Environmental Appeal Board

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DECISION NOS. EAB-IPM-22-A001(b) to EAB-IPM-22-A008(b) [Group Appeal File: EAB-IPM-22-G001]

In the matter of eight appeals under the *Integrated Pest Management Act*, S.B.C. 2003, c. 58

BETWEEN:	Dr. Evan Frangou and Diana Smardon	**APPLICANTS**
AND:	Jane Elizabeth Rollins, Joanna Wilkinson, Karen Forbes, Louise Sawyer, Kelly Lahti, and Katy Young	**APPELLANTS**
AND:	Administrator, *Integrated Pest Management Act*	**RESPONDENT**
AND:	Ministry of Forests - Forest Science, Planning and Practices Branch	**THIRD PARTY**
BEFORE:	David Bird, Panel Chair	
DATE:	Conducted by way of written and oral submissions concluding May 19, 2022	
APPEARING:	For the Applicants:	Dr. Evan Frangou Benjamin Isitt, Articled Student
	For the Appellants:	Katy Young Karen Forbes
	For the Respondent and Third Party:	Amanda Macdonald, Counsel Kyle Chesley, Articled Student

Stay Decision

APPLICATIONS

[1] On May 2 and 9, 2022 the Environmental Appeal Board (the "Board") received two applications seeking a stay of Pesticide Use Permit No. 738-0030-20/23, as amended on April 4, 2022 (the "Amended Permit"). The Amended Permit was issued by an Authorizations Section Head with the Integrated Pest Management and Environmental Protection Division of the Ministry of Environment and Climate Change Strategy, on behalf of the Administrator, Integrated Pest

Management Act (the "IPMA'"). The Administrator is the Respondent in the appeals. The Board has received eight appeals of the Amended Permit, which have been joined and are being heard together.

[2] The Amended Permit was issued to the Ministry of Forests, Forest Science, Planning and Practices Branch (the "Permit Holder"). The Permit Holder is a third party to these appeals.

[3] Two of the Appellants, Dr. Frangou and Diana Smardon (the "Applicants"), filed applications for interim relief through a stay of the Amended Permit. All the other Appellants were invited to provide submissions on the two applications by Friday, May 13, 2022. The Board received two written submissions, one from Ms. Forbes on behalf of herself and Ms. Sawyer and one from Ms. Young. Ms. Young also attended the oral hearing held on May 19, 2022 by videoconference and provided submissions along with Dr. Frangou and Ms. Smardon (through her representative, Mr. Isitt).

[4] On May 20, 2022, I granted a partial interim stay of the Amended Permit, suspending the aerial spray scheduled for the View Royal area on May 21, 2022. My written reasons for the interim stay were issued on May 25, 2022. The partial interim stay was effective until May 31, 2022.

[5] Due to the time sensitive nature of these applications, in a June 1, 2022 letter I advised the parties that the stay applications were denied on the merits and my written reasons would follow. These are my written reasons on the merits of the stay applications. My decision on the merits of the stay application, and the reasoning provided below, are based on the information and arguments made up to and including the oral hearing on May 19, 2022.

[6] I note the Respondent provided a schedule for the application of the pesticide under the Amended Permit following my letter of June 1, 2022. The Respondent intends to complete the applications before the hearing on the merits of these appeals can be completed, and applies for the appeals to be dismissed as moot. This development occurred after, and presumably in response to, my letter of June 1, 2022, communicating that the stay applications were denied on the merits. This decision only provides the reason for denying the stay applications, which was decided on June 1, 2022. The application for dismissal, and any other applications that may arise from the Respondent's letter, will be decided by the Board separately.

BACKGROUND

[7] The Amended Permit authorizes the use of Foray 48B, a pesticide with the active ingredient Bacillus thuringiensis var. kurstaki ("BtK"), in a spray program designed to eradicate populations of the Lymantria dispar moth in a specified areas throughout British Columbia (B.C.).

[8] The management of pests for the protection of plants, including trees, shrubs and bushes has a long history in both B.C. and Canada.

[9] In 2009, the BC Plant Protection Advisory Committee was formed as part of an inter-agency response to plant emergencies. Pest control responses were

coordinated through the Critical Plant Pest Management Committee, also formed in 2009. This committee is comprised of senior provincial and federal officials, working to optimize pest management for the protection of plants.

[10] As part of the coordination of these inter-agency committees, B.C. has a Lymantria Moth Technical Advisory Committee which evaluates Lymantria moth management options and makes treatment recommendations. This Committee is made up of federal and provincial government experts in Lymantria moth management.

