has been simplified and all stipends and allowances are now reflected on one page as Schedule 'A'. This schedule also details whether the remuneration is a stipend or an allowance as well as whether the remuneration is paid on a per occurrence basis (i.e. per meeting or travel time) or paid on a monthly basis. The monthly amounts are also reflected as an annual amount. In addition, the expense allowances eligible for a T2200-Declaration of Conditions of Employment have also been identified. All of the stipends and allowances provided in Schedule 'A' are taxed and paid through payroll.

For added clarity, all expense reimbursements like mileage, accommodations, and airfare, have been taken out of the remuneration bylaw and added to a draft policy regarding Director Travel & Expense Reimbursements (Attachment 2) that will be presented to the Policy and Personnel Committee on June 25, 2020. Please note that all expense reimbursements are not taxed and do not make up any part of a Director's remuneration, but are considered out of pocket expenses that are incurred when doing business in the role of an RDKB Director. The travel policy is similar to the travel policy for RDKB employees and outlines what expenses are reimbursable as well as the procedure to follow to receive reimbursement. All expense reimbursement information that was within Director Remuneration bylaws are included within the draft Director Travel & Expense Reimbursement policy and are paid through accounts payable.

Principle 3

Staff are recommending that the BC CPI increase be at the rate in November rather than December. This is due to the delay of information provided by Statistics Canada, which usually comes near the end of the following month. For example, information regarding the 2019 November CPI was available to the public around December 18th. However, the 2019 December CPI information was available to the public around January 23rd. Receiving this information after the monthly January remuneration payment is made will cause additional administrative work including determining retroactive amounts to be paid in February. If the November CPI information is utilized, the increase will occur on January 1 as stated in the bylaw.

The requirement for a BC CPI increase on January 1 of every year is included in the core bylaw and the November to November rate of 2.2% for 2019 is reflected in the amounts shown in Schedule 'A'.

Principle 4

The requirement for a comparison and review of Director Remuneration is also included in the core of the bylaw and states that one year prior to the general local government election, stipends and expense allowances will be reviewed and adjusted using comparable regional district data. Depending on the direction of the Board, this review, comparison, and recommendation will either be prepared by staff or by a consultant. If the bylaw is adopted, the next review will take place by the Fall of 2021.

Principle 5

Included in the draft bylaw is Schedule 'B', which includes an explicit list of the different meetings RDKB Directors attend including the RDKB Committee and Board meetings as well as commissions and external agencies. Historically, some of these committees and commissions were not eligible for the meeting allowance and staff are recommending that all meetings that a Director attends when representing the RDKB be eligible for a meeting allowance, travel allowance (if applicable) and expense reimbursement as per the draft policy. The allowance(s) and reimbursement of expenses will be ineligible if the external agency also provides an allowance or reimbursement of expenses to ensure there is no opportunity for a Director to obtain income or expense reimbursement from two different sources for the same purpose (i.e. double dipping).

Recommendations

That the Regional District of Kootenay Boundary Director Remuneration Bylaw No. 1736, 2020 be given first, second and third readings.

That Regional District of Kootenay Boundary Director Remuneration Bylaw No. 1736, 2020 be Reconsidered and Adopted.

ATTACHMENT 1

BYLAW NO. 1736**A Bylaw to provide for remuneration to the Board of Directors of the Regional District of Kootenay Boundary**

WHEREAS pursuant to the provisions of the *Local Government Act*, being Chapter 1 of the Statutes of British Columbia, and the *Community Charter*, being Chapter 26 of the Statutes of British Columbia, the Regional District may, by bylaw, provide remuneration for and reimbursement of expenses of Directors;

AND WHEREAS the Board of Directors finds it desirable to remunerate members of the Board and provide for expenses incurred by a Director for discharge of the duties of office;

AND WHEREAS the Regional District Board may, by bylaw, provide reimbursement of all or part of the expenditures made or expenses incurred by a Director when that Director is representing the Regional District of Kootenay Boundary, or is attending a meeting of the Board or any committee of the Board of which the Director is a member;

AND WHEREAS the Regional District may, by bylaw, provide an allowance, daily or otherwise, for specified expenses incurred by a Director when performing the activities referred to in the preceding recital;

NOW THEREFORE BE IT RESOLVED that the Regional District of Kootenay Boundary Board of Directors, duly assembled in an open meeting, enacts as follows:

1. Stipends and Expense Allowances

There shall be provided in the annual budget under Legislative and General Government and Electoral Area Administration an amount sufficient to pay remuneration to each of the Electoral Area and Municipal Directors of the Regional District of Kootenay Boundary as per the attached Schedule 'A'. All Electoral Area Director only stipends and expense allowances will be paid under the Electoral Area Administration service budget. Schedule 'B' lists all of the RDKB committees and external agency meetings that are eligible for the meeting allowance payment as of the date of adoption of this bylaw. Schedule 'B' will be updated annually and presented to the Board and details when an allowance is not eligible.

2. Annual British Columbia Consumer Price Index

Each January 1, all dollar amounts contained in this Bylaw will be adjusted to the nearest dollar to reflect the British Columbia Consumer Price Index (BC CPI) year-over-year change (November to November) as reported by Statistics Canada.

Bylaw No. 1735,2020
Director Remuneration

3. Comparison and Review

One year prior to the general local government election, stipends and expense allowances will be reviewed and adjusted using comparable regional district data. At the direction of the Board, the review, comparison and recommendation will either be prepared by staff or by a consultant.

4. Bylaw No. 1683 cited as "Electoral Area Director Remuneration Bylaw No. 1683, 2018" is hereby rescinded.
5. Bylaw No. 1714 cited as "Director Remuneration Bylaw No. 1714, 2019" is hereby rescinded.
6. This Bylaw may be cited for all purposes as the "Regional District of Kootenay Boundary Board of Directors Remuneration Bylaw No. 1736, 2020".

Read a First and Second time this _____ day of _____, 2020.

Read a Third time this _____ day of _____, 2020.

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer of the Regional District of Kootenay Boundary, hereby certify the foregoing to be a true and correct copy of Bylaw No. 1736 cited as the "Regional District of Kootenay Boundary Board of Directors Remuneration Bylaw No. 1736, 2020" as read a third time this day of _____, 2020.

Manager of Corporate Administration/Corporate Officer

Reconsidered and Adopted this _____ day of _____, 2020.

Chair
Officer

Manager of Corporate Administration/Corporate

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer of the Regional District of Kootenay Boundary, hereby certify the foregoing to be a true and correct copy of Bylaw No. 1736 cited as the "Regional District of Kootenay Boundary Board of Directors Remuneration Bylaw No. 1736, 2020" as Reconsidered and Adopted this _____ day of _____, 2020.

Manager of Corporate Administration/Corporate Officer

Bylaw No. 1735,2020
Director Remuneration

Schedule 'A'**Director Remuneration (Stipends & Allowances)**

Stipends	Who	Explanation	2020 Rates (\$)		
			Occurrence	Monthly	Annual
Base	all Directors	work provided by all Directors		949	11,393
Electoral Area	Electoral Area Directors only	additional work provided by an Electoral Area Director		1,325	15,894
Chair of the Board	Chair elected by the Board	work provided by the Chair		2,109	25,313
Vice Chair of the Board	Vice Chair Elected by the Board	work provided by the Vice Chair		368	4,415

Allowances

Meeting	all Directors	all Board approved meetings (see Schedule B)	92		
Committee Chair	Chair/Vice Chair of committee	chairing of Board approved meetings	123		
SIDIT Reading	appointed by Board Chair			47	562
Director Liaison	appointed by Board Chair	Environmental Service, Protective Services, Finance		66	797
Technology & Office*	all Directors	expenses for performing RDKB business at home (cell phone, internet service, printers, paper, printer cartridges, other consumables, etc.)		221	2,649
Technology & Office*	Electoral Area Directors only	additional to the above		193	2,318
Technology hardware*	Electoral Area Directors only	supply and maintain appropriate hardware		46	552
Technology hardware	Municipal Directors only	suitable hardware provided by RDKB per policy			
Vehicle*	all Directors			51	613
Travel Time	all Directors attending Board approved meetings	over 150 kilometers but less than 250 kilometers	54		
		250 kilometers but less than 350 kilometers	65		
		350 kilometers or more	81		

*eligible for a T2200-Declaration of Conditions of Employment

Travel & Expense Reimbursements/General Travel

See Director Travel & Expense Reimbursement policy

Schedule 'B'



Board Approved Meetings Eligible for a Meeting Allowance

As of June 18, 2020

Board Chair Appointed Committees:

Education & Advocacy
Policy & Personnel

Stakeholder Committees:

East End Services Committee
Beaver Valley Regional Parks and Regional Trails Committee
Greenwood/Area E Cemetery Committee
Utilities Committee
Boundary Community Development Committee
Electoral Area Services Committee
Boundary Trails Master Plan Steering Committee
Boundary Agricultural & Food Plan Steering Committee
Liquid Waste Management Plan Steering Committee

Board Appointed Committees:

Solid Waste Management Plan Steering & Monitoring Committee

RDKB Commissions & Steering Committees:

Recreation
Advisory Planning
Official Community Plan
Zoning Bylaw

Chair Appointments: Other/Outside Agencies

* ineligible if other/outside agency offers an allowance
BC Rural Centre / Southern Interior Beetle Action Committee (SIBAC)
The Okanagan Film Commission
Ktunaxa Treaty Advisory Committee
Boundary Invasive Species Committee

Board Appointments: Other Boards, Committees, Commissions

* ineligible if other board, committee, commission offers an allowance
Municipal Finance Authority (MFA)
Municipal Insurance Association (MIA)
Southern Interior Development Initiative Trust (SIDIT)-Regional Advisory Committee (RAC)
Columbia River Treaty Local Government Committee (CRT LGC)
Columbia Basin Regional Advisory Committee (CB RAC)-Provincial
West Kootenay Transit Committee (WKTC)
Rural Development Institute (RDI)

Notes:

*Members of each committee are updated by the Corporate Officer
*List to be updated annually in January based on Board resolutions from the prior year

ATTACHMENT 2



POLICY TITLE: Director Travel and Expense Reimbursement Policy

**PEP COMMITTEE
REVIEW DATE**

**BOARD
APPROVAL DATE:**

Policy: The Regional District will reimburse Directors for reasonable expenses incurred as a result of Regional District business.

Purpose: To formalize the expense reimbursement process for Directors and establish guidelines for reimbursement of travel and related expenses.

Procedure:

1. For travel exclusively related to Regional District responsibilities, mileage at the current automobile expense reimbursement rate per kilometer may be claimed from the place of the Director's principal residence to the place of the meeting. The reimbursement is the mileage rate determined by The Province of British Columbia (i.e. Provincial Rate).
2. All travel outside of the Regional District must be approved by the Board. The Chair of the Board may approve such travel when it is inappropriate or not feasible to get Board approval. Approval is deemed to be given if the meeting/convention/conference is specifically identified and included in the annual Financial Plan.
3. All claims for reimbursement must be made on the Expense Report form developed by Staff.
4. Original receipts or proof of purchase must accompany expense claim other than for per diem amounts.
5. The completed Expense Report is to be submitted within ten (10) working days of the Director's return from travel, along with supporting receipts and

a copy of the program itinerary provided by the event organizer (including meeting/conference dates).

Accommodation:

Where overnight stays are required for Board business, whether it be for meetings, conferences or seminars, the Regional District will book rooms at the accommodator hosting the event, or at the most convenient accommodator to the event.

Directors will be responsible for any upgrade or additional costs incurred.

Should a Director choose to book their own room, the Regional District will pay only for a basic room. Receipts as proof of payment are required.

Directors are able to utilize private accommodation if they choose. They are entitled to an allowance of \$50 per night.

Travel:

When making travel plans, Directors are expected to utilize the most cost effective method of travel considering time, convenience and safety.

Directors are eligible for reimbursement of commercial airline fees (economy class) or mileage, whichever is less. Receipts as proof of payment are required.

