



DISTRICT OF METCHOSIN

AGENDA

ENVIRONMENTAL ADVISORY SELECT COMMITTEE MEETING

March 25, 2025 at 7:00 p.m.
Council Chambers
Metchosin Municipal Hall

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 - Correspondence from GRANUM MicroConsult, Re: Appeal of Aerial Spraying of Foray 48B Pesticide Overpopulated Areas in BC
 - Correspondence from Dr. Jennifer Tynan, Re: Pesticide Use Permit Applications for Foray 48B Spraying on Vancouver Island
 - Appellants' Memorandum of Argument Stay Application, Environmental Appeal Board
 - [Detailed history of spongy moth treatments in B.C. - Province of British Columbia](#)
 - [Petition · Delay & Reconsider the Spongy \(Gypsy\) Moth Spraying in British Columbia - Canada · Change.org](#)
 - b) **Local Biodiversity and Natural Assets Plan**
 - Input and advice
 - Identification and mapping of sensitive ecosystems
 - Next steps
 - c) **Race Rocks Ecological Reserve**
 - d) **Environmental Groups in Metchosin, Project Criteria and Student Support**
7. **Reports**
 - a) **Chair's Verbal Report**
 - b) **Council Liaison Verbal Report**
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10. **Adjournment and Next Meeting**

District of Metchosin

Minutes

Environmental Advisory Select Committee Meeting

Tuesday, February 25, 2025 at 7:00 p.m.

Council Chamber

Metchosin Municipal Hall

Present: Councillor Steve Gray, Bill Cave, Garry Fletcher (Chair), Merrilee Hoen (recorder), Ric Perron, Erin Van de Water

Regrets: Andy MacKinnon, Anna Hall

The meeting was called to order at 7:05 p.m.

1. Agenda, Additions and Approval

Additions to Other Business:

Discussion about facilitating student environmental projects, consider a BC government statement that refers to Race Rocks as part of Metchosin.

Moved and Seconded by Steve and Erin that the Committee approve the agenda as amended.

Carried

2. Presentations

None.

3. Public Participation

Nicole Shukin expressed support for the draft outline of a Biodiversity and Natural Assets Plan. In keeping with the draft document, she recommended that the proposed zoning category “Conservation Zone P4” under consideration for the Buffer Lands might be an appropriate designation for other lands in Metchosin.

4. Adoption of Minutes

a) Environmental Advisory Select Committee, January 28, 2025

Moved and Seconded by Ric and Bill that the Committee approve the minutes of the Environmental Advisory Select Committee meeting held on January 28, 2025.

Carried

5. Receipt of Minutes

- a) Committee of the Whole, January 13, 2025
- b) Committee of the Whole, February 10, 2025
- c) Parks & Trails Advisory Select Committee, December 17, 2024
- d) Parks & Trails Advisory Select Committee, January 21, 2025

Moved and Seconded by Merrilee and Erin that the Committee receive the minutes of the Committee of the Whole meetings held January 13, 2025 and February 10, 2025 and the minutes of the Parks & Trails Advisory Select Committee meetings held December 17, 2024 and January 21, 2025.

Carried

6. Business Arising from the Minutes

a) Spongy Moth Spraying Program

Erin has been gathering information about the aerial spraying program. Municipalities will be asked for their permission before spraying is done. Erin proposes that we recommend to Council that they do not give permission if approached in future.

Action: Erin will circulate the information she has gathered for consideration at our next meeting.

Action: Committee members to review information gathered in preparation for making a recommendation at the next meeting.

b) Working on a Local Biodiversity and Natural Assets Plan

Steve included a draft outline of the Local Biodiversity and Natural Assets Plan in the agenda package for this meeting. Several other municipalities have created similar documents, and we can learn a lot from them. Garry recommends looking at Gibson's plan as one model. With increasing pressure for development, we need to identify sensitive, biologically rich areas in line with our Official Community Plan (OCP). With increasing climate change pressure, we need to also identify existing natural assets performing functions that, if lost, would have to be replaced at great expense to the municipality. An example of this is flood control provided by wetlands.

Topics of discussion at future meetings will be how to engage the public for input as we refine the plan. Some preliminary ideas included conducting opinion polls, facilitated round table discussions, workshops and Metchosin Community Day displays.

Action: Committee members to provide feedback to Steve on the draft document.

Action: Garry to check with Andy about the progress he is making with the project to prepare data for the Conservation Data Centre using maps and other data that has been collected in Metchosin in the past.

Action: Steve will share the draft Local Biodiversity and Natural Assets Plan with our Planner and the Agriculture Advisory Select Committee for feedback. Steve will also touch base with Sc'ianew First Nation and contact the community groups mentioned in the document to refine the descriptions of activities and garner additional feedback.

7. Reports

a) Chair's Verbal Report

None.

b) Council Liaison Verbal Report

Steve and Councillor Sharie Epp attended an on-paper Western Canada Marine Response Corporation (WCMRC) oil spill simulation of a large spill on Constance Bank. WCMRC representatives have agreed to make a presentation to Council in the near future to provide an update on preparations.

Steve and Sharie learned that the province and WCMRC will be responsible for shoreline response. Up to now we had thought that Metchosin would be responsible for this. Metchosin will be responsible still for evacuation of residents, as needed.

8. Correspondence

None

9. Other Business

a) Election of Chair and Vice Chair

Chair: Garry Fletcher
Vice-Chair: Merrilee Hoen

b) Bylaw and Policy Material for Annual Review

The committee reviewed the following documents for information.

- i. District of Metchosin Respectful Workplace Policy # A-100.40
- ii. District of Metchosin Advisory Select Committee Bylaw No. 49
- iii. Environmental Advisory Select Committee (MEASC) Terms of Reference, Policy C-100.72
- iv. District of Metchosin Council Procedure Bylaw No. 507

b) Race Rocks Ecological Reserve

While looking at some BC government documents outlining some changes to how parks are designated, Garry noticed that the Race Rocks Ecological Reserve is listed as being in Metchosin. Formerly, it was always listed as being in the Juan De Fuca District.

Action: Garry will investigate if this is an error or if a change has occurred.

c) Project criteria and student support

If the various environmental groups in Metchosin could tailor their project descriptions to meet the criteria for projects students must complete to fulfill their program requirements, it is possible that these groups could obtain much more help.

Action: Merrilee will investigate the criteria needed for projects for the Environmental Restoration and Geography programs at UVic and Erin will investigate similar criteria at Camosun.

10. Adjournment and Next Meeting Date

Moved and Seconded by Ric and Merrilee that the Committee adjourn the meeting at 8:55 p.m.

Carried

The next meeting will be held on Tuesday, March 25, 2025 at 7:00 p.m.

District of Metchosin

Minutes

Parks and Trails Advisory Select Committee Meeting

February 18, 2025 at 7:00 p.m.

Council Chamber

Metchosin Municipal Hall

Present: Ron Aubrey (Chair), Jay Shukin (Councillor Liaison), Kathy Atherton, Ryan Carter, Caroline Donahue, Karen Hoffman, Jim Nan, David Shanks (Recorder)

The meeting was called to order at 7:00 p.m.

1. Agenda, Additions and Approval

Jim requested to add item on Blinkhorn Nature Park, added under 9.d.

Moved by David that the Committee approve the agenda as amended.

Carried

2. Presentations

None.

3. Public Participation

Avril Yoachim, resident

- Reminded that Winfall Road was agreed to be off the Master Plan, but it now appears on the Active Transportation Plan. Due to cost and terrain.
 - Asked that past agreement be communicated to the Urban Systems
 - Note from PTASC, ATP is still draft and survey is currently live to receive feedback
 - Link: <https://www.metchosin.ca/government-bylaws/news-alerts/metchosin-draft-active-transportation-network-plan-phase-2-engagement>

4. Adoption of Minutes

a) Parks & Trails Advisory Select Committee, January 21, 2025

Moved by Jim that the Committee approve the minutes of the Parks and Trails Advisory Select Committee meeting held on January 21, 2025.

Carried

5. Receipt of Minutes

a) Metchosin Environmental Advisory Select Committee, January 28, 2025

- Noted that motion regarding Riparian Area Regulations might have an impact on the proposed trail development within the Beckingham Subdivision.
 - Clarified this change is rather complex and long way off

Moved by Caroline that the Committee receive the minutes of the Environmental Advisory Select Committee meeting held on January 28, 2025.

Carried

6. Business Arising from the Minutes

a) Beckingham Subdivision

- Kathy taking on PTASC lead for next site visit relating to Phase 2 of Beckingham subdivision
 - Phase 2 discussion
 - Developer currently seeking to commence Phase 2 of development. Proposed that 1 or 2 PTASC members attend this next walk about.
 - Ron noted he is pleased to have PTASC consulted and included for visit with CAO.
 - Phase 1 trail to be visited during same site
 - Agreed for Karen to be second PTASC member to attendee
 - Phase 1 discussion
 - Noted that there is benefit to including past Metchosin expert on Trail building for Phase 1 walk thru to seek their input
 - **Action:** Jay to follow-up on the request to have planned Right of Way flagged so that location for trail and crossing of wet area could be seen & understood on walkthrough.

7. Reports

a) Parks and Trails Coordinator

- Graffiti reported on Metchosin Wilderness Park to the wooden signage. Understood to be Deer Park Entrance. Not yet resolved.

b) Council Liaison

- Budget related updates
 - Funding received/approved for further study of the Duke Rd East trail. If approved by council, the request was that remaining funds be used for Phase 1 DRE trail construction.
 - Reflecting on the July 31, 2024 community input session, PTASC heard strong support for improving roadside safety.
 - Phase 1 of DRE appears very feasible and cost effective; the study will look closer.
 - Approval for \$20,000 for Parks & Trail Master Plan development, with understanding work to proceed within PTASC. Funds to be used for printing, mapping assistance, graphic design, etc.
 - Overall tax increase is presently anticipated at approx. 5.3% (residential tax class). Finance Committee has approved the hiring of a fourth Public Works crew member.

c) Chair Verbal Report

- Meeting today to discuss Duke Rd East with CAO and Engineer on contract with Metchosin. Walk planned to look at potential trail locations and seek his recommendation and input.
 - Still in information gathering phase, public consultation to proceed prior to any decision on moving forward with trail.
 - Engineer noted that traffic calming measures will be integral to improving safety for pedestrians

- Council approval is needed before moving forward with any trail construction on DRE
- Spoke with John Russell from City of Colwood, and they are willing to share information to Metchosin CAO on how volunteers, such as Trail Stewards, can be covered under WorkSafe BC insurance coverage.
- Still undertaking to make connections with Colwood Trails counterparts

8. Correspondence

- Metchosin Equestrian Society, New Mounting Rocks installed. Thank you received.

9. Other Business

a) Bylaw and Policy Material for Annual Review

- i. District of Metchosin Respectful Workplace Policy # A-100.40
 - Applies to PTASC and other Advisory Select Committee members, it also applies to employees, contractors, and volunteers (as defined in the Policy). District of Metchosin Advisory Select Committee Bylaw No. 493
 - Discussed key provisions and how the Bylaw applied to all of the Advisory Select Committees: PTASC, as well as Environment, Healthy Community, and Agriculture.
- ii. Parks & Trails Advisory Select Committee (PTASC) Terms of Reference, Policy C-100.73
 - Current discussion for update to these Terms of Reference. It is expected this revision will come to PTASC for comment.
 - Discussed future updates identified that should be collected & shared with Council. (e.g. “Ad Hoc Trails Committee”, adding Trails Steward Program, description of Trails Coordinator Role)
- iii. District of Metchosin Council Procedure Bylaw No. 507 item
 - **Request to District Staff:** Ask for Metchosin representative (Councillor Donaldson) to Westshore Parks & Rec share relevant updates to PTASC for our information.

b) Parks & Trails Master Plan, Council Resolution, January 20, 2025

c) Parks and Trails Master Plan

- i. General updates from subcommittees
 - Duke Rd East discussed above under 7c)
- ii. Public Engagement Plan
 - Muse article has been submitted. Intent to post information for District Website for March 1st
 - Open house
 - Proposed for drop-in style engagement on April 5. Will seek PTASC members to attend & will also need to prepare discussion boards and materials.
 - Will promote the open house through a range of channels: website, Muse article, Fire Hall sign, etc..

- Suggested to put all Open House Materials on District Website & then provide period after open house for Community Members to also provide input
 - **Action:** It was agreed to proceed with the Open House on Saturday, April 5.
- iii. Discussion of Values / Guiding Principles, Public Engagement Plan
- Update from Kathy on review of P&T Master Plans; general themes
 - Connectivity, respect for environment, invasives, wildlife corridors, climate mitigation,
 - Building trails at subdivision to be complete by time the development is complete
 - Acknowledging First Nations
 - Mountain bikes, eBikes, multi-use, accessibility, dogs in parks
 - FireSmart (includes climate change mitigation and adaptation)
- d) Blinkhorn Nature Park
- Name changed from Blinkhorn Nature Park to Blinkhorn Lake Nature Park in various published locations
 - At commencement of the park, the view was to have the name reflect the intent of keeping it in natural state & avoid the area as a swimming destination.
 - It is incorrectly identified in Official Metchosin Map, Website, and Metchosin Parks & Trails Brochure. Requested that this be reverted to the original name, without “Lake”
 - **Action:** Jay to raise the topic to staff to make correction to name on the Metchosin website, Map, & Brochures

10. Adjournment and Next Meeting Date

Moved by Caroline that the Committee adjourn the meeting at 8:59 p.m.