[11] The Lymantria Moth Technical Advisory Committee makes recommendations on whether and how to eradicate the Lymantria moth in any given area in B.C. Treatment options include aerial and ground spraying with pesticides and mass trapping of adult males. The Lymantria Moth Technical Advisory Committee bases its decision on various factors, including trapping results, egg mass surveys, ecological suitability to sustain a Lymantria moth population, climatic suitability to sustain a Lymantria moth population, and other relevant factors.

[12] In November 2021, the Permit Holder applied for an amendment to Pesticide Use Permit No. 738-0030-20/23, which was originally issued in March 2020. The permit originally targeted populations of Lymantria moth (North American strain) by applying Foray 48B at specified locations in Surrey and Lake Cowichan. The amendment sought to add treatment areas in Mission, Langley, Chilliwack, View Royal, Nanoose Bay, and Burnaby, as well as adding the Asian variety of the moth to the permit. The application for the amendment proposed aerial application of Foray 48B by fixed or rotary wing aircraft, beginning in spring 2022.

[13] Relevant history related to the Amended Permit is outlined in a Technical Assessment document, which assessed the application for the Amended Permit. The Respondent provided the Board and the parties with a copy of the Technical Assessment. This document specifies on page 2 that B.C.'s goal is to eradicate all Lymantria moths detected to maintain a "moth free status". The Technical Assessment outlines that in Surrey, B.C., the Lymantria moth was detected in 2013 and the moth population rapidly increased in 2017 and continued to be high in 2018. Both ground and aerial pesticide treatments were applied without success. More targeted mass trapping identified more clearly the location of the Lymantria moths and subsequent targeted aerial pesticide treatment in 2018 and 2019 resulted in reduced counts in 2021. However, moth trap counts in the Surrey area indicate that the moth population was not successfully eradicated.

[14] The Technical Assessment also states that in the Castlegar and Cowichan Lake areas, there were rapid increases in Lymantria moths in 2019. The Castlegar outbreak is controlled, but the Cowichan Lake outbreak is not. Additionally, in 2021, there was rapid increase of Lymantria moths across the lower mainland and Vancouver Island, including the Asian variety moth in Langley, B.C.

[15] In addition, the Technical Assessment explains that moth larvae (caterpillars) hatch in early and mid-April, reaching maturity in early July. The larvae pupate in cocoons for about one month, typically during July, before emerging as adult moths. BtK targets lepidopteran larvae. BtK produces crystals which are toxic to

larvae upon ingestion. The crystals of BtK dissolve in the alkali conditions of the larvae's gut, releasing toxins which kill the larvae.

[16] The Technical Assessment reviews the potential risks to humans, animals, and the environment from exposure to Foray 48B and BtK. Among other things, it notes that there is "reasonable certainty that no harm will result from chronic dietary exposure to sensitive members of the population (infants and children)", but there is "the potential for lung sensitization after repeated exposures of high concentrations via inhalation for workers (less indication of sensitization for the general public)."

[17] The Technical Assessment recommended that the Amended Permit be issued, stating:

> There is sufficient evidence to support the need for the proposed pesticide use. Two ground-based applications and one aerial application were unsuccessful at eradicating this population and therefore an additional application is justified for the proposed treatment area, including over residential land. The proposed pesticide use is in accordance with the label of the proposed pesticide to be used. Additionally, there is no indication that the proposed pesticide will cause an unreasonable adverse effect on human health or the environment that cannot be addressed in the conditions of the permit, while the economic and ecological cost of letting gypsy moth establish are high.

[18] The Amended Permit issued under section 6 of the *IPMA* authorizes the Permit Holder to use pesticides subject to the conditions listed in the Amended Permit. Specifically, the Amended Permit authorizes the use of Foray 48B by aerial and ground spray for the eradication of the European and Asian Lymantria Moth from public and private land in Surrey, Lake Cowichan Area, Nanoose Bay, City of Victoria (View Royal), City of Burnaby, City of Mission, City of Langley and the City of Chilliwack. The Amended Permit sets conditions on the number of applications of Foray 48B, the maximum treatment area for each of the eight locations, and the authorized method of application including ground spray and aerial by fixed-wing aircraft.

[19] The Amended Permit sets conditions on the number of liters of Foray 48B that can be applied per hectare, and the allowable treatment dates based on notification requirements. It also sets out requirements for public notification and access to the Amended Permit.