Mileage, inclusive of parking and ferries, up to the equivalent economy airfare, plus estimated taxi fares, will be paid for the use of private automobiles for travel. If the Director claims mileage equivalent to airfare, hotel accommodations and meals enroute normally will not be paid. Hotel accommodations and meals enroute, however, will be paid if it makes reasonable sense to do so (i.e. flight was cancelled).

Air travel is to be used where other less expensive forms of transportation are not possible or reasonable. The most economical airfare shall be obtained and flights should be booked as soon as travel needs are determined to obtain early booking discounts. Use of personal air miles or like reward plans to purchase airline tickets will not be compensated.

Directors can claim reimbursement of actual expenses such as taxis, buses/transit/shuttle, baggage fees and parking. Receipts as proof of payment are required.

Meals and Incidental Expenses:

For the purposes of this policy, breakfast is at 7 am, lunch is at 12 pm, and dinner is at 6 pm.

A meal allowance may be claimed in lieu of providing receipts as follows:

Zone 1 – All of BC except Greater Vancouver Regional District (GVRD), Squamish Lillooet Regional District (SLRD), and Capital Regional District (CRD)

- Breakfast \$20.00
- Lunch \$25.00
- Dinner \$35.00 (rates include gratuities)

Zone 2 – GVRD, SLRD, CRD, and areas outside the province of BC

- Breakfast \$25.00
- Lunch \$30.00
- Dinner \$45.00 (rates include gratuities)

If the meeting, convention or seminar, or the travel required, spans one or more of the stipulated times, Directors are entitled to claim the appropriate meal allowance(s) in accordance with the appropriate Zone.

If a meal is provided as part of the event, or is otherwise paid for by public money, no claim for that meal may be made. Where a provided meal is missed due to reasonable circumstances the Director shall be entitled to claim to appropriate meal allowance.

Directors are entitled to claim \$20 per night for reimbursement of reasonable costs for incidental expenses for each full day of meetings, conventions, seminars or travel.

Miscellaneous Expenses:

Directors are entitled to have their partner/spouse accompany them to formal functions at the Federation of Canadian Municipalities, Union of British Columbia Municipalities and Association of Kootenay Boundary Local Government conventions. The Regional District will pay for, or reimburse the Director, for fees related to Welcoming Reception and Formal Banquet/Dinner only. If requesting a reimbursement, receipts as proof of payment are required.

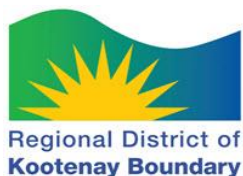
Directors are entitled to claim the difference between personal and business car insurance rates due to use of private vehicles for RDKB business. Receipts of proof of payment are required.

Directors are entitled to claim for one windshield replacement deductible per year if their windshield is damaged while on RDKB business. Receipts of proof of payment are required.

Expenses Ineligible for Reimbursement:

- Motor vehicle infractions
- In-room movies or personal services
- Alcoholic beverages
- Parking tickets or fines
- Vehicle damages

- Cost for participation in optional recreation and social activities if not included in the conference registration fee
- Costs for spouse/partner recreation and social activities
- Expenses that are reimbursed by an outside agency external to the RDKB



STAFF REPORT

Date: 16 Jun 2020

File Admn
Bylaw No. 1720

To: **Chair Langman & Members of RDKB Board of Directors**

From: Theresa Lenardon, Manager of Corporate Administration/Corporate Officer

Re: Proposed RDKB Procedure Bylaw No. 1720

Issue Introduction

A staff report from Theresa Lenardon, Manager of Corporate Administration/Corporate Officer presenting the final draft of RDKB Procedure Bylaw No. 1720, including final updates as per feedback received from Directors after the April 30, 2020 Board meeting.

History/Background Factors

From May 2019 to present, the Policy and Personnel Committee worked with staff to revise the current RDKB Procedure Bylaw No. 1616, 2016. Past revisions to procedure bylaws leading up to 2019-2020 included clerical and legislative edits to specific sections. Whereas, the 2019-2020 work resulted in an very focused and thorough review resulting in a rewrite of the entire bylaw. There have been numerous changes made so that the bylaw now reflects the current RDKB Board and Committee's agenda and meeting procedures and practices and the current local government culture and environment.

The Board last reviewed the draft bylaw on April 30th and approved the following:

Add S. 1.6 (page 5)-Suspension of Rules to Introduction.

Add S. 3.5-Board Agendas (page 8): Directors who are appointed to represent the RDKB on external committees, commissions and boards etc. will, when possible, submit a written report summarizing their activities. The written report will be included on Board meeting agendas under "Board Appointment Updates" for every second meeting.

Clarify "recording of meetings" in S. 5.1-Electronic Meetings (page 13): It was agreed that Board and Committee meetings may be recorded. The Board may wish discuss further. Closed meetings of the RDKB Board of Directors and Committee meetings will not be recorded.

At the April 30th meeting, the Board also agreed:

1. to include the First Nations territorial acknowledgement on Committee and Commission agendas (S. 8.3, page 21),
2. to add "Applicants and Others Attending" as a Board agenda item (S. 8.2, page 21),

3. that a draft copy of the Board minutes (Part 10), with a watermark "Draft Not Approved by the Board" will be sent to the Board Members after the meeting. Once errors have been corrected, the draft minutes, including the watermark, will be published and become available to the public online. A draft copy of Committee minutes (with "draft" watermark) will be sent to the Chairs of each Committee. Should a Committee member, other than the Chair, request a copy of draft Committee minutes, all members will receive a draft copy. Draft Committee minutes will not be published online.

The above updates have been incorporated in the proposed bylaw (attached).

For the June 25th Board meeting, staff present further recommendations for the Board's consideration. These changes are compliant with legislation and are practical for the current times and circumstances.

S. 4.2 (page 9-Board) & S. 4.13 (page 11-Committees)-Time & Location of Meetings: Additional text has been added to clarify that when the Board or Committee Chair deem it feasible, and or during emergencies (e.g. such as the current COVID-19 situation), that RDKB meetings may be held via electronic means rather than in-person at the usual meeting locations (Trail and Grand Forks offices).

5.1(d) (page 13)-Electronic Meetings: Remove the last sentence "...Board or Committee Chair approve Director participation....in a meeting by electronic means, but only in the event of an emergent situation". Staff feel this is inefficient to the RDKB's current meeting processes and does not reflect the current times and today's meeting technology that is available.

5.2 (page 13)-Electronic Meetings: Remove the last paragraph S. 5.2 which requires the Board or Committee Chair to be physically present at the scheduled meeting location, while other Directors participate in the meeting via electronic means. This is a "legacy" item and is not necessary nor practical, given current times and advancements in technology.

9.18 (page 28)-Use of Mobile and Other Electronic Devices: Clarify that mobile devices are in fact allowed at meetings, but that they must either be turned off or on vibrate. This should have already been done in a previous version of the bylaw.

10.16 (page 31)-Debate and Conduct: There is a question regarding a *Director's request to call a vote on a motion* and whether the current language in the bylaw fits with the speaker's queue. 10.17 currently reads:

At any time during debate on a motion, a Director may move "That the vote on the motion be called" and that motion shall be decided without amendment or debate. If the motion "That the vote on the motion be called" is adopted by at least two-thirds (2/3) of the votes cast, the motion consequent thereon shall be immediately called and voted upon without further debate or amendment.

Staff suggest that this be revised to read by adding the underlined text: *At any time during debate on a motion, and once in the regular speaker's queue, a Director may move "That the vote on the motion be called....."*

Should the Board agree to the edits above, a motion directing staff to incorporate them into the bylaw, and subsequent motions to give Bylaw 1720-First, Second and Third readings and Adoption, can be made at the June 25th Board meeting.

Implications

- Staff resources and Committee and Board time.
- There are no financial implications.
- Legislation requires local governments to have an adopted procedure bylaw in place and it is considered a best practice that the Board review and, when necessary and with staff's discretion, revise it to ensure the bylaw remains compliant with the *Local Government Act* and *Community Charter* and that it accurately reflects the RDKB's administrative and corporate processes and procedures for agendas, meetings and minutes.

Background Information Provided

- Procedure Bylaw No. 1720, 2020

Alternatives

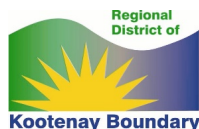
1. Receive report and no action,
2. Approve the changes to the bylaw as proposed in the staff report titled "Proposed Procedure Bylaw 1720",
3. Give the Bylaw 1, 2 and 3 readings and Adoption.

Recommendation(s)

That the Regional District of Kootenay Boundary Board of Directors approve the final updates to the proposed RDKB Procedure Bylaw No. 1720 as presented to, and discussed by the Board on June 25, 2020.

That Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2020 be read a First, Second and Third time.

That Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2020 be Reconsidered and Adopted.



BYLAW NO. 1720

A bylaw to regulate the meetings & conduct of the RDKB Board of Directors and Committees thereof.

WHEREAS the *Local Government Act* provides that a Regional Board must, by bylaw, provide for the procedure that is to be followed for the conduct of its business, including the manner by which resolutions may be passed and bylaws adopted and for providing advance public notice of such meetings;

AND WHEREAS the Regional Board deems it essential and expedient to provide for a procedure that is to be guided by principles of efficiency, accountability and procedural fairness for the conduct of its business;

NOW THEREFORE BE IT RESOLVED that the Regional District of Kootenay Boundary Board of Directors, in open meeting assembled, enacts as follows:

Part 1 Introduction

Citation

- 1.1 This Bylaw may be cited for all purposes as "Regional District of Kootenay Boundary Procedure Bylaw No. 1720 2020".

Interpretation

- 1.2 In this Bylaw the following words have the following meanings:

- a) **Act** means the *Local Government Act*, R.S.B.C. 2015, c. 1, as may be amended from time to time;
- b) **Alternate Director** means an Alternate Director as defined in the Act and duly sworn in prior to voting on any matter before the Board;
- c) **Audio, Video and Recording Devices** means any equipment enabling the recording or transmission of sound and or visual images;
- d) **Board** means the governing and executive body – the Board of Directors of the Regional District of Kootenay Boundary;

- e) Calendar** means the Board and Committee(s) meeting schedules posted on the RDKB website and which acts as the RDKB's Public Notice Posting Place;
- f) Chair** means the Member presiding at a meeting of the Board of Directors, Committee or Commission as the context requires and who is elected by the Board or by the Committee or Commission;
- g) Charter** means the *Community Charter*, S.B.C. 2003, c. 26, as may be amended from time to time;
- h) Closed Meeting** means a meeting closed to the general public and or employees, as deemed appropriate, with items to be discussed as set out in the *Community Charter S.B.C. 2003, c. 26*;
- i) Commission** means a commission established by the Board pursuant to the Act;
- j) Committees** means, as the context requires, a Select, Standing, Stakeholder or other Committee of the Board either appointed by the Board Chair or by the Board of Directors; and in the Regional District of Kootenay Boundary means only the following Committees:
- i. Beaver Valley Regional Parks and Regional Trails Committee;
 - ii. Boundary Agricultural and Food Plan Steering Committee;
 - iii. Boundary Community Development Committee;
 - iv. Boundary Trails Master Plan Steering Committee;
 - v. East End Services Committee;
 - vi. Education and Advocacy Committee;
 - vii. Electoral Area Services Committee;
 - viii. Greenwood/Area E Cemetery Committee;
 - ix. Kettle River Watershed Management Plan Steering Committee;
 - x. Liquid Waste Management Plan Stage 3 Steering Committee;
 - xi. Policy and Personnel Committee;
 - xii. Solid Waste Management Plan Steering and Monitoring Committee;
 - xiii. Utilities Committee;
 - xiv. Any Committee created by the Chair or Board, from time to time;
- k) Corporate Officer** means the Manager of Corporate Administration of the Regional District of Kootenay Boundary holding an Officer position and assigned corporate administration responsibilities named in the *Local Government Act*;
- l) Delegation** means an individual or organization or group who request to appear before the Board and/or Committees or Commissions;
- m) Director** means an Electoral Area Director or a Municipal Director pursuant to the *Local Government Act*;

