

## Gypsy Moth Open House Reminders

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From: Bains, Babita FLNR:EX <Babita.Bains@gov.bc.ca>  
To: Ebata, Tim FLNR:EX <Tim.Ebata@gov.bc.ca>  
Cc: Postlethwaite, Brent (CFIA/ACIA) <brent.postlethwaite@canada.ca>, Holden, David (CFIA/ACIA) <david.holden@canada.ca>, Gabriella Zilahi-Balogh (Gabriella.Zilahi-Balogh@inspection.gc.ca) <Gabriella.Zilahi-Balogh@inspection.gc.ca>, Armstrong, Holly (CFIA/ACIA) <holly.armstrong@canada.ca>, Hueppelsheuser, Tracy AGRI:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Darling, Lee (CFIA/ACIA) <lee.darling@canada.ca>, Humble, Leland (NRCan/RNCan) <leland.humble@canada.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Korban, Martine (CFIA/ACIA) <martine.korban@canada.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Nealis, Vince (NRCan/RNCan) <vince.nealis@canada.ca>, Derksen, Shannon (CFIA/ACIA) <shannon.derksen@canada.ca>, Van Hezewijk, Brian (NRCan/RNCan) <brian.vanhezewijk@canada.ca>, Lindsay, Rachel (CFIA/ACIA) <rachel.lindsay@canada.ca>, Cook, Melissa (CFIA/ACIA) <melissa.cook@canada.ca>, Zeglen, Stefan FLNR:EX <Stefan.Zeglen@gov.bc.ca>, Hartz, Thomas M FLNR:EX <Thomas.M.Hartz@gov.bc.ca>, Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>, Christianson, Dean D FLNR:EX <Dean.Christianson@gov.bc.ca>  
Sent: January 7, 2020 2:53:02 PM PST  
Attachments: 7283\_GypsyMothSpray\_MailerCard Surrey.pdf, 7283\_GypsyMothSpray\_MailerCard Castlegar.pdf, 7283\_GypsyMothSpray\_MailerCard Cowichan.pdf

This is a reminder that we will be holding the following gypsy moth information sessions this month:

- Surrey: Tuesday, January 21<sup>st</sup>, 4:30 pm – 8 pm at the Erma Stephenson Library
- Castlegar: Thursday, January 23<sup>rd</sup>, 4:30 pm – 8 pm at the Community Complex (Kootenay Room)
- Lake Cowichan: Tuesday, January 28<sup>th</sup>, 4:30 pm – 8 pm at the Lake Cowichan School Gymnasium

Please let us know if you are able to attend (if you haven't already). I have attached the postcards that have the addresses for the open houses.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Resource Practices Branch, MFLNRORD  
236-468-2295 | [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

# Gypsy Moths

are **invasive pests** that have been found in your area.

Copyright

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has prepared a plan to protect British Columbia's forests, parks and neighborhood trees from this devastating pest. Please join us to learn more about British Columbia's treatment plan.

**WHERE:** Erma Stephenson Elementary school library, 10929-160 St., Surrey

**WHEN:** Tuesday, Jan. 21, 2020. From 4:30 p.m - 8:00 p.m.

**WHO:** Ministry staff, along with members of the B.C. Gypsy Moth Technical Advisory Committee, representatives from the Ministry of Environment and Climate Change Strategy, the Ministry of Agriculture, Canadian Food Inspection Agency, Canadian Forest Service and other experts.



## **THE MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT WILL TREAT THIS AREA WITH A BIOLOGICAL INSECTICIDE.**

Trapping and monitoring results over the past several years show clear evidence of an established gypsy moth population in the planned treatment area: 241 hectares of residential and municipal park land close to Highway 1, near the Port Mann Bridge in North Surrey.

This is the same area that was aerial sprayed in 2019 and ground (hand) sprayed in 2017 and 2018. Trapping results indicate the aerial spray reduced the population however the spray area was not extensive enough to eradicate the building population.

The planned treatment will use aircraft to apply Btk, a biological insecticide which occurs naturally in soil and is commonly used in organic agriculture. Btk is effective at treating gypsy moth. It impacts only caterpillars that eat sprayed leaves, and has a proven safety record around humans. Livestock, pets, birds, fish, spiders, bees, ladybugs and amphibians are not impacted by Btk.

Specialists will be at the open house to answer your questions about the 2019 trapping season, the 2020 treatment area and to provide information on Btk.

### **LEARN MORE NOW**

Visit us online to learn more about the threat gypsy moths pose to British Columbia's forests, farms, orchards and trees, and government's treatment plan. You can also sign up at the open house or on our website to receive regular updates. Our website has a detailed map and associated trapping data as well.

[www.gov.bc.ca/gypsymoth](http://www.gov.bc.ca/gypsymoth)



**BRITISH  
COLUMBIA**

# Gypsy Moths

are **invasive pests** that have been found in your area.

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The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has prepared a plan to protect British Columbia's forests, parks and neighborhood trees from this devastating pest. Please join us to learn more about British Columbia's treatment plan.

**WHERE:** Castlegar and District Community Complex (Kootenay Room), 2102 – 6th Avenue. Castlegar, B.C.

**WHEN:** Thursday Jan. 23, 2020. From 4:30 p.m - 8:00 p.m.

**WHO:** Ministry staff, along with members of the B.C. Gypsy Moth Technical Advisory Committee, representatives from the Ministry of Environment and Climate Change Strategy, the Ministry of Agriculture, Canadian Food Inspection Agency, Canadian Forest Service and other experts.

## **THE MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT WILL TREAT THIS AREA WITH A BIOLOGICAL INSECTICIDE.**

The 2019 gypsy moth trapping data revealed that a population of moths in Raspberry has persisted for at least two years and appears to be growing. The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has determined it necessary to treat 167 hectares to eradicate gypsy moth.

The planned treatment will use aircraft to apply Btk, a biological insecticide which occurs naturally in soil and is commonly used in organic agriculture. Btk is effective at treating gypsy moth. It impacts only caterpillars that eat sprayed leaves, and has a proven safety record around humans. Livestock, pets, birds, fish, spiders, bees, ladybugs and amphibians are not impacted by Btk.

Specialists will be at the open house to answer your questions about the 2019 trapping season, the 2020 treatment area and to provide information on Btk.

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[www.gov.bc.ca/gypsymoth](http://www.gov.bc.ca/gypsymoth)



**BRITISH  
COLUMBIA**

# Gypsy Moths

are **invasive pests** that have been found in your area.

Copyright

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has prepared a plan to protect Vancouver Island's forests, parks and neighborhood trees from this devastating pest. Please join us to learn more about British Columbia's treatment plan.

**WHERE:** Lake Cowichan School Gymnasium,  
190 S Shore Road, Lake Cowichan

**WHEN:** Tuesday, Jan. 28, 2020. From 4:30 p.m - 8:00 p.m.

**WHO:** Ministry staff, along with members of the B.C. Gypsy Moth Technical Advisory Committee, representatives from the Ministry of Environment and Climate Change Strategy, the Ministry of Agriculture, Canadian Food Inspection Agency, Canadian Forest Service and other experts.

## **THE MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT WILL TREAT THIS AREA WITH A BIOLOGICAL INSECTICIDE.**

The 2019 gypsy moth trapping data revealed that a population of moths in Cowichan Lake has persisted for at least two years and appears to be growing. The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has determined it necessary to treat 231 hectares of residential and municipal land to eradicate gypsy moth.

The planned treatment will use aircraft to apply Btk, a biological insecticide which occurs naturally in soil and is commonly used in organic agriculture. Btk is effective at treating gypsy moth. It impacts only caterpillars that eat sprayed leaves, and has a proven safety record around humans. Livestock, pets, birds, fish, spiders, bees, ladybugs and amphibians are not impacted by Btk.

Specialists will be at the open house to answer your questions about the 2019 trapping season, the 2020 treatment area and to provide information on Btk.

### **LEARN MORE NOW**

Visit us online to learn more about the threat gypsy moths pose to British Columbia's forests, farms, orchards and trees, and government's treatment plan. You can also sign up at the open house or on our website to receive regular updates. Our website has a detailed map and associated trapping data as well.

[www.gov.bc.ca/gypsymoth](http://www.gov.bc.ca/gypsymoth)



**BRITISH  
COLUMBIA**

## Tim in the news!

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From: Chadburn, Crystal FLNR:EX <Crystal.Chadburn@gov.bc.ca>  
To: Carder, Judith FLNR:EX <Judith.Carder@gov.bc.ca>  
Cc: Beck, Martina ENV:EX <Martina.Beck@gov.bc.ca>, Bindra, Rena MAH:EX <Rena.Bindra@gov.bc.ca>, Bond, Jeanine ENV:EX <Jeanine.Bond@gov.bc.ca>, Gielens, Grahame TRAN:EX <Grahame.Gielens@gov.bc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Hanke, Gavin RBCM:EX <ghanke@royalbcmuseum.bc.ca>, Hueppelsheuser, Tracy AGRI:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Meili, Sonia EMPR:EX <Sonia.Meili@gov.bc.ca>, Miller, Val FLNR:EX <Val.Miller@gov.bc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Vert, Patrick FLNR:EX <Patrick.M.Vert@gov.bc.ca>, Canuel, Aaron ENV:EX <Aaron.Canuel@gov.bc.ca>, Ebata, Tim FLNR:EX <Tim.Ebata@gov.bc.ca>, Khadka, Mahesh OGC:EX <Mahesh.Khadka@bcogc.ca>, Morgan, Jeff A FLNR:EX <Jeff.Morgan@gov.bc.ca>, Munro, Brent D EDUC:EX <Brent.D.Munro@gov.bc.ca>, Ralph, Jeff IRR:EX <Jeff.Ralph@gov.bc.ca>, Sapsford, Kenneth AGRI:EX <Kenneth.Sapsford@gov.bc.ca>, Wheeler, Erica J RBCM:EX <EWheeler@royalbcmuseum.bc.ca>  
Sent: February 18, 2020 9:05:44 AM PST  
Attachments: image001.png  
<https://www.cowichanvalleycitizen.com/news/no-resistance-to-aerial-gypsy-moth-spraying-at-lake-cowichan/>

Great job Tim!

Crystal Chadburn, PAg  
Senior Invasive Plant Specialist  
Ministry of Forests, Lands, Natural Resource Operations and Rural Development  
250-701-3821

# Gypsy Moth eradication update

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From: Ebata, Tim FLNR:EX <Tim.Ebata@gov.bc.ca>  
To: Bains, Babita FLNR:EX <Babita.Bains@gov.bc.ca>, Brent Postlewaite  
(postlethwaiteb@inspection.gc.ca) <postlethwaiteb@inspection.gc.ca>, David Holden  
<holdend@inspection.gc.ca>, Holly Armstrong (armstrongh@Inspection.GC.CA)  
<armstrongh@Inspection.GC.CA>, Hueppelsheuser, Tracy AGRI:EX  
<Tracy.Hueppelsheuser@gov.bc.ca>, Humble, Leland (NRCAN/RNCAN)  
<leland.humble@canada.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Lee Darling  
<lee.darling@canada.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>,  
rachel.lindsay@canada.ca, Shannon Derksen <Shannon.Derksen@inspection.gc.ca>, VAN  
HEZEWIJK, Brian <Brian.VANHEZEWIJK@NRCAN-RNCAN.gc.ca>, Vince Nealis  
s.22  
Sent: May 22, 2020 11:52:21 AM PDT

Just thought it would be good to update the committee on this spring's aerial spray program. We are now about half way there with two rounds in Surrey completed, one round in Cowichan done (sort of) and one round in Castlegar finished. Complaints from Surrey and Cowichan have been light with most issues relating to the early morning wake up call. Castlegar was a different story.<sup>s.15; s.16</sup>  
s.15; s.16

s.15

s.15 Hopefully, no incidents will occur during our next round of treatments scheduled tentatively for Monday morning. The last treatment for Surrey is planned for the 27<sup>th</sup> and the final rounds in Cowichan and Castlegar will be in the first week of June. Cowichan has been plagued by bad weather, low cloud and wind issue that have postponed or cancelled several planned treatment mornings – some at the very last minute. Due to the Covid-19 restrictions on ferry sailings, it was decided to base out of Boundary Bay rather than Nanaimo which adds 12 minutes of flying time to each trip to and from the site thus Cowichan requires two mornings to complete.

This spring's weather has been very unsettled and is confounding our efforts to plan these applications. Hopefully the remaining treatments go smoothly.

I will provide an update upon completion of the program.

Wish us luck!

Tim Ebata  
Forest Health Officer  
Resource Practices Branch, BCMFLNRO&RD  
NEW ADDRESS: 545 Superior Street, Victoria, BC V8V 1T7

(778) 974 5663

Visit our web site at: <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health>

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## Courtenay Spray Boundary - for review

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From: Ebata, Tim FLNR:EX <Tim.Ebata@gov.bc.ca>  
To: Bains, Babita FLNR:EX <Babita.Bains@gov.bc.ca>, Brent Postlewaite (postlethwaiteb@inspection.gc.ca) <postlethwaiteb@inspection.gc.ca>, Cook, Melissa (CFIA/ACIA) <melissa.cook@canada.ca>, David Holden <holdend@inspection.gc.ca>, Goudie, Elaine (CFIA/ACIA) <elaine.goudie@canada.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Hueppelsheuser, Tracy AGRI:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Lee Darling <lee.darling@canada.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Shannon Derksen <Shannon.Derksen@inspection.gc.ca>, VAN HEZEWIJK, Brian <Brian.VANHEZEWIJK@NRCan-RNCan.gc.ca>  
Sent: November 2, 2020 3:25:26 PM PST

Following our BC GM TAC meeting on Oct 22<sup>nd</sup>, Babita, Dave Holden, Brian Van Hezewijk and I discussed the treatment options we had based on the available trapping data to propose a 185 hectare spray block. This decision is based on a slight deviation from the current treatment boundary setting protocol. It accounts for the recent history of the positive finds (with 2019 being an anomaly) and the chronic nature of the repeated finds in the immediate vicinity of the block and also host type. Fortunately, much of the treatment area is non-residential but the area encompasses the 2018 block. Our small team determined it would be prudent to go bigger as we suspect the moth population is centred in the area west of the highway where there were few traps placed this year but one positive in 2018. We contemplated just doing a very high density trap grid centred around the two positive traps but the team believes there is sufficient evidence to treat it aerielly again.

Please have a look at this proposed treatment boundary and get back to me and Babita as soon possible with any comments or questions.

Cheers

Tim Ebata  
Forest Health Officer  
Resource Practices Branch, BCMFLNRO&RD  
NEW ADDRESS: 545 Superior Street, Victoria, BC V8V 1T7

(778) 974 5663

Visit our web site at: <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health>

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## Pesticide Use Permit Referral

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From: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
To: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Chadburn, Crystal FLNR:EX <Crystal.Chadburn@gov.bc.ca>, Beck, Martina ENV:EX <Martina.Beck@gov.bc.ca>, Sapsford, Kenneth AGRI:EX <Kenneth.Sapsford@gov.bc.ca>, Lambert, Tim HLTH:EX <Tim.Lambert@gov.bc.ca>, judy.hartman@canada.ca, rory.beise@viha.ca  
Sent: January 15, 2021 4:07:15 PM PST  
Attachments: IPM-CON-01 - IPMC Referral letter.docx, 2021 Application 738-0032.pdf

Please find attached a referral for a Pesticide Use Permit in the Courtenay Area.

*Scott Bennett, R.P.F.  
Sr. Pesticide Management Officer  
BC Ministry of Environment and Climate Change Strategy  
(236) 468-2250*



VIA E-MAIL

Jan 15, 2021

File: 738-0032-21-24

**Integrated Pest Management Committee:**

Christa Zacharias-Homer (IPMC Chair, IPM ENV, [Christa.ZachariasHomer@gov.bc.ca](mailto:Christa.ZachariasHomer@gov.bc.ca))  
Jon Mullan (IPMC Secretary, IPM ENV, [Jonathan.Mullan@gov.bc.ca](mailto:Jonathan.Mullan@gov.bc.ca))  
Beck, Martina ([Martina.Beck@gov.bc.ca](mailto:Martina.Beck@gov.bc.ca))  
Crystal Chadburn (FLNROD, [Crystal.Chadburn@gov.bc.ca](mailto:Crystal.Chadburn@gov.bc.ca))  
Kenneth Sapsford (Pesticide Specialist, AGRI, [Kenneth.Sapsford@gov.bc.ca](mailto:Kenneth.Sapsford@gov.bc.ca))  
Tim Lambert (HLTH, [Tim.Lambert@gov.bc.ca](mailto:Tim.Lambert@gov.bc.ca))  
Judy Hartman (PMRA, [judy.hartman@canada.ca](mailto:judy.hartman@canada.ca))

**Re: Application for a Pesticide Use Permit under the *Integrated Pest Management Act***

This letter is in regard to a Pesticide Use Permit (PUP) Application submitted by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The purpose of the proposed treatment is for the control of Gypsy Moth in the Courtenay area.

The attached copy of the application and supporting documentation have been provided for your review, to provide technical information on the proposed pesticide use. This referral is being sent to you as you are either a current member of the Integrated Pest Management (IPM) Committee under the *IPM Act*, or you have been identified as an additional referee for this purpose. Please refer this communication to other staff in your agency if they would be better able to address the subject, and please forward me their contact information if that is the case.

**We respectfully request that your agency responds in writing by the following date:**

**PUP Application No.**  
738-0032-21-24

**Date Comments Due**  
Feb 15, 2021

Any comments or concerns raised in your response will be taken into consideration in the adjudication of the permit application. Finally, any requests for additional information or clarification you make may be forwarded on to the applicant.

If you have any questions regarding this application, or require an extension to the comment period, please contact me at [scott.bennett@gov.bc.ca](mailto:scott.bennett@gov.bc.ca)

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Ministry of Environment and  
Climate Change Strategy

Integrated Pest Management  
Regional Operations Branch  
Environmental Protection Division

Mailing Address:  
200 - 10470 152nd Street  
Surrey BC V3R 0Y3

Telephone:  
Facsimile: 604 930-7119  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)

IPM Committee and referees  
Date:

File:

Sincerely,

Scott Bennett, R.P.F.  
Sr. IPM Officer  
Ministry of Environment & Climate Change Strategy

cc: Rory Beise, Vancouver Island Health, [rory.beise@viha.ca](mailto:rory.beise@viha.ca)

Attachment: Permit Application



Ministry of Environment and Climate Change Strategy

# Ministry of Environment and Climate Change Strategy

## Pesticide Use Permit Application

Commented [AGEE1]: Received Dec. 14/2020  
Payment log # 2479 – Paid on M/C

This application is submitted under the *Integrated Pest Management Act* to obtain a permit for the use of pesticides as prescribed under the Integrated Pest Management Regulation (IPMR) Section 18. Following the submission of this application, the applicant will be provided an application number by ministry staff and instructed to consult the public in accordance with IPMR Section 60. The applicant must submit evidence of consultation and a statement of action proposed in response.

Permit Application Number: 738-0032-21/24

Commented [AGEE2]: PUP # 738-0032-21/24

Pesticide use may not proceed unless a permit has been issued.

A fee of \$1,000 must be submitted with this application. The fee is non-refundable once processing has occurred.

**PLEASE PRINT CLEARLY. PROVIDE ADDITIONAL SHEETS IF REQUIRED.**

### 1. Full Legal Name of Applicant

This name must be a Limited or Incorporated Company registered with the BC Registrar of Companies. Please provide the name exactly as registered along with the incorporation registration number. **If the applicant is not a Limited or Incorporated Company use full personal name.**

British Columbia Ministry of Forests, Lands, Natural Resource Operations & Rural Development			
Applicant's Name		B.C. Incorporation Registration #	
Babita Bains			
Business Operating Name, if different from above (i.e. Doing Business As )		Name of the Contact Person for the Permit	
200 – 10470 152 <sup>nd</sup> Street	Surrey	V3R 0Y3	V3R 0Y3
Suite # Street Name and Number	City	Province	Postal Code
Babita.Bains@gov.bc.ca	236-468-2295	250-812-5752	
E-mail Address	Area Code + Telephone #	Area Code + Cell Phone #	

### 2. Name of the Owner or Manager of the Treatment Location

Various: includes Crown, Private and Municipal properties

### 3. Purpose of Proposed Pesticide Use

Eradication of a small isolated populations of European gypsy moth, *Lymantria dispar*, (North American strain)

### 4. Proposed Start and End Date of Pesticide Use

April 15, 2021	2021	04	15	June 30, 2024	2024	06	30
Commencement Date	Yr.	Mo.	Day	Completion Date	Yr.	Mo.	Day

### 5. Description of the Geographic Area to be covered by the Permit

Describe the location of the proposed treatment area:

187 ha of agricultural, municipal and private land north of Courtenay (see attached map). The treatment area extends just north of Rennison and Parke Roads (northern boundary) and East near Victoria Road (eastern boundary) and South to Wentworth Road /Vanier Drive (southern boundary), and ~100m West of Topland Road (western boundary).

For MOE IPM Office Use Only			
Date received:		Date permit mailed:	
Payment	OK ( )	Not Attached ( )	Incomplete ( ) or Incorrect ( )
Log No.:	Permit Expiry Date:	Permit No.:	
Application Processed by:	Referral to BCPC ( ) Regions ( ) ( ) ( )	Region(s):	

PERMIT APP

## 6. Type of Pesticide Use Requiring a Permit

Please check the category below that corresponds with your intended pesticide use. Note: the category must be for a pesticide or pesticide use as prescribed under the Integrated Pest Management Regulation Section 18.

- a)  Permit-restricted pesticide  
b)  Aerial application of a pesticide  
c)  Use of a pesticide in or on a body of water  
d)  Use of a pesticide on public land not prescribed as requiring a licence or confirmation  
e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of IPMR

If the prescribed use for which a permit is required falls under e) above, provide details of the regulated standard that the permit applicant considers impractical to meet and why. Propose alternative terms and conditions that in the opinion of the applicant will not cause unreasonable adverse effects.

## 7. Pesticide Information

a. Active Ingredient (common name)	b. Pesticide Trade Name	c. P.C.P. No.	d. Application Rate	e. Treatment Area (ha)
<i>Bacillus thuringiensis</i> sub species <i>kurstaki</i> , (Btk)	Foray® 48B	24977	4.0 L/ha per application (50 BIU / ha / application)	Courtenay: 187 ha (2,992 L of Foray 48B to cover four treatments)

## 8. Application Method

The proposed method to eradicate the establishing gypsy moth population in a mixed residential and agricultural area north of Courtenay is through the aerial application of the biological insecticide Foray 48B (active ingredient *Bacillus thuringiensis* var *kurstaki* (Btk)) in the spring of 2021. The only feasible option for aerial treatment is through the use of a twin engine aircraft with Low Flight Exemption from Transport Canada. The aircraft applying the Foray 48B will have the appropriate equipment (nozzles and booms), navigation equipment (AgNav or equivalent), application equipment will have flow control to maintain the application rate of 4 L/hectare output with airspeed, and all crew members will have Pesticide Application Certification. Over the single treatment block a total of 748 L of Foray 48B will be applied during each treatment. Three treatments are planned (typically 7 – 10 days apart) however a fourth treatment could be required due to unforeseen circumstances (e.g., adverse weather immediately following application). Each treatment will commence at first daylight (between 5:00 and 6:00 am) and will be completed by 8:00 am. Treatments will occur between April 15, 2021 and June 30, 2021. Treatment dates are determined by the BioSim model which monitors the development of gypsy moth larvae. Anticipated treatment dates will be provided on a weekly basis and residents will be notified of precise dates through automated email updates or by monitoring the Gypsy Moth website and phone line.

## 9. Signature

The undersigned declares that the use of pesticides under the authority of this permit will comply with the *Integrated Pest Management Act and Regulation*.

Print Name: Babita Bains

Position Title: Provincial Forest Entomologist

Signature: *B Bains*

Date: December 4, 2020

## Payment Form

For MOE IPM Office Use Only

Log Number:

Amount of Payment Submitted (\$1,000 is required): .00

### Form of Payment

The Ministry of Environment and Climate Change Strategy now accepts VISA or MASTERCARD as well as cheque or money order.

Please indicate how you would like to pay:

Cheque  Money Order  Credit Card (Please provide credit card information in the area below)

### Cheque or Money Order Payment Option

For payment by Cheque or money order please make payable to **Minister of Finance** and mail to the address below.

Name as it appears on cheque or money order: \_\_\_\_\_

### Credit Card Payment Option

*Do not complete this section if you are paying by cheque or money order.*

Please bill my VISA  MASTER CARD

Name as it appears on Credit Card: Please contact Christine Lechelt for payment: 778-974-5592 \_\_\_\_\_

Name of applicant if different than name on Card: \_\_\_\_\_

Contact telephone number for Card holder: \_\_\_\_\_

Credit Card number: \_\_\_\_\_

Credit Card Expiry Date: \_\_\_\_\_

Signature: \_\_\_\_\_

*Note: Credit card information provided on this form will not be retained. Upon authorization of payment request this page will be destroyed.*

### Mailing and Contact Information

Please send this Permit Application, including this payment form, along with a cheque, money order or credit card payment.

#### MAILING ADDRESS

IPM PROCESSING  
MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY  
PO BOX 9377 STN PROV GOVT  
VICTORIA, BC V8W 9M1

#### COURIER ADDRESS

IPM PROCESSING  
MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY  
525 SUPERIOR STREET, VICTORIA, BC V8V 1T7

#### FAX NUMBER

(250) 356-0299  
For use with credit card option

#### GENERAL INFORMATION NUMBER

For information phone the Ministry receptionist at (250) 387-3205. Indicate the subject of your enquiry and you will be promptly directed to the appropriate staff member.

**Please discuss timelines for the review of this permit application with  
Ministry staff.**



Clearly mark the location of sites where pesticide use is intended.





## Notes from PPAC

---

From: Hall, Lauren ENV:EX  
To: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Au, Robert ENV:EX <Robert.Au@gov.bc.ca>  
Sent: February 25, 2021 4:51:13 PM PST  
Hi Jon and Rob,

I thought you might be interested in some of the notes I took from the PPAC meeting this morning. I highlighted a few particularly interesting points.

Lauren

- Staffing changes
  - FLNR
    - Dr. Celia Boone is the new regional research forest entomologist (formerly provincial entomologist for Nova Scotia!)
      - s.22
- Technical reports
  - Gypsy moth
    - Less catches overall but more locations
      - Lots more trapping this year due to more locations (CFIA funds trapping)
    - All spring aerial trts (3) were successful – no moths found within spray block
    - One site in Courtenay this spring for aerial spray – aiming for April/May
    - 2022 may be a busy treatment year – many potential high profile areas
    - Gypsy moth program is “flagship of cooperation between agencies”
    - [www.gov.bc.ca/gypsymoth](http://www.gov.bc.ca/gypsymoth)
    - CFS recent report– produced economic analysis of program: at least 3 to 1 benefit!  
<https://cfs.nrcan.gc.ca/publications?id=39964>
  - Japanese beetle
    - No changes to regulated area in 2021
    - 214 beetles found in 39 positive traps – 82% reduction compared to 2019!
      - And was already 86% drop from 2018 to 2019 – treatment is working
    - No new hot spots outside of False Creek area – believe movement controls and communication are working
    - 2021 – trapping planned on sunshine coast and up sea to sky to Squamish
    - In 2020, most beetles were caught in canopy traps rather than ground traps (sunnier?)
    - Treatments:
      - 1 application Acelepryn application/yr – soil drench (turf)
      - 4 trts foliar spray of Btg (every 7-10 days during peak flight)
    - Landscaping companies (2) – public space and some private lands
      - New app to track properties that were treated, not treated or didn't need trt
      - Almost 100% support from landowners and strata managers to treat
      - 48 ha public land and 10 ha of private land were treated in 2020
    - Eradication is declared in areas when there is no catches for 2 consecutive years
  - BMSB – tree fruits, forestry
    - Fumigation required for goods heading to Australia
    - BMSB seem to have “immobile” period in the winter; may propose to Aus that fumigation req't is seasonal?
- Jay Schlosser – Urban Forestry Foreman – City of Kelowna: Purple Stain Fungi
  - Associated with bore damage in ash trees from ash/lilac borer (not EAB)
  - Still trying to ID purple stain (fungi??)
- Strategies to mitigate risk to western provinces from increasing eastern gypsy moth pop'ns
  - ON: increase from 47k in 2019 to 586k ha in 2020
    - Known cyclical pest
- Grape phylloxera – first detection on Vancouver Island Fall 2020
  - Best way managed in the Okanagan is planting resistant root stock

**Lauren Hall, M.Sc., P.Ag.**

IPM Large Industry Specialist

BC Ministry of Environment & Climate Change Strategy

Integrated Pest Management Program

Headquarters / Victoria

(778) 698-9277

[Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca)

## Updates from FPT meeting today

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From: Hall, Lauren ENV:EX  
To: Zacharias-Homer, Christa ENV:EX <Christa.ZachariasHomer@gov.bc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Au, Robert ENV:EX <Robert.Au@gov.bc.ca>  
Sent: May 5, 2021 4:34:48 PM PDT

### Update from PMRA:

- Federal budget released April 19
  - Nothing for PMRA
  - Some funding for chemicals management plan (maintain current levels for 3 years)
  - Some funding for 2 yrs for new Canada Water Agency (to finalize scope/mandate)
    - FPT Chair will be requesting a presentation on Canada Water Agency for upcoming FPT meeting
    - Agenda item for water monitoring also part of the upcoming FPT annual meeting

### Manitoba

- Call out: jurisdictional scan for cosmetic pesticides
  - Note – comment that unless urgent, preference for jurisdictional scans is to be coordinated through the FPT Secretariat
- Working on policy for online sales – interest in offline discussions to harmonize requirements w/ other provinces

### ON

- Issues with cert/training for farmers – especially as farming season approaching and need for recertification
- Aerial spraying for gypsy moth – MOE does not approve spray programs for municipalities, but does approve notifications to the public for spraying
  - Have recently observed a significant increase in municipalities addressing gypsy moth

### Quebec

- City of Laval is the “first” Quebec municipality to ban use of glyphosate [unclear how different from cosmetic pesticide bylaws in QC?]
  - <https://globalnews.ca/news/7757887/laval-glyphosate-pesticides-ban/>
- Mosquito/biting fly jurisdictional scan sent out – public concern with Bti use and impact on invertebrates

### NB

- Legislative committee looking at herbicide use in province especially glyphosate
- About to issue a permit for rotenone use in a lake to eradicate small mouth bass (last application was in 2001)
  - Request: any recent projects using rotenone – interested in seeing permit conditions from other provinces

### NS

- Made the move to online exams in March

### PEI

- Trying to catch up on exams; online exams (using Ontario’s online cert for agricultural applicators and moving towards that for PEI)
- Company out of Ontario – BioNorth solutions – microbial remediation project approval. (contaminated sites use? Breaking down oils or pesticides too?)
  - Doesn’t really fall within PMRA’s mandate unless looking to kill something

### Pesticide Compliance program

- Ongoing discussions with PEI, ON, QC – will be having conversations with all provinces [unclear if this is similar to the MoU we already have?]
- Vegetative filter strips – finalizing compliance approach (promotion of relatively new risk mitigation measure; required or recommended on labels; new this year – verification as well)
- Inspections: on site inspections are on hold, hoping to resume this summer
- C&E annual report from last fiscal released; list of compliance promotion fact sheets

### Monarchs/BTK – information sharing (Yadvinder Bhuller)

- Media interest in BTK sprays; public inquiries

- Health Canada has committed to taking this into account for the next re-evaluation of BTK (2024)
- Request: if citing Health Canada on provincial websites, please cite actual study/publication/document

FPT Annual meeting

- Proposed dates: June 9-10 OR June 16-17

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BC Ministry of Environment & Climate Change Strategy

Integrated Pest Management Program

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## Pesticide Use Permit Application under the *Integrated Pest Management Act*

FORM REFERENCE CODE: EPD-IPM-10v2

### INSTRUCTIONS:

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

The permitting process consists of several steps that require the submission of an application form, map and fee, followed by meetings with ministry staff to receive guidance on the consultation process and required documentation. If you have questions, you are encouraged to contact ministry staff by email at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

### HOW TO SUBMIT:

Please submit this form and maps via email to [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) with the subject line "Pesticide Use Permit Application". If large files prevent email submission, please use the ministry's File Transfer Service at <http://www.env.gov.bc.ca/csd/imb/soft/soft.shtml>.

There is an application fee of \$1000 that is due upon submission of this application. The fee is non-refundable after a permit application number has been issued. Please see Section 12 for payment information.

Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6



**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street 200 - 10470 152nd St.			5
	City Surrey	Province BC	Postal Code V3R 0Y3	6
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone 250-468-2295	Mobile 250-812-5752	7
<b>Email Address</b>	babita.bains@gov.bc.ca		8



**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

*“Applicant” means the Applicant as identified in section 1 of this application form, and  
“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3

### Section 4: Owner or Manager of the Treatment Location

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

### Section 5: Description of Proposed Pesticide Use

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient <i>Bacillus thuringiensis</i> var <i>kurstaki</i> (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>



### Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023 (each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:00 am))	3
<b>Anticipated number of applications per year</b>	Three	4

### Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Courtenay - Dove Creek: 652 ha northwest of the City of Courtenay. The northern treatment boundary is around Orr Road and the western boundary extends from Orr Rd at Dove Creek Road to the west side of Wildwood Dr. The southern boundary is parallel to Burns Rd (~500 m south of Burns Rd) and extends to 500 m east of Condorsory Rd. The eastern boundary is parallel to Dove Creek Rd (~500 m east). The treatment area falls within the Comox Valley Regional District.

City of Courtenay: 331 ha in the City of Courtenay, around Cumberland Rd. The northern treatment boundary extends from 17 th St at Grant Ave, to Lake Trail Rd at Arden Rd. The western boundary extends from Lake Trail Rd at Arden Rd down to Comox Logging Rd at Cumberland Rd. The southern boundary extends from Cumberland Rd to 29th St at Fitzgerald Ave. The eastern boundary runs ~150 m northeast and parallel to Kipatrick Ave. The treatment area falls within the City of Courtenay.

### Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

### Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	652	7,824
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	331	3,972

## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.

## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.
3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.
4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.
5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-29	4

## Section 12: Payment of Fees

The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> <i>(999) 999-9999</i>		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> <i>(999) 999-9999</i>		6



## Pesticide Use Permit Application under the *Integrated Pest Management Act*

FORM REFERENCE CODE: EPD-IPM-10v2

### INSTRUCTIONS:

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

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Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6



**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street 200 - 10470 152nd St.			5
	City Surrey	Province BC	Postal Code V3R 0Y3	6
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone 250-468-2295	Mobile 250-812-5752	7
<b>Email Address</b>	babita.bains@gov.bc.ca		8



**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

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“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3



### Section 4: Owner or Manager of the Treatment Location

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

### Section 5: Description of Proposed Pesticide Use

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient <i>Bacillus thuringiensis</i> var <i>kurstaki</i> (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>

### Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023 (each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:30 am); all flights over populated areas are prohibited)	3
<b>Anticipated number of applications per year</b>	Three at each site (six total)	4

### Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Campbell River: 303 ha treatment boundary around Hilchey Rd and S Alder St. The northern treatment boundary extends from S Island Hwy (just south of Ellis Park) and west to Rockland Rd at S Dogwood St (approximately 50 m north of Juniper Dr). The western boundary follows S Dogwood St and the southern boundary follows Holm Rd where the boundary extends parallel to Westgate Rd to S Island Hwy. The eastern boundary follows the east side of S Island Hwy. The treatment area falls within the City of Campbell River.

Port Alberni: 763 ha treatment boundary around Malabar Rd and Falls St. The northern treatment point is Swanson Rd at Lamaque Rd, and the boundary extends beyond Ferguson Rd and down to Pacific Rim Hwy. The southern boundary extends from Pacific Rim Hwy at Tsahaheh 1 to Yaqwimit Place at Pacific Rim Hwy, and extends to the southeastern point of the treatment area at Meadow Dr and Cleary Rd. The treatment area falls within the City of Port Alberni and Alberni-Clayoquot Regional District.

### Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

### Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	303	3,636 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	763	9,156 L

## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.

## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.
3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.
4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.
5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-24	4

## Section 12: Payment of Fees

The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> (999) 999-9999		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> (999) 999-9999		6

## FW: Public call - Stop the Spray BC

---

From: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>  
To: Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>  
Sent: May 31, 2021 10:04:23 AM PDT  
Hi Lauren,

FYI on glyphosate communication through the Steering Committee contacts.

Depending on their anticipated workplan this year, we may move you to primary contact for this group and their workload. However, lets see what the next few months shape up like.

Jon

---

**From:** Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>  
**Sent:** May 27, 2021 3:02 PM  
**To:** Bedford, Lorne FLNR:EX <Lorne.Bedford@gov.bc.ca>  
**Subject:** RE: Public call - Stop the Spray BC

Hi Lorne,

A few thoughts:

s.13

Does this help or are you looking for something else on it?

Jon

---

**From:** Bedford, Lorne FLNR:EX <Lorne.Bedford@gov.bc.ca>  
**Sent:** May 27, 2021 10:18 AM  
**To:** Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>  
**Subject:** FW: Public call - Stop the Spray BC

What would be your take on this one Jonathan?

---

**From:** Zeglen, Stefan FLNR:EX <[Stefan.Zeglen@gov.bc.ca](mailto:Stefan.Zeglen@gov.bc.ca)>  
**Sent:** May 27, 2021 10:06 AM  
**To:** Hughes, Neil FLNR:EX <[Neil.Hughes@gov.bc.ca](mailto:Neil.Hughes@gov.bc.ca)>  
**Cc:** Bedford, Lorne FLNR:EX <[Lorne.Bedford@gov.bc.ca](mailto:Lorne.Bedford@gov.bc.ca)>  
**Subject:** Public call - Stop the Spray BC

Hi Neil,

Received a call today from s.22 (Stop the Spray BC) who wanted to know why information on glyphosate wasn't posted on the HealthlinkBC website the way it is for Btk. He feels the public should be aware that glyphosate residues found on wild berries, etc have recently been found to be higher than those allowed for store-bought fruit (from a recent UNBC study apparently). Absence of this info on the site implies that these residues are not a concern and this is wrong.

This came to me because Tim used to manage the info around BTK and subsequently updated web pages with this info and I have, apparently, inherited this task. Let me know how you want to handle this.

s.22

Stefan Zeglen, RPF  
Forest Health Officer  
Resource Practices Branch  
Office of the Chief Forester  
BC Ministry of Forests, Lands and  
Natural Resource Operations  
250-739-8385



## 2021 BCPPAC Lymantria dispar TAC

---

From: David Holden <david.holden@inspection.gc.ca>  
To: Zeglen, Stefan FLNR:EX <Stefan.Zeglen@gov.bc.ca>, Postlethwaite, Brent (CFIA/ACIA) <brent.postlethwaite@canada.ca>, Jason Crandall <Jason.Crandall@inspection.gc.ca>, Cook, Melissa (CFIA/ACIA) <melissa.cook@canada.ca>, Holden, David (CFIA/ACIA) <david.holden@canada.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Hueppelsheuser, Tracy AFF:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Darling, Lee (CFIA/ACIA) <lee.darling@canada.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Derksen, Shannon (CFIA/ACIA) <shannon.derksen@canada.ca>, Van Hezewijk, Brian (NRCAN/RNCAN) <brian.vanhezewijk@canada.ca>, Christine Orchard <Christine.Orchard@inspection.gc.ca>, Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>, Robert, Jeanne FLNR:EX <Jeanne.Robert@gov.bc.ca>, Gordon Henry <gordon.henry@inspection.gc.ca>, Abdullahi Ameen <abdullahi.ameen@inspection.gc.ca>, Blackburn, Gwyllim (NRCAN/RNCAN) <gwyllim.blackburn@canada.ca>  
Cc: Erin Bullas <erin.bullas-appleton@inspection.gc.ca>  
Sent: September 28, 2021 10:26:50 AM PDT  
Attachments: image001.png

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hi Folks,

I spoke with Brian V. today and we are suggesting calling a meeting to discuss this year's GM finds. I am suggesting either the 12, 14 or 15<sup>th</sup> of October to be good dates. Please let us know which days and times work best for you so we can get this setup. This will be a big year this year and we have lots of finds to discuss.

Please forward to any I have missed.

Cheers,

Dave Holden  
Survey Biologist  
Canadian Food Inspection Agency / Government of Canada  
[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tel: 604-292-5643 cell: 604-787-0424

Dave Holden  
Biologiste des enquêtes  
Agence canadienne d'inspection des aliments / Gouvernement du Canada  
[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tél. : 604-292-5643 cell: 604-787-0424

## RE: 2021 BCPPAC Lymantria dispar TAC

From: David Holden <david.holden@inspection.gc.ca>  
To: Melissa Cook <Melissa.Cook@inspection.gc.ca>, Shannon Derksen <shannon.derksen@inspection.gc.ca>  
Cc: Zeglen, Stefan FLNR:EX <Stefan.Zeglen@gov.bc.ca>, Brent Postlethwaite <brent.postlethwaite@inspection.gc.ca>, Jason Crandall <Jason.Crandall@inspection.gc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Hueppelsheuser, Tracy AFF:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Lee Darling <lee.darling@inspection.gc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Van Hezewijk, Brian (NRCAN/RNCAN) <brian.vanhezewijk@nrcan-rncan.gc.ca>, Christine Orchard <Christine.Orchard@inspection.gc.ca>, Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>, Robert, Jeanne FLNR:EX <Jeanne.Robert@gov.bc.ca>, Gordon Henry <gordon.henry@inspection.gc.ca>, Abdullahi Ameen <abdullahi.ameen@inspection.gc.ca>, Blackburn, Gwylim (NRCAN/RNCAN) <gwylim.blackburn@nrcan-rncan.gc.ca>, Erin Bullas <erin.bullas-appleton@inspection.gc.ca>  
Sent: September 28, 2021 4:33:11 PM PDT

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

I agree it will take longer than usual and I have mentioned that to Jeanne. She will be finalizing the dates and times so keep an eye out for that email.

Cheers,

Dave Holden  
Survey Biologist  
Canadian Food Inspection Agency / Government of Canada  
[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tel: 604-292-5643 cell: 604-787-0424

Dave Holden  
Biologiste des enquêtes  
Agence canadienne d'inspection des aliments / Gouvernement du Canada  
[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tél. : 604-292-5643 cell: 604-787-0424

---

**From:** Melissa Cook <Melissa.Cook@inspection.gc.ca>  
**Sent:** 2021-09-28 3:54 PM  
**To:** Shannon Derksen <shannon.derksen@inspection.gc.ca>  
**Cc:** David Holden <david.holden@inspection.gc.ca>; Stefan.Zeglen@gov.bc.ca; Brent Postlethwaite <brent.postlethwaite@inspection.gc.ca>; Jason Crandall <Jason.Crandall@inspection.gc.ca>; Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>; Hueppelsheuser, Tracy AGRI:EX <Tracy.Hueppelsheuser@gov.bc.ca>; Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>; Lee Darling <lee.darling@inspection.gc.ca>; Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>; Van Hezewijk, Brian (NRCAN/RNCAN) <brian.vanhezewijk@nrcan-rncan.gc.ca>; Christine Orchard <Christine.Orchard@inspection.gc.ca>; Marnie.DuthieHolt@gov.bc.ca; Robert, Jeanne FLNR:EX <Jeanne.Robert@gov.bc.ca>; Gordon Henry <gordon.henry@inspection.gc.ca>; Abdullahi Ameen <abdullahi.ameen@inspection.gc.ca>; Blackburn, Gwylim (NRCAN/RNCAN) <gwylim.blackburn@nrcan-rncan.gc.ca>; Erin Bullas <erin.bullas-appleton@inspection.gc.ca>  
**Subject:** Re: 2021 BCPPAC Lymantria dispar TAC

Hi Dave,

Any of those days are good in the morning. Agree with Shannon that we will need a longer meeting or two to cover all survey results

Melissa

Sent from my iPhone

On Sep 28, 2021, at 1:10 PM, Shannon Derksen <[shannon.derksen@inspection.gc.ca](mailto:shannon.derksen@inspection.gc.ca)> wrote:

Hi Dave I prefer 12<sup>th</sup> or 14<sup>th</sup> – might need to do it all in 2 meetings?

Shannon

---

**From:** David Holden <[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca)>

**Sent:** 2021-09-28 10:27 AM

**To:** [Stefan.Zeglen@gov.bc.ca](mailto:Stefan.Zeglen@gov.bc.ca); Brent Postlethwaite <[brent.postlethwaite@inspection.gc.ca](mailto:brent.postlethwaite@inspection.gc.ca)>; Jason Crandall <[Jason.Crandall@inspection.gc.ca](mailto:Jason.Crandall@inspection.gc.ca)>; Melissa Cook <[Melissa.Cook@inspection.gc.ca](mailto:Melissa.Cook@inspection.gc.ca)>; David Holden <[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca)>; Hall, Lauren ENV:EX <[Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca)>; Hueppelsheuser, Tracy AGRI:EX <[Tracy.Hueppelsheuser@gov.bc.ca](mailto:Tracy.Hueppelsheuser@gov.bc.ca)>; Heron, Jennifer M ENV:EX <[Jennifer.Heron@gov.bc.ca](mailto:Jennifer.Heron@gov.bc.ca)>; Lee Darling <[lee.darling@inspection.gc.ca](mailto:lee.darling@inspection.gc.ca)>; Mullan, Jonathan M ENV:EX <[Jonathan.Mullan@gov.bc.ca](mailto:Jonathan.Mullan@gov.bc.ca)>; Shannon Derksen <[shannon.derksen@inspection.gc.ca](mailto:shannon.derksen@inspection.gc.ca)>; Van Hezewijk, Brian (NRCAN/RNCAN) <[brian.vanhezewijk@nrcan-rncan.gc.ca](mailto:brian.vanhezewijk@nrcan-rncan.gc.ca)>; Christine Orchard <[Christine.Orchard@inspection.gc.ca](mailto:Christine.Orchard@inspection.gc.ca)>; [Marnie.DuthieHolt@gov.bc.ca](mailto:Marnie.DuthieHolt@gov.bc.ca); Robert, Jeanne FLNR:EX <[Jeanne.Robert@gov.bc.ca](mailto:Jeanne.Robert@gov.bc.ca)>; Gordon Henry <[gordon.henry@inspection.gc.ca](mailto:gordon.henry@inspection.gc.ca)>; Abdullahi Ameen <[abdullahi.ameen@inspection.gc.ca](mailto:abdullahi.ameen@inspection.gc.ca)>; Blackburn, Gwylim (NRCAN/RNCAN) <[gwylim.blackburn@nrcan-rncan.gc.ca](mailto:gwylim.blackburn@nrcan-rncan.gc.ca)>

**Cc:** Erin Bullas <[erin.bullas-appleton@inspection.gc.ca](mailto:erin.bullas-appleton@inspection.gc.ca)>

**Subject:** 2021 BCPPAC Lymantria dispar TAC

Hi Folks,

I spoke with Brian V. today and we are suggesting calling a meeting to discuss this year's GM finds. I am suggesting either the 12, 14 or 15<sup>th</sup> of October to be good dates. Please let us know which days and times work best for you so we can get this setup. This will be a big year this year and we have lots of finds to discuss.

Please forward to any I have missed.

Cheers,

Dave Holden  
Survey Biologist  
Canadian Food Inspection Agency / Government of Canada  
[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tel: 604-292-5643 cell: 604-787-0424

Dave Holden  
Biologiste des enquêtes  
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[david.holden@inspection.gc.ca](mailto:david.holden@inspection.gc.ca) / Tél. : 604-292-5643 cell: 604-787-0424

<002.png>

## Lymantria Moth Pesticide Use Permit Amendment 738-0030-20-23

---

From: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
To: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Sapsford, Kenneth AFF:EX <Kenneth.Sapsford@gov.bc.ca>, Chadburn, Crystal FLNR:EX <Crystal.Chadburn@gov.bc.ca>, Kerr-Upal, Manjit ENV:EX <Manjit.Kerr-Upal@gov.bc.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>  
Cc: Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>  
Sent: January 13, 2022 3:51:39 PM PST  
Attachments: 2020-03-13 PERMIT 738-0030-20-23.pdf, 211201 FLNRORD proposed 2022 aerial and ground spray treatment areas.docx

Dear Integrated Pest Management Committee Members and additional referees:

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development has requested a major amendment to an existing Pesticide Use Permit. The purpose of the proposed amendment seeks to include additional areas in Nanoose Bay, Victoria, Coquitlam, Burnaby, Mission, Langley and Chilliwack. The Langley site is the Asian variety of the Lymantria moth and responsibility for that site is held by the CFIA.

The attached maps and copy of the current PUP have been provided for your review to provide technical information on the proposed pesticide uses. Please refer this communication to other staff in your agency if they would be better able to address the subject. We respectfully request that your agency responds in writing by **February 15, 2022** (even if that response is as simple as “no comment” or “no concern”).

Please do not hesitate to contact me by email or at the number below if you have any questions, and thank you for your time on this referral.

Regards,

*Scott Bennett, R.P.F.*  
*Sr. Pesticide Management Officer*  
*BC Ministry of Environment*  
(236) 468-2250

*Scott Bennett, R.P.F.*  
*Sr. Pesticide Management Officer*  
*BC Ministry of Environment and Climate Change Strategy*  
(236) 468-2250



Date: March 13, 2020

PUP No. 738-0030-20/23

**VIA EMAIL AND MAIL**

Attn: Tim Ebata

Ministry of Forests, Lands, Natural Resource Operations & Rural Development  
P.O. Box 9513 Stn. Prov. Govt.  
Victoria, BC V8W 9C2

Dear Sir:

In response to your application dated November 25, 2019, enclosed is Pesticide Use Permit No. **738-0030-20/23** issued under the provisions of the *Integrated Pest Management Act*. Your attention is respectfully directed to the conditions of the permit that must be complied with.

It is the responsibility of the permit holder to ensure that all activities conducted under this permit are carried out with due regard to the rights of third parties, and comply with other applicable legislation that may be in force - including, but not limited to, using pesticide only for the use described on the label and in accordance with the instructions on that label.

This decision may be appealed in accordance with Section **14** of the *Integrated Pest Management Act*. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be sent by registered mail to PO Box 9425 Stn. Prov. Govt, Victoria, BC, V8W 9V1 or personally delivered to the Chair, Environmental Appeal Board, Fourth Floor, 747 Fort Street, Victoria, British Columbia, V8W 3E9, (4) be delivered within 30 days from the date of the decision, and (5) be accompanied by a fee of \$25.00, payable to the Minister of Finance and Corporate Relations.

Yours truly,

Digitally signed by Shelley  
Metcalfé  
Date: 2020.03.13 14:49:08  
-07'00'

Shelley Metcalfe, MEL, P.Ag.  
Authorizations Section Head, Industry and IPM  
On behalf of the Administrator, *Integrated Pest Management Act*

Attachments

---

Ministry of Environment &  
Climate Change Strategy

Integrated Pest Management  
Environmental Protection  
Division

Mailing Address:  
200-10470 152<sup>nd</sup> Street  
Surrey BC V3R 0Y3

Telephone: 604 582-5200  
Facsimile: 604 930-7119  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)



## MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY

### PESTICIDE USE PERMIT No. 738-0030-20/23

*Pursuant to Section 6 of the Integrated Pest Management Act*

British Columbia Minister of Forests, Lands, Natural Resource Operations & Rural Development  
P.O. Box 9513 Stn. Prov. Govt.  
Victoria, BC V8W 9C2

is authorized to use pesticides subject to conditions listed below. Contravention of any of these conditions is a violation of the *Integrated Pest Management Act* and may result in prosecution.

#### 1 Authorized Pesticide Use

Pesticide use must be for the purpose of eradicating introduced populations of the Gypsy Moth (*Lymantria dispar*) from municipal and private land in the Fraser Heights neighbourhood in the City of Surrey as shown in Map 1, the Lake Cowichan Area as shown on Map 2, and the Castlegar area as shown on Map 3.

1.1 The authorized pesticide is Foray® 48B, P.C.P. No. 24977, active ingredient: *Bacillus thuringiensis* sub species *kurstaki* strain ABTS-351 at a rate of 4 L/ha or 50 Billion Cabbage Looper Units (BCLU/ha) per application.

1.2 The authorized method of application is aerial by fixed-wing aircraft.

1.3 A maximum of four aerial pesticide applications are permitted for each treatment location.

1.4 The maximum treatment area per application must not exceed:  
a) 241 ha in Surrey,  
b) 231 ha in Lake Cowichan, and  
c) 167 ha in Castlegar.

2 Aerial application is permitted on or over lands that are within the treatment boundaries delineated on Map 1, 2, and 3 where permission has been granted by the land owner, the land holder, an Order In Council, or other legal instrument.

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



### 3 Treatment Dates

- 3.1 The authorized pesticide use may be conducted from **10 (ten)** days after the date of publication of the permit as described in Condition 4.1 until the permit expires on March 01, 2023.

### 4 Access to Permit Information

- 4.1 To allow inspection and copying by the public, within seven days of permit issuance, the permit holder must post a copy of the permit with relevant maps at:
- the Ministry of Forests, Lands, Natural Resource Operations and Rural Development– Resource Practices Branch in Victoria,
  - on the Ministry of Forests, Lands, Natural Resource Operations and Rural Development’s web site, and
  - the Surrey City Hall
  - the Regional District of Kootenay Boundary regional office
  - the Lake Cowichan Town hall
- 4.2 The posted permit and maps must remain at the locations specified in Condition 4.1 until 7 days after all pesticide spray activities under the permit have ceased.

### 5 Notification

- 5.1 Within 15 days of issuance of the permit, the permit holder must publish a notice in at least one community newspaper circulated within the treatment areas.
- 5.2 A notice for the purpose of Condition 5.1 must contain the following information:
- the name, address and telephone number of the permit holder,
  - the permit number,
  - the purpose of pesticide use,
  - the trade name, P.C.P No., and the active ingredient of the pesticide used,
  - the method of application,
  - a map showing the location of the treatment area and primary zone of spray drift deposition,
  - the date of project commencement and completion,
  - information on where copies of the permit and map of the treatment area may be examined,
  - information on how and when telephone support lines can be accessed by the public to obtain information on the pesticide use.

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



5.3 Annually, at least 7 days prior to commencement of the first pesticide application, a press release providing details of pending local pesticide use must be sent to a minimum of one community newspaper, one locally broadcast AM radio station, one locally broadcast FM station, and one locally broadcast television station that serve the communities in and around the treatment areas.

5.4 A press release for the purpose of Condition 5.3 must contain at least the following, or comparable, wording:

The first in a series of aerial spray operations using the pesticide product Foray 48B (active ingredient Btk) to control introduced populations of the Gypsy Moth may commence as early as April 15, 2020. A maximum of four sprays will take place at approximately ten day intervals until June 30, 2020. Each spray is expected to commence 1 hour before sunrise to no later than 7:30am on each of four spray application mornings. People who wish to minimize their exposure may remain indoors with their windows and doors closed during the spraying and for at least 30 minutes thereafter. Changes in weather conditions may cause proposed applications to be cancelled or delayed with little advance notice.

5.5 At least 24 hours before commencement of each pesticide application, notification (written if possible) must be provided to the following persons (or their representatives):

- a) the Medical Health Officer for each Health Authority in which an application will take place,
- b) the Principals of all schools within the treatment area and primary zone of spray drift deposition,
- c) the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition,
- d) all persons subscribed to the list serve or other subscription email application,
- e) the Mayor of each town or City in which an application will take place,
- f) IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).

5.6 Notification for the purpose of Condition 5.5 must include:

- a) the date and estimated start time of pesticide application, and
- b) estimates of how long the upcoming pesticide application will likely take to be completed.

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

Page 3 of 10

Permit No. 738-0030-20/23





- 5.7 Immediate notification must be provided to the persons outlined in Condition 5.5 when a pending pesticide application has been cancelled, delayed or deferred which must include that a pending pesticide application has been cancelled, delayed, or deferred, and when a deferred pesticide application has been rescheduled, or when the next pesticide application is likely to occur.
- 5.8 At least 48 hours before commencement of each spray application, the permit holder must place treatment notices so they are clearly visible to anyone entering the treatment areas.
- 5.9 A treatment notice for the purpose of Condition 5.8 must:
- be at least 75 cm x 65 cm in size,
  - be constructed of water resistant material,
  - display, in bold, block letters, the words “NOTICE OF PESTICIDE USE”, or in place of the words “pesticide use”, the words “GYPSY MOTH AERIAL SPRAYING”,
  - contain a cautionary symbol, like a stop sign or a raised hand,
  - indicate the name of the permit holder,
  - indicate the permit number,
  - indicate the treatment date,
  - indicate the purpose of pesticide use,
  - indicate the trade name, P.C.P. No., and active ingredient of the pesticide used,
  - indicate the method of application,
  - contain precautionary advice to minimize exposure to the pesticide or its residues, including, but not limited to “to minimize contact with the pesticide, remain indoors with windows and doors closed during active spraying and for at least 30 minutes thereafter”,
  - contain a map showing the location of the treatment area and primary zone of spray drift deposition,
  - contain the date of project commencement and completion,
  - contain information on telephone lines and websites that can be accessed by the public to obtain spray-related information or to discuss health-related concerns associated with the pesticide use.
- 5.10 At least one hour before commencement of each pesticide application, the permit holder must ensure that treatment signs are displayed via LED variable message boards on the north and south bound lanes of, or entrances to, Highway 1 and on the east and west bound lanes of the South Fraser Perimeter Road, so that each sign is clearly visible

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.

On behalf of the Administrator – *Integrated Pest Management Act*



and will inform any person approaching the area of the pesticide use.

- 5.11 At least one hour before commencement of each pesticide application, the permit holder must ensure that a treatment sign is displayed on the pedestrian lane adjacent to Highway 1 at 49.210087, -122.806528 (where a service road bisects the pedestrian lane just past the end of Dogwood RV Park) so that the sign is clearly visible and will inform any person approaching the area from the Port Mann bridge of the pesticide use.
- 5.12 The permit holder must conduct any additional notification agreed upon during the consultation process in the manner agreed upon with the parties to be notified.
- 5.13 Prior to any pesticide use authorized by this permit, the permit holder must provide written notification to IPM Officer Scott Bennett via email of the name, licence number, and valid British Columbia Pesticide Applicator Certificate numbers of any contractors that will be applying the pesticides.
- 5.14 Prior to the first pesticide application, the permit holder must submit a copy of the signed Order In Council to IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).
- 5.15 The permit holder must develop, maintain and implement a location-specific plan for communicating details to the public, relevant health authorities, government agencies and local government regarding the proposed and completed pesticide uses.

## 6 Monitoring

- 6.1 During the periods of pesticide use, the permit holder must ensure that wind speed is monitored using an appropriate anemometer within the permitted area.
- 6.2 The permit holder must use spray monitoring devices to determine the uniformity of coverage of the spray treatment and the extent of spray drift.

## 7 Restrictions

- 7.1 The permit holder must comply with all applicable provisions under the *Integrated Pest Management Act*.
- 7.2 The permit holder must comply with the requirements of the label for the pesticide being applied.

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Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



- 7.3 All personnel involved in the project must be informed of the terms and conditions of the permit and any permit amendments prior to pesticide use.
- 7.4 Application equipment and droplet size must be selected to minimize drift while still achieving the primary treatment objective of Gypsy Moth eradication.
- 7.5 All spray equipment must be properly calibrated prior to use.
- 7.6 All pesticide products and application equipment used must be maintained in secure conditions that prevent tampering or the introduction of contaminants.
- 7.7 All individuals conducting aerial pesticide applications must possess a valid BC pesticide applicator certificate in the Aerial category.
- 7.8 Aerial applications must be conducted between civil morning twilight and 0730 hours.
- 7.9 At all times during aerial operations, the pilot(s) must be in continuous radio contact with ground-based personnel that are familiar with the permit and treatment area.
- 7.10 Pesticides must not be applied in areas where wind speeds are greater than 8 km/hr.
- 7.11 Areas affected by pesticide spills that result in impacts not authorized by, or consistent with this permit, must be cleaned-up and decontaminated immediately.

## 8 Record Keeping and Reporting

- 8.1 All available information on public health concerns raised and addressed through the health lines listed in Conditions 5.2 (i) and 5.9 (n) must be documented and reported to IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) within 15 days of each period of pesticide use.
- 8.2 For each pesticide treatment under this permit, the permit holder must keep a record containing the following information:
  - a) the name and address of the owner or manager of the treatment location,
  - b) if the use was performed as a service, the name and license number of the licensee who performed the service,
  - c) if the use was not performed as a service, the name and certificate number of the pesticide applicator certificate holder who used the pesticide,
  - d) the date and time of the pesticide use,

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.