[20] Section 4 of the Amended Permit sets out notification requirements starting within 15 days of the issuance of the Amended Permit. Some, but not all, of the following notification requirements are set out in section 4 of the Amended Permit. The Permit Holder must:

- publish notice in at least one community newspaper circulated within each treatment area, within 15 days of the issuance of the Amended Permit;
- issue a press release providing details of the pending local pesticide use to a minimum of one community newspaper, one locally broadcast AM Radio station, one locally broadcast FM Radio station, and one locally broadcast

television station that serve the communities in and around the treatment areas, annually and at least seven days before the first pesticide application;

- provide 24 hours' notice before each pesticide application (in writing if possible) to the following persons:
  - the Medical Health Officer for each Health Authority in which application will take place;
  - the principals of all schools within the treatment areas and primary zone of spray drift deposition;
  - the owners or managers of any licensed care facilities within the authorized spray area and primary zone of spray drift deposition;
  - all persons subscribed to the list serve or other subscription email application;
  - the mayor for each town or city in which an application will take place; and
  - an Integrated Pest Management Authorization Officer;
- place treatment notices so they are clearly visible to anyone entering the treatment areas, at least 48 hours before the start of each spray application.

[21] Section 6 of the Amended Permit sets out various restrictions, including that aerial applications must be completed between civil morning twilight and 07:45 hours. Treatments can be conducted to 08:00 hours on weekends, school professional development days, and on weekends in some locations. However, aerial applications must be completed by 07:45 hours in View Royal and Cowichan Lake at all times except on school professional development days.

[22] The Applicants seek a stay of the Amended Permit pending a decision on the merits of the appeals. The Board held an expedited hearing on the stay applications on May 19, 2022, by videoconference. The Permit Holder took no position on the stay applications, but the Respondent submitted that a stay should not be granted because of the potential impact to the overall eradication program from even a minor delay in the treatment schedule.

DISCUSSION AND ANALYSIS

[23] As I noted in the interim stay decision, the parties agreed that the legal test to be applied when deciding a stay application is the three-stage test in *RJR-MacDonald Inc. v. Canada (Attorney General)* (1994), 111 DLR (4th) 385 (SCC) [*RJR-MacDonald*]. This test was referenced by the parties in their submissions. The test involves the following three parts:

1) whether the appeal raises a serious issue;
2) whether the applicant for a stay will likely suffer irreparable harm if a stay is refused; and

3) whether any harm that the applicant will likely suffer if a stay is refused exceeds any harm that may occur if a stay is granted (the "balance of convenience" test).

1. Whether the appeals raise a serious issue

Summary of the Parties' Submissions

[24] The Applicants submit that the appeals raise serious questions to be decided by the Board, including whether the spray of Foray 48B will cause harm to human health or the environment. The Applicants argue that these are not questions that are vexatious, frivolous or purely questions of law.

[25] The Respondent argues that stay applications are vexations or frivolous because there is little prospect they can succeed based on prior analysis used by the Board (see *Carolyn Klassen v. Environmental Health Officer*, Environmental, Appeal Board, Appeal No. 98-HEA-08, June 8, 1998).

[26] The Respondent submits that the appeals deal with scientific evidence regarding whether there is a substantive risk to human health or the environment. The Respondent submits that Health Canada has certified Foray 48B as a safe pesticide to use, and therefore, there is little prospect of the Appellants successfully demonstrating that the pesticide will cause unreasonable harm to human health or the environment. Therefore, the Respondent submits there is no serious issue to be tried.

[27] The Respondent submits that previous court and Board decisions have supported the proposition that Foray 48B can be considered "generally safe" because of the regulated process and science-based review that Foray 48B undergoes to be certified by Health Canada.

[28] The Respondent relies on the B.C. Court of Appeal decision *Canadian Earthcare Society v. Environmental Appeal Board*, 1988 BCJ No. 3109, 3 CELR N.S. 55 [*Canadian Earthcare*], which confirmed the Board did not commit a jurisdictional error by assuming that a federally regulated pesticide was generally safe. However, the Court of Appeal also noted that the Board found that a federally registered pesticide could still cause an unreasonable adverse effect, and that the Board was willing to hear evidence on whether the specific site in question prevented safe application of the pesticide, the proposed pesticide use was contrary to registration intent and restrictions, and the permit holder was unable to apply the pesticide safely.

[29] The Respondent submits that the Board applied the principles in *Canadian Earthcare* when it considered the use of BtK to eradicate Lymantria moths in previous appeals. For example, in *Caryl and Jeff Jones v. Administrator, Integrated Pest Management Act, Decision No. 2010-IPM-001(a), April 12, 2010* [*Jones*], at para. 135, the Board found:

> Foray 48B has been registered for many years and there is significant legal authority for the proposition that the Board can consider a registered pesticide to be generally safe when used in accordance with the label.

[30] Therefore, the Respondent submits that I can give weight to the mechanism of review and approval of Foray 48B under the federal government pesticide control regulations and, in general, find that Foray 48B is safe if applied in accordance with the label. The Respondent submits that the Board lacks the authority to question Health Canada's certification that Foray 48B is safe to use as a registered pesticide. This applies not only to the Board's decision on the merits of the appeals, but also to the first and second stages of the *RJR MacDonald* test in deciding the applications for a stay of the Amended Permit.