- n) Electronic Meeting** means a regular, special or closed Board or Committee meeting using electronic and communications media pursuant to BC Reg. 271-2005; *Regional Districts Electronic Meetings Regulation*;
- o) Ex-officio Member** shall mean a Member who shall have the right to attend and speak, but not vote, at all Committees that they are not appointed to;
- p) Inaugural (Statutory) Meeting** means the meeting at which the newly appointed Directors take the Oath of Office as set out in the Act and without the Oaths of Office, also means the first Board meeting held after November 1 in each year where the Board Chair and Board Vice Chair are elected;
- q) Majority Vote** and “**majority of votes**” means more than half the votes cast by Members legally entitled to vote at a properly called meeting at which quorum is present (and does not include blank and spoiled ballots when voting for the Chair and Vice Chair);
- r) Meeting** means a regular, special, closed, electronic or other duly called meeting of the Board of Directors, Committees of the Board or Commissions, as the context requires;
- s) Member(s)** means the Director(s) elected or appointed to the Regional District of Kootenay Boundary Board of Directors and includes Alternate Directors when acting in the absence of the Director;
- t) Open Meetings** means, as a general rule, that Board and Committee meetings must be open to the public as set out in the *Community Charter S.B.C. 2003, c. 26*.
- u) Presenter(s)** means an individual, organization or group who have been requested by the Board and or a Committee to appear in front of the Board and or Committee to present information and updates as requested by the RDKB and whom are not considered to be a delegation(s);
- v) Presiding Officer** means a Director appointed by the Board to preside temporarily in place of the Board or Committee Chair and/or Vice Chair;
- w) Public Notice Posting Place**, as per the requirements in the Act, means the place(s) that identify where the notices of regular RDKB Board and Committee meetings, agendas and minutes will be posted and for the purposes of this Bylaw and the RDKB, is the calendar located on the RDKB website.
- x) Recess** means the temporary suspension of proceedings until a later time;
- y) Regional District / RDKB** means the Regional District of Kootenay Boundary;
- z) Regular Meeting** means all Board and Committee regularly scheduled open meetings;

- aa) **Quorum** means a majority of the Members of the Regional District of Kootenay Boundary Board of Directors or a majority of the Members of a Committee;
- bb) **Secondary Committee** means a sub-Committee of the Board;
- cc) **Select Committee** means a Committee established by the Board to consider or inquire into any matter and report its findings and opinion to the Board and is automatically dissolved upon its final report to the Board of Directors. Persons who are not Directors may be appointed by the Board, but at least one (1) Member of the Select Committee must be a Director;
- dd) **Special Committee** means a Committee appointed by the Chair of the Board to undertake special interim projects;
- ee) **Special Meeting** means a Board or a Committee meeting (other than a regular open, closed or other meeting) which are not included on the adopted annual Board meeting calendar;
- ff) **Stakeholder Committee** means a RKDB Committee comprised of the service participants;
- gg) **Standing Committee** means a long-term Committee established by the Chair of the Board to deal with issues of an ongoing nature;
- hh) **Steering Committee** means a Committee comprised of Board Members only and appointed by the Board to act in an advisory capacity by providing guidance to staff and to the overall Board of Directors on the priorities, order of business, financial and budgetary matters and general courses of operations for the implementation of new RKDB initiatives and the operations thereof;
- ii) **Table** means to “lay on the table” to temporarily suspend further consideration or action on the pending motion; Table also means to “take from the table” to resume consideration of the item previously “laid on the table”;
- jj) **Vice Chair** means the Member elected as Vice Chair of the Board or of a Committee or Commission pursuant to the Act and who acts in the absence of the Chair;
- kk) **Weighted Voting** means the number of votes a municipality or electoral area is entitled to, based on the Voting Unit (population) as certified by the Provincial Ministry responsible for Regional District Governance.

Application of Rules of Procedure

- 1.3 The rules of procedure as set out in this Bylaw apply to all meetings of the Board of Directors and Committees of the Board except as otherwise provided herein.
- 1.4 In cases not provided for under the *Local Government Act*, the *Community Charter* or this Bylaw, the current edition of *Robert's Rules of Order, Newly Revised* shall

apply to the extent that those Rules are applicable in the given circumstances and are not inconsistent with the provisions of this Bylaw, the *Local Government Act* or the *Community Charter*. Where there is an inconsistency between this Bylaw or *Robert's Rules of Order, Newly Revised*, and the Act, and or the RDKB Letters Patent or Supplementary Letters Patent, firstly the Act shall prevail and secondly the Regional District of Kootenay Boundary Letters Patent or Supplementary Letters Patent shall prevail.

- 1.5 A rule of procedure that does not originate in the Act or the Charter and does not affect voting may be suspended on a case by case basis if at least two thirds of the Members present agree to do so.

Suspension of Rules of Procedure

- 1.6 Except for those provisions of this Bylaw that are statutorily mandated, the rules of procedure contained in this Bylaw may be suspended for a temporary time period specified by the Board with a two third vote of the Members present.

General

- 1.7 The *Interpretation Act*, Chapter 238, R.S.B.C. 1996, as amended from time to time, applies to this Bylaw.
- 1.8 When the masculine is used in this Bylaw it includes both genders and the singular includes the plural and vice-versa.
- 1.9 Where this Bylaw conflicts with the provisions of the Act, the Act shall prevail.
- 1.10 Any definition of a word or phrase used in this Bylaw and not defined in this Bylaw has the meaning as defined in the Act.
- 1.11 This Bylaw may not be amended or repealed and substituted unless notice of the proposed amendment or repeal is mailed to each Member at least five (5) days before the meeting in which the amendment or repeal is to be introduced in accordance with the Act.

Part 2
Election of Board Chair and Vice Chair

Inaugural Meeting

- 2.1 At such time as shall be advised in writing by the Corporate Officer, the Board shall convene an Inaugural Meeting at the first Board meeting held after November 1st in each year.

The Presiding Officer of the Inaugural Meeting shall be the Corporate Officer until such time as the Board Chair and Vice Chair have been elected. In an election year, the Directors will take their Oaths of Office as delivered by the Corporate Officer at the Inaugural Meeting.

Election of Board Chair and Board Vice Chair

- 2.2 The Board shall elect a Chair and Vice Chair from amongst its Members at its Inaugural Meeting each year and each Director present at the meeting shall have one vote in each election for an office.
- 2.3 The Corporate Officer will call three (3) times for the nominations for the position of Chair of the Board. The nomination requires only a mover. The nominee must consent to the nomination. If a nominee is not present at the Inaugural Meeting, they must have advised the nominator of their consent to be nominated in writing prior to the Inaugural Meeting or such person will not be considered for the position of Board Chair. The absent nominee must participate in the meeting electronically under the appropriate section of this Bylaw.
- 2.4 After the calling of nominations for each person nominated who has consented to their nomination, an election by secret ballot will be held. Prior to distribution of ballots, candidates will have the opportunity to address the Board and will be provided three (3) minutes to speak.
- 2.5 If a Director is participating in the Inaugural Meeting by electronic means, to cast a vote for the office of Board Chair, they shall, at the time the vote is being conducted, contact by telephone or text the Corporate Officer, or delegated staff who will record their vote on a ballot paper and deposit same in the ballot box.
- 2.6 If only one candidate is nominated for an office, the Corporate Officer will declare the candidate elected by acclamation.
- 2.7 If only two (2) candidates have been nominated, the candidate receiving the majority of votes from the Members of the Board then present in person or electronically will be declared elected.
- 2.8 If three (3) or more candidates are nominated, and no candidate receives a majority of votes, the name of the candidate receiving the lowest number of votes will be removed from the ballot, ballots will be redistributed and the remaining candidates

will again stand for election. This process will be repeated until a candidate is elected, or until only two (2) candidates remain and the vote is tied. Once voting has been completed, the Corporate Officer will declare the candidate with the most votes as the Board Chair and will ask for a motion to destroy the ballots.

2.9 In the event of a tie vote:

- (a) the names of the candidates will be written on separate pieces of paper and placed in a container;
- (b) the Corporate Officer will be asked to withdraw one (1) paper; and
- (c) the candidate whose name is on the withdrawn paper will be declared elected.

Election of Board Vice Chair

- 2.10 Nominations for the office of Board Vice Chair and the secret ballot voting procedure shall be called by the Corporate Officer and will be held following the same provisions for nominations and election of the Board Chair as set out above.

Board Chair or Board Vice Chair Vacancy

- 2.11 If the office of the Chair or Vice Chair becomes vacant, following the process set out in this Bylaw above, the Board shall elect another Chair or Vice Chair from among its Directors at the first practicable regular meeting of the Board after the vacancy occurs.

Restriction on Nominations for Board Chair and Vice Chair

2.12 Nominations will not be accepted for:

- (a) a Director who is not present unless that Director is an absent nominee participating in the meeting by electronic means and as per Sections 2.3 and 2.5 of this Bylaw;
- (b) a Director who has not made an Oath of Office;
- (c) a Director who has not filed Financial Disclosure Papers with the Regional District's Corporate Officer;
- (d) a Director who has not signed the Elected Officials' Responsible Conduct Guiding Principles Policy and Code of Conduct;
- (e) an Alternate Director.

Part 3 Board and Committee Agendas

Agenda Items

- 3.1 Any Director wishing to place an item on a Board or Committee meeting agenda for consideration must receive approval from the Board or Committee Chair.
- 3.2 Once approved by the Board or Committee Chair, the deadline for submission of Board and Committee meeting agenda items to the Corporate Officer or delegated staff is Noon, one (1) day before the Board or Committee agenda is distributed by electronic means.
- 3.3 Any Director wishing to place an item on a Board or Committee agenda after the deadline in 3.2 above, must receive approval from the Board or Committee Chair. Should the Chair approve the inclusion of the requested item on the agenda, the Chair must notify the Corporate Officer or delegated staff in a timely manner. Once the item has been added to the agenda, the agenda will be final and will be reformatted and republished online at the beginning of the week in which the meeting will be held.

The final agenda will be redistributed to the Board and Committee members accordingly two (2) to three (3) days prior to the meeting. Any requests for items after the final agenda has been reformatted and republished as noted above, will be considered "late" and sent to the Board or Committee members via email in advance of the meeting and will be discussed at the meeting under Late (Emergent) Items.
- 3.4 Sections 3.2 to 3.3 also apply to the submission of agenda items from RDKB staff.
- 3.5 Directors who are appointed to represent the RDKB on external committees, commissions and boards etc. will, when possible submit a written report summarizing their activities. The written report will be included on Board meeting agendas under "Board Appointment Updates" for every second meeting.
- 3.6 The Board and Committee Chairs shall review and approve the meeting agendas for each meeting prior to the agendas being published and delivered.

Request(s) for RDKB to Act as Host Agency and Requests for Letters of Support

- 3.7 In the case of agenda items where non-profit organizations request the RDKB Board of Directors to act as a host agency to sponsor grant applications for community projects, or in the case of agenda items where the Board is requested to provide a letter of support for a community project grant application, the request must be accompanied by the grant application and or the project proposal, which will be attached to the Board agenda.

Part 4
Board and Committees
Meeting Details, Notices and Agenda Delivery

Board Meeting: Time and Location of Meetings

- 4.1 No later than the last scheduled Board meeting of the year, the Board shall, by resolution, adopt an annual schedule of regular Board meetings for the immediately ensuing year and subsequently post the schedule on the RDKB website Calendar, which acts as the Public Notice Posting Place.
- 4.2 Regular, special and or closed meetings of the Board shall be held within the Regional District corporate offices at 202-843 Rossland Ave., Trail, B.C. or 2140 Central Ave., Grand Forks, B.C. unless the Board passes a resolution during the year authorizing the meeting to be held elsewhere within the Regional District or, as authorized by the Act, outside the boundaries of the Regional District.