On behalf of the Administrator – *Integrated Pest Management Act*



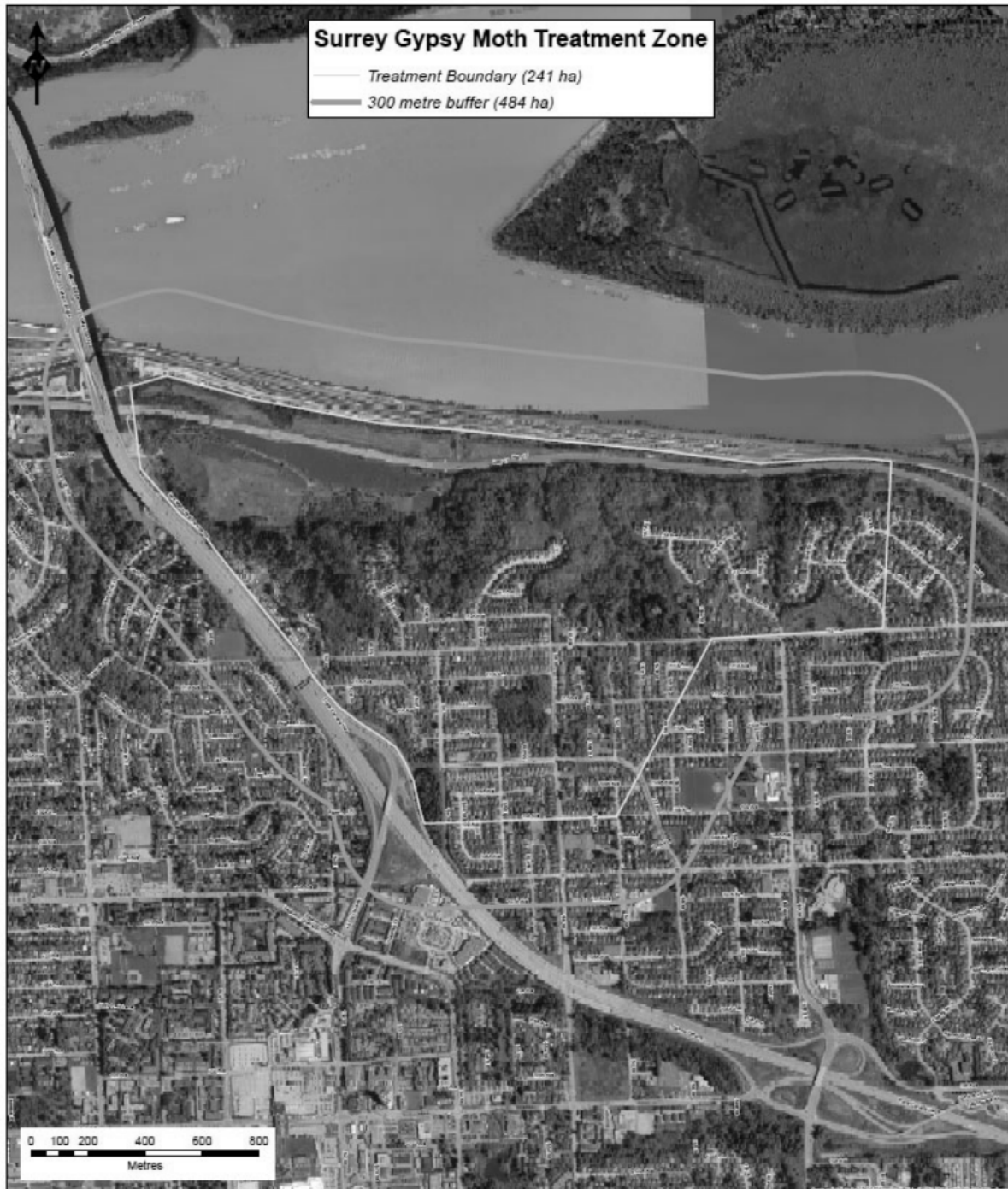
- e) the name of the pest targeted by the use or the purpose of the pesticide use,
  - f) the trade name of each pesticide used and its registration number under the federal Act;
  - g) the method and rate of application and the total quantity used,
  - h) the prevailing meteorological conditions, including temperature, precipitation, and speed and direction of the wind,
  - i) the pesticide application flight path maps,
  - j) the results from spray monitoring devices.
- 8.3 The permit holder must prepare and submit a summary report to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) by January 31 of the calendar year following treatment. The summary report must include:
- a) the name and address of the permit holder,
  - b) the trade name, P.C.P No., active ingredient and the quantity (in L) of pesticide used per application and the total quantity of pesticide used,
  - c) the area treated (in ha),
  - d) a description of the timing of treatments,
  - e) a summary of information or concerns raised through the health lines in Condition 4.2 (i) and 4.12 (n) and recommended actions to address these concerns for future programs,
  - f) the pesticide treatment efficacy based on monitoring trap catches,
  - g) the results of the spray zone and drift zone monitoring required under Condition 5.2,
  - h) all pertinent maps and recommended follow-up activities for the treatment area.
- 8.4 Pesticide spills that result in impacts not authorized by or consistent with this permit must be immediately reported to the Provincial Emergency Program at 1-800-663-3456.
- 8.5 A report on spills and activities outlined in Condition 6.11 must be provided to the IPM Section Head (or their representative) and [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) as soon as practicable.
- 8.6 Permit non-compliance that results in impacts not consistent with the intent of this permit must be reported to the IPM Section Head (or their representative) and [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) within 48 hours of the infraction's discovery.

Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



**Map 1. Fraser Heights Surrey Gypsy Moth Treatment Area**



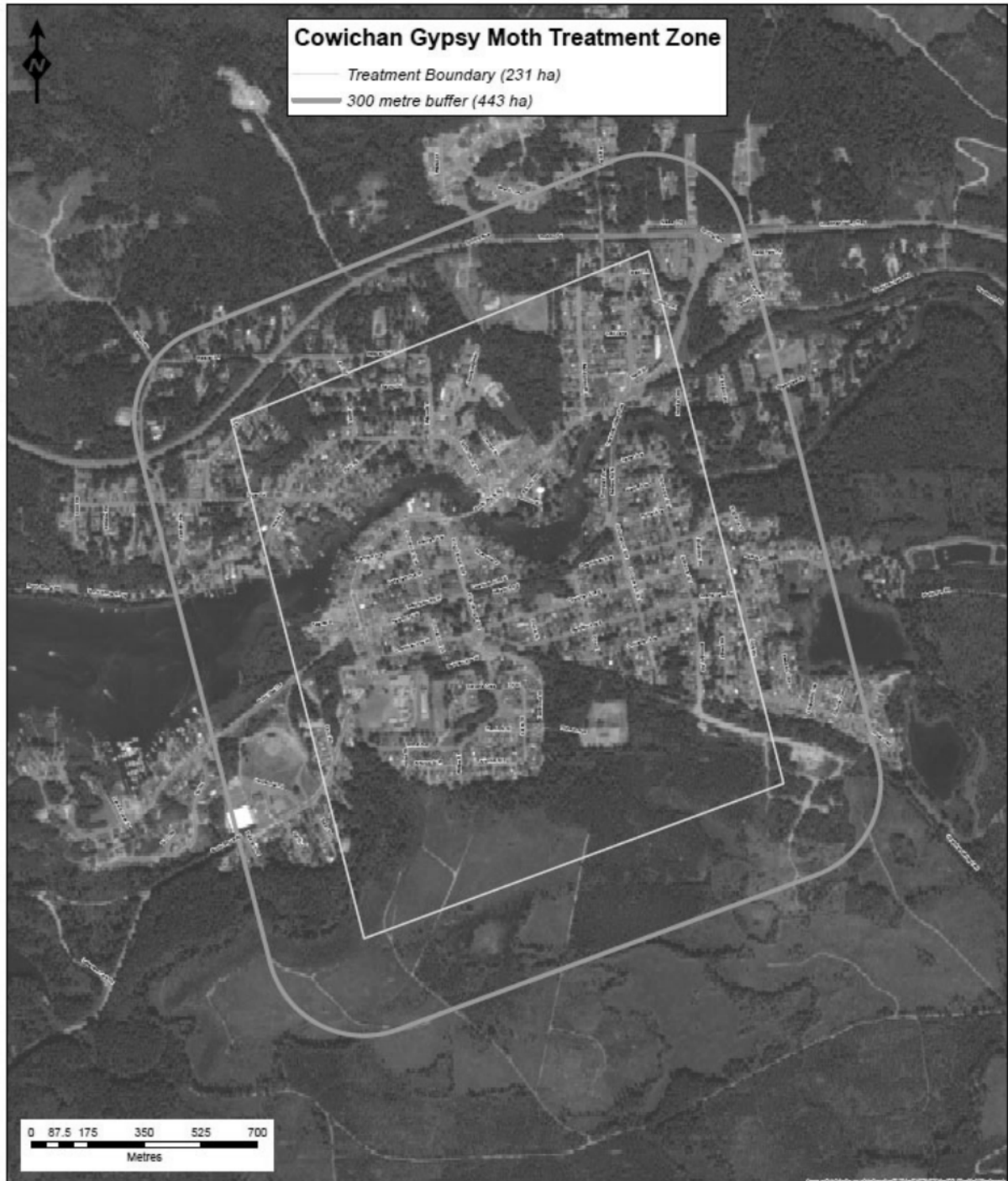
Date Issued: March 13, 2020

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

Page 8 of 10

Permit No. 738-0030-20/23

**Map 2. Lake Cowichan Gypsy Moth Treatment Area**



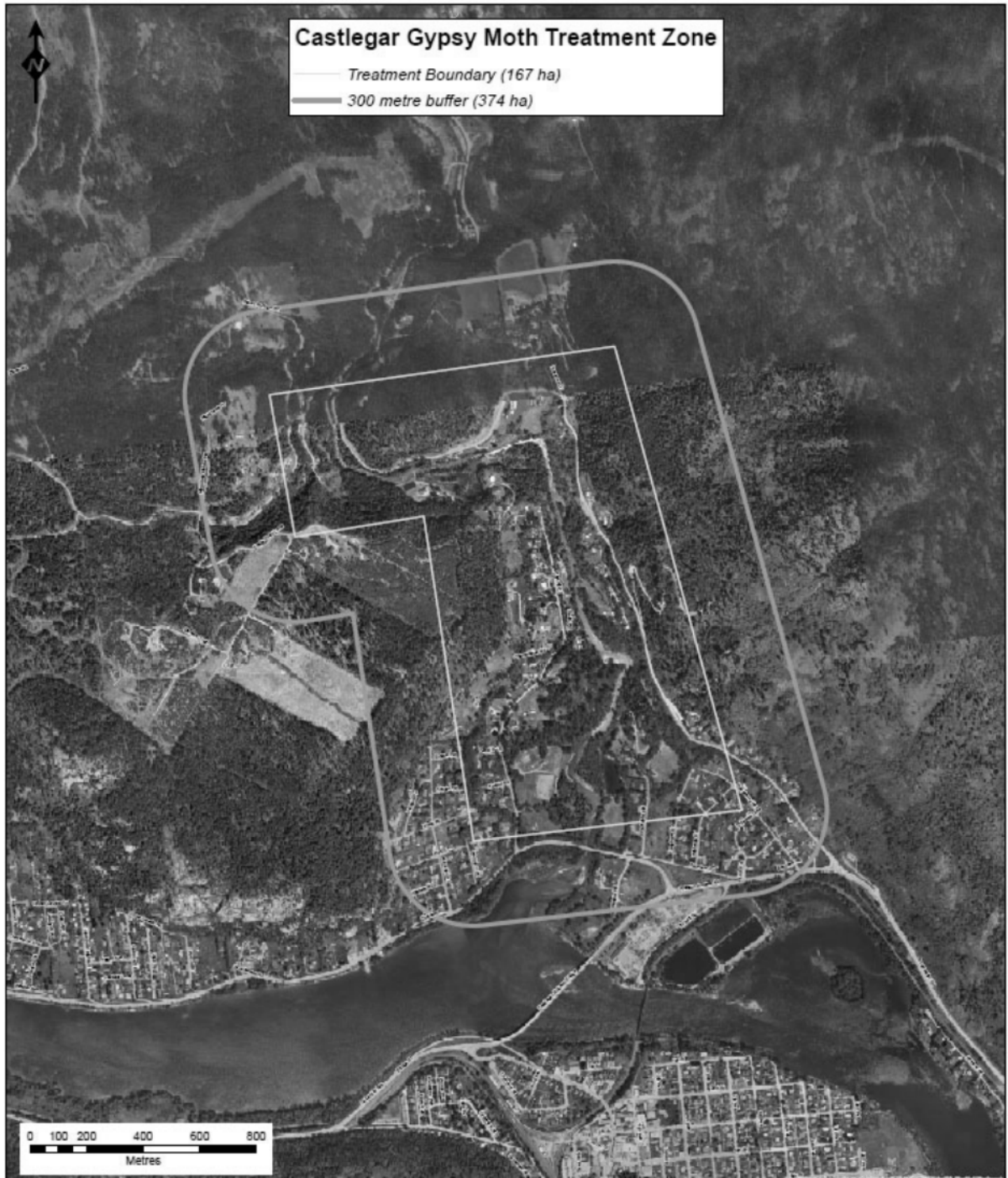
Date Issued: March 13, 2020

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

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Permit No. 738-0030-20/23

**Map 3. Castlegar Gypsy Moth Treatment Area**



Date Issued: March 13, 2020

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

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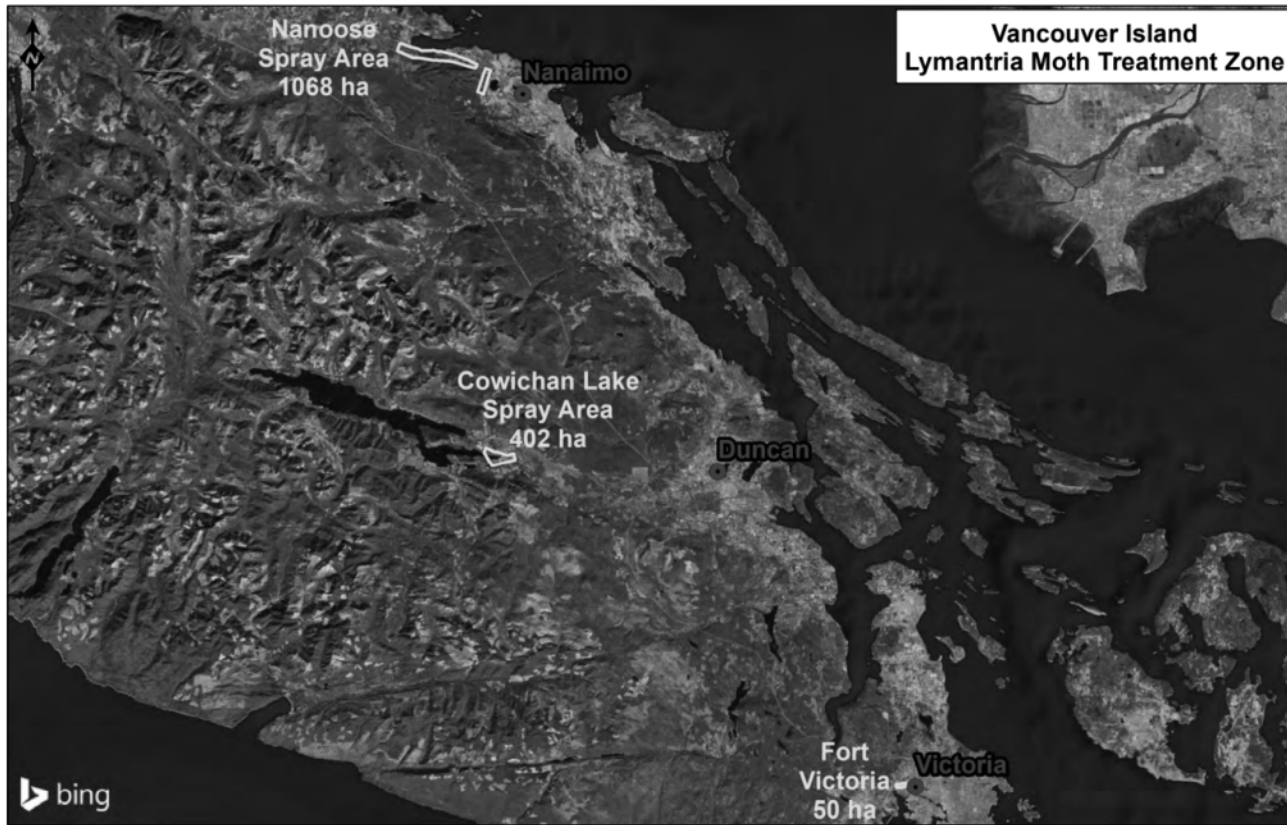
Permit No. 738-0030-20/23



FLNRORD proposed 2022 aerial and ground spray treatment areas (8 spray areas):

**Vancouver Island - FLNRORD spray area for EUROPEAN LYMANTRIA MOTH (LDD)**

Overview map (3 aerial spray areas):





1. Nanoose bay aerial spray - 1,068 hectares  
\*\*the red triangles indicate positive trap catches for LDD



2. Cowichan Lake aerial spray - 402 hectares

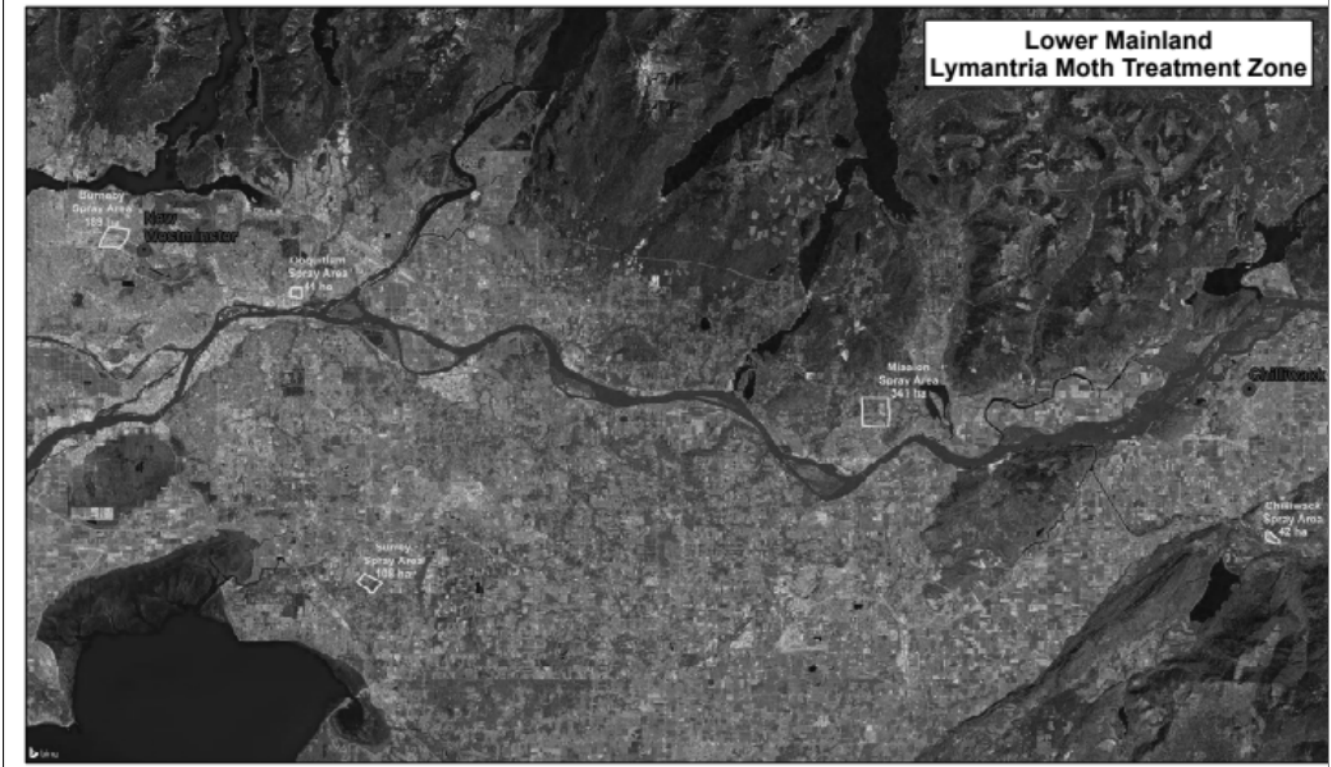


3. Fort Victoria aerial spray – 50 hectares



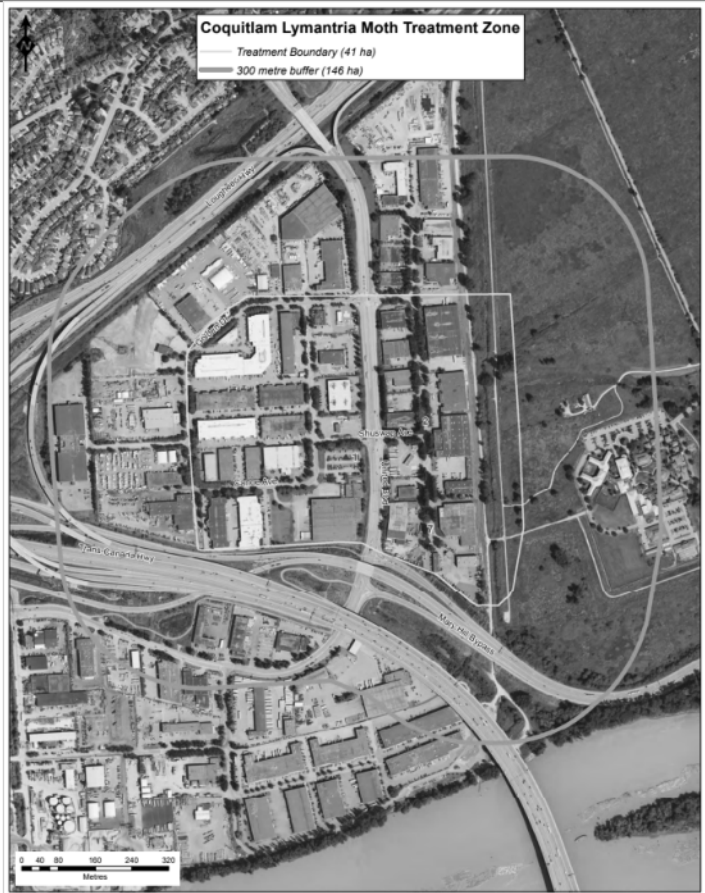
Lower mainland - FLNRORD spray area for EUROPEAN LYMANTRIA MOTH (LDD)

Overview map (5 spray areas):



4. Coquitlam ground spray – 41 hectares

\*\*the red triangles indicate positive trap catches for LDD



5. Burnaby aerial spray – 193 hectares



6. Surrey aerial spray - 108 hectares



7. Mission aerial spray - 341 hectares



8. Chilliwack aerial spray - 49 hectares





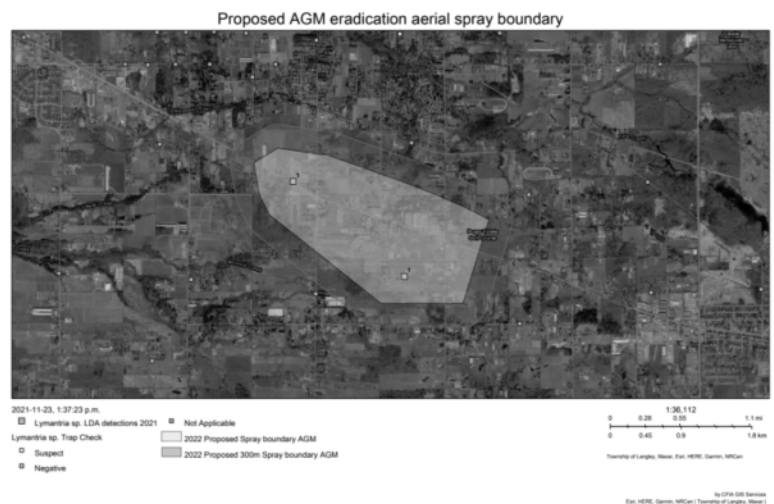
CFIA proposed 2022 aerial spray treatment area (1 spray area):

**Lower mainland - CFIA spray area for ASIAN LYMANTRIA MOTH**

Overview map (1 spray area): ★



Langley aerial spray – 350 hectares  
 \*\*\*green squares are positive traps for Asian lymantria moth (LDA)



## RE: BC Lymantria moth program

---

From: Tim Ebata <sup>s.22</sup>  
To: Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>  
Cc: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>, Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>  
Sent: January 24, 2022 11:00:12 AM PST

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Thanks Lauren. No surprise. I think we'll cover this section anyway and then just hand out their contact information so we can deflect public questions to them. Shaun Dhaliwal has been providing some additional info and will be on the virtual meeting in the background to provide support of the presenters for the QA portion but will not speak.

Sent from Mail for Windows

---

**From:** Hall, Lauren ENV:EX  
**Sent:** January 24, 2022 10:43 AM  
**To:** EbataT  
**Cc:** Bennett, Scott ENV:EX; Duthie-Holt, Marnie FLNR:EX  
**Subject:** FW: BC Lymantria moth program

Hi Tim,

Please see PMRA's response below.

**Lauren Hall, M.Sc., P.Ag.**  
IPM Large Industry Specialist  
(778) 698-9277

---

**From:** Lamarche, Natalie (HC/SC) <natalie.lamarche@hc-sc.gc.ca> **On Behalf Of** PMRA FPT Secretariat / ARLA (HC/SC)  
**Sent:** January 21, 2022 11:43 AM  
**To:** Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>  
**Subject:** RE: BC Lymantria moth program

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hello Lauren,

Unfortunately we are not able to attend your virtual event.

If you have specific questions, we could provide responses to supplement our existing public info that is currently used.

Thank you,  
Natalie

---

**From:** Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>  
**Sent:** 2022-01-10 6:58 PM  
**To:** PMRA FPT Secretariat / ARLA (HC/SC) <pmra.fpt.secretariat-arla@hc-sc.gc.ca>  
**Cc:** 'Tim Ebata's.22 ; Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>; Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>

**Subject:** BC Lymantria moth program

Hello FPT/PMRA:

By way of this email, I'd like to introduce you to the B.C. government team (cc'd) involved in the provincial Lymantria moth management program.

They are holding a series of virtual public open houses on their program activities in the near future. They are seeking a PMRA representative who may be able to attend (virtually) and speak to the health and environmental assessments of Btk pesticides, such as Foray 48B.

If you can recommend an appropriate contact at PMRA for their request, it would be appreciated. Alternatively, please advise if a better route is to contact the general PMRA info inbox ([hc.pmra.info-arla.sc@canada.ca](mailto:hc.pmra.info-arla.sc@canada.ca)).

Best wishes,  
Lauren

**Lauren Hall, M.Sc., P.Ag.**

IPM Large Industry Specialist

BC Ministry of Environment & Climate Change Strategy

Integrated Pest Management Program

Headquarters / Victoria

(778) 698-9277

[Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca)



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Withheld pursuant to/removed as

s.12 ; s.13 ; s.14

## BCPPAC Technical advisory committee meeting for Lymantria dispar trapping results

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From: Duthie-Holt, Marnie FLNR:EX <Marnie.DuthieHolt@gov.bc.ca>  
To: Robert, Jeanne FLNR:EX <Jeanne.Robert@gov.bc.ca>, Zeglen, Stefan FLNR:EX <Stefan.Zeglen@gov.bc.ca>, Brent Postlethwaite <brent.postlethwaite@inspection.gc.ca>, Crandall, Jason (CFIA/ACIA) <Jason.Crandall@inspection.gc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Hueppelsheuser, Tracy AFF:EX <Tracy.Hueppelsheuser@gov.bc.ca>, Heron, Jennifer M ENV:EX <Jennifer.Heron@gov.bc.ca>, Lee Darling <lee.darling@inspection.gc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, VAN HEZEWIJK, Brian <brian.vanhezewijk@NRCan-RNCan.gc.ca>, Christine Orchard <Christine.Orchard@inspection.gc.ca>, Gordon Henry <gordon.henry@inspection.gc.ca>, Abdullahi Ameen <abdullahi.ameen@inspection.gc.ca>, Holden, David (CFIA/ACIA) <David.Holden@inspection.gc.ca>, Cook, Melissa (CFIA/ACIA) <Melissa.Cook@inspection.gc.ca>, Michael Pichonsky <Michael.Pichonsky@inspection.gc.ca>  
Cc: Ebata, Tim FLNR:EX <Tim.Ebata@gov.bc.ca>  
Sent: May 2, 2022 5:26:14 PM PDT  
Attachments: BCPPAC 2022 LD Recomendations\_2021-11-17.xlsx, image001.png  
Hello everyone,

We are starting to spray for Lymantria moth as of tomorrow (weather dependent) but have a pending appeal on our pesticide use permit. At this point we only have a pre-hearing meeting scheduled for the week of May 10<sup>th</sup> and no request for a stay on the permit.

However, in preparation for a possible hearing I am pulling together information regarding the;

1. **Methodology for determining treatment actions** from our meeting planning meeting in the fall where we determined the best course of action based on the trap counts (i.e. delimitation trapping 16 traps/ square mile, delimitation trapping 36 traps/ square mile, aerial or ground spray, egg mass search, or combinations of treatments). I have attached the spreadsheet generator from the meeting as a reference.
2. **Ramifications of not conducting a spray treatment** when recommended.

I am guessing that Dave and Brian are best positioned to provide guidance but thought that I would send this request to the larger group in case others would like to provide details on treatment guidelines and ramifications of not conducting a spray program if recommended.

Thank you ahead of time for your assistance. Please respond by May 13<sup>th</sup> if possible so that we have this information in hand if requested as our turn around time will likely be quite tight.

Thanks, Marnie



**Marnie Duthie-Holt**  
**Provincial Forest Entomologist**  
**Forest Science, Planning and Practices Branch**  
**Office of the Chief Forester**  
**Ministry of Forests**  
1902 Theatre Road, Cranbrook, BC V1C 7G1  
250-420-6394 Work  
250-421-3601 Mobile  
[Marnie.DuthieHolt@gov.bc.ca](mailto:Marnie.DuthieHolt@gov.bc.ca)

## 2022-05-04 Lymantria spray inspection?

From: Berube, Conrad ENV:EX <Conrad.Berube@gov.bc.ca>  
To: Lapham, Michael ENV:EX <Michael.Lapham@gov.bc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>  
Sent: May 4, 2022 7:47:33 AM PDT  
Attachments: image001.png, image002.jpg, image004.jpg, image003.jpg  
Hey Mike and Jon—

s.13

I haven't seen anything that indicates that the appeal of PUP #768-0032-21/24 has elevated its profile to a degree significant enough to warrant reprioritization. Have you?

If the MO would like eyes on the operation, it's doable, but would require overnighting budget and possible bumping higher priority inspections.

Let me know if circumstances change to raise the profile of the PUP to the point that onsite over-sight is warranted.

Here's the latest aerial spray schedule from

<https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health/invasive-forest-pests/lymantria/news>

Aerial Spray Treatment Areas and Approximate Dates (subject to change) - Updated April 20, 2022			
LOCATION (click to view maps)	1st Treatment	2nd Treatment	3rd Treatment
<a href="#">View Royal</a> (50 ha, PDF 58KB)	May 16	May 27	June 10
<a href="#">Nanoose/Lantzville/Nanaimo</a> (1,068 ha, PDF 49KB) - 3 days required	May 20-22	June 1-3	June 12-14
<a href="#">Lake Cowichan</a> (402 ha, PDF 29KB)	May 19	June 1	June 10
<a href="#">Surrey</a> (108 ha, Grandview Heights) (PDF 23KB)	May 13	May 25	June 5
<a href="#">Burnaby</a> (193 ha, PDF 39KB)	May 13	May 25	June 5
<a href="#">Mission</a> (341 ha, PDF 30KB)	May 14	May 26	June 6

Aerial Spray Treatment Areas and Approximate Dates (subject to change) - Updated April 20, 2022

LOCATION (click to view maps)	1st Treatment	2nd Treatment	3rd Treatment
<a href="#">Chilliwack</a> (49 ha, PDF 104KB)	May 16	May 27	June 7
<a href="#">Langley</a> – treatment for Asian gypsy moth (LDA) (362 ha PDF 27KB)	May 3	May 24	June 4

Have a great day!



Conrad Bérubé, M.Sc., P.Ag., BCE | Senior Integrated Pest Management Officer

Compliance and Environmental Enforcement | BC Ministry of Environment and Climate Change Strategy  
2080-A Labieux Road | Nanaimo, BC | V9T 6J9 | Tel: 250.739.8229

To report an act of pollution call the RAPP (Report All Poachers and Polluters) line at 1-877-952-7277 or #7277 on the TELUS Mobility Network or report the incident [online](#)

To report a spill call the Provincial Emergency Program at 1-800-663-3456

More information about Environmental Compliance and how it is assessed can be found [here](#).

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Withheld pursuant to/removed as

s.12 ; s.13 ; s.14

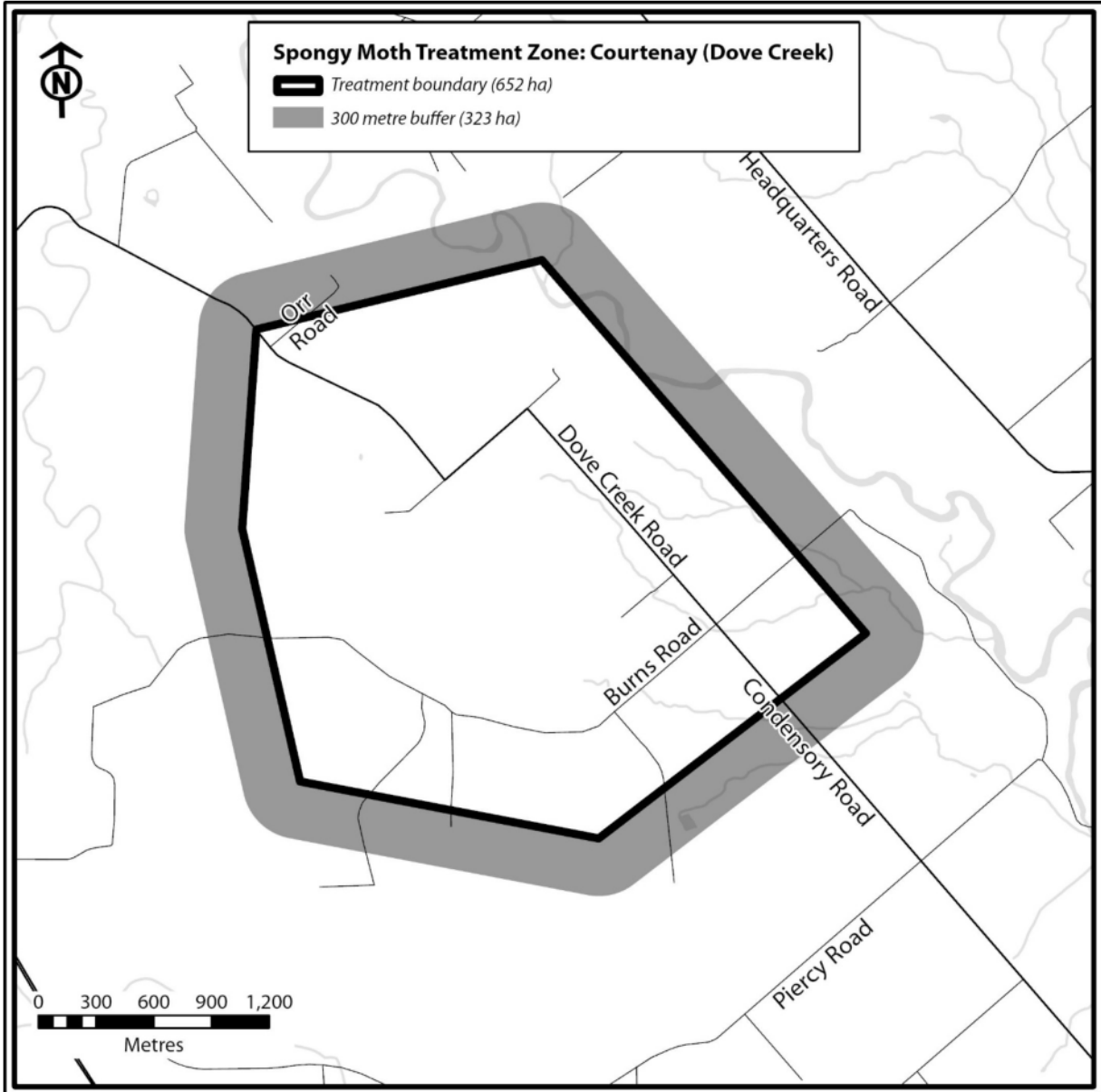
**Courtenay 2022 Lymantria Moth Aerial Spray Program Treatment Plan**  
**Ministry of Forests**

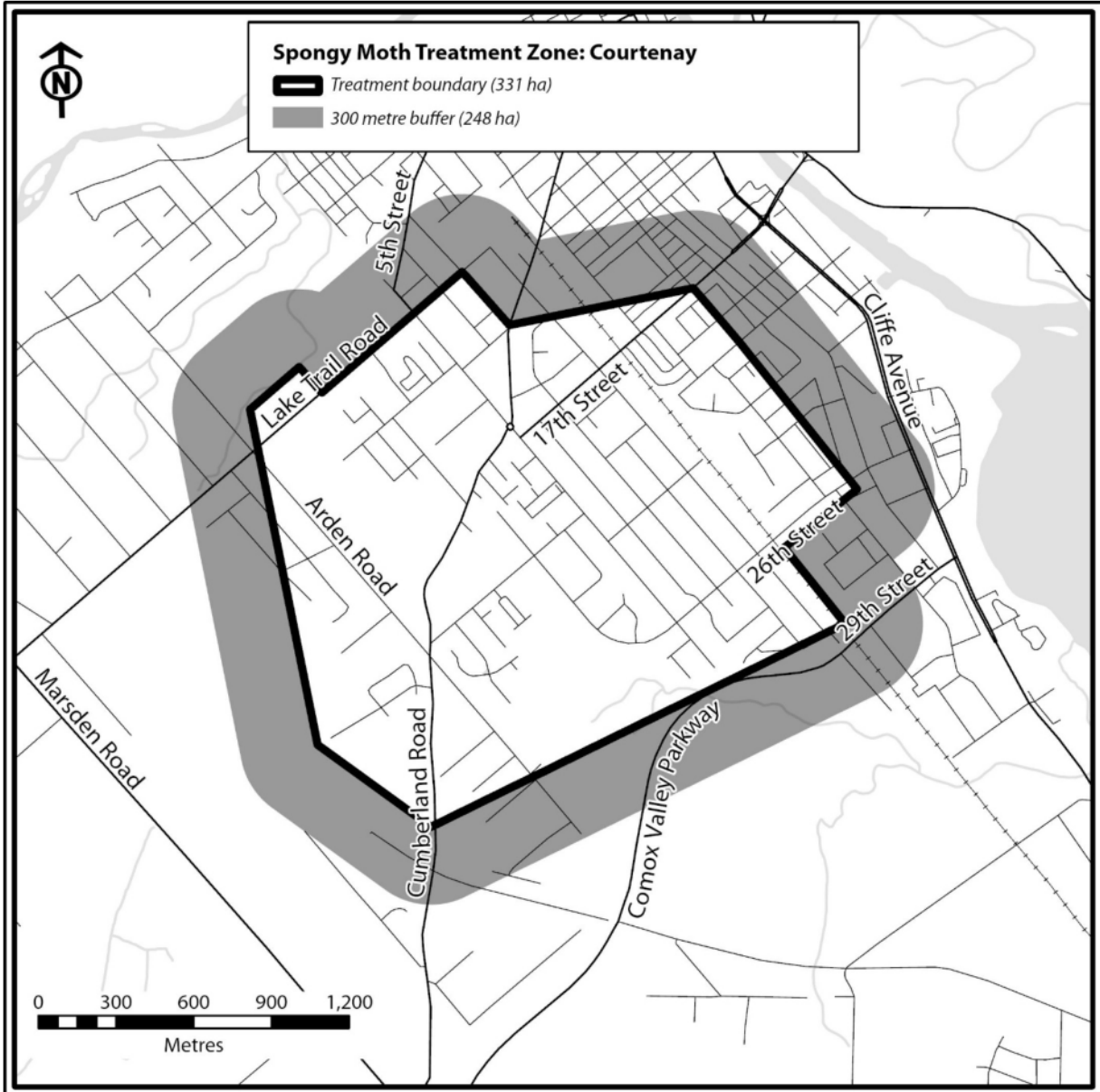
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1. Program Contact: Babita Bains, Provincial Forest Entomologist, MOF ([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - Courtenay – Dove Creek: 652 ha
    - City of Courtenay: 331 ha
3. Public Outreach / Notification:
  - Within seven days of receiving the permit, a copy of the permit and map of the treatment area will be posted at the following locations:
    - MOF Lymantria Moth website; and
    - Comox Valley Regional District Office
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
  - MOF will update the 24-hour Lymantria moth information line and Lymantria moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, MOF will notify via telephone or email:
    - the Medical Health Officer (Island Health Authority);
    - the Principals of all schools within the treatment area and primary zone of spray drift deposition;
    - the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition;
    - all persons subscribed to the news web page;
    - RCMP; and
    - IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).
  - At least 48 hours before commencement of each spray application, MOF will place treatment notices so they are clearly visible to anyone entering the treatment areas:

- Lawn signs with treatment window and map of the treatment area; and
- LED highway signs (message boards) on any major highways.

Courtenay treatment areas:









VIA E-MAIL

2023-01-11

Files: 738-0032-21-24; 738-0035-23-23; 738-0036-23-23

**Integrated Pest Management Committee:**

Behn Andersen (IPMC Chair, IPM ENV, [Behn.Andersen@gov.bc.ca](mailto:Behn.Andersen@gov.bc.ca))

Jon Mullan (IPM Unit head, IPM ENV, [Jonathan.Mullan@gov.bc.ca](mailto:Jonathan.Mullan@gov.bc.ca))

Lauren Hall (IPMC Secretary, IPM ENV, [Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca))

Martina Beck (Unit Head – Freshwater Applied Science & Programs, WLRS, [Martina.Beck@gov.bc.ca](mailto:Martina.Beck@gov.bc.ca))

Stefan Zeglen (Forest Health Officer, FOR, [Stefan.Zeglen@gov.bc.ca](mailto:Stefan.Zeglen@gov.bc.ca))

Crystal Chadburn (Sr. Invasive Plant Specialist, FOR, [invasive.plants@gov.bc.ca](mailto:invasive.plants@gov.bc.ca))

Kenneth Sapsford (Pesticide Specialist, AGRI, [Kenneth.Sapsford@gov.bc.ca](mailto:Kenneth.Sapsford@gov.bc.ca))

Geneen Russo (Director, Healthy Community Environments, HLTH, [Geneen.Russo@gov.bc.ca](mailto:Geneen.Russo@gov.bc.ca))

Ammar Makhzoum (Regional Manager, Health Canada, [ammam.makhzoum@hc-sc.gc.ca](mailto:ammam.makhzoum@hc-sc.gc.ca))

**Additional Referees:**

Rory Beise (Drinking Water/Land Use Consultant, Island Health, [HBE@viha.ca](mailto:HBE@viha.ca))

Jennifer Heron (Invertebrate Specialist, WLRS, [Jennifer.Heron@gov.bc.ca](mailto:Jennifer.Heron@gov.bc.ca))

**Re: Pesticide Use Permit Application Referral – Response Requested**

The Ministry of Forests has applied for two pesticide use permits and a permit amendment of permit 738-0032-21-24 under the *Integrated Pest Management Act*. The applications are for aerial treatment of Spongy Moth (formerly Gypsy Moth) with Foray 48B (PCP 24977, active ingredient *Bacillus thuringiensis* var *kurstaki*). Seven treatment areas are proposed in Campbell River, Courtenay (City and Dove Creek sites), Port Alberni and Victoria (View Royal, Esquimalt and Belmont sites).

As a current member of the Integrated Pest Management Committee or as an identified additional referee, we request a review by you or other staff in your agency to identify any potential concerns to human health or the environment and any conditions that may mitigate those risks. Any comments or concerns raised in your response will be considered in the adjudication of the permit application.

We respectfully request that your agency provide comments by **February 1, 2023**.

IPM Committee and referees  
Date: January 11, 2023

Files: 738-0032-21-24; 738-0035-23-23; 738-0036-23-23

If you have any questions regarding this application, or require an extension to the comment period, please contact me at [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca) or 236-468-2249. If you have no concerns, a simple statement to that effect is appreciated.

Sincerely,



Chelsea Eby  
IPM Officer  
Ministry of Environment & Climate Change Strategy

Attachment:

- Application forms
  - Courtenay PUP Application Amendment LDD 2023
  - Victoria PUP Application LDD 2023
  - CR PA PUP Application LDD 2023
- Maps
  - Courtenay LDD
  - Courtenay Dove Creek LDD
  - Victoria Belmont LDD
  - Victoria View Royal LDD
  - Victoria Esquimalt LDD
  - Campbell River LDD
  - Port Alberni LDD
- Treatment plans
  - 738-0032-21-24 Treatment Plan Courtenay LDD 2023
  - PUP Treatment Plan Victoria LDD 2023
  - PUP Treatment Plan CR PA LDD 2023

## IPMC Referral - Spongy Moth PUP Applications

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From: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
To: Andersen, Behn ENV:EX <Behn.Andersen@gov.bc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Beck, Martina LWRS:EX <Martina.Beck@gov.bc.ca>, Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>, Provincial Invasive Plant Program FOR:EX <Invasive.Plants@gov.bc.ca>, Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>, ammar.makhzoum@hc-sc.gc.ca, Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>  
Cc: Miller, Val FOR:EX <Val.Miller@gov.bc.ca>, Russo, Geneen HLTH:EX <Geneen.Russo@gov.bc.ca>  
Sent: January 11, 2023 11:02:44 AM PST  
Attachments: Courtenay\_PUP\_Application\_Amendment\_LDD\_2023.pdf, Courtenay\_Dove Creek\_LDD.jpg, Campbell River\_LDD.jpg, 738-0032-21-24\_Treatment Plan\_Courtenay\_LDD\_2023.docx, PUP\_Treatment Plan\_Victoria\_LDD\_2023.docx, Port Alberni\_LDD.jpg, PUP\_Treatment Plan\_CR\_PA\_LDD\_2023.docx, Victoria\_View Royal\_LDD.jpg, Victoria\_Esquimalt\_LDD.jpg, Victoria\_Belmont\_LDD.jpg, CR\_PA\_PUP\_Application\_LDD\_2023.pdf, Courtenay\_LDD.jpg, Victoria\_PUP\_Application\_LDD\_2023.pdf, 2023-01-11 IPMC Referral letter - Spongy Moth PUP Applications.pdf

Hello IPM Committee members,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

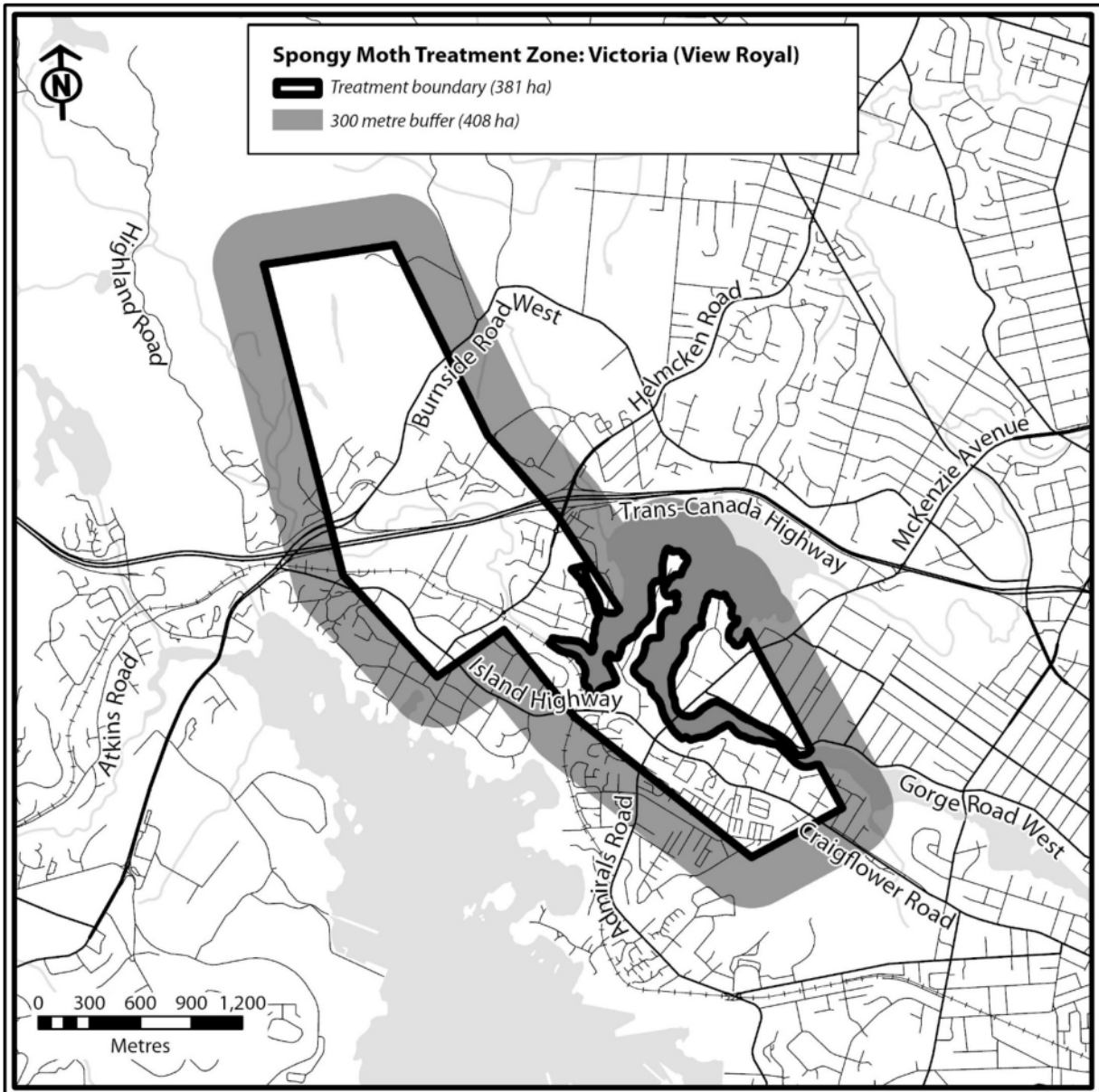
*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / həŋqəmiñəm speaking peoples.*

**Victoria (View Royal, Esquimalt and Belmont)**  
**2022 Lymantria Moth Aerial Spray Program Treatment Plan**  
**Ministry of Forests**

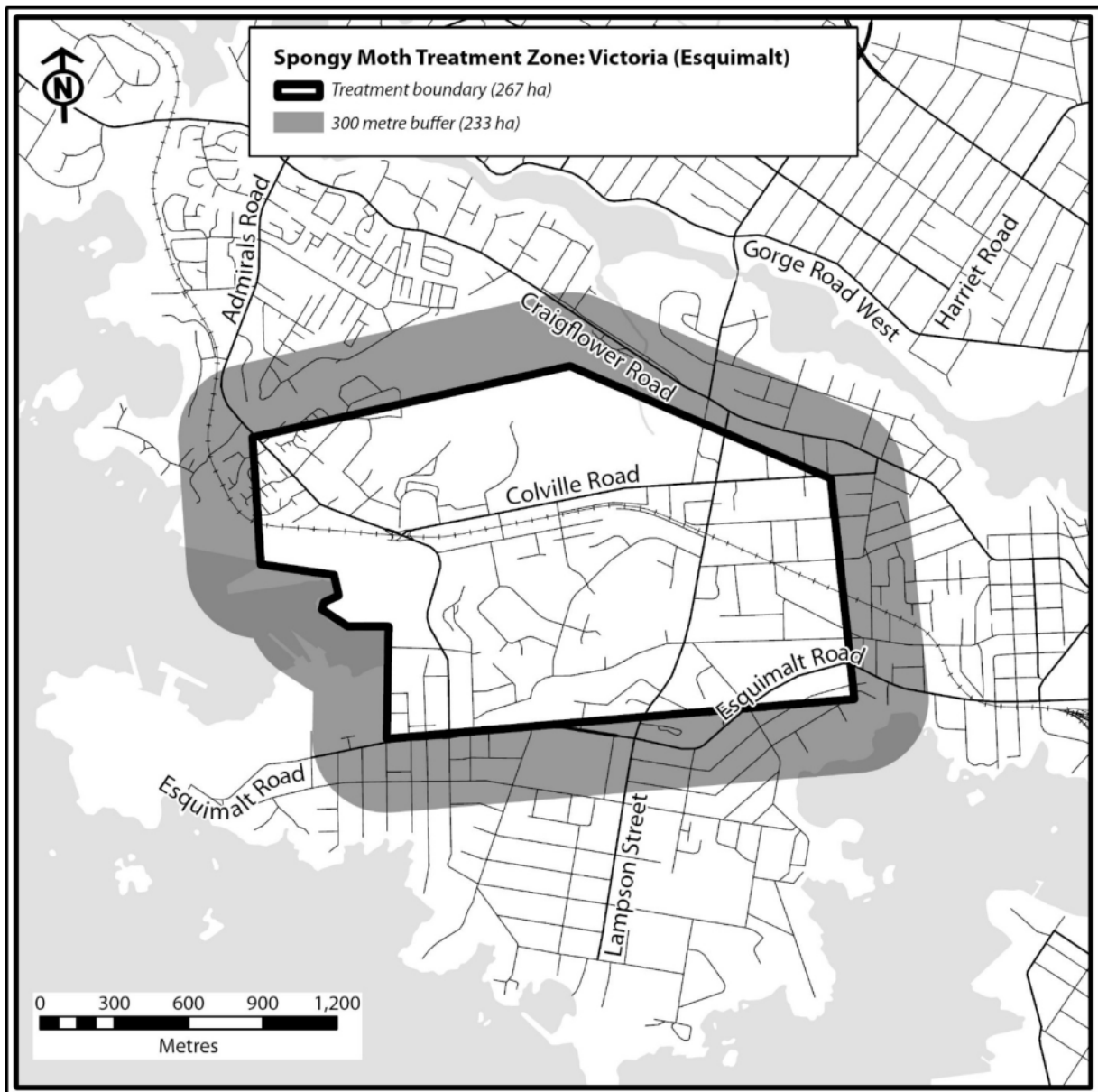
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1. Program Contact: Babita Bains, Provincial Forest Entomologist, MOF ([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - View Royal: 381 ha
    - Esquimalt: 267 ha
    - Belmont: 341 ha
3. Public Outreach / Notification:
  - Within ten days of receiving the permit, a copy of the permit and map of the treatment area will be posted on the MOF Lymantria moth website.
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
  - MOF will update the 24-hour Lymantria moth information line and Lymantria moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, MOF will notify via telephone or email:
    - all persons subscribed to the news web page; and
    - IPM Officer Scott Bennett via email (copy: [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca)).
  - At least 48 hours before commencement of each spray application, MOF will place treatment notices, so they are clearly visible to anyone entering the treatment areas:
    - Lawn signs with treatment window dates and map of the treatment area; and
    - LED highway signs (message boards) on any major highways.

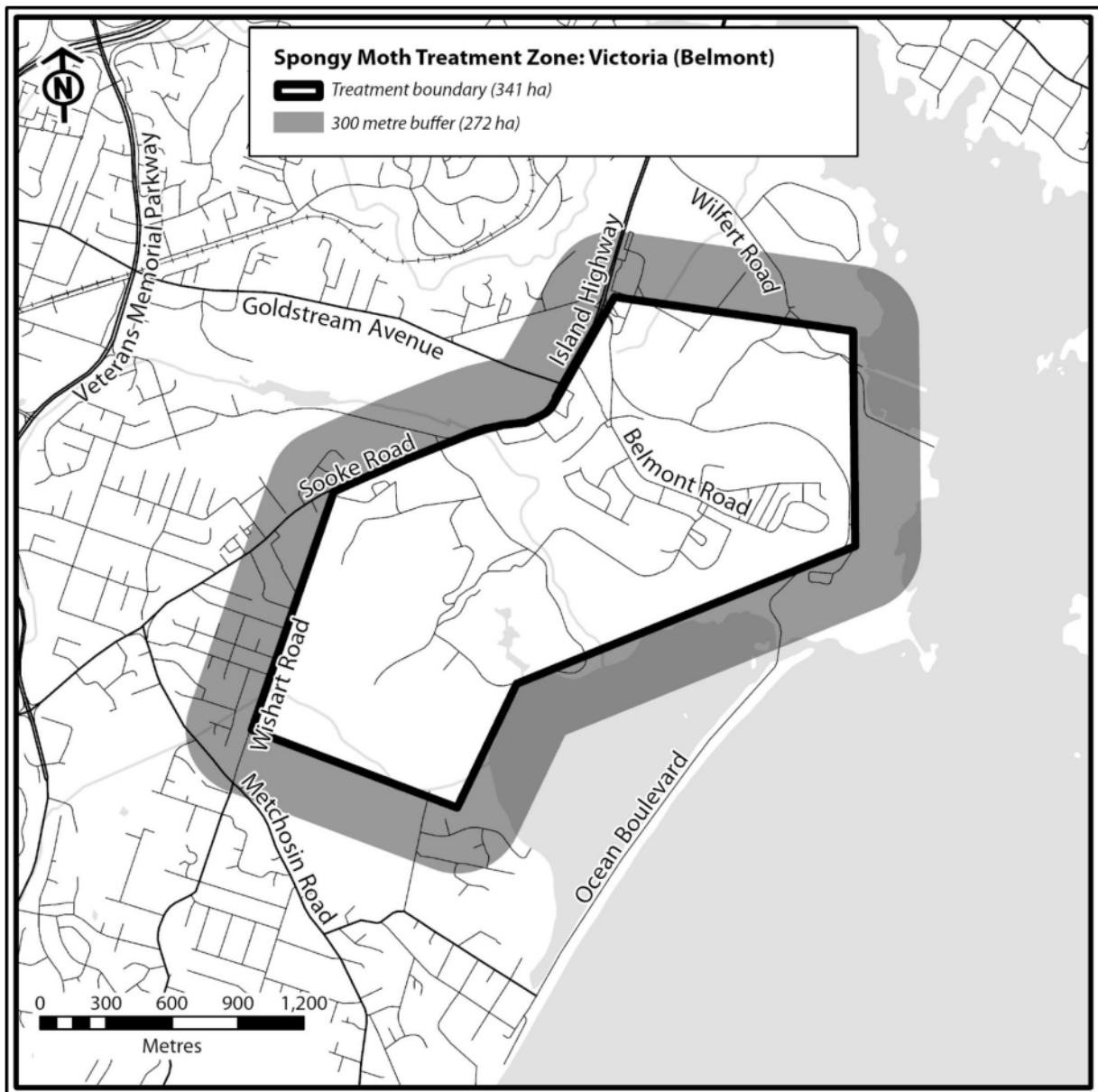
View Royal Treatment Area:

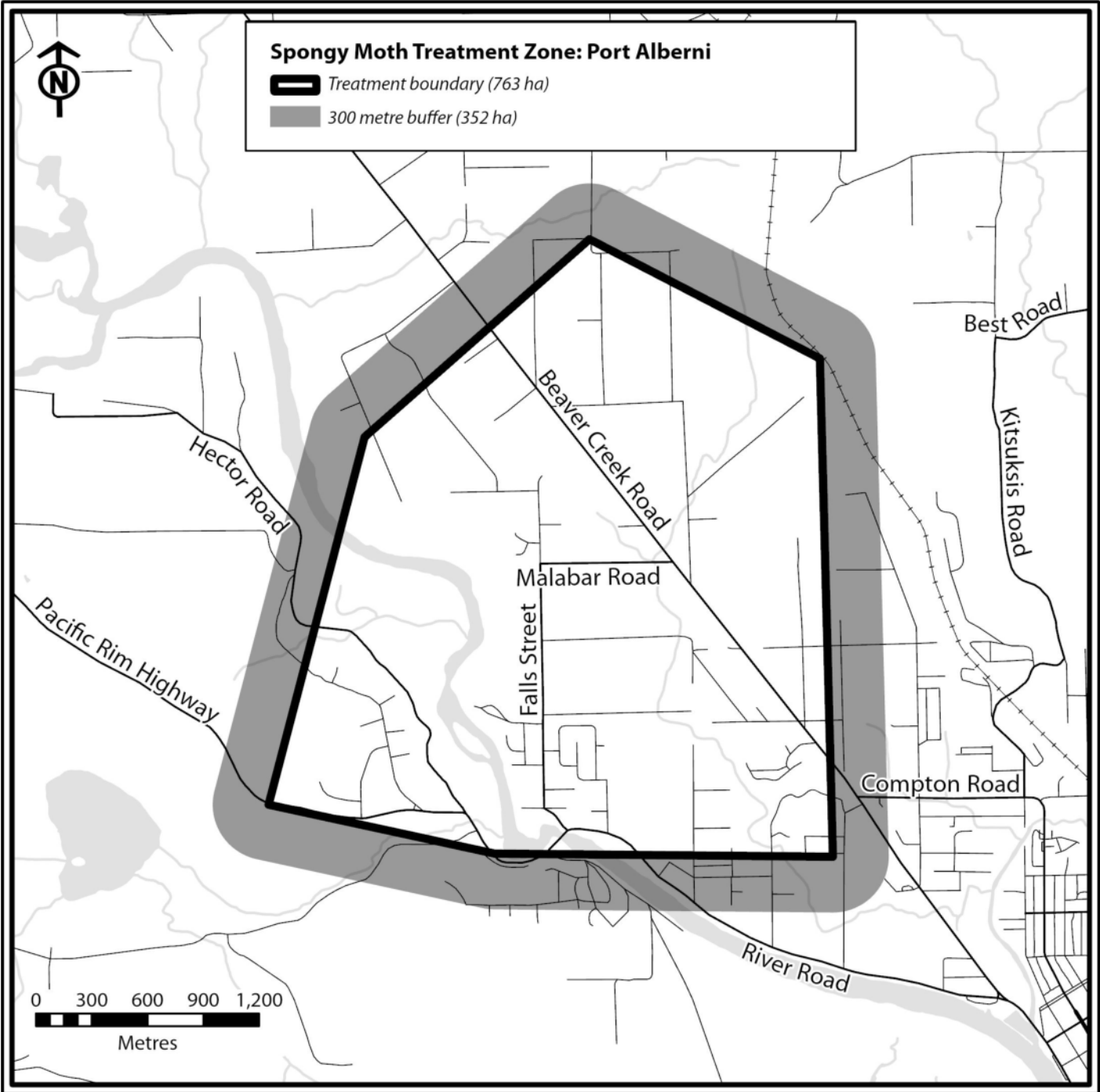


Esquimalt Treatment Area:



Belmont Treatment Area:





