

THE CORPORATION OF THE  
**CITY OF WHITE ROCK**  
CORPORATE REPORT



**DATE:** May 30, 2022

**TO:** Mayor and Council

**FROM:** Jim Gordon, P.Eng., Director, Engineering & Municipal Operations

**SUBJECT:** Vegetation Control on the Hump

**RECOMMENDATION**

THAT Council receive the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled "Vegetation Control on the Hump" providing information on the feasibility of bringing maintenance of the Hump greenery to pre-2019 levels and to provide direction to staff.

**EXECUTIVE SUMMARY**

The blackberries on the Hump are currently being trimmed in areas immediately south of the fence. However, the tree shoots growing from stumps south of the fence are not being trimmed. The tree shoots have grown to the extent that they block some resident's views and also the views of pedestrians and those seated on the benches at various viewpoints along the Hump.

In response to a delegation that appeared before Council at its regular meeting on February 22, 2022, Council requested that the feasibility of more extensive trimming, including the trimming of tree shoots be investigated.

This report discusses options for consideration related to maintenance of the vegetation growth on the Hump.

**PREVIOUS COUNCIL DIRECTION**

<b>Motion # &amp; Meeting Date</b>	<b>Motion Details</b>
2019-278 July 8, 2019	THAT Council directs staff to bring forward a corporate report that will outline what level of work can be done in regard to trimming / cutting along Marine Drive (maintaining vegetation on the Hump).  <u>Motion CARRIED</u>
2019-311 July 22, 2019	THAT Council  1. Receives for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled "Marine Drive "Hump" Vegetation Management Plan";

**INTRODUCTION/BACKGROUND**

	<p>2. Directs staff to maintain the vegetation of the blackberry bushes; however, exclude the trimming of the trees;</p> <p>3. Endorses the amended Marine Drive "Hump" Vegetation Management Plan as outlined in this corporate report;</p> <p style="text-align: right;"><u>Motion CARRIED</u></p>
2022-055 February 28, 2022	<p>THAT Council directs staff to report back on the feasibility of bringing maintenance of the hump greenery to pre-2019 levels including compliance to new policies in place as well as budget implications.</p> <p style="text-align: right;"><u>Motion CARRIED</u></p>

The blackberry bushes on the Hump are currently being trimmed in areas immediately south of the fence. Council requested that the feasibility of more extensive trimming, including the trimming of tree shoots be investigated.

A delegation appeared at the Regular Council meeting on July 8, 2019, requesting that the foliage along the Hump be trimmed. Council directed staff to bring forward a corporate report outlining the level of work that can be done in regard to trimming, cutting and maintaining the vegetation growth on the Hump (Appendix A).

Staff reported back to Council on July 22, 2019, with several recommendations for maintenance of the blackberry bushes and shoots growing from tree stumps (Appendix B). Council endorsed the vegetation management plan discussed in the report and directed that staff maintain the blackberry bushes but exclude the trimming of the trees (Appendix C).

Since 2019, staff have trimmed the blackberry bushes close to the fence but not the tree shoots growing from stumps. More extensive trimming of the blackberry bushes can be done, although this is limited where they are entangled with the tree shoots.

A delegation appeared at Council on February 28, 2022 advocating for trimming of vegetation on the Hump as per practices prior to 2019. Council directed staff to report back on the feasibility of bringing Hump greenery to pre-2019 levels (Appendix D).

## **DISCUSSION**

A maintenance plan proposing regular blackberry bushes trimming three times per year and trimming of the tree shoots every three years was discussed in 2019. It was suggested that this would allow the stumps to remain alive and yet the tree shoots would not grow to the extent that they would block views.

A review of this plan from a stump health perspective was conducted by the former Manager, Parks and is included in Appendix E. A selection from the review follows:

*A program of cutting back vegetation every three years will not have a negative effect on the health and vigor of this plant community. Woody plants will produce 1 m – 5 m of regrowth each year after having been cut back. Allowing 2-3 years of regrowth will allow plants to continually support a healthy root system.*

Appendix E also contains opinions from GeoWest Engineering, geotechnical engineers. A selection follows:

*The majority of the Hump is inclined at or near its angle of repose. The vegetative cover provides a vital role in maintaining its stability by way of root reinforcement and by controlling surface water and groundwater pore pressures. Deeper rooting tree species provide the greatest mechanical root reinforcement benefit, but taller growing trees can become a destabilizing windthrow hazard and would also block views from Marine Drive.*

Both of the recent professional opinions are consistent with the recommendations in the July 22, 2019 report.