Carried

The next meeting will be held on Tuesday, March 18, 2025 at 7:00 p.m.

District of Metchosin

Minutes

**Committee of the Whole Meeting
March 10, 2025 at 7:00 p.m.**

Council Chamber
Metchosin Municipal Hall

PLEASE NOTE: The meeting has been recorded

Present: Councillor Gray in the Chair, Mayor Little, Councillors Donaldson, Epp, and Shukin. Also present was Bob Payette, Chief Administrative Officer, Geoffrey Kreek, Chief Financial Officer, Stephanie Dunlop, Fire Chief, and Jennifer Miller, Legislative Services Assistant

The meeting was called to order at 7:00 p.m.

The Chair provided a Territorial Acknowledgement.

1. Agenda, Additions and Approval

Moved and Seconded by Councillors Shukin and Donaldson that the Committee of the Whole agenda be approved as amended with the addition of the following correspondence as supplemental information:

- Darren Brown, Parks and Trails Masterplan, Duke Road East Trail
- Avril Yoachim, Metchosin School
- Carol Voyt, Metchosin Pickleball Club, Metchosin School

Carried

2. Presentations

a) Shannon Carman, Metchosin Village Square Society (MVSS), Metchosin Village Square Project

Shannon Carman provided an overview of the presentation including:

- Thank you to Council for previous approval of the Village Square project
- Reference to fostering social connections being cited in the vision statement for the Metchosin School Management Report.
- Due to a classroom being leased where the entry way was going to go through, that aspect of the build has been postponed; however, the remaining phases will move forward, namely the landscaping and creation of the Village Square itself.
- The MVSS will work closely with the District to get the project shovel ready including design details, stakeholder input, suppliers, budget, communications and fundraising.
- The MVSS requests that a Councillor be delegated to act as a liaison to work with MVSS to refine the details of the build, report back to Council on progress, and consult with Council on any required decisions.
- The MVSS wishes to ensure a clear path of communication is established prior to fundraising efforts.

Committee of the Whole discussion:

- Previous Council resolutions related to the Main Entrance and Village Square
- Staff Report and Council Resolution from the Council meeting of July 31, 2024
- Proposal for a Main Entrance and Village Square, June 2024

- Budget
- Fundraising
- Volunteer efforts
- Councillor Liaison to the MVSS

b) Rebecca Nielsen, Bilston Watershed Habitat Protection Association (BWHPA), Protecting the Bilston Creek Habitat

Rebecca Nielsen provided an overview of the PowerPoint presentation including:

- Overview of Bilston Creek
- Resident Coastal Cutthroat Trout (CCT)
- Vernal Stream and Wetland Habitat
- Bilston Watershed Terrestrial Wildlife
- Stewardship priorities for conservation of CCT in Bilston Creek
- BWHPA funding sources
- CCT population assessments
- Propagation workshops
- Community engagement and environmental education
- BWHPA activities
- Monthly stream cleanups
- Stream crossing signs
- Water quality monitoring program
- Summary of requests:
 - Collaborate with the District on stream signs installation
 - Municipal support for volunteer stream clean up events and garbage removal
 - Matching funds for water quality monitoring program for sites within Metchosin
- Thanks to BWHPA partners and supporters

Committee of the Whole discussion:

- BWHPA requests
- District Grant-in-Aid application process
- Size of fish discovered in the population assessments
- Stormwater pond location
- Benefit analysis and establishing a baseline for the health of the watershed
- Locations of previous benefit analysis and proposed future analysis
- Volunteer community group
- Education program
- Funding received from the City of Langford
- Water quality monitoring budget item versus Grant-in-Aid
- Climate Action reserve in budget

Action: That Ms. Nielsen combine the Bilston Watershed Habitat Protection Association's three requests into one proposal and submit to the District in advance of the next Finance Committee meeting for consideration.

3. Public Participation

Carol Voyt, resident and Metchosin Pickleball Club, provided an overview of the Pickleball Club's activities, facility rental bookings, program hours, and benefits to the community. Ms. Voyt expressed concerns about West Shore Parks & Recreation bookings and a provisional management system.

Kym Hill, resident, expressed concern about unresolved bylaw infractions in her neighbourhood and urged Council to deliver better and more efficient bylaw services, stay focussed on priorities, avoid distractions, and listen to the voices of Metchosin elders.

Donna Begley, resident, spoke in support of the Metchosin Pickleball Club, outlined the health and social benefits of pickleball, and inquired about what is happening with the gym bookings moving forward.

Sarah Anthony, resident, commented on the length of time that the Village Square Project has been in discussion and expressed support for moving forward with the project to improve the space, particularly as there is a community group willing to do the work.

Avril Yoachim, resident, expressed concerns about taxpayers subsidizing the school, noted that the Report on the Metchosin School Finances and Management Matters only deals with half of the school, and urged Council to address the rents and leases for all rooms in the school to generate revenue.

4. Adoption of the Minutes

Moved and Seconded by Councillors Shukin and Donaldson that the minutes of the Committee of the Whole meeting held on February 10, 2025 be adopted.

Carried

5. Receipt of Minutes

Moved and Seconded by Councillor Shukin and Mayor Little that the Committee of the Whole receive the minutes of the Parks & Trails Advisory Select Committee Meeting held on February 18, 2025.

Carried

Moved and Seconded by Councillors Shukin and Epp that the Committee of the Whole receive the minutes of the Environmental Advisory Select Committee Meeting held on February 25, 2025.

Carried

Moved and Seconded by Councillors Epp and Shukin that the Committee of the Whole receive the minutes of the Healthy Community Advisory Select Committee Meeting held February 25, 2025.

Carried

Moved and Seconded by Councillors Donaldson and Epp that the Committee of the Whole receive the minutes of the Agricultural Advisory Select Committee Meeting held on February 26, 2025.

Carried

6. Business Arising

a) **Agricultural Advisory Select Committee (AASC) Recommendations, February 26, 2025 Meeting**

Association of Vancouver Island Coastal Communities (AVICC) Resolution and Next Steps Goose Management

Councillor Donaldson provided an overview of the AASC recommendation regarding the Association of Vancouver Island Coastal Communities (AVICC) Resolution and Next Steps Goose Management.

Committee of the Whole discussion:

- Capital Regional District (CRD) Goose Management
- AVICC resolution
- Damage to agricultural crops
- Data regarding numbers, location, and frequency
- Engaging the province and outlining challenges in the District
- Peninsula & Area Agricultural Commission (PAAC) meetings
- Supporting agriculture on Vancouver Island and across the province

Moved and Seconded by Councillors Donaldson and Shukin that the Committee of the Whole recommend to Council that Mayor Little draft a letter urging the provincial government to support a goose cull as related to the District of Metchosin's Association of Vancouver Island Coastal Communities (AVICC) Resolution and Backgrounder on Non-Migratory Resident Canada Geese.

Carried

7. Reports

7.1. Finance

7.1.1. Councillor's Update

Councillor Donaldson provided an overview of her Councillor's report including the following:

- Metchosin Grown Society updates on activities
- Collaboration between the Agricultural Advisory Select Committee (AASC) and Reimagine West Shore on agricultural events
- Greater Victoria Public Library
- West Shore Parks and Recreation Society
- Metchosin Muse articles

7.2. Public Works and Protective Services

7.2.1 Councillor's Update

Councillor Epp provided an overview of her Councillor's report including the following:

- Metchosin Seniors' Association
- Capital Region Emergency Service Telecommunication (CREST)
- Capital Regional District Arts Commission
- Healthy Community Advisory Select Committee (HCASC)
- Coastal Douglas Fir Conservation Partnership
- Public Works clean up of garbage dumped on roads
- 4th Annual March for Liz, March 30th
- Metchosin Search and Rescue
- Ideas Fair

Committee of the Whole discussion:

- Main Entrance and Village Square Project at the Metchosin School
 - Previous Council resolutions
 - Project timelines, workplan, and fundraising
 - District funds and budget cycle
 - Benefits of appointing a Councillor Liaison to the MVSS
 - Budget to be amended with the removal of the entryway
 - Refining budget, design, and proposal to keep the momentum going

- Ideas Fair, Open House

Moved and Seconded by Councillors Epp and Shukin that the Committee of the Whole recommend Council provide approval to the Village Square Society to get started on the plan for the courtyard at the Metchosin School.

Motion Withdrawn

Moved and Seconded by Councillor Shukin and Mayor Little that the Committee of the Whole recommend Council appoint Councillor Epp as the Councillor Liaison to the Metchosin Village Square Society with the goal of bringing back more information regarding the Village Square Project at the next Committee of the Whole meeting.

Carried

Moved and Seconded by Councillors Epp and Shukin that the Committee of the Whole recommend that Council approve the Healthy Community Advisory Select Committee to look into the possibility of a community-wide event at the school.

Carried

7.3. Environment and Natural Areas

7.3.1 Councillor's Update

Councillor Gray provided an overview of his Councillor's report including the following:

- Special Community Planning Committee Meeting, Committee Information Session – Planning 101, held February 26th
- 2025 Coldest Night of the Year
- Capital Regional District (CRD), invitation for feedback on engagement for the Regional Water Supply Strategic Plan
- Sc'ianew First Nation Water Servicing Agreement with the Capital Regional District
- Mary Hill, work to remove unexploded explosive ordinances by CFB Esquimalt
- Mayor's Tea, March 12th
- Biodiversity and Natural Assets Planning

7.3.2 Draft Outline Biodiversity and Natural Assets Plan (version 1)

Councillor Gray provided an overview of the draft outline on Biodiversity and Natural Assets Plan including the following:

- Introduction
- Vision and Goals
- Context and alignment with the Official Community Plan (OCP)
- Priority biodiversity actions
- Action plan and implementation timeline
- CRD's Biodiversity and Environmental Stewardship
- Joint application (between the Metchosin Biodiversity Project, the Bilston Watershed Habitat Protection Association, and the Metchosin Foundation) to the University of Victoria Environmental Law Centre Clinic approved to review the District of Metchosin's bylaws related to environmental protection and recommend changes

Committee of the Whole discussion:

- Natural Assets Management
- Making the plan practical, annual schedule, invasive picking, watershed and streamside restoration, opportunities for various groups to come together

- Tangible elements of a plan such as balancing levels of service, risk, and costs
- Co-benefits of green infrastructure, inventory of assets prior to implementation of the plan, and sustainable service delivery in the District
- How the plan relates to private property such as household levies to provide the ability for property owners to access funds and community values
- Next steps

Action: That Councillor Gray continue to revise the draft Biodiversity and Natural Assets Plan based on feedback received from the Committee of the Whole and various stakeholder groups and to bring an updated plan back to the Committee of the Whole including measurable actions in a couple of months.

7.4. Community Planning

7.4.1. Councillor's Update

Councillor Shukin provided an overview of his Councillor's Report including the following:

- Report on Metchosin School Finances and Management Matters
- Parks and Trails Masterplan updates
- Open House on the Parks & Trails Masterplan April 5th
- Buffer Land Broom Pull, March 23rd
- Municipal Protected Areas Project (MPAP)
- "Funding our Future: Financing Conservation on Private Lands Conference", February 27th

The Committee of the Whole discussed the values and principles in relation to the Parks and Trails Masterplan, the natural environment as a central element of Metchosin's culture, preparing parks to manage growing use and traffic, beachheads, garbage management, and niche uses of parks and trails.

7.4.2. Report on Metchosin School Finances and Management Matters

Councillor Shukin provided an overview of the report on Metchosin School Finances and Management Matters including the following:

- Introduction
- Summary
- Recommendations
- Vision and Guiding Principles
- Revenue projections
- Rentals or lease – the right balance
- Managing the booking process
- Personnel
- Value of the school, potential of third-party management, and user groups

Committee of the Whole discussion:

- Five-Year revenue projections
- Training revenue
- Fire Department training and potential bill back arrangement for tracking purposes
- Leasing versus renting
- Cost recovery threshold
- Expenditures and revenue expectations
- Facility management and the booking process

- Monitoring staff workload and capacity
- Consultation with and feedback from user groups
- Suggestion to create a succinct vision statement and have the guiding principles be more fulsome
- Recommendation to include training in Section 1.1 and that protective services training be reflected in the vision statement
- Evolution of the school site and management plan
- Revenue received from the Metchosin Arts & Cultural Association and the Art Pod
- Percentage of costs covered by revenue
- Renaming the school to reflect the facility's future use
- Managing expenditures
- Peer comparisons
- Potential to rent out three classrooms for training to increase the percentage of costs covered by revenue
- Methodical approach to the recommendations related to leasing and renting classrooms
- Suggestion to contact the 2024 classroom and users to seek future interests
- Shared expenses to offset operating costs
- Rental rates

There was consensus to revisit renaming the school once the vision statement has been confirmed.

Moved and Seconded by Councillor Epp and Mayor Little that the Committee of the Whole receive the report on the Metchosin School Finances and Management Matters.

Carried

Action That Councillors Donaldson and Shukin add to and further revise the Report on Metchosin School Finance and Management Matters based on the feedback received from the Committee of the Whole, particularly around the vision statement.