Panel's Findings

[31] I note that the Court in *RJR-MacDonald* said the first stage of the test has a low threshold and there are no specific requirements when determining whether there is a serious issue to be tried, other than the issues must not be frivolous or vexatious, or pure questions of law.

[32] I find that the appeals raise serious issues to be tried, including whether the application of the permitted pesticide will cause unreasonable adverse effects to human health and the environment. These questions are not vexatious, frivolous, or pure questions of law.

[33] I am not persuaded by the Respondent's argument that there is no serious issue to be tried because of prior decisions of the Board concluded that it may assume a pesticide to be generally safe based on scientific review and assessment by Health Canada. In those prior decisions, and as noted by the Court of Appeal, while the Board did not make a jurisdictional error in concluding that a federally regulated pesticide is generally safe, this does not preclude or fetter the Board's discretion to consider whether a pesticide creates an unreasonable harm in a specific set of circumstances, as described in *Canadian Earthcare*.

[34] I also note that the Respondent says that the stay applications are frivolous because the Appellants have submitted no scientific studies or expert evidence to accompany their stay applications. However, the question in the first stage of the *RJR-MacDonald* test is whether the appeals raise a serious issue to be tried, and not whether the stay applications raise a serious issue. The Court stated in para. 78 of *RJR-MacDonald* that this first question is to be decided based on "an extremely limited review of the case on the merits". At para. 50, the Court stated that "A prolonged examination of the merits is generally neither necessary nor desirable." In appeals to the Board, this typically involves reviewing the grounds for appeal and the issues identified in the notice of appeal. It generally does not involve assessing evidence submitted at the preliminary stages of the appeal process, including any evidence supporting a preliminary stay application. Such evidence is usually assessed in the next steps of the *RJR-MacDonald* test.

[35] In deciding the stay applications, while I can assume that Foray 48B is generally safe to use as a registered pesticide as determined by Health Canada, it remains within my jurisdiction to consider the evidence brought forward by the Appellants as to whether use of the pesticide as authorized in the Amended Permit may cause "unreasonable adverse effect", as stated in section 6(3)(d) of the *IPMA*, based on the particular circumstances of the case.

[36] I find the first stage of the *RJR-MacDonald* test is met. The appeals raise serious questions about whether the application of Foray 48B under the terms and conditions of the Amended Permit will cause unreasonable harm to human health and the environment. These are not vexatious or frivolous matters nor pure questions of law.

2. Whether the Applicants will likely suffer irreparable harm if a stay is refused

Summary of the Applicants' Submissions

[37] Dr. Frangou submits that the Amended Permit should be stayed because the eight communities around the province where the aerial spray is scheduled to occur have not received full, impartial and transparent notice about the potential harm associated with the application of Foray 48B and its active ingredient BtK.

[38] Dr. Frangou says that he personally will be exposed to Foray 48B in the View Royal area because he travels in the area to get to work. He is especially concerned about people using the regional bike trail because it is used by many people at all times of the day or night. Dr. Frangou also expressed concern about exposure to Foray 48B by patients at Victoria General Hospital, which is in the buffer zone of the application area for View Royal under the Amended Permit.

[39] Dr. Frangou submits that people within this geographic area are unlikely to receive adequate notice of the spray and will not be reasonably informed of the potential health risks associated with the pesticide. He says there is evidence that people with underlying health conditions may be more susceptible to harm from Foray 48B. Dr. Frangou acknowledged there is a procedure to inform patients at the hospital about the scheduled treatments but he is skeptical this information will be disseminated to patients throughout the hospital.

[40] Dr. Frangou argues that many of the means of providing the public notice are not reflective of the habits of people in the target area. He submits that "millennials" (young adults) are unlikely to read community newspapers or listen to A.M. Radio Station announcements.

[41] Beyond concerns about the adequacy of notice requirements in the Amended Permit, Dr. Frangou says there is good evidence that Foray 48B can cause irreparable harm to human health and the environment. Studies have identified that conditions like asthma and allergies can be exacerbated and that water bodies can become contaminated. Dr. Frangou references a study which shows that other insect species populations remained low four years after an initial pesticide treatment with Foray 48B. He notes that impacts from the aerial spray can extend outside of the target spray as a result of drift.

[42] Dr. Frangou submits that studies show increased colonization of BtK in nasal swabs of humans, even nasal swabs taken from people far from the treatment areas. He says that, although the symptoms of irritations caused by exposure to BtK are not immediately life threatening, they are measurable, meaningful, and seemingly irreversible.