According to Part 5 of this Bylaw, regular, special and or closed Board meetings may also be conducted by electronic means, rather than in person at the aforementioned locations, when the Board Chair deems it feasible to do so and or during emergencies.

- 4.3 In the interest of making Board meetings (only) more accessible to residents and applicants and to assist the Board members' gain knowledge and awareness of the RDKB's diverse communities, the Board may wish to schedule two (2) regular Board meetings per year in different locations than set out in Section 4.2 of this Bylaw; one (1) meeting in the East End, rather than the RDKB offices in Trail, B.C. and one (1) meeting in the West End, rather than the RDKB offices in Grand Forks, B.C. This must be decided at the time the Board adopts the annual meeting schedule.
- 4.4 Regular meetings of the Board shall be held on the second Wednesday and the last Thursday of each month commencing at 1:00 p.m. local time. The Board may, by resolution, cancel or reschedule the time and date of regular meetings. In such cases, the Chair must notify the Corporate Officer who will ensure that a notice, advising of the change will be posted as per Sections 1.2(e)-*Calendar* and 1.2(w) - *Public Notice Posting Places* of this Bylaw. Notice of the change will also be sent to the Board Members and Alternate Directors via e-mail.
- 4.5 The Board of Directors, through this procedure Bylaw, delegates to Committees the authority to set the dates and times of Committee meetings according to the wishes of the Committee members.

Board Meeting Notice: Regular Open Meetings

- 4.6 At least seventy-two (72) hours before a regular Board meeting, the Corporate Officer or delegated staff must give the Board of Directors and the public notice of the time, place and date of the meeting by:

- (a) giving notice of the meeting in accordance with the Act;
- (b) sending a Notice with the meeting details via e-mail to the Board Members and Alternate Directors;
- (c) giving advance public notice of the time, place and date by posting an electronic copy of the published agenda on the RDKB website and making paper copies available for the public upon request; and
- (d) other means such as the Corporate Officer might deem reasonable.

4.7 On the Friday in the week preceding the regular open Board meeting, the Corporate Officer or delegated staff must e-mail the link to the electronic agenda to each Member of the Board and to each Alternate Director to the e-mail address which the Directors and Alternate Directors have directed that agendas and notices be sent.

4.8 Should the Chair determine that there is insufficient business to justify holding a regular open Board meeting the Chair may cancel the meeting upon three (3) days notice to the Corporate Officer who will ensure that in such cases, Notice of Meeting Cancellation will be posted as per Section 4.4 of this Bylaw above.

Board Notice: Special Meetings

4.9 A special meeting, which is a Board meeting other than a regular, inaugural, statutory, closed or adjourned meeting, shall be called by the Corporate Officer, on the request of the Chair or any two (2) Directors, by notice e-mailed, or otherwise delivered in writing, to each Director at least three (3) days before the date of the meeting at the location given by the Corporate Officer for that purpose.

4.10 Except where notice of a special meeting is waived by unanimous vote of all Directors pursuant to the Act, at least forty-eight (48) hours before a special meeting of the Board, the Corporate Officer must:

- (a) give notice of the special meeting in accordance with the Act;
- (b) send a Notice with the meeting details via e-mail to the Board Members and Alternate Directors,
- (c) give advance public notice of the time, place and date of the special meeting by posting the published agenda on the RDKB website and making paper copies available to the public upon request; and
- (d) other means such as the Corporate Officer might deem reasonable.

4.11 In the case of an emergency, notice of a special meeting may be given, with the consent of the Chair and two (2) directors, less than three (3) days before the date of the meeting and need not be given in writing.

Committees Meetings: Time and Location of Meetings

4.12 No later than the last scheduled Board meeting of the year, the Board shall, by resolution, adopt an annual schedule of regular Committee meetings for the immediately ensuing year and subsequently post the schedule on the RDKB website Calendar, which acts as the Public Notice Posting Place.

Further to Section 4.5 of this Bylaw, the Committees have the authority to set the days of the week and the times of regular, closed and special meetings of the RDKB Committees according to the wishes of the Committee Members.

- 4.13 Regular, special and or closed RDKB Committee meetings shall be held within the Regional District corporate offices at 202-843 Rossland Ave., Trail, B.C. or 2140 Central Ave., Grand Forks, B.C. unless the Board Chair authorizes the Committee Chair to support a Committee meeting to be held elsewhere within the Regional District.

According to Part 5 of this Bylaw, regular, special and or closed Committee meetings may also be conducted by electronic means, rather than in person at the aforementioned locations, when the Committee Chair deems it feasible to do so and or during an emergency.

- 4.14 A Committee Chair may cancel or reschedule the time and date of a regular Committee meeting. In such cases, the Committee Chair must notify the Corporate Officer who will ensure notice of the change will be posted on the RDKB website Calendar as the Public Notice Posting Place. Notice of the change will also be sent to the Committee Members and Alternate Directors.

Committee Meeting Notice: Regular Open Meetings

- 4.15 At least seventy-two (72) hours before a regular meeting of a Committee, the Corporate Officer or delegated staff must give the Committee Members and the public notice of the time, place and date of the meeting by:
- (a) giving notice of the meeting in accordance with the Act;
 - (b) sending a Notice with the meeting details via e-mail to the Committee Members and Alternate Directors;
 - (c) giving advance public notice of the time, place and date by posting a copy of the published agenda on the RDKB website and making paper copies available for the public upon request; and
 - (c) other means such as the Corporate Officer might deem reasonable.
- 4.16 On the Friday in the week preceding the regular open Committee meeting, the Corporate Officer or delegated staff must e-mail the link to the electronic agenda to each Member of the Committee, and to each Alternate Director to the e-mail address which the Directors and Alternate Directors have directed that agendas and notices be sent.
- 4.17 Should the Committee Chair determine that there is insufficient business to justify holding a regular open Committee meeting, the Chair may cancel the meeting upon three (3) days with notice to the Corporate Officer who will ensure that in such cases, notice of meeting cancellation will be posted as per Section 4.4 of this Bylaw above.

Committee Notice: Special Meetings

- 4.18 A special Committee meeting, which is a meeting other than a regular, closed or adjourned meeting, shall be called by the Corporate Officer at the request of the Committee Chair, by notice e-mailed, or otherwise delivered in writing, to each Director and Alternate Director at least three (3) days before the date of the special meeting at the location given by the Corporate Officer for that purpose.
- 4.19 Except where notice of a special Committee meeting is waived by unanimous vote of all Committee Directors, at least forty-eight (48) hours before a special meeting of the Committee, the Corporate Officer must:
- (a) send a Notice with the meeting details via e-mail to the Committee Members and Alternate Directors,
 - (b) give advance public notice of the time, place and date of the special meeting by posting the published agenda on the RDKB website and making a paper copy available for the public upon request;
 - (c) other means as the Corporate Officer might deem reasonable.
- 4.20 In the case of an emergency, notice of a special meeting may be given with the consent of the Committee Chair and two (2) Directors less than three (3) days before the date of the meeting and need not be given in writing.

Part 5
Electronic Meetings
Board and Committees

- 5.1 Subject to the Act and the *Regional Districts Electronic Meetings Regulation*, B.C. Reg. 271/2005, and amendments thereto:
- (a) in accordance with this Bylaw, regular open and special Board and or Committee meetings may be conducted by means of electronic or other communication means including audio, visual and recording devices subject to public notices posted in the RDKB Trail and Grand Forks offices and on the RDKB website. The notice will advise that RDKB meetings may be recorded and that recordings are available for public perusal. Closed Board and Committee meetings may be conducted by means of electronic devices according to this Bylaw, but closed Board and Committee meetings will not be recorded.
 - (b) electronic meetings will be held during emergencies and or in circumstances where the provincial when meeting in person
 - (c) a reference to meetings that are conducted by electronic means will be included on Board and Committee meeting agendas and minutes;
 - (d) a Member of the Board who is unable to attend in person at any meeting of the Board or a Committee, may participate in the meeting by means of electronic or other communication means. Director participation in electronic meetings for those meetings that are held in person is subject to approval from the Board or Committee Chair. ~~where one or more of the following emergent situations occurs: sickness, extreme weather conditions, a Member of the Board is out of the area and any other emergent condition acceptable to the Chair of the Board or Chair of a Committee.~~
- 5.2 ~~Unless a situation where there is insufficient business, Section 4.8 and 4.18 above, occurs or there is an Extreme Weather Advisory as per the RDKB Board/Committee Meeting Cancellation Policy, the Board Chair and Committee Chairs must be physically present at the scheduled location of the meetings. In the event the Board Chair or a Committee Chair need to participate electronically, the Vice Chair must be physically present at the scheduled location of the meeting to assume the Chair.~~
- 5.3 Board Members who participate in a meeting referred to in Section 5.1 above are deemed to be present at the meeting.
- 5.4 The communication means must enable the meeting's participants to hear, or watch and hear each other. Except for any part of the meeting that is closed, the public must be able to hear, or watch and hear the meeting.
- 5.5 When a Director participates in a meeting by electronic means the onus is on the Director to ensure that they have heard and understood the discussion and the motion on the floor. The Director must only indicate their vote verbally and is responsible to speak clearly and loud enough for all participants and the public to

hear and understand. If the Director is not heard or understood, they are deemed to be in favour of the motion.

- 5.6 If communication is lost to one (1) or more electronic participants during a meeting:
- (a) a recess may be called by the Chair without specifying a timeline for the recess;
 - (b) the Member(s) participating by electronic means are responsible to re-establish the connection;
 - (c) if a link cannot be re-established, the Director affected will be deemed to have left the meeting;
 - (d) if, after a link is re-established, there is a subsequent loss of communication, no further attempts will be made to re-establish the link and the Director affected will be deemed to have left the meeting;
 - (e) in the event of an equipment failure or other occurrence which prevents or limits electronic participation, the Board or Committee Meeting will not be adjourned unless quorum is lost;
 - (f) if a link cannot be re-established and there is not a quorum of Members present, the Chair will deem the meeting adjourned.
- 5.7 Although every effort will be made to accommodate electronic participation in meetings, nothing in this Bylaw shall be construed to guarantee any Director electronic access to a Board or Committee Meeting. Electronic participation in Board or Committee Meetings may be restricted by the capacity or dependability of the equipment employed.

Part 6
Closed (In Camera) Meetings

- 6.1 This section applies to meetings of bodies referred to in the *Community Charter*, including, without limitation:
- (a) Board of Directors;
 - (b) all Committees of the Board;
 - (c) Board(s) of Variance;
 - (d) Parcel tax roll review panels;
 - (d) Court(s) of Revision;
 - (e) Advisory Planning Commission(s); and
 - (f) Recreation Commission(s), and
 - (g) Other advisory Committees, Commissions and bodies established by the Board under the Act.

Scheduling and Attendance at Closed (In-Camera) Board or Committee Meetings

- 6.2 When required, closed meetings of the RDKB Board of Directors and or RDKB Committees are called pursuant to Sections 90 (1) – 90 (3) of the *Charter*.
- 6.3 Before closing a regular open meeting or a portion of a regular open meeting to the public, the Board or Committee must pass a resolution in a public meeting in accordance with Section 92 of the *Community Charter* and such resolution must include the basis under the applicable subsection of Section 90 on which the meeting or part of is to be closed.
- 6.4 Closed meetings may be scheduled in advance and included on a regular Board or Committee agenda where the Board or Committee will convene to the closed meeting at the end of the open meeting. If this is the case, a separate closed meeting agenda will be sent to the Board of Directors via email after the regular, open meeting agenda has been delivered and in accordance with the process set out in Parts 3 and 4 of this Bylaw.
- 6.5 With Chair approval, closed meetings may be called impromptu during an open Board or Committee meeting.
- 6.6 With approval from the Board or Committee Chair, a standalone closed meeting may be called at any time, separately from a regular Committee or Board meeting.
- 6.7 While in a closed meeting, the Board may authorize the release of information considered or decisions made in the closed meeting or in a previous closed meeting upon adoption of a resolution "That the matter of _____ be released to the open meeting" and will be placed under "Recommendations Released from Closed Meeting" of the open meeting.