8. Correspondence

The following correspondence was received as supplemental information:

- Darren Brown, Parks and Trails Masterplan, Duke Road East Trail
- Avril Yoachim, Metchosin School
- Carol Voyt, Metchosin Pickleball Club, Metchosin School

The Committee of the Whole discussed the Active Transportation Network Plan informing the Parks and Trails Masterplan, the Duke Road East Trail, the use of subcommittees to advisory select committees.

9. Adjournment

Moved and Seconded by Mayor Little and Councillor Epp that the Committee of the Whole adjourn the meeting at 9:38 p.m.

Carried

Certified Correct

Chair

Corporate Officer

Babita Bains RPF
Ministry of Forests
PO Box 9513 STN Prov Govt
Victoria, BC V8W 9C2
Canada

February 17, 2023

Re: Appeal of Aerial Spraying of Foray 48B pesticide over populated areas in BC

Dear Ms. Baines,
Below you will find my comments to the aerial spraying of Foray 48B over populated areas.

What does science say about spraying of *Bacillus thuringiensis* and their δ -endotoxins?

Taxonomy of the *Bacillus cereus* group

The *Bacillus cereus* (Bc) group of spore-forming Bacilli comprises: *B. anthracis*, *B. cereus sensu stricto*, *B. cytotoxicus*, *B. mycoides*, *B. pseudomycoides*, *B. thuringiensis* (Bt), *B. toyonensis*, and *B. wiedmannii*. *B. weihenstephanensis* has recently been reclassified as *B. mycoides*. Apart from *B. anthracis* they are all producing enterotoxins resulting in one of the most common causes of human food poisoning (1, 2). Even *B. anthracis* has the enterotoxin genes, but the positive regulator *plcR* has a mutation making them silent.

Although Bc and Bt are described as distinct species the only difference between them is the ability to produce δ -endotoxins. The genes for such toxin production are usually on plasmids that frequently leave the Bt cells when grown at higher temperatures (>37 °C) and becomes indistinguishable from Bc (3).

The food poisoning toxins from *B. cereus*

There are two different types of food poisoning toxins made by Bc: Three different types of protein enterotoxins causing diarrhea and a ring formed peptide causing emesis (1). The ability of different strains to produce these toxins vary, but the genes for the most potent enterotoxin Nhe is present in all Bc and Bt strains (4). It is therefore clear that Bt strain will cause human food poisoning if eaten in sufficient amounts (usually > 10.000 bacterial cells) (1).

The δ -endotoxins

There is a variety of different δ -endotoxins produced by different types of Bt strains, and they also have different species specificity. These toxins have been successfully used as bioinsecticides against caterpillars, beetles, and flies, including mosquitoes and blackflies. The most frequently used type for killing caterpillars is Bt kurstaki. Bt has for long been used to control crops from attacks of insect larvae, and with success. However, when Bt was at first permitted for use the Bc virulence factors were unknown, and that all Bt strains produce at least one of the same enterotoxins was first shown around the year 2000 (4).

The δ -endotoxins synthesized as protoxins, are only made in massive quantities during sporulation, and packaged into intracellular inclusions (crystals). Fortunately for humans these toxins inclusions are only dissolved at pH >10, and thus impossible to dissolve in our body. Even though breathing air after spraying of Bt toxins have been shown to cause problems, specifically for people with asthma (5).

1 of 4

What is in the Foray 48B?

The company produce the active components in this spray from *B. thuringiensis* subsp. *kurstaki* (strain ABTS-351), and it contains: 12,65 % fermentation solids, spores, and insecticidal toxins and the remaining 87,35 % are other ingredients (Foray 48B Product sheet). This would have been a safer product if it did not contain spores that will germinate in the human body, resulting in vegetative cells, followed by enterotoxin synthesis.

Bacillus cereus infection

As mentioned above Bc and Bt is the same species if the Bt is cured for the plasmid containing the δ -endotoxin gene. Thus, infections caused by the two "species" will be identical. The emetic toxin genes are also located on large plasmids, and has never been isolated from Bt. However, the Nhe genes are found in all Bt strains, and the majority also contains Hbl.

The food poisoning caused by Bc is well known, and there are three different enterotoxins described: Nhe, Hbl and CytK. They will all cause diarrhea that usually last for about 24 hours, although more severe bloody diarrhea even with mortality is described.

Another virulence factor is collagenase, specifically for eye infections (5) that may be severe and must be rapidly treated. Collagenase is produced by all strains of Bc/Bt. Since Bc is frequently resistant to chloramphenicol eye infections should be treated with gentamicin that is not the first choice for most medical doctors.

Inhaling the δ -endotoxins and the Bt spores may cause different problems, from allergy attacks to lung infections, and immunocompetent people and premature babies are at high risk for infections (6, 7).

Spraying *B. thuringiensis* δ -endotoxins/spores from the air

There is no doubt that spraying "Bt products" from the air has protected crops from being ruined by insects (caterpillars), specifically in tropic and subtropic areas, and the fight for food may sometimes makes it beneficial for the local population. However, when such spraying is carried out it is not in areas where there are people present during spraying. The problem with the food can be that it carries sufficient number of spores to cause food poisoning if eaten raw. And sprayed broccoli from Guatemala has been returned from Europe because they contained more than 10^5 /Bt per gram, making it unacceptable for humans eaten raw (Granum PE, contract work for Norwegian authorities).

Still, spraying over cities, even during the night is different story, and the risk for people to get infected is much higher, and the benefit much lower when the reason is to protect leaves on trees in parks and along roads. In a scientific paper from 2011 (8) where scientists followed spraying in Seattle in 2008, they found that: "Environmental samples were collected from multiple matrices and evaluated for the presence of viable *B. thuringiensis* subsp. *kurstaki* at times ranging from less than 1 day to 4 years after spraying". And Jeffrey Jenkins, Environmental and Molecular Toxicology Oregon State University (6) reported that after spraying over parts of East Auckland New Zealand in 1996-1997 (with Foray 48B) 375 people reported a wide variety of adverse effects. And after a second air spraying in 2002 there were 1397 documented health symptoms reported by 315 people (6).

In another combat, in 2000, to fight the Asian Gypsy Moth, Foray 48B was aerially applied 3 three times over parts of Seattle, Washington. This resulted in: "Adverse effects reported by 59 individuals following the

spraying including: cough, wheezing, headache, trouble breathing, sore throat, nasal congestion, irritated eyes, skin rashes, upper respiratory and nasal symptoms, flu-like or viral symptoms, worsening asthma and/or asthma attacks, and allergic bronchitis” (Washington State Dept. of Health 2001). I am also convinced that increased numbers with diarrhea in following days could have been reported if followed up. But in the active part of the disease you are bound to the toilette, and the next day you are usually without symptoms, so doctors are rarely used by such patients.

Another scientific paper (9) reported that: “Repeated low dose aerosol exposures to commercial Bt based biopesticides can induce sub-chronic lung inflammation in mice, which may be the first step in the development of chronic lung diseases”.

In light of this one may ask: Why is it allowed to spray spores of a human pathogenic bacterium over a city? Remember that the use of *B. thuringiensis* was allowed before the knowledge of the enterotoxin production by this species, that is actually a *B. cereus* with an extra plasmid.

Conclusions

As written above there are many concerns with using commercial *B. thuringiensis* sprays containing their toxin crystals and spores, and there is usually a battle between commercial interests and human health considerations. It is understandable that spaying products such as Foray 48B is used in combat against insects’ larvae to protect crops, and when application can be done without humans present while spraying. However, spraying toxins and spores of Bt over a city is a completely different story, and the benefits much lower for the population in the area. There is a large risk for human health problems after such spraying, and the minimum the Ministry of Forests can do is to go through a risk assessment followed by risk management before making a decision. If I lived in Victoria, I would certainly not be present there during spraying, if I was notified ahead of time.

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Oslo, Norway 17 February 2023



Per Einar Granum, PhD
Professor
Member of The Norwegian Academy of Science and Letters

CC: Chelsea Eby, Ministry of Environment and Climate Change

Dr. Jennifer Tynan, MD, FRCP(C), DABR
c/o 2547 Prior Street Victoria, BC V8T 3X5
Email. jennifertynan@gmail.com

February 18, 2023

Babita Bains
Ministry of Forests
PO Box 9513 STN Prov Govt
Victoria, BC V8W 9C2
Email. Babita.Bains@gov.bc.ca

SENT VIA EMAIL AND REGISTERED MAIL

Dear Ms. Bains:

Re: Pesticide Use Permit Applications for Foray 48B Spraying on Vancouver Island

I write in respect of the Ministry of Forests' applications for Pesticide Use Permits to spray Foray 48B over several Vancouver Island communities in the spring of 2023 (Application Numbers 738-0032-21-24, 738-0035-23-23 and 738-0036-23-23). I am also writing on behalf of the group *Communities United for Clean Air*, comprised of dozens of island residents. I request that you halt your plans to spray for the sake of human health and informed consent.

To familiarize you with my background: I am a practicing physician with specialty training in diagnostic radiology; I am also a mother of a child who attends school in the proposed Esquimalt spray zone. In medicine, we take the Hippocratic Oath to "first, do no harm." Therefore, as both a mother and a physician, I feel implored to speak up and protect the public.

Regarding harm, the public have been told in print that the Foray 48B "poses no threat to people or animals."¹ Having reviewed the available literature and reports, this statement does not have a scientific foundation and is misleading. As you know, Foray 48B includes *Bacillus thuringiensis* subspecies *Kurstaki* (Btk) and non-disclosed proprietary ingredients. The research now demonstrates effects on non-target species: Bt has been shown to produce "membrane damaging toxins that act on mammalian cells" and to cause "various infectious diseases in humans."² Even in 1990, it was clear that organisms such as Btk "can no longer be dismissed

¹ Dickson, L. (2023, January 14). Spongy-moth spraying planned for parts of Island this spring. The Times Colonist.

² Celandroni F et al. *Bacillus thuringiensis* membrane damaging toxins acting on mammalian cells. FEMS microbiology letters 2014 (361) 95-103.

as harmless commensals or skin contaminants.”³ These articles, in addition to many others now available, do not substantiate the claim that Foray 48B is harmless.

During my research review, I identified the Norwegian scientist Dr. Per Einar Granum as one of the most published authors in the extremely specialized area of B, and contacted him. Dr. Granum has been involved in data acquisition and monitoring of Bt in Norway – where the use of it is now banned. As you’ll see from Dr. Granum’s expert report, which I am attaching as an appendix to this letter, he confirms that the aforementioned public statements from your Ministry are unfounded and he disagrees with spraying Btk over humans. In Norway, they have managed to find other ways to deal with the spongy moths. Perhaps your Ministry could collaborate with public land managers in Norway and work towards a more evolved approach here in British Columbia.

In addition to Dr. Granum, I’ve had the pleasure now of speaking with foresters, researchers, and toxicologists internationally and am left with only increasing concerns regarding the situation. One of these experts from the United States of America, Dr. Stephen King, has his PhD in Toxicology as well as a Masters degree in Public Health; he has studied and worked at some of the most renowned health institutions in the world. As you will see from Dr. King’s expert letter, which I am also appending to my letter, he is in disagreement with urban aerial pesticide spraying with Foray 48B.

Consent is a concept which is growing in public awareness. Informed consent is a key step that must be taken prior to making any decision that could affect human health. This is even more critical for those at highest risk. In 2000, Tayabali et al. from the Department of Health of the Government of Canada reported that “ Bt products have an inherent capacity to lyse human cells . . .and may also act as immune sensitizers.”⁴ They go on to state that “what is lacking is a critical understanding of conditions that might concern high-risk groups, those unable to manage microbe invasions through impaired immune responses, the very young, the elderly.” This is concerning for everyone, but particularly for high-risk groups: there are multiple schools, daycare centres, and family dwellings in the spray zones. Victoria General Hospital, the main obstetric and pediatric hospital for Greater Victoria with a population of 420,000 people, is also affected. These important populations should not be put at risk; we all have a duty to protect them. Further, to spray a known aerosolized irritant over urban communities is shockingly cavalier given the current health climate.⁵ Acute and chronic respiratory conditions are rampant and we are on the heels of the COVID-19 pandemic.

³ Green M, H. M. (1990 July). Public health implications of the microbial pesticide *Bacillus thuringiensis*: an epidemiological study, Oregon, 1985-86. *Am J Public Health.*, 80(7):848-52. doi: 10.2105/ajph.80.7.848. PMID: 2356910; PMCID: PMC1404979.

⁴ Tayabali AF, S. V. (2000 Oct). Human cell exposure assays of *Bacillus thuringiensis* commercial insecticides: production of *Bacillus cereus*-like cytolytic effects from outgrowth of spores. *Environ Health Perspect*, 108(10):919-30.

⁵ Barford, K et al. (2010). Sub-chronic lung inflammation after airway exposures to *Bacillus thuringiensis* biopesticides in mice. *BMC Microbiology*, 10, 233.

While there is a growing number of community members and specialists who are aware of, and very concerned about, this aerial spraying practice, the vast majority of the public remain unaware that it is even happening. This does not constitute informed consent. The lack of informed consent is particularly problematic in light of the express misstatements in public communications from the Ministry regarding risks posed by Foray 48B. This breach of the duty of procedural fairness that the Ministry owes to the public is highlighted in the attached letter from Registered Professional Forester Kathlene Roth of Campbell River, who emphasizes the need to consider alternative treatments and points to the lack of effectiveness of Foray 48B in eradicating *Lymantria dispar*. Forester Sharalyn Peterson of Oregon also emphasizes the need to pursue alternative treatments in her attached letter.