[43] Dr. Frangou also argues that the Respondent has stated on its website that BtK is harmless, which is inconsistent with the evidence that some people might

experience a reaction. He submits the government's position is based on a non-peer reviewed study from 1999. Dr. Frangou says the province has the duty to communicate the potential adverse effects resulting from spraying this pesticide.

[44] In support of his position, Dr. Frangou references four scientific studies:

- "The measurement of volatile constituents in Foray 48B, an insecticide prepared from *Bacillus* thuringiensis var. kurstaki", C. Van Netten, K. Teschke, V. Leung, Y. Chow, K. Barlett, in the Science of the Total Environment, 263 (2000) 155-160, June 9, 2000.
- "Identification of *Bacillus* thuringiensis subsp. Kurstaki strain HD1-Like Bacteria from Environmental and Human Samples after Aerial spraying of Victoria, British Columbia, Canada with Foray 48B", G. Valadares De Amorim, B. Whittome, B. Shore and D. Levin, Applied and Environmental Microbiology, March 2001, p. 1035-1043.
- "Immune Responses in farm workers after exposure to *Bacillus* thuringiensis pesticides", L. Bernstein, J. Bernstein, J. Bernstein, M. Miller, S. Tierzieuk, D. Bernstein, Z. Lummus, M. Selgrade, D. Doerfler, and V. Seligy, Environmental Health Perspectives, Vol. 107, No. 7, July, 1999 (the "Bernstein et al study").
- "Symptom complaints following aerial spraying with biological insecticide Foray 48B", Petrie, Thomas, and Broadbent, The New Zealand Medical Journal, March 14, 2003, Vol. 116, No. 1170 (the "New Zealand study").

[45] Dr. Frangou submits that the New Zealand study found that participants perceived a reduction in their health following aerial spray of BtK. Dr. Frangou notes that although all studies have some biases, the New Zealand study is peer reviewed which should give the study some weight.

[46] Dr. Frangou also expressed concern about himself and others in and around the spray area becoming "colonized" by BtK, resulting in serious and irreparable harm like chronic obstructive pulmonary disease (COPD) or some other respiratory illnesses. Dr. Frangou submits BtK can causes inflammation, which is his main concern.

[47] Ms. Smardon submits that the pesticide use authorized under the Amended Permit will cause irreparable harm to her, others, and the environment. She notes that the Court defined irreparable harm as being harm that cannot be compensated by money or cannot be quantified in monetary terms. Ms. Smardon submits that in *RJR-MacDonald*, the Supreme Court of Canada held that decision-makers should not limit their assessment of possible irreparable harm to only the harm to the applicants. Rather, the correct approach is to broadly consider the scope of potential harm. Ms. Smardon submits that the Board has the jurisdiction to consider not only the irreparable harm that she might suffer, but also the harm to other individuals, including her interests in low-income or homeless individuals in the various spray areas under the Amended Permit.

[48] Ms. Smardon submits that this approach has been taken before in B.C., citing the court decision in *Carvalho v. British Columbia (Medical Services Commission)*, [2017] BCJ No 454, 2017 BCSC 381. In that case, at para. 74, the Court did not

limit its assessment of irreparable harm to only Dr. Carvello; it also considered harm to Dr. Carvello's patients.

[49] Ms. Smardon submits that the application of BtK through Foray 48B will cause irreparable harm to both human health and the environment that cannot be compensated with monetary damages.

[50] In support of this submission, Ms. Smardon cites the research paper "A Review of the environmental impacts of the microbial insecticide Bacillus thuringiensis," Technical Bulletin No. 29, Argi-culture and Argi-Food Canada, Kwang-Bo Joung and Jean Cotes, 2000, which found that human exposure to BtK occurs orally, dermally, and by inhalation. Ms. Smardon specifically noted the following passage regarding workers involved in ground spray of BtK:

> In fact, a major study of workers in the Vancouver urban area spray program found that some people working on Btk ground spray programs, without protective clothing, developed minor irritations of skin, eyes and respiratory tract. These health effects tended to be transient and irritant in nature: dry skin, chapped lips, itchy, red and burning eyes, runny nose and nasal stuffiness. The symptoms were reported two to three times more frequently among ground spray workers than among the control group during the trial period. However, ground workers are likely to have greater levels of exposure to Btk than aerial workers or the general public. The exposure rates of the ground workers were up to 500 times the amount of Btk that a general public standing outside during the spray operation would be exposed to. Consequently, these effects are less likely to be observed in aerial workers or members of the general public after exposure to Btk (Nobel et al., 1992). The study also found that Btk persists in the nasal cavities of workers for up to four weeks (or longer in a minority of cases). No significant or serious health problems in spray workers resulted from Btk exposure and no loss of workdays could be attributed to Btk.