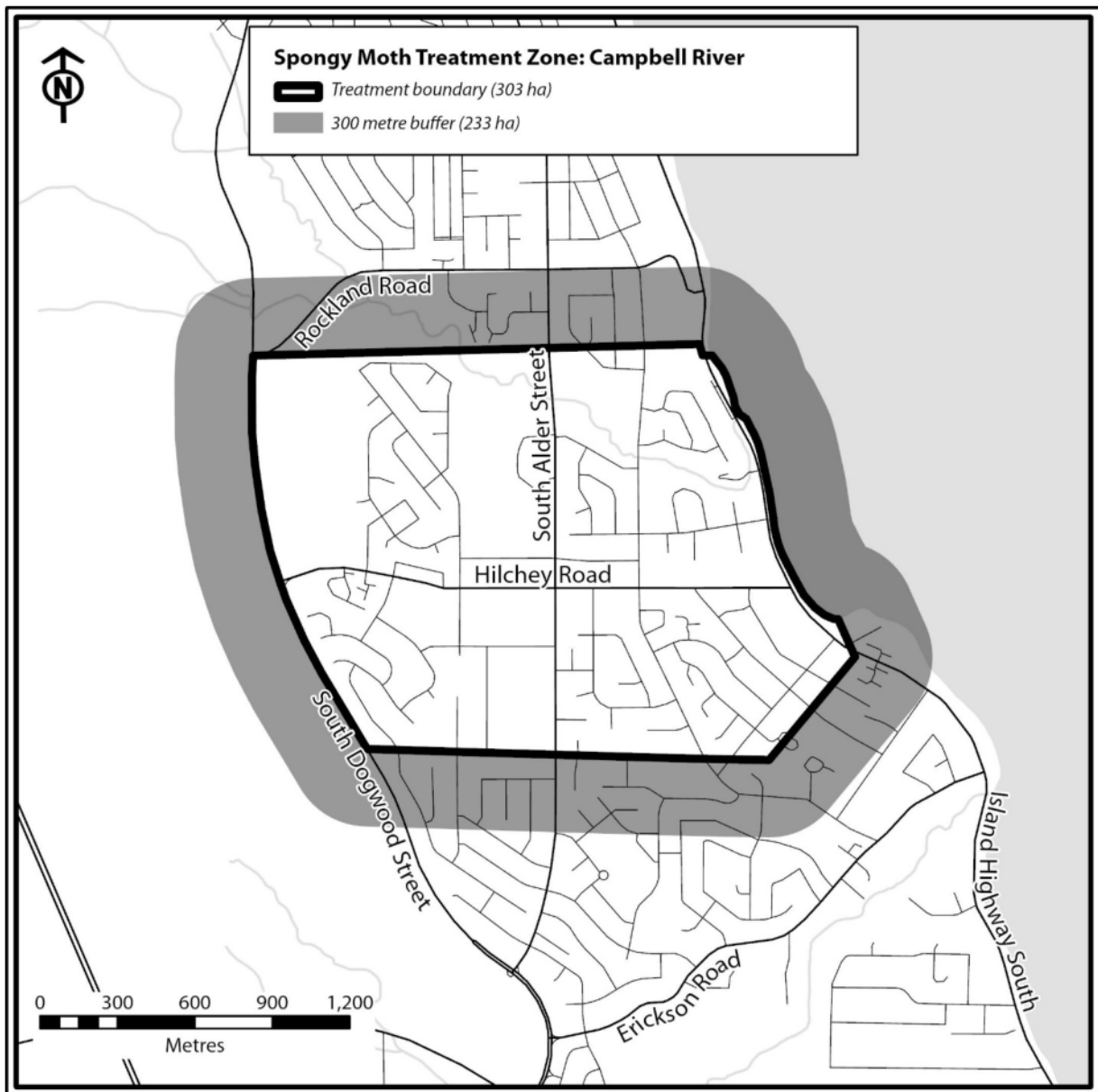


**Campbell River and Porta Alberni  
2022 Lymantria Moth Aerial Spray Program Treatment Plan  
Ministry of Forests**

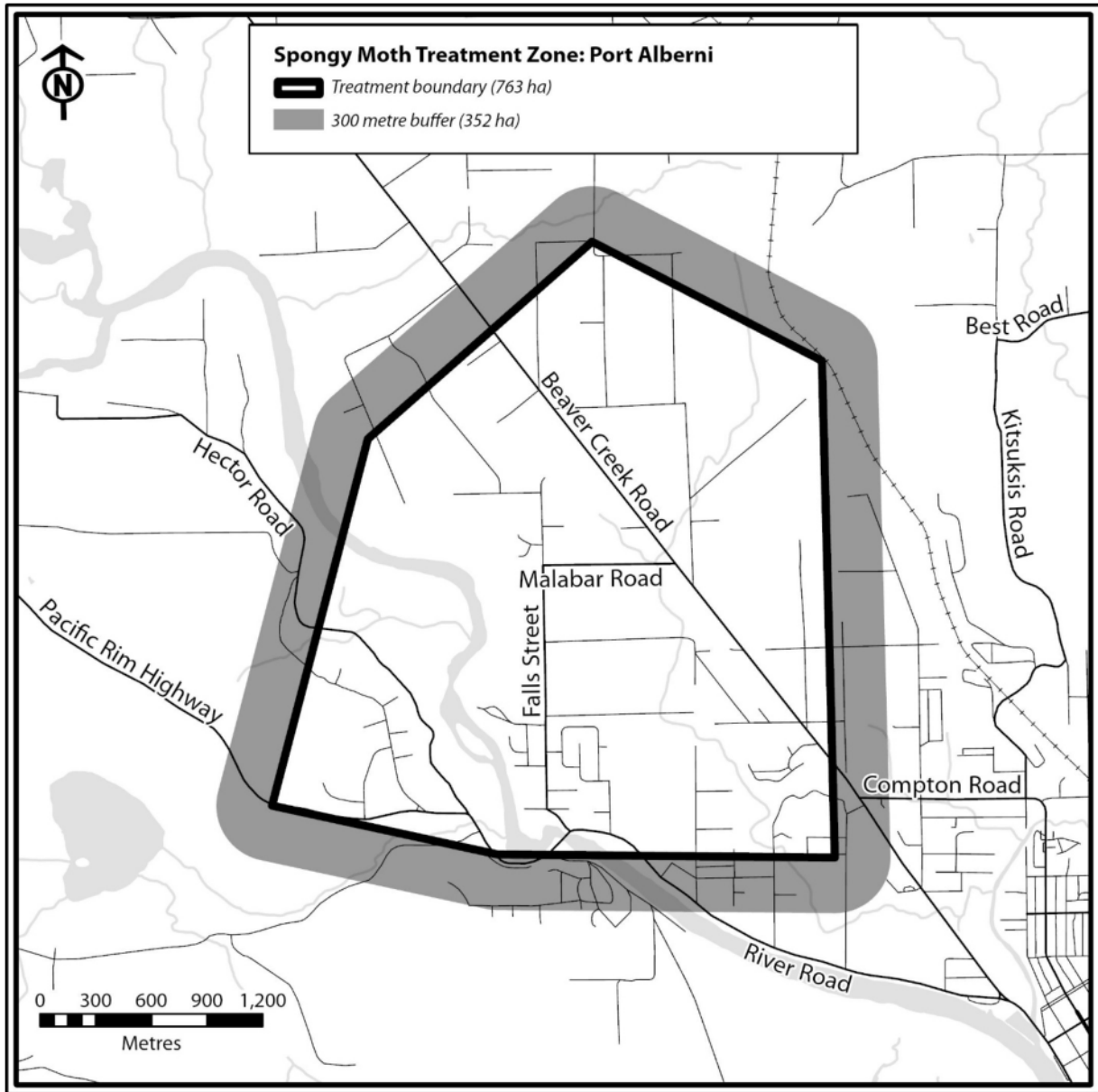
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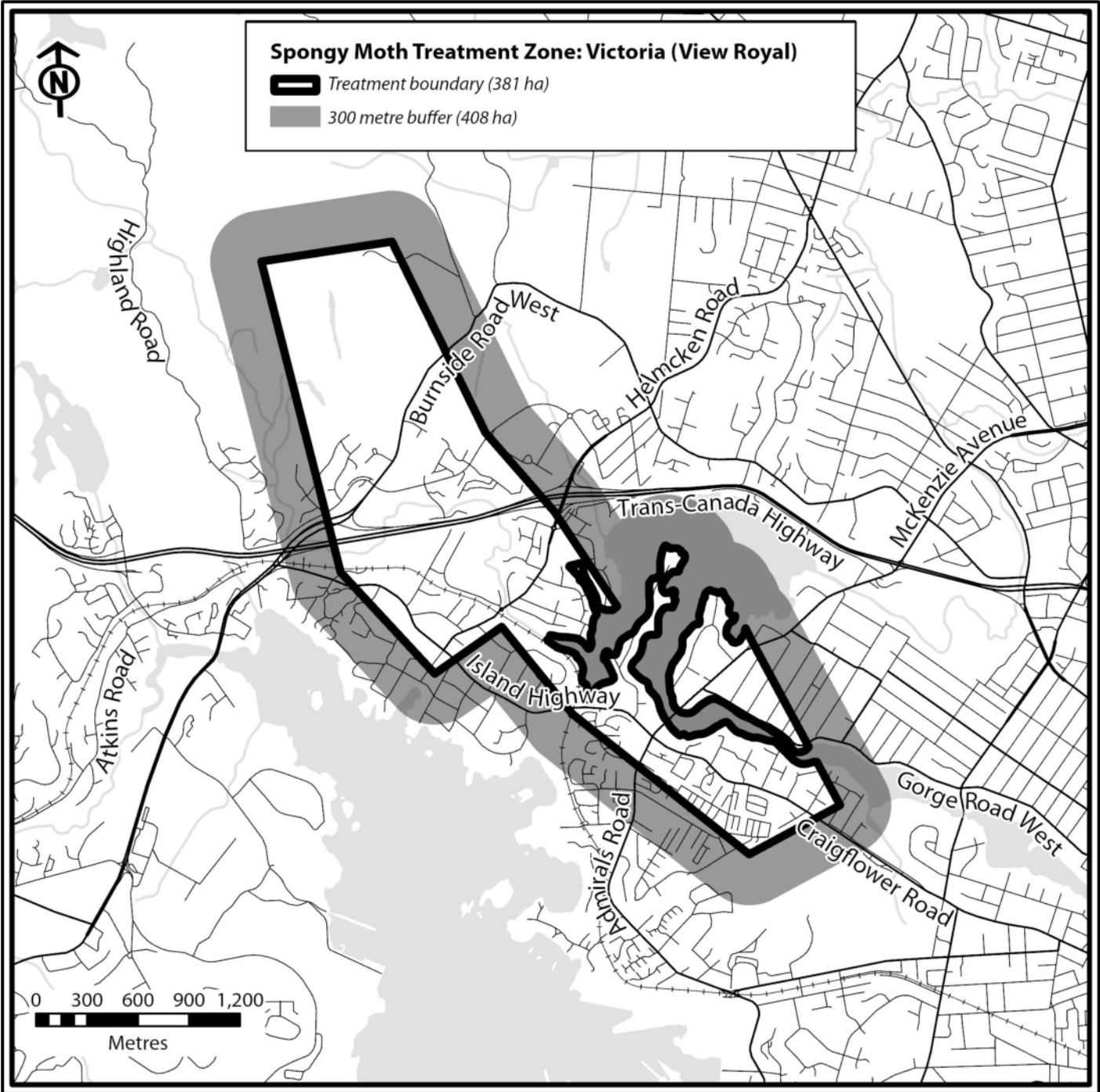
1. Program Contact: Babita Bains, Provincial Forest Entomologist, MOF ([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - Campbell River: 303 ha
    - Port Alberni: 763 ha
3. Public Outreach / Notification:
  - Within ten days of receiving the permit, a copy of the permit and map of the treatment area will be posted on the MOF Lymantria moth website.
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
  - MOF will update the 24-hour Lymantria moth information line and Lymantria moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, MOF will notify via telephone or email:
    - all persons subscribed to the news web page; and
    - IPM Officer Scott Bennett via email (copy: [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca)).
  - At least 48 hours before commencement of each spray application, MOF will place treatment notices so they are clearly visible to anyone entering the treatment areas:
    - Lawn signs with treatment window dates and map of the treatment area; and
    - LED highway signs (message boards) on any major highways.

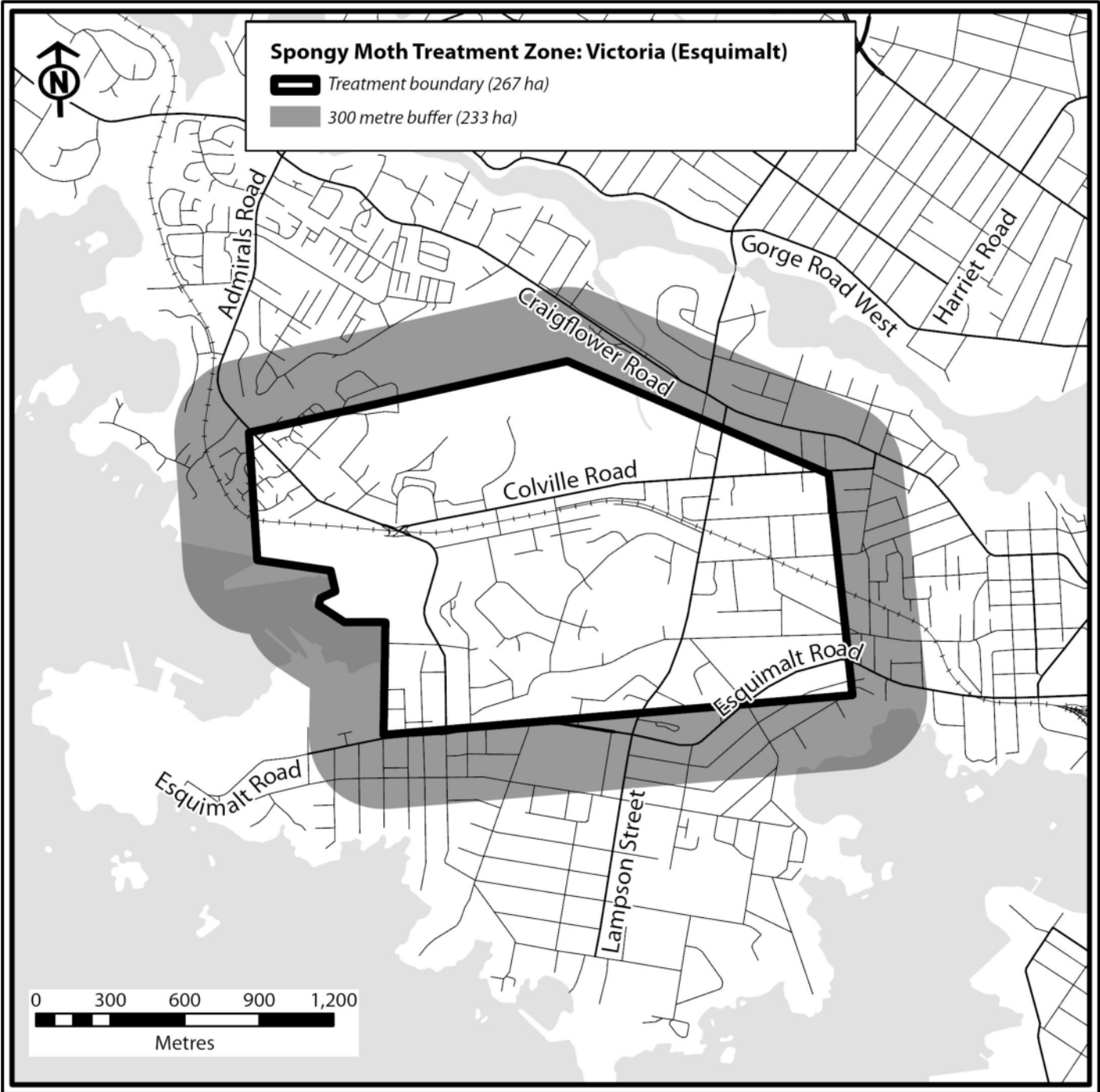
Campbell River treatment area:

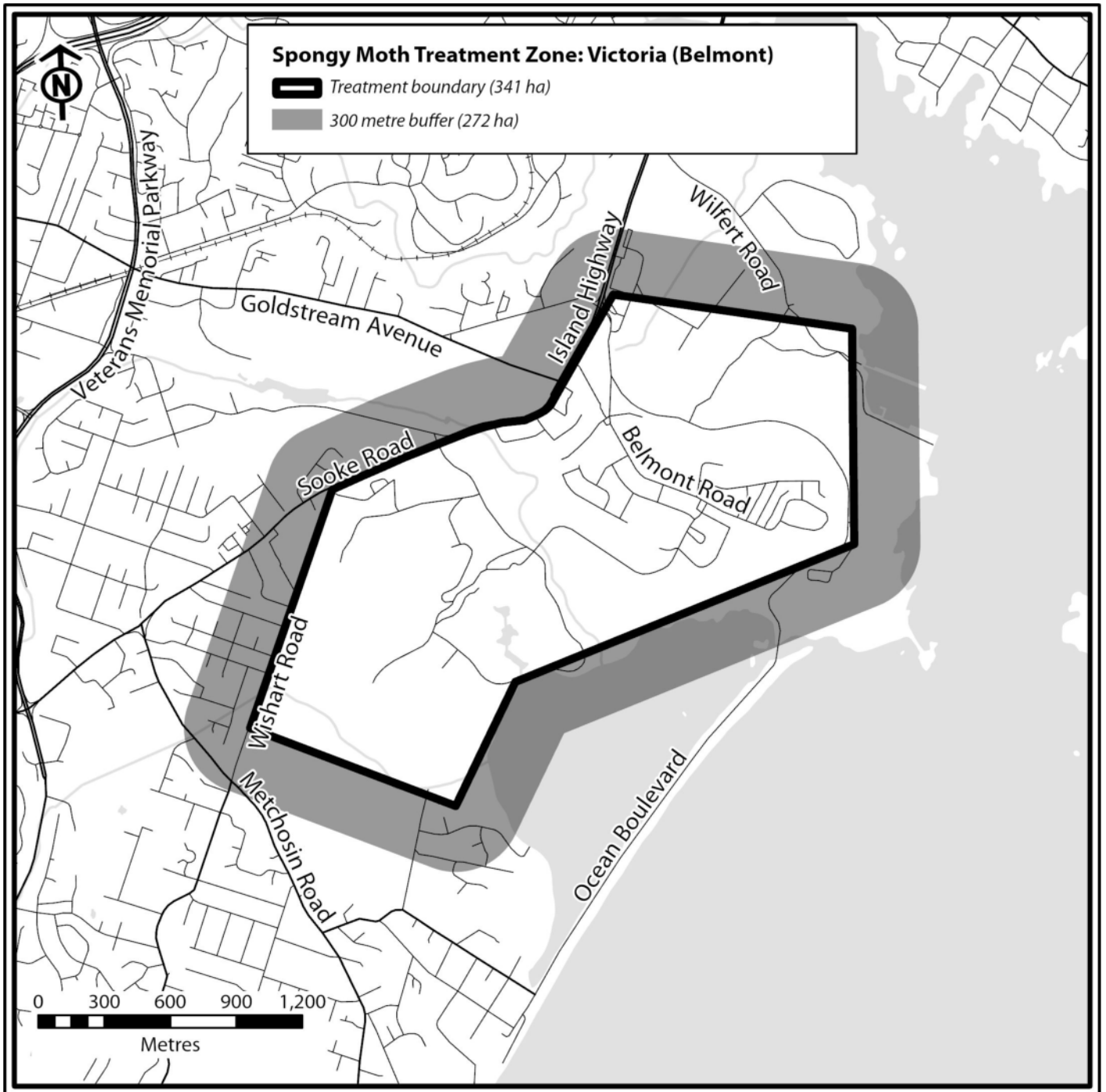


Port Alberni Treatment Area:











## Pesticide Use Permit Application under the *Integrated Pest Management Act*

FORM REFERENCE CODE: EPD-IPM-10v2

### INSTRUCTIONS:

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

The permitting process consists of several steps that require the submission of an application form, map and fee, followed by meetings with ministry staff to receive guidance on the consultation process and required documentation. If you have questions, you are encouraged to contact ministry staff by email at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

### HOW TO SUBMIT:

Please submit this form and maps via email to [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) with the subject line "Pesticide Use Permit Application". If large files prevent email submission, please use the ministry's File Transfer Service at <http://www.env.gov.bc.ca/csd/imb/soft/soft.shtml>.

There is an application fee of \$1000 that is due upon submission of this application. The fee is non-refundable after a permit application number has been issued. Please see Section 12 for payment information.

Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6



**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street 200 - 10470 152nd St.			5
	City Surrey	Province BC	Postal Code V3R 0Y3	6
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone 250-468-2295	Mobile 250-812-5752	7
<b>Email Address</b>	babita.bains@gov.bc.ca		8





**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

*“Applicant” means the Applicant as identified in section 1 of this application form, and  
“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3

### Section 4: Owner or Manager of the Treatment Location

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

### Section 5: Description of Proposed Pesticide Use

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient <i>Bacillus thuringiensis</i> var <i>kurstaki</i> (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>

## Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023. Each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:30 am) all flights over populated	3
<b>Anticipated number of applications per year</b>	Three at each site = nine applications	4

## Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Victoria-View Royal: 381 ha in the View Royal, Craigflower and Esquimalt area. The northern treatment boundary extends across the Highland Pacific Golf Course. The western boundary extends from the golf course to Klsingbury Ln near Island Hwy and south to Helmcken Rd just north of View Royal Ave. The western boundary then extends around View Royal Elementary School and south through Glentana Rd at Admirals Rd, down to the north end of Gorge Vale Golf Course. The southern boundary extends south of Ned Williams Rd (along the golf course) and east, halfway down Shirley Rd. The eastern boundary extends from Shirley Rd and includes the points in Portage Inlet. The Inlet and Gorge will not be sprayed (booms off). The eastern boundary extends from Crane place to the northern boundary. Victoria General Hospital is east of the treatment boundary and will not be sprayed.

Victoria-Esquimalt: 267 ha in Esquimalt. The northern treatment point is in the middle of Gorge Vale Golf Course and extends southeast to Admirals Rd (between Luscombe Pl and Maplebank Rd) and southwest to Carrie St. at Colville Rd. The western boundary extends from Admirals Rd, along the inlet, down Sturdee St to Esquimalt Rd. The southern boundary extends along Esquimalt Rd and east to Dunsmuir Rd at Sea Terrace. The eastern boundary extends from Dunsmuir Rd to Colville Rd at Carrie St.

Victoria-Belmont: 267 ha in Colwood around Belmont Park. The northern treatment boundary extends from Sooke Rd at Wishart Rd and follows Sooke Rd to Wate Rd. The northern boundary

## Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

## Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	381	1,524 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	267	1,068 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	341	1,364 L

## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.

## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.

3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.

4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.

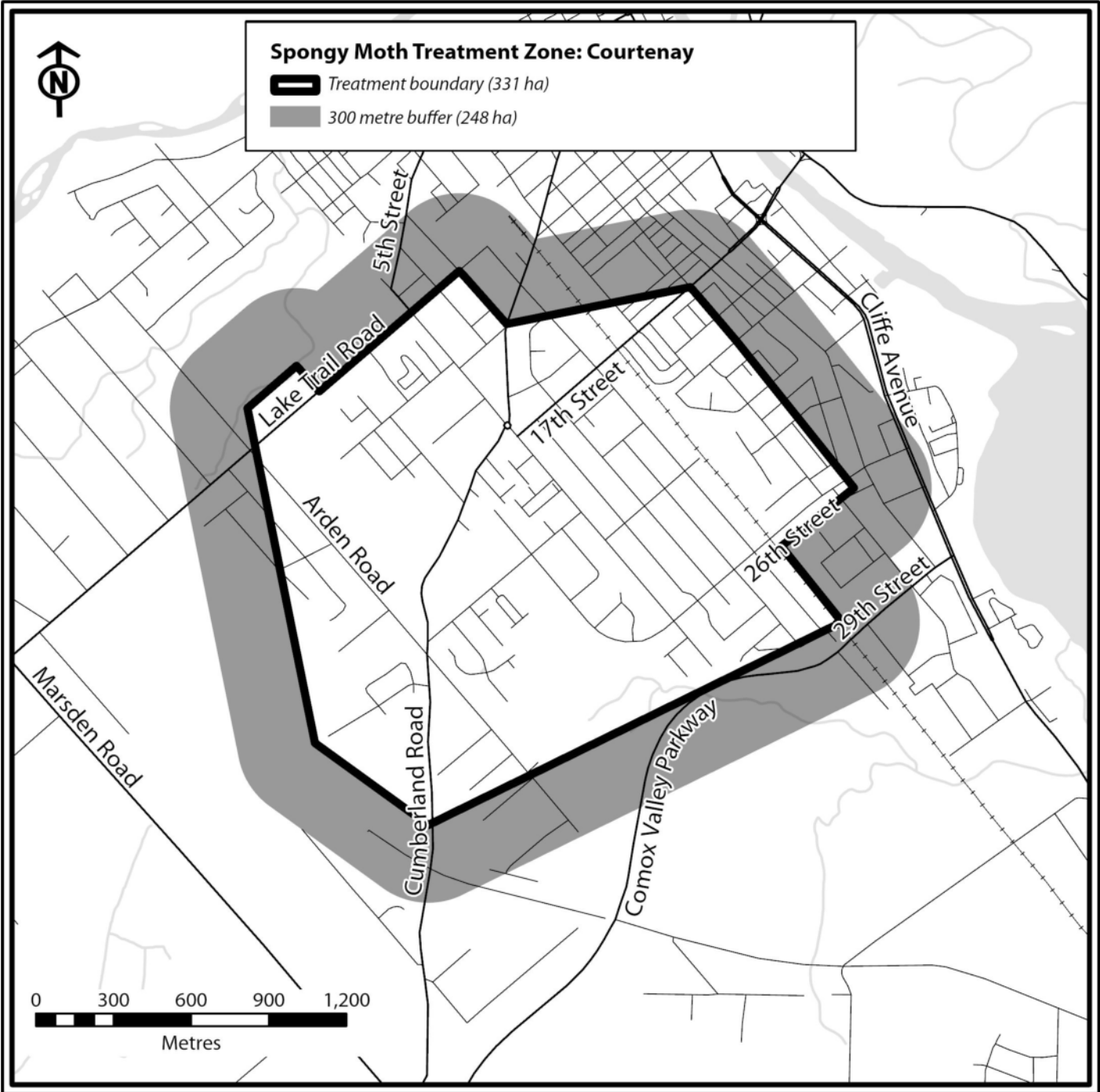
5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-24	4

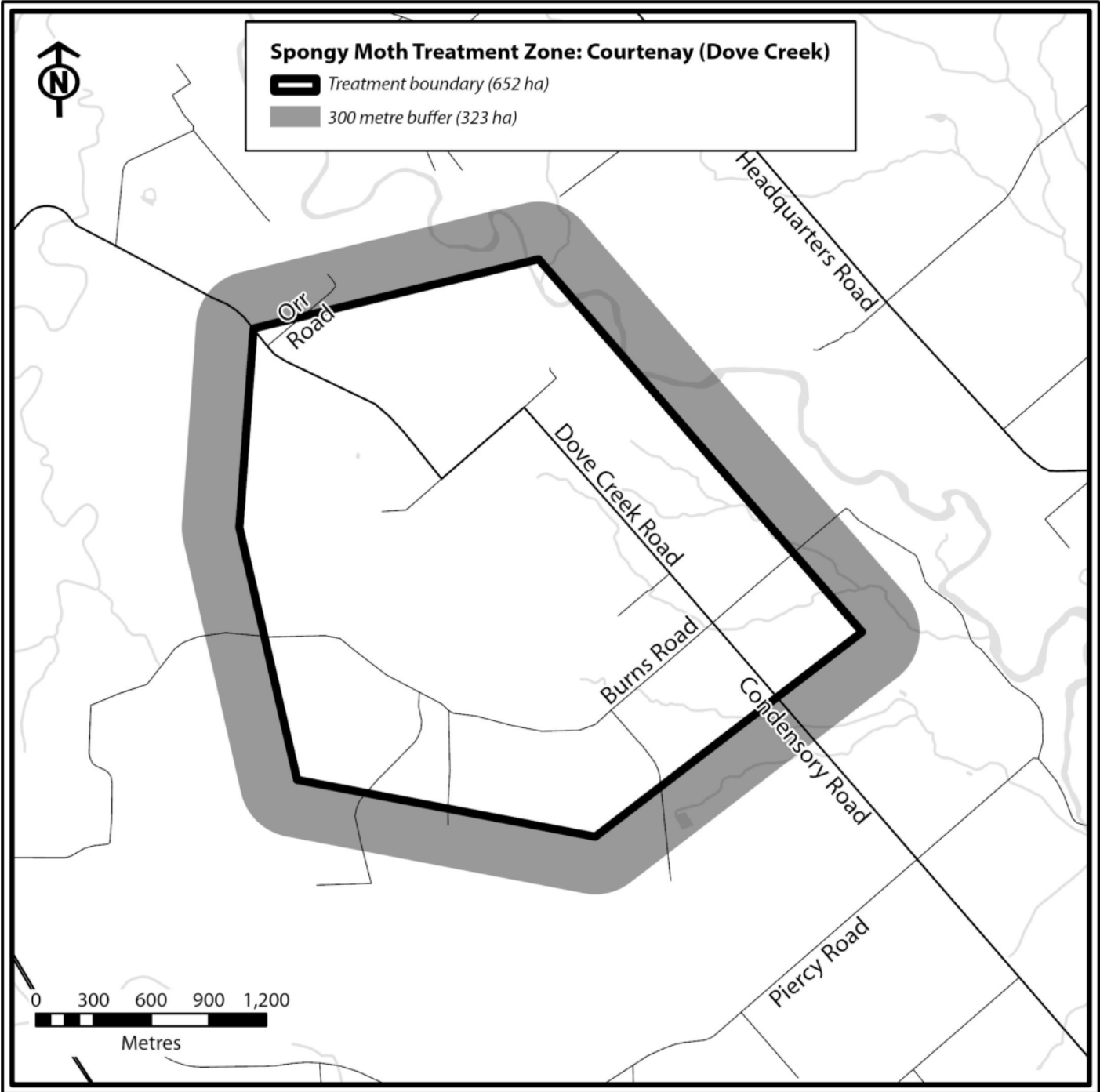
## Section 12: Payment of Fees

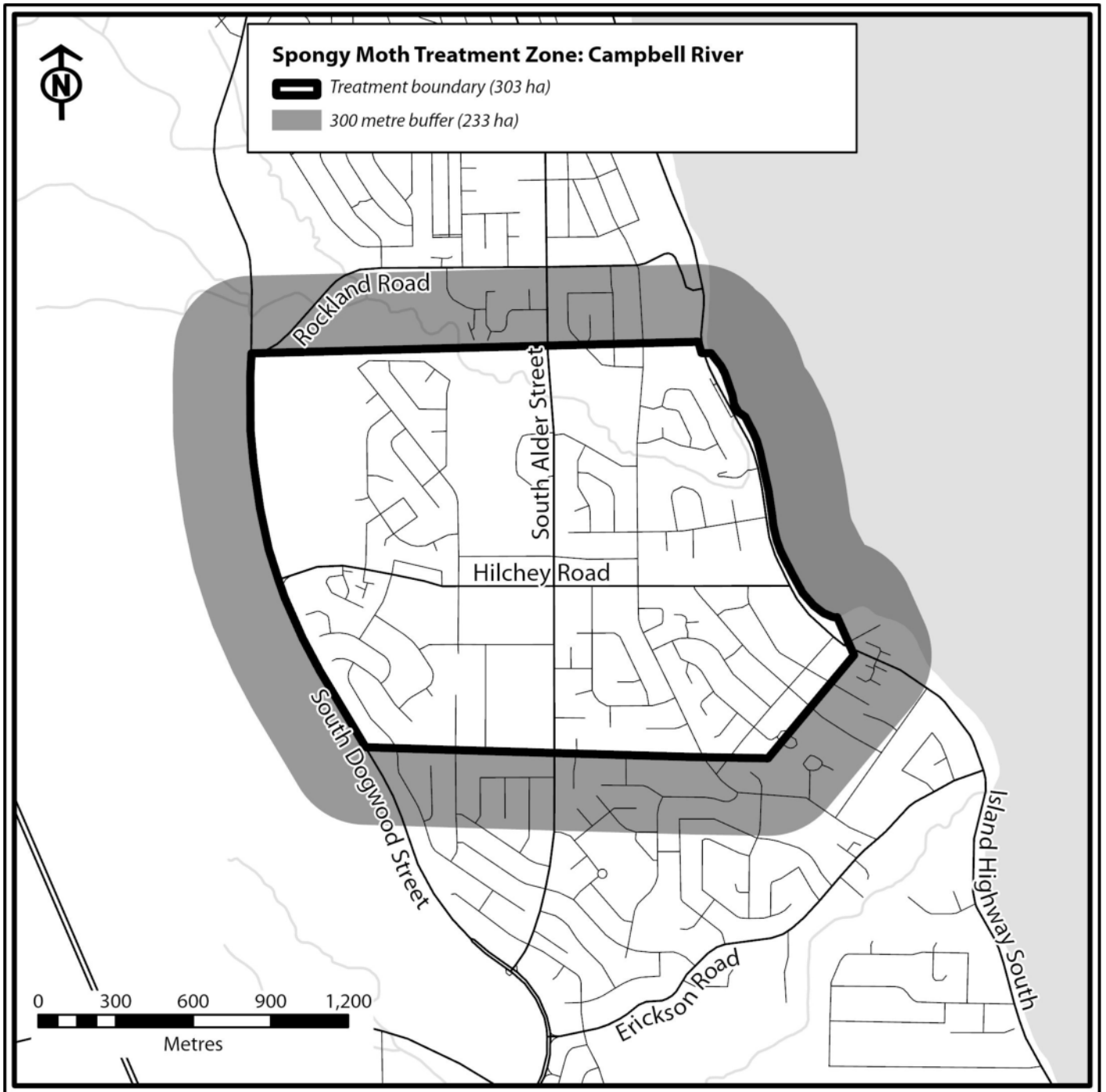
The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> <i>(999) 999-9999</i>		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> <i>(999) 999-9999</i>		6









Communications Map Layout

Spatial Reference: NAD 1983 BC Environment Albers

Sources: Lymantria Treatment Area Boundaries, Province of British Columbia; Roads, CanVec 1:50k; Water Features, CanVec 1:50k.

Caslys Consulting Ltd.  
2022-11-18

## **FYI - New product for spongy moth**

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From: Hall, Lauren ENV:EX  
To: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>, Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 25, 2023 10:28:53 AM PST

I watched a spongy moth update today and learned that there is a newly registered product labeled for spongy moth suppression: [https://pr-rp.hc-sc.gc.ca/1\\_1/view\\_label?p\\_ukid=262387613](https://pr-rp.hc-sc.gc.ca/1_1/view_label?p_ukid=262387613)

It's labeled for ground or aerial application but don't think it can be used in populated areas.

No plans for use by MOF at this time but could come up in the future. The active is also on Schedule 4 (I think...they are spelled a bit differently!)

### **Lauren Hall, M.Sc., P.Ag.**

IPM Large Industry Specialist  
BC Ministry of Environment & Climate Change Strategy

Integrated Pest Management Program  
Headquarters / Victoria  
(778) 698-9277  
[Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca)

# moths Interior	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1			Prince George	LDA-BC-2021-06615		New	Delim 16
1	51.133448	-117.85559	REVELSTOKE	LDA-BC-0000160757	from Delim		Delim 36
2	50.838201	-118.99181	SICAMOUS	LDA-BC-0000160758	s.22	new	delim 16
1	50.756060	-119.24086	CANOE	LDA-BC-0000160759	Canoe Beach Park	new	delim 16
1	49.510000	-119.64	PENTICTON	LDA-BC-0000160329	s.22	2020	delim 36
1	49.706478	-123.16325	SQUAMISH	LDA-BC-0000160586	Bailey St	new	delim 16

coastal

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
3	49.606287	-124.04346	MADEIRA PARK	LDA-BC-0000160618	s.22	new	delim 16
1	49.474004	-123.7595	SECHELT	LDA-BC-0000160614		new	delim 16
1	49.309965	-121.90085	Harrison mills	LDA-BC-0000160639		new	delim 16
1	49.102938	-121.94819	CHILLIWACK	LDA-BC-0000160767		new	delim 16
5			CHILLIWACK			2020	spray aerial

1

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1			CHILLIWACK		s.22	2020	spray aerial
2	49.086956	-121.93791	CHILLIWACK	LDA-BC-0000160638		2020	spray aerial
1	49.236395	-122.38752	MISSION	LDA-BC-0000160762			
1	49.165514	-122.28946	MISSION	LDA-BC-0000160640			spray aerial
1	49.158455	-122.29508	MISSION	LDA-BC-0000160611	Dewdney Trunk Rd.		
1	49.162108	-122.30055	MISSION	LDA-BC-0000160610	s.22		

2

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	49.154802	-122.28961	MISSION	LDA-BC-0000160609	s.22		
2	49.154836	-122.29513	MISSION	LDA-BC-0000160608			
1	49.154870	-122.30065	MISSION	LDA-BC-0000160607			
1	49.239578	-122.49124	MAPLE RIDGE	LDA-BC-0000160717		2nd year	delim 36
1	49.106338	-122.43322	ABBOTSFORD	LDA-BC-0000160578		new	delim 16
2	49.230855	-122.81811	COQUITLAM	LDA-BC-0000160723		2nd year	spray ground or maybe aerial
7	49.228442	-122.81811	COQUITLAM	LDA-BC-0000160722			
1	49.229004	-122.82132	COQUITLAM	LDA-BC-0000160719			spray ground spray ground

3

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	49.107683	-122.89626	DELTA	LDA-BC-0000160627	HWY-10	new	delim 16
1	49.151144	-122.94031	DELTA	LDA-BC-0000160612	s.22	new	delim 16
1			BURNABY		Halifax st. bby mtn golf course	new	delim 16



# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
9	49.262393	-122.98591	BURNABY	LDA-BC-0000160646	s.22		
1			BURNABY			2020 2nd year	spray; delim 36; egg mass search
2			BURNABY				
2			BURNABY				
4	49.262392	-122.98038	BURNABY	LDA-BC-0000160647			

4

5

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
2	49.058653	-122.75152	SURREY	LDA-BC-0000160766	s.22	2nd year	spray; delim 36; egg mass
8	49.061355	-122.75394	SURREY	LDA-BC-0000160262			
1	49.061397	-122.75734	SURREY	LDA-BC-0000160260			
1	49.064554	-122.54352	LANGLEY	LDA-BC-0000160765			
1	49.092351	-122.5436	LANGLEY	LDA-BC-0000160764		2nd year	delim 16 or 36; combination
1			Langley				
1	49.077959	-122.56577	LANGLEY	LDA-BC-0000160763			
2	49.136022	-122.60939	LANGLEY	LDA-BC-0000160620		new	delim 16

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1			West Vancouver		s.22		
1	49.331268	-123.13523	WEST VANCOUVER	LDA-BC-0000160336		new 2nd year	delim 16 delim 36
1	49.302414	-123.00692	NORTH VANCOUVER	LDA-BC-0000160613	Maplewood	new	delim 16
			quesnel			new	delim 16
			Bakerville			new	delim 16
			Island				
1	49.983874	-125.22619	CAMPBELL RIVER	LDA-BC-0000160626	s.22		
						year 3 post spray	delim 16 strip of 36?
1	49.679635	-124.91058	COMOX	LDA-BC-0000160372		new	delim 16
1	49.681741	-125.01018	COURTENAY	LDA-BC-0000160727		new	
5	49.668589	-125.00086	COURTENAY	LDA-BC-0000160726			egg mass search

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	49.728266	-125.06779	COURTENAY	LDA-BC-0000160650	s.22	new	delim 16; egg mass survey
4	49.715121	-125.05844	COURTENAY	LDA-BC-0000160649			delim 16
1	49.734315	-124.98365	COURTENAY	LDA-BC-0000160625			one mile radius = 35 traps
1			Denman Island		stone hill and greenhill junction	new	delim 16
2	49.441376	-124.69463	BOWSER	LDA-BC-0000160411	Island Hwy W southbound lane across from Jamieson rd	new	delim 16
2	49.442546	-124.74415	BOWSER	LDA-BC-0000160392	s.22	new	delim 16
4	49.282879	-124.85167	Port ALBERNI-CLAYOQUOT REGIONAL DISTRICT	LDA-BC-0000160577	s.22	new	delim 16
1	49.287057	-124.95807	SPROAT LAKE	LDA-BC-0000160725		new	delim 16
1	49.345285	-124.48226	QUALICUM BEACH	LDA-BC-0000160373	Laburnum Rd	new	delim 16
1	49.358494	-124.49136	QUALICUM BEACH	LDA-BC-0000160370	s.22	new	delim 16

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	49.342668	-124.38346	PARKSVILLE	LDA-BC-0000160621	s.22	new	delim 16
1	49.237108	-124.09384	LANTZVILLE	LDA-BC-0000160605	s.22	new	possible spray???
2	49.229744	-124.06473	LANTZVILLE	LDA-BC-0000160604		new	
2	49.231219	-124.114	LANTZVILLE	LDA-BC-0000160589		new	
1	49.244464	-124.12296	LANTZVILLE	LDA-BC-0000160588			
1	49.238569	-124.14312	LANTZVILLE	LDA-BC-0000160587			
2	49.210610	-124.07594	NANAIMO	LDA-BC-0000160619			

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
2	49.251812	-124.15209	NANOOSE BAY	LDA-BC-0000160575	s.22		
1			NANOOSE BAY				
9	49.245911	-124.17225	NANOOSE BAY	LDA-BC-0000160552			
1	49.253244	-124.20139	NANOOSE BAY	LDA-BC-0000160551			
1	49.154000	-123.72498	GABRIOLA ISLAND	LDA-BC-0000160794		new	delim 16
7	48.877014	-124.21616	YUBOU	LDA-BC-0000160773			delim 36, egg mass

6

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	48.827677	-124.08275	LAKE COWICHAN	LDA-BC-0000160775	s.22		spray; delim 36; egg mass
1	48.814413	-124.07388	LAKE COWICHAN	LDA-BC-0000160770			
1	48.821949	-124.04747	LAKE COWICHAN	LDA-BC-0000160769			
7	48.820301	-124.05391	LAKE COWICHAN	LDA-BC-0000160768			
1	48.772672	-123.78355	DUNCAN	LDA-BC-0000160771		new	delim 16
1	48.861479	-123.53197	SALTSPRING ISLAND	LDA-BC-0000160800	Booth Camp canal		
						new	delim 16
1	48.834857	-123.51455	SALTSPRING ISLAND	LDA-BC-0000160799	s.22		
						new	
1	48.827320	-123.4858	SALTSPRING ISLAND	LDA-BC-0000160798			
3	48.874789	-123.54069	SALTSPRING ISLAND	LDA-BC-0000160564			
1	48.421370	-123.41211	ESQUIMALT	LDA-BC-0000160797		new	delim 16
1	48.434706	-123.42071	ESQUIMALT	LDA-BC-0000160796		new	delim 16
1	48.411605	-123.50021	COLWOOD	LDA-BC-0000160409		new	delim 16

# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
1	48.417386	-123.48034	COLWOOD	LDA-BC-0000160407	s.22	new	delim 16
1	48.450660	-123.31479	OAK BAY	LDA-BC-0000160332	:	new	delim 16
1	48.511096	-123.37549	Saanich	LDA-BC-0000160772		new	delim 16
10	48.461373	-123.43792	VICTORIA	LDA-BC-0000160774			
						new	delim 16/ 36
1	48.474705	-123.44653	View Royal	LDA-BC-0000160410		new	delim 16/ 36, egg masses
1			Victoria			2nd year	delim 36
1	48.447543	-123.35817	VICTORIA	LDA-BC-0000160566		2nd year	delim 36
1	48.453907	-123.3544	VICTORIA	LDA-BC-0000160565		2nd year	delim 36
?	48.524431	-123.3841	VICTORIA	LDA-BC-0000160369	:		



# moths	Latitude	Longitude	Town	Facility name	Address	Notes	Recommendation
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			Langley			Asian	
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Nov 18, 2021  
comments

at RV Park

Canyon Hot Springs; year 2; use  
about 49 traps

Public restroom, RV parks;  
increase trapping density  
between Sicamous and Canoe in  
high risk sites RV Parks, pullouts;  
sum total of trap

same location as positive from  
2020

no detection prior

Nov 18, 2021  
comments

Pender Habor; 3 in one trap;  
Texada southern part of island  
no traps

off grid vehicles; not very  
touristy, by fish hatchery

close to delim from last year

5 in one trap close to epicenter;  
100 m radius egg mass survey  
along edge of forest in  
residential, better success in  
treatments; last year was  
singulton; delim 36 post spray  
2023?

Nov 18, 2021  
comments

2km between 1 and 2 positive  
traps

spray boundary 1.5 trap,  
forested lands, challenges with  
ground spray

last year delimitation; 4 and 1 in  
2020 prior (Sanders and Dirkson  
Drive); no egg mass search yet;  
area between 2 and 4 where  
epicenter located; hesitant to  
recom egg mass survey

traps 400 meters apart

spraying a prison Ok stay away  
from schoolyards

Nov 18, 2021  
comments

last year and no increase; traps  
in riparian and forest to N

near flower nursery, north of  
railway, difficult to place traps  
lots of private land and nurseries

2020 6 moths last year;  
transmountain pipeline intersect

agricultural fields to east;  
industrial; preliminary egg  
masses; forensic jail near by, no  
evidence near jail

Nov 18, 2021  
comments

eradication in the past; difficult  
to control; aerial spray in the  
past

near Burns Bog, fire hazard limits  
access

Burnaby Mnt golf course  
correlation with detections;  
isolated from cluster 3km

Nov 18, 2021  
comments

Lougheed Hwy/  
Bowling alley,  
YVR approach,  
and Pit  
Meadows  
airport Boudary  
Bay, air traffic  
control  
narrowed  
application  
window (cap  
how late they  
could fly);  
Burnaby  
industrial maybe  
ground spray

epicenter and flyout between 9  
and 4; group all as 1; around 9  
egg mass survey; close to CFIA  
office; Lougheed Hwy; CPR  
railline, Burnaby works yard;  
industrial high risk factors; high  
towers nearby

Nov 18, 2021  
comments

last year 5,1,1 2020 positives;  
year over year increases; host  
material north adjacent to fields

last year 2 in one trap; wider  
spaced than other areas? Lower  
priority than other areas. 4.4km  
distance between n and s traps;  
Poppy Estate ag tourism



Nov 18, 2021  
comments

likely connected to Keith Road  
site

2 in one trap, 2 separate sites

3 traps, in campsite; 1, 1,2  
parking lot introduction point

high density survey; 3 years ago  
near 2021 positive; ground spray  
3 years ago, spray 2018; 2019  
nothing; 2020 singleton

2020

2 and 3 in 2020

Nov 18, 2021  
comments

2021 treatment area

outside of 2021 spray zone

5.4km from Boswer

tied in with denman Island but  
water in between

near protected area; boon  
docking sites; first nations lison;  
public awareness campagne

4.8 mile apart from sproat lake

Nov 18, 2021  
comments

separate from Qualicum

Mosaic ok with additional traps; 4- 5 passes for spray, likely last spray, Notch Hill to north has day flying tiger moth endangered moth; good trapping critical

2 epicenters likely; no historical treatments

south and in forest; cooperation with Mosaic better trapping?

Nov 18, 2021  
comments

gas pipeline right of way; any work recently? Mosaic forestry company private land until south of Brennan Lake; porpdo test area, AGM no flight by females, submarines from Esqumalt or states.

resort, limited trapping; history east in lake cowichan; spray in 2020; 18 in area

Nov 18, 2021  
comments

2020 spray didn't go as well;  
weather difficulties in 2020;  
ceiling schedule adjusted

challenge doing sprays wanted  
egg mass removals; ground  
sprays in past and eradicated  
once aerial

engage locals early; lots of traps;  
involve locals

Nov 18, 2021  
comments

by golff club

significant numbers; view Royal  
Park trailer park to west

Nov 18, 2021  
comments

2 singletons;  
CFIA lead  
erradiacation;  
US allows  
suggestions  
erradication not  
survelence; lab  
100% accurate  
for genetic  
testing

Spray areas	aerial	Days	ground	Btk	Application	days	liters	Btk	totes	Costo/Btk
1 CHILLIWACK	40	1		s.17	mass trapping instead of spray??		0			5
2 MISSION	40	1			east -west spray; prison		480			5
COQUITLAM				40			480			
3 BURNABY	190	2			ground spray potential; slyline issues;sp		2280			3
4 SURREY	100	2			egg mass survey		1200			1
5 LAKE COWICHAN	340	3				1	4080			4
6 NANOOSE BAY	1150	4--6				2	13800			14
7 Fort Victoria	75	7					900			
8 langely AGM	350	1			working together for spray, communicat		4200			4
total	2285			40			27420			2325

s.17

4 liters/ ha  
 \$/ liter  
 application cost  
 relocation costs

68000





## SAFETY DATA SHEET

1 of 10

### Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

### 1.1 Product Identifier

**MATERIAL NAME:** Foray 48B Biological Insecticide Aqueous Suspension

**Synonyms:** None

**PCP No.:** 24977

**Code Number:** 12280

**List Number:** 60179

**Chemical Family:** Microbial, Btk strain ABTS-351

**Substance Registration Number(s)[REACH]:** N/A

### 1.2 Relevant Identified Uses and Uses Advised Against

**Identified Uses:** Agricultural Insecticide

**Uses Advised Against:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.

### 1.3 Details of the supplier of the Safety Data Sheet

**Supplied By:** Valent BioSciences  
870 Technology Way  
Libertyville, Illinois 60048

**Canadian Agent:** Valent Canada, Inc.  
201-230 Hanlon Creek Blvd.  
Guelph, Ontario N1C 0A1

### 1.4 EMERGENCY TELEPHONE NUMBERS

**Emergency Health or Spill:**

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

Eye Irritation – Category 2B

### 2.2 Labeling Elements

**Symbol(s)**

Not required



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

#### Signal Word

WARNING

#### Hazard Statement(s)

Causes eye irritation

#### Precautionary Statement:

##### Prevention

Wash hands and face thoroughly after handling

#### Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

#### Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

#### 2.3 Other Hazards

None identified.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> strain ABTS-351	12.65
	Other Non-hazardous Components	87.35

### 4. FIRST AID MEASURES

#### 4.1 Description of First Aid Measures

**GENERAL:** In all cases of doubt, seek medical attention.

**EYES:** Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

**SKIN:** Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. Cover irritated skin with an emollient. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**INGESTION:** Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. Give large quantities of water. If signs of toxicity occur, seek medical attention.



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

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Provide symptomatic /supportive care as necessary.

**INHALATION:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

#### 4.2 Most important Symptoms and Effects, both Acute and Delayed

##### Acute

Eye irritation

##### Delayed

No information on significant adverse effects

#### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

### 5. FIRE FIGHTING PROCEDURES

#### 5.1 Extinguisher Media

##### Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

##### Unsuitable Extinguisher Media

None known

#### 5.2 Specific Hazards Arising from the Chemical

None known

##### Thermal decomposition products

Carbon oxides, nitrogen oxides

#### 5.3 Advice to Firefighters

##### Protective Equipment and precautions for firefighters

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

##### Fire & Explosive hazard

Not expected to be flammable.



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

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ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use in a well-ventilated area. Respiratory protection such as a dust mask should be worn during normal product use. Wear eye protection appropriate to handling activities. Wear impervious gloves. Wear appropriate body coverings if contact may occur. Where exposure level is not known, wear respirator protection suitable for expected level of exposure, in addition to the personal protection as recommended in Section 8.

### 6.2 Environmental Precautions

Keep out of drains, sewers, ditches and waterways. Avoid runoff to waterways and sewers. Dispose of excess product and washwaters according to local regulations.

### 6.3 Methods and Materials for Containment and Cleaning Up

Ventilate area. Wear appropriate personal protective equipment. Recover product with inert material (earth, sand, vermiculite), place into appropriate container for disposal. Do not flush to sewer. Avoid generating dust.

### 6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for Safe handling

Ventilate. Avoid breathing dust or vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping. For filling operations respiratory protection may be recommended particularly in enclosed areas.

### 7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Close containers of unused material. Store in a dry, cool, ventilated place, away from direct sunlight.

#### **Incompatibilities**

None Known

### 7.3 Specific End Use(s)

Insecticide



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

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[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters

#### Component Exposure Limits

None

#### Derived No Effect Levels (DNELs)

No DNELs available

#### Predicted No Effect Concentrations (PNECs)

No PNECs available

### 8.2 Exposure Controls

#### Appropriate Engineering Controls

Provide general ventilation. Where adequate general ventilation is unavailable use process enclosure, local exhaust ventilation, or other engineering controls

#### SKIN PROTECTION:

Wear protective clothing, including boots and gloves. Wear gloves made of Latex or other impervious materials. Wash thoroughly with soap and water after handling.

#### EYE PROTECTION:

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

#### RESPIRATORY PROTECTION:

For filling operations if dust/mist is produced respiratory protection is recommended. Where respiratory protection is warranted, use dust mask.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid, opaque, light brown	Odor:	Yeast like
pH:	≈4.4 (1% dilution)	Odor Threshold:	Not Determined
Melting Point:	Not Applicable	Boiling Point:	Not Determined
Specific Gravity:	Not Determined	Solubility (H <sub>2</sub> O):	Not Determined
Octanol/H <sub>2</sub> O Coeff:	Not Determined	Bulk Density:	1.1 ± 0.1 g/ml
Molecular Weight:	Not Applicable	Evaporation Rate:	Not Applicable
Auto Ignition:	Not Determined	Decomposition Temp.:	Not Determined
Flash Point:	Non-flammable	LFL:	Not Determined
Vapor Density:	Not Determined	UFL:	Not Determined
VOC:	Not Determined	Vapor Pressure:	Not Determined
Kinematic Viscosity:	Not Determined	Flammability Class:	Not flammable



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

## 10. CHEMICAL STABILITY AND REACTIVITY

### 10.1 Reactivity

Material does not pose a significant reactivity hazard.

### 10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

### 10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

### 10.4 Conditions to Avoid

None known

### 10.5 Incompatible Materials

None known

### 10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects

#### Likely Routes of Exposure

Inhalation: Yes  
Eye Contact: Yes  
Skin Contact: Yes  
Ingestion: Not likely

#### Product (or TGA) where noted) Toxicology

##### Acute Effects

Oral Toxicity: LD<sub>50</sub> > 5,000 mg/kg (rat) [EPA Toxicity Category IV]  
Dermal Toxicity: LD<sub>50</sub> > 5,000 mg/kg (rabbit)  
Inhalation Toxicity: LC<sub>50</sub> rat (4 hours): > 2.14 mg/L  
Corrosiveness: Not corrosive.  
Dermal Irritation: Mildly irritating, [EPA Toxicity Category IV]  
Ocular Irritation: Mildly irritating, (cleared by day-7)  
Dermal Sensitization: Not a sensitizer (guinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens.

Carcinogenicity Information: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.

## Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

Developmental/Reproductive Toxicity: This material is not teratogenic

Special Target Organ: Not Applicable

Aspiration Hazard: Not Applicable

Repeat Dose Studies: Not Applicable, Acute Toxicity testing was all negative

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity (Data for a Concentrated Technical Powder)**

Do not allow into waterways or lakes.

Fish:  $LC_{50} > 2.87 \times 10^7$  cfu/L (96-H, Rainbow Trout)Bird:  $LC_{50} > 2857$  mg/kg ( $5.7 \times 10^{10}$  cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)Invertebrates:  $EC_{50} > 50$  mg/L (48-Hr) (Daphnia)21-day NOEC  $> 5.0$  mg/L (Daphnia)

Honeybee: Essentially Nontoxic to honeybee

**12.2 Persistence and Degradability**

No data available

**12.3 Bioaccumulation potential**

No data available

**12.4 Mobility in Soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Assessments not performed

**12.6 Other adverse effects**

None known

**13. DISPOSAL CONSIDERATIONS****13.1 Waste Disposal Methods**

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.



## SAFETY DATA SHEET

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### Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

#### 14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT  
UN PROPER SHIPPING NAME: N/A  
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated  
PROPER SHIPPING NAME: N/A  
REMARKS: N/A

IMDG STATUS: Not Regulated  
PROPER SHIPPING NAME: N/A  
REMARKS: N/A

#### 15. REGULATORY INFORMATION

##### 15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Exempt  
CERCLA STATUS: Not regulated as hazardous  
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No  
RCRA STATUS: Not regulated as hazardous  
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

##### 15.2 PMRA Pesticide Regulations

PCP Number: 21062  
Product must have PMRA Approved Pesticide Label attached to or accompanying all containers.  
RESTRICTED  
READ THE LABEL BEFORE USING

This chemical is a pesticide product registered by the PMRA and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

##### STORAGE

In order to ensure microbial purity and potency, Foray 48B Biological Insecticide Aqueous Suspension should be stored in the original container at 0 - 25°C and used within 12 months of the date of manufacture. After extended storage, vigorously shake or stir contents to assure a uniform suspension.





**SAFETY DATA SHEET**

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**Foray 48B Biological Insecticide Aqueous Suspension**

**SDS# VBC-0244 Revision 2**

**ISSUED 03/31/2020**

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**DISPOSAL**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site: Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Make the empty, rinse container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**16. OTHER INFORMATION**

**NFPA Hazard Ratings**

**HMIS Hazard Ratings**

Health: 1  
Flammability: 0  
Instability: 0

Health: 1  
Flammability: 0  
Instability: 0

0 = Minimal  
1 = Slight  
2 = Moderate  
3 = Serious  
4 = Extreme

REASON FOR ISSUE: General Update  
APPROVAL DATE: 03/31/2020  
SUPERSEDES DATE: 05/08/2019

LEGEND: N/A = Not Applicable                      N/D = Not Determined  
          N/L = Not Listed                              L = Listed  
          C = Ceiling                                    S = Short-term  
          (R) = Registered Trademark of Valent BioSciences  
          (TM) = Registered Trademark of Valent BioSciences

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences to confirm that you have the most current product label and SDS.



## SAFETY DATA SHEET

10 of 10

### Foray 48B Biological Insecticide Aqueous Suspension

SDS# VBC-0244 Revision 2

ISSUED 03/31/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.



870 Technology Way  
Libertyville, IL 60048 – 800-323-9597

© Valent BioSciences, 2020

2020-08-25  
Sub.No. 2020-3528

**Group 11 Insecticide**

**Foray<sup>®</sup> 48B**  
**Biological Insecticide Aqueous Suspension**

**For Use in Forests, Woodlands, and Other Treed Areas**

**RESTRICTED**  
**READ THE LABEL BEFORE USING**

**GUARANTEE:**

Bacillus thuringiensis subsp. kurstaki strain ABTS-351..... Potency: 10,600 Cabbage  
Looper Units (CLU)/mg of product (equivalent to 10 billion CLU/kg).

The potency measurements are not internationally standardized.

REGISTRATION NO. 24977 PEST CONTROL PRODUCTS ACT

POTENTIAL SENSITIZER  
CAUTION EYE IRRITANT  
READ THE LABEL BEFORE USING

Net contents: L (Litres)

Date of manufacture: \_\_\_\_\_

Lot No.:

Best Before:

Registrant:  
Valent BioSciences LLC  
1910 Innovation Way, Suite 100  
Libertyville, IL 60048  
USA  
1-800-323-9597

Canadian Agent:  
Valent Canada, Inc.  
201-203 Hanlon Creek Blvd.  
Guelph, Ontario N1C 0A1

**PRECAUTIONS:**

KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL.

MAY CAUSE SENSITIZATION

CAUTION EYE IRRITANT

Avoid contact with skin, eyes, and clothing. Avoid breathing dust/spray mist. Wear a long sleeved shirt, long pants, waterproof gloves, shoes and socks, eye goggles and NIOSH-approved respirator with any N-95, R-95, or P-95 filter for biological products when handling, mixing/loading or applying the product and during all clean-up/repair activities. When applicators use closed systems (e.g. enclosed cabs) the personal protective equipment requirements may be reduced or modified. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

<b>FIRST AID</b>	
If on skin or clothing	Rinse skin immediately with plenty of water. Remove contaminated clothing and wash separately before reuse. If irritation occurs and persists or is severe, seek medical attention.
If in eyes	Hold eye open and rinse slowly and gently with water. Remove contact lenses, if present, then continue rinsing eye. If irritation occurs and persists or is severe, seek medical attention.
If inhaled	Move person to fresh air, apply respiration if needed and seek medical attention.
If swallowed	Rinse mouth and throat with copious amounts of water. DO NOT induce vomiting. Promptly contact a physician or poison control centre. DO NOT give anything by mouth to an unconscious person.
General	Seek medical attention if irritation or signs of toxicity occur and persist or is severe. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:**

Treat symptomatically.

**STORAGE**

In order to ensure microbial purity and potency, Foray 48B Biological Insecticide Aqueous Suspension should be stored in the original container at 0 - 25°C and used within 12 months of the date of manufacture. After extended storage, vigorously shake or stir contents to assure a uniform suspension.

**DISPOSAL:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site.

Before taking the container to the collection site:

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Make the empty, rinse container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**DIRECTIONS FOR USE:**

DO NOT apply this product through any type of irrigation system.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. As this pesticide is not registered for control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT allow spray mixture to stand in the tank for more than 12 hours. Recirculate mixture before loading and/or application.

Foray 48B Biological Insecticide Aqueous Suspension contains spores and insecticidal crystals of a naturally occurring strain of *Bacillus thuringiensis* sub-species *kurstaki*.

Foray 48 B is highly specific to some lepidopteran larvae. It is a stomach poison only and therefore must be ingested by the larvae to be effective. After ingestion of a sufficient dose, feeding ceases and death will follow in 2 - 5 days.

In general, larvae should be treated when they are newly hatched. Young larvae (early instars) are most susceptible to the effects of *Bacillus thuringiensis* sub-species *kurstaki* and less damage will have been caused by larval feeding. Thorough spray coverage with well-distributed deposits of Foray 48B Biological Insecticide Aqueous Suspension is necessary to assure that the feeding larvae ingest a toxic dose.

Foray 48B Biological Insecticide Aqueous Suspension is a water based formulation which may be applied undiluted or diluted with clean water. Dilute with minimal quantities of water only when required to improve deposit. Do not use petroleum-based solvents. Foray 48B Biological Insecticide Aqueous Suspension does not settle out rapidly, so continual agitation is not recommended and should be avoided

Even though Foray 48B Biological Insecticide Aqueous Suspension deposits are relatively resistant to wash-off, avoid application when significant rainfall is imminent. For early morning applications, foliage should not be wet with dew to the point of runoff.

Consult with recognized forest pest control authority or Valent BioSciences Corporation representative regarding appropriate timing and method of application. The timing and number of applications required for effective control will depend upon foliage development and larval activity. For effective control, applications should coincide with sufficient foliage development (shoot elongation or leaf expansion) to ensure maximum spray deposit.

To the extent possible, apply treatments after egg hatch has been completed to assure that the maximum number of larvae are present during the treatment period. If Foray 48B Biological Insecticide Aqueous Suspension is applied in later larval instars and/or extremely high larval populations, use the higher label rates and/or additional applications.

To control eastern spruce budworm, treat prior to 5th instar larval development and when bud flush/shoot development is sufficient to allow good deposit on emerging needles.

Timing of treatment of the two-year cycle spruce budworm depends on the year of its life cycle. For first year larvae treat early instars when bud flush/shoot development is sufficient to allow good deposit on emerging needles. For second year larvae treat larvae at peak 4<sup>th</sup> instar when bud flush/shoot development is sufficient to allow good deposit on emerging needles.

For consistently acceptable control of western spruce budworm, two-year cycle spruce budworm and western blackhead budworm, higher rates and volumes of spray may be required to achieve satisfactory deposit in mountainous terrain.

Treat against gypsy moth when larvae are in 2nd and 3rd instar and when leaf expansion is 40 – 50%; when egg hatch is extended, 2 or more applications, 7-10 days apart, may be required.

For best control of eastern or western hemlock looper, apply when larvae are young (early instars) before extensive damage occurs and/or when a majority of buds have flushed or shed bud caps. Repeat applications at intervals to maintain control, usually 3-14 days depending on larval growth and weather. If control is sought with a single spray, wait until egg hatch is essentially complete.

To control Whitemarked Tussock Moth in conifers, apply first at peak second instar, then make a second application 2-5 days later.

For control of Jackpine budworms, apply undiluted at 20-30 BCLU/ha to early larval instars; double applications several days apart may be considered. For consistent control of very high larval populations, one single application at higher rates up to 60 BCLU/ha may be required.