Without consent, the spraying has continued for decades. Additionally, there has been no ongoing, structured short- or long-term data collection and health monitoring. There are no long-term controlled studies on the effects of Foray 48B on humans. In 1999, the BC Ministry of Health made very clear recommendations that are not being followed: "Continued monitoring is needed to identify rare or unexpected effects of the exposure to the spray and to generate more information to help the public and the government understand the local consequences of aerial spraying of Btk. . . This needs to use a variety of scientific specialties to track the full range of possible health impacts."⁶ They go on to say that: "Health studies need to be planned well before any spray program begins."⁷ To our knowledge there is no such plan in place, and yet the spraying is scheduled again this year. The public deserve transparency in this regard and to be given a choice whether to be exposed.

Notwithstanding these significant concerns, I must state that I am sympathetic to challenges of forest management and hurdles faced when changing any current practice. I also acknowledge that when Btk was initially discovered it seemed like a promising advance compared to the historically known poisons including Dichlorodiphenyltrichloroethane (DDT). However, we must learn from the past and incorporate the new evidence available to evolve beyond the status quo. I am optimistic that once you are aware of all of this information, you will feel inspired to take the necessary steps forward.

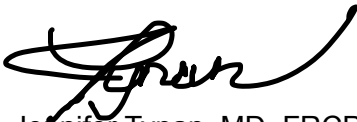
I also recognize financial considerations of the Government of British Columbia relating to the export of logs to the United States. However, as a physician and a parent, I submit that the Government of British Columbia must not prioritize those economic considerations ahead of public health considerations and the duty of informed consent. I also note the substantial economic opportunities available to British Columbia and British Columbians through the processing of logs here in British Columbia, which would make aerial spraying of Btk unnecessary from a trade standpoint.

⁶ Human Health Surveillance during the aerial spraying for the control of the North American gypsy moth on Southern Vancouver Island British Columbia, 1999. A report to the administrator, Pesticide Control Act by the Capital Health Region Office.

⁷ Human Health Surveillance during the aerial spraying for the control of the North American gypsy moth on Southern Vancouver Island British Columbia, 1999. A report to the administrator, Pesticide Control Act by the Capital Health Region Office.

For all these reasons, I implore you to put the health and safety of British Columbians first and withdraw your applications for aerial spraying of Btk in 2023. Undertake the research that has been recommended and evaluate all options to meet your objectives in a manner that does not compromise human health and the duty of informed consent. Please listen to and hear the voices of local concerned citizens and international experts from the scientific community. Specifically, I urge you to consider the wellbeing of children and other high-risk populations. I would be happy to assist in connecting you and colleagues in your Ministry with the above-discussed experts for collaborative future planning should it be useful for you. I see this as an opportunity for British Columbia to become a leader in conscious pest management.

Sincerely,



Dr. Jennifer Tynan, MD, FRCP(C), DABR

cc. Chelsea Eby, Ministry of Environment and Climate Change

Attachments:

1. Letter from Dr. Stephen King
2. Curriculum Vitae of Dr. Stephen King
3. Letter from Dr. Per Einar Granum
4. Curriculum Vitae of Dr. Per Einar Granum
5. Letter from Kathlene Roth, RPF
6. Letter of Sharalyn Peterson, Forester

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Appeal File No. EAB-IPM-24-G001
consisting of EAB-IPM-24-A001,
A002, A003, A004

ENVIRONMENTAL APPEAL BOARD

In the matter of several appeals under section 14 of the
Integrated Pest Management Act, S.B.C. 2003, c. 58.

BETWEEN:

COMMUNITIES UNITED FOR CLEAN AIR and DR. JENNIFER TYNAN

APPELLANTS

AND:

ADMINISTRATOR, INTEGRATED PEST MANAGEMENT ACT

RESPONDENT

AND:

MINISTER OF FORESTS

THIRD PARTY

APPELLANTS' MEMORANDUM OF ARGUMENT – STAY APPLICATION

April 15, 2024

Counsel for the Appellants:

Benjamin Isitt, Barrister and Solicitor
Benjamin Isitt Law Corporation
2547 Prior Street, Victoria, BC V8T 3X5
Email. ben@isitt.ca

Counsel for the Respondent and Third Party:

Amanda McDonald
Ministry of Attorney General
PO Box 9289 Stn Prov Govt, Victoria, BC V8W 9J7
Email. Amanda.Macdonald@gov.bc.ca

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A. INTRODUCTION

1. The Appellants Communities United For Clean Air (“**CUFCA**”) and Dr. Jennifer Tynan (“**Dr. Tynan**”) apply for a stay of execution of Pesticide Use Permits 738-0037-24-24 and 738-0038-24-24 (the “**Permits**”, attached as Exhibits “3” and “4”) pending the hearing on the merits of their appeals.

2. This application is made pursuant to Section 25 of the *Administrative Tribunals Act*, SBC 2004, c. 45 and the Board’s Rule 16(1)(c), which authorizes an appellant to apply in writing for pre-hearing interim relief in the form of a stay of a decision under appeal.

3. The legal basis for CUFCA’s and Dr. Tynan’s stay applications is provided below, applying the three-part test from *RJR-MacDonald Inc. v Canada (AG)*, [1994] 1 SCR 311, which the Board has relied on in considering stay applications since *North Fraser Harbour Commission et al. v. Deputy Director of Waste Management*, 1997 BCEAB 36.

4. In particular, CUFCA and Dr. Tynan submit that the balance of convenience favours the granting of a stay on account of:

- a. evidence that the Third Party Ministry of Forests intends to breach Conditions 4.9 and 4.10(k) of the Permits by posting notices at the entrances to the spray zones that expressly fail to comply with the mandatory minimum precautionary advice for reducing adverse effects (attached as Exhibit 5);
- b. the Ministry of Forests’ apparent failure to comply with Condition 7.3 of the 2022 permits (including Permit No. 738-0030-20-23 Amendment #1, attached as Exhibit 6), by apparently failing to submit Summary Reports with respect to the 2022 spray programs by the specified deadline of January 31, 2023; and
- c. the Ministry of Forests’ breach of procedural fairness in its description of the Victoria West spray zone in communications materials distributed to

members of the public in January and February 2023 (attached as Exhibit 7), which impeded participation of impacted residents in the public-consultation process prior to the Permits being issued, and thereby breached the duty of procedural fairness that the Respondent and Third Party owed to them.

B. CONTEXT AND GROUNDS OF APPEAL

5. CUFCA and Dr. Tynan have filed appeals pursuant to Section 14 of the *Integrated Pest Management Act*, SBC 2003, c 58 (“*IPMA*”) and the Board’s Rule 5.

6. The grounds for CUFCA’s and Dr. Tynan’s appeals are as follows:

- a. That the Administrator erred in concluding that the pesticide use authorized by the Permits would not cause an unreasonable adverse effect on human health, animal health and environmental health, in contravention of Section 6(3)(d) of the *IPMA* and without proper regard to best practices in Norway and other international jurisdictions;
- b. That the Administrator erred in issuing the Permits notwithstanding deficiencies in public consultation conducted by the Ministry of Forests, including (a) false statements to the effect that Foray 48B has “no known toxic effects”, (b) mischaracterization of the geographic location of the Victoria West spray zone on the Ministry of Forests website, and (c) failure to mail notices to residents who had opted out of Canada Post “ad mail”, despite the option of sending government mailings to all households—all of which had the effect of limiting public participation among impacted individuals, and thereby breached the duty of procedural fairness that the Administrator owed to them; and
- c. That the Administrator erred in issuing the Permits notwithstanding inadequate conditions to protect human health and environmental health, particularly the absence of effective mechanisms for the reporting and monitoring of adverse public-health effects to Health Canada.

7. CUFCA and Dr. Tynan will adduce evidence and provide argument during the hearing on the merits of their appeals with respect to these aforementioned grounds.

8. The relief that CUFCA and Dr. Tynan seek is an order from the Board setting aside the Permits and remitting the decision back to the Administrator, with direction to address the errors outlined above. CUFCA and Dr. Tynan note that it is also within the authority of the Board to make any decision following the hearing of the appeals that the Administrator could have made, including deciding to not issue the Permits (pursuant to authority granted under Section 14(8)(c) of the *IPMA*).

9. The outcome that CUFCA and Dr. Tynan seek is an approach to spongy moth management in British Columbia that poses a substantially lower level of adverse effects to human health, animal health and environmental health, through proven treatment methodologies including mass trapping and ground application.

C. SUMMARY OF FACTS

History of aerial spraying of Foray 48B in British Columbia and attributes of the pesticide

10. For several decades British Columbia has engaged in the practice of aerial application of the pesticide Foray 48B with the stated aim of preventing the establishment of spongy moth populations (*Lymantria dispar*) in the province.

11. This practice is recommended by an entity known as the British Columbia Plant Protection Advisory Council (BCPPAC), consisting of foresters, agrologists and other natural-resource professionals affiliated with government and industry. To CUFCA's knowledge, no public-health professionals serve on BCPPAC or its advisory committees.

12. The BCPPAC's Spongy Moth Technical Advisory Committee makes recommendations to the Ministry of Forests for annual Foray 48B treatments based on trapping results conducted by the Canadian Food Inspection Agency.

13. The treatments are generally conducted between April and June each year, to coincide with the larval stage of the moths.

14. A primary motivation for containment of spongy moth populations appears to be economic. In 2022, the Ministry of Forests stated on its spongy moth (then known as “Lymantria moth”) management webpage that:

“Once lymantria moths arrive in an area, they threaten extensive damage to the environment and economy. B.C.’s major trading partners may set quarantine and trade restrictions and restrict transportation for products like Christmas trees and logs with bark. For example, in 1999, in response to a lymantria moth infestation, the U.S. threatened to refuse shipments from B.C. nurseries without additional inspection certificates.”

Appellants’ Book of Exhibits, Exhibit 8

15. The Board has also noted this economic motivation for spongy moth control in reasons indexed as *Maureen Fitzmaurice v. Deputy Administrator, Pesticide Control Act*, 2000 BCEAB 22: “There is evidence that failure to eradicate the gypsy moth appearances in B.C will have economic impacts in the form of trade sanctions”:

Appellants’ Book of Authorities, Tab 10

16. Foray 48B is a proprietary pesticide manufactured by Valent BioSciences LLC, a subsidiary of Sumitomo Chemical Co. Ltd. (“**Valent**”). Its active ingredient is the bacterium *Bacillus thuringiensis subsp. kurstaki* (*Btk* strain ABTS-351), with the remainder of the pesticide comprised of water and other inert proprietary ingredients that are not disclosed to the public on product labels (but which ostensibly have been disclosed to Health Canada’s Pest Management Regulatory Agency).

Book of Exhibits, Exhibits 9 to 12
(including the Foray 48B Technical Manual, p. 64)

17. Valent makes the following claims with respect to Foray 48B on its product webpage (a screenshot of which is appended as Exhibit 9 in the Appellants’ Book of Exhibits):

- a. Btk is a unique, naturally occurring bacterium that affects only caterpillars;
and

-
- b. It has minimal environmental impact and it will not harm other types of insects, fish, birds or mammals.
18. In the Foray 48B Technical Manual (appended in the Appellant's Book of Exhibits at Tab 12), Valent claims (at Page 65) that: "Foray meets or exceeds the safety standards set in the US, Canada, and in all other countries. It should be noted that Canada has some of the toughest regulatory standards in the world".
19. Valent acknowledges, however, (on Page 60 of the Technical Manual) that: "Individuals with pre-existing allergies, asthma or hypersensitive individuals, especially those sensitive to normal exposure to soil or smoke and pollutants, could feel some temporary effects."
20. Further, Valent provides the following warnings on the Foray 48B Safety Data Sheet (appended as Exhibit 11, at Pages 4 and 7):
- a. "Environmental Precautions:
- Keep out of drains, sewers, ditches and waterways. Avoid runoff to waterways and sewers" (Clause 6.2); and
- b. "Ecotoxicity ...:
- Do not allow into waterways or lakes" (Clause 12.1).
21. The Foray 48B Technical Manual states (at Page 52) that:
- a. "A 6-hour period free of precipitation should be allowed for Foray spray deposits to adhere to the foliage and dry";
- b. "Foray should not be applied when rain is forecast within six hours"; and
- c. "If early morning dew (or previous night's rainfall) is sufficient to wet the foliage to the point of run-off, it is advisable to wait for a mild breeze or for warmer temperatures to dry the surface of the foliage before starting to spray".

22. With respect to resistance to Btk, Valent acknowledges on the Foray 48B product label (Exhibit 10, at Page 5) that:

“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 are 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.”

Demonstrated adverse effects of aerial application of Foray 48B in British Columbia in recent years

23. In 2015, Surrey resident Mike Shilton was rushed to hospital with acute respiratory symptoms, after he was sprayed with Foray 48B released from a helicopter above his home and he inhaled the pesticide (as described in the news report appended as Exhibit 13). Shilton’s brother told the Canadian Broadcasting Corporation at the time that: “He immediately started coughing, wheezing. He could barely breathe so he called 911.” Shilton had received no notification of the treatment and walked outside his home after hearing the helicopter overhead, in order to determine what was happening.