[51] Ms. Smardon submits that this research identifies potential harms related to exposure to BtK, including symptoms that can last up to four weeks after the pesticide is applied to an area. She acknowledges that the symptoms are not fatal, but says this research paper shows that application of BtK can cause harm to human health and the environment.

[52] Ms. Smardon also cites a journal article by Carrie Swagner titled "Bacillus Thuringensis (B.T.)" in the Journal of Pesticide Reform, Vol. 14, No. 3, Fall 1994, pp. 13-20, that states that:

> B.t.k. has been found to drift over 3,000 meters downwind during an aerial application. The distance B.t.k. is capable of drifting depends upon the amount and method of application.

[53] Ms. Smardon submits this is evidence of the potential far reaching impacts the spray programs may have on human health and the environment if the stay is not granted. The possible irreparable harm extends far beyond the boundaries and buffer zones identified in the Amended Permit.

[54] Ms. Smardon submits that in the View Royal treatment area, there are low-income and homeless populations who are disproportionately impacted by the proposed spray. Within that treatment area, there is a recreational vehicle park, a major highway, an addictions treatment center, and a regional bike trail. In the identified buffer zone, there is the hospital. The individuals living at, attending, or passing through this area would all be potentially impacted by the proposed pesticide spray. However, Ms. Smardon says there is no evidence that these people were notified or consulted by the Respondent prior to the scheduled spray treatments. She also submits that many people in this area may be low income or homeless and unable to access or participate in the appeal process. Ms. Smardon agrees with the submissions of Dr. Frangou that there are various other individuals potentially exposed to BtK by use of the regional bike trail or attending the hospital.

[55] In addition, Ms. Smardon submits that the riparian area of Craigflower Creek flowing through View Royal Park, into Portage Inlet, then into Victoria Arm and into the Pacific Ocean, and all of the plant and animal species connected through those waterways, may experience irreparable harm. She argues that the scope of the potential irreparable harm to human health and the environment is extensive. In support of her argument that the pesticide use will cause harm to the environment, Mr. Smardon says the Board has noted that harm to wildlife arising from the application of pesticides amounts to irreparable harm if proven in the substantive appeal (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).

[56] Ms. Smardon also suggests that a further variable is the impact of COVID-19 and whether it makes people more vulnerable to negative side effects when exposed to BtK. It has been shown that people with underlying conditions like allergies or asthma can be susceptible to more harm from exposure than others.

Submissions from other Appellants

[57] As noted above, two other Appellants supported the stay applications.

[58] Ms. Young submits that it is common knowledge that BtK harms human health, and she is particularly concerned about BtK getting into water bodies and drinking water. She maintains that BtK particles are inhaled deep into the lungs because the bacteria are very small.

[59] Ms. Young submits that BtK can also be ingested because the bacteria are in the air and settle onto things, including what people eat or drink. Ms. Young is concerned that the spray program in Cowichan Lake will contaminate the drinking water and she says that constitutes irreparable harm. She noted that a previous study showed BtK in the Capilano watershed for three months after the spray program in 1992. Ms. Young submits that thousands of people reported being ill after that, but they were ignored.

[60] Ms. Young argues that the irreparable harm is vast. When she is exposed, she gets a headache that lasts for days. She is unproductive for days. She says I should extrapolate from this the impact aerial application of BtK could have on the productivity of thousands of people.

[61] Ms. Young submits that studies have identified that exposure can sensitize people to reactions like allergies or asthma. With each spray, people become more susceptible to reacting to the product. Ms. Young referenced spray programs in 1993 and 1994 where people were just recovering from the first spray when the second occurred. Ms. Young attributes a miscarriage she experienced to the second spray in 1994.

[62] Ms. Young also argues that the New Zealand study supports her argument that irreparable harm will occur if the spray programs occur. She also referenced a website created by Valent BioSciences[1] which provides label information for Foray 48B.

[63] Finally, Ms. Forbes, on her own behalf and on behalf of Ms. Sawyer, made a brief submission concerning the potential drift of the aerial spray of Foray 48B. She referenced a journal article titled, "Pesticide Action Network North America (PANNA) – Getting the Drift on Chemical Trespass", K. Owens and J. Feldman, Vol. 24, No. 2, 2004. Ms. Forbes also refers to the New Zealand study in support of the stay applications.

Summary of the Respondent's Submissions

[64] The Respondent submits that if I assume that Foray 48B is being applied as required by the label, I have no grounds to conclude that it will cause irreparable harm. The Respondent submits that the studies and examples raised by the Applicants cannot be relied upon as evidence that the permitted pesticide use may cause irreparable harm. The Respondent submits that the Bernstein et al study titled "Immune Responses in farm workers after exposure to *Bacillus thuringiensis"* was reviewed by Heath Canada. In addition, studies of the health impacts on workers using ground spray were considered in the Agriculture and Agri-Food Canada report, "A review of the environmental impacts of the microbial insecticide Bacillus thuringiensis".