For control of Eastern and Western Blackheaded Budworm apply two applications at 30 BCLU/ha or one application at 60 BCLU/ha. For two applications at 30 BCLU/ha make the first application at the late egg hatch and follow up with a second application 3 to 7 days later. For a single application at 60 BCLU/ha apply after 100% egg hatch.

**To control pale-winged gray, make one application of Foray 48B Biological Insecticide Aqueous Suspension at close to 100% egg hatch.**

**GROUND APPLICATION:**

With ground equipment, provide thorough coverage while minimizing runoff. Dilute Foray 48B Biological Insecticide Aqueous Suspension only to provide sufficient volume for thorough coverage.

For mist blower applications, add the recommended volume of Foray 48B Biological Insecticide Aqueous Suspension to water, at a mix ratio ranging from 1:20 to 1:50. Do not exceed 150 litres/hectare total mixture.

For high volume hydraulic sprayers, add the recommended volume of Foray 48B Biological Insecticide Aqueous Suspension to water at a mix ratio ranging from 1:50 to 1:500. Do not exceed 1500 litres/hectare total mixture.

**AERIAL APPLICATION INSTRUCTIONS:**

Apply only by fixed-wing or rotary aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application by using appropriate marking devices and/or electronic guidance equipment.

**Use Precautions:**

Apply only when meteorological conditions at the treatment site allow for complete and even coverage. Apply only when meteorological conditions are in compliance with local and /or provincial authorities.

**Operator Precautions:**

DO NOT allow the pilot to mix product to be loaded onto the aircraft. However, loading of premixed product with a closed system is permitted. It is desirable that the pilot has communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear the personal protective equipment described in the PRECAUTIONS section of this label. When handlers/loaders use closed systems to load product onto the aircraft, the handler requirement for eye goggles and a NIOSH-approved respirator/mask with any N-95, R-95, or P-95 filter for biological products may be waived. When reduced personal protective equipment is worn, the respirator/mask must be immediately available for use in an emergency such as a spill or equipment breakdown.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing must be washed before reuse. Decontaminate aircraft cockpit and vehicle cabs regularly.

**Product Precautions:**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-323-9597 or obtain technical advice from the distributor or from your

provincial agricultural or forestry representative. Application of this specific product must meet and/or conform to the aerial uses and rates on this label.

**RESTRICTED USES:**

**FORESTS, WOODLANDS AND RESIDENTIAL AREAS**

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized; contact local pesticide regulatory authorities about use permits which may be required.

**Forestry Use:** Ground/Aerial Application for sites greater than 500 ha.

**Woodland Use:** Aerial Application for sites 500 ha or less.

**Residential Use:** Aerial Application. Consult local Transport Canada office regarding air regulations for urban and/or forestry applications. Foray 48B Biological Insecticide Aqueous Suspension may be used for aerial application in urban areas for treatment of residential areas and municipal recreational areas (including parks, parkland, vacant lots, shelterbelts, and rights of way under municipal jurisdiction).

Undiluted applications are recommended for most labeled pests; however, Foray 48B Biological Insecticide Aqueous Suspension may be diluted with water and applied at the rates indicated in the dose rate table. Total volume of spray material to be applied per hectare depends upon target pest, target foliage, weather, spray equipment and droplet size.

Recommended droplet size spectra are from 30 – 80 microns for coniferous foliage and 50 – 150 microns for broadleaf foliage.



**DOSE RATES: AERIAL AND GROUND APPLICATION<sup>1</sup>  
 FORESTS, WOODLANDS, ORNAMENTALS AND  
 OTHER TREED AREAS**

<b>Target insect</b>	<b>RATE Litre/ha</b>	<b>DOSE BCLU/ha</b>
Eastern Spruce Budworm	1.6 – 2.4	20 – 30
Western Spruce Budworm	2.4 – 3.1	30 – 40
Gypsy Moth	2.4 – 4.0	30 – 50
Jackpine Budworm <sup>2</sup>	1.6 – 4.8	20 – 60
Forest Tent Caterpillar	1.0 – 1.6	12 – 20
Spring & Fall Cankerworm	1.0 – 1.6	12 – 20
Eastern Hemlock Looper	2.4 – 3.2	30 – 40
Western Hemlock Looper	2.4 – 3.2	30 – 40
Satin Moth	4.0	50
Whitemarked Tussock Moth	4.0	50
Pale-winged Gray	3.1	40
Douglas-fir Tussock Moth <sup>3</sup>	4.0	50
Eastern Blackheaded Budworm	2.4 – 4.8	30 – 60
Two-year Cycle Spruce Budworm	2.4 – 3.1	30 – 40
Western Blackheaded Budworm	2.4 – 4.8	30 – 60

<sup>1</sup> See the restricted uses for aerial application to forests, woodlands, and residential areas, and ground application to forests.

<sup>2</sup> For control of Jackpine budworms, apply undiluted at 20-30 BCLU/ha to early larval instars; double applications several days apart may be considered. For consistent control of very high larval populations, one single application at higher rates up to 60 BCLU/ha may be required.

<sup>3</sup> For control of Douglas-fir tussock moth, target application at the peak of second instar and make a second application 2-5 days later.

**RESISTANCE MANAGEMENT RECOMMENDATIONS:**

For resistance management, please note that Foray 48B Biological Insecticide Aqueous Suspension contains a Group 11 insecticide. Any insect population may contain individuals naturally resistant to Foray 48B Biological Insecticide Aqueous Suspension and other Group 11 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same site. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. The following appropriate resistance management strategies should be followed to delay insecticide resistance:

- Where possible, rotate the use of Foray 48B Biological Insecticide Aqueous Suspension or other Group 11 insecticides with different groups that control the same pests in a site.
- Insecticide use should be based on an Integrated Pest Management program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or integrated pest management recommendations for the specific site and pest problems in your area.

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- For further information or to report suspected resistance, contact Valent BioSciences LLC at 1-800-323-9597

**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.



## **Pesticide Use Permit Application** *under the Integrated Pest Management Act*

**FORM REFERENCE CODE: EPD-IPM-10v2**

### **INSTRUCTIONS:**

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

The permitting process consists of several steps that require the submission of an application form, map and fee, followed by meetings with ministry staff to receive guidance on the consultation process and required documentation. If you have questions, you are encouraged to contact ministry staff by email at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

### **HOW TO SUBMIT:**

Please submit this form and maps via email to [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) with the subject line "Pesticide Use Permit Application". If large files prevent email submission, please use the ministry's File Transfer Service at <http://www.env.gov.bc.ca/csd/imb/soft/soft.shtml>.

There is an application fee of \$1000 that is due upon submission of this application. The fee is non-refundable after a permit application number has been issued. Please see Section 12 for payment information.

Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6

**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street			5
	200 - 10470 152nd St.			
	City	Province	Postal Code	6
	Surrey	BC	V3R 0Y3	
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile	7
	250-468-2295	250-812-5752	
<b>Email Address</b>	babita.bains@gov.bc.ca		8



**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

*“Applicant” means the Applicant as identified in section 1 of this application form, and  
“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3

### Section 4: Owner or Manager of the Treatment Location

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

### Section 5: Description of Proposed Pesticide Use

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient <i>Bacillus thuringiensis</i> var <i>kurstaki</i> (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>

### Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023 (each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:00 am))	3
<b>Anticipated number of applications per year</b>	Three	4

### Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Courtenay - Dove Creek: 652 ha northwest of the City of Courtenay. The northern treatment boundary is around Orr Road and the western boundary extends from Orr Rd at Dove Creek Road to the west side of Wildwood Dr. The southern boundary is parallel to Burns Rd (~500 m south of Burns Rd) and extends to 500 m east of Condorsory Rd. The eastern boundary is parallel to Dove Creek Rd (~500 m east). The treatment area falls within the Comox Valley Regional District.

City of Courtenay: 331 ha in the City of Courtenay, around Cumberland Rd. The northern treatment boundary extends from 17 th St at Grant Ave, to Lake Trail Rd at Arden Rd. The western boundary extends from Lake Trail Rd at Arden Rd down to Comox Logging Rd at Cumberland Rd. The southern boundary extends from Cumberland Rd to 29th St at Fitzgerald Ave. The eastern boundary runs ~150 m northeast and parallel to Kipatrick Ave. The treatment area falls within the City of Courtenay.

### Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

### Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	652	7,824
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	331	3,972



## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.

## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.
3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.
4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.
5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-29	4

## Section 12: Payment of Fees

The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> (999) 999-9999		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> (999) 999-9999		6

Appendix to:

EFSA (European Food Safety Authority), 2021. Conclusion on the peer review of the pesticide risk assessment of the active substance *Bacillus thuringiensis* subsp. *kurstaki* strain ABTS-351. EFSA Journal 2021;19(10):6879, 20 pp. doi:10.2903/j.efsa.2021.6879

© European Food Safety Authority, 2021

## **Appendix A - List of end points for the active substance and the representative formulation**

Copyright

Page 029 of 301 to/à Page 047 of 301

Withheld pursuant to/removed as

Copyright

## CONCLUSION ON PESTICIDES PEER REVIEW

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APPROVED: 23 September 2021

doi: 10.2903/j.efsa.2021.6879

### **Peer review of the pesticide risk assessment of the active substance *Bacillus thuringiensis* subsp. *kurstaki* strain ABTS-351**

Copyright

Page 049 of 301 to/à Page 067 of 301

Withheld pursuant to/removed as

Copyright



December 8, 2022

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152<sup>nd</sup> St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Amendment Request to Pesticide Use Permit 738-0032-21-24**

This letter contains instructions on how to complete public consultation and submit the necessary documents required for your pesticide use permit amendment request under the *Integrated Pest Management Act*.

**Next steps**

Below are the next steps to proceed with your application. Additional instructions on each item are contained within this Application Instruction Document.

1. Update the treatment plan
2. Initiate First Nations engagement
3. Prepare and submit a public consultation plan for approval
4. Advertise the application and begin public consultation
5. Submit your final application to the ministry, which includes:
  - A. Final treatment plan
  - B. Public consultation report<sup>1</sup>
  - C. First Nations engagement report

<sup>1</sup>You may submit your public consultation report before the other documentation to comply with legislated timelines.



## **1. Update the treatment plan**

You are required to prepare a draft treatment plan to ensure public consultation and First Nations engagement is meaningful.

The details for developing a treatment plan are provided in the enclosed Developing a Treatment Plan for Pesticide Use Permit Applications guidance document. As a courtesy I have also attached a copy of the current treatment plan for this permit.

## **2. Initiate First Nations engagement**

You must engage appropriate First Nations for this amendment request. The following resources and guidelines can be used to guide the engagement process:

BC government Proponent Resources for Engaging First Nations:

<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations>

IPM-specific guidelines: [https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/guidelines/guide\\_consut\\_first\\_nations.pdf](https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/guidelines/guide_consut_first_nations.pdf)

Profiles of Indigenous Peoples (PIP) Consultation Areas for additional information on First Nations traditional territories and contacts (provincial government staff use only):

<https://apps.nrs.gov.bc.ca/int/fnp/>

To ensure you have sufficient time for meaningful engagement and as a courtesy to First Nations it is recommended that you start engagement prior to publishing the notice of the permit application in the newspaper.

### **3. Prepare a public consultation plan**

The public consultation requirements changed in February 2022 so that newspaper advertisements are no longer specifically required. You must now develop a public consultation plan and submit it for approval to receive your permit application number for public consultation.

The ministry currently recommends continuing to advertise in a newspaper(s) serving the treatment area in addition to any other methods you wish to use (e.g. posting on your website).

The public consultation plan should include:

- Methods of notifying the public (e.g. newspaper name(s), website(s), physical location such as a notice board in an office, etc.)
- Timing
- List of relevant stakeholders who will be contacted

Please send your proposed consultation plan to [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca).

### **4. Advertise the application and begin public consultation**

Following approval of your public consultation plan you will be required to:

- a) publish a notice of the pesticide use permit application in the manner specified in your approved public consultation plan, or
- b) if all persons who may be affected by the use are identifiable, give written notice of the permit application to each of those persons.

The notice must contain the following:

- (a) the heading "APPLICATION FOR PESTICIDE USE" in block letters 18 pt. or larger and in bold or medium type;
- (b) the permit application number;
- (c) the applicant's name, address, telephone number, and email at which the applicant can be contacted;
- (d) the purpose of the pesticide use;
- (e) the manner of application of the pesticide;
- (f) the location and size of the treatment area;
- (g) the trade name of the pesticide and its active ingredient;
- (h) pesticide use proposed start and end dates;
- (i) a location where copies of the permit application and maps of the treatment area may be examined. A website location should also be included.
- (j) the following paragraph:

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A person wishing to contribute information about the treatment area for the evaluation of this permit application must send copies of the information to both the applicant at the address above and the administrator under the *Integrated Pest Management Act* at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) within 30 days of the publication of this notice.

- For notices posted digitally, ensure that the date of posting is included.

### ***Additional Stakeholders***

In addition to the requirements above, please provide a copy of your pesticide use permit application and updated treatment plan directly to the following stakeholder groups:

- Local governments (Comox Valley Regional District, Town of Comox, The Corporation of the City of Courtenay)
- Other relevant stakeholders listed in your public consultation plan

**Within 90 days of publishing or distributing the notice**, you must submit a public consultation report which must include the following items:

- a) proof of publication (e.g. the “tear sheet” of the notice of the application from the newspaper(s) in which it was published, a saved copy of a website with the posted notice that includes the date of posting, date-stamped photo of posting in a physical location, etc.). If written notice to all identifiable affected parties was sent instead, then provide a copy of the notice and a statement identifying the persons to whom the notice was given,
- b) a clear and concise summary of all public and stakeholder input received during this process, and
- c) a signed statement describing the action the applicant proposes to take in response to consultation.

## **5. Submitting your final application**

Your final application includes the following documentation:

- Final treatment plan
- Public consultation report
- First Nation engagement report

The ministry will begin reviewing your application once we have received all required documents. Please note you may submit your public consultation report before the other documentation to comply with the legislated timelines in Section 60 of the Integrated Pest Management Regulation.

**Treatment Plan**

The final treatment plan is to include changes, if applicable, based on the results of public consultation and First Nation engagement. Please provide rationale if changes have not been made.

**Public Consultation Report**

Your consultation results must be summarized in a public consultation report and submitted to the ministry within 90 days of publishing or distributing the advertising notice as referred to in section 5. The report should provide proof of advertising, a clear and concise summary of all input received during this process and describe the actions that you have or will take in response to public comments.

**First Nation Engagement Report**

The results of your engagement with First Nations must be summarized in a First Nation engagement report. It should provide the following:

- a clear and concise engagement summary, which may be in a tabulated format, where you describe the main concerns, your action to address those concerns, and the outcome of engagement for each First Nation; if there is no response from First Nations, provide a statement to that effect.
- details of engagement with each First Nation, including the dates and methods of contact, and any actions or accommodations that you have conducted or agreed to conduct; attach applicable letters and/or emails.

Please submit all required documents via email to [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca) and use the subject line "Final application for permit 738-0032-21-24. If the documents are not being submitted simultaneously, please indicate that in your email.

If you have any questions, please contact me.

Yours truly,

Scott Bennett  
IPM Officer  
Surrey Regional Office

Enclosure:

- Developing a Treatment Plan for Pesticide Use Permit Applications
- 738-0032-21-24 Treatment Plan Courtenay GM2021

## RE: Pesticide Use Permit Amendment Request

---

From: Eby, Chelsea ENV:EX  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
Sent: November 30, 2022 1:20:23 PM PST

Hi Babita,

We don't currently have a permit amendment form. In the meantime, please use the [permit application form](#):

- Put "Amendment request for Pesticide Use Permit 738-0032-21-24" in Line 1 of Section 8
- Complete Section 2
- Fill out the section(s) that applies to the amendment you're requesting (e.g. Section 7 – Geographic area to be treated).
- If you're wanting to change a specific clause, use Line 2 of Section 8 with which clauses you're wanting to change and Line 3 with the proposed changes.
- Complete Section 11
- Attach any relevant documents (e.g. maps)

You can just send the form to me and Scott instead of [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

Give me a shout if you have any questions.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

IPM Officer  
236.468.2249

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / hə́ŋqəmíḡəm' speaking peoples.*

---

**From:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
**Sent:** November 29, 2022 4:24 PM  
**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Subject:** FW: Pesticide Use Permit Amendment Request

Good afternoon,

Please advise Babita on the process for amending a Pesticide Use Permit.

Thanks,

**Channing Vigier**

Authorization and Licencing Officer  
Integrated Services | Regional Operations Branch  
Environmental Protection Division  
Ministry of Environment and Climate Change Strategy

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Sent:** November 28, 2022 2:18 PM  
**To:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
**Subject:** Pesticide Use Permit Amendment Request

I would like to apply for an amendment for Pesticide Use Permit 738-0032-21-24 however I don't see any information on your webpage on how to apply for an amendment (<https://www2.gov.bc.ca/gov/content/environment/pesticides-pest->

[management/business-industry/authorization-to-sell-or-use-pesticides](#)). Could you please let me know what I need to do/what form I need to submit to apply for an amendment.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

## Pesticide Use Permit Amendment Request: Courtenay

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Sent:** December 2, 2022 3:12:21 PM PST  
**Attachments:** Courtenay\_PUP\_Application\_Amendment\_LDD\_2023.pdf,  
Courtenay\_DoveCreek\_300dpi\_LDD.jpg, Courtenay\_300dpi\_LDD.jpg, !Permit\_738-0032-21-24.pdf

Thanks, Chelsea! I have attached the application and map, and I also attached the original permit (this is the final year for an amendment). I had also asked Scott about cost and I'm still going to proceed with the three permits (just an fyi).

Thanks again for your help and please let me know if you need anything else.

Babita

---

**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** November 30, 2022 1:20 PM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Subject:** RE: Pesticide Use Permit Amendment Request

Hi Babita,

We don't currently have a permit amendment form. In the meantime, please use the [permit application form](#):

- Put "Amendment request for Pesticide Use Permit 738-0032-21-24" in Line 1 of Section 8
- Complete Section 2
- Fill out the section(s) that applies to the amendment you're requesting (e.g. Section 7 – Geographic area to be treated).
- If you're wanting to change a specific clause, use Line 2 of Section 8 with which clauses you're wanting to change and Line 3 with the proposed changes.
- Complete Section 11
- Attach any relevant documents (e.g. maps)

You can just send the form to me and Scott instead of [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

Give me a shout if you have any questions.

Cheers,

**Chelsea Eby, MPM, P.Ag. (she/her)**  
IPM Officer  
236.468.2249

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / hən̓q̓əmi̓nəm speaking peoples.*

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**From:** Integrated Pest Management ENV:EX <[IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca)>  
**Sent:** November 29, 2022 4:24 PM  
**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Subject:** FW: Pesticide Use Permit Amendment Request

Good afternoon,

Please advise Babita on the process for amending a Pesticide Use Permit.

Thanks,

**Channing Vigier**

Authorization and Licencing Officer  
Integrated Services | Regional Operations Branch  
Environmental Protection Division  
Ministry of Environment and Climate Change Strategy

---

**From:** Bains, Babita FOR:EX <[Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)>  
**Sent:** November 28, 2022 2:18 PM  
**To:** Integrated Pest Management ENV:EX <[IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca)>  
**Subject:** Pesticide Use Permit Amendment Request

I would like to apply for an amendment for Pesticide Use Permit 738-0032-21-24 however I don't see any information on your webpage on how to apply for an amendment (<https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management/business-industry/authorization-to-sell-or-use-pesticides>). Could you please let me know what I need to do/what form I need to submit to apply for an amendment.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295





Date: March 1, 2021

PUP No. 738-0032-21-24

**VIA EMAIL AND MAIL**

Attn: Babita Bains

Ministry of Forests, Lands, Natural Resource Operations & Rural Development  
P.O. Box 9513 Stn. Prov. Govt.  
Victoria, BC V8W 9C2

Dear Ms Bains:

In response to your application dated December 14, 2020, enclosed is Pesticide Use Permit No. **738-0032-21/24** issued under the provisions of the *Integrated Pest Management Act*. Your attention is respectfully directed to the conditions of the permit that must be complied with.

It is the responsibility of the permit holder to ensure that all activities conducted under this permit are carried out with due regard to the rights of third parties, and comply with other applicable legislation that may be in force - including, but not limited to, using pesticide only for the use described on the label and in accordance with the instructions on that label.

This decision may be appealed to the Environmental Appeal Board in accordance with Section 14 of the *Integrated Pest Management Act*. An appeal must be delivered within 30 days from the date that notice of the decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Administrator, designated officer, or as further instructed.

Yours truly,

Digitally signed by  
Shelley Metcalfe  
Date: 2021.03.01  
15:50:16 -08'00'

Shelley Metcalfe, MEL, P.Ag.  
Authorizations Section Head, Industry and IPM  
On behalf of the Administrator, *Integrated Pest Management Act*

Attachments

---

Ministry of Environment &  
Climate Change Strategy

Integrated Pest Management  
Environmental Protection  
Division

Mailing Address:  
200-10470 152<sup>nd</sup> Street  
Surrey BC V3R 0Y3

Telephone: 604 582-5200  
Facsimile: 604 930-7119  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)



## MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY

### PESTICIDE USE PERMIT No. 738-0032-22-24

*Pursuant to Section 6 of the Integrated Pest Management Act*

British Columbia Minister of Forests, Lands, Natural Resource Operations & Rural Development  
P.O. Box 9513 Stn. Prov. Govt.  
Victoria, BC V8W 9C2

is authorized to use pesticides subject to conditions listed below. Contravention of any of these conditions is a violation of the *Integrated Pest Management Act* and may result in prosecution.

#### 1 Authorized Pesticide Use

Pesticide use must be for the purpose of eradicating introduced populations of the Gypsy Moth (*Lymantria dispar*) from municipal and private land in the Courtenay area shown in the attached map.

- 1.1 The authorized pesticide is Foray® 48B, P.C.P. No. 24977, active ingredient: *Bacillus thuringiensis* sub species *kurstaki* at a rate of 4 L/ha or 50 Billion Cabbage Looper Units (BCLU/ha) per application.
- 1.2 The authorized method of application is aerial by fixed-wing aircraft.
- 1.3 A maximum of four aerial pesticide applications are permitted for each treatment location.
- 1.4 The maximum treatment area per application must not exceed 187 ha.

- 2 Aerial application is permitted on or over lands that are within the treatment boundaries delineated on the attached map where permission has been granted by the land owner, the land holder, an Order In Council, or other legal instrument.

Date Issued: March 1, 2021

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



### 3 Treatment Dates

- 3.1 The permit holder is authorized to conduct pesticide use from 10 (ten) days after the date of publication of the permit as described in Condition 4.1 until the permit expires on March 1, 2024.

### 4 Access to Permit Information

- 4.1 To allow inspection and copying by the public, the permit holder must post a copy of the permit within seven days of permit issuance with relevant maps:
- a) on the Ministry of Forests, Lands, Natural Resource Operations and Rural Development's web site, and
  - b) at the Comox Valley Regional District Office.
- 4.2 In each calendar year, the permit holder must post the permit and maps as described in Condition 4.1 at least 7 days before treatment begins and ensure postings remain at those locations until 7 days after all pesticide spray activities under the permit have ceased for that year.

### 5 Notification

- 5.1 Within 15 days of issuance of the permit, the permit holder must publish a notice in at least one community newspaper circulated within the treatment areas.
- 5.2 A notice for the purpose of Condition 5.1 must contain the following information:
- a) the name, address and telephone number of the permit holder,
  - b) the permit number,
  - c) the purpose of pesticide use,
  - d) the trade name, P.C.P No., and the active ingredient of the pesticide used,
  - e) the method of application,
  - f) a map showing the location of the treatment area and primary zone of spray drift deposition,
  - g) the date of project commencement and completion,
  - h) information on where copies of the permit and map of the treatment area may be examined,
  - i) information on how and when telephone support lines can be accessed by the public to obtain information on the pesticide use.
- 5.3 In each calendar year the permit holder must issue a press release about the pending local pesticide use at least 7 days prior to commencement of the first pesticide application. The press release must be sent to a minimum of one community newspaper, one locally

Date Issued: March 1, 2021

Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



broadcast AM radio station, one locally broadcast FM station, and one locally broadcast television station that serve the communities in and around the treatment areas.

- 5.4 A press release for the purpose of Condition 5.3 must contain at least the following, or comparable, wording:

The first in a series of aerial spray operations using the pesticide product Foray 48B (active ingredient Btk) to control introduced populations of the Gypsy Moth may commence as early as April 15, 2021. A maximum of four sprays will take place at approximately ten day intervals until June 30, 2021. Each spray is expected to commence 1 hour before sunrise to no later than 8:30am on each of four spray application mornings. People who wish to minimize their exposure may remain indoors with their windows and doors closed during the spraying and for at least 30 minutes thereafter. Changes in weather conditions may cause proposed applications to be cancelled or delayed with little advance notice.

- 5.5 At least 24 hours before commencing each pesticide application, the permit holder must provide notification (in writing if possible) to the following persons or their representatives:

- a) the Medical Health Officer for each Health Authority in which an application will take place,
- b) the Principals of all schools within the treatment area and primary zone of spray drift deposition,
- c) the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition,
- d) all persons subscribed to the list serve or other subscription email application,
- e) the Mayor of each town or City in which an application will take place,
- f) IPM Officer [ConradBerube@gov.bc.ca](mailto:ConradBerube@gov.bc.ca) via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).

- 5.6 Notification for the purpose of Condition 5.5 must include:

- a) the date and estimated start time of pesticide application, and
- b) estimates of how long the upcoming pesticide application will take to be completed.

- 5.7 Immediate notification must be provided to the persons outlined in Condition 5.5 when a pending pesticide application has been cancelled, delayed or deferred and when a deferred pesticide application has been rescheduled, or when the next pesticide application is likely

Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

Page 3 of 8

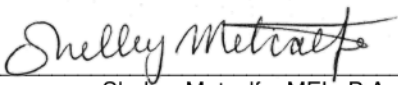
Permit No. 738-0032-21-24



to occur.

- 5.8 At least 48 hours before commencement of each spray application, the permit holder must place treatment notices so they are clearly visible to anyone entering the treatment areas.
- 5.9 A treatment notice for the purpose of Condition 5.8 must:
- a) be at least 75 cm x 65 cm in size,
  - b) be constructed of water resistant material,
  - c) display, in bold, block letters, the words “NOTICE OF PESTICIDE USE”, or in place of the words “pesticide use”, the words “GYPSY MOTH AERIAL SPRAYING”,
  - d) contain a cautionary symbol, like a stop sign or a raised hand,
  - e) indicate the name of the permit holder,
  - f) indicate the permit number,
  - g) indicate the treatment date,
  - h) indicate the purpose of pesticide use,
  - i) indicate the trade name, P.C.P. No., and active ingredient of the pesticide used,
  - j) indicate the method of application,
  - k) contain a map showing the location of the treatment area and primary zone of spray drift deposition,
  - l) contain the date of project commencement and completion, and
  - m) contain information on telephone lines and websites that can be accessed by the public to obtain spray-related information or to discuss health-related concerns associated with the pesticide use.
- 5.10 At least one hour before commencement of each pesticide application, the permit holder must ensure that treatment signs are displayed via LED variable message boards on the north and south bound lanes of the Island Highway N so that each sign is clearly visible and will inform any person approaching the area of the pesticide use.
- 5.11 The permit holder must conduct any additional notification agreed upon during the consultation process in the manner agreed upon with the parties to be notified.
- 5.12 Prior to the first pesticide application, the permit holder must submit a copy of the signed Order In Council to IPM Officer Scott Bennett via email [scott.bennett@gov.bc.ca](mailto:scott.bennett@gov.bc.ca) and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).

Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



- 5.13 The permit holder must develop, maintain and implement a location-specific plan for communicating details to the public, relevant health authorities, government agencies and local government regarding the proposed and completed pesticide uses.

## 6 Monitoring

- 6.1 During the periods of pesticide use, the permit holder must ensure that wind speed is monitored using an appropriate anemometer within the permitted area.
- 6.2 The permit holder must use spray monitoring devices to determine the uniformity of coverage of the spray treatment and the extent of spray drift.

## 7 Restrictions

- 7.1 The permit holder must comply with the requirements of the label for the pesticide being applied.
- 7.2 All personnel involved in the project must be informed of the terms and conditions of the permit and any permit amendments prior to pesticide use.
- 7.3 Application equipment and droplet size must be selected to minimize drift while still achieving the primary treatment objective of Gypsy Moth eradication.
- 7.4 All spray equipment must be properly calibrated prior to use.
- 7.5 All pesticide products and application equipment used must be maintained in secure conditions that prevent tampering or the introduction of contaminants.
- 7.6 All individuals conducting aerial pesticide applications must possess a valid BC pesticide applicator certificate in the Aerial category.
- 7.7 Aerial applications must be conducted between civil morning twilight and 0830 hours.
- 7.8 At all times during aerial operations, the pilot(s) must be in continuous radio contact with ground-based personnel that are familiar with the permit and treatment area.
- 7.9 Pesticides must not be applied in areas where wind speeds are greater than 8 km/hr.

Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*




- 7.10 Areas affected by pesticide spills that result in impacts not authorized by, or consistent with this permit, must be cleaned-up and decontaminated immediately.

## 8 Record Keeping and Reporting

- 8.1 All available information on public health concerns raised and addressed through the health lines listed in Conditions 5.2 (i) and 5.9 (m) must be documented and reported to IPM Officer Scott Bennett via email [scott.bennett@gov.bc.ca](mailto:scott.bennett@gov.bc.ca) and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) within 15 days of each period of pesticide use.
- 8.2 For each pesticide treatment under this permit, the permit holder must keep a record containing the following information:
- if the use was performed as a service, the name and license number of the licensee who performed the service,
  - if the use was not performed as a service, the name and certificate number of the pesticide applicator certificate holder who used the pesticide,
  - the date and time of the pesticide use,
  - the method and rate of application and the total quantity of pesticide used,
  - the prevailing meteorological conditions, including temperature, precipitation, and speed and direction of the wind,
  - the pesticide application flight path maps, and
  - the results from spray monitoring devices.
- 8.3 The permit holder must submit an annual report for each calendar year via email to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) on or before January 31 of the next calendar year. The first report is due January 31, 2022. The annual report must include:
- the name and address of the permit holder,
  - the trade name, P.C.P No., active ingredient and the quantity (in L) of pesticide used per application and the total quantity of pesticide used,
  - the area treated (in ha),
  - a description of the timing of treatments,
  - a summary of information or concerns raised through the health lines in Condition 5.2 (i) and 5.9 (m) and recommended actions to address these concerns for future programs,
  - the pesticide treatment efficacy based on monitoring trap catches,
  - the results of the spray zone and drift zone monitoring required under Condition 6.2, and

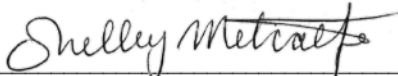
Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*



- h) all pertinent maps and recommended follow-up activities for the treatment area.
- 8.4 Pesticide spills that result in impacts not authorized by or consistent with this permit must be immediately reported to Emergency Management BC at 1-800-663-3456. Spill affected areas must be immediately evaluated and cleaned up/decontaminated as appropriate. As soon as practicable, the permit holder must provide the Administrator with a report via email to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) on the nature of the spill, any impacts, as well as any clean up/decontamination activities planned or taken.
- 8.5 If the permit holder believes that the permit holder or another person has contravened the *Integrated Pest Management Act* or Regulation in a manner involving the release of pesticide into the environment, the permit holder must give written notice to the Administrator as soon as practicable.
- 8.6 If the permit holder believes that non-compliance with any terms and conditions of this permit has occurred, the permit holder must give written notice to the Administrator via email to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca) as soon as practicable. The permit holder must undertake actions to evaluate the potential impact of the non-compliance on human health and or the environment.

Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

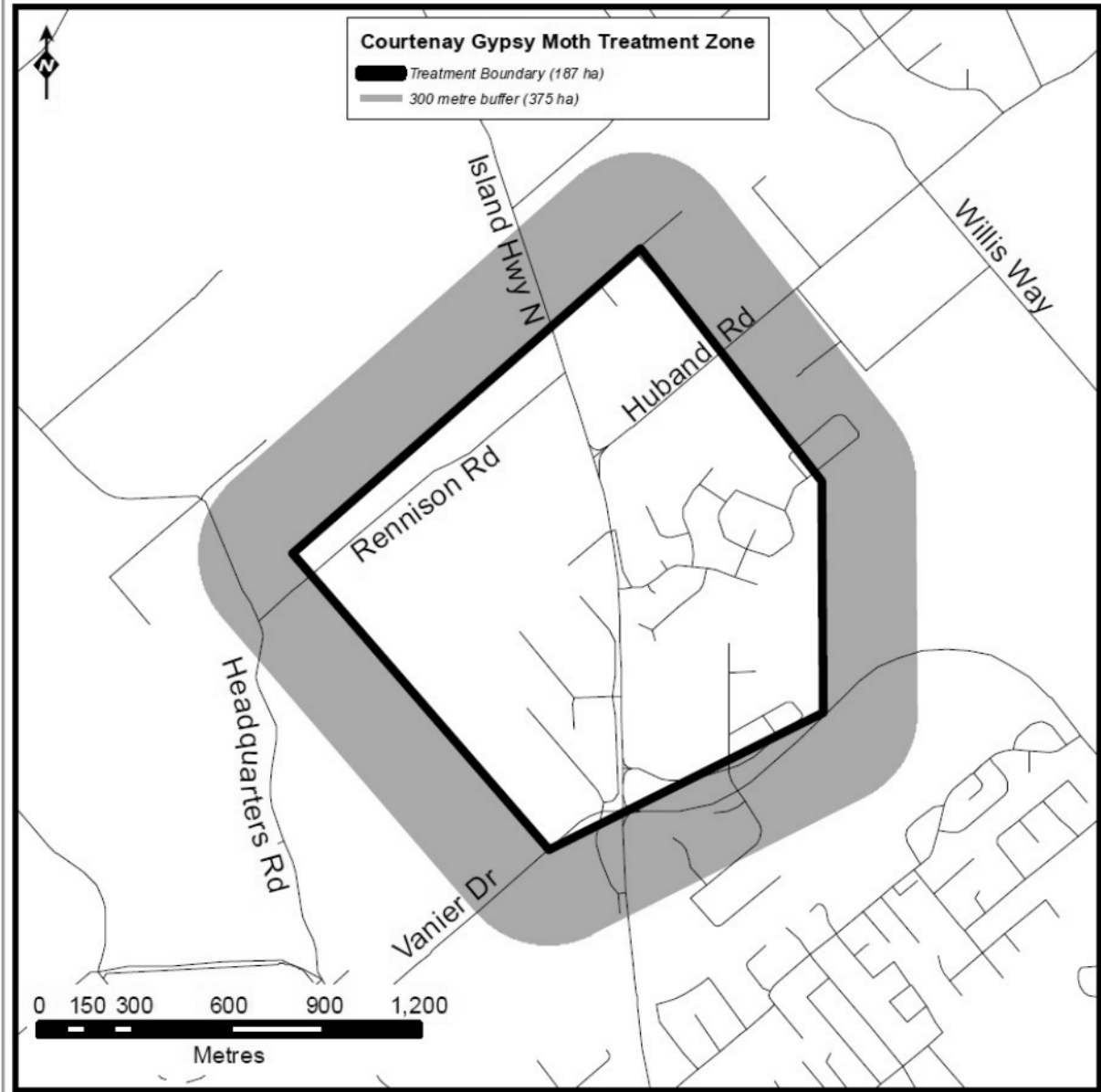
Page 7 of 8

Permit No. 738-0032-21-24

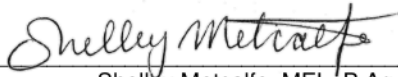




Map 1. Courtenay Gypsy Moth Treatment Area



Date Issued: March 1, 2021

  
Shelley Metcalfe, MEL, P.Ag.  
On behalf of the Administrator – Integrated Pest Management Act



December 8, 2022

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152<sup>nd</sup> St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Amendment Request to Pesticide Use Permit 738-0032-21-24**

This letter contains instructions on how to complete public consultation and submit the necessary documents required for your pesticide use permit amendment request under the *Integrated Pest Management Act*.

**Next steps**

Below are the next steps to proceed with your application. Additional instructions on each item are contained within this Application Instruction Document.

1. Update the treatment plan
2. Initiate First Nations engagement
3. Prepare and submit a public consultation plan for approval
4. Advertise the application and begin public consultation
5. Submit your final application to the ministry, which includes:
  - A. Final treatment plan
  - B. Public consultation report<sup>1</sup>
  - C. First Nations engagement report

<sup>1</sup>You may submit your public consultation report before the other documentation to comply with legislated timelines.

## **1. Update the treatment plan**

You are required to prepare a draft treatment plan to ensure public consultation and First Nations engagement is meaningful.

The details for developing a treatment plan are provided in the enclosed Developing a Treatment Plan for Pesticide Use Permit Applications guidance document. As a courtesy I have also attached a copy of the current treatment plan for this permit.

## **2. Initiate First Nations engagement**

You must engage appropriate First Nations for this amendment request. The following resources and guidelines can be used to guide the engagement process:

BC government Proponent Resources for Engaging First Nations:

<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations>

IPM-specific guidelines: [https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/guidelines/guide\\_consult\\_first\\_nations.pdf](https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/guidelines/guide_consult_first_nations.pdf)

Profiles of Indigenous Peoples (PIP) Consultation Areas for additional information on First Nations traditional territories and contacts (provincial government staff use only):

<https://apps.nrs.gov.bc.ca/int/fnp/>

To ensure you have sufficient time for meaningful engagement and as a courtesy to First Nations it is recommended that you start engagement prior to publishing the notice of the permit application in the newspaper.

### **3. Prepare a public consultation plan**

The public consultation requirements changed in February 2022 so that newspaper advertisements are no longer specifically required. You must now develop a public consultation plan and submit it for approval to receive your permit application number for public consultation.

The ministry currently recommends continuing to advertise in a newspaper(s) serving the treatment area in addition to any other methods you wish to use (e.g. posting on your website).

The public consultation plan should include:

- Methods of notifying the public (e.g. newspaper name(s), website(s), physical location such as a notice board in an office, etc.)
- Timing
- List of relevant stakeholders who will be contacted

Please send your proposed consultation plan to [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca).

### **4. Advertise the application and begin public consultation**

Following approval of your public consultation plan you will be required to:

- a) publish a notice of the pesticide use permit application in the manner specified in your approved public consultation plan, or
- b) if all persons who may be affected by the use are identifiable, give written notice of the permit application to each of those persons.

The notice must contain the following:

- (a) the heading "APPLICATION FOR PESTICIDE USE" in block letters 18 pt. or larger and in bold or medium type;
- (b) the permit application number;
- (c) the applicant's name, address, telephone number, and email at which the applicant can be contacted;
- (d) the purpose of the pesticide use;
- (e) the manner of application of the pesticide;
- (f) the location and size of the treatment area;
- (g) the trade name of the pesticide and its active ingredient;
- (h) pesticide use proposed start and end dates;
- (i) a location where copies of the permit application and maps of the treatment area may be examined. A website location should also be included.
- (j) the following paragraph:

---

A person wishing to contribute information about the treatment area for the evaluation of this permit application must send copies of the information to both the applicant at the address above and the administrator under the *Integrated Pest Management Act* at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) within 30 days of the publication of this notice.

- For notices posted digitally, ensure that the date of posting is included.

### ***Additional Stakeholders***

In addition to the requirements above, please provide a copy of your pesticide use permit application and updated treatment plan directly to the following stakeholder groups:

- Local governments (Comox Valley Regional District, Town of Comox, The Corporation of the City of Courtenay)
- Other relevant stakeholders listed in your public consultation plan

**Within 90 days of publishing or distributing the notice**, you must submit a public consultation report which must include the following items:

- a) proof of publication (e.g. the “tear sheet” of the notice of the application from the newspaper(s) in which it was published, a saved copy of a website with the posted notice that includes the date of posting, date-stamped photo of posting in a physical location, etc.). If written notice to all identifiable affected parties was sent instead, then provide a copy of the notice and a statement identifying the persons to whom the notice was given,
- b) a clear and concise summary of all public and stakeholder input received during this process, and
- c) a signed statement describing the action the applicant proposes to take in response to consultation.

## **5. Submitting your final application**

Your final application includes the following documentation:

- Final treatment plan
- Public consultation report
- First Nation engagement report

The ministry will begin reviewing your application once we have received all required documents. Please note you may submit your public consultation report before the other documentation to comply with the legislated timelines in Section 60 of the Integrated Pest Management Regulation.

**Treatment Plan**

The final treatment plan is to include changes, if applicable, based on the results of public consultation and First Nation engagement. Please provide rationale if changes have not been made.

**Public Consultation Report**

Your consultation results must be summarized in a public consultation report and submitted to the ministry within 90 days of publishing or distributing the advertising notice as referred to in section 5. The report should provide proof of advertising, a clear and concise summary of all input received during this process and describe the actions that you have or will take in response to public comments.

**First Nation Engagement Report**

The results of your engagement with First Nations must be summarized in a First Nation engagement report. It should provide the following:

- a clear and concise engagement summary, which may be in a tabulated format, where you describe the main concerns, your action to address those concerns, and the outcome of engagement for each First Nation; if there is no response from First Nations, provide a statement to that effect.
- details of engagement with each First Nation, including the dates and methods of contact, and any actions or accommodations that you have conducted or agreed to conduct; attach applicable letters and/or emails.

Please submit all required documents via email to [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca) and use the subject line "Final application for permit 738-0032-21-24. If the documents are not being submitted simultaneously, please indicate that in your email.

If you have any questions, please contact me.

Yours truly,

Scott Bennett  
IPM Officer  
Surrey Regional Office

Enclosure:

- Developing a Treatment Plan for Pesticide Use Permit Applications
- 738-0032-21-24 Treatment Plan Courtenay GM2021

## **Courtenay Permit Amendment 738-0032-21-24**

---

From: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: December 8, 2022 3:12:25 PM PST  
Attachments: 2022-12-08 Amendment 1 AID.pdf, 738-0032-21-24\_Treatment Plan Courtenay GM2021.docx,  
EGD-IPM-03 Guidance for treatment plans.pdf

Hi Babita, I have attached the Application Instruction Document for the Courtenay permit amendment. Please send all required submissions to Chelsea.

Thanks!

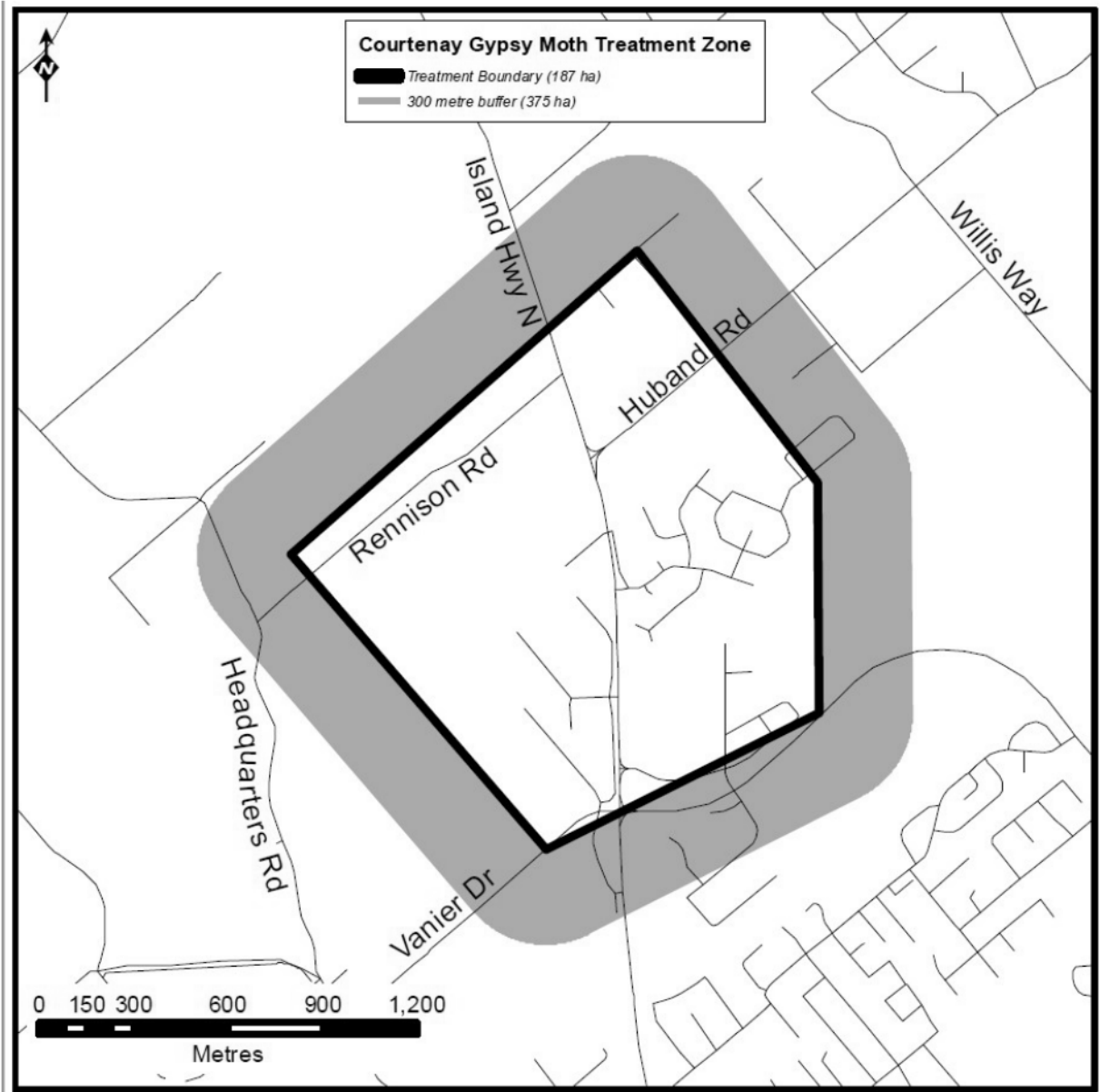
*Scott Bennett, R.P.F.*  
*Sr. Pesticide Management Officer*  
*BC Ministry of Environment and Climate Change Strategy*  
(236) 468-2250

**Courtenay 2021 Gypsy Moth Aerial Spray Program Treatment Plan**  
**Ministry of Forests, Lands, Natural Resource Operations & Rural Development**

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1. Program Contact: Babita Bains, Provincial Forest Entomologist, MFLNRORD  
([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Order in Council.
  - Application rate: 4L/ha.
  - Maximum four treatments, approximately 7 – 10 days apart (weather dependent).
  - Treatment area per application: 187 ha north of Courtenay, B.C. (see treatment area map below).
3. Public Outreach / Notification:
  - Within seven days of receiving the permit, a copy of the permit and map of the treatment area will be posted at the following locations:
    - FLNRORD Gypsy Moth website; and
    - Comox Valley Regional District Office
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, FLNRORD will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the FLNRORD website and 24-hour gypsy moth information line.
  - FLNRORD will update the 24-hour gypsy moth information line and gypsy moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, FLNRORD will notify via telephone or email:
    - the Medical Health Officer (Island Health Authority);
    - the Principals of all schools within the treatment area and primary zone of spray drift deposition;
    - the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition;
    - all persons subscribed to the news web page;
    - RCMP; and
    - IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).
  - At least 48 hours before commencement of each spray application, FLNRORD will place treatment notices so they are clearly visible to anyone entering the treatment areas:
    - Lawn signs with date of treatment and map of the treatment area; and
    - LED highway signs (message boards) on any major highways.





GUIDANCE

REGIONAL OPERATIONS BRANCH | July 2022

## Developing a Treatment Plan for Pesticide Use Permit applications Integrated Pest Management Act

### Purpose of this document

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This guide is for applicants developing a treatment plan as part of a pesticide use permit application under the *Integrated Pest Management Act* and Integrated Pest Management Regulation. It includes the following:

- required components of the treatment plan and level of detail to be included,
- elements of the 6 principles of integrated pest management to incorporate in the plan, and
- examples of activities from various industries that can be used for reference.

The examples provided throughout this document are not always necessary, nor do they represent all the possible ways to meet the ministry's expectations. However, many of these examples are standard industry practices, and if applicants choose to deviate from those practices, sufficient justification should be provided to support the reasoning. When ministry staff assess integrated pest management programs, they typically explore how the elements of integrated pest management interact to create a rational and logical program.

If you have any questions about the information provided, please contact the ministry at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

#### **Disclaimer**

*The guidance provided in this document helps to clarify ministry policy and the provisions of the Integrated Pest Management Act. This is not a legal document and the information in it does not constitute legal advice or impose any legally binding requirements. Guidance provided in this document does not replace the Act, or any other applicable law. Any amendments to the Act, and other legislation referred to in this document may affect provisions of the guidance; in the event of an inconsistency, the Act, or other applicable legislation will prevail.*

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## Acronyms

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IPM – Integrated Pest Management

IPMA - *Integrated Pest Management Act*

IPMR - Integrated Pest Management Regulation

## Definitions

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Adverse Effect	Harm to humans, animals or the environment
Administrator	The administrator appointed under section 9 of <i>the Integrated Pest Management Act</i>
Injury Threshold	The point at which the abundance of pests and the damage they are causing, or are likely to cause, indicates that pest control is necessary or desirable
Integrated Pest Management	<p>A process for managing pest populations that includes the following elements:</p> <ul style="list-style-type: none"><li>a) planning and managing ecosystems to prevent organisms from becoming pests</li><li>b) identifying pest problems and potential pest problems</li><li>c) monitoring populations of pests and beneficial organisms, damage caused by pests and environmental conditions</li><li>d) using injury thresholds in making treatment decisions</li><li>e) suppressing pest populations to acceptable levels using strategies based on considerations of:<ul style="list-style-type: none"><li>i) biological, physical, cultural, mechanical, behavioural and chemical controls, in appropriate combinations, and</li><li>ii) environmental and human health protection</li></ul></li><li>f) evaluating the effectiveness of pest management treatments</li></ul>
Invasive Plant	A prescribed species of invasive plant listed under the Invasive Plants Regulation
Noxious Weed	Has the same meaning as under the <i>Weed Control Act</i>
Pest	An injurious, noxious or troublesome living organism, but does not include a virus, bacteria, fungus or internal parasite that exists on or in humans or animals

## 1.0 Overview

---

Permit applications must present comprehensive information and demonstrate how the proposed pesticide use will not cause unreasonable adverse effects. This criterion requires evaluation of risks to human health and the environment, potential impacts to Indigenous groups, and other impacts identified by the public and stakeholders. Since the purpose of the ministry's Integrated Pest Management Program is to prevent unnecessary use of pesticides and minimize exposure to people and the environment, a treatment plan must explain how the integrated pest management principles will be used for the pest problem and demonstrate how potential adverse effects are identified and avoided or mitigated.

The development of a draft treatment plan is needed in the early stages of the application process as it provides a framework for engagement with Indigenous groups, other government agencies, the public and stakeholders. At a minimum, the treatment plan is expected to include the following information:

- a) General information on where the proposed pest management will take place, the person responsible and principal contact;
- b) How integrated pest management principles will be applied;
- c) Operational information on safely transporting, storing, mixing and applying, disposing and spill response;
- d) Environmental protection strategies such as protecting water and food sources, protecting fish and wildlife habitat, pre-treatment inspection procedures, calibrating application equipment, monitoring weather conditions; and,
- e) Identification of each pesticide to be used and the method of application.

### 1.1 Incorporating integrated pest management into the treatment plan

Integrated pest management is composed of six elements, which must be incorporated in treatment plans:

1. **Prevention** – assessing various methods to prevent pest establishment
2. **Pest Identification** – identifying pest problems and developing management strategies
3. **Monitoring** – checking pest numbers and environmental conditions to figure out when the pest will likely surpass the injury threshold
4. **Injury Threshold** – estimating the damage likely to be caused by pests
5. **Pest Treatment Methods**
6. **Evaluation** – assessing treatment effectiveness

The integrated pest management program should be knowledge-based with a heavy emphasis on collecting and assessing information prior to making management decisions. The ministry expects that for some pests and locations, pest managers may use an iterative approach, i.e., start with simple integrated pest management and move to a more comprehensive framework as more information is obtained with time. The following goals are important when developing an effective integrated pest management program:

- Minimize risk to human health and the environment by reducing exposure to pesticides.
- Prevent unnecessary use of pesticides. If pesticides are necessary, improve their use to make them as selective and low risk as possible.
- Research and adopt new technologies and practices to ensure continual improvement in processes and more effective long-term results.

Treatment plans should include the range of likely activities that may be conducted (pesticides, method of application, IPM procedures). Any permit authorizing the use of pesticides will likely contain a condition for implementing the plan, i.e., once operations begin, you will be required to conduct work as specified in the plan. If there are situations that require an unforeseen change, it will be necessary to amend the plan and, in some cases, the permit. Therefore, it's important to develop a draft version of this plan and submit it with your permit application.

The plan should illustrate how integrated pest management principles will be implemented, and how the environment and human health will be affected when employing pesticides as part of a pest management program. The operational requirements for using integrated pest management before applying pesticides are outlined in IPMR S.68 for licensees and S.69 for confirmation holders and are expected to be met by permittees. Details of each element of the IPM program are provided further in this guidance.

## **1.2 Required public consultation for treatment plan**

The treatment plan must be available during public consultation and the draft must include a permit application number. The purpose of consultation is to ensure that significant issues and concerns are identified, considered and addressed prior to issuance of the permit. Interested parties may comment on the plan and supply relevant information, such as location of water supply systems and particular land uses. The ministry should be assured that relevant issues brought forward by concerned parties are discussed in the finalized plan. The plan may need revisions, based on information provided during consultation. Ministry staff will review the treatment plan during the review phase of the application process and may inspect selected plans under the ministry's compliance program after the permit is issued.

The objectives, intended treatment methods and location of treatment areas outlined in a plan should be presented in plain language to effectively engage the public. Enough detail should be provided to enable identification of communities, watercourses, and other features that may be relevant.

Applicants may consider including visual depictions like maps, diagrams and photographs to improve communication.

### **1.3 Referencing outside documents**

If outside documents are referenced in the treatment plan, it should be clear if references supply background for proposed preventative strategies or are part of the integrated pest management program. Restrict references to relevant pages only. Do not reference the entire document if some information included is not applicable. Referenced documents should be easily obtainable by staff and contractors who are working under the permit and by the ministry and the public who may review the document.

Build plans with the goal of demonstrating due diligence. All required information relating to the proposed integrated pest management program should be adequately explored and sufficiently addressed in the treatment plan. Justify decisions and explain how the proposed use will not result in unreasonable adverse impact. Checklists are useful to demonstrate due diligence, especially if licensees will be contracted to apply pesticide. While not mandatory, checklists can be used to ensure information has been conveyed or procedures have been followed. These checklists can be used by staff or a contractor involved in implementing a treatment plan to demonstrate that a permit holder has provided adequate instruction.

Further information to aid with the development a treatment plan may be obtained from references in Appendix 1.



## 2.0 Components of Treatment Plans in Permit Applications

---

### 2.1 Geographic Boundaries and Maps of Proposed Treatment Areas

The scale of the map or diagram outlining the proposed treatment areas should be sufficient to identify the gross boundaries of those areas (e.g., include boundaries of a regional district or mark railway lines, pipeline corridors, or industrial substation sites). They should show the relative locations of communities and major bodies of water such as lakes, rivers, and marine shoreline. The map or diagram should also include areas that may require treatment, but are yet to be confirmed (i.e. areas that require additional monitoring to determine the need for treatment). A description of the geographic boundaries may include a list of facilities with street addresses or GPS coordinates.

Maps or diagrams are to be available for viewing during the consultation period, so that a person can contact the applicant about any concerns. All areas potentially to be treated with pesticides should be identified on the map(s). If new pesticide use areas (that fall outside the original geographic boundaries described in the plan) are identified after the permit has been issued, then the permit and plan must be amended to reflect these new areas.

### 2.2 Contact Information

The treatment plan must identify both the applicant, who is responsible for the work, and an individual who can be contacted for details of the plan who has decision-making power regarding the development and implementation the plan.

The applicant may be a limited company, corporation, government agency, or an individual under the jurisdiction of the government of British Columbia and in a position of responsibility for carrying out the regulated activity.

### 2.3 Integrated Pest Management

#### 2.3.1 Pest Prevention

A pest prevention program must be developed, where reasonable, to minimize the need for control measures. The purpose of discussing prevention in the treatment plan is to confirm that the applicant has considered all applicable prevention methods and has decided whether they are reasonable for the particular pest to be managed. This section should also include a description of how methods will be implemented.

Pest prevention includes activities used to impede the establishment and spread, as well as minimizing impacts, of unwanted pests to prevent the need for treatment. It is important to find long-term preventative solutions to pest problems. The plan should describe prevention in enough detail for the public and the ministry to have a clear understanding of the methods that have been considered and

used. For example, if prevention is to include seeding of disturbed areas, the discussion could include how the disturbed sites will be identified, when and how they will be seeded and to what extent this should reduce the need for control options. The discussion can reference information sources in other documents that were used to prepare the pest prevention program, such as specific pages in industry technical documents, integrated pest management manuals or reports prepared by integrated pest management consultants and qualified professionals.

If no prevention methods were found to be practical, the treatment plan should include reasons why this conclusion was reached, particularly if standard industry practices are not being used. If cost is a major reason, details to support this claim must be included. The following are some examples of prevention methods that are typically considered and/or implemented for different types of vegetation management programs.

*Example: Noxious Weed and Invasive Plant Management*

Prevention can be an important aspect of managing noxious weed and invasive plant species, and generally involves reducing their spread. It can be difficult to reduce the spread of seeds and plant parts by natural vectors (e.g., wind, water and wildlife), but reducing human activities responsible for their introduction and spread is sometimes possible.

Examples of preventative measures for noxious weeds and invasive plants could include timely seeding of disturbed areas and inspecting vehicles when leaving infested areas to ensure weed plant materials have not become attached to the undercarriage.

*Example: Industrial Vegetation Management*

Prevention methods for industrial vegetation management can include minimizing the initial growth and spread of undesirable vegetation on existing sites, or steps to prevent growth of undesirable vegetation during construction or upgrading of sites. Measures to prevent vegetation impacts on industrial sites could include:

- installing surfacing materials to serve as a barrier to prevent unwanted vegetation;
- establishing stable, low-growing plant communities that prevent growth of unwanted, taller species on electrical transmission and distribution corridors; and
- eliminating seed sources, by preventing leakage of grain products during loading and transport on railways.

### **2.3.2 Pest Identification**

Pests must be identified so that their biology can be researched and incorporated into an integrated pest management program. Some species may not cause significant impacts and are not considered pests. It is important to ensure only organisms that are actually pests are subjected to the control options. If a pesticide is needed, the target pests must also be adequately identified to ensure the

pesticide is used only on pests for which it is registered. In addition, correctly identifying species to determine if they are noxious (*Weed Act*) or invasive (*Forest and Range Act*) may affect treatment boundaries or the type of authorization needed.

It is important to correctly identify pests to be managed as monitoring methods and injury thresholds may be specific to a particular species. Furthermore, treatment options and delivery mechanisms may be influenced by the pest targeted. The level to which various pests need to be identified can vary considerably. This may depend on factors such as the potential impact of the pest, as well as the cost and effort of its identification. For example, if there are safety concerns regarding fire from vegetation, the presence of any plant in a facility may meet the threshold to trigger the need for treatment without further analysis. If identifying a pest to species level is extremely difficult or requires costly laboratory analysis, it may be sufficient to identify only to the genus if this still meets the management objectives.

In some cases, such as for noxious weed management, it may be important to accurately identify a weed to the species level because only those plants must be controlled. This may be important to reduce non-target treatment which could decrease the ability of susceptible habitat to resist future colonization of pests.

For industrial vegetation management it may not be necessary to identify plants to the species level, particularly if several commonly associated plants, together, may be the pest problem that requires treatment (e.g., impacting growth of forest crop seedlings). In such cases, the plant association or “complex” can be identified – usually by identifying a sufficient number of the most common species to uniquely characterize the complex. Reasons should be given as to why identification of plants to a particular level was considered appropriate (for example: “The target species are to include all grasses, herbaceous and woody plants colonizing the gravel bed to prevent fire hazard”).

### **2.3.3 Monitoring Program**

Monitoring is necessary to assess the distribution and abundance of the pest(s) to ensure that the treatment is applied only in areas where it was found that the pest(s) exceeded, or will exceed, the established injury threshold (see section 2.3.4 - Injury Threshold). Therefore, the monitoring program must be designed and used to achieve this objective.

The monitoring program must describe and document the following:

- Distribution and abundance of pests, whether the pest population is increasing or decreasing and whether competing species are, or will, cause significant impacts to the pest population. For example, IPMR S.77(3) requires noxious weed programs, in relation to confirmation holders and licensees, to attempt to identify sites where biological release programs are active and try to prevent harm to those organisms.
- Environmental features and conditions to help determine when or where treatment may be needed, and if required, what type of treatment may be possible (e.g., differing moisture and

soil types and the presence of wetlands or bodies of water may influence treatment decisions). Also, the collection of appropriate environmental data is expected to help assess the impacts of the treatment.

- The level of damage the pest population will cause, and whether the pest population has reached the injury threshold (the point at which the abundance of pests and the damage they are causing, or are likely to cause, indicates that pest control is necessary or desirable). Evaluating damage caused by unwanted pests is important to support injury threshold determinations. The plan should describe the criteria used to determine that the injury threshold has, or will, be exceeded, such as cover or height of plants.

The monitoring program should also include the following details:

- a) **Monitoring methods:** how monitoring sites will be selected and visited (e.g., using ground patrols or aerial surveys), how levels of pest density or damage will be assessed (e.g., through density counts, height measurements or visual estimates), and how relevant environmental conditions will be measured (i.e., anemometer for wind speed).
- b) **Frequency of monitoring:** how often sites will be visited to ensure adequate monitoring. If high priority or high-risk sites are visited more frequently, this should be described. Monitoring typically involves a series of observations to obtain information about a pest population and the environment, and to determine how quickly pests develop to cause significant damage, if ever.
- c) **Data that will be collected:** relevant factors that will be assessed with each monitoring visit (e.g., density and height of vegetation, depth of roots, species of weeds present, species of non-target plants present, density of bio-control agents, soil type, slope, aspect, water levels in wetland areas). If relevant data will be collected by other organizations, this should be described. In many industries, there are standard practices for monitoring the density or percent cover of pests, such as sample quadrats or transects. If these practices are not used, the program should be able to justify the deviation from such practices.

Quantitative data should support the evaluation of the integrated pest management program, and an attempt should be made to collect reproducible and comparable quantitative data to provide an accurate assessment of monitoring data. Nonetheless, quantitative sampling may not always be practical, nor possible, and in such cases, it may be sufficient to collect qualitative data through a visual examination. To achieve reliable and consistent results, adopt qualitative methods that strive for standardization, make sufficient observations, and retain a person with relevant observation skills.