The tree shoots have now grown to the extent that they cannot be easily trimmed using a tractor mounted flail mower. A project to trim the tree shoots and blackberry bushes for the first approximate 5-10 metres south of the fence could be done by a contractor using high angle slope safety equipment, chainsaws, chipper and traffic control at a cost estimated to be \$25K.

The project for more extensive trimming is feasible; however, there are challenges as outlined in the following sections of this report.

### **FINANCIAL IMPLICATIONS**

There is no provision in the Financial Plan for the \$25K expenditure. If Council wishes to proceed, the work to be carried out would need to be funded from contingency or by amending the Financial Plan.

### **LEGAL IMPLICATIONS**

There are no legal implications, but approval to enter onto the lands and carry out the work would need to be obtained from Burlington Northern Sante Fe Railway (BNSF).

### **COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS**

As tree trimming on the Hump may be controversial, advance communication of the project would be necessary.

### **INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS**

The Communications department and Engineering and Municipal Operations would need to work together on the timing of the work.

### **CLIMATE CHANGE IMPLICATIONS**

There may be some minor climate change implications with the removal of regrowing tree shoots. Also, some air and noise pollution exists with the use of chainsaws and vehicles involved with the work.

### **IMPLICATIONS FOR TREE PRESERVATION AND TREE CANOPY ENHANCEMENT**

There would be no reduction in tree canopy as proposed removal of vegetation included in the proposal for consideration is the removal of tree shoots growing from stumps.

### **ALIGNMENT WITH STRATEGIC PRIORITIES**

Enhanced trimming and maintenance of the blackberry bushes and tree shoots aligns with Council's strategic priority "Our Waterfront" with the objective "Attract visitors and residents to the Waterfront."

### **OPTIONS / RISKS / ALTERNATIVES**

It is feasible to carry out more extensive vegetation trimming on the Hump, including trimming of the tree shoots, in the first 5-10 metres south of the fence subject to the financial, environmental, social and other challenges outlined in this report. The benefits of improved views would accrue to nearby residents, pedestrians and tourists.

Another option available for Council's consideration is to direct staff to continue with trimming blackberry bushes immediately south of the fence only. However, this would not address the other vegetation that will continue to block the views of some residents, pedestrians and those seated on the benches on the sidewalk along the Hump. It will also result in an unkept look which is contrary to White Rock's image as a beautiful tourist friendly City and with increased growth of tree shoots, continue to reduce the views along the Hump.

### **CONCLUSION**

More extensive trimming of the growth south of the Hump is feasible subject to the allocation of financial resources of approximately \$25K. This would improve views for residents, pedestrians and visitors and result in a more groomed appearance of the area south of the Hump

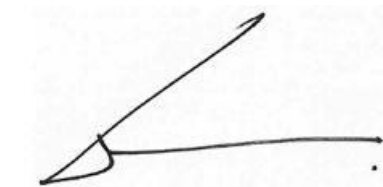
Respectfully submitted,



Jim Gordon, P.Eng.  
Director of Engineering & Municipal Operations

### **Comments from the Chief Administrative Officer**

I concur with the recommendation of this corporate report.



Guillermo Ferrero  
Chief Administrative Officer



- Appendix A: Excerpt 5.1.3 from Minutes of the Regular Council Meeting on July 8, 2019
- Appendix B: Corporate Report to Council dated July 22, 2019, titled “Marine Drive “Hump” Vegetation Management Plan”
- Appendix C: and Excerpt 6.2.8 from Minutes of Regular Council Meeting dated July 22, 2019
- Appendix D: Excerpt 5.1.a from Minutes of the Regular Council Meeting on February 28, 2022
- Appendix E: GeoWest Engineering Ltd. Memorandum dated April 20, 2022

results with respect to a proposed moderate density and more affordable housing development at 1453 Stayte Road.