[65] The Respondent notes that the symptoms being described by Dr. Frangou were related to unprotected workers who had been exposed to dosages 500 times greater than what anyone in the public might be exposed to during the aerial spray treatments under the Amended Permit. Even under those conditions, the workers only experienced skin, eye or respiratory irritation. Therefore, the Respondent submits it is very unlikely that anyone exposed during the aerial spray programs would experience any of the symptoms identified by the studies or reports relied upon by the Applicants.

[66] The Respondent submits that while the workers in the Bernstein et al study did experience symptoms for up to four weeks, none of the symptoms were significant and no serious health problems occurred as a result of exposure to BtK. The Respondent also notes that no time loss was associated with any reported symptoms resulting from BtK exposure. The Respondent submits that these studies and reports are not reliable in assessing potential harm, or irreparable harm, in the zones under the Amended Permit because they are not specific to the conditions in

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[1] Publicly viewable at:
https://www.valentbiosciences.com/foresthealth/products/foray/#downloads1

the Amended Permit and do not address that the pesticide is being applied as required under the label.

[67] The Respondent argues that the concentration of exposure is a very important factor because often a pesticide can be harmful at one dose or concentration and harmless at another. This was reflected in *Island Protection Society v. British Columbia (Environmental Appeal Board*, [1998] B.C.J. No. 1639, where the B.C. Supreme Court upheld the Board's finding that a chemical can be dangerous at one concentration but have no effect at another concentration. In that case, the Board also found that studies of harmful effects of some chemicals cannot be evidence that their use under other conditions would cause similar effects unless the concentrations and conditions in the environment were the same as in the case study.

[68] With respect to irreparable harm to the environment, the Respondent submits the evidence demonstrates that BtK only affects the gut of the specific lepidopteran insects in the larval stage of their life cycles. It does not harm adult moths, for example. The Respondent provided a copy of a Health Canada Factsheet, which states that the U.S. Environmental Protection Agency categorizes the risk posed by BtK to non-target organisms as "minimal to non-existent".

[69] The Respondent says that the cases submitted by Ms. Smardon regarding prior Board decisions on harm to wildlife caused by pesticides are distinguishable from these applications because they involved a different pesticide. The Respondent submits that BtK is a federally reviewed and regulated product, it is naturally occurring, and has been certified as an authorized pesticide for organic farming. The Respondent says the Agriculture and Agri-Canada Study found that no negative impacts were associated with invertebrate predators, fish, amphibians, birds, or mammals from the use of Btk as a pesticide.

Summary of the Applicants' Reply Submissions

[70] Dr. Frangou submits that the product label for Foray 48B does not provide any meaningful instruction on how to apply the pesticide in areas near hospitals. He argues that all the studies examine the potential harms to the average person or general public, and do not consider marginalized groups of people such as those identified in these applications.

[71] Dr. Frangou submits it is dangerous to extrapolate from studies of healthy people, who have minimal adverse effects, and conclude that it is safe or there is no harm expected in children and adults in marginalized communities. Dr. Frangou reiterates that some people will have susceptibility related to underlying conditions like COVID-19.

[72] Dr. Frangou submits that the case study titled "Recovery of Non-Target Lepidoptera on Vancouver Island, Canada: One and Four Years after Lymantria dispar Gypsy Moth Eradication Program", T. Boulton, I. Otvos, K. Halwas and D. Rohlfs, Environ Toxiol Chem, April 24, 2007 suggests that ecological harm will be caused, particularly to species affected by BtK. He notes this study reported that some species [Dr. Frangou did not clarify what species] were still reduced in numbers four years after the initial spray.

[73] Ms. Smardon says that the Board should reject the Respondent's argument that it cannot find that harm is caused by BtK because it is federally regulated pesticide. Ms. Smardon submits this is an unreasonable erosion of the Board's jurisdiction to issue a stay under section 25 of the *ATA*.

[74] Regarding whether BtK will cause irreparable harm, Ms. Smardon argues the studies provided establish that it causes some harm. The question is how much harm. If there was not harm associated with the pesticide, then why does the Amended Permit contain specific conditions regarding when, where, and at what time the pesticide is applied? Why does the Amended Permit contain restrictions around school zones and school times?

[75] Ms. Smardon submits that once it is established there is harm, the degree of harm is better determined on the merits of the appeal after the parties have had sufficient time to gather evidence and make submissions.