- 6.8 No Director or staff present in a closed meeting shall disclose to the public the proceedings of a closed meeting, unless a resolution has been passed to release the proceedings to the open meeting.
- 6.9 Except in the case where the RDKB Board, by resolution, prohibits the release of closed meeting discussions and or resolutions and except where the Board, in a closed meeting adopts a closed meeting resolution for release to the open meeting, individual Municipal Directors may release information received and/or discussed at a closed meeting of the RDKB Board of Directors or at a closed RDKB Committee meeting to their municipal Councils. The release of the RDKB closed information to the Municipal Council must be done in a closed Council meeting.
- 6.10 Information protected under the *Freedom of Information and Protection of Privacy Act* will not be released at any time.
- 6.11 Minutes of closed Board and Committee meetings shall be kept by the Corporate Officer in the same manner as minutes of regular open meetings, but shall not be filed with the minutes of regular open meetings.
- 6.12 Following a general local election or by-election, newly elected Directors should not be permitted to attend closed meetings, or receive closed meeting agendas and materials until such time as they have been officially sworn in and taken an Oath of Office as Directors.

Notice of Closed Board and Committee Meeting and Agenda Delivery

- 6.13 When a closed meeting is scheduled in advance and which will be held during a regular Board or Committee meeting, the Corporate Officer or delegated staff will send a notice of closed meeting to the Committee Members by e-mail at least forty-eight (48) hours before the meeting as per the RDKB Closed Meeting Agendas and Information Policy.
- 6.14 An electronic link to the closed meeting agenda and background materials shall be delivered by e-mail at least forty-eight (48) hours in advance of the closed meeting. In an emergent situation, paper copies of the agenda may be distributed at the meeting as per the RDKB Closed Meeting Agendas and Information Policy. Should that be the case, all paper copies of the closed meeting agenda will be returned to the Corporate Officer or designated staff directly after the closed meeting has been adjourned and will be shredded.
- 6.15 When a closed meeting is not scheduled in advance but is called at the discretion of the Board Chair, Committee Chair or at the request of a Director present at the meeting with Chair approval, the Board or Committee will proceed to the closed meeting without an agenda.
- 6.16 The Directors will at all times ensure the security and confidentiality of their assigned user ID and password for their electronic device and will notify the Corporate Officer

immediately should they misplace, lose or otherwise determine their user ID and/or password has been compromised.

Persons Attending Closed Board and Committee Meetings

- 6.17 While in a closed meeting, the procedures set out in this Bylaw shall, to the extent possible, be followed by the Board and Committee in the conduct of business.
- 6.18 The Chair may expel or exclude a Director from a closed meeting pursuant to Section 133 of the *Charter*.
- 6.19 The Board or Committee Chair may dismiss all or some staff from a closed meeting and if necessary, will identify the staff person who will remain in the closed meeting to record the minutes.
- 6.20 The only persons permitted to receive an electronic closed meeting agenda and remain in the closed meeting are the Members of the RDKB Board of Directors or Members of the Committee, the Corporate Officer, Chief Administrative Officer, the Service Manager presenting the information in person or in a staff report and Recording Secretaries.
- 6.21 In general, other delegated staff, members of the public and Alternate Directors are not permitted to receive closed meeting agendas or attend closed meetings unless authorized by the Board or Committee Chair. Alternate Directors will only receive a closed meeting agenda when they attend a closed meeting in place of the elected or appointed Director.
- 6.22 Employees may attend a closed meeting to present information, or when requested by the Board Chair, Committee Chair or Chief Administrative Officer to attend.
- 6.23 A Board Director who attends an open RDKB Committee meeting, but who does not sit on that Committee, can, with Chair approval attend a closed Committee meeting as an observer should the open meeting convene to a closed meeting.

Part 7
Attendance at Public Meetings and Delegations

Meetings Open to the Public

- 7.1 Subject to the *Charter*, all Board and/or all Committee meetings must be open to the public.
- 7.2 This section applies to meetings of bodies referred to in the *Charter*, including, without limitation:
- (a) Committees and or Commissions of the Board;
 - (b) Board(s) of Variance;
 - (c) Court(s) of Revision;
 - (d) Advisory Planning Commission(s); and
 - (e) Recreation Commission(s).

Regular Delegations - Board and Committees

- 7.3 Using the RDKB Committee/Board Delegation Presentation form, a delegation wishing to appear before the Board and/or Committee shall submit a written request to appear along with a brief written synopsis of the information that will be included on the agenda and presented to the Board or the Committee. The Corporate Officer must receive the approved and completed written request and the written synopsis at least seven (7) calendar days prior to the scheduled Board meeting and will submit to the Board or Committee Chair for approval.
- 7.4 The Board or Committee Chair must approve all delegations before the delegation is set on an agenda. Where the Chair has refused a delegation, the Chair shall notify the Board or Committee in writing that the delegation asked to appear before them and list the reason(s) why the delegation was denied attendance. The Chair will also notify the delegation of the decision to not approve the request and will provide reasons.
- 7.5 Where the subject matter of a delegation has previously been dealt with in the form of a delegation, the Chair may advise the delegation of such apparent duplication and/or repetition and refuse such delegation until permission of the overall Board or Committee has been obtained.
- 7.6 A delegation is not permitted to address a meeting of the Board or a Committee regarding a bylaw in respect of which a public hearing has been held, where the public hearing is required under an enactment as a prerequisite to the adoption of the bylaw.
- 7.7 Once approved, the Corporate Officer or delegated staff shall notify a representative of the delegation at a reasonable time in advance of the meeting date, the time, day and place of the meeting at which the delegation will be heard.

7.8 The number of delegations appearing before the Board and/or Committees shall be limited to two (2) per meeting unless the Chair determines that there is an additional urgent matter or unless a delegation wishes to address an item that is already on the agenda. At the discretion of the Chair, the time limit for presenting is ten (10) minutes unless otherwise determined by a two-thirds (2/3) vote of the Members present.

7.9 No delegations will be accepted at the November Statutory Board meeting.

Late Delegations-Board of Directors Meetings

7.10 Any person or organization who deems its interests to be affected by an item on a Board meeting agenda, who has appeared before an appropriate Committee or who, because of circumstance, could not have been expected to appear before a Committee or give earlier notice, may request to appear as a late delegation before the Board to address an item already on the agenda. A written request must be submitted to the Corporate Officer no later than twelve o'clock Noon on the day before the Board of Directors meeting.

7.11 The written request to appear as a late delegation must stipulate the subject matter upon which the late delegation wishes to speak and explain why the Board should consider the late delegation.

7.12 The Corporate Officer will advise the Chair of the Board of the late delegation request and circulate the written request to RDKB Board Directors via email as soon as it has been submitted. The Board Members shall reply to the Corporate Officer as to whether the late delegation should be allowed; or not. A majority of Board Members in favour or against, will determine if the late delegation will be heard at the meeting.

If the delegation's late request to attend the meeting is approved, the written request will be displayed on the video monitors at the meeting.

7.13 Notwithstanding the foregoing, where a written request has not been received as prescribed in Section 7.5 above, a late delegation may address the meeting if approved by a unanimous vote of the Members present.

7.14 The Chair may determine the maximum time for which each late delegation will be permitted to address the Board, after which time, the Board may dispose of the delegation submission at the meeting, refer the subject matter to a Committee or take such other action as is deemed expedient.

Presenter(s) and Applicant(s) Speaking to Agenda Items

7.15 From time to time, the RDKB Board of Directors and Board Committees may invite certain individuals, external agencies, organizations or other groups to attend a meeting to present certain information including financial details and or other reports which relate to RDKB funded projects and service delivery and or to RDKB business in general.

Applicants may also wish to attend a Board or Committee meeting to speak to their application that may be included on an agenda. Presenters and applicants are not considered "delegations" and hence, are not required to submit the Board or Committee Delegation Request form.

Presenters may be requested to submit a brief synopsis of their presentation to the Corporate Officer seven (7) days prior to the Board or Committee meeting. The Corporate Officer will include the synopsis on the agenda. Applicants are not required to submit a synopsis.

- 7.16 The Corporate Officer shall notify presenters in advance of the meeting the date, time and place of the meeting at which the presenter(s) will be heard.
- 7.17 The number of presenters appearing before the Board and/or Committees shall be determined and approved by the Board or Committee Chair. The time limit for presenters sharing the information at the meeting is at the discretion of the Chair unless otherwise determined by a two-third (2/3) vote of the Members present.
- 7.18 Presenters will not be invited to speak at the November Statutory Board meeting.

Public and Media Attendance

- 7.19 Members of the public and media shall be given an opportunity to ask questions of, and address the Board or Committee during the open public portion of the meeting as set out in the open public agenda under *Question Period for Public and Media* as set out in Section 8.2 of this Bylaw. This time is expressly devoted to questions only.

Expulsion from Meetings-Board Meetings

- 7.20 If the Chair or Vice Chair, presiding at a Board meeting considers that another person is acting improperly, the presiding Official may order that person to be expelled from the meeting. If the person who is expelled does not leave the meeting, a peace officer may enforce expulsion as if it were a Court order.

Part 8
Order of Business and Meeting Procedures - Board and Committees

Opening Procedures and Order of Business

- 8.1 Once the Chair has confirmed quorum, called the meeting to order and the agenda has been presented and adopted, the minutes of the preceding meeting shall be considered by the Board or Committee in order to correct errors and omissions. The minutes of the preceding meeting of the Board need not be read aloud prior to their adoption.
- 8.2 The order of business for all regular meetings of the Board shall be as follows (to the extent applicable):
- Call to Order'
 - First Nations Land Acknowledgement'
 - Adoption of the Agenda (additions/deletions);
 - Consent Agenda;
 - Minutes;
 - Presentations/Delegations;
 - Applicants and Others Speaking to Agenda Items
 - Unfinished Business;
 - Communications (RDKB Corporate Communications Officer);
 - Communications (Information Only);
 - Reports;
 - Committee Recommendations to the Board;
 - Board Appointment Updates;
 - New Business;
 - Bylaws;
 - Late (Emergent) Items;
 - Discussion of Items for Future Meetings;
 - Question Period for Public and Media;
 - Closed (in camera) Meeting;
 - Adjournment.
- 8.3 The order of business for all Committee or Commission meetings shall be as follows (to the extent possible):
- Call to Order;
 - First Nations Land Acknowledgement;
 - Acceptance of the Agenda (additions/deletions);
 - Consent Agenda;
 - Minutes;
 - Presentations/Delegations;
 - Unfinished Business;
 - New Business;
 - Late (Emergent) Items;
 - Discussion of Items for Future Agendas;
 - Closed (in camera) Meeting;
 - Adjournment.

- 8.4 At the Board or Committee Chair's discretion, the order of business and the agenda item headings may be amended from time to time.

Adoption of the Agenda-Board and Committee

- 8.5 After a Board meeting has been called to order and at consideration of the agenda, the Corporate Officer will introduce any additions, deletions and or changes to the order of the agenda.
- 8.6 At the time of any Board or Committee meeting, other than an emergency meeting and at acceptance of the agenda, the Chair, any Director and or staff may add items to, or remove items from the agenda with the overall approval of the Board or Committee. Items added to the agenda at the meeting, will be considered "late" and will be added to Late (Emergent) Items.
- 8.7 If a quorum is not present at a Board meeting within thirty (30) minutes after the appointed time of the meeting the Corporate Officer shall record in the minute book the names of the Members present and the Board shall stand adjourned until the next meeting date or another meeting has been called in accordance with this Bylaw.
- 8.8 The Communications (Information Only) Board or Committee meeting agenda items are considered to be routine and do not require debate or discussion. The items listed on the Communications (Information Only) agenda shall be received in one (1) motion. If discussion of a particular item on the Communications (Information Only) agenda is desired by a Director, that item shall be removed from the Communications (Information Only) section of the agenda and considered separately.