24. In 2016, a panel of the Workers’ Compensation Appeal Tribunal found that the appellant worker “developed irritant contact dermatitis as a result of exposure to wet substances, in this case Foray 48B and water, that contacted the worker’s skin and contaminated the worker’s clothing”:

A1600523 (Re), 2016 CanLII 154766 (BC WCAT) at para. 43,
Tab 19 of the Appellants' Book of Authorities

25. This was consistent with findings in a study by the Research Branch of Agriculture and Agri-Food Canada that exposure to Btk among workers applying Foray 48B can result in "irritations of skin, eyes and respiratory tract", including "dry skin, chapped lips, itchy, red and burning eyes, runny nose and nasal stuffiness," symptoms that can persist for up to four weeks" (appended as Exhibit 44).¹

26. In 2021, Courtenay resident Corey Luke suffered rashes on his skin after being spraying with Foray 48B released from a helicopter, while he was sleeping outdoors in a hammock in a rural area. He had received no notification of the treatment:

Affidavit #1 of Corey Luke, Paras. 2-8,
appended as Exhibit 2 of the Appellants' Book of Exhibits

27. In 2023, aerial application of Foray 48B by the Ministry of Forests pursuant to Permits 738-0035-23-23, 738-0036-23-23, and 738-0032-21-24 Amendment #1 resulted in at least one asthma attack and other respiratory symptoms, rashes and other adverse effects among members of the public, as Ministry of Forests' officials acknowledged during a virtual town hall meeting on February 13, 2024 (see the attached transcript at Exhibit 14 of the Appellants' Book of Exhibits).

28. On May 25, 2023, Port Alberni resident Shawn Dearin reported to the Ministry of Forests' spongy moth hotline that she started feeling sick on May 15, 2023, which coincided with aerial spraying of Foray 48B in the Port Alberni spray zone authorized pursuant to Permit No. 738-0036-23-23. Ms. Dearin reported that she experienced wheezing in her chest, headache and felt fatigued. The symptoms grew worse, progressing to coughing and other allergy-like symptoms by the date of her call to the hotline. Ms. Dearin also reported that her granddaughter got sick. In addition to calling the Ministry of Forests' hotline, Ms. Dearin reported that she also called 8-1-1: (see

¹ Agriculture and Agri-Food Canada, "A review of the environmental impacts of the microbial insecticide *Bacillus thuringiensis*," Technical Bulletin No. 29 (2000): p. 8.

Ministry of Forests' Summary Report for Permit No. 738-0036-23-23, Page 19, appended as Exhibit 17 in the Appellants' Book of Exhibits, along with Summary Reports for Permits 738-0035-23-23 and 738-0032-21-24 Amendment #1 at Exhibits 15 and 16).

29. CUFCA notes that while the Ministry of Forests' 2023 Summary Reports reference only one (1) reported adverse effect on human health arising from the 2023 spraying, that eight (8) reports were recorded on the database administered by Health Canada (see a screenshot of the reporting results summary attached as Exhibit 18), creating a reasonable inference of a disconnect between Health Canada and Ministry of Forests' monitoring and reporting data and processes.

30. CUFCA further notes that it has not yet received the Ministry of Forests' Summary Reports mandated as a Condition 7.3 of the 2022 Permits, notwithstanding having submitted a written request for this information on March 22, 2024 (attached as Exhibit 19).

31. Health Canada has received a number of reports of adverse effects of Foray 48B on human health (appended as Exhibits 20 to 27), including the following reports with respect to the Ministry of Forests' spray program in 2023:

a. Incident Report Number: 2023-2457 (June 8, 2023):

"Throat was burning and felt raw. Coughing. Headache for 3 days following the day of spraying";

b. Incident Report 2023-2261 (June 1, 2023):

"I was outside while the plane was spraying Foray 48B directly over our property";

"Fatigue/General Malaise Dizziness Gastric Upset Headache Respiratory issues and shortness of breath Allergy type symptoms Sleeplessness at night Difficulty concentrating. The symptoms began within an hour of the spraying and have lasted for 2 weeks";

c. Incident Report 2023-2254 (June 1, 2023):

“I followed the guidelines for the days that spraying occurred and remained indoors, with windows closed until well over an hour after spraying stopped. I do not know when exposure occurred or how it occurred. On the first day of spraying, the skin on my face began to itch and burn - red bumps and scaly skin rash spread on my face, neck and chest. Irritation is ongoing and increased in severity after each subsequent day of spraying over the past two weeks. The irritation continues to spread and is extremely itchy. I’ve been to the doctor - he describes it as contact dermatitis and has prescribed an ointment. The itching and pain continues and has spread to my chest. I have never experienced any type of skin reactions like this before. I’ve enclosed a couple of pictures showing the rash on my face”;

d. Incident Report 2023-2179 (May 30, 2023):

“Morning after spraying daughter woke up with severe cough and respiratory distress. Loss of appetite”;

e. Incident Report 2023-2178 (May 30, 2023):

“Plane spraying Foray 48B all over house, cars, Lawns. All windows closed and we even sprayed all our property and grass with water trying to get rid of it”;

“The day after the first spray my daughter [*age redacted*] woke up coughing and congested. Got worse and worse would start getting better than they would spray again. The cough was really noticeable at night and got worse at night. Mood chances [*sic*] and Loss of appetite”;

f. Incident Report 2023-2174 (May 29, 2023):

“After playing outside in our backyard several hours after they spraying for spongy moth my daughter became sick and lethargic for the rest of the day and the day afterwards. She puked and then slept the entire day until evening. She complained of a sore neck and headache”;

g. Incident Report 2023-2159 (May 26, 2023):

“The aerial treatment began around 5am this morning and finished around 7:30am”;

“Upon departing my house a little after 8, my throat and eyes became irritated and sore. I waited the recommended 30mins prior to leaving my home that had my doors and windows closed for the treatment. The only thing I can correlate to my irritation and soreness it the treatment this morning”; and

h. Incident Report 2023-2084 (May 24, 2023):

“Pesticide crop dusted by plane directly over all people, animals, buildings, cars etc. You can see the spray residue on the cars and windows. Every surface likely had spray residue”; and

“Burning in throat, dry throat, dry eyes, burning eyes, coughing, throat feels swollen and raw”.

32. With respect to adverse effects of Foray 48B on human health, the Ministry of Forests’ conceded in an affidavit of provincial forest entomologist Babita Bains filed in response to a 2023 stay application of Dr. Tynan (at para. 53, which we have included in the Appellants’ Book of Exhibits as Exhibit 28) that:

Terms like “safe” and “harmless” are often used to describe the treatment to communicate to the general public in plain language but we do agree that the more accurate terminology is that it poses a “very low risk of producing adverse human health effects”.

I agree that the “harmless” descriptor should be replaced with “low risk” in future public communications

33. In that same proceeding, the Ministry of Forests tendered evidence acknowledging the lack of scientific consensus on the risks posed by Foray 48B, including a technical assessment report that stated (at page 13):

Btk strain ABTS-351 has not been found to be toxic, pathogenic or infective in acute oral, dermal, inhalation or intraperitoneal exposure studies in mammals, despite incomplete clearance being observed in several studies. It is of low toxicity by oral and inhalation routes and is mildly irritating to the skin and eyes.

There is disagreement in the current EU re-evaluation on the pathogenetic potential of Btk strain ABTS-351 related to the possibility of secondary metabolites/toxins leading to diarrhoeal-associated food-borne disease in humans.

34. CUFCA and Dr. Tynan further note that a study from New Zealand following aerial spraying of Foray 48B in Auckland—based on a survey of 300 impacted households—found that: “Aerial spraying with Foray 48B is associated with some adverse health consequences in terms of significant increases in upper airway, gastrointestinal, and neuropsychiatric symptoms, as well as a reduction in overall perception of health in the exposed population” (abstract appended as Exhibit 50).²

35. This was consistent with the findings of a study of the Washington State Department of Health, following aerial spraying of Foray 48B in the Seattle area, which identified adverse effects among 59 individuals in 50 households, including: cough, wheezing, headache, trouble breathing, sore throat, nasal congestion, irritated eyes, skin rashes, upper respiratory and nasal symptoms, flu-like or viral symptoms, worsening asthma and/or asthma attacks, and allergic bronchitis (appended as Exhibit 45).³

² Petrie K, Thomas M, Broadbent E. Symptom complaints following aerial spraying with biological insecticide Foray 48B. N Z Med J. 2003 Mar 14;116(1170):U354. PMID: 12658313 (Abstract).

³ Washington State Department of Health, Report of Health Surveillance Activities: Aerial Spraying for Asian Gypsy Moth, Seattle, May 2000 (July 2001).

36. Based on the foregoing, CUFCA and Dr. Tynan submit that the adverse effects of the proposed spraying on human health and environmental health are clear.

The 2024 Permits and appeals

37. In December 2023, the Ministry of Forests submitted Pesticide Use Permit Applications 738-0037-24-24 and 738-0038-24-24 (the “**Applications**”, attached as Exhibits 29 and 30) to the Administrator, seeking authorization for proposed spraying of Foray 48B over thirteen treatment areas in British Columbia in the spring of 2024, including a number of Greater Victoria municipalities (Victoria, Esquimalt, Saanich, View Royal, Colwood, Langford and North Saanich), Salt Spring Island, Cowichan Bay / Cobble Hill, Nanaimo, Qualicum Beach, Tsawwassen, Langley (township), Kamloops, West Kelowna and Cranbrook.

38. In January 2024, the Ministry of Forests invited public comment on the Applications (see *Spongy Moth News* website, appended as Exhibit 7).

39. During the public consultation process, the Ministry of Forests circulated notices of the Applications via voluntarily “neighbourhood ad mail”, rather than through mandatory household mail that is available for government mailings, which resulted in the exclusion of households that had opted out of receiving commercial advertisements: correspondence between CUFCA and Ministry of Forests.

40. On February 24, 2024, CUFCA and Dr. Tynan provided written submissions to the Ministry of Forests (attached as Exhibit 31), requesting that the Ministry of Forests and the Administrator suspend further consideration of Pesticide Use Permits Applications numbers 738-0037-24-24 and 738-0038-24-24 until informed consent had been obtained and a proper scientific review of adverse effects of Foray 48B on human populations and species of concern has been conducted.

41. In these written submissions, CUFCA submitted in the alternative that public reporting requirements mandated by the Administrator as conditions for aerial application of Foray 48B pursuant to Section 6 (4) of the *IPMA* must be amended to provide:

- (1) a meaningful mechanism for the public to report adverse effects on human health and environmental health arising from aerial application of Foray 48B in 2024, and
- (2) an effective mechanism for the Ministry of Forests, Health Canada and the manufacturer to respond to this data and incorporate this data into future planning and actions.

42. CUFCA appended expert opinion evidence from Dr. Per Einar Granum with its written submissions to the Ministry of Forests, regarding harms of aerial application of Foray 48B and Norway's modern approach to spongy moth management (attached with Dr. Granum's curriculum vitae as Exhibits 36, 37 and 39). As stated in Dr. Granum's evidence:

- a. "Today, with our present genetic knowledge, the two species [Bacillus cereus and B. thuringiensis (B.t)] would be considered the same species (not even sub species)", and that the criticism of the respondent is without merit;
- b. "In Norway ... spraying B. t is not banned, but aerial spraying is not allowed. If you read the latest conclusion (May 2016) from the Norwegian Scientific Committee for Food Safety, they conclude: 'It cannot be excluded that the use of pesticides containing Bacillus thuringiensis can bring cases of food poisoning. That is the main conclusion in the health environmental risk assessment conducted by the Norwegian Scientific Committee for Food Safety. The Norwegian Food Safety Authority has requested the assessment.'"
- c. Published papers have shown that B. t has caused food poisoning and that strains of B. t carry the genes making them able to produce enterotoxins, including the B. t strain in Foray 48B: "since I have, for many years, been responsible for the reference laboratory for The Norwegian Food Safety Authority on B. cereus (and several other food pathogens) and have discovered and described the two most important enterotoxins (Nhe and CytK) causing the diarrhea, I also know almost everything about how humans react to the foodborne diseases caused by B. cereus (and relatives). Usually, you have watery diarrhea for 18-24 hours and then recover quickly, although it sometimes might be

much more severe.”

- d. “How many people in Victoria would know that they should report any type of symptoms after B.t spraying? Do you check what percentage of the population have even heard that you are going to spray, and when? It is easy to say that when few report any symptoms, you can conclude that it is safe. In my report I refer to cases reported both from Seattle and New Zealand.”
- e. The Respondents’ materials from the 2023 appeals deny scientific facts and empirical evidence.

43. On March 18, 2024, the Administrator issued the Permits, authorizing aerial application of Foray 48B over thirteen BC communities in the spring of 2024.

44. On April 8, 2024, the provincial cabinet approved the *Spongy Moth Eradication Regulation*, BC Reg 175/2024 (attached at Tab 6 of the Appellants’ Book of Authorities), enacted pursuant to Section 8 of the *Plant Protection Act*, RSBC 1996, c 365, amending the *Spongy Moth Eradication Regulation*, BC Reg 100/2022 (attached at Tabs 4 and 5 of the Appellants’ Book of Authorities) to authorize treatment of the thirteen spray zones described in the Permits.

45. On April 9, 2024, Mayor Wayne Price of the City of Cranbrook wrote to Minister of Forests, the Honourable Bruce Ralston, requesting that the Ministry of Forests “provide further opportunities for public consultation prior to approval of any treatment” (attached as Exhibit 32).