**5.1.3**

**SHELLY MARE & KERRY WRAY: VEGETATION ON THE HUMP**

S. Mare & K. Wray, residents, appeared as a delegation in regard to vegetation on the hump.

They are looking for help in regard to having the foliage along the hump trimmed. Stating currently there is a danger as it has grown higher than the fence in some areas and noted they have pictures where people are seen climbing the fence in effort to see the view.

2019-278

**It was MOVED and SECONDED**

THAT Council directs staff to bring forward a corporate report that will outline what level of work can be done in regard to trimming / cutting along Marine Drive (maintaining vegetation on the hump).

**CARRIED**

**5.1.4**

**SUE MCINTOSH, SENIORS COME SHARE SOCIETY: OVERVIEW OF SERVICES IN WHITE ROCK**

S. McIntosh, Executive Director, Seniors Come Share Society, appeared as a delegation to provide an overview of services in White Rock.

**5.2**

**PETITIONS**

None

**6.**

**PRESENTATIONS AND CORPORATE REPORTS**

**6.1**

**PRESENTATIONS**

**6.1a**

**RYAN WILLIAMS, TWI SURVEYS: 2019 EMPLOYEE SURVEY RESULTS**

R. Williams, TWI Surveys, provided a presentation regarding the 2019 City of White Rock Employee Survey Results.

- It was requested that Council be given a hard copy of the presentation and the actual survey.

**6.1b**

**DR. SAAD JASIM, MANAGER OF UTILITIES: 2018 WATER ANNUAL REPORT**

Dr. Saad Jasim, Manager of Utilities, provided a presentation regarding the City of White Rock's 2018 Water Annual report.

## Appendix B

### THE CORPORATION OF THE CITY OF WHITE ROCK CORPORATE REPORT



**DATE:** July 22, 2019

**TO:** Mayor and Council

**FROM:** Rosaline Choy, P.Eng., MBA  
Acting Director, Engineering and Municipal Operations

**SUBJECT:** Marine Drive “Hump” Vegetation Management Plan

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#### RECOMMENDATIONS

THAT Council

1. Receive for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Marine Drive “Hump” Vegetation Management Plan”; and
  2. Endorse the Marine Drive “Hump” Vegetation Management Plan as outlined in this corporate report.
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#### INTRODUCTION

At the regular Council meeting on July 8, 2019, Council directed staff to prepare a maintenance plan for the vegetation on the Marine Drive “Hump” that preserves views, slope stability, and greenery. The maintenance plan shall include cost estimates, schedule, and BNSF requirements for working within BNSF’s property.

#### PAST PRACTICE

Past practice for Marine Drive “Hump” maintenance includes mowing the top of the Hump from the Marine Drive. The work was conducted from City property without staff or contractors venturing onto BNSF property. The frequency of the mowing was once per year. This year (2019) is the first year that clearance mowing has not been completed.

#### ANALYSIS

Staff reviewed the existing conditions and past practices. The view corridors enjoyed by residents and visitors are now blocked by Himalayan Blackberries and tree re-growth from the stumps (sucker growth). In previous years, the mid-summer mowing program maintained the view corridors.

A summary of the maintenance considerations are as follows:

- The brambles and suckers of the tree stumps along Marine Drive will continue to grow and obstruct views if not pruned.
- There will be a desire to cut back the vegetation if the brambles and suckers are allowed to grow to incredible heights and obstruct views.

- If suckers are allowed to grow to a large size before it is pruned, it will leave large scars that are not aesthetically pleasing.

#### Schedule

The Himalayan Blackberry is an invasive species that grows quickly compared to other plant species. It is recommended that blackberry maintenance should be completed three (3) times per year: once after the first flush of growth in the spring, once in the summer (late July), and once at the end of the season in October. Dead stumps will biodegrade; this creates a void and could undermine the slope overtime. The suckers from the tree stumps are necessary for keeping the stumps alive but will slowly block views. It is recommended these suckers are pruned once every three (3) to five (5) years. This will allow the stumps and their roots to stay alive but still not block the views. The following table summarizes the proposed type and frequency of maintenance work.