Voting-Board and Committee

- 8.9 The procedure for voting shall be in accordance with the provisions of the Act.
- 8.10 When considering a motion, the question shall be decided by a show of hands in favour of a motion followed by a show of hands from those opposed to the motion.
- 8.11 The Chair participates in all voting unless the vote is on the question "Shall the Chair be sustained?"
- 8.12 Members participating electronically in a meeting must only indicate their negative votes verbally.
- 8.13 In all cases where the votes of the Members present and entitled to vote, including the vote of the Chair or other person presiding, are equal for and against a question, the question shall be declared in the negative and shall be defeated, and it shall be the duty of the Chair or other Member presiding to so declare.

- 8.14 Any Member then present who abstains from voting shall be deemed to have voted in the affirmative.
- 8.15 A negative vote will always be documented unless a Member requests their negative vote not to be recorded in the minutes.
- 8.16 Prior to calling the vote, any Member may request that the motion be read aloud. The vote on a motion will be taken when the Chair is satisfied that its intent is clear to the Members.
- 8.17 A vote on a motion shall be deemed to be carried unanimously unless a Member or Members vote against the motion. The Chair will state aloud that the vote is carried, carried unanimously or defeated.

Motions-Board and Committee

- 8.18 Motions shall be phrased in a clear and concise manner and framed as a positive action.
- 8.19 The names of the Members who move and second a motion will not be recorded.
- 8.20 All questions shall be decided by a vote on a motion and with the exception of Section 8.21 below, all motions may be moved and seconded by any Member.
- 8.21 At Board meetings, a motion, the subject matter of which pertains to the administration and operation of a local or extended service, shall be moved and seconded by a Stakeholder Member for the participating area of that service.
- 8.22 At Board meetings, a motion under the agenda section titled "Committee Recommendations to the Board of Directors", shall be moved by the relevant Committee Chair and in their absence, by the relevant Committee Vice Chair.
- 8.23 Any Member may require the question or motion under discussion to be read at any time during the debate but not so as to interrupt a Member while speaking in accordance with this Section.
- 8.24 No Member shall speak more than twice to the same question without leave of the Chair, except in explanation of the material part of their discourse, which may have been misconceived, and in doing so the Member is not to introduce a new matter. A reply is allowed to a Member who has made a substantive motion to the Board or Committee, but not to any Member who has moved an amendment.
- 8.25 No Member shall speak on any question for longer than five (5) minutes without leave of the Chair.
- 8.26 After a motion is read by the Chair or other Member presiding or the Corporate Officer, it shall be deemed to be in possession of the Board or Committee, but may

be withdrawn at any time before a decision or an amendment with the approval of the Board. A motion to withdraw is not recorded.

- 8.27 Amendments to original motions as presented on an agenda and any new motions that are not already included on the agenda, but created at the meeting must be presented in a clear and concise manner and shall be written out at the time the motion is made in the meeting, made visible on the monitors for the Recorder and those attending and then added to the record.

These motions must be decided upon or withdrawn before the main question is put to a vote. Only one (1) amendment to an amendment shall be allowed at one (1) time and the same shall be dealt with before the amendment is decided.

- 8.28 When the question under consideration contains more than (1) one distinct proposition, a separate vote upon each such proposition shall be taken if any Member so requires.

- 8.29 After the question is finally put by the Chair, no Member shall speak to the question nor shall any other motion be made until after the result is declared and the decision of the Chair as to whether the question has been finally put is conclusive.

- 8.30 When a question is under debate, no motion shall be received except for the following:

- (a) to refer to a Committee and/or staff;
- (b) to amend;
- (c) to lay on the table;
- (d) to table indefinitely;
- (e) to defer to a certain time; or
- (f) to adjourn.

Laying on the table would typically be used when the Board or Committee wants to lay a pending question aside when something else of immediate urgency has arisen. By adopting a motion to "lay on the table" the majority has the ability to halt consideration of a question immediately without debate. In this circumstance, the motion may be set aside temporarily without setting a time for resuming its consideration, but the matter can be taken up again when the majority decides to bring it back.

The process of laying on the table is different from postponing indefinitely. To postpone indefinitely is to decline to take a position on the question, which effectively operates to kill the motion and avoids a direct vote on the question. The purpose of "laying a motion on the table" is not to avoid dealing with a measure, but instead to halt consideration of a measure in order to deal with a matter of urgency that has arisen.

If a time for resuming consideration of the matter is specified in making the motion, then it is a motion to postpone, rather than to lay on the table. A significant

difference between the two (2) motions is that a motion to postpone is debatable, whereas a motion to lay on the table is not.

The six (6) motions (a) to (f) in Section 8.30 above, shall have precedence in the order in which they are named and the last four (4) are neither amendable nor debatable.

- 8.31 A question of referral, until it is decided, shall preclude all amendments to the main question.
- 8.32 A motion to adjourn shall always be in order, but no second motion to the same effect shall be made until some intermediate proceeding shall have been taken.
- 8.33 When the Chair is of the opinion that a motion put before the Board or Committee is contrary to the rules of the Board or Committee, the Chair shall apprise the Members thereof immediately before putting the question thereon, and shall cite the rule or authority applicable to the case without argument or comment.

Reconsideration

- 8.34 The Chair may return a resolution providing for reconsideration in accordance with the provisions of the Act and or the *Community Charter*.
- 8.35 After a bylaw, resolution, or proceeding has been decided, any Member may, at the same meeting or at any time within one (1) month after a bylaw, resolution or proceeding is considered, return the matter for the Board or Committee's reconsideration. The Board or Committee shall not reconsider a matter unless the motion to reconsider the matter has firstly been considered.
- 8.36 Where a matter has been reconsidered, the Board or Committee shall not reconsider the matter again subject to Section 8.34 above.
- 8.37 Once a bylaw, resolution, or proceeding has been rejected upon its reconsideration, it shall not be reintroduced to the Board for six (6) months, except with the unanimous consent of the Board.
- 8.38 Any and all conditions which apply to the passage of the original bylaw, resolution, or proceeding shall apply to its rejection.

Meeting Quorum – Board and Committees

- 8.39 The quorum for the Board and Committees is a majority of the Members.

Designation of Member to Act in Place of Board Chair

- 8.40 If the Board Chair is not in attendance within ten (10) minutes after the time appointed for the meeting, the Vice Chair shall take the Chair and call the Directors to order. If the Vice Chair is also absent, the Corporate Officer shall take the Chair

and call the Directors to order and if a quorum is present the Directors shall elect an Acting Chair who shall preside during the meeting until the arrival of the Chair or Vice Chair. The person appointed as Acting Chair has all the authority and is subject to the same rules as the Chair.

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PART 9
Points of Order

Board and Committee Chair and Presiding Officers

- 9.1 The Chair of the Board of Directors shall have the right to sit ex-officio on all Committees of the Board that they are not appointed to.
- 9.2 The Board or Committee Chair, if present, shall preside at Board or Committee meetings.
- 9.3 The Vice Chair shall preside at Board and Committee meetings in the absence, illness or other disability of the Chair or when the Chair vacates the Chair. The Vice Chair has all the authority, and duties of the Chair and is subject to the same rules as the Chair.
- 9.4 The Chair, Vice Chair or other Member presiding at a meeting of the Board or Committee shall preserve order and rule on all points of order which may arise, but subject to a challenge by the other Members then present.
- 9.5 Every Member desiring to speak shall address the Chair.
- 9.6 A Director who introduces a resolution has opportunity to open the debate and close the debate after other Members of the Board or Committee have had an opportunity to speak to the question. No Member can speak more than twice to the question except with the permission of the Chair.
- 9.7 If a decision of the Chair is challenged by a Director, the Chair shall immediately put the question "Shall the Chair be sustained?" and the question shall be decided without debate. The Chair shall be governed by the vote of the majority of the Directors then present and entitled to vote, exclusive of the Chair, and in the event of the votes being equal, the question shall pass in the affirmative.
- 9.8 If the Chair refuses to put the question "Shall the Chair be sustained?" the Vice Chair or other person appointed by the Board or Committee shall preside temporarily in place of the Chair, and the Director so temporarily presiding shall immediately put the question "Shall the Chair be sustained?" and the question shall be decided without debate and in the event of the votes being equal, the question shall pass in the affirmative.
- 9.9 Any resolution or motion carried under the circumstances mentioned in Section 9.8 is as effectual and binding as if carried out with the Chair presiding.
- 9.10 At RDKB Board meetings the Board Director who has been appointed by the Board Chair as a Director Liaison for Emergency Services, Environmental Services, and Finance will act as a Board resource and will introduce and read out the recommendations for those three (3) services when items are included on a Board agenda.

9.11 The Chair shall preserve order and decide all points of order which may arise, subject to an appeal, which may arise.

9.12 When the Chair is required to decide a point of order:

- (a) the Chair shall suspend debate on the matter currently before the meeting;
- (b) the person raising the point of order shall define the procedural matter under which the point of order has been raised;
- (c) the Chair shall determine whether the point of order is sustained or overruled and must cite the applicable rule or authority if requested by another Member;
- (d) another Member shall not question or comment on the rule or authority cited by the Chair;
- (e) if the point of order is overruled, the debate resumes on the matter previously suspended;
- (f) if the point of order is sustained, the Chair directs the appropriate corrective actions;
- (g) the Chair may reserve the decision until the next meeting.

Appeal

9.13 In accordance with the *Community Charter*, a decision of the Chair made under Section 9.12 may be appealed by a Member and on an appeal by a Member, the question as to whether the Chair is to be sustained must be immediately put by the Chair and decided without debate and the Chair shall be governed by the vote of the majority of the Directors then present excluding the Chair.

9.14 In the event of the votes being equal, the question on an appeal shall be declared in the affirmative.

9.15 The names of the Members who voted contrary to the outcome of the question on an appeal shall be recorded in the minutes.

Privilege

9.16 A matter of privilege (a matter dealing with the rights or interests of the Board as a whole or of a Member personally) may be raised at any time and shall be dealt with forthwith before resumption of business.

9.17 A matter of privilege includes reference to any of the following motions:

- (a) to fix the time to adjourn;
- (b) to adjourn;
- (c) to recess;
- (d) to raise a question of privilege of the Regional Board; and
- (e) to raise a question of privilege of a Member of the Regional Board.

Use of Mobile and Other Electronic Devices

9.18 As per the *RDKB Elected Officials Responsible Conduct Policy and Code of Conduct (Conduct of Public Meetings)*, during meetings, Directors must only be engaged

with RDKB business. **Mobile and other electronic devices must be turned off or kept on silent or vibrate.** while at an RDKB meeting and should only use mobile and other electronic devices to . the use of cellular telephones and pagers mobile and other electronic devices are not permitted during Board and Committee meetings unless they are turned off or kept on silent or vibrate.

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Part 10
Debate and Conduct-Board and Committees

- 10.1 Conduct at meetings will be as per this Section of this Bylaw and the RDKB *Elected Officials Responsible Conduct Guiding Principles Policy–Code of Conduct*. The Chair is responsible for preserving order at meetings and for ensuring that questions are decided with the benefit of fair debate and in accordance with procedural and other rules. On matters of procedure the Chair shall remain impartial.
- 10.2 No Member shall speak until recognized by the Chair.
- 10.3 No Member shall interrupt another Member who is speaking, except to raise a point of order.
- 10.4 Members speaking at a Board meeting:
- (a) must act and speak according to the RDKB Responsible Conduct Guiding Principles Code of Conduct;
 - (b) must use respectful language;
 - (c) must not use offensive gestures or signs;
 - (d) must speak only in connection with the matter being debated;
 - (e) must not speak outside the motion or reflect upon any vote of the Board except for the purpose of moving that such vote be reconsidered;
 - (f) must not leave their seats or make any noise or disturbance while a vote is being taken and until the result is declared; and
 - (g) must adhere to the rules of procedure established under this Bylaw and to the decisions of the Chair and the Board in connection with the rules and points of order.
- 10.5 If more than one (1) Member speaks the Chair must call on the Member, who, in the Chair's opinion, spoke first.
- 10.6 The order of debate on a motion will be determined by the Chair and those Members waiting to speak shall be placed into a queue. Members wishing to participate in the debate may do so by raising their hand. The mover and seconder of a motion, or of an amending motion, shall be entitled to speak ahead of other Members.
- 10.7 No Member shall speak on any motion for longer than three (3) minutes without leave of the Chair.
- 10.8 Members are encouraged to speak succinctly and to not repeat information that has already been heard.
- 10.9 Except in explanation of the material part of a Director's speech, all Members will be given the opportunity to speak once on the same matter or motion, without leave of the Chair, before a Member is recognized a second time.