A system should be developed to record monitoring data to determine if treatment is called for and to evaluate the integrated pest management program. Monitoring record forms are one good way to achieve this. Such forms can be incorporated in the treatment plan to show what information will be collected. This may provide a way to easily meet the requirement without a lengthy description. A record of the injury thresholds should be made for each treatment location. An example of a monitoring form is presented on Figure 1 below.

FIGURE 1. EXAMPLE OF A MONITORING FORM

Monitoring Date: _____ Name of Monitor: _____			
Location of Site (attached diagram if required): _____			
Target Plant or Plant Complex	Growth Stage	Density/Percent Cover/ Height (as appropriate)	Exceeds Threshold ?

**ENVIRONMENTAL CONSIDERATIONS**

Soil type and moisture content: \_\_\_\_\_

Aspect: \_\_\_\_\_ Slope: \_\_\_\_\_

Water Sources or wells within 30 m of site If yes, describe: _____	YES	NO
Bodies of water within 20 m of site If yes, describe: _____	YES	NO
Other Environmental Features Requiring Protection If yes, describe: _____	YES	NO

Recommendations for additional monitoring/treatment: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

The program for pre-treatment monitoring for pest abundance and environmental baseline conditions should be designed so that it can be used together with post-treatment monitoring to assess treatment effectiveness and potential impacts on human health and the environment (see section 2.3.6 – Post-Treatment Monitoring). This may be done by establishing the same observation sites and parameters, which would be used in both, pre- and post-treatment monitoring.

The following are some considerations for the pest monitoring to be included in a plan for different types of vegetation management.

*Noxious Weed and Invasive Plant Management*

Noxious weeds and invasive plants are already determined to cause damage (hence are designated under the *Weed Control Act* or Invasive Plants Regulation under the *Forest and Range Practices Act*). Thus, monitoring does not have to include observations on potential damage they cause, unless it is used in assessing the priority for treatment in an area. However, it may be desirable to include observations to assess conditions that are promoting spread of the noxious or invasive plants.

The monitoring program for a noxious weed or invasive plant management program can reference surveys and information from various sources. The assessment of distribution and rate of spread may be determined from reports by land managers or observations during earlier treatments or by follow up visits to significant sites that received treatment. Since noxious weed and invasive plant programs may have a threshold of zero, the need for a sophisticated and well described monitoring system is less important. Monitoring of noxious weed and invasive plant populations is typically done with visual observations to document the extent of an infestation, generally recorded as area infested or as a percentage cover or number of plants per unit area. The final monitoring is often done immediately before treatment of all target plants seen, or observations may be made of various factors to assess the priority for treating target plants.

The manner of recording these observations should be described in the plan (such as on maps or survey forms). If the program is using the Invasive Alien Plant database, this should be referenced with a description of how it will be used.

#### *Industrial Vegetation*

Industrial vegetation management objectives vary, and hence, monitoring programs vary. Some programs may have thresholds with a low tolerance for any vegetation, such as around gas and oil wells or electrical facilities due to legal requirements and safety considerations. In such cases, monitoring may be conducted immediately before the treatment of all vegetation observed. Other programs may require repeated observations to determine which plants are damaging and when they should be treated, if ever. In some cases, early detection of unwanted types of vegetation may be important to prevent seed production and spread to adjacent areas and to ensure a wide range of treatment methods can be used. The rationale for the type of monitoring and the record keeping system should be documented in the plan.

#### **2.3.4 Injury Thresholds**

Injury threshold is defined in IPMR as “the point at which the abundance of pests and the damage they are causing, or are likely to cause, indicates that pest control is necessary or desirable”. Injury thresholds need to be determined, and used, (in conjunction with monitoring) to ensure that control options are used only where the level of current or expected damage caused by the pest is sufficient to justify their use. The plan should outline the thresholds that will be used, how they were chosen, and how they will be operationally applied in the field. This description needs to demonstrate to the public and the ministry that reasonable thresholds were established and that treatment methods will be used only where monitoring indicates the thresholds have or will be exceeded.

Figuring out when problem pests reach thresholds of unacceptable damage can be difficult and varies for different industry sectors. Damage may include reduced economic values, reduced public safety, fire hazard, damage to equipment or facilities or impacts on native ecosystems. Often there are programs with multiple pests, different management objectives and different injury thresholds under a single

treatment plan. In such cases, it will be necessary to identify the location, physical characteristics and injury thresholds of the different management areas.

The ministry expects that a threshold is developed to meet operational needs while minimizing unnecessary pesticide use. Thresholds should be quantitative to enable clear and consistent decision making. The ministry recognizes that it is often necessary to set preliminary thresholds and then refine these as further data and experience is gained. If the threshold and its justification are well described in a reference document or guide, it is acceptable to simply reference the relevant publication and page number. Potential sources for researching thresholds could include company policies, standard industry practices, reference guides, federal and provincial legislation, and pest management experts. If the justification for setting thresholds is not referenced externally, it is expected that a detailed description is included based on sound reasoning and quality information. Note that statements such as “pests must be treated because they reach a level that will impact operational objectives” are not considered sufficient to justify treatment.

The following are some considerations for the development of injury thresholds for different types of vegetation management. Descriptions in the plan should clearly identify how pests may prevent operational objectives from being achieved.

#### *Noxious and Invasive Plant Management*

Plants are designated as noxious or invasive in BC because they can cause significant damage to agriculture, forestry, or native ecosystems. There is often no acceptable abundance of these plants. In practice, however, the degree of control that can be implemented for a specific plant in a specified area will depend on factors such as how widespread it is, how rapidly it is spreading, the degree of damage it causes and the susceptibility of the surrounding habitat to infestation. Thresholds may be based on operational capacity or the presence of established containment areas and may be influenced by the program’s operational budget.

Most noxious weed and invasive plant committees have adopted a system of categorizing noxious weed and invasive plant species and the sites where they are found, to set up priorities for control programs. Systems, such as the one used by the provincial government, can be used to help justify the need for the level of program required, especially where there are several pests managed under the same treatment plan and with varying degrees of likelihood of treatment. As an example, the tables listed in Figure 2 illustrate how various combinations of plant categories and site priorities are used to establish the level of treatment priority. Ideally, the thresholds section of a plan would reference the use of such systems to confirm that there was an assessment of the need for a particular intensity of noxious weed and invasive plant management in a specified area.

#### *Industrial Vegetation Management*

Consideration of worker safety, maintenance of infrastructure (e.g., rail bed, ties), public and environmental safety (e.g., restricting site lines, risk of fire), and impeding inspections or maintenance (e.g., access, location, or markers) may be used to develop injury thresholds.

Injury thresholds may be based on the number or cover of weed species present at a site, or on the size of specific problem species such as those with deep roots or which grow too tall.

The following is an example of the format that could be used for injury threshold information based on plant height.

**Example:**

**Issue:** Tall-growing shrub and tree species must be managed to prevent reaching a specified distance from a transmission line to reduce the risk of fire, electrocution of people and power disruption.

**Thresholds:** The thresholds are minimum distances between the conductor and vegetation as shown in the following table:

Voltage	xxV	xxV	xxV	xxV	xxV
Minimum distance required between conductor and vegetation	xx m	xx m	xx m	xx m	xx m

**How the thresholds were chosen:** Thresholds were determined from the potential for electrical arcing and sagging of lines based on engineering studies and observations (provide an explanation or reference to the studies).

**How the thresholds will be applied operationally:** Plants will be treated if monitoring observations show they have the potential to reach the minimum distance from lines before the next site visit (this should be explained with reference to the growth rate of the plants and predicting the distance from lines before the next scheduled site visit). The plan should indicate if the threshold is based on a legal requirement or policy (e.g., legislated requirements for vegetation removal around oil and gas wells or safety orders to clear railway ballast).



FIGURE 2. EXAMPLE OF A THRESHOLD MATRIX

**Noxious Weed and Invasive Plant Categories**

Category 1	Category 2	Category 3	Category 4
Plants that pose extreme risk for invasion and spread into undisturbed sites, including ecologically at risk habitats. Sites < 0.5 ha, including new infestations within containment zones of other noxious weeds or invasive plant species will be considered for control.	Plants that pose a high risk of invasion and spread to undisturbed sites. Less aggressive than Category 1 plants, but pose similar threat to ecologically at risk areas. Sites less than 0.25 ha would be considered for control.	Plants that pose a moderate risk to invasion and spread into disturbed sites. These plants pose a threat to ecologically at risk sites.	Plants that pose a low to moderate risk of invasion and spread into undisturbed sites.

**Noxious Weed and Invasive Plant Site Priorities**

Priority	Purpose or Intent of Treatment
1. Extremely High Risk	To stop the spread of noxious weeds or invasive plants threatening non-infested, highly susceptible areas. These sites are generally less than or equal to 0.25 ha, and are widely separated by distance or physical barrier from the infestation site. These sites have a high probability of control
2. High Risk	To stop the enlargement of sites in highly susceptible areas. These sites are ≤ 0.5 ha. These sites must have a good probability of control.
3. Moderate Risk	To stop the enlargement of sites of greater than or equal to 0.5 ha. In highly susceptible areas of ≤ 0.5 ha. In moderately susceptible sites. These sites must have a good probability of control.
4. Low Risk	To stop the enlargement/contain sites in moderately susceptible areas of ≥ 0.5 ha. These sites must have a good probability of control.

**Treatment Rationale by Species Category and Site (Injury Thresholds)**

Plant Category	Site Priority	Program Level
1	1	<b>Initial Attack</b> (prevent new species from becoming established)
1	2	
2	1	
1	2	<b>Containment</b> (prevent current infestations from expanding)
2	2	
2	3	
3	1	<b>Full Program</b>
3	2	
3	3	

### 2.3.5 Pest Treatment Options

This section of the treatment plan is expected to include:

- a) a description of the pesticide and non-pesticide treatment methods for controlling pests that may be used,
- b) the rationale for selecting the treatment methods,
- c) the benefits and limitations of each treatment method identified, and
- d) a description of how a decision to use treatment methods will be made.

The rationale for selecting methods should consider IPMR S.68(1)(e), which requires demonstrating that the method selected considered:

- (i) practical alternatives to pesticide use; and
- (ii) risk reduction and protection of human health and the environment.

In other words, operators that apply for a permit will be expected to demonstrate they have considered application technology options to minimize unnecessary introduction of pesticides into the environment. If several treatment methods could be used, it should be outlined how a decision will be made to use each method.

#### 2.3.5.1 Principles for Selection of Treatment Methods

A logical sequence would be to describe each treatment method that may be used, followed by its benefits and limitations, and then, if it is to be used, the rationale for selecting it. Review the ministry's guidance documents outlining the approach to determine [Best Achievable Technologies. A Guide for Sea Lice Managers Using Pesticides](#) is also based on the Best Achievable Technologies approach and is a useful tool for sea lice permit applicants. Using this framework can result in a significant reduction of pesticide use to ensure the protection of the environment, and to promote continual improvement of air, land, and water quality.

The following principles use Best Achievable Technologies and should guide the choice of treatment options:

- Look for long-term solutions to pest problems.
- Collect and use information about pest characteristics to find treatment methods that maximize selectivity and effectiveness.
- Identify treatment methods that are appropriate for the management objectives.

- Use alternatives to pesticides whenever practical, both chemical and non-chemical options should be discussed.
- Remove technically infeasible options. This may be due to environmental conditions that prevent adoption in the application area (e.g., water temperature).
- Incorporate the cost-effectiveness of each possibility. Financial implications to adopting new technology or practices may be considered.
- If pesticides are necessary, make an ongoing effort to improve pesticide selectivity and to use products and application methods that reduce risk to human health and the environment (e.g., using reduced-risk pesticides, lowest effective application rates, and application methods that minimize off target drift).
- Strive for continual improvement. Scan for new pesticides and treatment technology during the life of the plan. The description of non-chemical methods that may be used would include considering all manual, mechanical, cultural, and physical control options commonly used in the industry.

Examples of treatment methods that are alternatives to pesticides for different industry sectors include:

- **Forest vegetation management:** Cultural controls include prescribed burning, use of sheep grazing and planting genetically improved stock.
- **Noxious weed and invasive plant management:** Cultural and biological control methods include grass seeding of disturbed areas, livestock grazing and release of parasitic insect species.
- **Industrial vegetation management:** Physical techniques include landscape fabrics and use of asphalt and other paving materials. Cultural and biological control methods include seeding areas with grass and retention or planting of low-growing shrubs.

If no alternatives to pesticides are identified, the reasons should be discussed, particularly if standard industry practices are not used. If cost is a major reason, provide details to support this claim.

### **2.3.5.2 Selection of Pesticides**

Descriptions of treatment methods should include the product names and application methods for each proposed pesticide. The pesticides and application methods should be consistent with environmental protection strategies described in the plan.

The identifying information for each pesticide should include its trade name, active ingredient and PCP number as registered under the federal *Pest Control Products Act*. The registration number is a unique identifier for each product which allows retrieving the most current label information through the [Pesticide Label Search](#) on the Health Canada website. This number is also useful for seeking technical

information from the manufacturer and/or Health Canada through the [National Pesticides Call-line and Pest Management Information Service](#).

Rationale for selecting pesticides should consider the following:

- Is there a registered reduced-risk pesticide that could be used in place of a conventional one?
- Is there a registered bioherbicide with a plant pathogen active ingredient, which could be used in place of a conventional one?
- What is the best product formulation (lowest risk, most effective) for a proposed active ingredient?
- Does the label of a proposed pesticide allow treatment of all the target plants and the proposed treatment method?
- Are the environmental characteristics of the proposed pesticide, such as leachability, time it takes to break down and toxicity to terrestrial and aquatic organisms, suitable for the area for where it is to be used?

### **2.3.5.3 Description of Treatment Methods**

The description of application methods must specify ground or aerial treatment, include techniques that may be used, and relate these to the pesticides identified.

The following are considerations that should be discussed in the rationale selection:

- ability of the specific treatment method to achieve the pest management objectives (e.g., maintaining safety standards to staff and the public on rail lines);
- expected efficacy of the method (e.g., whether it will meet operational requirements and objectives, or whether expected results will be long or short-term control);
- cost-effectiveness;
- importance of combining pesticide and non-pesticide methods to increase effectiveness or reduce impacts;
- benefits/limitations regarding the protection of environmental features such as bodies of water, riparian areas, species at risk, or wildlife forage and habitat (e.g., benefits of girdling trees include feasibility of application on steep terrain and minimal impact on non-target vegetation that may be forage for wildlife. The limitations of girdling include labour intensiveness, difficulty to carry out in dense brush and safety hazard from the dead trees that remain standing);
- protection of sources of drinking water for humans or livestock;
- urgency of the required treatment based on monitoring results and observed or potential pest impact, and the consequences of not taking any action;

- how the species or types of pest limits treatment options (e.g., stem density and height of problem vegetation can limit the application equipment used for herbicide treatments);
- location of and accessibility to the pest (e.g., terrain, slope, remote areas); and
- potential impact of the treatment method on adjacent property owners.

To minimize release of pesticide to the environment and risk of environmental impact you may consider more specific questions such as:

- What is the lowest possible application rate that achieves efficacy objectives?
- Can target-specific treatments be used rather than broadcast foliar applications? (e.g., what is the potential to use infrared “weed seeking” vegetation detection and treatment equipment for railway ballast weed control, cut stump vs. broadcast, etc.)
- What is the availability of equipment that reduce the potential for drift for foliar applications?
- What would be optimal parameters such as nozzle sizes, pressure, spray pattern and droplet size to reduce drift?
- For large scale programs, how can GPS and GIS technologies during application be used to confirm the location of areas to be treated and environmental features to be protected?
- What is the optimal treatment timing to maximize effectiveness and minimize impact on non-target organisms such as biological control insects?

Often there are areas with different management objectives and characteristics to be dealt with. In such cases it will be necessary to discuss the rationale for selection of treatment methods for each area. These may be the same management areas or operating zones for which the different injury thresholds were discussed. Multiple pests covered in a plan may each require a separate section discussing treatment method selection.

#### **2.3.5.4 Decision on Treatment Methods**

The method of application is selected based on factors such as the target pest, the site of application, the specific pesticide to be used, as well as the cost and efficiency of alternative methods. Clearly describe how the proposed techniques will be used and what criteria will determine the operational selection.

If several treatment methods are to be used (e.g., non-pesticide, pesticide or several pesticides), describe the decision process for deciding when or where they will be used. The decision process can be described in a flow chart or similar diagram that incorporates the monitoring steps, treatment thresholds and environmental parameters.

An example of a decision process:

*Immediately before treatment, the target plant distribution will be surveyed; plants greater than 10 m away from bodies of water will be treated with xx herbicide using back-pack sprayers; plants between 10 to 5 m from bodies of water will be selectively treated with glyphosate using stem injection; plants closer than 5 m to bodies of water will be treated by manual girdling.*

Information about the risk of pesticides can be obtained from the [Pesticide Management Regulation Agency Reduced Risk Initiative](#). This initiative uses an expedited registration process to encourage the use of reduced-risk products. These pesticides may be chemical or biological. A reduced risk categorization may be based on properties inherent with the product or comparisons with commonly used alternatives in the marketplace.

Other helpful information regarding assessing risk of pesticides can be obtained on the US Environmental Protection Agency [Pesticide Science and Assessing Pesticide Risks](#) website.

### **2.3.6 Post-Treatment Monitoring**

The post-treatment monitoring program is expected to assess effectiveness of the treatment on the pests and to check environmental impact. The evaluation should provide information for improving treatments to be as selective, low impact and effective as possible. Evaluations should be used to guide future decision making on similar pest problems and to provide recommendations for continual improvement of the integrated pest management program.

Post-treatment monitoring takes two general forms:

1. Comparison with pre-treatment monitoring data to assess efficacy (see section 2.3.3 on pre-treatment monitoring program). This comparison should help identify any treatment-related issues and changes necessary in the integrated pest management program such as threshold establishment, treatment method, pesticide selection and application timing.
2. Monitoring to assess environmental protection strategies employed. Examples of this type of monitoring could be an assessment of buffer size to protect Pesticide Free Zones, and pesticide selection to assess mobility off site.

#### **2.3.6.1 Monitoring Methods**

This section of the plan should clearly describe the evaluation methods such as random plots, line transects and spray drift cards. For some programs, these methods may include initial aerial overview surveys that can identify visible issues and identify sites for secondary ground monitoring efforts. The efficacy evaluation must include post-treatment observations that can be directly compared with pre-treatment observations used to determine treatment necessity.

Environmental protection evaluation methods may vary among sites with different management objectives or treatment prescriptions. For example, water quality monitoring may be employed where there are repeated treatments with a residual herbicide next to fish bearing water. An example of an environmental protection strategy assessment would be a project to evaluate buffer decisions in protecting non-treatment areas. This type of evaluation activity differs from the treatment efficacy assessment in that the goal is to ensure protection strategies are adequate to prevent offsite movement and unreasonable adverse effects, as opposed to assessing the success of reducing pest numbers below the threshold.

### **2.3.6.2 Frequency of Monitoring**

This section should describe the timing for observations and sampling, and if needed, how many, how often and why the selected schedule is appropriate. The frequency of monitoring will depend on factors such as site permanence and the nature of sensitive environmental features that may be present. The evaluation process should ideally include observations and recommendations by applicators at the time of treatment. For example, for evaluation of herbicide treatment effectiveness, monitoring should include the time when herbicide damage to target and non-target plants can be most easily observed. Sufficient observations at different sites should be made, and samples obtained, to ensure an accurate assessment of all treated areas.

### **2.3.6.3 Monitoring Data**

Both the quantitative and qualitative data are expected to be collected to evaluate treatment effectiveness and impacts (e.g., the efficacy data is collected to evaluate whether free-growing requirements for forestry crop trees has been achieved, or whether safety standards have been achieved or sight lines restored). Examples of environmental data could include water quality samples to evaluate risks to aquatic organisms, or vegetation samples to assess impacts on traditional plants harvested by Indigenous Peoples.

Post-treatment observations for each treatment area may include:

- a review of whether all targets were treated;
- information about whether the application was appropriate in the circumstances (i.e., rate, method, pesticide selection, buffers, etc.); and
- information about whether the targeted pest was affected by the control chosen and if the level of control was acceptable (i.e., whether treatment objectives were met).

Post-treatment observations should be completed when the treatments have had time to noticeably affect targets. The optimal timing will depend on the species treated, the pesticide used, the season, and industry sector.

To evaluate environmental impacts, start monitoring as soon as possible following treatment to ensure serious issues are identified and addressed prior to further treatments. The ministry understands there may be some delay to capitalize on treatment efficiencies with future inspection schedules, however, certain aspects of assessing environmental protection strategies may require site visits before target impacts are clear (i.e., water quality monitoring to assess buffers chosen). It may be useful to have applicators record some information immediately after treatment (i.e., if some target plants were not treated and why, problems with the application equipment, observed drift outside of the treatment zones, etc.) that could help assess any reduced efficacy or any environmental impacts that may be discovered later.

Generally, the effectiveness data should be quantitative, such as number, cover, height or presence/absence of pests per unit area. Examples of data collection methods include:

- counting/estimating cover of pest plants before and after treatment in the same sites used for monitoring or in a representative sample of treatment locations for comparison with pre-treatment data; and
- taking photographs of sample sites before and after treatment for comparison, including written interpretation of the photos.

Sample areas should be selected where there are sensitive features to be protected or efficacy concerns are suspected based on feedback, history or land use. A representative sample of treatment locations should be sufficient to adequately assess efficacy and potential impacts of proposed use.

The types of data for monitoring environmental impacts could include visual impacts on non-target organisms or their habitat or forage next to target areas. Data to evaluate these effects should consider organisms which will be looked at and the nature of the observations. Habitat assessments will require knowledge of the organisms that need protection; it is expected that personnel retained for these assessments will be qualified in wildlife or aquatic biology.

Examples of evaluations include:

- pesticide impact in pesticide-free zones adjacent to water bodies;
- impacts on any selected non-target species that are to be protected in the treatment area (e.g., selected wildlife browse species or plants collected for human use). Such observations may be made using drift cards during pesticide application and/or examination of foliage for effects; and
- evaluating the adequacy of buffer zones used around wildlife features to be protected.

This data collection will be part of strategies to protect fish and wildlife, riparian areas and wildlife habitat from adverse effects of pesticide use (see section 2.10). Permit holders conducting evaluations



should develop a system to document observations, such as evaluation record forms, and ensure staff are trained to record the required information. These forms can be included in the plan. An example of a form used for recording is provided in Figure 3.

FIGURE 3. EXAMPLE OF A TREATMENT EVALUATION FORM

Date of Treatment: _____		Date of Post Treatment Evaluation _____	
Target Plants Treated (species or complexes): _____			
Treatment Location (attach map or diagram if needed) _____			
Total Area treated: _____			
Non-Chemical Treatments Used:		YES <input type="checkbox"/>	NO <input type="checkbox"/>
Treatment Method: _____			
Pesticide Applied:		YES <input type="checkbox"/>	NO <input type="checkbox"/>
<u>Product Name</u>	<u>Active Ingredient</u>	<u>PCP Number</u>	<u>Application Rate (L/ha)</u>
_____	_____	_____	_____
Application Method and Type of Application Equipment: _____			
<b>EVALUATION</b>			
Evaluation Site Location and Features (e.g., slope, aspect, soil type): _____			
Applicator Observations at Time of Treatment: (e.g., equipment problems, uniformity of treatment, drift): _____			
Post-treatment Data on Abundance of Pest Plants: (e.g., counts or estimates per unit area): _____			
Pest Control Results: (e.g., reduction in % cover/density of unwanted plants compared to pre-treatment conditions): _____			
Conclusions on Success of Treatment: _____			
Recommendations to Improve Effectiveness: _____			
Features/biota Examined for Non-target Impacts: _____			
Environmental Impacts Observed: _____			
Recommendations for Environmental Protection: _____			

## 2.4 Procedures for Safely Transporting Pesticides

It's important to develop and use safe transport procedures that provide an acceptable degree of protection for people and the environment. IPMR section 33(2) specifies that applicants transporting, or authorizing transport, of pesticides must ensure it is done in a manner that prevents pesticide escape, discharge, unauthorized removal from the vehicle, and contamination of items for animal or human use. Section 65(1) of IPMR outlines specific requirements on how pesticides must be stored and labeled, and details on how the applicant plans to meet these requirements are expected to be included in the treatment plan.

Information on pesticide transportation may be obtained from pesticide product labels, pesticide Safety Data Sheets, the Pesticide Applicator's Handbook, material from WorkSafeBC and other publications on pesticide safety procedures. It is expected that you review this material prior to developing transportation procedures and ensure those involved have access to the information. You should also be aware of the *Transport of Dangerous Goods Act* and Regulation to understand in which situations pesticides are considered dangerous goods, and subject to additional requirements for transportation.

Safe transport procedures that should be reflected in a plan include:

- minimum standards for containers used in transport (e.g., no leaking or damaged containers) and how they will be transported (e.g., upright and secured);
- conditions for dry formulations and pesticides in paper or cardboard boxes to be protected from moisture and rain during transport;
- a description of how IPMR 33(2) will be met; and
- a description of the personal protective equipment and spill clean-up kit contents adequate for the products and volume transported that will be carried in the transport vehicle (see section 2.8 – Procedures for Responding to Pesticide Spills).

A checklist for safe transport of pesticides may be necessary to confirm that staff or contractors are following the procedures. This checklist may be included in the plan. Vehicles used to hold pesticides overnight are considered mobile storage facilities and are also subject to storage regulations (see section 2.5 – Procedures for Safe Storage of Pesticides). Pesticides unsecured in a facility, trailer or vehicle are considered resting in storage and should meet the requirements of any storage facility.

## 2.5 Procedures for Safe Storage of Pesticides

To ensure pesticide storage provides an acceptable degree of protection for people and the environment, the IPMR sets certain requirements for all users. For example, IPMR sections 33, 65 and 66 describe how pesticides must be transported, stored and labeled. Details on how you will meet these requirements should be included in the treatment plan.

Consider the following:

- How will pesticide storage areas be separated from habitation, food, utensils, lunchrooms, washrooms, cleanup facilities, offices, maintenance shops, personal protective equipment, gasoline or propane storage, animal feed or seed?
- How will the pesticides be stored to prevent surface runoff contamination if water is used to fight a fire at the storage facility?
- What are the procedures for inspecting for leakage, corrosion, breaks, tears or other damage to pesticide containers, and how will the issue be remedied?
- How will stored pesticides be protected from extreme hot or cold temperatures?
- Will the applicant maintain access to up-to-date Safety Data Sheets for each pesticide being stored?
- How will an accurate and up-to-date inventory be kept for all pesticides in storage?
- What are the procedures for safely storing pesticides at field sites (e.g., ensuring spray tanks are empty at the end of the day)?

To ensure the procedures are followed it may be necessary to prepare and include in the plan a checklist of the procedures for safe storage of pesticides to be used by staff or contractors.

It should be noted that although some applicants will not store any pesticide and will contract this service to a licensee, the minimum conditions that permit holders will require of licensees should be included in the plan.

### *Additional Sources of Information*

Further information on storing pesticides may be obtained from references 1, 15, and 20 in Appendix 1.

## **2.6 Procedures for Safely Mixing and Loading**

IPMR S.70 requires applicants to avoid contaminating water when using containers or equipment for the purposes of pesticide loading, mixing, or applying. Outline relevant safe procedures that provide an acceptable degree of protection for people and the environment, and should consider the following:

- Directions for employees to review pesticide labels and Safety Data Sheets to determine the required protective clothing and other safety precautions and how this information will be made available.
- Emergency facilities, including washing facilities, first aid equipment and phone numbers that will be available at the mixing or loading sites.
- Conditions that will be required for mixing pesticides (e.g., mixed in good light, with adequate ventilation, and preferably outdoors under low wind conditions and upwind to minimize airborne exposure).
- Directions to mixers on safety considerations when pouring pesticides (e.g., below eye level, use of a closed mixing/ loading system).
- The minimum distance mixing sites will be located from bodies of water to reduce risk of contamination.

Mixing pesticides may be an especially dangerous activity because the product is concentrated. Therefore, discuss additional procedures for safe pesticide application in other sections of the plan, e.g., under the following headings:

- a) protecting watersheds and other domestic and agricultural water sources (see corresponding section 2.9);
- b) protecting fish and wildlife, riparian area and wildlife habitat (section 2.10); and
- c) preventing contaminating food with pesticide (section 2.11).

## 2.7 Safe Disposal of Empty Pesticide Containers & Unused Pesticides

Legal requirements in BC for the rinsing and disposal of pesticide containers and disposal of waste produced by cleaning of pesticide application equipment are specified in the Hazardous Waste Regulation of the *Environmental Management Act* (EMA). Familiarity with the [Hazardous Waste Regulation](#) is important to ensure pesticide containers and unused pesticides are effectively managed and detailed in a treatment plan. The Hazardous Waste Regulation also describes pesticide containers and unused pesticides which are not considered hazardous waste.

The Hazardous Waste Regulation describes mandatory rinsing of empty pesticide containers that are not labelled 'domestic' by the manufacturer before disposal. Instructions for triple rinsing rigid containers and single rinsing paper or plastic bags are discussed, as well as mandatory rinsing directions including minimum volumes of appropriate solvent to use.

Waste produced by cleaning pesticide application equipment or from rinsing pesticide containers is to be disposed of, if practicable, by adding it to the pesticide spray mix; or if this is not practicable, by applying the waste to land provided:

- 1) it is in the area to which the product contained in the waste has been applied for purposes of pest control;
- 2) it is flat ground, not a swale, and at least 200 m from surface water or any well; and
- 3) it does not consist of gravel, sand or other similarly porous material.

Examples of procedures that may be incorporated into a plan include the following:

- Rinsed containers are to be disposed of by taking them to an approved return collection facility if available (contact the pesticide dealer or Croplife Canada ([www.croplife.ca](http://www.croplife.ca)) or if no return collection program is available, by taking them to an approved landfill.
- Puncture or break non-recyclable containers so they cannot be reused.
- Unwanted or obsolete pesticide product is to be disposed of through a waste disposal company approved for disposal of pesticides.

Prior to developing this section, you should also review each pesticide label which may have disposal directions.

## 2.8 Procedures for Responding to Pesticide Spills

To minimize risk to the environment, the plan should have an outline of procedures for responding to a pesticide spill. These procedures must reflect the applicable regulatory requirements. Under certain conditions, pesticide spills must be reported as identified in the [Spill Reporting Regulation](#) under the *Environmental Management Act*. This regulation outlines when pesticide spills are reportable and what notifications must be performed.

Information on responding to pesticide spills and preparing spill response plans can be obtained by accessing the [Environmental Emergency Program](#) website. The spill response plan should, at a minimum, describe the following:

- procedures to stop the source of the spill, how spilled material is to be prevented from spreading (i.e., by creating a dam or ridge), and how the liquid will be absorbed (if applicable);
- how the absorbent material and contaminated soil is to be collected and how it is to be disposed of (i.e., by an approved waste management company);
- how employees and contractors will protect themselves when responding to a pesticide spill;
- when and how spills will be reported;
- where a copy of the spill response plan will be located (i.e., at each work site); and
- spill kit equipment available at mixing, loading and application sites and in transport vehicles.

Contents of spill kits should be adequate to manage a spill and should account for the volume and nature of pesticide kept by the applicant, and should at least include:

- personal protective equipment to be worn by responding staff, as recommended on the pesticide labels;
- absorbent material (type and volume to ensure a sufficient amount is present);
- neutralizing material such as lime or washing soda; and
- waste collection equipment and a sealed waste-receiving container.

## 2.9 Strategies for Protecting Domestic and Agricultural Water Sources

The treatment plan is expected to include strategies to protect community watersheds and other domestic and agricultural water sources from adverse effects of the proposed pesticide use. In carrying out a pesticide use, precautions should be taken to ensure that domestic water sources, agricultural water sources and soil used for agricultural crop production are protected for their intended use. The requirements in Section 71(3) of IPMR are expected to be met unless a specific rationale is provided, i.e., at least a 30m no-treatment zone around a water supply intake or well used for domestic or agricultural purposes and strategies on how these operational requirements will be met.

The BC [Drinking Water Protection Act](#) and [Regulation](#) include prohibitions against contaminating drinking water. A person must not “introduce anything or cause to allow anything to be introduced into a domestic water system, a drinking water source, a well recharge zone or an area adjacent to a drinking water source.” It is important to be familiar with the requirements relevant to treatment options.

Water sources to be protected should be described in the treatment plan. It is recommended that community watershed maps be obtained to determine if proposed treatments are within a community watershed and, if so, to determine the location of water intakes. Community watersheds are defined in the *Water Act*, and information on specific watersheds can be found on the [Community Watersheds](#) website.

Also, the [Groundwater Wells and Aquifers](#) webpage should be consulted to ensure the applicant is aware of risks of groundwater contamination in the area of the proposed pesticide use. Note that this database may not be complete for certain areas, and further effort may be required to identify wells that could be affected. For instance, property owners and local water purveyors could be consulted to locate wells and water intakes. Additionally, requests for information on location of wells and water intakes in a specified area can be advertised in conjunction with the permit consultation. Where treatments are proposed near domestic water sources it is important for applicants to consult with the regional health authorities about proposed protection strategies. More information can be found on the [Drinking Water Quality](#) website.

When developing strategies for protecting domestic and agricultural water sources you should ask the following questions:

- How will pesticides be stored (timelines and standards) within a community watershed including restrictions on preventing unnecessary storage prior to their use and when they will be removed from the watershed following application?
- How will licenced water intakes within a community watershed be protected?
- How will the no-treatment zone be established and maintained?
- Which treatment methods and pesticides will be used in the vicinity of intakes or wells? For example, only use selective treatment methods, pesticides that have minimal leaching and runoff potential, or use pesticides on soils that are not porous, or water saturated.

- How will protective measures be assessed? Will monitoring be conducted to ensure applicants are not introducing pesticide into a water supply that is to be protected?
- What measures will be undertaken if pesticide residues or pesticide breakdown products are detected at a community watershed water intake (i.e., discontinue pesticide use, communication plan, incidence response plan)?

## **2.10 Strategies to Protect Fish and Wildlife, Riparian Areas and Wildlife Habitat**

This section of the treatment plan should describe:

- wildlife species and/or habitats that require protection and steps that have been taken to determine them;
- steps taken to identify and map bodies of water and riparian areas; and,
- strategies to protect identified fish and wildlife, riparian areas and wildlife habitat from adverse effects of pesticide use.

In addition, IPMR S.71(2)(c) requires avoiding the application of pesticides over visible wildlife and domestic animals, while Section 71(10) requires applying herbicide in such a manner as not to cause erosion of a stream bank or debris from entering a stream. The plan should be consistent with these and other regional, provincial and federal requirements and provide assurance that there will be no unreasonable effect on the environment. Proposed activities should complement and be relevant to higher level plans and land use strategies and objectives, which can be referenced in the treatment plan.

Consider obtaining the services of professionals with experience and training in wildlife and habitat biology to conduct the assessments and provide recommendations for the strategies to avoid unreasonable adverse effects. In some cases, environmental protection strategies are based on company procedures and/or practices agreed to by government agencies – these can be referenced in the plan; an example is the intergovernmental [Approved Work Practices for Managing Riparian Vegetation](#).

Some examples of habitat protection strategies include:

- A pesticide-free zone (in metres) should be established and maintained around all wildlife trees showing active use (i.e., nesting birds, active feeding).
- Preferred foraging areas of bears are to be avoided or manually treated when there are signs of active bears.
- Avoiding direct pesticide application on ungulate winter forage when conducting ground-based spot treatments, unless it is in direct competition with crop trees (specify the radius) or posing a



safety concern as determined in the plan. Key species to avoid include *Ceanothus spp.*, Douglas maple, red osier dogwood, Saskatoon, mountain ash, *Rosa spp.*, *Salix spp.*, and *Vaccinium spp.*

Consider establishing schedules or operating zones where habitats of varying importance are assigned different injury thresholds that could balance operational objectives and the risk to wildlife. See Section 2.6 for more information about injury thresholds.

The BC [Plants, Animals & Ecosystems](#) website is a resource with information about mapped wildlife habitat data, species and ecosystems at risk, as well as conservation and wildlife management strategies. The management strategies specify forest and range practices and include restrictions on pesticide use and silviculture activities for protection of specific plants and animals.

Be familiar with other relevant legislation such as the federal *Species at Risk Act*, the *Migratory Birds Convention Act*, the *Fisheries Act* and the *BC Wildlife Act*.

Further information may be obtained from references in Appendix 2 which lists applicable federal and provincial legislation, sources for best management practices, guidelines, and other resources available to aid in fish and wildlife assessment.

## **2.11 Strategies to Prevent Pesticide Contamination of Food Intended for Human Consumption**

The treatment plans are expected to describe strategies to prevent pesticide contamination of food intended for human consumption.

Foods may include commercial agricultural crops of vegetables, berries or fruit and may also include domestic vegetable gardens and fruit trees, bee keeping areas, forage crops, beef and milk production and areas where wild berries or medicinal plants may be collected. Pre-treatment inspections of the proposed treatment areas and consultation with Indigenous groups and the general public will help identify those areas.

For the purpose of this section, strategies should consider the following:

- How are areas of food growing and gathering identified?
- What mapping efforts will occur and how will areas be flagged in the field prior to pesticide use?
- What inspections did/will occur prior to pesticide use to locate sites within or adjacent to the treatment area that are used for growing/gathering food?
- What no-treatment zones will be maintained adjacent to food growing/gathering sites during pesticide application? The distance for each treatment method and site conditions should be specified.
- What drift reduction methods will be employed?
- How will pesticide treatments be timed to minimize impacts on food plants (e.g., before the food plant is picked or after the picking season has finished)?
- How will information be posted or provided to inform the public about the treatment near food crops or in food gathering areas? What precautions should be taken (e.g., signs for not picking food plants or following the days-to harvest label requirement if pesticide is registered for use on food)?
- How will applicants protect milk and beef production from cattle foraging on or adjacent to treatment sites?

## 2.12 Pre-Treatment Inspection Procedures for Identifying Treatment Area Boundaries

The pre-treatment inspection of a treatment area is expected to be described in the plan to confirm that the boundary and site characteristics are identified. This will ensure that pesticides are only applied where required based on established injury thresholds and proposed treatment methods. It is important to demonstrate that pesticide treatment boundaries are assessed, confirmed and communicated. Inspections should ensure that proposed activities will only treat pests exceeding established thresholds and necessary adjustments are made regarding achieving operational objectives while affording adequate environmental and human protection. This also provides an excellent opportunity to identify and layout Pesticide Free Zones and features requiring protection.

The inspection description should include:

- a) Details on the timing of the inspection. The inspection of treatment boundaries may occur immediately before treatment or following initial inspections of the management area to identify the boundary of features to be protected. The timing of pre-treatment inspection should be as close as possible to the treatment date, so that there will be minimal change in targeted population or features to be protected before treatment.
- b) Features to be identified and assessed to protect human health and the environment, such as the location of wells, property boundaries, bodies of water, wetlands and areas set aside for wildlife and adjacent properties.

For this part, you should consider relevant IPMR sections, such as S.71(6) requiring a no-treatment zone to adjacent properties and S. 77(3) requiring *reasonable efforts to:*

- (i) identify sites where biological weed control organisms have been released, and*
- (ii) prevent harm to those organisms.*

- c) The procedures to be followed. The description should indicate the minimum knowledge or qualification standards to determine the treatment boundaries if there are requirements to identify critical wildlife protection issues.

After pre-treatment inspections, identify whether changes to the treatment area are to be made and how this information will be recorded.

It will be important to describe whether results from the inspection may involve adjusting the treatment boundary (including the width of no-treatment zones) to protect features, updates of operational maps relating to such adjustments, and how applicators will be informed of the boundaries. Identification of how applicators will be informed of the results is especially important where third parties are retained to perform applications who have not been involved in the development of the plan and inspection of the treatment site.

Different industry sectors may have varying systems in which pre-treatment inspections are scheduled, such as:

- for many noxious weed management programs, potential treatment sites are based on conducting annual inspections in established management areas and responding to calls within a “seek and destroy” system. Specific treatment area boundaries and features to be protected can be identified immediately prior to treatment; and
- industrial vegetation management programs on facility sites or rights-of-way may begin with an initial inspection to identify features that must be protected, and may be consistent over the duration of the plan. The boundary of some pesticide-free zones could be permanently marked (such as with stakes or posts). Treatment area boundaries for each year’s operations may be determined by inspections of target vegetation, just prior to treatment.

### **2.13 Procedures for Maintaining & Calibrating Pesticide Application Equipment**

Describing maintenance and calibration procedures in the treatment plan is expected to confirm that risk of harm to applicators and the environment from faulty equipment is minimized and to ensure application rates are consistent with label directions. Information in the plan should reflect how IPMR sections such as 35(3) and 71(1)(b) prescribing maintenance, calibration and record keeping requirements will be achieved.

The description of procedures should include:

- types of equipment (backpack sprayer, quad-mounted boom, etc.) to be used, and if they maintain such equipment, with the general maintenance and calibration requirements;
- a schedule for each one and records to be kept; and
- if contractors are employed, the applicants should indicate how they will ensure that contractors are using equipment and applying pesticides properly.

#### **Maintenance and calibration considerations**

Consider the following questions for the maintenance and calibration section of the treatment plan:

- When are hoses, valves, pumps and connections to be checked (i.e., at the beginning of each season, at weekly intervals during the spray season)?
- When will sprayers be calibrated (i.e., for new equipment, when nozzles or pumps are changed, when changing application rates and otherwise after xx hours of use)?

- When will spray droplet size and the spray pattern be assessed?
- What records will be maintained on the maintenance and calibration performed on each applicator unit?

## **2.14 Monitoring Weather Conditions**

The treatment plan must outline how weather conditions will be monitored and strategies for modifying pesticide application methods for different weather conditions. Weather conditions at the time of, or immediately before, treatment need to be measured and recorded to minimize off target spray drift or runoff, to meet pesticide label requirements and, if necessary, to evaluate treatment effectiveness or impacts that may be related to weather. Minimizing off-target pesticide movement can be critical to protect people, water intakes and wells, bodies of water and riparian areas and to avoid reduced efficiency of the pesticide.

Modifying pesticide application methods may be necessary when weather conditions are expected to result in off-target movement of pesticide or reduce its effectiveness. Modifications could include stopping a treatment, increasing the size of no-treatment zones, directing sprays away from treatment boundaries, changing from broadcast sprays to selective treatment or using shrouds over nozzles.

Note that the IPMR has several weather-related requirements that are expected to be met by permit holders, including the following:

- Section 37(1)(e) requires keeping records of temperature, precipitation and wind measurements for each treatment location and day of use;
- Section 71(7) specifies that a person must not engage in broadcast spraying or foliar spraying outdoors if the wind speed exceeds 8 km an hour (except on railways);
- Section 71(9)(a) specifies that a person must not use a residual pesticide on water saturated soil, during heavy rainfall or if heavy rainfall is imminent; and
- Section 71(9)(b) specifies that a person must not spray a pesticide on foliage covered by ice or frost or if water is flowing on the foliage.

The plan, therefore, should include the weather-related monitoring program describing:

- a) Weather parameters that will be measured. Parameters that can be critical for pesticide application include wind, precipitation, temperature and humidity;
- b) Time and duration of measurements;
- c) Measuring equipment to be used. Use of portable instruments including an anemometer to measure wind and a thermometer to measure temperature is expected. When necessary, given the label directions or site conditions, use a sling psychrometer to measure relative humidity;

- d) Location of the measuring equipment. Measurement of weather conditions should occur at or near the treatment site, ideally at the point of pesticide release from application equipment. Use of data from distant monitoring stations is not adequate; and
- e) How application methods will be modified in response to weather changes.

Applicators must be trained to measure and record the parameters. To monitor and measure weather conditions, it is expected that applicators:

- measure before treatment begins at each treatment site;
- re-measure during the day if changes in weather occur; and
- note the presence or absence of precipitation and its relative intensity in qualitative terms (e.g., heavy rain, light drizzle, etc.).

Design and conduct weather monitoring activities to ensure the preservation of Pesticide Free Zones. Excellent sources of information are the [Drift Mitigation webpage](#) of Health Canada and the [British Columbia Field Sampling Manual](#) for selecting air monitoring sites.

## APPENDIX 1: Information Resources and References

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## **APPENDIX 2:**

### **Sources of Information for Developing Strategies for Protecting Fish and Wildlife, Riparian Areas and Wildlife Habitat**

#### **Federal Legislation and Agencies**

Current federal legislation can be accessed through the Justice Laws website of the Department of Justice Canada. <https://laws-lois.justice.gc.ca/eng/>

**Fisheries Act** establishes criteria for the protection of fisheries and fish habitat from pesticides.

**Food and Drugs Act** describes restrictions on pesticide use on livestock forage, and where livestock will be consumed by humans.

**Migratory Birds Convention Act** describes the requirements to protect migratory birds from pesticides.

**Pest Control Products Act and Regulations** regulates the registration, labeling and handling of pest control products that are sold and used in Canada.

**Pest Management Regulatory Agency (PMRA)** is a division of Health Canada, responsible for the regulation of pest control products in Canada, development of pest management guidelines and compliance under the **Pest Control Products Act** (PCPA). The PMRA has an electronic label search available through the following web site: <http://www.hc-sc.gc.ca/cps-spc/pest/registrant-titulaire/tools-outils/label-etiq-eng.php>

**Species at Risk Act** protects endangered or threatened wildlife species from activities including pesticide use. Its purpose is to prevent wildlife species from being extirpated or becoming extinct, to support the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened. <https://laws.justice.gc.ca/eng/acts/S-15.3/>

#### **Provincial Legislation**

**BC Riparian Areas Protection Act** – protects fish and fish habitat by limiting licences in water short regions and providing directives for residential, commercial and industrial development. [https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/00\\_97021\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/00_97021_01)

**BC Wildlife Act** establishes criteria for the protection of wildlife and wildlife habitat, regulates hunting, and declares and protects endangered species. [https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96488\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96488_01)

## Resources on Biodiversity and Ecosystems

**Important Bird Areas (IBA)** identified under the Canada's Important Bird and Biodiversity Areas Program provide information and maps of important bird habitat. <http://www.ibacanada.ca/>

**Plants, Animals & Ecosystems**, BC Ministry of Environment and Climate Change Strategy. The website is a gateway to detailed information on ecosystems and biodiversity, fish, plants and wildlife, species and ecosystems at risk, invasive and alien species, conservation data and conservation strategies.

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems>

**BCME, Species and Ecosystems Explorer** is a valuable provincial search mechanism that identifies known locations of species, ecological communities, Red and Blue listed species and ecological communities by Forest District and Biogeoclimatic unit. Results identify species and ecological community status, legal designation, distribution, life histories, conservation needs, recovery plans and provide direct links to relevant publications. <http://a100.gov.bc.ca/pub/eswp/>

**EcoCat Ecological Reports Catalogue** provides access to reports on ecological activities in British Columbia, plus related files such as maps, data sets and published inventories when available. Subject areas include aquatic species and habitats, terrestrial species and habitats, floodplain mapping, reservoirs, ground water and vegetation. <https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/libraries-publication-catalogues/ecocat>

**Riparian Areas Protection Regulation (RAPR)** website provides links to protecting riparian fish habitat, while facilitating urban development that exhibits high standards of environmental stewardship for ensuring healthy fish populations. <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/fish/aquatic-habitat-management/riparian-areas-regulation>

**Govindarajulu, P.P. 2008. Literature Review of Impacts of Glyphosate Herbicide on Amphibians: What Risk can the Silvicultural Use of this Herbicide Pose for Amphibians in BC? BC Ministry of Environment.** [https://www.researchgate.net/publication/237451758\\_Literature\\_review\\_of\\_impacts\\_of\\_glyphosate\\_herbicide\\_on\\_amphibians\\_What\\_risks\\_can\\_the\\_silvicultural\\_use\\_of\\_this\\_herbicide\\_pose\\_for\\_amphibians\\_in\\_BC](https://www.researchgate.net/publication/237451758_Literature_review_of_impacts_of_glyphosate_herbicide_on_amphibians_What_risks_can_the_silvicultural_use_of_this_herbicide_pose_for_amphibians_in_BC)

**Species and Habitat Management Recommendations**, Washington State Department of Fish and Wildlife; identifies needs for protection of fish and wildlife based on the best available science and provides guidelines for their incorporation in management decisions. <https://wdfw.wa.gov/species-habitats/at-risk/phs/recommendations>

**Ducks Unlimited Canada** describes wetland and wildlife conservation in BC. <https://www.ducks.ca/places/british-columbia/>

**BC Geographic Data and Services.** The website provides direct access to authoritative, geographic data through a wide variety of web applications and services.

<https://www2.gov.bc.ca/gov/content/data/geographic-data-services>

**Approved Work Practices for Managing Riparian Vegetation.** An intergovernmental guide for incorporating riparian environmental concerns into the protocol agreement for work in and around water.

[https://www.bchydro.com/content/dam/hydro/medialib/internet/documents/bctc\\_documents/work\\_practices\\_riparian.pdf](https://www.bchydro.com/content/dam/hydro/medialib/internet/documents/bctc_documents/work_practices_riparian.pdf)

REVISION HISTORY			
Approval Date	Effective Date	Document Version	Notes
July 13, 2022	July 13, 2022	Ver. 1	Document created

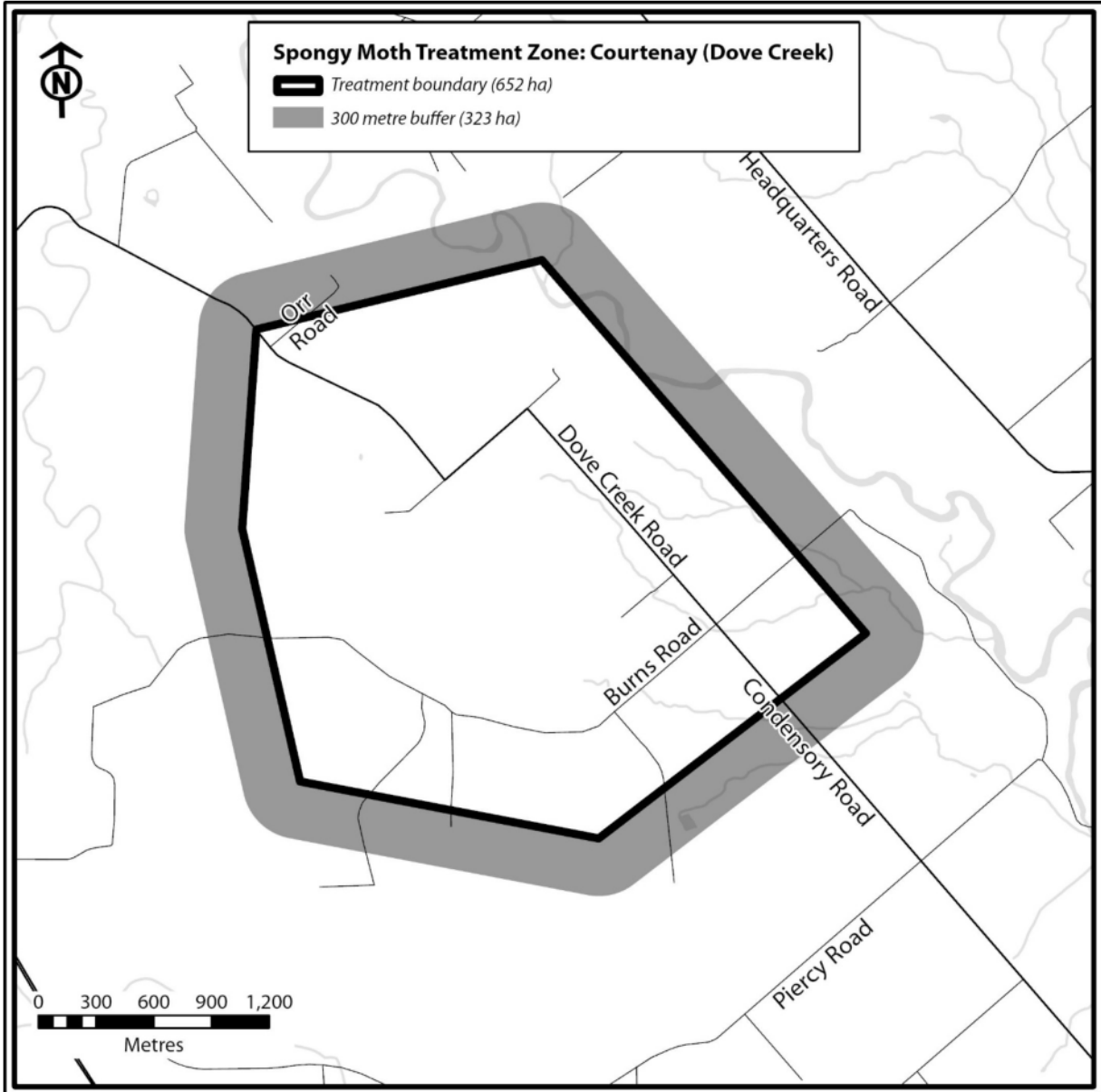
**Courtenay 2022 Lymantria Moth Aerial Spray Program Treatment Plan**  
**Ministry of Forests**

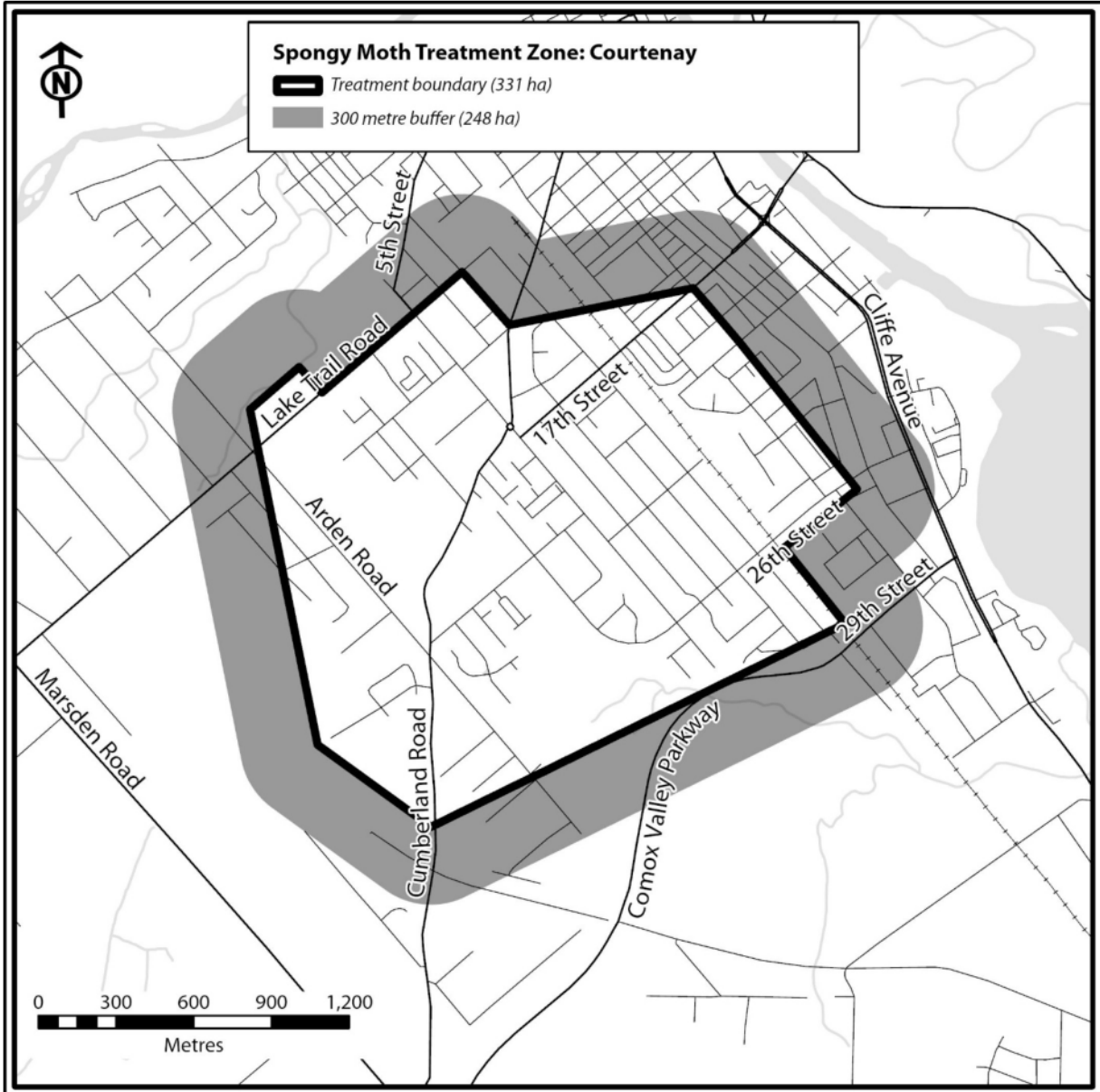
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1. Program Contact: Babita Bains, Provincial Forest Entomologist, MOF ([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - Courtenay – Dove Creek: 652 ha
    - City of Courtenay: 331 ha
3. Public Outreach / Notification:
  - Within seven days of receiving the permit, a copy of the permit and map of the treatment area will be posted at the following locations:
    - MOF Lymantria Moth website; and
    - Comox Valley Regional District Office
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
  - MOF will update the 24-hour Lymantria moth information line and Lymantria moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, MOF will notify via telephone or email:
    - the Medical Health Officer (Island Health Authority);
    - the Principals of all schools within the treatment area and primary zone of spray drift deposition;
    - the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition;
    - all persons subscribed to the news web page;
    - RCMP; and
    - IPM Officer Scott Bennett via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca).
  - At least 48 hours before commencement of each spray application, MOF will place treatment notices so they are clearly visible to anyone entering the treatment areas:

- Lawn signs with treatment window and map of the treatment area; and
- LED highway signs (message boards) on any major highways.

Courtenay treatment areas:







## FW: Courtenay Permit Amendment 738-0032-21-24

---

From: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: December 15, 2022 4:05:46 PM PST  
Attachments: LDD\_CommsPlan\_2023\_V1.docx, 738-0032-21-24\_TreatmentPlan\_Courtenay\_LDD\_2023.docx, !LDD\_OperationsManual\_2023\_Draft.docx, EGD-IPM-03 Guidance for treatment plans.pdf

Hi Chelsea,

Attached is the comms plan and treatment plan for Courtenay (the comms plan is generic as each program milestone is completed at the same time/as a group). I have also attached my operation plan that is for internal logistics.

Do you also know where our Campbell River/Port Alberni and Victoria permit applications are at?

Thanks,

Babita

---

**From:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Sent:** December 8, 2022 3:12 PM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Cc:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Subject:** Courtenay Permit Amendment 738-0032-21-24

Hi Babita, I have attached the Application Instruction Document for the Courtenay permit amendment. Please send all required submissions to Chelsea.

Thanks!

*Scott Bennett, R.P.F.  
Sr. Pesticide Management Officer  
BC Ministry of Environment and Climate Change Strategy  
(236) 468-2250*

DRAFT 1

## **Spongy Moth Eradication Communications Plan 2022/23**

### **I. OBJECTIVES:**

- Effectively communicate the Government's plan to eradicate spongy moth (LDD) through the aerial spray treatment of 3,038 ha of residential, commercial, municipal, park and agricultural lands across seven sites on Vancouver Island:
  1. Campbell River: 303 ha
  2. Courtenay – Dove Creek: 652 ha
  3. Courtenay: 331 ha
  4. Port Alberni: 763 ha
  5. Victoria – View Royal: 381 ha
  6. Victoria – Esquimalt: 267 ha
  7. Victoria – Belmont: 341 ha
- Communicate the need to treat for this invasive species, and the consequences of not eradicating this pest.
- Reassure the public that the product (Foray 48B) and the active ingredient in the (Btk; *Bacillus thuringiensis*) is safe and poses no known risk to human health.
- Ensure that members of the public who have questions and concerns about the treatment have access to accurate information and an opportunity to discuss their concerns.

### **II. BACKGROUND:**

Based on CFIA's 2022 trapping results, ministry staff are planning the eradication/aerial spray of 3,038 ha of residential, commercial, municipal, park and agricultural lands across seven sites on Vancouver Island.

Without treatment, LDD could establish on Vancouver Island and spread to other parts of the province, threatening forests and orchards. Select areas designated for eradication are near major transportation corridors and if established on Eastern Vancouver Island the presence of LDD will trigger CFIA to impose quarantines, trade and transportation restrictions.

The last aerial spray treatment program was conducted in 2022 where nine eradication programs (8 aerial and 1 ground spray) were implemented on Vancouver Island and throughout the Lower Mainland/Lower Fraser Valley:

1. Campbell River: 303 ha
2. Courtenay – Dove Creek: 652 ha
3. Courtenay: 331 ha
4. Port Alberni: 763 ha
5. Victoria – View Royal: 381 ha
6. Victoria – Esquimalt: 267 ha
7. Victoria – Belmont: 341 ha

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The 2022 eradication plan is a balanced, science based and location-specific approach that is consistent with LDD eradication programs that have been implemented over the past 40 years. The product used for eradication in B.C. is Foray 48B, it contains the active ingredient Btk, a natural bacteria found in urban, agricultural and forest soil around B.C. Btk only impacts caterpillars that eat sprayed leaves. Mammals (humans, livestock and pets), birds, fish, amphibians, spiders and bees are not impacted by Btk.

Foray 48B (Btk) is widely used by governments and farmers around the world to protect crops and natural areas. Foray 48B received certification from the Organic Materials Research Institute (OMRI) in 2008 as being suitable for use on certified organic farms in the U.S. and received Canadian Certification in 2018.

During past programs, urban residents have expressed health concerns related to the treatment. There is no medical evidence of serious adverse human health effects resulting from application of Btk or more specifically, Foray 48B.

One of the requirements of the Pesticide Use Permit is to provide advance notification of treatment dates to the public, particularly elderly people, young people and those with respiratory ailments, so they can stay indoors (if they choose to) during the treatment. Aerial spray applications are usually conducted from first light/5:00 a.m. to 8:30 or 9:00 a.m. and will take place between April 15 and June 30, 2023. Spraying over populated areas (homes, schools, daycares) will be completed by 8:00 am.

Residents within the spray zone and those living in the flight path of the aircraft are inconvenienced by the early-morning noise, and those directly treated will have spray residue on windows and other hard surfaces. The residue will erode by normal weathering in about one week and does not affect paint finishes. It can be removed with water and bit of scrubbing.