**Table 1 – Proposed Maintenance Plan**

Task	Frequency
Mowing of view corridors	Spring / Summer / Autumn
Pruning of new tree growth from stumps	Once every 3 years

This approach will provide a tidy appearance throughout the year, maintain the vegetation, allow for multiple viewing corridors, and maintain slope stability.

#### BNSF requirements to work on BNSF property are as follows:

- Work with machinery north of the Marine Drive fence is permitted;
- Work with manual labour south of the Marine Drive fence requires a signed form that indemnify BNSF and a site meeting with BNSF’s representative; and
- Work with manual labour within BNSF’s fenced track area requires permits and BNSF flag personnel

#### **BUDGET IMPLICATIONS**

Blackberry mowing is anticipated to cost \$2,600 per session. For 3 sessions, the estimated annual cost is \$7,800. The pruning and removal of stems from tree stumps require work to be performed on BNSF property; the anticipated cost is \$3,600. Table 2 summarizes the costs for Marine Drive “Hump” maintenance in 2019.

**Table 2 – 2019 Marine Drive “Hump” Maintenance Costs**

Task	Cost
Three mowing sessions of view corridors per year	\$7,800
Removal of tree growth (suckers)	\$3,600
<b>Total</b>	<b>\$11,400</b>

Although there are no funds specifically dedicated to the maintenance of the “Hump”, funds are available from the Contract Maintenance – Parks operating budget to complete this work.

**CONCLUSION**

The "Hump" is situated on the waterfront between East Beach and West Beach. This area is known for its viewing potential and would need regular maintenance in order to preserve views. At an annual cost of \$7,800 per year and \$3,600 every 3 years, the hump vegetation can be managed to support views, slope stability, and vegetation. Staff recommends Council support the maintenance plan as outlined in this corporate report.

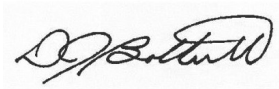
Respectfully submitted,



Rosaline Choy, P.Eng., MBA  
Acting Director, Engineering and Municipal Operations

**Comments from the Chief Administrative Officer:**

I concur with the recommendations of this corporate report.



Dan Bottrill  
Chief Administrative Officer

**6.2.7                    UPDATE ON CITY OWNED PROPERTY (15463 BUENA VISTA)**

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations “Update on City Owned Property (15463 Buena Vista)”.

Discussion ensued and the following information was provided in response to Council’s questions:

- The \$100K is allocated towards the demolition of the house, as well as basic grass seeding for the park
- The shrubs and trees will remain, and staff are looking into keeping the stone wall/seating area

2019-310

**It was MOVED and SECONDED**

THAT Council receives for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Update on City Own Property (15463 Buena Vista).”

**CARRIED**

**6.2.8                    MARINE DRIVE “HUMP” VEGETATION MANAGEMENT PLAN**

Corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations “Marine Drive “Hump” Vegetation Management Plan”.

It was noted that Burlington Northern Santa Fe (BNSF) are content for staff to maintain the city side of the vegetation, adding that permission needs to be obtained for any work on the BNSF side.

2019-311

**It was MOVED and SECONDED**

THAT Council

1. Receives for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled “Marine Drive “Hump” Vegetation Management Plan”;
2. Directs staff to maintain the vegetation of the blackberry bushes; however, exclude the trimming of the trees;
3. Endorses the amended Marine Drive “Hump” Vegetation Management Plan as outlined in this corporate report;

**CARRIED**

## Appendix D

parameters for brightness levels. A response from the Acting Director of Planning and Development Services is attached for information.

The Acting Director of Planning and Development Services read a response to the question provided by J. Arlington. The information will also be provided on the City's website.

On-Table comments were provided by P. Petrala supporting J. Arlington's concerns with the lighting features on the Foster Martin building.