46. On April 9, 2024, CUFCA and Dr. Tynan filed Notices of Appeal (attached as Exhibits 33 and 34) with the Board, challenging the Administrator’s decision to issue the Permits. CUFCA and Dr. Tynan appended an additional expert report from Dr. Granum with their notices of appeal (attached as Exhibit 38).

Geographic and socio-economic profiles of the proposed spray zones

47. The total area of the proposed spray zones is 1815 hectares (4485 acres), while the proposed “buffer zones” encompass 3482 hectares (8604 acres), in the following areas:

PUP No. 738-0037-24-24

Cranbrook: 299 ha (+ 538 ha buffer; 34 moths detected in 2023; spraying scheduled to commence on May 22 or 23, 2024);

West Kelowna / West Bank: 52 ha (+ 165 ha buffer; 11 moths detected in 2023; spraying scheduled to commence on May 6 or 7, 2024);

Kamloops: 80 ha (+ 225 ha buffer; 29 moths detected in 2023; spraying scheduled to commence on May 6 or 7, 2024);

Langley: 30 ha (+ 96 ha buffer; 10 moths detected in 2023; spraying scheduled to commence on April 27 or 28, 2024); and

Tsawwassen: 203 ha (+ 396 ha buffer; 87 moths detected in 2023; spraying scheduled to commence on April 27 or 28, 2024).

PUP No. 738-0038-24-24

Qualicum Beach: 96 ha (+ 250 ha buffer; 9 moths detected in 2023; spraying scheduled to commence on May 10, 2024);

Nanaimo-Hammond: 130 ha (+ 293 ha buffer; 38 moths detected in 2023; spraying scheduled to commence on May 10, 2024);

Salt Spring Island-Vesuvius: 48 ha (+ 163 ha buffer; 14 moths detected in 2023; spraying scheduled to commence on May 3 or 4, 2024);

Cowichan Bay: 126 ha (+ 344 ha buffer; 11 moths detected in 2023; spraying scheduled to commence on May 3 or 4, 2024);

North Saanich-Ardmore: 170 ha (+ 355 ha buffer; 21 moths detected in 2023; spraying scheduled to commence between April 29 and May 2, 2024);

Gorge-Tillicum: 120 ha (+ 318 ha buffer; 15 moths detected in 2023; spraying scheduled to commence between April 29 and May 2, 2024);

Victoria West / Esquimalt: 31 ha (+ 126 ha buffer; 9 moths detected in 2023; spraying scheduled to commence between April 29 and May 2, 2024); and

Colwood (Belmont): 430 ha (+ 713 ha buffer; 38 moths detected in 2023; spraying scheduled to commence between April 29 and May 2, 2024).⁴

48. The Ministry of Forests proposes to spray 7,250 litres of Foray 48B over these communities and tens of thousands of residents between now and June 2024, with the proposed commencement dates for the spraying specified above.

49. The various spray zones and buffer zones also include hundreds of facilities serving vulnerable human populations, including (but not limited to):

- a. daycare centres,
- b. elementary and middle schools,
- c. seniors' centres and care homes,
- d. hospitals and other health-care facilities,
- e. Indian Reserves,
- f. homeless encampments, and
- g. RV parks.

Affidavit #1 of Dr. Jennifer Tynan, paras. 8 to 33

⁴ Compiled from information in the Permits and in the Ministry of Forests' Spongy Moth News website, including trapping results from 2023 and the proposed 2024 spray schedule: Ministry of Forests, Spongy Moth News website, < <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/forest-health/invasive-forest-pests/spongy-moth/news> > (viewed April 14, 2024).

Ecological profiles of the proposed spray zones

50. Countless non-human animal species will also be impacted in the vicinity of the spray zones, including the rare Grey Copper Butterfly (also known as the Dione Copper Butterfly, *Lycaena dione*), which populates habitat within approximately one kilometre of the Cranbrook spray zone at Elizabeth Lake. We attach the BC Conservation Data Centre Species Summary for the Grey Copper Butterfly at Exhibit 35.

51. The Ministry of Forests has acknowledged that Foray 48B kills butterflies and other non-target *Lepidoptera* species in the vicinity of the spray zones for a period of approximately 2 years (document circulated by Ministry of Forests, April 4, 2024, appended as Exhibit 36).⁵

52. A recent study by Nora Braak et al. found that “Pesticides, in particular insecticides, ... been found to have harmful side effects on non-target insects. Butterflies play an important role in ecosystems, are well monitored and are recognised as good indicators of environmental health. The amount of information already known about butterfly ecology and the increased availability of genomes make them a very valuable model for the study of non-target effects of pesticide usage. The effects of pesticides are not simply linear, but complex through their interactions with a large variety of biotic and abiotic factors” (appended as Exhibit 51).⁶

53. CUFCA and Dr. Tynan note that moth and butterfly species are an important food source for birds. By spraying an insecticide that kills moth and butterfly caterpillars, the Ministry of Forests would deprive migrating and breeding birds of an important food source at a critical time. Migrating birds pass through the various treatment zones hungry and tired during the spring months—at the same time that the fall cankerworm and other caterpillars emerge, an excellent example of nature’s synchronicity or phenology. These and other birds depend on, and time their migration to feed on, historically-reliable insect supplies in southern British Columbia en route to their breeding destinations in the north.

⁵ Tim Ebata to Call to Action Cranbrook, April 4, 2024, appended as Exhibit 35.

⁶ Braak N, Neve R, Jones AK, Gibbs M, Breuker CJ. The effects of insecticides on butterflies - A review. Environ Pollut. 2018 Nov;242(Pt A):507-518. doi: 10.1016/j.envpol.2018.06.100. Epub 2018 Jul 4. PMID: 30005263 (Abstract).

Imminent non-compliance of Ministry of Forests with conditions of the Permits

54. The Permits mandate (at Conditions 4.9 and 4.10(k)) inclusion of the following minimum “precautionary advice” on Notices posted 48 hours before commencement of spraying for anyone entering the spray zones:

“to minimize contact with the pesticide: remain indoors with windows and doors closed during active spraying and for at least 1 hour thereafter; wash hands after outdoor activities; wash fruits and vegetables before consuming.”

55. However, the Ministry of Forests appears to be posed to imminently breach these Conditions, with Notices prepared for distribution in the spray zones (which have been shared with CUFCA members by Ministry of Forests officials, as per the attached Exhibits 5 and 37) that:

- a. Misstate the recommended period to remain indoors as 30 minutes (rather than the 1 hour mandated as a condition in the Permits); and
- b. Omit the following mandatory language: “wash hands after outdoor activities; wash fruits and vegetables before consuming.”

D. A STAY OUGHT TO BE GRANTED: APPLYING THE THREE-PART TEST IN RJR-MACDONALD***Serious Issue to Be Tried***

56. CUFCA and Dr. Tynan submit that there is plainly a serious question to be tried as to whether the Permits should have been issued.

57. The hearing on the merits will involve oral testimony and cross examination of experts and other witnesses, so will necessarily be a *de novo* hearing on a standard of correctness. While the onus will be on the appellants, no deference will be owed to the Administrator.

58. At issue in the appeals is whether the Permits should be set aside because:

- (a) the process of issuing the permits was procedurally unfair;
- (b) the Administrator failed to properly appreciate and account for the human and environmental risks associated with the spraying of Foray 48B;
- (c) the Administrator failed to quantify or otherwise properly assess the effectiveness of the spray program and its commercial benefits so they could be weighed against the risks that are being taken with human and environmental health;
- (d) the Administrator failed to fully consider the available alternatives to spraying;

And alternatively, if the Permits are not set aside, whether the Permits should be amended to include terms that require:

- (e) more effective and comprehensive notice of the spraying and of the potential health risks;
- (f) comprehensive independent health monitoring and health data collection so that such data can be considered in future spraying applications; and
- (g) independent environmental monitoring and data collection relating to butterfly populations and other environmental impacts.

59. In *RJR-MacDonald Inc. v Canada (AG)*, [1994] 1 SCR 311 at p. 335, the Supreme Court of Canada states that an adjudicator should apply “common sense and an extremely limited review of the case on the merits. ... A prolonged examination of the merits is generally neither necessary nor desirable.” Absent a frivolous or vexatious claim or a purely constitutional challenge to the validity of a statute, the adjudicator should turn to the second and third stages of the test.

60. These appeals are far from frivolous and vexatious. Rather, they address a serious human health and environmental health issue that needs to be properly reviewed and considered on its merits by the Board.

Irreparable Harm

61. CUFCA and Dr. Tynan submit that application of Foray 48B under authority granted in the Permits will result in irreparable harm to CUFCA members (including Dr. Tynan and her children), to other persons, and to non-human animal species in the natural environment.

62. Irreparable harm is harm that cannot be compensated by money damages, or alternately, harm that cannot be quantified in monetary terms.

63. CUFCA and Dr. Tynan note that in *RJR-MacDonald* (at p. 344) the Supreme Court of Canada cautioned adjudicators to “reject an approach which excludes consideration of any harm not directly suffered by a party to the application.” This principle was affirmed in *British Columbia in Carvalho v. British Columbia (Medical Services Commission)*, 2016 BCSC 1603 (at paras. 72, 74).

64. There is no monetary remedy available to people who suffer health impacts from the spraying of Foray 48B. Their injuries will be the product of a statutorily authorized spraying program. Similarly, there is no remedy for the negative environmental impacts of the spray program. As such, the harm is inherently irreparable.

65. CUFCA and Dr. Tynan submit that the harm resulting from application of Foray 48B—as described in the Summary of Facts above—satisfies the requirements for both types of irreparable harm. This includes harm to human health, harm to animal health and harm to environmental health.

66. As the Board has noted in a number of decisions, harm to wildlife arising from the application of pesticides amounts to irreparable harm if proven in the substantive appeal (see, for example, *City of Port Moody*; *City of Port Coquitlam*; *City of Coquitlam v. Deputy Administrator, Pesticide Control Act* (Appeal No. 98-PES- 05(a), July 20, 1998).

67. CUFCA and Dr. Tynan also submit that this irreparable harm is indicated by a number of scientific studies that provide evidence of the effect of Bt products on human cells, and which state that further research is required before aerial application of Bt products over urban populations could be justified.

68. To assist the Board in evaluating the extent and nature of irreparable harm and other adverse effects to human health, animal health and environmental health arising from aerial application of Foray 48B, CUFCA and Dr. Tynan tender the following scientific evidence (which have been appended in her Book of Exhibits as Exhibits 38 to 54):

- a. Report #1 of Dr. Granum, dated February 17, 2023 (discussing Norway's approach to spongy moth management, including a prohibition on aerial application);
- b. Report #2 of Dr. Granum, dated May 1, 2023 (replying to comments raised by the Respondent and Third Party in the 2023 appeals in response to Dr. Granum's report of February 17, 2023);
- c. Report #3 of Dr. Granum, dated March 6, 2024 (providing further approach to harm to humans arising from Bt products and scientifically sound approaches to spongy moth management);
- d. Curriculum vitae of Dr. Granum;
- e. Granum et al, "Bacillus cereus, Bacillus anthracis and Other Pathogenic Bacillus Species," Reference Module in Food Studies (2023);
- f. Capital Health Region Office, *Human Health Surveillance during the aerial spraying for the control of the North American gypsy moth on Southern Vancouver Island British Columbia: A report to the administrator, Pesticide Control Act* (December 31, 1999);
- g. Agriculture and Agri-Food Canada, "A review of the environmental impacts of the microbial insecticide Bacillus thuringiensis," Technical Bulletin No. 29 (2000): p. 8;

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- h. Washington State Department of Health, *Report of Health Surveillance Activities: Aerial Spraying for Asian Gypsy Moth, Seattle, May 2000* (July 2001);
 - i. Gavia Rivera AM, G. P. (2000 Sep 1). Common occurrence of enterotoxin genes and enterotoxicity in *Bacillus thuringiensis*. *FEMS Microbiol Lett.*, 190(1):151-5. doi: 10.1111/j.1574-6968.2000.tb09278.x. PMID: 10981706;
 - j. Celandroni F et al. *Bacillus thuringiensis* membrane damaging toxins acting on mammalian cells. *FEMS microbiology letters* 2014 (361) 95-103;
 - k. Green M, H. M. (1990 July). Public health implications of the microbial pesticide *Bacillus thuringiensis*: an epidemiological study, Oregon, 1985-86. *Am J Public Health.*, 80(7):848-52. doi: 10.2105/ajph.80.7.848. PMID: 2356910; PMCID: PMC1404979;
 - l. Tayabali AF, S. V., "Human cell exposure assays of *Bacillus thuringiensis* commercial Insecticides: production of *Bacillus cereus*-like cytolytic effects from outgrowth of spores," *Environ Health Perspect*, 108(10):919-30. doi: 10.1289/ehp.00108919. PMID: 11049810; PMCID: PMC1240123;
 - m. Petrie K, Thomas M, Broadbent E. Symptom complaints following aerial spraying with biological insecticide Foray 48B. *N Z Med J.* 2003 Mar 14;116(1170):U354. PMID: 12658313 (Abstract);
 - n. Braak N, Neve R, Jones AK, Gibbs M, Breuker CJ. The effects of insecticides on butterflies - A review. *Environ Pollut.* 2018 Nov;242(Pt A):507-518. doi: 10.1016/j.envpol.2018.06.100. Epub 2018 Jul 4. PMID: 30005263 (Abstract);
 - o. Hernandez E, R. F. (1998 Jul). *Bacillus thuringiensis* subsp. *konkukian* (serotype H34) superinfection: case report and experimental evidence of pathogenicity in immunosuppressed mice. *Journal of Clinical Microbiology*,

36(7):2138-2139. DOI: 10.1128/jcm.36.7.2138-2139.1998. PMID: 9650985; PMCID: PMC105009;

- p. Jackson SG, G. R. (1995 Aug). *Bacillus cereus* and *Bacillus thuringiensis* isolated in a gastroenteritis outbreak investigation. *Lett Appl Microbiol.* , 21(2):103-5. doi: 10.1111/j.1472-765x.1995.tb01017.x. PMID: 7639990; and
- q. Helgason E, C. D. (2000 Apr). Genetic structure of population of *Bacillus cereus* and *B. thuringiensis* isolates associated with periodontitis and other human infections. *J Clin Microbiol.*, 38(4):1615-22. doi: 10.1128/JCM.38.4.1615-1622.2000. PMID: 10747152; PMCID: PMC86502.