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**AUDIENCES:**

**a) External:**

- Residents, businesses, schools, daycares and care homes in treatment areas
- Island Health Authority, medical health officers
- Local media
- Mayors & Councils / Regional Districts
- Affected First Nations
- RCMP
- B.C. Nursery Trades Association
- Recreation grounds

## **DRAFT 1**

### **b) Internal:**

- Ministry of Agriculture & Food
- Ministry of Environment and Climate Change Strategy
- Ministry of Health, Public Health Office
- MLAs

### **Key Messages:**

- LDD are an invasive species that pose a threat to the province's ecology and economy.
- Aerial spray programs are required across seven sites on Vancouver Island, covering 3,100 hectares of residential, commercial, municipal, park and agricultural lands.
- There is clear evidence of establishing populations within these areas and we need to ensure LDD does not establish and/or expand to other parts of the province.
- The best treatment for each area is aerial spraying considering the sizes of areas requiring treatment, the terrain, tree density and access.
- Aerial spraying has been used in this long-term LDD program and has been successful.

### **Strategy:**

Engage early with stakeholders, media and residents in the spray area. Use technical ministry staff as key spokespeople to clearly articulate the need for the LDD eradication program. Ministry and GCPE MOF staff will also work with key stakeholders to disseminate information to the public. The local health authority and/or the nurse line will speak to questions about the effects of the spray on human health. Staff will also direct callers to the BC Government YouTube LDD (*LDD Aerial Spraying: Is it Safe*) produced by Island Health chief medical officer: Dr. Richard Stanwick in 2017.

Legally required ads and supporting information bulletins to media, as well as email notifications to LDD News Page subscribers, flyer drops, digital or static highway signs, media alerts, posting notices in public spaces and an open house/information session will all be used to publicize the program.

The ministry's LDD web page will be updated regularly and a toll-free number will also be used.

### **Spokespeople**

- Babita Bains, provincial forest entomologist – MOF will be the lead spokesperson for the program. She has been involved with the program since 2017 and has completed media training.
- Stefan Zeglen, forest health officer—MOF can be a secondary spokesperson for the program. He has been involved in previous aerial spray programs since.

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- Validators, if needed, include:
  - Health Canada, Pest Management Regulatory Agency – approvers of Foray 48B's registration
  - Medical health officer/Island Health:
    - Dr. Charmaine Enns (Campbell River & Courtenay)
    - Dr. Sandra Allison (Port Alberni)
    - Dr. Reka Gustafson (Victoria)
  - Canadian Food Inspection Agency – trapping info:
    - David Holden
    - Melissa Cook
  - Canadian Forest Service – scientific experts.
    - Dr. Brian Van Hezewijk
    - Dr. Gwylim Blackburn

## **ROLL OUT**

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	<ul style="list-style-type: none"> <li>Copied to FN Advisory and District Managers</li> <li>Letters to MLAs:</li> </ul>	
Dec. 22	<ul style="list-style-type: none"> <li>Info bulletin announcing permit application</li> </ul>	GCPE
Dec. 22	<ul style="list-style-type: none"> <li>Update “News” web page which automatically provides a notification to subscribers.</li> </ul>	MOF
Dec. 20	<ul style="list-style-type: none"> <li>PUP application number issued</li> </ul>	MOE
January 13	<ul style="list-style-type: none"> <li>Postcards to be circulated by BC Mail Plus</li> </ul>	MOE / GCPE
January 16-20	<ul style="list-style-type: none"> <li>Ad in <i>Comox Valley Record, Campbell River Mirror, Alberni Valley News &amp; Victoria Times Colonist</i> announcing permit application, as per Integrated Pest Management Regulation (30-day public comment period is initiated)</li> </ul>	GCPE
January 9-13	<ul style="list-style-type: none"> <li>Post PUP applications and maps on website</li> </ul>	MOF
Feb. 1	<ul style="list-style-type: none"> <li>Update LDD phone line message</li> </ul>	MOF
March 8	<ul style="list-style-type: none"> <li>45 day public comment period ends</li> </ul>	
March XX	<ul style="list-style-type: none"> <li>Pesticide Use Permit issued</li> </ul>	
When PUP is issued - <b>The 30-day Appeal period starts.</b>	s.13	MOF GCPE GCPE
First week of March	<ul style="list-style-type: none"> <li>Finalize second postcard and contact Queens Printer and BC Mail Plus to book printing and delivery of postcards</li> </ul>	MOF GCPE
End of March	<ul style="list-style-type: none"> <li>Reserve electronic highway message boards</li> </ul>	MOF
April 23	<ul style="list-style-type: none"> <li>Mail drops delivered to homes in the aerial spray area Deliveries will be completed by April 26 dependent on anticipated May 1 or 2 start date</li> </ul>	GCPE / MOF
10 days before initial spray (~April 15/May 1)	<ul style="list-style-type: none"> <li>Website updated to include treatment schedules – regular updates on website and to website subscribers</li> </ul>	MOF
7–10 days before initial aerial spray	<ul style="list-style-type: none"> <li>Info Bulletin announcing first spray treatment &amp; treatment schedule – which begins May – weather permitting , Copy to</li> </ul>	GCPE

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	<p>City and Regional District offices and Island Health Authority</p> <ul style="list-style-type: none"> <li>• Contact schools re: sending home flyers with kids – if any.</li> <li>• Website and mothline updates</li> </ul>	<p>MOF GCPE</p> <p>MOF</p>
2–3 days leading up to spray	<ul style="list-style-type: none"> <li>• Provide e-copies to schools in areas for distribution with request to send notices home</li> </ul>	MOF
May ~8 is first spray day, weather permitting -	<ul style="list-style-type: none"> <li>• Highway signs and lawn signs go up 48 hours before first spray and updated with treatment window dates prior to each treatment</li> </ul>	MOF
Day before each aerial spray	<ul style="list-style-type: none"> <li>• Website and mothline updates</li> <li>• Highway and lawn signs with anticipated treatment window dates</li> </ul>	MOF
Within 48 hours of program completion	<ul style="list-style-type: none"> <li>• Update highway signs, website and mothline to announce program completion</li> </ul>	MOFO

**V. MESSAGES:**

***The Program***

- The program works. It has prevented the establishment of LDD in B.C. for the last 40 years.
- Aerial spray treatment of Courtenay is required. If these areas are left untreated, the insect will continue to feed on and damage farms, orchards and street trees, and spread to other parts of the province.
- The LDD expands its territory rapidly by “hitchhiking” on human transported goods and vehicles, and could spread to other centres in the province through boat, rail or motor vehicles. Most of the treatment areas are of concern due to proximity to major highways.
- The U.S. border could be restricted to some B.C. products and vehicles. These commodities would have to be inspected adding both time and expense to our exported goods. Commercial and non-commercial vehicle traffic into the U.S. could also be inconvenienced by a thorough inspection.

***Health Concerns***

- The treatment involves a product registered for use on organic farms in the U.S. The public is exposed to the product if they consume USDA certified organic produce. Canadian registration was obtained in August 2018: <http://www.omri.org/omri-lists>
- Btk is naturally present in urban, agricultural and forest soil around the province. It is effective only when it is in a caterpillar’s stomach, and is specific to their digestive

## **DRAFT 1**

system. Mammals – humans, livestock and pets – birds, fish, amphibians, spiders and bees are not impacted by Btk.

- Public safety is paramount. The Pest Management Regulatory Agency, a division of Health Canada, regulates the use of pesticides. They are responsible for determining whether products are safe for use. The use of Btk for aerial application over populated areas is an approved use of Foray 48B. We rely on the expertise of scientists at Health Canada to ensure the safety of all products used in Canada. Health Canada’s media relations unit can be reached at 613-957-2983.
- Any adverse health incident reports are submitted to the manufacturer who have a legal obligation to report these to Health Canada within 30 days of receiving the incident report.

### **Environmental Concerns**

- Although the treatment only affects caterpillars in vulnerable life stages, the presence of rare and endangered moths or butterflies will be considered during treatment planning.
- Ministry of Environment and Climate Change Strategy’s (MOE) Conservation Data Centre will be consulted to determine if there are any known conflicts with high priority endangered species.
- MOE invertebrate specialists have concluded that the treatment does not pose a significant threat to known rare or endangered lepidopteran species.

### **Spraying Consideration**

- We recognize some people may be inconvenienced by the program and welcome calls toll-free at 1 866 917-5999, during business hours, to ask questions or learn more about the program.
- All permit and treatment steps will be advertised, and we will proactively contact media to inform them of our plans. Up-to-date information is available by phone, on-line or through our e-mail distribution lists.

### **Alternatives to aerial spraying:**

- Ground spraying of Btk is another option contemplated by the technical expert committee but because of the overall size of the treatment areas, terrain, lack of adequate access, and diversity of tree sizes, aerial application was considered the most practical option for all seven sites.
- Very high density (mass) trapping was also considered but not recommended by the committee. The costs and the potential delay in achieving the eradication target were considered as reasons not to recommend this approach.
- There is no alternative treatment that would be effective.
- If the population of LDD is not eradicated, a quarantine zone will be established by the Canadian Food Inspection Agency, affecting the local industry and economy.



# Spongy Moth Eradication Program Operations Manual

2023



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## Overview

This manual outlines the parameters for implementing aerial spongy moth eradication programs. It is intended for use by internal staff for aerial and ground-based programs.

## Personnel

Agency/Role	Person	Title	Phone	Email
FOR	Stefan Zeglen	Forest Health Officer	250-739-8385	<a href="mailto:stefan.zeglen@gov.bc.ca">stefan.zeglen@gov.bc.ca</a>
Project Manager	Babita Bains	Provincial Forest Entomologist	250-812-5752	<a href="mailto:Babita.Bains@gov.bc.ca">Babita.Bains@gov.bc.ca</a>
Flight Crew	s.22	Pilot Support crew Support crew	s.22	
Ground Support - Vancouver Island	Eveline Stokkink	Woodstock	s.22	
Ground Support - Vancouver Island	Tim Ebata	Woodstock		
Ground Support (TBD)	Gail Wallin	Invasive Species Council of BC Society	250-305-1003	<a href="mailto:gwallin@bcinvasives.ca">gwallin@bcinvasives.ca</a>
	Nick Wong	Sr Lead, Science Invasive Species Council BC	604-716-7544	<a href="mailto:projects@bcinvasives.ca">projects@bcinvasives.ca</a>
	Theo Hall	Invasive Species Council BC	s.22	
	Melanie Apps	Invasive Species Council BC	778-636-5168	<a href="mailto:FacilitatorVan@bcinvasives.ca">FacilitatorVan@bcinvasives.ca</a>
	Allison McCabe	Invasive Species Council BC	250-895-1236	<a href="mailto:plantwise@bcinvasives.ca">plantwise@bcinvasives.ca</a>
	Ruby Banwait	Invasive Species Council BC	778-388-7882	<a href="mailto:community1@bcinvasives.ca">community1@bcinvasives.ca</a>
	Diane Watson	Invasive Species Council BC	s.22	
Btk Manufacturer	Jacques Dugal	Global Forest Health Manager, Valent BioSciences	418-261-0823	<a href="mailto:jacques.dugal@valent.com">jacques.dugal@valent.com</a>

## Treatment Areas

Treatment Area	Insect	Treatment Area (ha)	Spray type
Campbell River	LDD	303	Aerial
Courtenay – Dove Creek	LDD	652	Aerial
City of Courtenay	LDD	331	Aerial
Port Alberni	LDD	763	Aerial
View Royal	LDD	381	Aerial
Esquimalt	LDD	267	Aerial
Belmont	LDD	341	Aerial
		<b>3,038</b>	

\*LDD= Spongy moth

Treatment area maps are located in Appendix 1-9.

## Emergency Contact Information:

**Immediately call 911.** If the call is non-emergency in nature, use the general enquiry phone number:

Area	RCMP / Police Number
Campbell River	
Courtenay	
Port Alberni	
View Royal	250-479-6800
Esquimalt	
Belmont	

## Operations

### Aerial Operations Base

Aerial Operations Base	Treatment area
Courtenay	Campbell River Courtenay – Dove Creek City of Courtenay
Port Alberni	Port Alberni
Victoria	View Royal Esquimalt Belmont

- For each location pesticide supplies will be securely stored at the base as required by the Pesticide Use Permit (spill kit, secured).
- Loading equipment – pumps, meters, hoses are on-site/in the hangar and are required to circulate the Foray 48B® and load the aircraft.
- Crew briefings and debriefings, project monitoring and general operations will be done remotely and led by the Project Manager (or a designate from Woodstock) who will be on-site.

### Operational Duties

A coordinated team approach will ensure that the project is completed in a timely and successful manner.

Specific duties include:

- **Project Manager:** Babita Bains with help from Tim Ebata
  - Brief pilot and ground support on program details
  - Conduct the project in a safe and effective manner
  - Determine the treatment plan with the applicator (pilot)
  - Ensure maintenance of the pesticide inventory records
- s.22
  - Conduct the aerial application in a safe and effective manner
  - Maintain a safe and tidy ramp area for aircraft operations
  - Ensure that Foray 48B® containers are prepared for loading
  - Maintain accurate aircraft loading records

- **Ground Crew** (Vancouver Island: Woodstock, and Invasive Species Council representatives (TBD))
  - Deploy spray monitoring cards, as prescribed by Project Manager, prior to treatment
  - Collect spray monitoring cards after treatment
  - Monitor, record and report wind speeds prior to and during treatment (approximately every 15 minutes)
  - Observe the aircraft during treatment to ensure proper functioning of spray system
  - Report to the aircraft Captain and Project Manager any anomalies with the spray application
  - Review spray cards, provide spray summary from pilot and collect weather data

## Certificates, Permits, Licenses, etc.

A current **Pesticide Applicators Certificate**, issued by the BC Ministry of Environment & Climate Change Strategy should be held by:

- Pilot (accessible to all loaders and mixers/maintenance staff who work on the spray systems)

A current **Pest Control Service Licence** shall be held by the applicator contracted to perform the aerial applications.

A **Low Flight Exemption** shall be obtained by the aerial applicator from Transport Canada for the treatment area in which operations are being conducted. This permit shall be in place for all training exercises or other operations that require low flying over the area.

The aerial applicator must consult with Transport Canada and, if deemed necessary:

- Establish a holding area for the treatment area or portion of the treatment
- Establish a flight corridor from the airport to the holding area
- Obtain exemptions and authorisations for any other activities that require Transport Canada or other agency approval but not outlined in this Manual

**Notams (Notice to Air Men)** will be prepared and issued by the aerial applicator for the spray area that covers all operations over the treatment area. The applicator shall ensure that the proper authorities are notified to activate the Notam prior to any operation.

**Inspectors** shall be appointed by the Deputy Minister of the Ministry of Agriculture and Food, for the purposes of the North American Spongy Moth Eradication Regulation, 2022. Inspectors include specific ministry staff positions, and any contractors employed to carry out the project (i.e., spray contractors and ground support).

## Product Storage, Loading and Authorizations

### Storage:

- Pesticide supplies will be securely stored adjacent at the Operations Base. The Foray 48B® containers will be clearly numbered and will have the original metal security tags that were affixed at the production facility. The Foray 48B® will be delivered to the Operations base in early April and to be stored for the duration of the project.
- An empty 1000-litre container with a sealing lid plus a spill kit and spill-containment container, both supplied by the aerial applicator, shall be located at the storage area for containing any collected spilled product.
- A pesticide log, specimen label and MSDS shall be in a prominent location adjacent to the stores of Foray 48B®. The pesticide log shall be maintained in an up-to-date manner.

**Loading:**

- The Foray 48B® plus the mixing and loading equipment will be moved to each loading area prior to removing security seals from the container and any circulation of the product, if required. All required spill containment equipment, including an artificial berm, must be in place prior to any action with the product.
- All product will be recirculated for a minimum of two turnovers (2000 litres on the loading meter) within two hours of loading the aircraft spray systems to ensure correct consistency of the Foray 48B® during the application.
- The loading hose must remain immersed in the product during recirculation procedures to ensure that air is not introduced into the product during circulation prior to loading. The pump inlet should never be allowed to suck air.
- The procedure for removing the pump from the mini bulk at the end of a loading or circulating exercise is:
  - place and secure loading hose into the top opening on the mini bulk
  - open the bottom valve on the mini bulk and confirm product flow
  - close bottom valve on mini bulk
  - open “camlock” and remove suction hose from the mini bulk
  - cap suction hose
  - shut off pump
  - close valve at end of loading hose and remove from the mini bulk
  - clean any Foray 48B® drips from equipment and the drip trays
- Ground application crews will decant sufficient Foray 48B® for one complete application on the evening prior to treatment. All containers - empty, full or partially full – will be secured by the application contractor.

**Authorizations:**

- The Project Manager or Twin Aviation loading manager must be present when any Foray 48B® handling action is conducted and must break the seal on the container to be used and reseal the containers when any action is completed. Any time that a seal is broken or affixed to a container, the seal number of the broken and of any newly-affixed seal must be recorded in the pesticide log.

## Timing of Treatments

The Project Manager determine the timing of the treatments.

**Protocol**

- The protocol for notifying Spongy Moth Eradication Program (SMEP) personnel shall be:
  - tentative “first spray” date will be communicated as soon as it has been determined and will be updated as the date is refined
  - tentative spray dates for all three treatments will be communicated two weeks in advance of the tentative “first spray” date
  - “first spray” date will be communicated seven days in advance and updated as necessary – based on weather forecasts
  - “first spray” date will be confirmed 48 hours in advance of the planned date
  - “first spray” date will be confirmed 24 hours in advance of the planned date – at this time the treatment can be cancelled or revised at 1500 or 2000 of the day prior to the proposed treatment or at 0300 of the day of the treatment

- treatment can be cancelled and postponed at any time after 0300 of the proposed treatment day, up to and during actual treatment
- “second spray” date will be announced at the completion of the first treatment and updated as necessary, following the same protocol
- “third spray” date will be announced at the completion of the second treatment and updated as necessary, following the same protocol

**Notifications**

- The Project Manager will ensure all Pesticide Use Permit requirements for notification are met.
  - At least 24 hours before commencement of each pesticide application, notification (written if possible) must be provided to the following persons (or their representatives):
    - a) the **Medical Health Officer** for each Health Authority in which an application will take place,
    - b) the **principals of all schools** within the treatment area and primary zone of spray drift deposition,
    - c) the owners or managers of any **licensed care facilities** within the authorized spray area and primary zone of spray drift deposition
    - d) all persons subscribed to the **government spongy moth news page**
    - e) an **IPM Authorization Officer** via email and to [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca)
- The protocol for notifying spongy moth personnel:
  - the Project Manager will determine application dates and advise:
    - the applicator/pilot
    - ground monitoring crews
  - the aerial applicator must notify:
    - Transport Canada regarding the issuance of any NOTAMS
    - RCMP via email
    - ATC as appropriate

A written record of all contacts made must be maintained.

**Aerial Application**

Pesticide Use Permits: # 738-0030-20/23, CR/PA # and Victoria #, issued by the Ministry of Environment and Climate Change Strategy restricts treatment to daylight hours from civil morning twilight to 0800 where schools and daycares are present and 0900 in all other locations. Treatments may be conducted to 0830 hours on weekends, school professional development days, and on weekdays in the following locations

Professional development days.

Pro D days 2023	Location

The Piper Aztec has been tested in past years for spray patterns. The information from these tests that will be used for planning purpose is:



- Airspeed: 240 km/hr (130 knots or 150 mph)
- Foray 48B® capacity: 550 litres useable
- Effective swath width: 40 meters
- Spray height: 30 meters
- Droplet size: 110 - 125 microns VMD (Volume Median Diameter) (refers to the midpoint droplet size (median), where half of the volume of spray is in droplets smaller, and half of the volume is in droplets larger than the median.
- Droplet density: 20 droplets per sq cm on monitoring cards

**Site Inspection:**

- The treatment site will be inspected if any flight safety concerns are identified, preferably from the air, by the spray aircraft pilot and the Project Manager to determine safe flight patterns for efficient and complete coverage.
- Practice flights in the spray aircraft may be conducted prior to commencement of treatment and after flight lines have been determined. The practice flights may be conducted at spray height and spray speed. No product or water will be carried on-board or sprayed over the spray area during practice flights.
- The treatment site will be ground inspected by the Project Manager to determine card placement locations. Card locations will be based on:
  - Spray deposition within the treatment area can be evaluated
  - Spray deposition inside and outside of the buffer can be quantified
- KromeKote cards must be placed into cardholders prior to the spray and will remain in the cardholders for ten minutes after the spray and then collected into collector boxes and taken to the card reading area for analysis by the Project Manager.
- Locations will also be chosen from which the ground crew monitors wind speed, precipitation, cloud cover (ceiling), temperature and direction.

**Training:**

If required, a brief training session may be held for all flight crews, loading crews and ground monitoring crews. This session will cover, but may not be limited to:

- product used and its characteristics during handling and spraying
- spills and spill plans
- how spray is formed - atomization of the product into droplets forming spray
- desired droplets for coverage and efficacy
- the effect of atmospheric conditions on spray droplets
- the effect of speed, altitude, pressure, etc. on droplets
- spray coverage
- application organization
  - spray teams
  - communications
  - briefings/debriefings
  - weather parameters
  - time constraints
  - shutdown procedures
- calibration
- site flight lines
- spray navigation system

- monitoring procedures
  - air
  - ground

In addition, ground monitoring crews **may** require further training in:

- effect of weather on droplets
- droplet fall rates and evaporation
- handling of deposit cards
- observation of spray aircraft
- public interaction

The flight crew will conduct training exercises in the spray aircraft to become completely familiar with the following:

- AG-NAV line tracking
- turns
- altitude and speed holding

#### **System Calibration:**

The Project Manager will supervise any calibration exercise that is conducted. The amount and complexity of the calibration will depend upon the aircraft selected for the project and its history with previous projects.

Static calibration may be conducted where the aircraft and its spray system has been calibrated by the BC Ministry of Forests for previous spongy moth eradication operations. The spray systems will be checked for leaks and full flow using water. The appropriate factors will be applied to compensate for the different characteristics of water vs. Foray 48B®.

A complete calibration will be required where the aircraft and / or its spray system is new to BC spongy moth eradication program.

Flow checks, recirculating, loading, unloading and flushing of the Foray 48B® will be conducted at the load site. The Spill Plan (Appendix B) will be in effect and a spill kit will be readily available during all calibration exercises.

Flow checks will be conducted on each aircraft using water. The water flow will be 105% of the flow required for the Foray 48B®. The system flow with water would then be set at 67 litres per minute, for a Piper Aztec. Actual flow with Foray 48B® will be checked with the calibrated load meter to ensure the aircraft flow meter is accurate.

The Foray 48B® will be recirculated for a minimum of two turnovers (2000 litres on the loading meter where a 1000-litre mini bulk container is being recirculated) prior to loading the aircraft tank. It is necessary to prime the aircraft spray system to ensure that the nozzles will produce an uninterrupted flow of product. To prime the system, plastic heavy-duty garbage bags will be placed over each Micronair® nozzle and the system will be activated until all nozzles have achieved an even flow. The product collected in the garbage bags will be measured and returned to the mini bulk.

The spray aircraft will fly over the card line at the spray speed and spray height with “booms on”. The spray booms will be turned on and off as per the airport diagram and pre-flight briefings. The aircraft will land and park at the loading base between calibration runs.

A monitoring-card line will be established at right angles to the flight path at a length of 150 metres with a cardholder located at two-metre intervals. All monitoring cards shall be numbered consecutively, from 1 through 76. The centreline card (#38) shall be noted as the nominal centre card.

Access to the monitoring-card line will be from the aircraft parking area. All vehicles must have a 360-degree amber beacon on the roof. Vehicles are not allowed on any runways.

KromeKote cards that had been placed into cardholders prior to the spray run will remain in the cardholders for ten minutes after the spray run and then collected into collector boxes and taken to the card reading area for analysis. New cards will be placed in the cardholders if further spray test runs are to take place within a short timeframe.

A minimum of two spray runs per aircraft with each nozzle configuration should be conducted. Spray runs will commence at civil daylight and continue until completed or the weather becomes unsuitable.

Calibration targets are as specified in the Spray Aircraft section.

The Foray 48B® may be fully flushed from the aircraft spray system and loading equipment at the completion of calibration. It shall be collected in a separate clean container, measured and recorded, and then returned to the 1000-litre mini bulk.

A record of Foray 48B® use must be maintained during the calibration exercise. The volume loaded, volume sprayed and the volume recovered from the aircraft and loading equipment and returned to the 1000-litre mini bulk shall be recorded.

**Monitoring:**

- A combination of monitoring methodologies will be utilised to ensure a safe, effective and efficient treatment operation.
- KromeKote cards will be used to track spray coverage and drift.

**Weather:**

Weather information will be taken from the Environment Canada weather stations adjacent to the treatment areas. This information will be used to “drive” the BioSim model that assists in the planning of treatment timing and will be used for spray-day decisions.

The Project Manager will maintain current weather information from a variety of sources, commencing 24 hours prior to the planned spray period.

Ground monitoring crews will have hand-held wind meters to check the wind at ground level on the flight lines at time of spray. A record of wind speeds at ground level. Windspeed readings will be relayed to the Project Manager if they change significantly or exceed a sustained 8 kilometers per hour.

**Orthoimagery:**

The spray aircraft will have a large-scale orthoimagery of the treatment area, buffer and some surrounding area. Flight lines, block boundaries and significant features will be clearly marked on the orthoimagery although it is expected that all navigation will be by the AG-NAV system.

Copies of the orthoimagery will be provided to the ground monitoring crews and will be posted at the Operations Base.

**AG-NAV Guidance System:**

The spray aircraft will be equipped with an AG-NAV Precision Navigation system – a parallel tracking and guidance system that provides the aircrew with electronic mapping. This information enables the aircrew to fly accurate flight lines and turn “booms on” and “booms off” at the treatment area boundaries.

Significant parameters are recorded to an on-board flash card that will be downloaded at the Operations Base at the completion of each mission so that a permanent record of each mission can be maintained. A “time-stamped” record of the aircraft’s path that shows “booms on” and “booms off” can be produced if required.

The flight crew will provide a KML file, within a few hours of application completion that will show the application lines where booms were ‘on’, on Google Earth.

**Ground-based Monitoring:**

Ground monitoring crews will place spray cards at predetermined locations throughout the treatment area, buffer areas and off-site. The spray cards will be collected and analysed to determine spray droplet size and density. The Project Manager will conduct spray card analysis at the Operations Base and the results will be recorded as required by the conditions of the Pesticide Use Permit.

**Briefings and Debriefings:**

Briefings and debriefings will be conducted by the Project Manager either remotely or at a predetermined location (either in the treatment area or at the aircraft staging site).

**Air Crew:**

A pre-spray briefing will be held each spray day, approximately one hour prior to planned departure of the spray aircraft. The exact briefing time will be specified in the previous day’s notification.

The briefing will be conducted by the Project Manager and will cover the following:

- treatment site weather – current and expected
- the day’s treatment section - by line numbers for each area
- exact daylight time, “booms on” and “booms off” times
- review communication protocol
- any perceived issues
- review any problems from previous application(s) and their resolution

A debriefing will be held after each spray session by noon of each spray day. The debriefing will review known information from the spray and provide information regarding the next proposed treatment.

**Ground Monitoring Crew:**

A pre-spray briefing for the ground monitoring crews will be conducted at either the Operations Base or by telephone approximately two hours prior to civil daylight. The exact briefing time will be specified in the previous day’s notification.

The briefing will be conducted by the Project Manager and will cover the following:

- treatment site weather – current and expected
- the day’s treatment section - by line numbers for each area
- exact daylight time, “booms on” and “booms off” times
- review communication protocol
- any perceived issues

- review any problems from previous application(s) and their resolution

Cards collected by the ground monitoring crews will be transported to the Project Manager and/or assessed internally by one person specified on the ground monitoring crew.

#### **Communications:**

Air-to-ground communications will be between the pilot (Twin Aviation) and Project Manager via cellphones. Twin Aviation will manage communications at the Operations Base and maintain a radio log as appropriate.

#### **Application:**

- It is expected that one morning will be required to complete each treatment excluding the Nanoose/Nanaimo site which is anticipated to take three mornings to complete. As well, Burnaby and Surrey sites as well as Chilliwack and View Royal sites will likely be combined. There are no significant hazards (i.e.- steep terrain) that may limit loads so the aircraft may be loaded to the operational capacity of 500 litres.
- Foliage should be dry but treatment may commence where the foliage is wet but moisture is not dripping from it. Precipitation should not be expected within six hours of the completion of treatment.
- The spray aircraft must be at the designated holding area at least two minutes prior to “booms on”, at civil daylight. The Operations Base will advise the flight crew at ten minutes and two minutes prior to “booms on” and at “booms on” time.
- The aircraft will proceed directly to the treatment area with subsequent loads during that morning.
- Spray operations will continue until the assigned treatment area is completed or until spray cut-off time, unless advised by the Operations Base to cease operations. The flight crew may shut down operations if there is an apparent problem with the spray or a safety concern (communicated via the Project Manager). The Operations Base must be advised immediately of any such action.
- All spraying must be completed by 0800 or 0900 as outlined in the PUP. The Operations Base will advise the flight crew of the time remaining to spray at 0730, 0740 and 0744. The Operations base will advise of “booms off” at the deadline.
- The Operations Base shall maintain the correct time.
- Safety shall be paramount at all times.

## **Media Relations**

- All media relations or public inquiries will be directed to the Project Manager
  - **Babita Bains: 250-812-5752 or Tim Ebata: 250-213-8716**
- An “Information Line” direct line has been set up and will remain open until the completion of the Program. The “Moth Line” number is: **1-866-917-5999**.
- The Spongy Moth Program website is: [www.gov.bc.ca/spongymoth](http://www.gov.bc.ca/spongymoth) (go to the ‘News’ webpage [www.gov.bc.ca/spongy-news](http://www.gov.bc.ca/spongy-news) for regular program updates.

## **Downed Aircraft Procedures**

### **Flight Monitoring**

The aircraft is equipped with satellite-based tracking beacons that can be displayed on a computer screen while the aircraft are in the air. The Project Manager will be in radio or cellphone contact with all aircraft at all times during the spray operation. The ground monitoring crews will be in radio contact with the aircraft while it is over the treatment area. Communications will be over Twin Aviation’s radio frequencies.

## Downed Aircraft

In the case of a downed aircraft the following procedures will be followed:

1. **Immediately call 911.** If the call is non-emergency in nature, use the general enquiry phone number:
  - **See RCMP numbers listed above**
2. All media enquiries will be directed to the local Police, non-emergency (GCPE will also be engaged)
3. As soon as possible a call will be placed to the Forest Science, Planning and Practices Branch:
  - Babita Bains, Project Manager and Media Relations
    - i. Cell: 250-812-5752
  - Tim Ebata, Project Manager and Media Relations
    - i. Cell: 250 213-8716

## Aircraft and Personnel Incidents

Other aircraft incidents and any personnel incidents will be addressed as specified in the Twin Aviation Inc. operations plan.

## Spill Plan

A **Spill** means a release or discharge, of a pesticide or Jet A aviation fuel, except as discharged or allowed by:

- a) Sections 3 and 5 of the *Waste Management Act*
- b) a waste management plan approved by the Minister or under the *Act*
- c) a permit, approval or order under the *Act*

Any volume of Foray 48B® that exceeds five litres that is introduced into the environment in any manner other than through the intended spray or calibration process, or Jet A aviation fuel that exceeds 100 litres that enters the environment, shall be considered a spill on this project.

A copy of this Spill Plan must be posted at any site where pesticide is stored or handled. All personnel participating in the mixing, loading, discharge or other handling of the pesticide must be familiar with its contents.

### Reporting a Spill:

- The person who is in control of the action being conducted when the spill occurs is responsible for initiating remedial action and reporting the spill as required.
- **Immediately** advise the appropriate agencies of the spill.
- The **Provincial Emergency Programme** at **1-800-663-3456**, must be notified as soon as possible. If you are unable to contact the PEP within a reasonable time, the local police must be contacted. Provide the following information:
  - Reporting person's name and contact number
  - Name and telephone number of the company involved in the spill
  - Location and time of the spill
  - The spilled product, including
    - Exact name (*Foray 48B®*, *PCP No. 24977* or *Jet A aviation fuel*)

- Quantity
- Hazard class (*MSDS indicated "not determined" for Foray*)
- Cause and effect of the spill
- Details of the action taken or proposed action to comply with section 3 of the *Waste Management Act*
- Description of the location and of the area surrounding the spill
- Equipment and other materials involved
- Details of further action planned
- Presence and extent of injuries, including name and age of any injured person
- Emergency action taken
- Names of other persons or agencies notified
- Potential impact on people and the environment

A written report must be completed and provided to the Project Manager and to the Ministry of Environment within three days of the occurrence. The report must include all actions taken to ensure a similar spill does not occur in the future.

The following actions shall occur in the event of a spill:

- protect yourself from contamination by wearing the appropriate personal protective equipment
- move any person from the spill area; provide first aid as necessary
- remove any sources of ignition if the spill is aviation fuel
- evacuate the area and call 911 if there is potential for fire or explosion
- stop all operations until the spill is contained and cleaned up
- control the spill – minimise the flow as much as possible
- contain the spill to as small an area as possible
- ensure that all personnel working on the spill wear appropriate personal protective equipment
- stop the spilled material from spreading by creating a berm, if necessary. Ensure that the spill material does not enter any drainage system
- collect the spilled material and place into empty containers for disposal
- where the spill results from an emergency aircraft dump, notify the Ministry of Environment
- where the spill results from an aircraft or vehicle accident call 911

#### **Storage and Loading:**

- s.15
- A berm must be placed around any Foray 48B® containers and mixing or loading equipment when recirculation, loading or transferring is taking place.
- s.15
- 

#### **Containment System:**

The Operations Base spill kit will contain:

- 50 feet of berming material to place around any spill

- personnel safety gear (minimum of 2 of each)
  - clean coveralls
  - waterproof boots – unlined
  - waterproof, unlined gloves
  - eye protection (goggles or face shield)
- absorbent material (minimum of 50 kg) *e.g.*- kitty litter
- two long handled push brooms
- two flat shovels
- one 205-gallon waste container, with lid
- one empty 1000-litre mini bulk container (or equivalent)
- plastic heavy-duty garbage bags
- one hundred feet of 1/8 inch rope with flagging tape – or similar product to define an exclusion zone

Any articles that have been used or have been removed from the spill kit shall be replaced immediately.

A clean water source, with water pressure, will be available to rinse equipment or persons, should it become necessary.

The storage and loading facility will be located in a manner where any spilled material can be contained and placed into the spill storage container. A sump area will be created, where possible, at the loading site to contain any liquid product which can then be pumped out into the designated container.

## Product Contamination

The product to be applied is Foray 48B® PCP No. 24977, a biological insecticide in which *Bacillus thuringiensis* var. *kurstaki* is the active ingredient, manufactured by Valent BioSciences. §.22

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The 1000-litre mini bulk containers are delivered with wire security seals that were affixed at the point of origin. Numbered plastic security seals will replace the wire security seals on any container that has been opened at the Operations Base.

The above procedures make it almost impossible to contaminate the product or the aircraft.

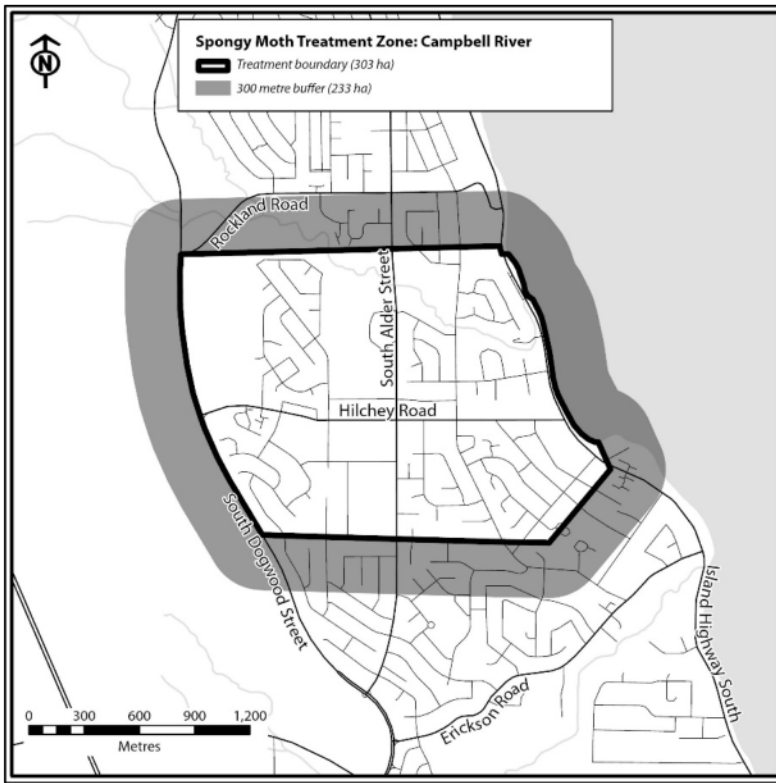
If contamination of the product is suspected the following procedures will be followed:

1. shutdown project immediately
2. follow spill procedures if a spill has taken place
3. test sample product in containers and aircraft, if applicable
4. obtain replacement product until on-site product is tested and cleared
5. use on-site product after testing and clearance of any contamination

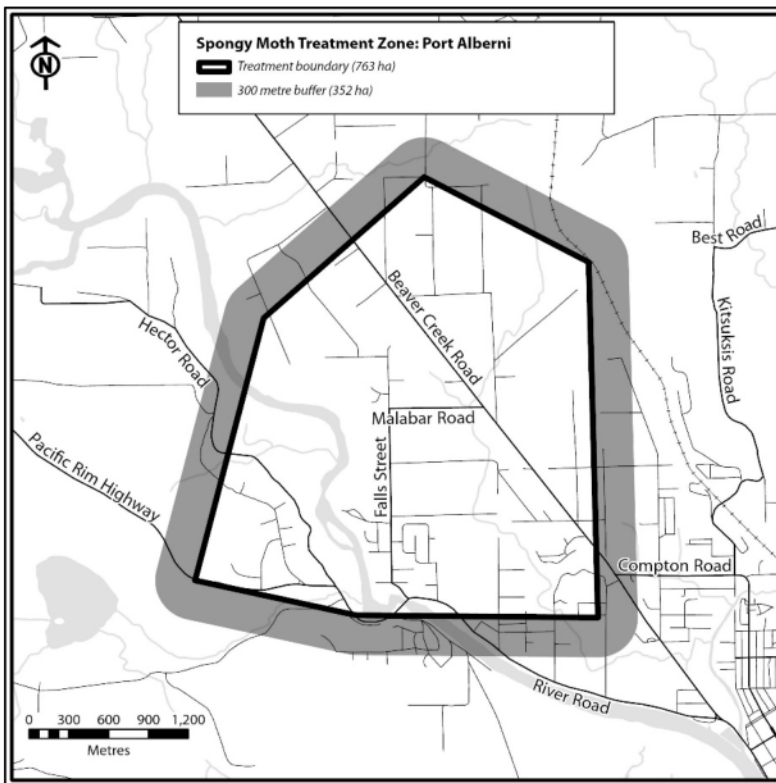


## Appendices

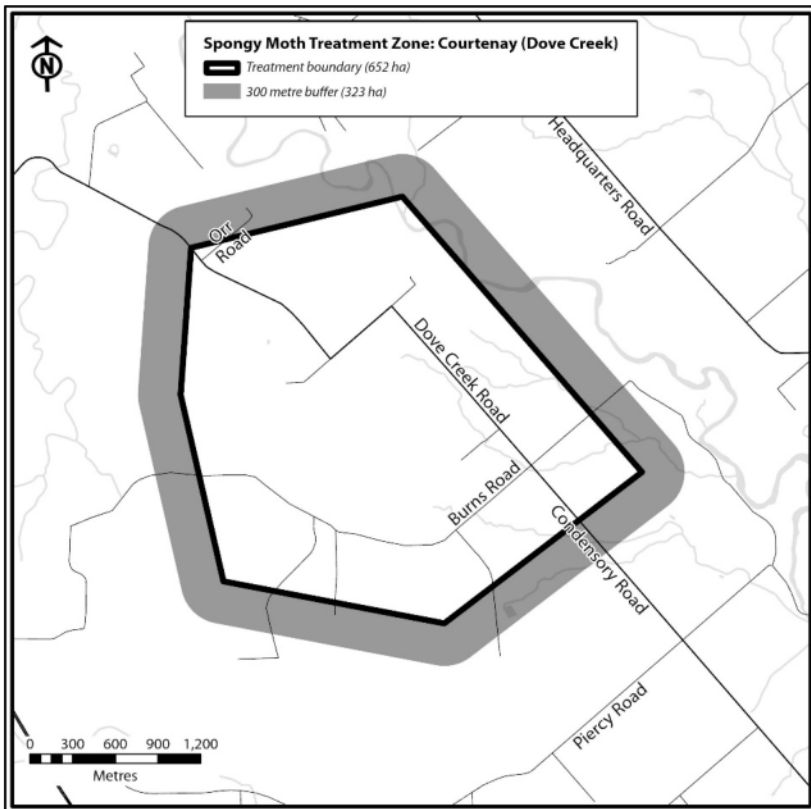
Appendix 1. Campbell River treatment map.



Appendix 2. Port Alberni treatment map.

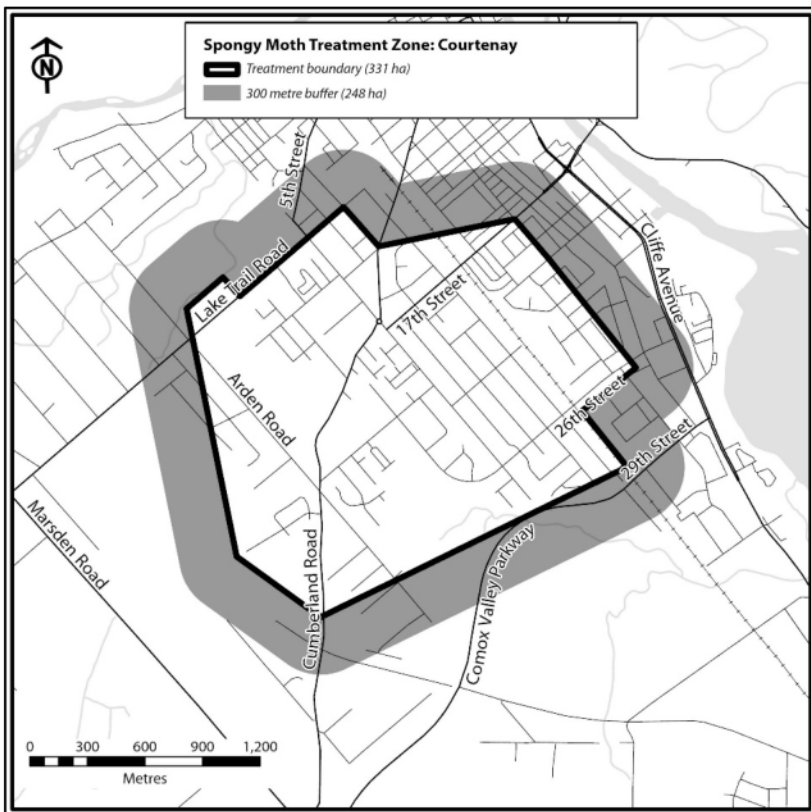


Appendix 3. Courtenay-Dove Creek

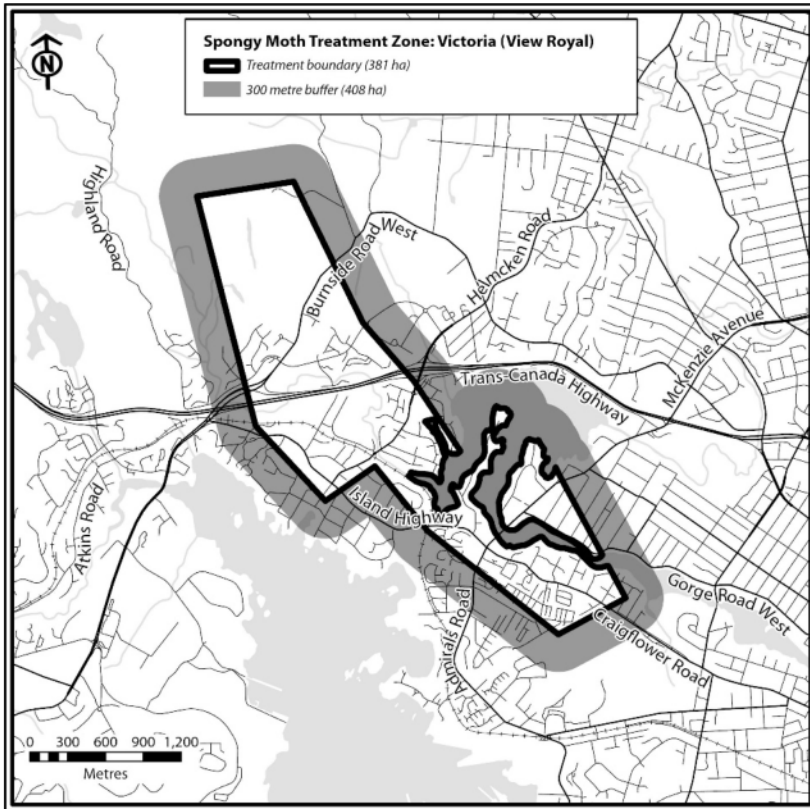


treatment map.

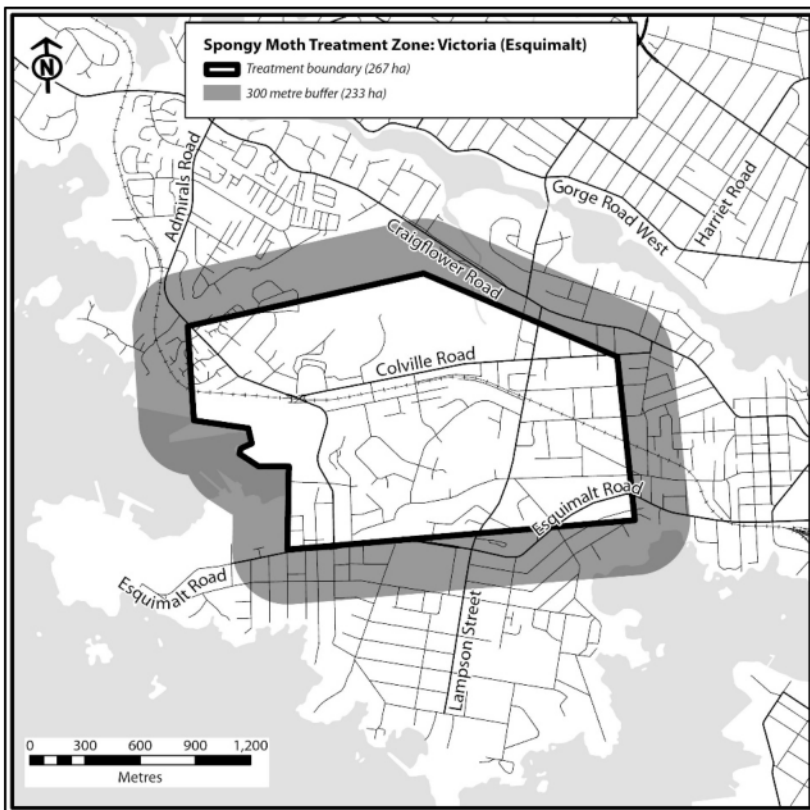
Appendix 4. City of Courtenay treatment map.



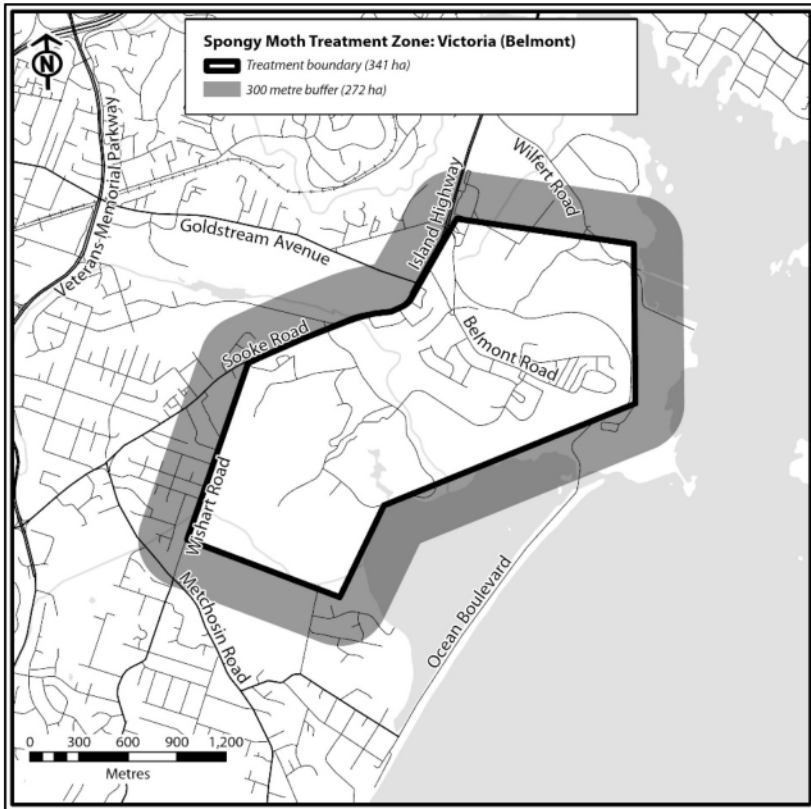
Appendix 5. View Royal treatment map.



Appendix 6. Esquimalt treatment map.



Appendix 7. Belmont treatment map.



## RE: Courtenay Permit Amendment 738-0032-21-24

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From: White, Kirsten M ENV:EX <Kirsten.White@gov.bc.ca>  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: December 16, 2022 12:13:03 PM PST  
Attachments: EGD-IPM-03 Guidance for treatment plans.pdf, image001.png, 738-0032-21-24\_TreatmentPlan\_Courtenay\_LDD\_2023.docx, !LDD\_OperationsManual\_2023\_Draft.docx, LDD\_CommsPlan\_2023\_V1.docx

Hi Babita,

Thank you for your submissions. I have forwarded the consultation plan to our Director, Cassandra Cauce for her review and decision as an IPM Administrator. Please be advised that she is currently on leave until the new year. You may anticipate an email response from Cassandra upon her return.

We thank you for your patience.

Kind regards,

Kirsten

Kirsten White, BSc, PAg (she/her)  
A/Section Head, Industry/Fish/IPM  
Authorizations South  
Environmental Protection Division  
Tel: 250 739 8297  
[Kirsten.White@gov.bc.ca](mailto:Kirsten.White@gov.bc.ca)



Ministry of  
Environment and  
Climate Change Strategy

*I respectfully acknowledge that I live, work and play on the traditional territory of the Coast Salish People including Snuneymuwx, Snaw-naw-as, and Stz'uminus Nations.*

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Sent:** December 15, 2022 4:06 PM  
**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Subject:** FW: Courtenay Permit Amendment 738-0032-21-24

Hi Chelsea,

Attached is the comms plan and treatment plan for Courtenay (the comms plan is generic as each program milestone is completed at the same time/as a group). I have also attached my operation plan that is for internal logistics.

Do you also know where our Campbell River/Port Alberni and Victoria permit applications are at?

Thanks,

Babita

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**From:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Sent:** December 8, 2022 3:12 PM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Cc:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Subject:** Courtenay Permit Amendment 738-0032-21-24

Hi Babita, I have attached the Application Instruction Document for the Courtenay permit amendment. Please send all required submissions to Chelsea.

Thanks!

*Scott Bennett, R.P.F.  
Sr. Pesticide Management Officer  
BC Ministry of Environment and Climate Change Strategy  
(236) 468-2250*

## Re: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

---

From: Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
To: ENV EMA Fees ENV:EX <EMAFees@gov.bc.ca>, Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>, Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
Cc: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: December 17, 2022 8:59:46 PM PST

Hi folks. The Courtenay application is an amendment and no payment should be required.

Scott Bennett

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**From:** ENV EMA Fees ENV:EX  
**Sent:** December 16, 2022 12:14 PM  
**To:** Bains, Babita FOR:EX; Integrated Pest Management ENV:EX  
**Cc:** Bennett, Scott ENV:EX; Eby, Chelsea ENV:EX  
**Subject:** RE: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Hi Babita,

I will be back in the office next Monday and Tuesday, and I can take credit card payment on Monday or Tuesday for Victoria site and CR/PA site. Please let me know whom I should contact for a credit card payment. Then I will not be able to take credit card payment until Dec 30, 2022 as I will not be in the office.

For Courtenay site, I need to wait until Channing confirms the amount as he is currently away from the office. I believe he will be back to work on Wednesday next week for one day before his Christmas vacation starts.

Thank you very much!

**Tasia Lau**  
Fees Analyst  
Integrated Services | Branch Operations | Regional Operations Branch  
Environmental Protection Division  
Ministry of Environment and Climate Change Strategy  
E: [emafees@gov.bc.ca](mailto:emafees@gov.bc.ca)

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Sent:** December 16, 2022 8:56 AM  
**To:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>; Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>; Lau, Tasia ENV:EX <Tasia.Lau@gov.bc.ca>  
**Subject:** RE: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Hi Channing,

I submitted the Courtenay permit to Chelsea and all the associated documentation that they requested. Can you call us today (I can send the contact info) or do you prefer we call you to process payment for all three or just the two permit applications you have? I can always pay for Courtenay when Chelsea is back as we already have a PUP number (it's an amendment) issued.

Thanks,

Babita

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**From:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>

**Sent:** December 12, 2022 2:57 PM

**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>

**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>; Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>; Lau, Tasia ENV:EX <Tasia.Lau@gov.bc.ca>

**Subject:** RE: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Hi Babita,

I never received an application for Courtenay. I only received Victoria, CR/PA, and the duplicate for CR/PA.

And yes, I have requested Tasia to take payment for both Victoria and CR/PA at the same time, but to process them on two separate receipts.

We can do a third payment for the Courtenay application so that the process is quicker once we receive it.

Thanks,

**Channing Vigier**

Authorization and Licencing Officer

Integrated Services | Regional Operations Branch

Environmental Protection Division

Ministry of Environment and Climate Change Strategy

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**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>

**Sent:** December 12, 2022 2:48 PM

**To:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>

**Cc:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>; Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>

**Subject:** FW: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Hi Channing,

I received an IM from Tasia asking for permit fee processing info and I think it was regarding the Campbell River / Port Alberni aerial spray permit. Is it possible to have our payment for all three permits (CR/PA, Courtenay and Victoria) processed at the same time? If not, no worries and we can process them as they are reviewed.

Thanks,

Babita

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**From:** Bains, Babita FOR:EX

**Sent:** November 30, 2022 8:59 AM

**To:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>

**Subject:** FW: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Hi Channing,

Thanks for reaching out for clarification – I actually tried to do a recall and replace so the 3:26 pm email is the correct and only submission for Campbell River Lymantria eradication.

Thank-you,

Babita

Babita Bains, MSc, RPF

Provincial Forest Entomologist

Forest Science, Planning and Practices Branch



Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

---

**From:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
**Sent:** November 30, 2022 8:56 AM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Subject:** FW: Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Good morning Babita,

I noticed that we received we received this same application from you at 1:04pm on Dec 24<sup>th</sup>. I do note there was also a similar application for Victoria 3:23pm on the same day, but I wanted to check whether this email from you at 3:26pm was an amendment to the one at 1:04pm, a duplicate, or you accidentally send it again in lieu of another location.

Please confirm.

Thank you,

**Channing Vigier**  
Authorization and Licencing Officer  
Integrated Services | Regional Operations Branch  
Environmental Protection Division  
Ministry of Environment and Climate Change Strategy

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**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Sent:** November 24, 2022 3:26 PM  
**To:** Integrated Pest Management ENV:EX <IPMPBC@gov.bc.ca>  
**Subject:** Pesticide use Application: MOF Lymantria Eradication - Campbell River & Port Alberni

Attached is the Ministry of Forests pesticide use permit application to control/eradication Lymantria moth in Campbell River and Port Alberni using Foray 48B in spring 2023 and associated maps.

If you have any questions or require additional information please let me know.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

## RE: 2023 Spongy Moth PUP Applications Docs for CR/PA and Victoria

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From: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>, Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
Sent: January 6, 2023 2:27:43 PM PST  
Attachments: SpongyMoth\_CommsPlan\_2023\_PUP.docx  
s.13

Thanks,

B

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**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** January 6, 2023 9:54 AM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>; Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>  
**Subject:** RE: 2023 Spongy Moth PUP Applications Docs for CR/PA and Victoria

Hey Babita,

s.22 you should send the notice of treatments to me (along with the generic email address).

You don't need to send me the revised treatment plans until you're done with your public and FN consultations, since you may need to revise the plans based on feedback received during consultation.

For your Comms plan, there's a few revisions needed before I send off for director approval:

- Please remove the draft watermark and red Draft 1 in the headers
- On page 2, the date needs to be updated to 2023 in the first sentence (still says 2022 eradication plan)
- In the roll-out table, I'm not seeing when the open houses are to take place.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)  
IPM Officer  
236.468.2249

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / həñqəmiñəm speaking peoples.*

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**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**Sent:** January 5, 2023 4:06 PM  
**To:** Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>; Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Subject:** 2023 Spongy Moth PUP Applications Docs for CR/PA and Victoria

Attached are the documents requested following today's meeting.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

## Approval of public consultation plan for 2 permit applications and 1 permit amendment for Spongy Moth eradication program

---

From: Counce, Cassandra ENV:EX <Cassandra.Counce@gov.bc.ca>  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: White, Kirsten M ENV:EX <Kirsten.White@gov.bc.ca>, Bennett, Scott ENV:EX <Scott.Bennett@gov.bc.ca>, Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 6, 2023 3:05:34 PM PST  
Attachments: image001.png, 2023-01-06 SpongyMoth\_CommsPlan\_2023\_PUP.docx, image002.jpg  
Good afternoon Babita,

On behalf of the Administrator, the submitted publication plan has been approved (per attached). Please ensure you publish your notice of application within 45 days of receiving your permit application number and submit a public consultation report within 90 days of receiving your permit application number.

I wish you luck for success on this spray program and hope that you don't encounter too many issues.

Regards,

**Cassandra Counce**, BSc. (*she/her*)

*Director, South Authorizations*

Regional Operations Branch | Environmental Protection Division | Ministry of Environment & Climate Change Strategy



More information needed? Check out our website:

- [Waste discharge authorizations and the process to apply](#)
- [Authorizations for the use and sale of pesticides](#)
- To report an act of pollution call the RAPP (Report All Poachers and Polluters) line at 1-877-952-7277 or #7277 on the TELUS Mobility Network or report the incident [online](#)

## **Ministry of Forests**

### **Spongy Moth Eradication Communications Plan 2022/23**

#### **I. OBJECTIVES:**

- Effectively communicate the Government’s plan to eradicate spongy moth (SPONGY MOTH) through the aerial spray treatment of 3,038 ha of residential, commercial, municipal, park and agricultural lands across seven sites on Vancouver Island:
  1. Campbell River: 303 ha
  2. Courtenay – Dove Creek: 652 ha
  3. Courtenay: 331 ha
  4. Port Alberni: 763 ha
  5. Victoria – View Royal: 381 ha
  6. Victoria – Esquimalt: 267 ha
  7. Victoria – Belmont: 341 ha
- Communicate the need to treat for this invasive species, and the consequences of not eradicating this pest.
- Reassure the public that the product (Foray 48B) and the active ingredient in the (*Btk; Bacillus thuringiensis*) is safe and poses no known risk to human health.
- Ensure that members of the public who have questions and concerns about the treatment have access to accurate information and an opportunity to discuss their concerns.

#### **II. BACKGROUND:**

Based on CFIA’s 2022 trapping results, ministry staff are planning the eradication/aerial spray of 3,038 ha of residential, commercial, municipal, park and agricultural lands across seven sites on Vancouver Island.

Without treatment, SPONGY MOTH could establish on Vancouver Island and spread to other parts of the province, threatening forests and orchards. Select areas designated for eradication are near major transportation corridors and if established on Eastern Vancouver Island the presence of SPONGY MOTH will trigger CFIA to impose quarantines, trade and transportation restrictions.

The last aerial spray treatment program was conducted in 2022 where nine eradication programs (8 aerial and 1 ground spray) were implemented on Vancouver Island and throughout the Lower Mainland/Lower Fraser Valley:

1. Campbell River: 303 ha
2. Courtenay – Dove Creek: 652 ha
3. Courtenay: 331 ha
4. Port Alberni: 763 ha
5. Victoria – View Royal: 381 ha
6. Victoria – Esquimalt: 267 ha

## 7. Victoria – Belmont: 341 ha

The 2023 eradication plan is a balanced, science based and location-specific approach that is consistent with SPONGY MOTH eradication programs that have been implemented over the past 40 years. The product used for eradication in B.C. is Foray 48B, it contains the active ingredient Btk, a natural bacteria found in urban, agricultural and forest soil around B.C. Btk only impacts caterpillars that eat sprayed leaves. Mammals (humans, livestock and pets), birds, fish, amphibians, spiders and bees are not impacted by Btk.

Foray 48B (Btk) is widely used by governments and farmers around the world to protect crops and natural areas. Foray 48B received certification from the Organic Materials Research Institute (OMRI) in 2008 as being suitable for use on certified organic farms in the U.S. and received Canadian Certification in 2018.

During past programs, urban residents have expressed health concerns related to the treatment. There is no medical evidence of serious adverse human health effects resulting from application of Btk or more specifically, Foray 48B.

One of the requirements of the Pesticide Use Permit is to provide advance notification of treatment dates to the public, particularly elderly people, young people and those with respiratory ailments, so they can stay indoors (if they choose to) during the treatment. Aerial spray applications are usually conducted from first light/5:00 a.m. to 8:30 or 9:00 a.m. and will take place between April 15 and June 30, 2023. Spraying overpopulated areas (homes, schools, daycares) will be completed by 8:00 am.

Residents within the spray zone and those living in the flight path of the aircraft are inconvenienced by the early-morning noise, and those directly treated will have spray residue on windows and other hard surfaces. The residue will erode by normal weathering in about one week and does not affect paint finishes. It can be removed with water and bit of scrubbing.

s.13; s.17

### **AUDIENCES:**

#### **a) External:**

- Residents, businesses, schools, daycares and care homes in treatment areas
- Island Health Authority, medical health officers
- Local media
- Mayors & Councils / Regional Districts
- Affected First Nations
- RCMP
- B.C. Nursery Trades Association

- Recreation grounds

**b) Internal:**

- Ministry of Agriculture & Food
- Ministry of Environment and Climate Change Strategy
- Ministry of Health, Public Health Office
- MLAs

**Key Messages:**

- SPONGY MOTH are an invasive species that pose a threat to the province’s ecology and economy.
- Aerial spray programs are required across seven sites on Vancouver Island, covering 3,100 hectares of residential, commercial, municipal, park and agricultural lands.
- There is clear evidence of establishing populations within these areas and we need to ensure SPONGY MOTH does not establish and/or expand to other parts of the province.
- The best treatment for each area is aerial spraying considering the sizes of areas requiring treatment, the terrain, tree density and access.
- Aerial spraying has been used in this long-term SPONGY MOTH program and has been successful.