**Motion Number: 2022-054** It was MOVED and SECONDED

**THAT Council receive for information the correspondence submitted for Question and Answer Period by February 28, 2022, including "On-Table" information provided with staff responses that are available at the time.**

**Motion CARRIED (6 to 0)**

### **4.1 CHAIRPERSON CALLS FOR SPEAKERS TO QUESTION AND ANSWER PERIOD**

No speakers came forward at the meeting to participate in Question and Answer Period.

## **5. DELEGATIONS AND PETITIONS**

### **5.1 DELEGATIONS**

#### **5.1.a KERRY WRAY AND SHELLEY MARE**

Shelley Mare and Kerry Wray attended as a delegation to advocate for the trimming of the hump, as in past City practices.

**Note:** There was further information provided On Table in regard to this item by the delegation.

The following discussion points were noted:

- Trimming on the slope would require permission from Burlington Northern Santa Fe (BNSF)
- Understand that trees and views are valued
- Don't want another clear cut; however trimming blackberries at the top is important

**Motion Number: 2022-055** It was MOVED and SECONDED

**That Council directs staff to report back on the feasibility of bringing maintenance of the hump greenery to pre-2019 levels including compliance to new policies in place as well as budget implications.**

**Motion CARRIED (6 to 0)**

## **5.2 PETITIONS**

None

## **6. PRESENTATIONS AND CORPORATE REPORTS**

### **6.1 PRESENTATIONS**

#### **6.1.a WHITE ROCK RCMP 2021 ANNUAL REPORT**

Staff Sergeant Kale Pauls, White Rock RCMP, provided a presentation regarding their 2021 Annual Report.

The following discussion point was noted:

- Opinion was asked on the impact that the One Lane Closure of Marine Drive in 2021 of Marine Drive (safety / noise) had. The Staff Sergeant noted there was not an instance he was aware of where response time was impacted.

#### **6.1.b UNITI - BEST PRACTICES IN THE DEVELOPMENT OF AFFORDABLE AND INCLUSIVE HOUSING**

Doug Tennant, Chief Executive Officer, Uniti, provided a presentation that outlined best practices in the development of affordable and inclusive housing and the need for such housing in White Rock and South Surrey.

### **6.2 CORPORATE REPORTS**

#### **6.2.a COVID-19 UPDATE (ON TABLE MEMO PROVIDED)**

The Fire Chief provided an On Table update regarding COVID-19.

It was confirmed that free rapid tests are available in White Rock for residents aged seventy and over.

#### **6.2.b TREE PROTECTION, CANOPY ENHANCEMENT AND MANAGEMENT ON CITY LANDS POLICY 611 - UPDATE**



## MEMORANDUM

Attention:	<b>Jim Gordon, P.Eng., City of White Rock</b>	Date:	April 20,2022
cc:		From:	Calum Buchan, P.Eng.
Project:	Marine Drive Hump Vegetation Management	File:	GA22-1085-00
		Sent Via:	email
Subject:	<b>Geotechnical Review of Vegetation Management Strategy</b>		

At the request of the City of White Rock (the City), GeoWest Engineering Ltd. provides herein our preliminary geotechnical comments with regard to vegetation management along the steep hillside that supports Marine Drive between Cypress Street and the White Rock Pier. This hillside is commonly referred to as the “Hump” and is predominantly located on BNSF Railway property. Aerial images taken of the Hump in late 2019 are provided below for reference.



Photo 1: Looking west across Hump to the White Rock Pier





Photo 2: Looking eastward from above top of Hump

It is understood that the City has an agreement with BNSF allowing them to enter the BNSF property to maintain the slope stability. The Hump has three metal bin wall structures constructed by the City on BNSF property that support Marine Drive, the largest of which was recently stabilized to provide enhanced resiliency against earthquake and natural hazards. GeoWest conducted the slope stability assessment, designed the repairs, and completed the engineering review of the slope remedial works. The author of this memorandum has also conducted previous geotechnical assessments of the Hump slope dating back to Circa 2009.

It is understood that the City is considering actively managing the vegetation growth on the Hump and have provided GeoWest with the attached *Character Analysis of Plant Community on Hump* document for our review from a geotechnical perspective. It is understood that cutting and mowing of vegetation is planned to maintain views from Marine Drive. The arborist that prepared the document opined that the cutting back of vegetation will not have a negative effect on the health of the vegetation.