10.10 A Member who has made a substantive motion to the Board may reply to the debate.

10.11 A Member who has moved an amendment on the previous motion may reply to the debate.

10.12 Members who are called to order by the Chair:

- a) must immediately stop speaking;
- b) may explain their position on the point of order; and
- c) may appeal to the Board for its decision on the point of order.

10.13 Where there is a motion under debate a Member shall not speak other than on that motion under debate and the matters relating to that motion.

10.14 Any Member may require the motion under discussion to be read at any time during the debate, but not so as to interrupt a Member while speaking.

10.15 If, during debate on a motion, a motion to refer or postpone that motion is put while there remain Members who have indicated an intention to speak; the Chair may refuse to accept the seconding of such motion of referral or postponement until those on the list of speakers for the first motion have been heard. No other names shall be added to the said speakers list and, following the hearing of those entitled to speak, the Chair shall ask if there be a seconder to the motion to refer or postpone and, receiving an affirmative response, shall call the question on such motion.

10.16 At any time during debate on a motion, **and once in the regular speaker's queue,** a Director may move "That the vote on the motion be called" and that motion shall be decided without amendment or debate. If the motion "That the vote on the motion be called" is adopted by at least two-thirds (2/3) of the votes cast, the motion consequent thereon shall be immediately called and voted upon without further debate or amendment.

10.17 If the Chair desires to leave the meeting, they shall call on the Vice Chair to take their place until they return to the meeting.

10.18 If the person presiding at a meeting considers that another person at the meeting is acting improperly, the person presiding may order that the person be expelled from the meeting. If a person who is expelled does not leave the meeting, a peace officer may enforce the order as if it were a court order.

Part 11
Conflict of Interest-Board and Committees

- 11.1 A Member attending a meeting must not participate in the discussion or vote on a matter where to do so would be contrary to the *Charter* and the *RDKB Elected Officials Responsible Conduct Guiding Principles Policy and Code of Conduct*. Where a Member considers that they are not entitled to participate in the discussion of a matter or to vote on a question in respect of the matter, the Member must declare this and state the general nature of why the Member considers this to be the case.
- 11.2 Where a Member considers that they are not entitled to participate in the discussion of a matter or to vote on a question in respect of the matter, the Member must:
- (a) not take part in the discussion of the matter and is not entitled to vote on any question in respect of the matter;
 - (b) immediately leave the meeting or that part of the meeting during which the matter is under consideration; and
 - (c) not attempt in any way, whether before, during, or after the meeting, to influence the voting on any question in respect of the matter.
- 11.3 If a Board member has made a declaration as noted above in Section 11.1, and after receiving legal advice on the issue, determines that they were wrong respecting their entitlement to participate in respect of the matter, the Member may:
- (a) return to the meeting or attend another meeting of the same body;
 - (b) withdraw the declaration by stating in general terms the basis on which the member has determined that they are entitled to participate;
 - (c) after this, participate and vote in relation to the matter.
- 11.4 Where a Member declares that they are not entitled to participate in the discussion of a matter or to vote on a question in respect of the matter, the Corporate Officer shall record the Member's declaration and the reasons given for the conflict of interest. The time(s) of the Member's departure from the meeting room and, if applicable, the Member's return shall be noted in the record.
- 11.5 Where a Member declares that they are not entitled to participate in the discussion of a matter or to vote on a question in respect of the matter, the person presiding must ensure that the Member is not present at the meeting at the time of any vote on the matter.

Part 12
Minutes-Board and Committee

12.1 Minutes of Board and Committee meetings must be kept in accordance with section 223 of the Act. For purposes of Section 223(b) of the Act, the designated officer is the Corporate Officer.

12.2 A draft copy of Board minutes with a watermark: "Draft Not Approved by the Board", will be sent to the Directors for review and reference. An electronic copy of the draft minutes with the watermark will be made available to the public.

A draft copy of Committee minutes, with a watermark "Draft" will be sent to the Chairs of each Committee. If one member of a Committee requests a copy of draft minutes, then the Committee Chair must direct that all members receive a draft copy. Draft Committee minutes will not be published online.

After the draft minutes are adopted by the Board and Committees at the next Board or Committee meeting, the watermark will be removed and the minutes will be republished online as the final public version.

12.3 The Corporate Officer shall ensure that copies of the minutes of every meeting of the Board and Committees are distributed to each Member prior to the meeting at which they are proposed to be adopted. Wherever possible, the Board and Committee minutes shall be adopted by the Board at the next regular meetings.

Minutes of the Committee meetings will be received by the Board of Directors once they have been adopted by the respective Committees.

12.4 The minutes of the proceedings of the RDKB Board of Directors and Board Committees must be open for public inspection at the Regional District office during the regular business hours.

12.5 The RDKB Corporate Officer is responsible for records management and the filing and keeping of all draft and adopted paper and electronic Board and Committee minutes.

Part 13 Bylaws

- 13.1 Prior to the introduction of any bylaw, each Member who is entitled to vote on the bylaw may receive a copy of the proposed bylaw in electronic format as part of the agenda .
- 13.2 Any bylaw which does not require approval, consent, or assent under the provisions of the Act or any other enactment prior to the adoption of the bylaw may be adopted at the same meeting of the Board at which it passed third reading, provided the motion for adoption receives an affirmative vote of at least two thirds (2/3) of the votes cast, otherwise, the Board must not adopt a bylaw on the same day it has given the bylaw third reading.
- 13.3 Unless the holding of a public hearing is waived in accordance with the Act, the Board must not give third reading to a community plan bylaw, rural land use bylaw or zoning bylaw without holding a public hearing on the bylaw. The public hearing must be held after first reading of the bylaw and before third reading of the bylaw.
- 13.4 A bylaw must be adopted by separate resolution.
- 13.5 Every bylaw which has been adopted by the Board shall immediately be signed by the Corporate Officer and Board Chair as the RDKB's authorized signatories and shall be retained by the Corporate Officer for safekeeping.

Part 14
Miscellaneous Provisions

Severability

- 14.1 If any section, subsection, clause or other part of this Bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this Bylaw.

Effective Date

- 14.2 This Bylaw shall come into full force and shall take effect on and after the date of the adoption thereof.

Repeal

- 14.3 Regional District of Kootenay Boundary Procedure Bylaw No. 1616, 2016 is hereby repealed.

Read a First, Second and Third Time this day of , 2020.

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer, do hereby certify the foregoing to be a true and correct copy of Regional District of Kootenay Boundary Bylaw No. 1720 cited as "Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2020" as adopted by the Board of the Directors at a regular meeting held this day of , 2020

Manager of Corporate Administration/Corporate Officer

Reconsidered and Adopted this day of , 2020.

Chair Manager of Corporate Administration/Corporate Officer

I, Theresa Lenardon, Manager of Corporate Administration/Corporate Officer, do hereby certify the foregoing to be a true and correct copy of Regional District of Kootenay Boundary Bylaw No. 1720 cited as "Regional District of Kootenay Boundary Procedure Bylaw No. 1720, 2019" as adopted by the Board of the Directors at a regular meeting held this day of , 2020.

Manager of Corporate Administration/Corporate Officer



**REGIONAL DISTRICT OF KOOTENAY BOUNDARY
BYLAW NO. 1724**

A Bylaw to amend Electoral Area 'C' Official Community Plan
Bylaw No.1250, 2004 of the Regional District of Kootenay Boundary

WHEREAS the Regional District of Kootenay Boundary may amend the provisions of its Official Community Plans pursuant to the provisions of the *Local Government Act*;

AND WHEREAS the Regional District of Kootenay Boundary Board of Directors intends to amend the Official Community Plan to re-designate two portions of the property legally described as Lot 5, Plan KAP2164, DL 750, SDYD from 'Natural Resource' to 'Rural' and from 'Residential' to 'Rural';

AND WHEREAS the Regional District of Kootenay Boundary has considered the requirements under Section 475 of the *Local Government Act* with respect to early and ongoing consultation;

NOW THEREFORE the Regional District of Kootenay Boundary Board of Directors, in open and public meeting assembled, enacts the following:

1. This Bylaw may be cited as Regional District of Kootenay Boundary Official Community Plan Amendment Bylaw No. 1724, 2020.
2. That Schedule B (Land Use Map) of the Electoral Area 'C' Official Community Plan Bylaw No. 1250, 2004 be amended to re-designate two portions of the following property from the current 'Natural Resource' to 'Rural' and one portion of the following property from the current 'Residential' to 'Rural':

Lot 5, Plan KAP2164, DL 750, SDYD as shown outlined in red on the attached Schedule X attached hereto and forming part of this bylaw.

READ A FIRST AND SECOND TIME this 30th day of January, 2020.

SECOND READING RESCINDED this 25th day of June, 2020.

READ A SECOND TIME AS AMENDED the 25th day of June, 2020

PUBLIC HEARING held on this ____ day of _____, 2020.

READ A THIRD TIME this ____ day of _____, 2020.

I, Theresa Lenardon, Manager of Corporate Administration hereby certify the foregoing to be a true and correct copy of Bylaw No. 1724, cited as "Regional District of Kootenay Boundary Official Community Plan Amendment Bylaw No. 1724, 2020" as read a third time by the Regional District of Kootenay Boundary Board of Directors this ____ day of _____, 2020.

Manager of Corporate Administration

RECONSIDERED AND FINALLY ADOPTED this ____ day of _____, 2020.

Manager of Corporate Administration

Chair

I, Theresa Lenardon, Manager of Corporate Administration of the Regional District of Kootenay Boundary, hereby certify that this is a true and correct copy of Bylaw No. 1724, cited as "Regional District of Kootenay Boundary Official Community Plan Amendment Bylaw No. 1724, 2020".