**Strategy:**

Engage early with stakeholders, media and residents in the spray area. Use technical ministry staff as key spokespeople to clearly articulate the need for the SPONGY MOTH eradication program. Ministry and GCPE MOF staff will also work with key stakeholders to disseminate information to the public. The local health authority and/or the nurse line will speak to questions about the effects of the spray on human health. Staff will also direct callers to the BC Government YouTube SPONGY MOTH (*SPONGY MOTH) Aerial Spraying: Is it Safe* produced by Island Health chief medical officer: Dr. Richard Stanwick in 2017.

Legally required ads and supporting information bulletins to media, as well as email notifications to SPONGY MOTH News Page subscribers, flyer drops, digital or static highway signs, media alerts, posting notices in public spaces and an open house/information session will all be used to publicize the program.

The ministry’s SPONGY MOTH SPONGY MOTH web page will be updated regularly, and a toll-free number will also be used.

**Spokespeople**

- Babita Bains, provincial forest entomologist – MOF will be the lead spokesperson for the program. She has been involved with the program since 2017 and has completed media training.

- Stefan Zeglen, forest health officer—MOF can be a secondary spokesperson for the program. He has been involved in previous aerial spray programs since.
- Validators, if needed, include:
  - Health Canada, Pest Management Regulatory Agency – approvers of Foray 48B’s registration
  - Medical health officer/Island Health:
    - Dr. Charmaine Enns (Campbell River & Courtenay)
    - Dr. Sandra Allison (Port Alberni)
    - Dr. Reka Gustafson (Victoria)
  - Canadian Food Inspection Agency – trapping info:
    - David Holden
    - Melissa Cook
  - Canadian Forest Service – scientific experts.
    - Dr. Brian Van Hezewijk
    - Dr. Gwylim Blackburn

**ROLL OUT**

s.13

<b>Lead</b>
MOF
MOF
MOF
MOF
MOF
MOF / GCPE
MOF / GCPE
MOF
GCPE
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GCPE



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**Additional Consultation:**

- Ensure local shelters in Victoria receive treatment notification postcard to notify any potentially impacted homeless populations.
- Contact any local residents that expressed concerns about the impacts to homeless populations during the 2022 aerial spray program in Victoria and request assistance with notification.
- If time permits, contact appellants from the 2022 pesticide use permit to discuss any concerns regarding the 2023 applications in January 2023/early in the process.

**V. MESSAGES:**

***The Program***

- The program works. It has prevented the establishment of SPONGY MOTH in B.C. for the last 40 years.
- Aerial spray treatments are required in the seven identified areas. If these areas are left untreated, the insect will establish and adversely impact farms, orchards and street trees, and spread to other parts of the province.
- The spongy moth expands its territory rapidly by “hitchhiking” on human transported goods and vehicles, and could spread to other centres in the province through boat, rail or motor vehicles. Most of the treatment areas are of concern due to proximity to major highways.
- The U.S. border could be restricted to some B.C. products and vehicles. These commodities would have to be inspected adding both time and expense to our exported goods. Commercial and non-commercial vehicle traffic into the U.S. could also be inconvenienced by a thorough inspection.

***Health Concerns***

- The treatment involves a product registered for use on organic farms in the U.S. The public is exposed to the product if they consume USDA certified organic produce. Canadian registration was obtained in August 2018: <http://www.omri.org/omri-lists>
- Btk is naturally present in urban, agricultural and forest soil around the province. It is effective only when it is in a caterpillar’s stomach, and is specific to their digestive system. Mammals – humans, livestock and pets – birds, fish, amphibians, spiders and bees are not impacted by Btk.
- Public safety is paramount. The Pest Management Regulatory Agency, a division of Health Canada, regulates the use of pesticides. They are responsible for determining whether products are safe for use. The use of Btk for aerial application over populated

areas is an approved use of Foray 48B. We rely on the expertise of scientists at Health Canada to ensure the safety of all products used in Canada. Health Canada's media relations unit can be reached at 613-957-2983.

- Any adverse health incident reports are submitted to the manufacturer who have a legal obligation to report these to Health Canada within 30 days of receiving the incident report.

#### ***Environmental Concerns***

- Although the treatment only affects caterpillars in vulnerable life stages, the presence of rare and endangered moths or butterflies will be considered during treatment planning.
- Ministry of Environment and Climate Change Strategy's (MOE) Conservation Data Centre will be consulted to determine if there are any known conflicts with high priority endangered species.
- MOE invertebrate specialists have concluded that the treatment does not pose a significant threat to known rare or endangered lepidopteran species.

#### ***Spraying Consideration***

- We recognize some people may be inconvenienced by the program and welcome calls toll-free at 1 866 917-5999, during business hours, to ask questions or learn more about the program.
- All permit and treatment steps will be advertised, and we will proactively contact media to inform them of our plans. Up-to-date information is available by phone, on-line or through our e-mail distribution lists.

#### ***Alternatives to aerial spraying:***

- Ground spraying of Btk is another option contemplated by the technical expert committee but because of the overall size of the treatment areas, terrain, lack of adequate access, and diversity of tree sizes, aerial application was considered the most practical option for all seven sites.
- Very high density (mass) trapping was also considered but not recommended by the committee. The costs and the potential delay in achieving the eradication target were considered as reasons not to recommend this approach.
- There is no alternative treatment that would be effective.
- If the population of SPONGY MOTH is not eradicated, a quarantine zone will be established by the Canadian Food Inspection Agency, affecting the local industry and economy.



January 6, 2023

File No: 738-0032-21-24

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Amendment Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning your current permit number 738-0032-21-24 to your permit amendment request, submitted on December 2, 2022. Now that you've received your permit amendment application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office

## Permit application numbers

---

From: Eby, Chelsea ENV:EX  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: Scott Bennett <Scott.Bennett@gov.bc.ca>  
Sent: January 6, 2023 3:36:09 PM PST  
Attachments: 2023-01-06 Application number issued\_CR-PA.pdf, 2023-01-06 Amendment application number assigned\_Courtenay.pdf, 2023-01-06 Application number issued\_Victoria area.pdf

Hi Babita,

As per the attached letters, you have been assigned the following permit application numbers for public consultation:

- 738-0035-23-23 (Victoria)
- 738-0036-23-23 (Campbell River and Port Alberni)
- 738-0032-21-24 (Courtenay permit amendment – use current permit number)

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / hə́ŋqəmíñəm speaking peoples.*



January 6, 2023

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning permit application number 738-0036-23-23 to your application for the Campbell River and Port Alberni areas, submitted on November 24, 2022. Now that you've received your permit application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc](mailto:Chelsea.Eby@gov.bc) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office



January 6, 2023

File No: 738-0032-21-24

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Amendment Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning your current permit number 738-0032-21-24 to your permit amendment request, submitted on December 2, 2022. Now that you've received your permit amendment application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc](mailto:Chelsea.Eby@gov.bc) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office



January 6, 2023

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning permit application number 738-0035-23-23 to your application for the Victoria area, submitted on November 24, 2022. Now that you've received your permit application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc](mailto:Chelsea.Eby@gov.bc) or 236-468-2249

Yours truly,

A handwritten signature in black ink that reads "Chelsea Eby" followed by a stylized flourish.

Chelsea Eby  
IPM Officer  
Surrey Regional Office



## Recent update to Province of British Columbia - Lymantria Moth News

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From: donotreply@gov.bc.ca  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 10, 2023 9:07:14 AM PST

Updates have recently been made to the following page on the Province of British Columbia website: [News](#)

Message to page subscribers: 2023 Spongy Moth Program Announcement: Seven areas on Vancouver Island require spongy moth eradication. Visit our website for more program information.

To unsubscribe from this page, click [here](#).

To unsubscribe from all pages, click [here](#).



VIA E-MAIL

2023-01-11

Files: 738-0032-21-24; 738-0035-23-23; 738-0036-23-23

**Integrated Pest Management Committee:**

Behn Andersen (IPMC Chair, IPM ENV, [Behn.Andersen@gov.bc.ca](mailto:Behn.Andersen@gov.bc.ca))

Jon Mullan (IPM Unit head, IPM ENV, [Jonathan.Mullan@gov.bc.ca](mailto:Jonathan.Mullan@gov.bc.ca))

Lauren Hall (IPMC Secretary, IPM ENV, [Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca))

Martina Beck (Unit Head – Freshwater Applied Science & Programs, WLRS, [Martina.Beck@gov.bc.ca](mailto:Martina.Beck@gov.bc.ca))

Stefan Zeglen (Forest Health Officer, FOR, [Stefan.Zeglen@gov.bc.ca](mailto:Stefan.Zeglen@gov.bc.ca))

Crystal Chadburn (Sr. Invasive Plant Specialist, FOR, [invasive.plants@gov.bc.ca](mailto:invasive.plants@gov.bc.ca))

Kenneth Sapsford (Pesticide Specialist, AGRI, [Kenneth.Sapsford@gov.bc.ca](mailto:Kenneth.Sapsford@gov.bc.ca))

Geneen Russo (Director, Healthy Community Environments, HLTH, [Geneen.Russo@gov.bc.ca](mailto:Geneen.Russo@gov.bc.ca))

Ammar Makhzoum (Regional Manager, Health Canada, [ammar.makhzoum@hc-sc.gc.ca](mailto:ammar.makhzoum@hc-sc.gc.ca))

**Additional Referees:**

Rory Beise (Drinking Water/Land Use Consultant, Island Health, [HBE@viha.ca](mailto:HBE@viha.ca))

Jennifer Heron (Invertebrate Specialist, WLRS, [Jennifer.Heron@gov.bc.ca](mailto:Jennifer.Heron@gov.bc.ca))

**Re: Pesticide Use Permit Application Referral – Response Requested**

The Ministry of Forests has applied for two pesticide use permits and a permit amendment of permit 738-0032-21-24 under the *Integrated Pest Management Act*. The applications are for aerial treatment of Spongy Moth (formerly Gypsy Moth) with Foray 48B (PCP 24977, active ingredient *Bacillus thuringiensis* var *kurstaki*). Seven treatment areas are proposed in Campbell River, Courtenay (City and Dove Creek sites), Port Alberni and Victoria (View Royal, Esquimalt and Belmont sites).

As a current member of the Integrated Pest Management Committee or as an identified additional referee, we request a review by you or other staff in your agency to identify any potential concerns to human health or the environment and any conditions that may mitigate those risks. Any comments or concerns raised in your response will be considered in the adjudication of the permit application.

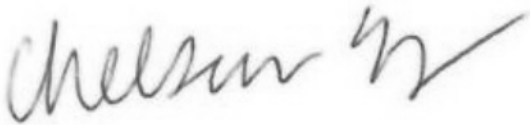
We respectfully request that your agency provide comments by **February 1, 2023**.

IPM Committee and referees  
Date: January 11, 2023

Files: 738-0032-21-24; 738-0035-23-23; 738-0036-23-23

If you have any questions regarding this application, or require an extension to the comment period, please contact me at [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca) or 236-468-2249. If you have no concerns, a simple statement to that effect is appreciated.

Sincerely,



Chelsea Eby  
IPM Officer  
Ministry of Environment & Climate Change Strategy

Attachment:

- Application forms
  - Courtenay PUP Application Amendment LDD 2023
  - Victoria PUP Application LDD 2023
  - CR PA PUP Application LDD 2023
- Maps
  - Courtenay LDD
  - Courtenay Dove Creek LDD
  - Victoria Belmont LDD
  - Victoria View Royal LDD
  - Victoria Esquimalt LDD
  - Campbell River LDD
  - Port Alberni LDD
- Treatment plans
  - 738-0032-21-24 Treatment Plan Courtenay LDD 2023
  - PUP Treatment Plan Victoria LDD 2023
  - PUP Treatment Plan CR PA LDD 2023



VIA E-MAIL

2023-01-11

Files: 738-0032-21-24; 738-0035-23-23; 738-0036-23-23

**Integrated Pest Management Committee:**

Behn Andersen (IPMC Chair, IPM ENV, [Behn.Andersen@gov.bc.ca](mailto:Behn.Andersen@gov.bc.ca))

Jon Mullan (IPM Unit head, IPM ENV, [Jonathan.Mullan@gov.bc.ca](mailto:Jonathan.Mullan@gov.bc.ca))

Lauren Hall (IPMC Secretary, IPM ENV, [Lauren.Hall@gov.bc.ca](mailto:Lauren.Hall@gov.bc.ca))

Martina Beck (Unit Head – Freshwater Applied Science & Programs, WLRS, [Martina.Beck@gov.bc.ca](mailto:Martina.Beck@gov.bc.ca))

Stefan Zeglen (Forest Health Officer, FOR, [Stefan.Zeglen@gov.bc.ca](mailto:Stefan.Zeglen@gov.bc.ca))

Crystal Chadburn (Sr. Invasive Plant Specialist, FOR, [invasive.plants@gov.bc.ca](mailto:invasive.plants@gov.bc.ca))

Kenneth Sapsford (Pesticide Specialist, AGRI, [Kenneth.Sapsford@gov.bc.ca](mailto:Kenneth.Sapsford@gov.bc.ca))

Geneen Russo (Director, Healthy Community Environments, HLTH, [Geneen.Russo@gov.bc.ca](mailto:Geneen.Russo@gov.bc.ca))

Ammar Makhzoum (Regional Manager, Health Canada, [ammam.makhzoum@hc-sc.gc.ca](mailto:ammam.makhzoum@hc-sc.gc.ca))

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If you have any questions regarding this application, or require an extension to the comment period, please contact me at [chelsea.eby@gov.bc.ca](mailto:chelsea.eby@gov.bc.ca) or 236-468-2249. If you have no concerns, a simple statement to that effect is appreciated.

Sincerely,



Chelsea Eby  
IPM Officer  
Ministry of Environment & Climate Change Strategy

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  - Campbell River LDD
  - Port Alberni LDD
- Treatment plans
  - 738-0032-21-24 Treatment Plan Courtenay LDD 2023
  - PUP Treatment Plan Victoria LDD 2023
  - PUP Treatment Plan CR PA LDD 2023

## IPMC Referral - Spongy Moth PUP Applications

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From: Eby, Chelsea ENV:EX  
To: Andersen, Behn ENV:EX <Behn.Andersen@gov.bc.ca>, Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>, Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>, Beck, Martina LWRS:EX <Martina.Beck@gov.bc.ca>, Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>, Provincial Invasive Plant Program FOR:EX <invasive.plants@gov.bc.ca>, Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>, ammar.makhzoum@hc-sc.gc.ca, Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>  
Cc: Miller, Val FOR:EX <Val.Miller@gov.bc.ca>, Russo, Geneen HLTH:EX <Geneen.Russo@gov.bc.ca>  
Sent: January 11, 2023 11:02:32 AM PST  
Attachments: 2023-01-11 IPMC Referral letter - Spongy Moth PUP Applications.pdf, Courtenay\_LDD.jpg, Victoria\_Esquimalt\_LDD.jpg, Port Alberni\_LDD.jpg, PUP\_Treatment Plan\_CR\_PA\_LDD\_2023.docx, PUP\_Treatment Plan\_Victoria\_LDD\_2023.docx, 738-0032-21-24\_Treatment Plan\_Courtenay\_LDD\_2023.docx, Campbell River\_LDD.jpg, Victoria\_Belmont\_LDD.jpg, Victoria\_View Royal\_LDD.jpg, Courtenay\_Dove Creek\_LDD.jpg, Victoria\_PUP\_Application\_LDD\_2023.pdf, CR\_PA\_PUP\_Application\_LDD\_2023.pdf, Courtenay\_PUP\_Application\_Amendment\_LDD\_2023.pdf

Hello IPM Committee members,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

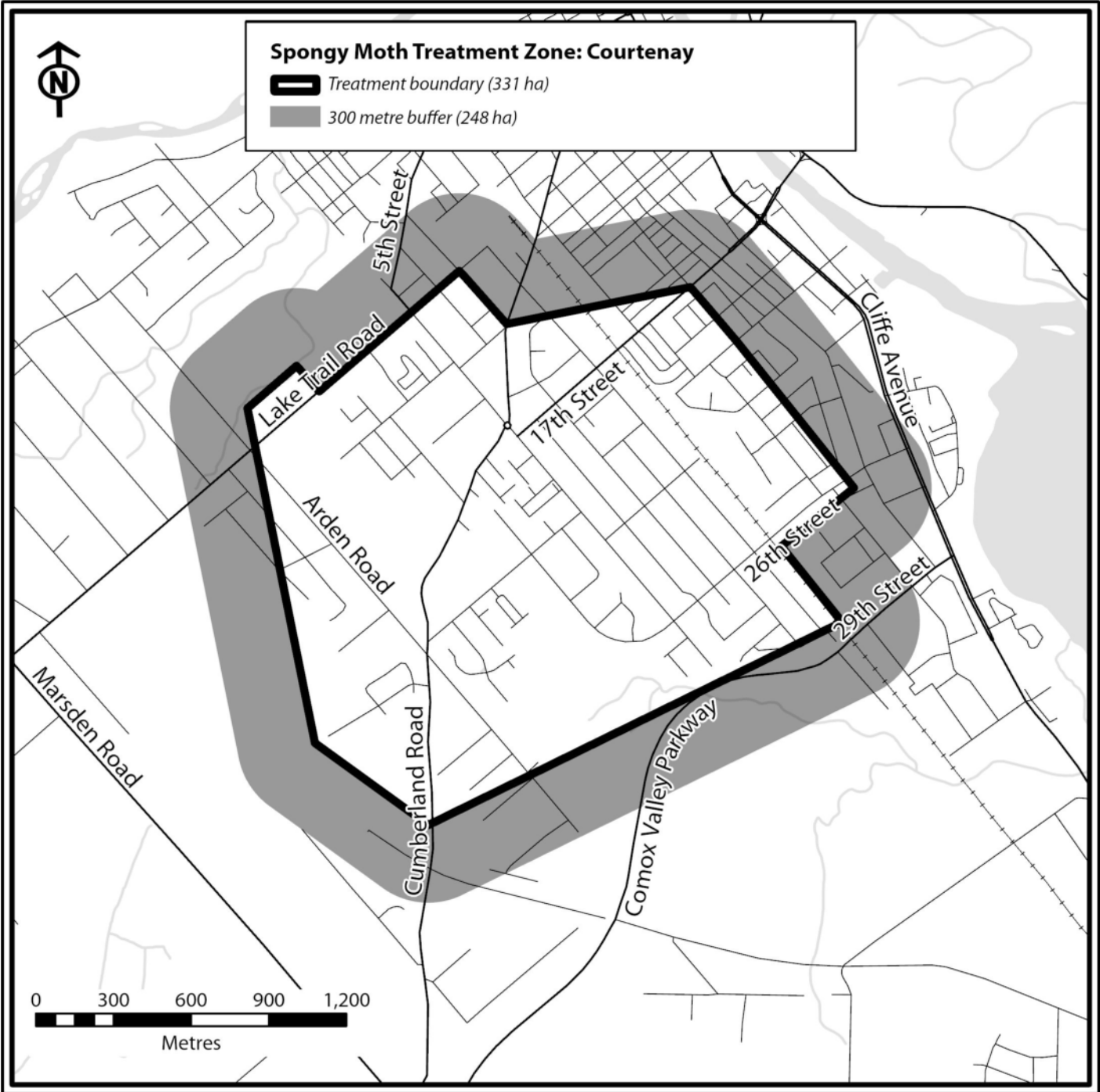
Environmental Protection Division, Authorizations South

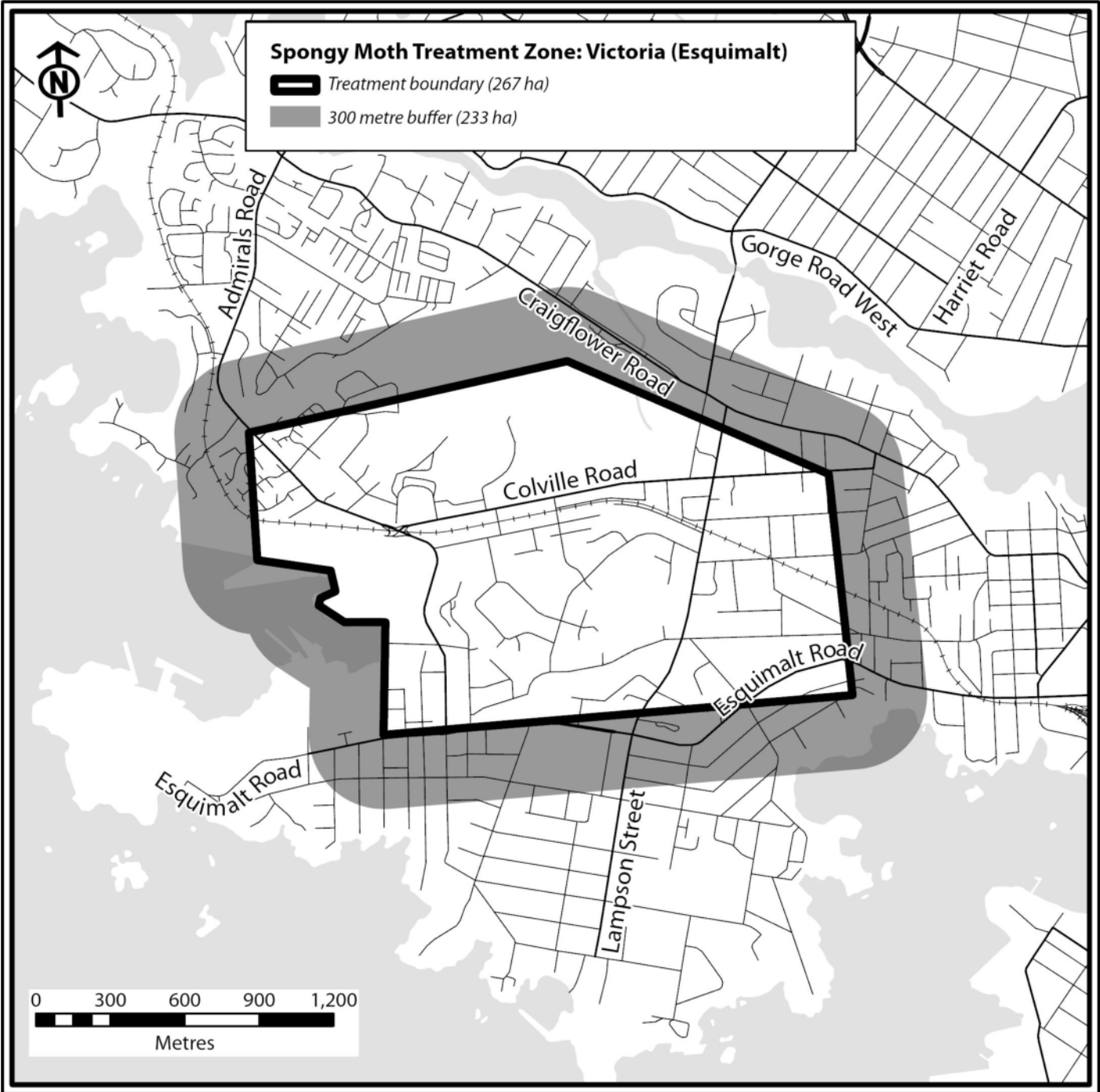
Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

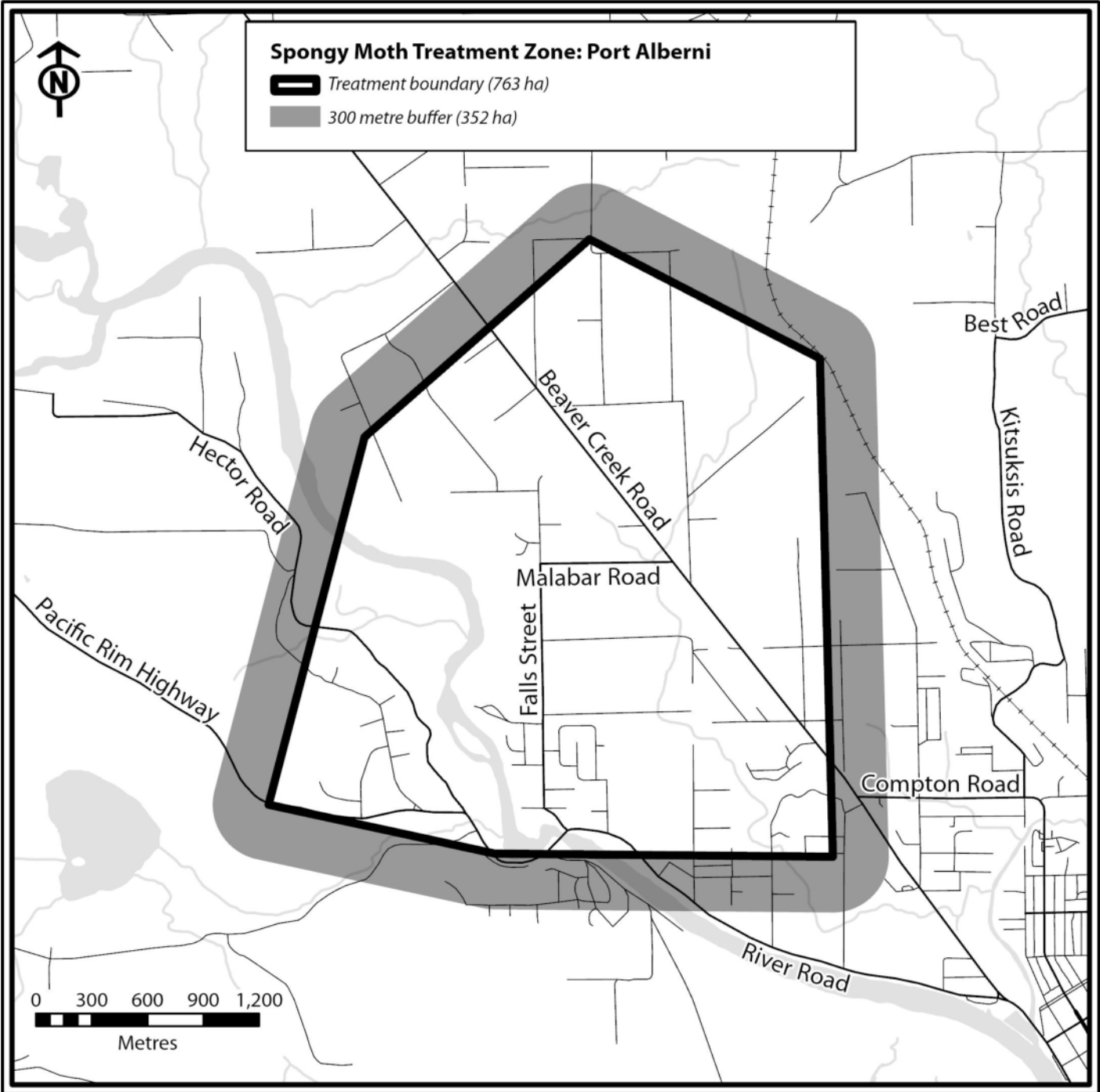
Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / həŋqəmiñəm speaking peoples.*







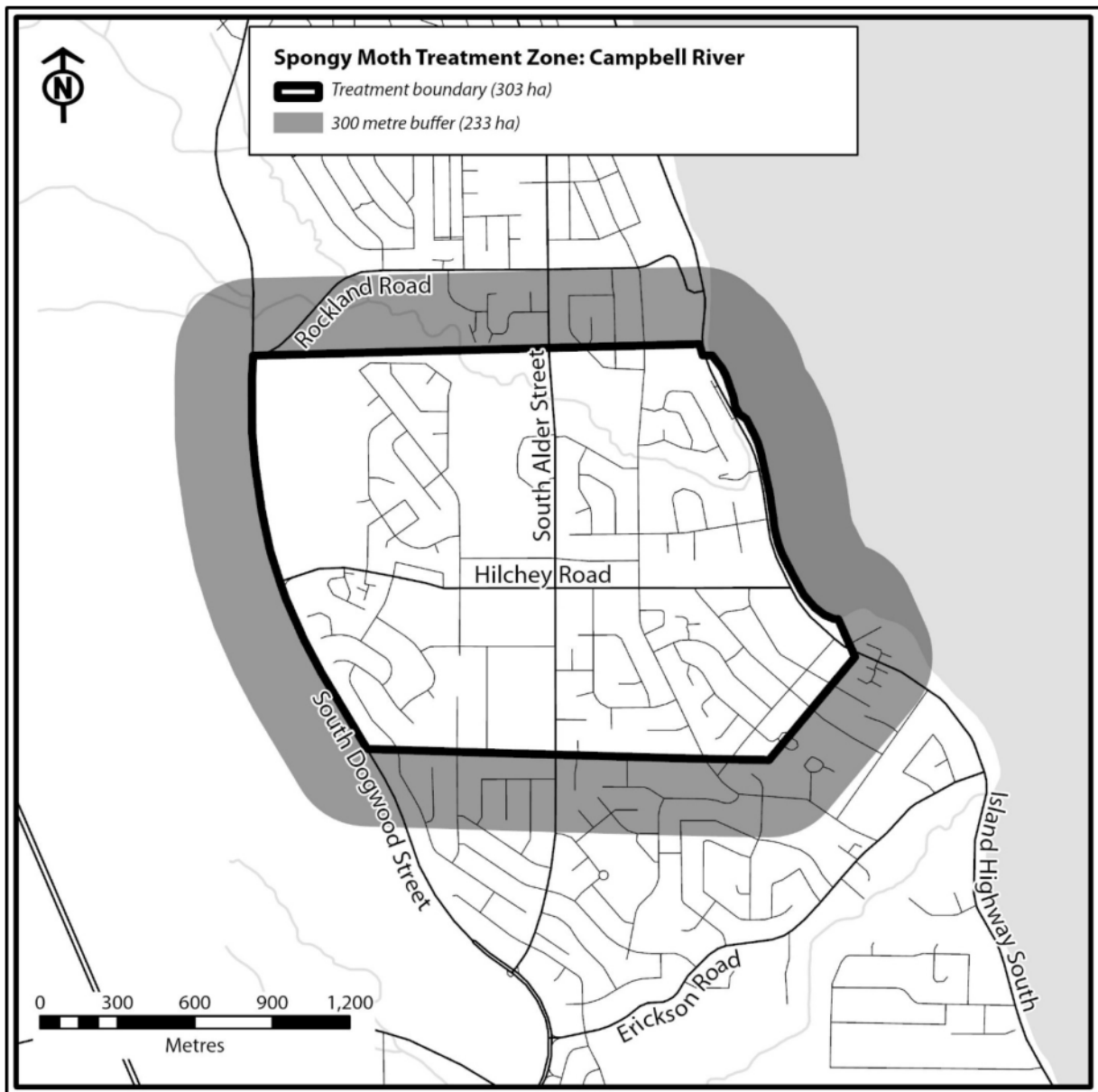


**Campbell River and Porta Alberni  
2022 Lymantria Moth Aerial Spray Program Treatment Plan  
Ministry of Forests**

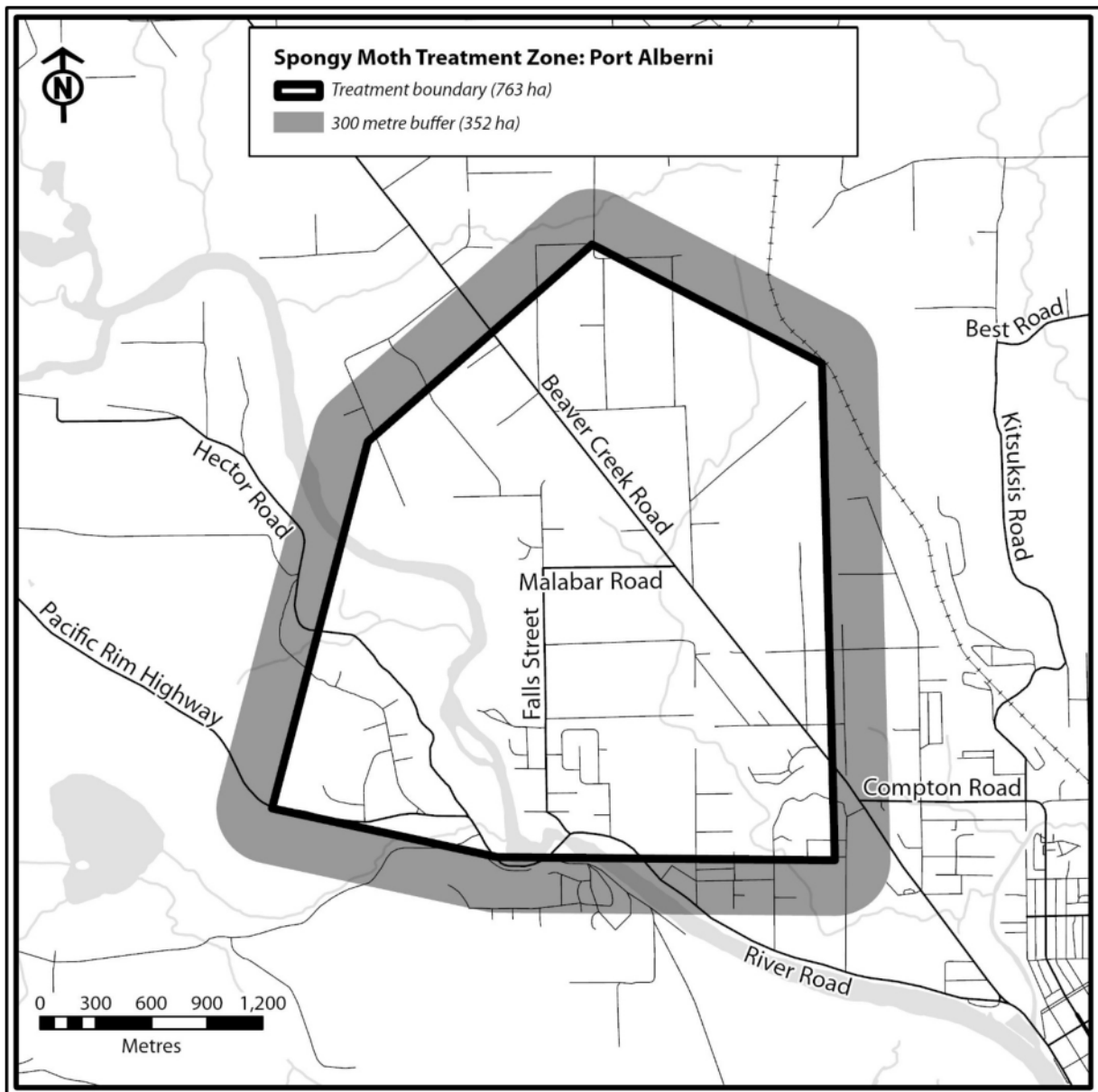
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1. Program Contact: Babita Bains, Provincial Forest Entomologist, MOF ([Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca); 236-468-2295)
2. Pesticide Use:
  - The program will be using Foray 48B, P.C.P. No. 24977, active ingredient *Bacillus thuringiensis* var *kurstaki* strain ABTS-351.
  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - Campbell River: 303 ha
    - Port Alberni: 763 ha
3. Public Outreach / Notification:
  - Within ten days of receiving the permit, a copy of the permit and map of the treatment area will be posted on the MOF Lymantria moth website.
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
  - MOF will update the 24-hour Lymantria moth information line and Lymantria moth news web page with regular program updates, including 24 hours notice before commencement of each pesticide application and completion of each application, any weather delays and notification of program completion.
  - At least 24 hours before commencement of each pesticide application, MOF will notify via telephone or email:
    - all persons subscribed to the news web page; and
    - IPM Officer Scott Bennett via email (copy: [ipmreporting@gov.bc.ca](mailto:ipmreporting@gov.bc.ca)).
  - At least 48 hours before commencement of each spray application, MOF will place treatment notices so they are clearly visible to anyone entering the treatment areas:
    - Lawn signs with treatment window dates and map of the treatment area; and
    - LED highway signs (message boards) on any major highways.

Campbell River treatment area:



Port Alberni Treatment Area:

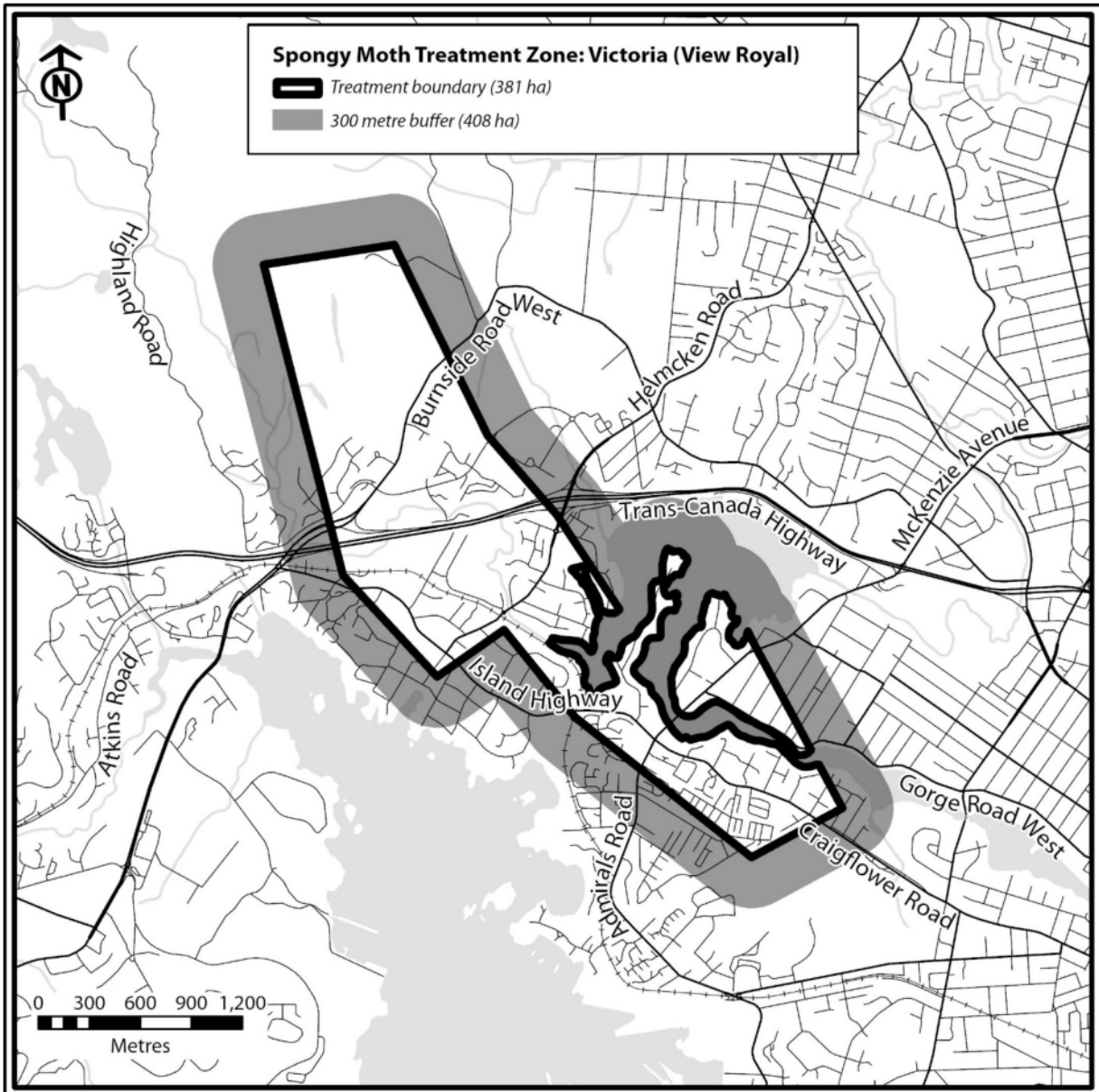


**Victoria (View Royal, Esquimalt and Belmont)**  
**2022 Lymantria Moth Aerial Spray Program Treatment Plan**  
**Ministry of Forests**

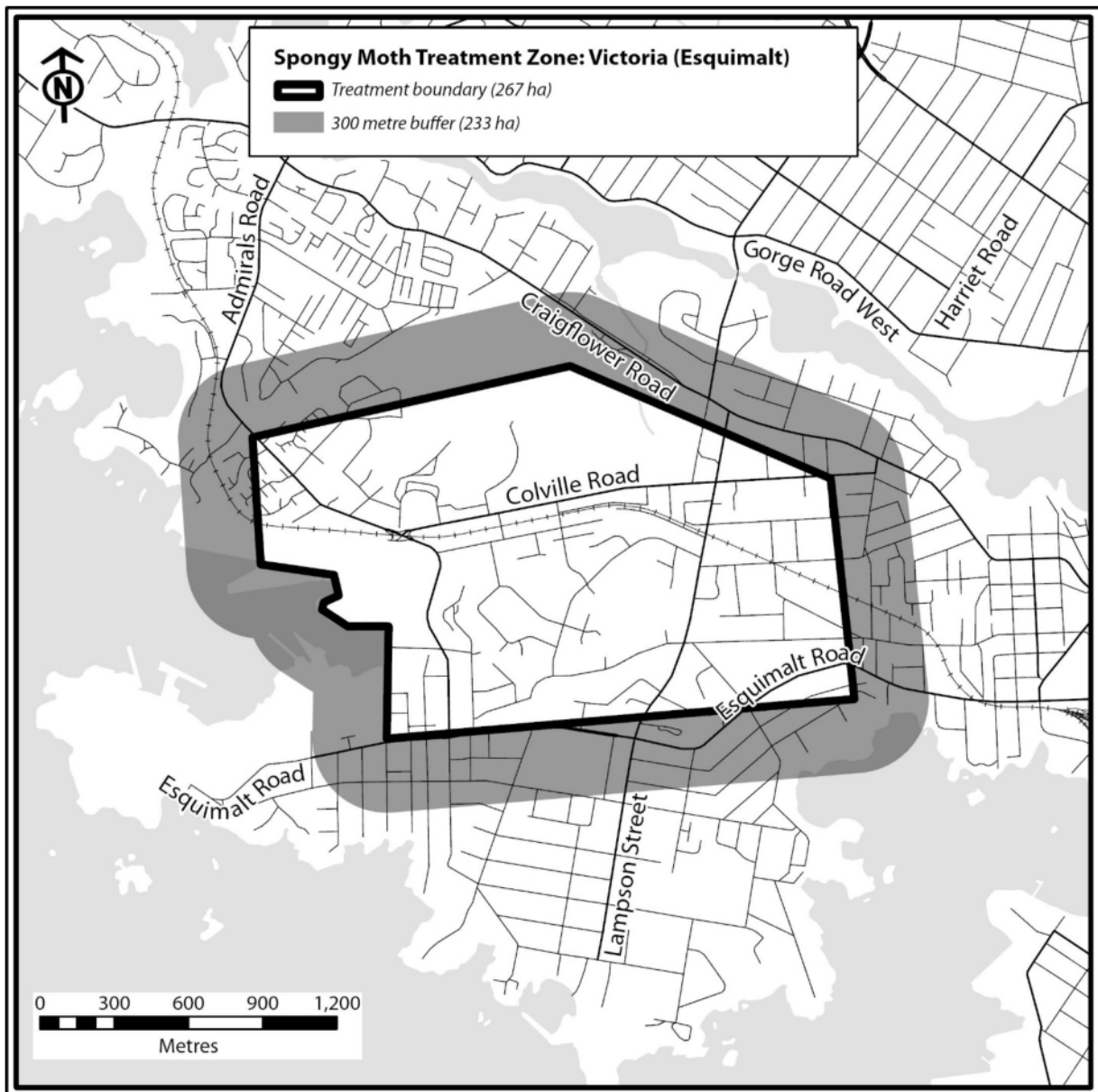
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  - Aerial application permitted via Pesticide Use Permit (application submitted Dec 2022).
  - Application rate: 4L/ha.
  - Three treatments (maximum four treatments, if required) approximately 7 – 10 days apart (weather dependent).
  - Treatment areas per application (see treatment area map below):
    - View Royal: 381 ha
    - Esquimalt: 267 ha
    - Belmont: 341 ha
3. Public Outreach / Notification:
  - Within ten days of receiving the permit, a copy of the permit and map of the treatment area will be posted on the MOF Lymantria moth website.
  - Within 15 days of receiving the permit, a copy of the permit and map of the treatment area will be posted in at least one community newspaper and an information bulletin will be released to the media.
  - At least seven days prior to commencement of the first pesticide application, MOF will deliver (via BC Mail Plus) postcards to residents within the treatment area and 300 m buffer zone. Postcards will include program information such as anticipated start dates, timing of sprays, links to the MOF website and 24-hour Lymantria moth information line.
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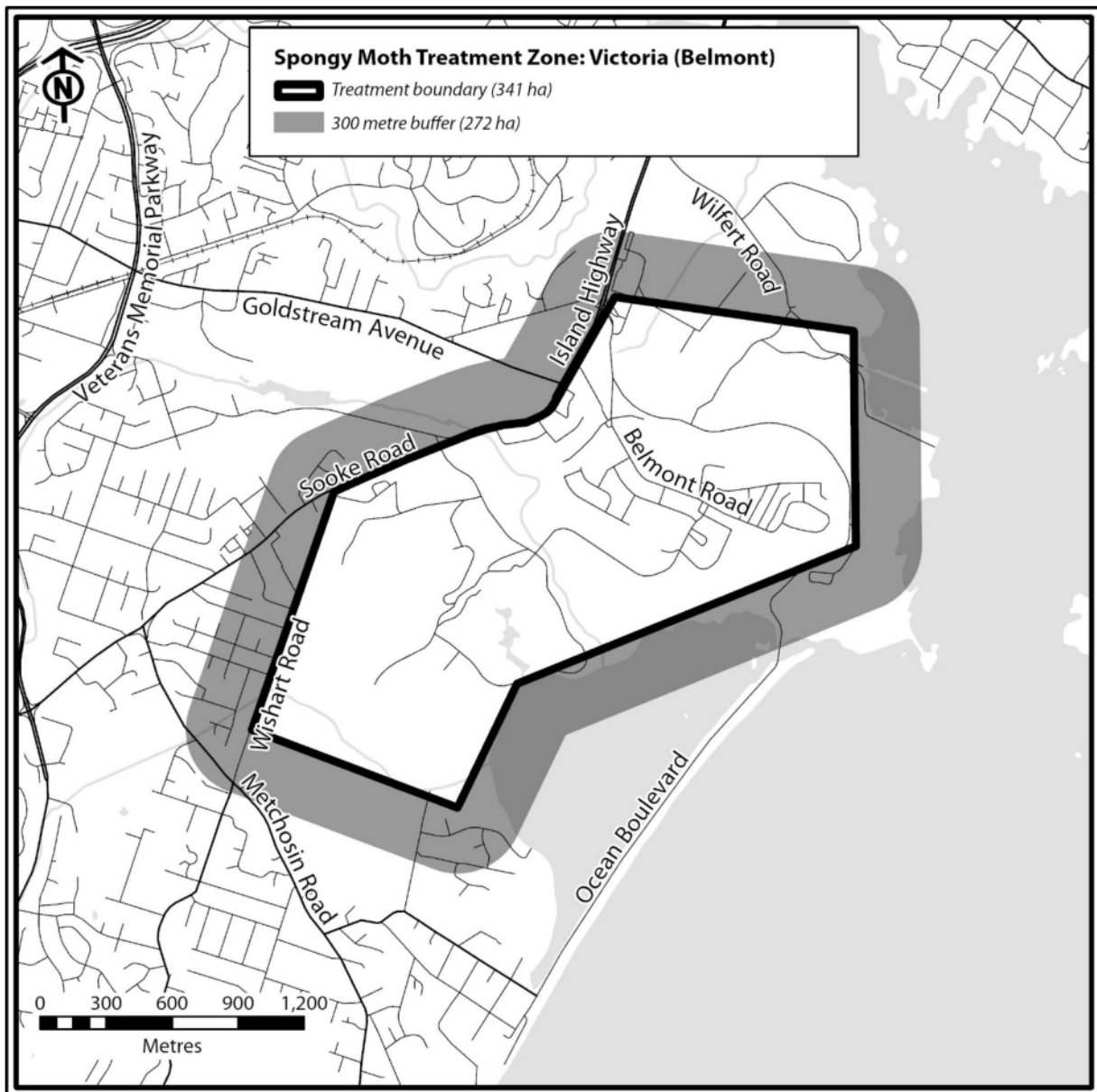
View Royal Treatment Area:



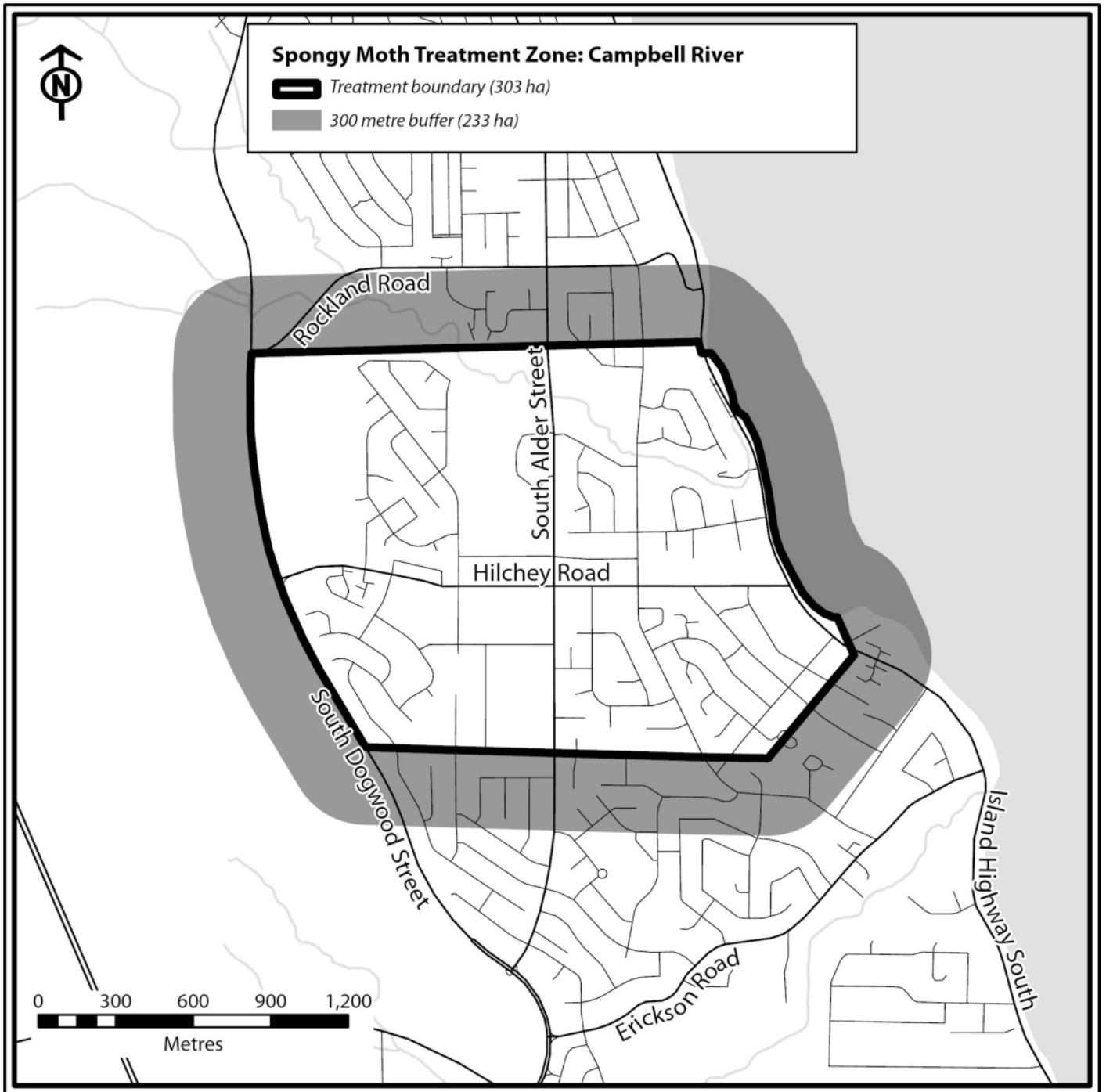
Esquimalt Treatment Area:



Belmont Treatment Area:





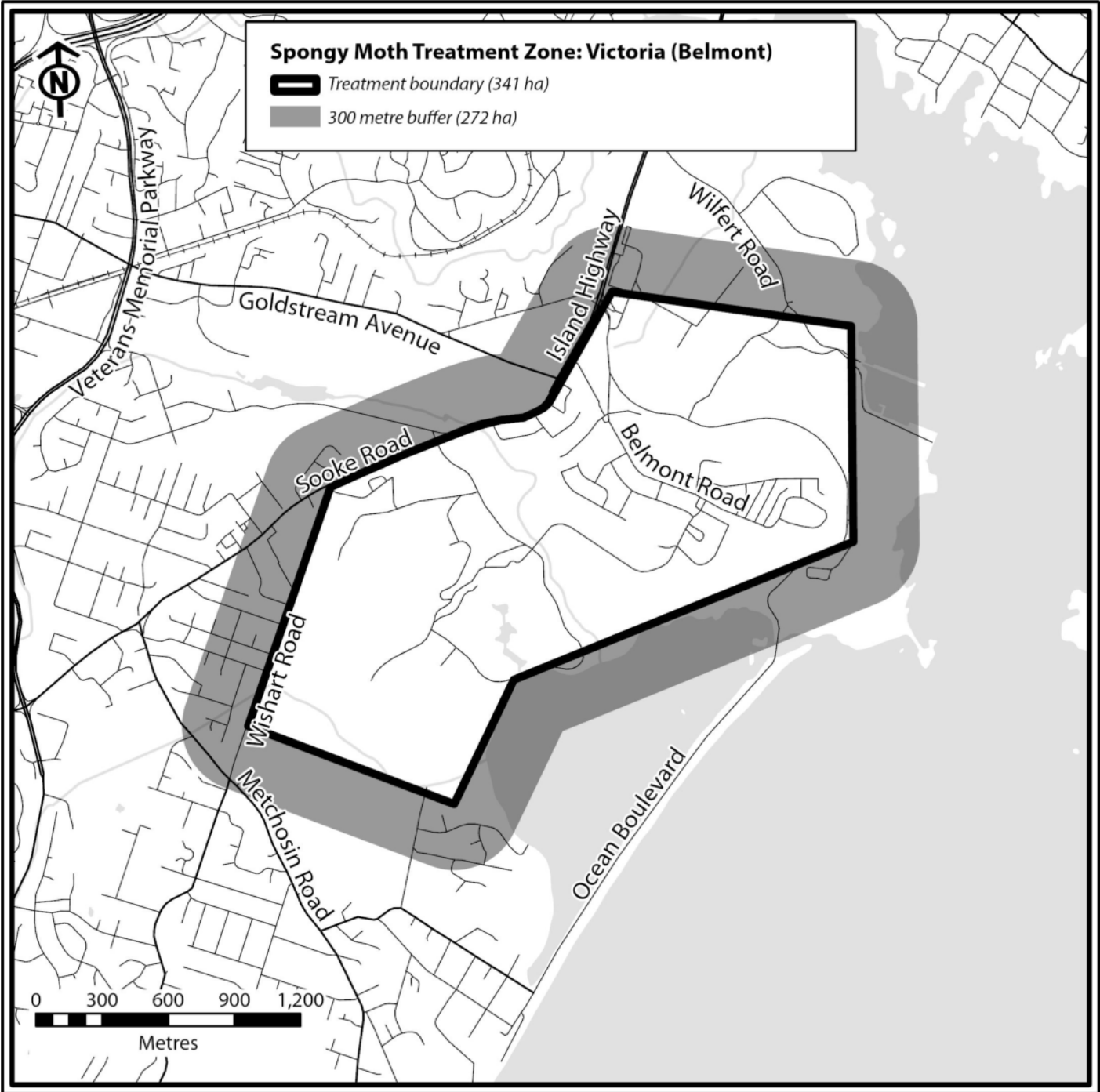


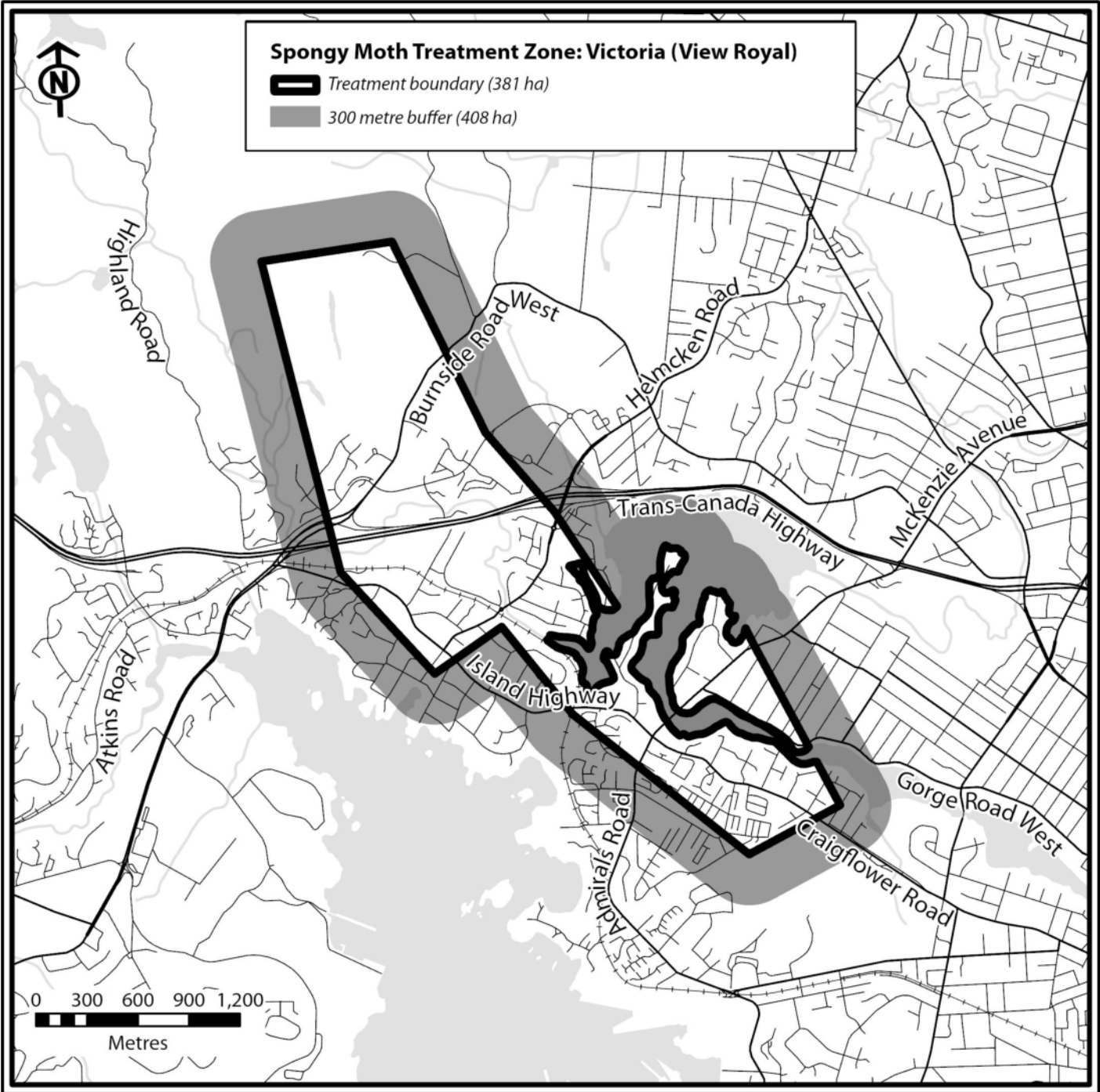
Communications Map Layout

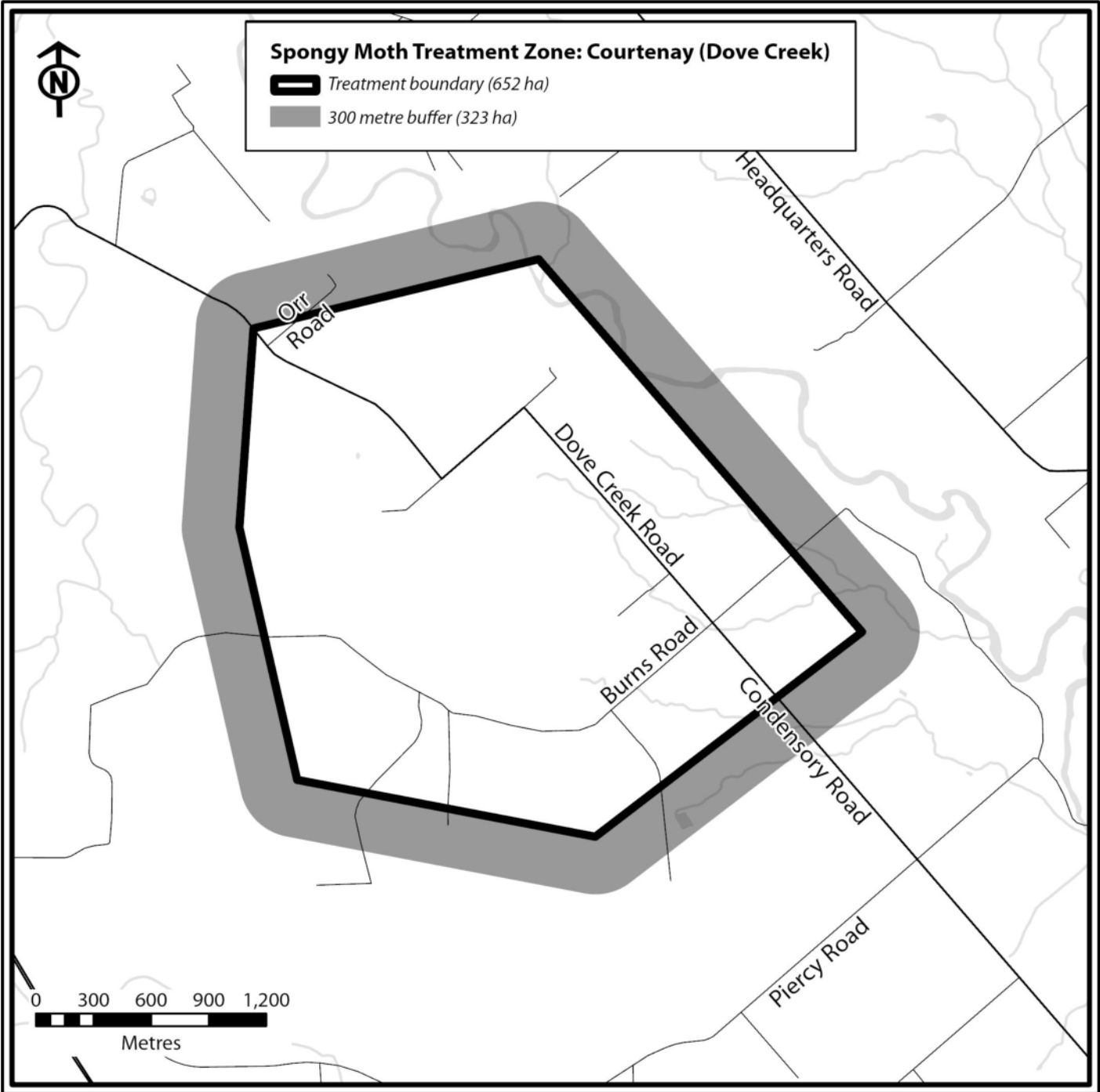
Spatial Reference: NAD 1983 BC Environment Albers

Sources: Lymantria Treatment Area Boundaries, Province of British Columbia; Roads, CanVec 1:50k; Water Features, CanVec 1:50k.