Balance of Convenience

69. CUFCA and Dr. Tynan submit that the balance of convenience favours the granting of a stay of the Permits pending the Board's consideration of the substantive issues raised in CUFCA and Dr. Tynan's appeals. Interlocutory relief in the form of a stay is a conservative remedy, aimed at preserving the status quo pending final determination of a matter.

70. As noted in *RJR-MacDonald (applying American Cyanamid Co. (No 1) v Ethicon Ltd.*, [1975] UKHL 1), factors which must be considered in assessing the "balance of inconvenience" are numerous and will vary in each individual case.

71. CUFCA and Dr. Tynan submit that the following factors are relevant to the Board's assessment of the balance of convenience and weigh particularly heavily in favour of a stay being granted:

- (1) evidence of the Ministry of Forests' imminent breach of Conditions 4.9 and 4.10(k) of the Permits (with respect to insufficient content of precautionary advice on public notices, as described above);

- (2) the Ministry of Forests' apparent failure to comply with Condition 7.3 of the 2022 permits (including Permit No. 738-0030-20-23 Amendment #1, attached as Exhibit 6), by apparently failing to submit Summary Reports with respect to the 2022 spray programs by the specified deadline of January 31, 2023; and
- (3) the Ministry of Forests' breach of procedural fairness in its description of the Victoria West spray zone in communications materials distributed to members of the public in January 2023 (as described above and in Dr. Tynan's written submissions appended as Exhibit 31), which impeded participation of impacted residents in the public-consultation process prior to the Permits being issued, and thereby breached the duty of procedural fairness that the Respondent and Third Party owed to them.

72. CUFCA and Dr. Tynan also identify the following additional factors that are relevant to the Board's assessment of the balance of convenience and which further support the granting of a stay:

- a. the Ministry of Forests' decision to circulate public notices during the consultation process in January and February 2024 via voluntarily "neighbourhood ad mail", rather than through mandatory household mail that is available for government mailings, which resulted in the exclusion of households that had opted out of receiving commercial advertisements; and
- b. Statements by the Ministry of Forests during the 2024 consultation process to the effect that Foray 48B was "harmless" (appended as Exhibit 36).

73. Further to the aforementioned factors in Paragraphs 71 above, if the Ministry of Forests will not comply with reporting requirements or the inclusion of minimum precautionary advice on Notices to the public, as mandated by the Administrator as Conditions 4.9 and 4.10(k) of the Permits, CUFCA and Dr. Tynan submit that it can reasonably be inferred that the Ministry of Forests may breach other conditions of the Permits, including conditions governing:

-
- a. cancellation of scheduled applications when:
 - i. wind speed exceeds 8 km/h (as mandated under Condition 6.12);
 - ii. rainfall is imminent (as stated on Page 3 of the product label, which is incorporated into the Permits by way of Condition 6.2); or
 - iii. dew exists on foliage to the point of run-off (as stated on Page 3 of the product label);
 - b. monitoring the uniformity of spray coverage and spray drift (as mandated under Condition 5.3);
 - c. monitoring of health lines for human health or environmental health-related concerns (as mandated under Condition 5.3);
 - d. reporting adverse effects to the manufacturer (as mandated under Condition 7.2);
 - e. submitting Summary Reports (as mandated under Condition 7.5); and
 - f. other conditions of the Permits.

74. CUFCA and Dr. Tynan submit that the public cannot have confidence in the proposed 2024 treatment program in circumstances of the Ministry of Forests' imminent non-compliance with at least two conditions of the Permits, as well as evidence of non-compliance with permit conditions in previous years and breaches of procedural fairness during public consultation in 2023 and 2024. All of these factors are relevant to the Board's assessment of the balance of convenience and weigh in favour of the granting of a stay.

75. CUFCA and Dr. Tynan submit that strict compliance with all Permit conditions is necessary, and that the Board should have no part in condoning apparent breaches or apparent imminent breaches of any conditions. Public confidence in the *IPMA* permitting

process—and in the Board’s own appeal processes—are compromised when permit-holders are allowed to act with impunity and disregard conditions mandated in permits.

76. CUFCA and Dr. Tynan submit that the Board has an opportunity in the context of the hearing of these stay applications to uphold the public interest by granting a stay, properly weighing evidence of non-compliance with Permit conditions in assessing the balance of convenience.

77. If the Board declines to grant a stay of the Permits pending the hearing on the merits of the appeals, CUFCA members (including Dr. Tynan and her children) and the general public (including immuno-compromised individuals, senior citizens, low-income individuals and other vulnerable and/or marginalized persons), and non-human animal species—particularly non-target butterflies and other *Lepidoptera* insects—will all be exposed to risks of adverse effects from the aerial spraying of Foray 48B.

78. Unhoused and other low-income individuals — including those who have encountered substantial procedural barriers to participating in Ministry of Forests and Ministry of Environment processes that preceded the Decision, as well as barriers to Board appeal processes — would be exposed to health risks arising from aerial application of Foray 48B.

79. Natural ecosystems — including animal and plant species dependent on the ecological integrity of riparian and shoreline areas, particularly butterfly and other non-invasive *Lepidoptera* species — would also be exposed to the potential adverse impacts of the application of Foray 48B.

80. CUFCA notes that the manufacturer discloses on the Foray 48B product label that: “For early morning applications, foliage should not be wet with dew to the point of runoff” (appended as Exhibit 10, page 3). To our knowledge, the Third Party has failed to take precautions to avoid application of Foray 48B onto foliage that is wet with dew to the point of runoff. Indeed, climatic conditions in several spray zones across southern British Columbia in the spring months are highly conducive to substantial dew accumulating on foliage in the early morning hours, given the variation in temperature and resulting

condensation. CUFCA and Dr. Tynan therefore submit that it is highly probable that foliage in the various spray zones will be wet with dew to the point of runoff on most of the application dates, and that there is a substantial risk that Ministry of Forests (through its contractors) will apply the pesticide despite these conditions on the ground. CUFCA and Dr. Tynan notes that the only Spray Summaries in its possession (for 2023) make no mention of planned treatments being cancelled on account of dew, leaving the reasonable inference that this is not a factor that is taken into consideration by the Ministry of Forests or its contractors.

81. With respect to adverse effects on human health, if people in affected areas come down with asthma attacks, food poisoning symptoms and/or eye infections, they will be effectively involuntarily, and perhaps unknowingly, paying the cost of the commercial benefits the Ministry of Forests seeks to gain by spraying. This is unacceptable.

82. Of particular relevance in this case is that if a stay is not granted, the appeals on the merits will be defeated because the spraying program will be complete and the appeals will likely be deemed moot by the time the appeals are heard and reasons issued by the Board (as has occurred in previous years). Accordingly, granting a stay in these appeals is appropriate as it will allow the matter to be properly adjudicated on its merits.

83. In contrast, the Ministry of Forest would suffer minimal inconvenience if the Board agrees to grant a stay of the Permits pending the appeals. The spongy moth eradication program has been ongoing since 1979 and the moth has not been eradicated. A pause in the program to adjudicate the merits of these particular Permits is highly unlikely to cause the moth population to increase in a manner that is unmanageable. Not every area of British Columbia is sprayed each year, which indicates that annual spraying is not essential.

84. Similarly, the Ministry of Forests would suffer minimal inconvenience from an international trade standpoint if the Board agrees to grant a stay of the Permits pending the appeals. The risk of international trade implications or restrictions on the export of BC logs is negligible (and could result in a net benefit to workers, communities and public

revenues if logs were processed in BC communities, rather than being exported to the United States).

85. With respect to the assessment of the balance of convenience, CUFGA and Dr. Tynan note the conclusions of a panel of the Board in *Resident Advisory Board et. al. v. Deputy Administrator, Pesticide Control Act*, 1998 BCEAB 18 (appended at Tab 10 of the Appellants' Book of Authorities):

Taking into consideration the risks and intended benefit of the spray program authorized by the Permit, the Panel finds that aerial spraying of Foray 48B over the proposed, heavily populated areas is unreasonable in this case. The Panel finds that aerial spraying will create an unacceptable risk of health problems among the residents of these densely populated areas. In particular, the Panel agrees with the Appellants that there is a risk to the health of children, people of all ages who have allergies, asthma, and other respiratory ailments, people with immuno deficiencies, chemical hypersensitivities, and the elderly. It also poses an unreasonable adverse effect to the environment (non-target species).

All parties agree that detection and eradication of the gypsy moth is an important goal. The Board concurs. Further, while all parties agree that the gypsy moth can potentially cause problems for the economy of British Columbia, it is clear that there are methods other than aerial spraying available which can reasonably be employed on the facts of this case, to address the problem. The options are not limited to aerial spraying of Foray 48B or do nothing. CFIA does not say that the gypsy moth problem, as identified to date, cannot be addressed through alternative methods; only that it is more cost effective and efficient to do so through aerial spraying.

Given the trapping detection results to date, the limited areas where gypsy moths tend to live (Garry oaks, etc.), the Panel finds that to allow aerial spraying over heavily populated tracts of urban areas poses an unreasonable adverse effect, when viable alternatives are available.

86. While a panel of the Board dismissed stay applications in 2022 and 2023 (in reasons indexed as *Dr. Evan Frangou v. Jane Elizabeth Rollins*, 2022 BCEAB 13 and *Wartels et al v Administrator, Integrated Pest Management Act*, 2023 BCEAB 14), CUFCA and Dr. Tynan note that these past decisions of the Board in relation to spongy moth spraying cannot be relied upon, as they were made on different, and much less comprehensive, evidentiary bases than is before the Board on this application. The Board has found (for example in *A. Carol Anderson v. Deputy Administrator, Pesticide Control Act*, 1996 BCEAB 19) that where the evidence warrants, a permit will be set aside.

87. CUFCA and Dr. Tynan further submit that the precautionary principle is a factor that should be considered in assessing the balance of convenience. The precautionary principle states that “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (*Canadian Environmental Protection Act*, S.C. 1999, c. 33, s. 2(1)(a), Appellants’ Book of Authorities, Tab 8).

88. There does not appear to be a scientific consensus on the impacts of Foray 48B on human health and ecological health, as noted in the attached expert reports and publications. Dr. Tynan submits that this uncertainty supports the application of the precautionary principle when considering governmental action relating to Foray 48B, and supports the balance of convenience weighing in favour of the granting of a stay.

89. In 2000, Tayabali et al. from the Department of Health of the Government of Canada reported (appended at Exhibit 49) that:

“Bt products have an inherent capacity to lyse human cells. . .and may also act as immune sensitizers.”

90. They go on to state that “what is lacking is a critical understanding of conditions that might concern high-risk groups, those unable to manage microbe invasions

through impaired immune responses, the very young, the elderly.”⁷

91. CUFCA and Dr. Tynan submit that a critical understanding is required of conditions that might concern high-risk groups — including those unable to manage microbe invasions through impaired immune responses and other physical-chemical clearance mechanisms manifested during development (for example, the very young and the elderly) and in specific genetic disorders (e.g., cystic fibrosis). To justify aerial application of spore-containing Bt products, claims of no health effects need to be addressed in light of current scientific evidence and practices.

92. Disruptions to the immune system of a human can have a broad range of health outcomes for individuals, including infections, allergies, autoimmunity, and malignancies. There is nothing either in the Permits nor in the Ministry of Forests’ methodology that provides for actual monitoring, reporting and analysis of health impacts of the spraying of Foray 48B. Indeed, as noted above, the Ministry of Forests references only one (1) report of adverse effects to human health in relation to the 2023 permits, while Health Canada reported that it received eight (8) incident reports. There is clearly a discontent in the monitoring and reporting of adverse effects of Foray 48B spraying in British Columbia; the conditions in the 2024 Permits and in permits issued by the Administrator in previous years are woefully inadequate. This further weighs in support of the Board finding that the balance of convenience favours the granting of a stay.

93. Moreover, there has been no ongoing, structured short- or long-term data collection and health monitoring. There are no long-term controlled studies on the effects of Foray 48B on humans. In 1999, the Capital Health Region Office of the BC Ministry of Health made very clear recommendations that are not being followed (in a report appended as Exhibit 43):

⁷ Tayabali AF, S. V. (2000 Oct). Human cell exposure assays of *Bacillus thuringiensis* commercial Insecticides: production of *Bacillus cereus*-like cytolytic effects from outgrowth of spores. *Environ Health Perspect*, 108(10):919-30. doi: 10.1289/ehp.00108919. PMID: 11049810; PMCID: PMC1240123, appended as Exhibit 49.