Manager of Corporate Administration

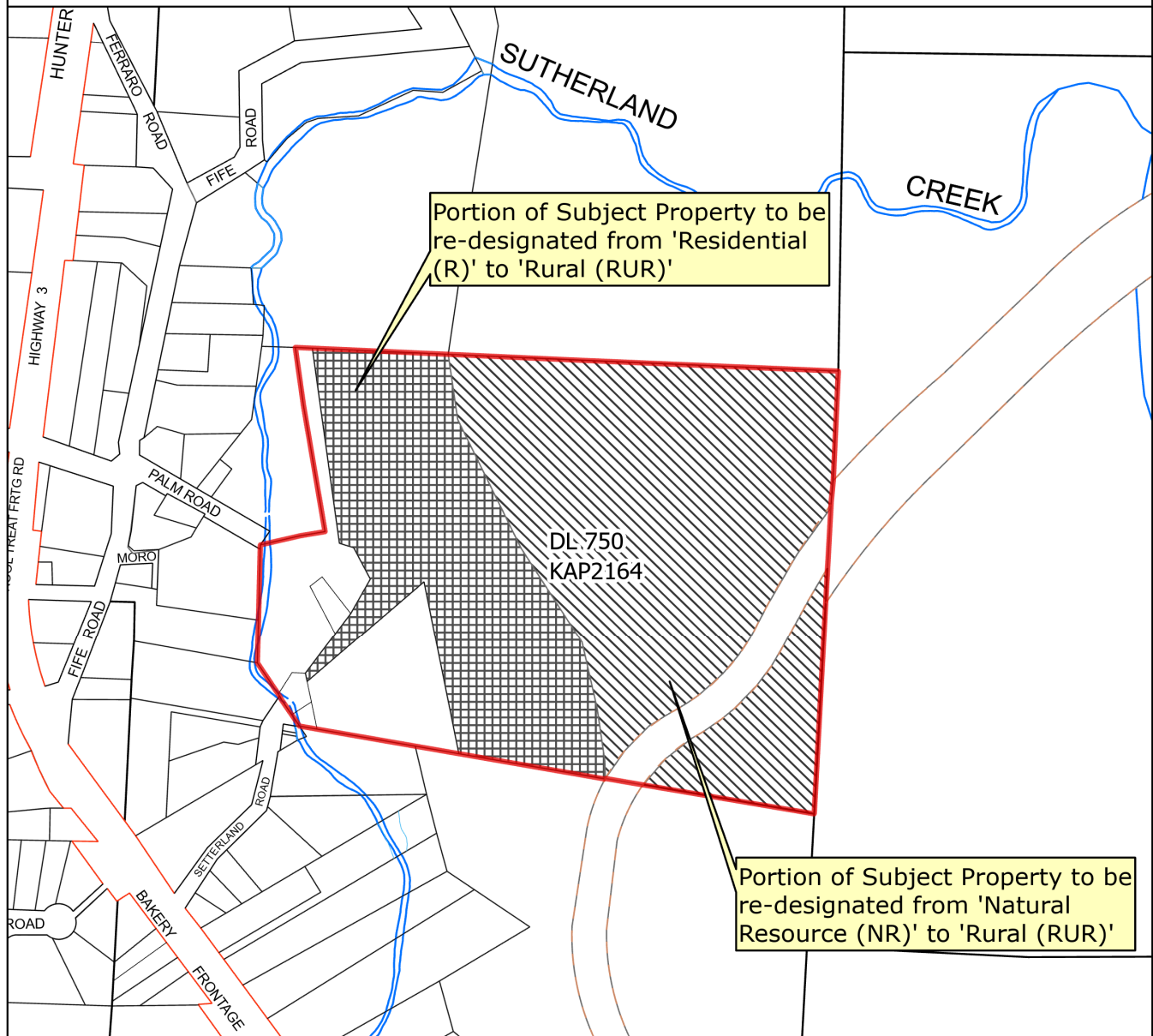
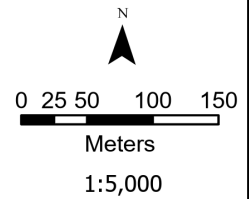


Regional District of
Kootenay Boundary

2020-06-12

Schedule X

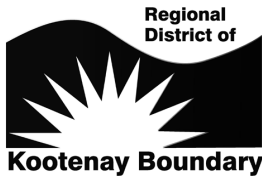
Lot 5,
Plan KAP2164,
DL 750, SDYD



I hereby certify this Schedule X to be a true and correct copy and that this Schedule X correctly outlines the property to be re-designated by "Regional District of Kootenay Boundary Bylaw No. 1724."

Manager of Corporate Administration

Date



Staff Report

RE:	OCP & Zoning Bylaw Amendment Application – Hicks		
Date:	June 25, 2019	File #:	C-750-04040.000
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

We received an application to amend the Official Community Plan and Zoning Bylaw in Electoral Area C/ Christina Lake to facilitate a subdivision of the subject property located at 1930 Settlerland Road, legally described as Lot 5, Plan KAP2164, DL 750, SDYD, owned by Barry and Lana Hicks.

Bylaw 1724 was drafted to amend the Official Community Plan and Bylaw 1726 was drafted to amend the Zoning Bylaw. These bylaws were presented to the Board on January 30, 2020 when they received first and second reading and staff were directed to schedule the public hearing.

During the preparation process to refer these bylaws to provincial agencies, First Nations, and neighbouring local governments, it was determined that the amending bylaws do not accurately depict the proposed changes. As such, staff have redrafted the amending bylaws and are presenting them again to the Board.

Recommendation

The recommendations regarding Bylaws 1724 and 1726 appear in Section 14 of the June 25 Board Agenda.



**REGIONAL DISTRICT OF KOOTENAY BOUNDARY
BYLAW NO. 1726**

A Bylaw to amend Electoral Area 'C' Zoning
Bylaw No.1300, 2007 of the Regional District of Kootenay Boundary

WHEREAS the Regional District of Kootenay Boundary may amend the provisions of its Zoning Bylaws pursuant to the provisions of the *Local Government Act*;

AND WHEREAS the Regional District of Kootenay Boundary Board of Directors intends to rezone three portions of the property legally described as Lot 5, Plan KAP2164, DL 750, SDYD from 'Manufactured Home Park 6' to 'Single Family Residential 1'; from 'Manufactured Home Park 6' to 'Rural 1'; and from 'Natural Resource 1' to 'Rural 1';

NOW THEREFORE the Regional District of Kootenay Boundary Board of Directors, in open and public meeting assembled, enacts the following:

1. This Bylaw may be cited as Regional District of Kootenay Boundary Zoning Bylaw Amendment No. 1726, 2020.
2. That Schedule 2 (South Map) of the Electoral Area 'C' Zoning Bylaw No. 1300, 2007 be amended to rezone two portions of the following property from the current 'Natural Resource 1' to 'Rural 1', one portion from the current 'Manufactured Home Park 6' to 'Rural 1'; and one portion from the current 'Manufactured Home Park 6' to 'Single Family Residential 1':
3. **Lot 5, Plan KAP2164, DL 750, SDYD** as shown outlined in red on the attached Schedule Z attached hereto and forming part of this bylaw.

READ A FIRST AND SECOND TIME this 30th day of January, 2020.

SECOND READING RESCINDED this 25th day of June, 2020.

READ A SECOND TIME AS AMENDED the 25th day of June, 2020

PUBLIC HEARING held on this ___ day of _____, 2020.

READ A THIRD TIME this ___ day of _____, 2020.

I, Theresa Lenardon, Manager of Corporate Administration hereby certify the foregoing to be a true and correct copy of Bylaw No. 1726, cited as "Regional District of Kootenay Boundary Zoning Amendment Bylaw No. 1726, 2020" as read a third time by the Regional District of Kootenay Boundary Board of Directors this ____ day of _____, 2020.

Manager of Corporate Administration

APPROVED BY THE MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
APPROVING OFFICER this ____ day of _____, 2020.

Approving Officer

RECONSIDERED AND FINALLY ADOPTED this ____ day of _____, 2020.

Manager of Corporate Administration

Chair

I, Theresa Lenardon, Manager of Corporate Administration of the Regional District of Kootenay Boundary, hereby certify that this is a true and correct copy of Bylaw No. 1726, cited as "Regional District of Kootenay Boundary Zoning Amendment Bylaw No. 1726, 2020".

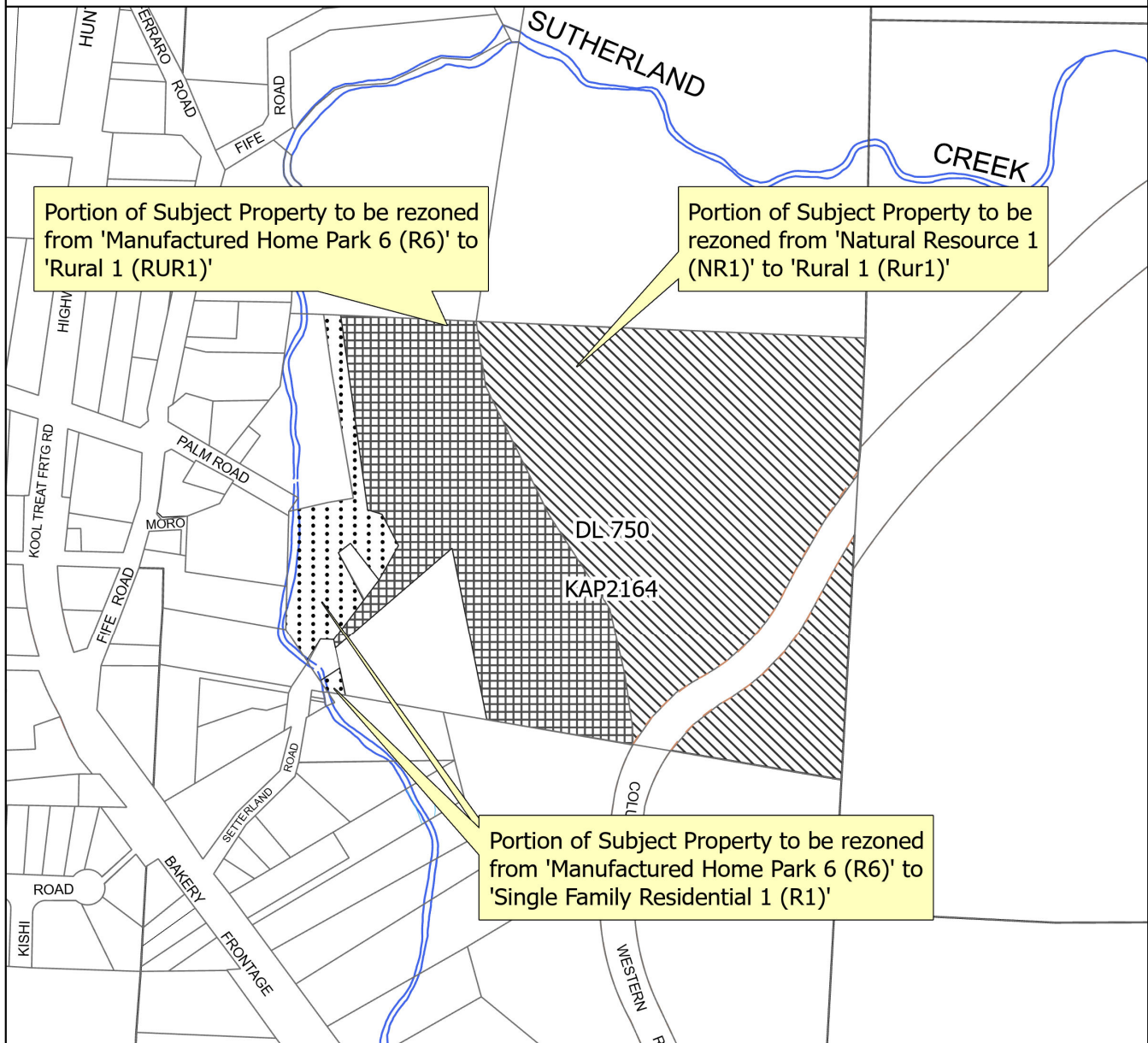
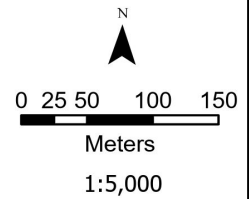
Manager of Corporate Administration



2020-06-18

Schedule Z

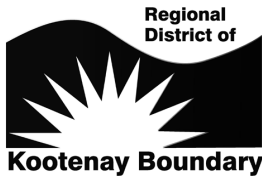
Lot 5,
Plan KAP2164,
DL 750, SDYD



I hereby certify this Schedule Z to be a true and correct and that this Schedule Z correctly outlines the property to be rezoned by "Regional district of Kootenay Boundary Bylaw No. 1726."

Manager of Corporate Administration

Date



Staff Report

RE:	OCP & Zoning Bylaw Amendment Application – Hicks		
Date:	June 25, 2019	File #:	C-750-04040.000
To:	Chair Langman and members of the Board of Directors		
From:	Liz Moore, Senior Planner		

Issue Introduction

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Bylaw 1724 was drafted to amend the Official Community Plan and Bylaw 1726 was drafted to amend the Zoning Bylaw. These bylaws were presented to the Board on January 30, 2020 when they received first and second reading and staff were directed to schedule the public hearing.

During the preparation process to refer these bylaws to provincial agencies, First Nations, and neighbouring local governments, it was determined that the amending bylaws do not accurately depict the proposed changes. As such, staff have redrafted the amending bylaws and are presenting them again to the Board.

Recommendation

The recommendations regarding Bylaws 1724 and 1726 appear in Section 14 of the June 25 Board Agenda.