Caslys Consulting Ltd.  
2022-11-18









## Pesticide Use Permit Application under the *Integrated Pest Management Act*

FORM REFERENCE CODE: EPD-IPM-10v2

### INSTRUCTIONS:

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

The permitting process consists of several steps that require the submission of an application form, map and fee, followed by meetings with ministry staff to receive guidance on the consultation process and required documentation. If you have questions, you are encouraged to contact ministry staff by email at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

### HOW TO SUBMIT:

Please submit this form and maps via email to [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) with the subject line "Pesticide Use Permit Application". If large files prevent email submission, please use the ministry's File Transfer Service at <http://www.env.gov.bc.ca/csd/imb/soft/soft.shtml>.

There is an application fee of \$1000 that is due upon submission of this application. The fee is non-refundable after a permit application number has been issued. Please see Section 12 for payment information.

Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6



**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street 200 - 10470 152nd St.			5
	City Surrey	Province BC	Postal Code V3R 0Y3	6
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone 250-468-2295	Mobile 250-812-5752	7
<b>Email Address</b>	babita.bains@gov.bc.ca		8



**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

*“Applicant” means the Applicant as identified in section 1 of this application form, and  
“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3

### Section 4: Owner or Manager of the Treatment Location

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

### Section 5: Description of Proposed Pesticide Use

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient <i>Bacillus thuringiensis</i> var <i>kurstaki</i> (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>



### Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023. Each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:30 am) all flights over populated	3
<b>Anticipated number of applications per year</b>	Three at each site = nine applications	4

### Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Victoria-View Royal: 381 ha in the View Royal, Craigflower and Esquimalt area. The northern treatment boundary extends across the Highland Pacific Golf Course. The western boundary extends from the golf course to Klsingbury Ln near Island Hwy and south to Helmcken Rd just north of View Royal Ave. The western boundary then extends around View Royal Elementary School and south through Glentana Rd at Admirals Rd, down to the north end of Gorge Vale Golf Course. The southern boundary extends south of Ned Williams Rd (along the golf course) and east, halfway down Shirley Rd. The eastern boundary extends from Shirley Rd and includes the points in Portage Inlet. The Inlet and Gorge will not be sprayed (booms off). The eastern boundary extends from Crane place to the northern boundary. Victoria General Hospital is east of the treatment boundary and will not be sprayed.

Victoria-Esquimalt: 267 ha in Esquimalt. The northern treatment point is in the middle of Gorge Vale Golf Course and extends southeast to Admirals Rd (between Luscombe Pl and Maplebank Rd) and southwest to Carrie St. at Colville Rd. The western boundary extends from Admirals Rd, along the inlet, down Sturdee St to Esquimalt Rd. The southern boundary extends along Esquimalt Rd and east to Dunsmuir Rd at Sea Terrace. The eastern boundary extends from Dunsmuir Rd to Colville Rd at Carrie St.

Victoria-Belmont: 267 ha in Colwood around Belmont Park. The northern treatment boundary extends from Sooke Rd at Wishart Rd and follows Sooke Rd to Wate Rd. The northern boundary

## Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

## Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	381	1,524 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	267	1,068 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	341	1,364 L

## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.



## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

- 2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.
- 3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.
- 4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.
- 5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-24	4

## Section 12: Payment of Fees

The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> <i>(999) 999-9999</i>		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> <i>(999) 999-9999</i>		6



## Pesticide Use Permit Application under the *Integrated Pest Management Act*

FORM REFERENCE CODE: EPD-IPM-10v2

### INSTRUCTIONS:

Use this form to apply for a pesticide use permit under the *Integrated Pest Management Act* and Regulation. Pesticide use must not proceed unless a permit has been issued.

The permitting process consists of several steps that require the submission of an application form, map and fee, followed by meetings with ministry staff to receive guidance on the consultation process and required documentation. If you have questions, you are encouraged to contact ministry staff by email at [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca).

### HOW TO SUBMIT:

Please submit this form and maps via email to [IPMPBC@gov.bc.ca](mailto:IPMPBC@gov.bc.ca) with the subject line "Pesticide Use Permit Application". If large files prevent email submission, please use the ministry's File Transfer Service at <http://www.env.gov.bc.ca/csd/imb/soft/soft.shtml>.

There is an application fee of \$1000 that is due upon submission of this application. The fee is non-refundable after a permit application number has been issued. Please see Section 12 for payment information.

Alternatively, you may mail your application to:

Regional Operations Branch IPM Program  
Ministry of Environment & Climate Change Strategy  
PO Box 9377 Stn Prov Govt  
Victoria, BC V8W 9M6



**Section 1: Applicant Information**

<b>Applicant Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Government			1
<b>Company Legal Name</b> <i>as registered with the BC Registrar of Companies</i> <b>OR Individual's Full Legal Name</b>	British Columbia Ministry of Forests			2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Incorporation Number</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				4
<b>Legal Address</b> <i>as registered with BC Registrar of Companies</i>	Unit # / Street 200 - 10470 152nd St.			5
	City Surrey	Province BC	Postal Code V3R 0Y3	6
<b>Mailing Address</b>	<input checked="" type="checkbox"/> Same as Legal Address			7
	Unit # / Street			8
	City	Province	Postal Code	9

**Section 2: Contact Information for the Applicant**

<b>Contact's Last Name</b>	Bains		1
<b>Contact's First Name</b>	Babita		2
<b>Contact's Title</b>	Provincial Forest Entomologist		3
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone 250-468-2295	Mobile 250-812-5752	7
<b>Email Address</b>	babita.bains@gov.bc.ca		8



**Section 3: Authorized Agent (“the Agent”)**

The Applicant may authorize an Agent to deal with the ministry directly on future aspects of this application. An Agent is a person who is not an employee of the Applicant. ***This section must be completed in full if an Agent is used.***

<b>Agent’s Type</b>	<input type="checkbox"/> Business <input type="checkbox"/> Individual <input type="checkbox"/> Government			1
<b>Agent’s Company Legal Name</b> <i>as registered with the BC Registrar of Companies (if applicable)</i>				2
<b>Doing Business As</b> <i>if applicable</i>				3
<b>Agent’s Last Name</b>				4
<b>Agent’s First Name</b>				5
<b>Agent’s Title</b>				6
<b>Contact Numbers</b> <i>(999) 999-9999</i>	Phone	Mobile		7
<b>Email Address</b>				8
<b>Mailing Address</b>	Unit # / Street			9
	City	Province	Postal Code	10

*In this section:*

*“Applicant” means the Applicant as identified in section 1 of this application form, and  
“Agent” means the Agent as identified in section 3 of this application form.*

I/we (the Applicant) hereby authorize the above-named Agent to deal with the ministry directly on all aspects of this application. I/we (the Applicant) understand and agree with the terms and conditions in Section 12 of this application form.

<b>Applicant’s Full Name</b>		1
<b>Signature of the Applicant</b>		2
<b>Date signed</b> <i>(YYYY / MM / DD)</i>		3





**Section 4: Owner or Manager of the Treatment Location**

Name of the owner or manager of the treatment location

BC Ministry of Forests (Babita Bains)

**Section 5: Description of Proposed Pesticide Use**

Please provide a brief overview of the proposed pesticide use.

<p><b>Pest(s) to be controlled and the importance of the pest control program</b></p>	<p>Lymantria moth (LDD; formerly gypsy moth): an invasive insect pest that must be eradicated to maintain the Province's LDD-free status for both socio-economic and environmental reasons.</p>	<p>1</p>
<p><b>Proposed Integrated Pest Management elements (including pest prevention and identification, monitoring program, treatment thresholds, post-treatment evaluation) and the rationale for the proposed pesticide use</b></p>	<p>LDD is frequently introduced through the movement of household and recreational goods into the province from infested areas. These periodic introductions are detected by the Canadian Food Inspection Agency (CFIA), who carry out annual monitoring across the province. Once an establishing population is detected (positive detections in the same area two-years in a row or more than 10-12 moths in one trap), the Lymantria Moth Technical Advisory Committee (MOF, Ministry of Environment and Climate Change Strategy, Ministry of Agriculture and Food, CFIA and Canadian Forest Service) determine the best method for eradication. The biological insecticide Foray 48B (active ingredient Bacillus thuringiensis var kurstaki (Btk)) is approved for use over populated areas. Each area identified for eradication will be treated three times (typically 7 - 10 days apart) in the spring. Spray deposit is monitored with kromekote cards to ensure adequate application of the Foray 48B. Treatment efficacy is monitored by CFIA through their annual pheromone trapping program.</p>	<p>2</p>

### Section 6: Proposed Start and End Date of Pesticide Use

Please provide the proposed start and end date of pesticide use. The maximum term of a permit is three years.

<b>Start date</b> (YYYY / MM / DD)	2023-04-01	1
<b>End date</b> (YYYY / MM / DD)	2023-06-30	2
<b>Timing of pesticide applications</b> (i.e. time of the year and duration)	Three days between April 1, 2023 and June 30, 2023 (each spray is usually 7 - 10 days apart and completed in the early morning hours (first light - 9:30 am); all flights over populated areas are prohibited)	3
<b>Anticipated number of applications per year</b>	Three at each site (six total)	4

### Section 7: Geographic Area to be Treated

You will need to submit a digital map with this application form. Your map must identify the gross boundaries of the treatment area, communities, and geographic features applicable to the proposed pesticide use. At a minimum, maps must be provided in PDF format. Additional acceptable formats include .kmz or kml.

In addition to your digital map, please describe the area of the proposed pesticide use below. The description must be consistent with the attached maps and include the names of the communities or landmarks and all regional districts encompassed by the geographic boundaries of the treatment area.

Campbell River: 303 ha treatment boundary around Hilchey Rd and S Alder St. The northern treatment boundary extends from S Island Hwy (just south of Ellis Park) and west to Rockland Rd at S Dogwood St (approximately 50 m north of Juniper Dr). The western boundary follows S Dogwood St and the southern boundary follows Holm Rd where the boundary extends parallel to Westgate Rd to S Island Hwy. The eastern boundary follows the east side of S Island Hwy. The treatment area falls within the City of Campbell River.

Port Alberni: 763 ha treatment boundary around Malabar Rd and Falls St. The northern treatment point is Swanson Rd at Lamaque Rd, and the boundary extends beyond Ferguson Rd and down to Pacific Rim Hwy. The southern boundary extends from Pacific Rim Hwy at Tsahaheh 1 to Yaqwimit Place at Pacific Rim Hwy, and extends to the southeastern point of the treatment area at Meadow Dr and Cleary Rd. The treatment area falls within the City of Port Alberni and Alberni-Clayoquot Regional District.

### Section 8: Type of Pesticide Use

Please check the category below that corresponds with your intended pesticide use.

- a)  Permit-restricted pesticide
- b)  Aerial application of a pesticide
- c)  Use of a pesticide in or on a body of water
- d)  Use of a pesticide on public land as required under a license or confirmation
- e)  Use of a pesticide under a confirmation or licence requiring an exemption from the applicable prescribed standards in Division 7, Part 2 of Integrated Pest Management Regulation

If you checked category(e) above, please indicate:

<b>Existing licence or confirmation number for which an exemption is required</b>		1
<b>Section of the regulated standard requiring an exemption</b>		2
<b>Proposed alternative terms and conditions</b>		3

### Section 9: Pesticide Information

Please list all pesticides, including adjuvants, proposed for use under this permit.

Pesticide Trade Name	Active Ingredient	Registration Number under the Federal Pest Control Products Act (P.C.P. No)	Application Rate	Treatment Area (ha)	Quantity (kg)
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	303	3,636 L
Foray 48B	Bacillus thuringiensis va	24977	4.0 L/ha	763	9,156 L

## Section 10: Pesticide Application Methods

Please check all applicable proposed pesticide application methods.

1. Broadcast

- Aerial
- Backpack sprayer
- Power nozzle
- Boom Sprayer

2. Selective Treatment

- Backpack sprayer
- Stem injection
- Wipe-on

3.  Immersion Bath

4.  Other

If you checked the category "Other" above, please specify the methods proposed.

## Section 11: Declaration and Signature

By completing this application form for a permit, the Applicant understands and agrees with the following terms and conditions:

1. In this section:

“Administrator” means the administrator appointed under IPMA Section 9;

“Applicant” means the applicant as identified in section 1 of this application form;

“IPMA” means the *Integrated Pest Management Act*, S.B.C. 2003, c. 58, as amended or replaced from time to time;

“FOIPPA” means the Freedom of Information and Protection of Privacy Act, R.S.B.C. 1996, c. 165, as amended or replaced from time to time;

“Province” means Her Majesty the Queen in Right of British Columbia;

“Regulatory Document” means:

- a) this application form,
- b) any document that the Applicant submits or causes to be provided submitted to the Province or the Administrator in support of this application, and
- c) any document that the Applicant submitted or causes to be submitted to the Administrator or the Province pursuant to
  - i. the permit;
  - ii. any regulation made under IPMA that regulates the pesticide use described above; or
  - iii. any order issued under IPMA directed against the Applicant that is related to the pesticide use described above.

2. In consideration of the Province receiving this application, subject to paragraph 3, the Applicant hereby irrevocably authorizes the Province to publish on the B.C. government website the entirety of any Regulatory Document.
3. Despite paragraph 2, if the Applicant clearly identifies on the face of a Regulatory Document that the Regulatory Document, or clearly identified portions of it, are confidential and provides in writing with the document a rationale for why the document or portion thereof could not be disclosed under FOIPPA, the Applicant does not consent to the Province publishing the document or any portion of it if, in the opinion of the Administrator, the document or portion could not be disclosed under FOIPPA, if it were subject to a request under section 5 of FOIPPA.
4. In consideration of the Province receiving this application, the Applicant agrees that it will indemnify and save harmless the Province and the Province’s employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province’s employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.
5. The Applicant certifies that the information provided in this application form is true, complete and accurate, and acknowledges that the submission of insufficient information may result in this application being returned causing delays in the application review process.

<b>I am:</b>	<input checked="" type="checkbox"/> The Applicant <input type="checkbox"/> The Agent	1
<b>Full Name</b> <i>(Name of the Applicant, or name of the Agent)</i>	Babita Bains	2
<b>Signature:</b>	<i>B. Bains</i>	3
<b>Date signed:</b> <i>(YYYY / MM / DD)</i>	2022-11-24	4

## Section 12: Payment of Fees

The application fee is \$1000 CAD. No PST or GST is required.  
The fee is non-refundable after a permit application number has been issued.

<input checked="" type="checkbox"/> I would like a call-back to pay by credit card	Currently, there is no electronic payment system for credit card transactions. Please complete the following to arrange for a call-back to collect credit card payment information. <b>DO NOT ENTER CREDIT CARD INFORMATION HERE OR SEND BY EMAIL.</b>		1
	<b>Name of cardholder</b>		2
	<b>Phone number</b> (999) 999-9999		3
<input type="checkbox"/> I am submitting my cheque or money order via mail/courier	Cheques or money orders not received within 10 business days may result in your application being returned as incomplete.  In addition to submitting this application form electronically, please send a printed copy along with your cheque or money order.		4
	<i>Mail:</i>	Ministry of Environment & Climate Change Strategy Regional Operations Branch IPM Program PO Box 9377 Stn Prov Govt Victoria, BC V8W 9M6	
	<i>Courier:</i>	Ministry of Environment & Climate Change Strategy Environmental Protection Division Regional Operations Branch IPM Program 3 <sup>rd</sup> Floor, 525 Superior Street Victoria, BC V8V 0C5	
<input type="checkbox"/> I have questions about the application fees and would like a call-back for consultation	<b>Name</b>		5
	<b>Phone number</b> (999) 999-9999		6

## IPMC Referral - VIHA - Spongy Moth PUP Applications

---

From: Eby, Chelsea ENV:EX  
To: HBE@viha.ca  
Cc: s.15  
Sent: January 11, 2023 11:04:06 AM PST  
Attachments: Courtenay\_PUP\_Application\_Amendment\_LDD\_2023.pdf, Courtenay\_Dove\_Creek\_LDD.jpg, Campbell\_River\_LDD.jpg, 738-0032-21-24\_Treatment\_Plan\_Courtenay\_LDD\_2023.docx, PUP\_Treatment\_Plan\_Victoria\_LDD\_2023.docx, PUP\_Treatment\_Plan\_CR\_PA\_LDD\_2023.docx, Port\_Alberni\_LDD.jpg, Victoria\_View\_Royal\_LDD.jpg, Victoria\_Esquimalt\_LDD.jpg, Victoria\_Belmont\_LDD.jpg, CR\_PA\_PUP\_Application\_LDD\_2023.pdf, Courtenay\_LDD.jpg, Victoria\_PUP\_Application\_LDD\_2023.pdf, 2023-01-11 IPMC Referral letter - Spongy Moth PUP Applications.pdf

Hello Rory,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

We have identified two hospitals that fall within two of the treatment areas in Victoria (Victoria General Hospital in View Royal, and the Base Hospital in Esquimalt). In addition to any other comments you might have on the PUP applications, we would like your opinion on aerial application of Btk over the hospitals.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / hən̓q̓əmin̓əm̓ speaking peoples.*

## RE: IPMC Referral - Spongy Moth PUP Applications

---

From: Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 17, 2023 2:38:40 PM PST

I have no objection to the Pesticide Use Permits indicated below.

*Ken Sapsford P. Ag.*

Pesticide Specialist  
BC Ministry of Agriculture & Food  
Phone: 236 766-7084  
Cell: 250 215-5479  
kenneth.sapsford@gov.bc.ca

---

**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** January 11, 2023 11:03 AM  
**To:** Andersen, Behn ENV:EX <Behn.Andersen@gov.bc.ca>; Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>; Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>; Beck, Martina LWRS:EX <Martina.Beck@gov.bc.ca>; Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>; Provincial Invasive Plant Program FOR:EX <Invasive.Plants@gov.bc.ca>; Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>; ammar.makhzoum@hc-sc.gc.ca; Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>  
**Cc:** Miller, Val FOR:EX <Val.Miller@gov.bc.ca>; Russo, Geneen HLTH:EX <Geneen.Russo@gov.bc.ca>  
**Subject:** IPMC Referral - Spongy Moth PUP Applications

Hello IPM Committee members,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag. (she/her)**

*IPM Officer*

Environmental Protection Division, Authorizations South  
Ministry of Environment & Climate Change Strategy  
Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3  
Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

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## RE: IPMC Referral - Spongy Moth PUP Applications

---

From: Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 18, 2023 11:18:39 AM PST  
No comment

---

**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** January 11, 2023 11:03 AM  
**To:** Andersen, Behn ENV:EX <Behn.Andersen@gov.bc.ca>; Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>; Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>; Beck, Martina LWRS:EX <Martina.Beck@gov.bc.ca>; Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>; Provincial Invasive Plant Program FOR:EX <Invasive.Plants@gov.bc.ca>; Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>; ammar.makhzoum@hc-sc.gc.ca; Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>  
**Cc:** Miller, Val FOR:EX <Val.Miller@gov.bc.ca>; Russo, Geneen HLTH:EX <Geneen.Russo@gov.bc.ca>  
**Subject:** IPMC Referral - Spongy Moth PUP Applications

Hello IPM Committee members,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag. (she/her)**

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

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## FW: IPMC Referral - VIHA - Spongy Moth PUP Applications

---

From: HBE (Healthy Built Environment) <HBE@islandhealth.ca>, Clements, Nancy s.15  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Cc: HBE (Healthy Built Environment) <HBE@islandhealth.ca>  
Sent: January 19, 2023 9:34:42 AM PST  
Attachments: image001.jpg, image002.jpg

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hi Chelsea,

Thanks for forwarding this information to the MHO's for their reference.

We had no objections to the use of BTK for the treatment of spongy moth as outlined in this pesticide application as BTK is not associated with any negative health effects. I will be notifying the local Environmental Health Offices in Victoria, Port Alberni, Courtenay and Campbell River with this notification in the event that they receive public inquiries and utilize the resources below for reference.

<https://www.healthlinkbc.ca/healthlinkbc-files/gypsy-moth-spraying>

[What is Btk? - Province of British Columbia \(gov.bc.ca\)](#)

Just for your reference we do not have authority over the base hospital at CFB Esquimalt so recommend you connect with the base directly so they are aware of this activity.

Regards

Nancy

Nancy Clements | Drinking Water – Healthy Built Environment Consultant

Phone: 250.850.2107 | email: [nancy.clements@islandhealth.ca](mailto:nancy.clements@islandhealth.ca)

Web: [islandhealth.ca](http://islandhealth.ca) | [Facebook](#) | [Twitter](#) | [Flickr](#) | [Vimeo](#)



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---

**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** Wednesday, January 11, 2023 11:04 AM  
**To:** HBE (Healthy Built Environment) <HBE@islandhealth.ca>  
**Cc:** Beise, Rory s.17  
**Subject:** IPMC Referral - VIHA - Spongy Moth PUP Applications

Hello Rory,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

We have identified two hospitals that fall within two of the treatment areas in Victoria (Victoria General Hospital in View Royal, and the Base Hospital in Esquimalt). In addition to any other comments you might have on the PUP applications, we would like your opinion on aerial application of Btk over the hospitals.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

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## **FW: Insecticide spraying application in Courtenay Dove Creek area, Feb 21 deadline**

From: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 23, 2023 9:38:00 AM PST

---

**From:** Bains, Babita FOR:EX  
**Sent:** January 21, 2023 12:08 PM  
**To:** s.22 Chelsea.Eby@gov.bc  
**Subject:** RE: Insecticide spraying application in Courtenay Dove Creek area, Feb 21 deadline

Hi s.22

I can assure you Foray 48B is not broad-based and will not impact insects other than Lepidopterans. I'm an entomologist and I would never use a product that would have detrimental impacts. Additionally, the species at risk biologist with Ministry of Environment and Climate Change Strategy, with the help of the B.C. Conservation Data Centre complete a species-at-risk review to ensure there are no listed Lepidopterans in our treatment areas to ensure no detrimental impacts.

As members of the Spongy Moth Technical Advisory Committee we are not only qualified professionals (biologists, foresters and scientists), we are naturalists that do the work we do because we care about the environment.

Thank-you,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

*I acknowledge with respect and gratitude the Coast Salish peoples of the QayQayt Nation whose ancestral, unceded and traditional territories that I live and work on.*

---

**From:** s.22  
**Sent:** January 18, 2023 7:33 PM  
**To:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>; Chelsea.Eby@gov.bc  
**Subject:** Insecticide spraying application in Courtenay Dove Creek area, Feb 21 deadline

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Dear Ms Baines, and Ms Eby, I am totally opposed to the Ariel spraying of Foray 48B for the control of Spongy Gypsy Moth. This insecticide is broad based and will result in severe impact on many beneficial insects. This is entirely inappropriate in this rural agricultural area.

I am not able to attend the

2023 Spongy Moth Virtual Open Houses: Campbell River, Courtenay and Port Alberni Virtual Open House: on Monday, January 23rd, 7:30 pm - 8:30 pm, As noted on your website.

Sincerely,  
s.22

Reported symptoms

dermatitis  
chest pain  
stomach problems'  
vomiting, diarrhea  
scratchy throat, coughing, chest tightness  
feeling weird for the last 3 days, body pain, headache, dizziness  
loss of appetite, eye edema, stuffy nose, shortness of breath, sweating, nausea, bloody vomit, stomach cramps, he  
difficulty breathing, sneezing (2 people)  
shortness of breath  
red skin, lesion  
coughing, sore throat  
coughing

55

6

eadache, anorexia, dizziness



## Recent update to Province of British Columbia - Spongy Moth News

---

From: donotreply@gov.bc.ca  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 23, 2023 1:39:45 PM PST

Updates have recently been made to the following page on the Province of British Columbia website: [News](#)

Message to page subscribers: Reminder: Spongy Moth Virtual Open House for Campbell River, Courtenay and Port Alberni on Monday, January 23, 7:30 pm - 8:30 pm.

To unsubscribe from this page, click [here](#).

To unsubscribe from all pages, click [here](#).

## Permit application tracker

738-0032-21-24 Amendment 1

Actions	Date
Applicant contacts IPM staff (optional)	
Application received (Integrated Services)	02/12/2022
Payment processed (Integrated Services)	
IPM Officer receives application	02/12/2022
AID issued	08/12/2022
Public Consultation Plan submitted for approval (applicant)	06/01/2023
Draft Treatment Plan submitted (applicant)	15/12/2022
Public Consultation Plan approved (Director)	06/01/2023
Application number issued	06/01/2023
IPMC referrals sent	11/01/2023
Public Consultation Report submitted (applicant)	
First Nation Engagement Report submitted (applicant)	
Other documents required by AID submitted, if required (applicant)	
Technical Report completed	
Draft permit sent to applicant	
Draft permit and technical report sent to SDM	
SDM decision	
Applicant & Integrated Services notified of decision	



Meetings	
Attendees	Notes
Babita Bains, Scott Bennett and Chelsea Eby	Included discussion of new public consultation requirements
Babita Bains and Chelsea Eby	Permit clause review and discussion (current and possible)

## Masks: Spongy Moth Open Houses

---

From: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: January 25, 2023 3:28:01 PM PST  
I forgot to CC you, just thought you may be interested....

---

**From:** Bains, Babita FOR:EX  
**Sent:** January 25, 2023 3:27 PM  
**To:** 'Holden, David (CFIA/ACIA)' <david.holden@inspection.gc.ca>; 'VAN HEZEWIJK, Brian' <brian.vanhezewijk@NRCan-RNCan.gc.ca>; Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>; 'Blackburn, Gwylim' <gwylim.blackburn@NRCan-RNCan.gc.ca>; Hueppelsheuser, Tracy AF:EX <Tracy.Hueppelsheuser@gov.bc.ca>; 'Tim Ebata's.22' <tim.ebata@bcinvasives.ca>; 'nwong@bcinvasives.ca' <nwong@bcinvasives.ca>  
**Cc:** Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>  
**Subject:** RE: Spongy Moth Open Houses

Just an FYI...below is an email from Valent regarding droplet size and the use of masks:

*Naturally produced droplets from humans (e.g. droplets produced by breathing, talking, sneezing, coughing) include various cells types (e.g. epithelial cells and cells of the immune system), physiological electrolytes contained in mucous and saliva (e.g. Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>), as well as, potentially, various infectious agents (e.g. bacteria, fungi and viruses). Exhaled particles range in diameter from < 1 µm to 1000 µm, which is a big spit I presume. One of the way to prevent inhalation of spray droplets is certainly to wear a mask. Our label states to wear a "NIOSH-approved respirator with any N-95, R-95, or P-95 filter for biological products when handling, mixing/loading or applying the product and during all clean-up/repair activities". Your assumption is certainly good as the Foray droplet size is around 100-125µ, some are smaller while others bigger.*

---

**From:** Bains, Babita FOR:EX  
**Sent:** January 25, 2023 12:03 PM  
**To:** Holden, David (CFIA/ACIA) <david.holden@inspection.gc.ca>; VAN HEZEWIJK, Brian <brian.vanhezewijk@NRCan-RNCan.gc.ca>; Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>; Blackburn, Gwylim <gwylim.blackburn@NRCan-RNCan.gc.ca>; Hueppelsheuser, Tracy AF:EX <Tracy.Hueppelsheuser@gov.bc.ca>; 'Tim Ebata's.22' <tim.ebata@bcinvasives.ca>; 'nwong@bcinvasives.ca' <nwong@bcinvasives.ca>  
**Subject:** Spongy Moth Open Houses

I wanted to thank everyone for their time over the past two evening (and apologize both meetings went longer than scheduled – I'll make sure we start earlier next year!). Thank-you for answering a lot of the difficult questions and contributing valuable information. One woman called me today and s.22 sent a follow-up email, and they both wanted to thank everyone and said they were really impressed with the information shared (even if they didn't agree with it) and how respectful the TAC was. It's not easy and definitely frustrating at times so thanks again and I'll keep the full TAC posted on any major set-backs. s.13

s.13

Let me know if there are any weeks in March that will not work.

Thanks,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

*I acknowledge with respect and gratitude the Coast Salish peoples of the QayQayt Nation whose ancestral, unceded and traditional territories that I live and work on.*



January 6, 2023

File No: 738-0032-21-24

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Amendment Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning your current permit number 738-0032-21-24 to your permit amendment request, submitted on December 2, 2022. Now that you've received your permit amendment application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office

## permit number letters updated with correct email

---

From: Eby, Chelsea ENV:EX  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Sent: January 26, 2023 4:27:49 PM PST  
Attachments: 2023-01-06 Applicaiton number issued\_CR-PA.pdf, 2023-01-06 Applicaiton number issued\_Victoria area.pdf, 2023-01-06 Amendment applicaiton number assigned\_Courtenay.pdf

Hey Babita,

I've updated the permit number letters with my correct email address for you to upload to the website. Sorry about that!

Cheers,

**Chelsea Eby, MPM, P.Ag.** (*she/her*)

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / həŋqəmiŋəm speaking peoples.*





January 6, 2023

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning permit application number 738-0036-23-23 to your application for the Campbell River and Port Alberni areas, submitted on November 24, 2022. Now that you've received your permit application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office



January 6, 2023

**VIA EMAIL:** [Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)

Ministry of Forests  
200 – 10470 152nd St  
Surrey, BC  
V3R 0Y3

Dear Applicant:

**Re: Pesticide Use Permit Application Number under the *Integrated Pest Management Act***

The Ministry of Environment and Climate Change Strategy is assigning permit application number 738-0035-23-23 to your application for the Victoria area, submitted on November 24, 2022. Now that you've received your permit application number, you must advertise within 45 days of receiving this email and provide the ministry with a public consultation report within 90 days of this email. Please refer to your Application Instruction Document for further instructions.

**Agency Referrals**

Please be aware that the ministry will refer your application for review and comment to members of the Integrated Pest Management Committee, as required under Section 13 of the *Integrated Pest Management Act*. This committee includes representatives from provincial ministries in agriculture, environmental protection, forests, and health, and any additional persons considered appropriate. We will notify you if these referrals require response or additional actions on your part.

If you have any questions, please contact Chelsea Eby at [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca) or 236-468-2249

Yours truly,

Chelsea Eby  
IPM Officer  
Surrey Regional Office

## **Bains, Babita FOR:EX sent you a message in Skype for Business while you were offline**

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
**Sent:** January 27, 2023 9:36:20 AM PST

**Bains, Babita FOR:EX 9:36 AM:**

Application number documents have been updated on our website!

Need Skype for Business? [Try the Skype for Business mobile app.](#)

Page 248 of 301 to/à Page 249 of 301

Withheld pursuant to/removed as

s.13 ; s.14

Page 250 of 301 to/à Page 266 of 301

Withheld pursuant to/removed as

s.14

## RE: IPMC Referral - Spongy Moth PUP Applications

---

From: Makhzoum, Ammar (HC/SC) <ammar.makhzoum@hc-sc.gc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: February 1, 2023 3:05:40 PM PST

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hello Chelsea,

I consulted with my senior inspectors and we do not have any concerns/comments.

Kind regards,

**Ammar Makhzoum, PhD**

Regional Manager  
Pesticide Compliance Program – British Columbia  
Regulatory Operations and Enforcement Branch  
Health Canada / Government of Canada  
[ammar.makhzoum@hc-sc.gc.ca](mailto:ammar.makhzoum@hc-sc.gc.ca) / Tel: 236-330-4276

Gestionnaire régional  
Programme de la conformité des pesticides – Colombie Britannique  
Direction générale des opérations réglementaires et de l'application de la loi  
Santé Canada / Gouvernement du Canada  
[ammar.makhzoum@hc-sc.gc.ca](mailto:ammar.makhzoum@hc-sc.gc.ca) / Tel: 236-330-4276

---

**From:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>

**Sent:** 2023-01-11 11:03 AM

**To:** Andersen, Behn ENV:EX <Behn.Andersen@gov.bc.ca>; Mullan, Jonathan M ENV:EX <Jonathan.Mullan@gov.bc.ca>; Hall, Lauren ENV:EX <Lauren.Hall@gov.bc.ca>; Beck, Martina LWRS:EX <Martina.Beck@gov.bc.ca>; Zeglen, Stefan FOR:EX <Stefan.Zeglen@gov.bc.ca>; Provincial Invasive Plant Program FOR:EX <Invasive.Plants@gov.bc.ca>; Sapsford, Kenneth AF:EX <Kenneth.Sapsford@gov.bc.ca>; Makhzoum, Ammar (HC/SC) <ammar.makhzoum@hc-sc.gc.ca>; Heron, Jennifer M LWRS:EX <Jennifer.Heron@gov.bc.ca>

**Cc:** Miller, Val FOR:EX <Val.Miller@gov.bc.ca>; Russo, Geneen HLTH:EX <Geneen.Russo@gov.bc.ca>

**Subject:** IPMC Referral - Spongy Moth PUP Applications

Hello IPM Committee members,

Attached please find a referral and supporting documents for two Pesticide Use Permit (PUP) applications and one PUP amendment application for aerial treatments of Spongy Moth (formerly Gypsy Moth) on Vancouver Island.

Please provide any comments by February 1.

Cheers,

**Chelsea Eby, MPM, P.Ag. (she/her)**

*IPM Officer*

Environmental Protection Division, Authorizations South

Ministry of Environment & Climate Change Strategy

Suite 200 – 10470 152 Street, Surrey BC V3R 0Y3

Phone: 236.468.2249 | Fax: 604.930.7119 | [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

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## RE: Permit Application Comment Period

---

From: Eby, Chelsea ENV:EX  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Sent: February 2, 2023 3:14:31 PM PST

Hi Babita,

The public consultation requirements (IPMR Section 60) are that you need to submit your public consultation report within 90 days after you published your newspaper ads, so you can accept comments beyond the 30 days listed in the advertisement.

I'm assuming you'll advertise the additional open house on your website. I suggest that you also add a note that you will receive comments after the 30 days from the date the newspaper ads were posted.

Cheers,

**Chelsea Eby, MPM, P.Ag. (she/her)**

IPM Officer  
236.468.2249

*Living and working with gratitude and respect on the traditional territories of the Hul'q'umi'num' / Halq'eméylem / hən̓q̓əmin̓əm̓ speaking peoples.*

---

**From:** Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>

**Sent:** February 2, 2023 10:42 AM

**To:** Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>

**Subject:** Permit Application Comment Period

Hi Chelsea,

We've decided to run a third open house if PMRA / Health Canada can attend. This would be scheduled for the week of Feb 21<sup>st</sup> (likely the 22<sup>nd</sup>). If we were to do this it would be after the comment period for the permit applications has closed but in good faith we were wondering if we are allowed to give/get an extension on the comment period? I've received a handful of emails from individuals that did not get their postcards in time – a few from Courtenay (more than one person in the spray area confirmed they were received on Friday however not everyone checks their mailboxes regularly, hence why we try to get them delivered 7 – 10 days in advance) and the others didn't disclose their location and suggested we intentionally sent the postcards late so they couldn't attend. If we were to run an extra open house could we extend the comment period to February 27<sup>th</sup>? I could re-run all the ads the week of February 13<sup>th</sup>, host the open house on the 22<sup>nd</sup> and we could take comments until the 27<sup>th</sup>? My only concern was if we do push the comment period by one week would we still be able to get our permit before April 1<sup>st</sup>?

s.14

Thanks,

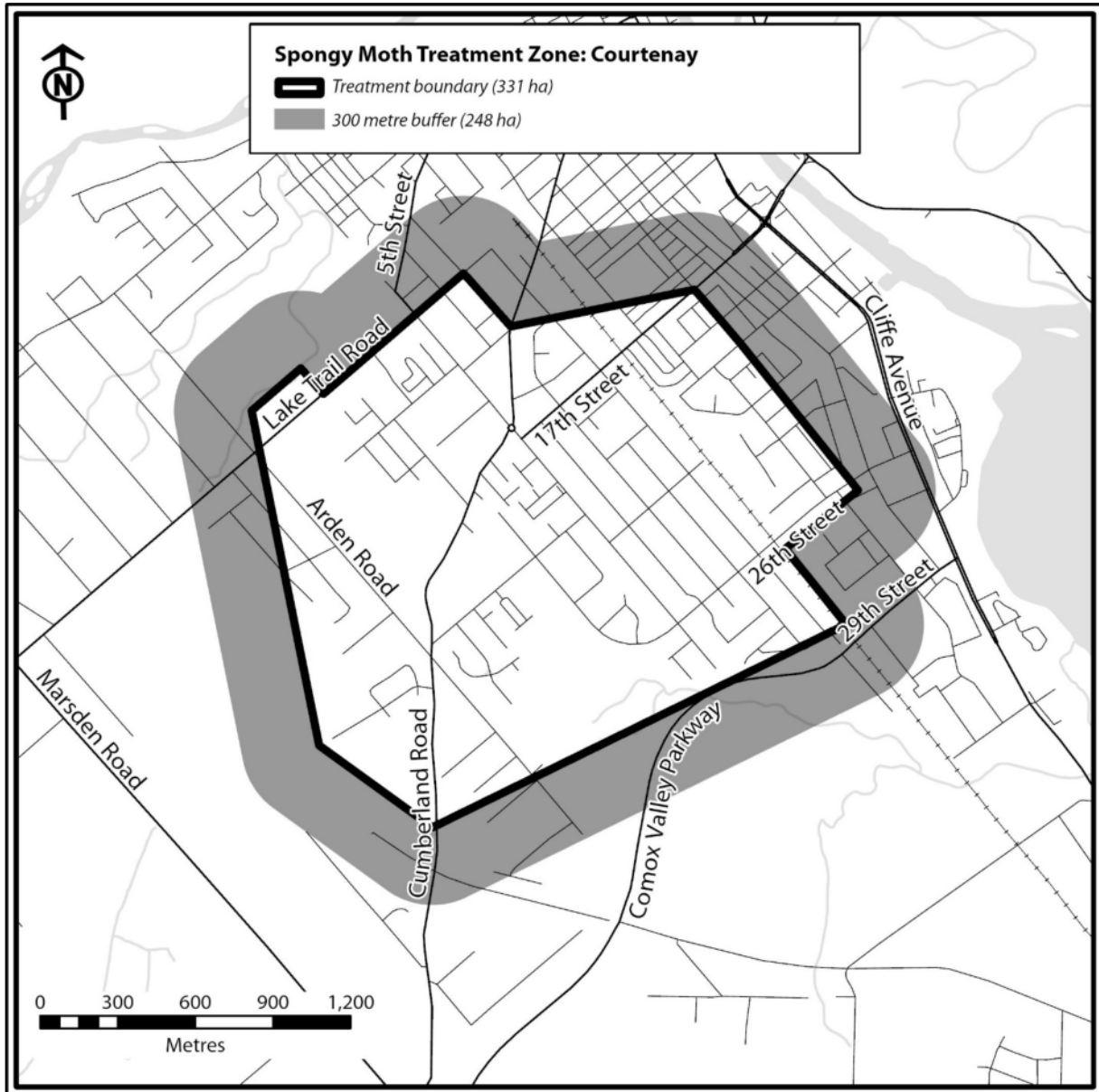
Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

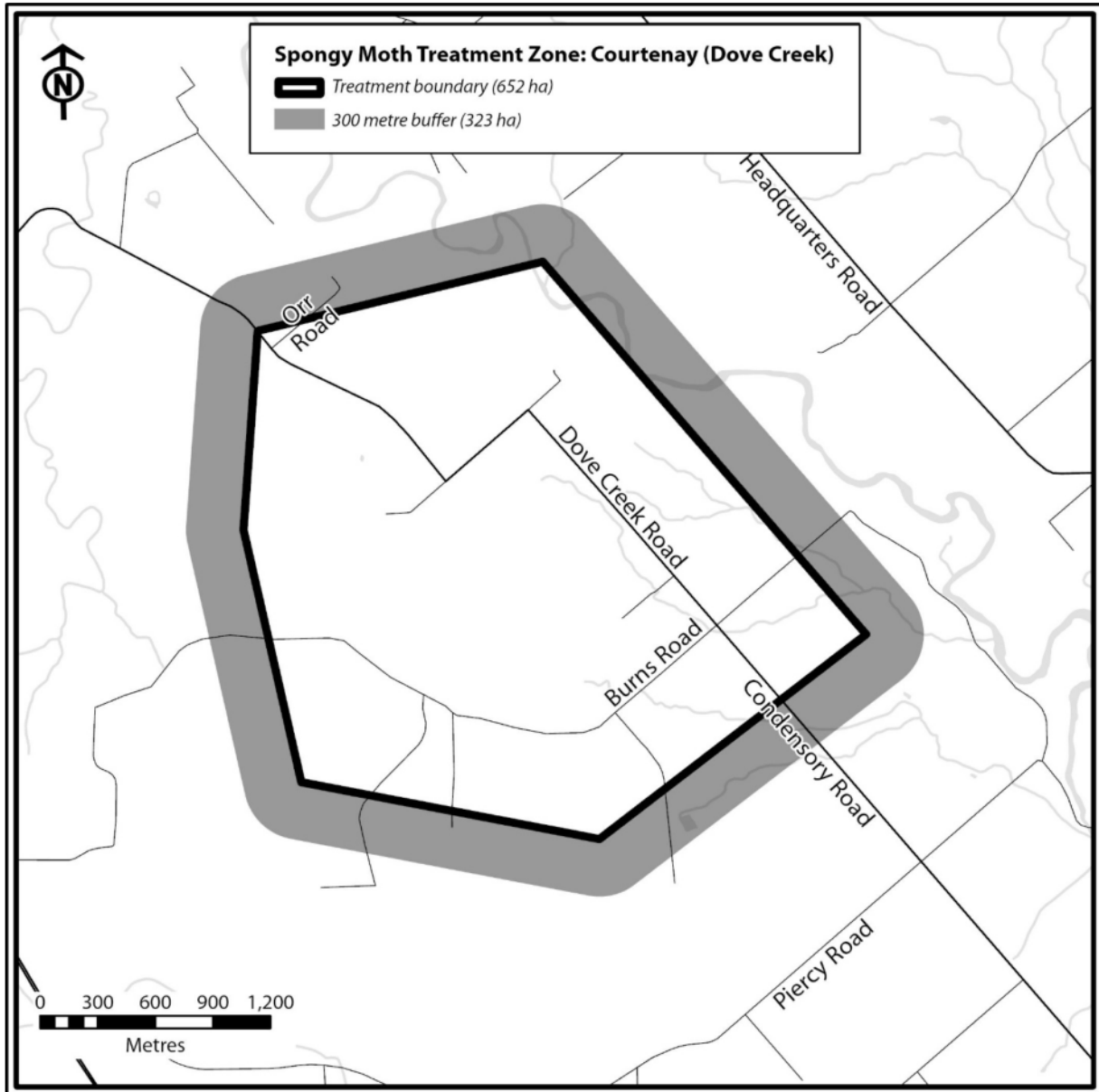


*I acknowledge with respect and gratitude the Coast Salish peoples of the QayQayt Nation whose ancestral, unceded and traditional territories that I live and work on.*

**Map 1. City of Courtenay Spongy Moth Treatment Area**



**Map 2. Dove Creek Spongy Moth Treatment Area**



Amended:

Peter Lawrie, P.Ag.  
On behalf of the Administrator – *Integrated Pest Management Act*

Page 1 of 1

Permit No. 738-0032-21-24

## **FW: Insecticide spraying in Courtenay Dove Creek area on Feb 21st**

---

From: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Cc: s.22  
Sent: February 6, 2023 12:47:23 PM PST  
Hi Kathryn and Chelsea,

I just wanted to note that s.22 sent both Chelsea and me an email on January 21<sup>st</sup> (see below) and unfortunately Chelsea's email was not completely transcribed (forgot the .ca). So I'm just resending our email chain so Chelsea can make a record of s.22 email.

Thank-you,

Babita

---

**From:** Bains, Babita FOR:EX  
**Sent:** Monday, February 6, 2023 12:38 PM  
**To:** s.22 ; Chelsea.Eby@gov.bc  
**Subject:** RE: Insecticide spraying in Courtenay Dove Creek area on Feb 21st

Hi s.22

Sorry for my delayed response. I am going to post a recording and the PDF copy of my presentation from the January 23<sup>rd</sup> virtual open house. If you wish to view it, it will be posted by February 15<sup>th</sup> at: [www.gov.bc.ca/spongymoth-news](http://www.gov.bc.ca/spongymoth-news).

I would like to clarify that our technical advisory committee is comprised of various specialists – entomologists, general biologists, foresters, etc. and we carefully evaluate each treatment area and ensure our program does not have a detrimental impact on both humans, animals and the environment. We have completed a species at risk review and there are no listed species in our treatment areas. Additionally, Btk is specific to moths and butterfly larvae and the only impacted larvae (caterpillars) will be those that are emerging at the same time as the spongy moth (which is when we time our three sprays). Any caterpillars that are emerging at the same time as our sprays will be established (native) populations that will not be impacted in the long-term. There may be a population decrease initially, however, within 2 – 3 years they will be completely re-established – it's also important to note that our treatment area is very small compared to the natural habitat/extent of these species so they will recolonize from outside of the treated area within three years. Btk is only activated in a moth/butterfly caterpillar gut (alkaline guts) and therefore it does not impact any other animals. Btk also naturally occurs in the environment and our spray application is very low at 4 L/ ha but still effective in eradicating spongy moth caterpillars.

If you have any questions please let me know.

Thank-you,

Babita

Babita Bains, MSc, RPF  
Provincial Forest Entomologist  
Forest Science, Planning and Practices Branch  
Office of the Chief Forester  
Ministry of Forests  
Office: 236-468-2295

*I acknowledge with respect and gratitude the Coast Salish peoples of the QayQayt Nation whose ancestral, unceded and traditional territories that I live and work on.*

---

**From:** s.22

**Sent:** Saturday, January 21, 2023 4:20 PM

**To:** Bains, Babita FOR:EX <[Babita.Bains@gov.bc.ca](mailto:Babita.Bains@gov.bc.ca)>; [Chelsea.Eby@gov.bc.ca](mailto:Chelsea.Eby@gov.bc.ca)

**Subject:** Insecticide spraying in Courtenay Dove Creek area on Feb 21st

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Dear Ms Baines and MS Eby,

I am totally opposed to the aerial spraying of Foray 48B for the control of Spongy Gypsy Moth. I believe that this insecticide will result in a harmful impact on many other insects which are necessary for a healthy ecosystem.

I am unable to attend the virtual meeting on January 23rd.

Sincerely,  
s.22

## Recent update to Province of British Columbia - Spongy Moth News

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From: donotreply@gov.bc.ca  
To: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: February 13, 2023 10:02:30 AM PST

Updates have recently been made to the following page on the Province of British Columbia website: [News](#)

Message to page subscribers: A recording and PowerPoint presentations from the 2023 spongy moth virtual open house sessions are now available on the Ministry's spongy moth news web page. Please note that anyone wishing to contribute information about the treatment areas for the evaluation of the Ministry's pesticide use permit applications must send copies of the information to both the applicant and the administrator as outlined in the permit applications by February 21, 2023.

To unsubscribe from this page, click [here](#).  
To unsubscribe from all pages, click [here](#).

## Review and Comment on the use of Foray 48B on Vancouver Island

---

From: s.22  
To: Bains, Babita FOR:EX <Babita.Bains@gov.bc.ca>  
Cc: Eby, Chelsea ENV:EX <Chelsea.Eby@gov.bc.ca>  
Sent: February 14, 2023 4:03:21 PM PST  
Attachments: RRM.Consultation.AppealLetter.Foray48B.2023.pdf

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hello Babita,

Attached is a letter I have written in response to the public review and comment period regarding the use of Foray 48B to control spongy moth (*Lymantria dispar*) on Vancouver Island; specifically to application permits 738-0032-21-24, 738-0036-23-23, and 738-0035-23-23.

If you would like to have any additional conversations about the information within the letter, please let me know.

Thank you,

s.22

s.22

February 14, 2023

Babita Bains RPF  
Ministry of Forests  
Provincial Forest Entomologist  
PO Box 9513 STN Provincial Government  
Victoria, British Columbia, V8W 9C2

CC: [Forests.Forestpracticesbranchoffice@gov.bc.ca](mailto:Forests.Forestpracticesbranchoffice@gov.bc.ca)

Re: Appeal of Aerial Spraying of Foray 48B pesticide over populated areas in BC

Dear Ms. Baines,

I am writing in response to the recent notification of aerially spraying pesticide Foray 48B within populated areas of Courtenay, Campbell River/Port Alberni, and Victoria; specifically, to the application permit numbers: 738-0032-21-24, 738-0036-23-23, and 738-0035-23-23. The information pertaining to these treatments is located here:

<https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health/invasive-forest-pests/spongy-moth/news>.

I am a Registered Professional Forester in good standing with the Association of BC Forest Professionals (ABCFP). I have over ten years of Coastal forestry experience in the arena of forest planning and silviculture practices. Part of my job involves the use of herbicide and pesticides on undesirable species post-harvest. Based on this brief synopsis, I would consider myself competent in the field of herbicide and pesticide use. As well, as a member of the ABCFP I am bound by the Code of Ethical and Professional Conduct which first and foremost ‘holds paramount the safety, health, and welfare of the public and the protection of the environment.’

Therefore, I would like to raise concerns over some of the information presented on the BC Government News website (<https://news.gov.bc.ca/releases/2023FOR0001-000018>). It describes Foray 48B as “only (affecting) spongy moth (*Lymantria dispar*) caterpillars” and “poses no threat to people”. The website further indicates that “repeat scientific study concludes the treatment poses no threat to people” and “it does not harm mammals, birds, fish, plants, reptiles,



amphibians, bees nor other insects”. These statements are clearly inaccurate based on the references noted below. Using these references, I believe that the aforementioned statements are grossly misleading the public and inaccurately represent the risks affiliated with using Foray 48B. Please review the peer reviewed articles and update the Ministry website accordingly. The importance of doing so cannot be overlooked or ignored as these treatments are planned to occur around multiple schools, daycares, playgrounds, community gardens, and residential homes and buildings.

As well, I find it compelling that Foray 48B has been used for 62 years to eradicate *Lymantria dispar* yet the species has yet to be eradicated. To me, that would indicate a failure of a treatment. Perhaps alternative methods should be used since this one appears to be continually failing to complete the task it was intended for. I attempted to view the government’s information on the ‘other treatments’ hyperlink on (<https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health/invasive-forest-pests/spongy-moth>) but that webpage ‘cannot be found’. Therefore, although alternative treatment methods may exist for this species, the public cannot review this information during the limited 30 day review and comment period.

As inaccurate and misleading information has been presented to the public regarding the use of this product, the current treatment planned between April 1<sup>st</sup> and June 30<sup>th</sup>, 2023 should be halted and a widely publicized discussion with the public regarding the risks of using Foray 48B should be openly conducted.

Thank you,



s.22

s.22

## References

- Boulton TJ, O. I. (2007 Apr). Recovery of nontarget Lepidoptera on Vancouver Island, Canada: one and four years after a gypsy moth eradication program. *Environ Toxicol Chem.*, 26(4):738-48. doi: 10.1897/06-079r1.1. PMID: 17447559.
- Celandroni F, S. S. (2014 Dec). Bacillus thuringiensis membrane-damaging toxins acting on mammalian cells. *FEMS Microbiol Lett.* , 361(2):95-103. doi: 10.1111/1574-6968.12615. Epub 2014 Oct 21. PMID: 25283838.
- Damgaard, P. H. (December 1995). Diarrhoeal enterotoxin production by strains of Bacillus thuringiensis isolated from commercial Bacillus thuringiensis-based insecticides. *FEMS Immunology and Medical Microbiology*, 12(3-4), 245-249.
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## MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY ASSESSMENT

**PUP #: 738-0032-21-24 Amendment 1**

<b>Written by:</b> Updated by Chelsea Eby		<b>Date:</b>
<b>Application type:</b> Pesticide Use Permit Application		<b>Date of Application meeting:</b> Dec 5, 2022 (virtual)
<b>Applicant name:</b> British Columbia Ministry of Forests		<b>Date on Application:</b> November 29, 2022
<b>Contact name:</b> Babita Bains, Provincial Forest Entomologist		<b>Date Application received:</b> Dec 02 2022
<b>Purpose of Proposed Pesticide Use:</b> Amendment request to eradicate two small isolated populations of spongy moth (formerly gypsy moth), <i>Lymantria dispar</i> .		
<b>Location Description:</b> A 331 ha area within the City of Courtenay approximately centred on Cumberland Rd and 17 <sup>th</sup> St, and a 652 ha area northwest of the city approximately centred on Dove Creek Rd between Orr Rd and Burns Rd.		
<b>Total treatment area (ha):</b> 983	<b>Proposed Start and End Date of Pesticide Use:</b> 2023-04-01 to 2023-06-30	
<b>Application method:</b> Aerial application by fixed or rotary wing aircraft appropriately equipped for aerial spray operations and in compliance with Transport Canada requirements.		

1. **Application Request**

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2008-2343	PIRX001-2008-06-17HRS1106-2196	39588	39616	Human	CA	ON	FORAY 48B
2008-2893	PIRX001-2008-07-29HRS1429-2552	39266	39658	Domestic Anim	US	NY	DiPel Pro DF Insecticide
2010-2575	PIRX001-2010-06-07HRS1132-9689	40304	40332	Human	CA	BC	FORAY 48B
2010-2681	PIRX001-2010-06-14HRS1540-9734	40326	40343	Human	CA	BC	FORAY 48B
2010-2682	PIRX001-2010-06-14HRS1540-9735	40326	40343	Human	CA	BC	FORAY 48B
2010-2820	PIRX001-2010-06-24HRS0918-9848	40326	40352	Human	CA	BC	FORAY 48B
2010-3956	PIRX001-2010-08-27HRS1410-10841	40415	40417	Environment	CA	BC	MAXCEL PLANT GROWTH REGULATOR, DIPEL 2X DF BIOLOGICAL INSECTICIDE DRY FLOWABLE, RETAIN PLANT GROWTH REGULATOR
2010-6319	PIRX001-2010-12-30HRS1029-12608	40393	40542	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2012-1282	PIRX001-2012-03-26HRS1325-17671	40763	40994	Human	US	FL	Green Light BT Worm Killer

Active ingredients - English	Active ingredients - French	Severity	Reported symptoms
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS) 6-BENZYLAMINOPURINE (OR: 6-BENZYLADENINE);AVIGLYCINE HYDROCHLORIDE;BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI BACILLUS THURINGIENSIS VAR KURSTAKI;BENZYL ADÉNINE;CHLORHYDRATE D'AVIGLYCINE		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2012-2422	1402		41082	Human	CA	SK	FORAY 76B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2014-2974	PIRX001-2014-08-01HRS1415-27262	41828	41852	Human	CA	BC	FORAY 48BA BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1841	PIRX001-2015-05-12HRS0829-30138	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1843	PIRX001-2015-05-12HRS0830-30140	42118	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1844	PIRX001-2015-05-12HRS0830-30141	42122	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1845	PIRX001-2015-05-12HRS0830-30142	42118	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1846	PIRX001-2015-05-12HRS0831-30143	42125	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1847	PIRX001-2015-05-12HRS0831-30144	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1848	PIRX001-2015-05-12HRS0831-30145	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION



Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

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KURSTAKI (ALL STRAINS)

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KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2015-1849	PIRX001-2015-05-12HRS0832-30146	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1850	PIRX001-2015-05-12HRS0832-30147	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1851	PIRX001-2015-05-12HRS0832-30148	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1852	PIRX001-2015-05-12HRS0833-30149	42110	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1853	PIRX001-2015-05-12HRS0833-30150	42112	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1854	PIRX001-2015-05-12HRS0833-30151	42112	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1855	PIRX001-2015-05-12HRS0833-30152	42116	42135	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1917	PIRX001-2015-05-15HRS0833-30178	42114	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1918	PIRX001-2015-05-15HRS0833-30179	42122	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION

Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

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KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

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KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
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KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2015-1919	PIRX001-2015-05-15HRS0833-30180	42124	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1920	PIRX001-2015-05-15HRS0834-30181	42124	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1921	PIRX001-2015-05-15HRS0834-30182	42124	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1922	PIRX001-2015-05-15HRS0834-30183	42125	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1923	PIRX001-2015-05-15HRS0835-30184	42125	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1924	PIRX001-2015-05-15HRS0835-30185	42126	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1925	PIRX001-2015-05-15HRS0835-30186	42126	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1926	PIRX001-2015-05-15HRS0835-30187	42131	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1927	PIRX001-2015-05-15HRS0836-30188	42122	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION

Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
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BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2015-1928	PIRX001-2015-05-15HRS0836-30189	42126	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1929	PIRX001-2015-05-15HRS0837-30190	42131	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1930	PIRX001-2015-05-15HRS0837-30191	42131	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1931	PIRX001-2015-05-15HRS0837-30192	42136	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1932	PIRX001-2015-05-15HRS0837-30193	42136	42138	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-1991	3161		42143	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-2147	3201		41857	Human	CA	ON	unknown
2015-2363	PIRX001-2015-06-09HRS0916-30405	42140	42163	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-2364	PIRX001-2015-06-09HRS0916-30406	42140	42163	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION

Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
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KURSTAKI (ALL STRAINS)

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KURSTAKI (ALL STRAINS)

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KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2015-2365	PIRX001-2015-06-09HRS0916-30407	42140	42163	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-2366	PIRX001-2015-06-09HRS0917-30408	42153	42163	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-2367	PIRX001-2015-06-09HRS0917-30409	42140	42163	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4301	PIRX001-2015-08-27HRS1133-31340	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4302	PIRX001-2015-08-27HRS1133-31341	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4303	PIRX001-2015-08-27HRS1134-31342	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4304	PIRX001-2015-08-27HRS1134-31343	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4305	PIRX001-2015-08-27HRS1134-31344	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4306	PIRX001-2015-08-27HRS1135-31345	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION



Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

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KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

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KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

BACILLUS THURINGIENSIS SUBSPECIES  
KURSTAKI (ALL STRAINS)

BACILLUS THURINGIENSIS VAR  
KURSTAKI

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2015-4307	PIRX001-2015-08-27HRS1135-31346	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-4308	PIRX001-2015-08-27HRS1135-31347	42196	42243	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2015-6403	PIRX001-2015-11-19HRS1505-32321	42110	42327	Human, Domestic	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2018-1816	4621		43237	Human, Environmental	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2018-2482	PIRX001-2018-06-28HRS1011-41523	43236	43279	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2018-2483	PIRX001-2018-06-28HRS1014-41524	43269	43279	Human	CA	QC	FORAY 76B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2019-2596	4982		43620	Human	CA	ON	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2020-1819	PIRX001-2020-06-13HRS1304-48343	43983	43995	Human	CA	ON	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2020-2101	PIRX001-2020-06-26HRS1857-48492	43987	44008	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION

Active ingredients - English	Active ingredients - French	Severity	Reported symptoms
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI		
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	dermatitis
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	na	chest pain
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	stomach problems <sup>1</sup>
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	vomiting, diarrhea

Application number	ID	Date received - registrant	Date received - PMRA	Incident report type	Country	Province / State	Product name - English
2022-2087	PIRX001-2022-05-30HRS1121-54368	44701	44711	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2088	PIRX001-2022-05-30HRS1121-54369	44704	44711	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2688	PIRX001-2022-06-24HRS1145-54666	44722	44736	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2689	PIRX001-2022-06-24HRS1147-54667	44722	44736	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2752	PIRX001-2022-06-27HRS1906-54692	44734	44739	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2753	PIRX001-2022-06-27HRS1911-54693	44726	44739	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2754	PIRX001-2022-06-27HRS1915-54694	44726	44739	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
2022-2755	PIRX001-2022-06-27HRS1921-54695	44726	44739	Human	CA	BC	FORAY 48B BIOLOGICAL INSECTICIDE AQUEOUS SUSPENSION
			human	69			
			domestic animal	2			

Active ingredients - English	Active ingredients - French	Severity	Reported symptoms
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	scratchy throat, coughing, chest tightness
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	feeling weird for the last 3 days, body pain, headache, dizziness loss of appetite, eye edema, stuffy nose, shortness of breath, sweating, nausea, bloody vomit, stomach cramps, headache, anorexia, dizziness
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	feeling weird for the last 3 days, body pain, headache, dizziness loss of appetite, eye edema, stuffy nose, shortness of breath, sweating, nausea, bloody vomit, stomach cramps, headache, anorexia, dizziness
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	Minor, na	difficulty breathing, sneezing (2 people)
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	shortness of breath
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	red skin, lesion
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	coughing, sore throat
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI (ALL STRAINS)	BACILLUS THURINGIENSIS VAR KURSTAKI	minor	coughing
minor		11	55
na		2	6

Application number	ID	Date received - registrant	Date received - PMRA environment	Incident report type 2	Country	Province / State	Product name - English
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Active ingredients - English

Active ingredients - French

Severity

Reported symptoms

## Permit application tracker

738-0032-21-24 Amendment 1

Actions	Date	Notes
Applicant contacts IPM staff (optional)		
Application received (Integrated Services)	2022-12-02	Received by Chelsea Eby
Payment processed (Integrated Services)		n/a for a permit amendment
IPM Officer receives application	2022-12-02	
AID issued	2022-12-08	
Public Consultation Plan submitted for approval (applicant)	2023-01-06	Includes entire communication plan (not just public consultation requirements).
Draft Treatment Plan submitted (applicant)	2022-12-15	
Public Consultation Plan approved (Director)	2023-01-06	
Application number issued	2023-01-06	
IPMC referrals sent	2023-01-11	
Public Consultation Report submitted (applicant)		
First Nation Engagement Report submitted (applicant)		
Other documents required by AID submitted, if required (applicant)		
Technical Report completed		
Draft permit sent to applicant		
Draft permit and technical report sent to SDM		
SDM decision		
Applicant & Integrated Services notified of decision		

Meetings			
Date	Meeting Purpose	Attendees	Notes
	Pre-application meeting (optional)		
2022-12-05	Application meeting	Babita Bains, Scott Bennett and Chelsea Eby	Included discussion of new public consultation requirements
2023-02-22	Post-application meeting (optional)	Babita Bains and Chelsea Eby	Permit clause review and discussion (current and possible)
	Permit review meeting (optional)		