“Continued monitoring is needed to identify rare or unexpected effects of the exposure to the spray and to generate more information to help the public and the government understand the local consequences of aerial spraying of Btk. . . This needs to use a variety of scientific specialties to track the full range of possible health impacts. . . . Health studies need to be planned well before any spray program begins.”⁸

94. To our knowledge, there is no such plan in place, and yet the spraying is scheduled to occur again this year if the Permits are not stayed.

95. Granting a stay based on the facts in this appeal would be consistent with the Board’s decision in *City of Parksville et al. v. Deputy Administrator, Pesticide Control Act* (Appeal No. 98-PES-07(a), October 5, 1998), *Raincoast Research Society v. Deputy Administrator, Pesticide Control Act* (Appeal No. 99-PES- 09(a), August 6, 1999), *Fort Nelson First Nation v. Deputy Administrator, Pesticide Control Act* (Appeal No. 99-PES-22(a), August 27, 1999), and *Resort Municipality of Whistler v. Deputy Administrator, Pesticide Control Act* (Appeal No. 2000-PES-017(b), September 14, 2000).

96. In summary, CUFCA and Dr. Tynan submit that the balance of convenience weighs in their favour and against the Ministry of Forests, and that the Board should therefore issue a stay of the Permits pending the hearing and decision on the substantive appeals.

E. CONCLUSION AND ORDER SOUGHT

97. In conclusion, CUFCA and Dr. Tynan apply to the Board for an order staying the execution of Pesticide Use Permits 738-0037-24-24 and 738-0038-24-24 pending the hearing on the merits of their appeals against the Administrator’s decision to issue to the Permits.

98. CUFCA and Dr. Tynan make this application pursuant to Section 25 of the

⁸ Human Health Surveillance during the aerial spraying for the control of the North American gypsy moth on Southern Vancouver Island British Columbia, 1999. A report to the administrator, Pesticide Control Act by the Capital Health Region Office, appended as Exhibit 43.

Administrative Tribunals Act and the Board's Rule 16(1)(c). They submit that the facts and the law support the granting of a stay, consistent with the case of *RJR-MacDonald Inc. v Canada (AG)*, [1994] 1 SCR 311 and decisions of the Board since *North Fraser Harbour Commission et al. v. Deputy Director of Waste Management*, 1997 BCEAB 36.

99. In particular, CUFCA and Dr. Tynan draw the Board's attention to the following factors which distinguish their stay applications from similar applications decided in 2022 and 2023:

- a. evidence that the Third Party Ministry of Forests intends to breach Conditions 4.9 and 4.10(k) of the Permits by posting notices at the entrances to the spray zones that expressly fail to comply with the mandatory minimum precautionary advice for reducing adverse effects on human health (as appended in Exhibit 5);
- b. the Ministry of Forests' apparent failure to comply with Condition 7.3 of the 2022 permits (including Permit No. 738-0030-20-23 Amendment #1, attached as Exhibit 6), by apparently failing to submit Summary Reports with respect to the 2022 spray programs by the specified deadline of January 31, 2023 (based on the Third Party's failure to produce the requested Summary Reports to CUFCA, as per the correspondence appended as Exhibit 19; and
- c. the Ministry of Forests' breach of procedural fairness in its description of the Victoria West spray zone in communications materials distributed to members of the public in January and February 2023 (appended as Exhibit 7 and described in Dr. Tynan written submissions at Exhibit 31), which impeded participation of impacted residents in the public-consultation process prior to the Permits being issued, and thereby breached the duty of procedural fairness that the Respondent and Third Party owed to them.

100. Based on the foregoing, CUFCA and Dr. Tynan submit that the balance of convenience favours the granting of a stay of execution of the Permits pending the hearing on the merits of their appeals.

All of which is respectfully submitted,

A handwritten signature in blue ink, appearing to read "Ben Isitt", written over a horizontal line.

Benjamin Isitt,
Counsel for Communities United for Clean Air and Dr. Jennifer Tynan

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Detailed history of spongy moth treatments in B.C.

✦ Last updated on June 26, 2024

Usually, spongy moths (*Lymantria dispar*; formerly referred to as gypsy moth) detected in B.C. do not survive and establish a population. However, in rare circumstances, treatments are required to prevent moths from establishing permanently. The first spray treatments in B.C. happened in 1979.

- See a more [detailed treatment history \(PDF, 225KB\)](#)

Spray history

Year	Location	Treatment details
2023	Campbell River (303 ha)	Aerial Spray - Campbell River
	Courtenay (331 ha)	Aerial Spray - Courtenay
	Courtenay-Dove Creek (652 ha)	Aerial Spray - Dove Creek
	Port Alberni (763 ha)	Aerial Spray - Port Alberni
		Aerial Spray - Belmont



Year	Location	Treatment details
	Victoria-Belmont (341 ha)	<u>Aerial Spray - Esquimalt</u>
	Victoria-Esquimalt (267 ha)	<u>Aerial Spray - View Royal</u>
	Victoria-View Royal (381 ha)	
2022	Burnaby (193)	<u>Aerial Spray - Burnaby</u>
	Chilliwack (49 ha)	<u>Aerial Spray - Chilliwack</u>
	Coquitlam (41 ha)	<u>Ground Spray - Coquitlam</u>
	Cowichan (402 ha)	<u>Aerial Spray - Cowichan</u>
	Langley (362 ha)	<u>Aerial Spray - Langley</u>
	Mission (341 ha)	<u>Aerial Spray - Mission</u>
	Nanoose Bay (1,068 ha)	<u>Aerial Spray - Nanoose</u>
	Surrey (108 ha)	<u>Aerial Spray - Surrey</u>
	Victoria-View Royal (50 ha)	<u>Aerial Spray - View Royal</u>
2021	Courtenay (187 ha)	<u>Aerial Spray - Courtenay</u>
2020	North Surrey (241 ha)	<u>Aerial Spray - North Surrey</u>
	Cowichan Lake (231 ha)	<u>Aerial Spray - Cowichan</u>
	Castlegar (167 ha)	<u>Aerial Spray - Pass Creek</u>
2019	North Surrey (62.2 ha)	<u>Aerial Spray - North Surrey</u>

Year	Location	Treatment details
2018	Courtenay (94 ha)	Aerial Spray - Courtenay
	Agassiz (41 ha)	Ground Spray - Agassiz
	Campbell River (45 ha)	Ground Spray - Campbell River
	North Surrey (62 ha)	Ground Spray - North Surrey
2017	Bear Hill (Saanich) 182 ha	Aerial Spray - Saanich
	N. Surrey (Guildford) 26 ha	Ground Spray - N. Surrey
2016	-	No Treatment
2015	Surrey - 4576, 26 ha	Aerial Spray - Surrey
	Delta - 204 ha	Aerial Spray - Delta Ground Spray - Surrey
2014	-	No Treatment
2013	-	No Treatment
2012	-	No Treatment

Year	Location	Treatment details
2011	-	No Treatment
2010	Harrison - 25 ha Richmond - 766 ha	Ground Spray – Harrison map Aerial Spray – Richmond map
2009	Harrison - 329 ha	Aerial Spray– Harrison map
2008	Salt Spring Is. - 7.4 ha Saltair - 13.3 ha Lake Cowichan	Ground Spray – Salt Spring Is. map Ground Spray – Saltair map Mass Trapping – Lake Cowichan map Mass Trapping – Salt Spring map Mass Trapping – Saltair map
2007	Courtenay - 210 ha Salt Spring Is. - 10 ha Saanich (Cedar Hill) - 14 ha Belmont Park (Colwood) - 18 ha Sidney	Aerial Spray – Courtenay map Ground Spray – Salt Spring Is. map Ground Spray – Saanich map Ground Spray- Belmont Park map Mass Trapping – Salt Spring Is. map Mass Trapping – Sidney map Mass Trapping – Saanich map Mass Trapping – Belmont Park map
2006	Nanaimo - 10 ha Salt Spring Is. - 43 ha Saanich (Cedar Hill) - 9 ha	Ground Spray – Nanaimo map Ground Spray – Salt Spring Is. map Ground Spray –Saanich

Year	Location	Treatment details
2005	Duncan, Gabriola Is., Saanich, Langley	Gabriola Mass Trapping Duncan Mass Trapping Saanich Mass trapping Langley (no map)
2004	Saanich (Mt. Douglas Park) - 570 ha N. Delta - 23 ha Abbotsford, Duncan, Gabriola Is.	Saanich - aerial spray N. Delta - aerial spray Gabriola Mass Trapping Abbotsford Mass Trapping (no map) Duncan Mass Trapping (see 2005)
2003	N. Delta Saanich	Mass Trapping – N. Delta Mass Trapping – Saanich
2002	N. Delta	Mass Trapping
2001	N. Delta - 34 ha Sechelt	Ground Spray Mass Trapping - Sechelt

Year	Location	Treatment details
2000	Burnaby - 279.5 ha Sechelt	Aerial Spray Mass Trapping - Sechelt
1999	Victoria, Colwood, Esquimalt - 12,203 ha Duncan - 429 ha Nanaimo - 164 ha Brentwood Bay - 602 ha Tsawwassen - 51 ha	Aerial Spray Maps for: <ul style="list-style-type: none"> • Victoria area • Duncan • Nanaimo • Brentwood Bay • Tsawwassen Mass Trapping - Fairfield
1998	Victoria, Colwood, Esquimalt	Mass Trapping, Ground Spray
1997	New Westminster Victoria, Colwood, Esquimalt	Host Removal, Ground Spray Mass Trapping
1996	Hope	Ground Spray (no map)
1995	Chilliwack	Aerial & Ground Spray

Year	Location	Treatment details
1994	Victoria (Maplewood) Nanaimo (Beban Park) S. Vancouver Whisky Cr Hope Hope - Kawakawa Lake	Aerial Spray - Victoria map Aerial Spray - Nanaimo map Ground Spray. Aerial Spray. Aerial Spray. Aerial Spray.
1993	Richmond Burnaby Salt Spring Is Victoria Hope	Aerial Spray - Richmond map Aerial Spray. Ground Spray. Aerial Spray. Aerial Spray.
1992	Parksville (south) Belmont Park (Colwood) Vancouver (Asian Gypsy Moth)	Ground Spray. Aerial Spray. Aerial Spray and Ground Spray.
1991	North Saanich	Aerial & Ground Spray.
1990	Parksville (North)	Aerial & Ground Spray.
1989	Kelowna	Mass Trapping

Year	Location	Treatment details
1988	Kelowna Parksville (North) Colwood	Aerial and Ground Spray. Ground Spray. Aerial and Ground Spray.
1987	CFB Chilliwack	Aerial Spray.
1986	CFB Chilliwack	Ground Spray.
1985	Courtenay CFB Chilliwack	Ground Spray Ground Spray
1984	Ft. Langley Courtenay	Ground Spray Ground Spray
1983	-	No treatment
1982	-	No treatment
1981	-	No treatment

Year	Location	Treatment details
1980	-	No treatment
1979	Kitsilano*	Ground Spray - operational trial of Safer's Insecticidal Soap and Carbaryl. See Puritch, G.S.; Brooks, B.C. 1981. Effects of insecticidal soap used in the gypsy moth control program in Kitsilano on insects and vegetation. Environment Canada, Canadian Forestry Service, Pacific Forest Research Centre, Victoria, BC. Information Report BC-X-218. 22 p.

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Delay & Reconsider the Spongy (Gypsy) Moth Spraying in British Columbia

Started
Petition to

February 22, 2024
Cranbrook BC City Council and [2 others](#)

5,652

Signatures

7,500

Next Goal

Support now

Sign this petition

Why this petition matters



Started by [Cassandra Bergin](#)

[Media inquiries](#)

I am a resident of Cranbrook BC, and am deeply concerned about the planned aerial spraying of the Gypsy (Spongy, Lymantria) Moths across BC this spring. The organisation in charge is scheduled to receive their permit at the end of February, and the spraying is scheduled for this spring, 2024. This method of pesticide application is outdated, is not accepted by many private property owners, and could be replaced with safer methods.

This issue is personal to me because I fear the potential harm this pesticide could inflict on our local ecosystem and community health - more information and education is required.

The pesticide being used against these moths has been demonstrated to have detrimental effects on many other organisms. Other pollinating insects, which are vital for maintaining biodiversity and food production, may be severely affected. Birds and animals that feed on these insects may also suffer from secondary poisoning. Our waterways are at risk as pesticides most often leach into them, posing a threat to aquatic life. Our own Joseph Creek will be the recipient for this material.

Moreover, there is a significant concern about human health. The well-being of our children along with all people in our community could be compromised due to exposure to these pesticidal bacteria and chemicals, whose long term effects may be difficult to measure but dangerous, nonetheless. Schools and playgrounds are planned to be aerial sprayed.

While controlling the Spongy Moth population is important for preserving our trees, it's crucial that we consider alternative methods that are less harmful to other species and ourselves. We urge authorities to delay the permit for this spraying operation until further research can be conducted into its potential impacts, as well as a larger community involvement is achieved regarding the decisions and methods.

We need your help in voicing this concern - please sign this petition today. Let's do our best to protect our environment together by urging authorities to reconsider their approach towards pest control in Cranbrook BC, the rest of the province, and country.



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