The majority of the Hump is inclined at or near its angle of repose. The vegetative cover provides a vital role in maintaining its stability by way of root reinforcement and by controlling surface water and groundwater pore pressures. Deeper rooting tree species provide the greatest mechanical root reinforcement benefit, but taller growing trees can become a destabilizing windthrow hazard and would also block views from Marine Drive.

It is our considered opinion that vegetation management on the Hump by way of tree cutting will be beneficial for the slope stability, provided that appropriate native woody species well suited for the exposure and climate are established and maintained throughout the steep hillside area.

We trust that the information provided herein meets your immediate needs. Should you require further assistance, please contact the undersigned.

**GeoWest Engineering Ltd.**

Per: Calum Buchan, P.Eng., FEC  
Principal Geotechnical Engineer

**REVIEWED BY:**  
Michael Gutwein, P.Eng.  
Senior Geotechnical Engineer

Attachment: *Character Analysis of Plant Community on Hump*

## Character Analysis of Plant Community on Hump

The composition of the plant community on the hump includes an emergent canopy of mostly woody native pioneer species with an understory of invasive Himalayan blackberry. There are small fragmented occurrences of other native and invasive species that account for < 5% of the total plant community.

Individual species tend to be occurring in large monospecific groups that indicate site-specific soil moisture conditions. E.g. Bitter cherry growing high on the slope where it is drier and bigleaf maple growing lower on the slope where more moisture accumulates.

This plant community represents an early stage of ecological succession which is ultimately superseded by multiple stages of coniferous forest.

Primary Plant Species of Vegetation on Hump					
Species	Mature height	Growth rate from stump sprouts	Root system	Regenerates after basal pruning	Notes
<i>Prunus emarginata</i> , bitter cherry	<15m	<2m/season	Shallow with many lateral branches	Yes – at any stage of maturity	Indicator of moderately dry soil moisture
<i>Alnus rubra</i> , red alder	<40 m	<1m/season	Extensive fibrous root system	Yes – only on young trees	Indicator of high soil moisture
<i>Acer macrophyllum</i> , bigleaf maple	<30 m	<5m/season	Shallow but wide root system	Yes – at any stage of maturity	indicator of moderate soil moisture
<i>Abies grandis</i> , grand fir	<70 m	n/a	Relatively deep taproot with surface laterals	No	top dieback on single specimen – likely due to dry soil conditions
<i>Rubus armeniacus</i> , Himalayan blackberry	<3 m	<5m/season	Low branching density, roots up to 10 m long and 1 m deep	Yes – at any stage of maturity	Will out-compete most newly introduced plants.

## Mowing Vegetation on the Hump

All of the species in this plant community are adapted to regenerate after fire or grazing events and will regenerate vigorously if cut back to < 1m in height. A program of cutting back vegetation every three years will not have a negative effect on the health and vigor of this plant community. Woody plants will produce 1 m – 5 m of regrowth each year after having been cut back. Allowing 2-3 years of regrowth will allow plants to continually support a healthy root system.

Sources:

[silvics\\_mb.pdf \(gov.bc.ca\)](#)

[silvics\\_vb.pdf \(gov.bc.ca\)](#)

[https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics\\_dr.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf)

[Grand fir - Province of British Columbia \(gov.bc.ca\)](#)

[Himalayan Blackberry Factsheet 20190220.pdf \(bcinvasives.ca\)](#)



## General Composition of Plant Community – West Side of Hump

\*Areas not indicated with a colour code are Himalayan blackberry.



## General Composition of Plant Community – Top of Hump



### Sources:

[silvics\\_mb.pdf \(gov.bc.ca\)](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_mb.pdf)

[silvics\\_vb.pdf \(gov.bc.ca\)](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_vb.pdf)

[https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics\\_dr.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf)

[Grand fir - Province of British Columbia \(gov.bc.ca\)](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf)

[Himalayan Blackberry Factsheet 20190220.pdf \(bcinvasives.ca\)](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-species-selection/silvics_dr.pdf)