Panel's Findings

[76] In considering whether the permitted pesticide use will likely cause irreparable harm to the Applicants, it is important to consider what is meant by irreparable harm. As stated in *RJR-MacDonald* at p. 405 (paras. 63 - 64):

> At this stage the only issue to be decided is whether a refusal to grant relief could so adversely affect the [applicant's] own interest that the harm could not be remedied if the eventual decision on the merits does not accord with the result of the interlocutory application. "Irreparable" refers to the nature of the harm suffered rather than its magnitude. It is harm which either cannot be quantified in monetary terms or which cannot be cured, usually because one party cannot collect damages from the other. Examples of the former include instances where one party will be put out of business by the court's decision …; where one party will suffer permanent market loss or irrevocable damage to its business reputation… or where a permanent loss of natural resources will be the result when a challenged activity is not enjoined. …

[77] In these applications, the Applicants have asked that my assessment of potential irreparable harm go beyond each individual Applicants interests, and that I consider the irreparable harm experienced by marginalized people within each of the aerial spray zones in the Amended Permit. Ms. Smardon referenced some case law in support of taking this position and the Respondent did not object to this approach. I also note that the portion of *RJR-MacDonald* cited above refers to the likelihood of irreparable harm to the interests of the applicants. The Court in *RJR-MacDonald* stated at para. 57 – 58 that:

> At this stage of the test the only issue to be decided is whether a refusal to grant relief could so adversely affect the applicants' own interests that the harm could not be remedied if the eventual decision on the merits does not accord with the result of the interlocutory application.

[78] I note that "public interests" are generally considered in part three of the *RJR-MacDonald* test, I note that the Board has generally accepted that an individual applicant's interests may include "human health" (not simply the applicant's health)

and "the environment" in the context of an application to stay a pesticide use permit (e.g., *Josette Wier v. Deputy Administrator, Pesticide Control Act*, Appeal No. 2001-PES-003, July 6, 2001 [*Weir*]; *Ingmar Lee v. Deputy Administrator, Pesticide Control Act*, Appeal No. 2002-PES-003(a), May 17, 2002). Although those Board's past decisions are not binding on me, those decisions offer helpful guidance in deciding the present applications. Therefore, while the correct approach is still debated, in consideration of these stay applications I adopt the reasons in *Weir* and find I can consider the Applicants' interests to include "human health" and "the environment" broadly.

[79] I have some concerns regarding whether I can address the procedural fairness issues raised by Ms. Smardon from the various people identified in his submissions. For example, barriers associated with filing fees is not an issue the Board can likely address because the requirement of a filing fee is required by the enabling statute. In addition, the Board does not have the same inherent powers that a court of law has to address a wide range of remedies. However, the procedural fairness issues and the notice issues raised by Applicants are not specifically relevant to the question before me.

[80] However, these arguments are not relevant to applying the three-part test under *RJR-MacDonald* and it is not necessary for me to address or resolve these questions in addressing these applications.

[81] I am not persuaded by the Respondent's submission that, because Health Canada has registered Foray 48B and it can be assumed to be generally safe, the Applicants are unlikely to suffer any irreparable harm from the permitted pesticide use. I note that in *Weir v. Environmental Appeal Board et al.,* 2003 BCSC 1441, the Court confirmed at page 6 that the Board may consider evidence of the general toxicity of a pesticide, even though a pesticide has been federally registered. Furthermore, the Court of Appeal confirmed in *Canadian Earthcare* that the Board may hear evidence on whether a pesticide can be safely used at a particular site, whether the proposed pesticide is contrary to registration intent and restrictions, or the permit holder is unable to apply the pesticide safely. I find that in the context of these stay applications, I have the jurisdiction to consider whether application of Foray 48B under the terms and conditions of the Amended Permit is likely to result in irreparable harm to the Applicants' interests.

[82] All the parties have referenced various scientific studies in support of their positions that there will, or will not, be irreparable harm to the Applicants' interests if the stay application is not granted. I note that in *Wier*, the Board found on page 6 that:

> It should be noted that both parties referred to scientific reports that address the potential for adverse effects arising from the use of MSMA, and reach some conflicting conclusions. The Panel notes that the purpose of this preliminary application is to determine whether a stay should be issued, and not to address the merits of the appeal. At this stage of the appeal, it would not be appropriate for the Panel to try to resolve conflicts of evidence that go beyond those required to make a determination on the stay. These matters are appropriately dealt with after a full hearing of the merits of the appeal.

[83] Although this analysis is not binding on me, I find the reasoning above to be helpful in deciding these applications. The question of whether the application of Foray 48B will cause an unreasonable adverse effect on human health or the environment is a question to be decided when the merits of the appeals are heard. In deciding the stay applications, I must consider the evidence that is relevant to deciding the likelihood that the Applicants' interests will likely suffer irreparable harm if the stay applicants are denied. I will not try to resolve conflicts of evidence that go beyond those required to make a determination on the stay.

[84] A general review of the studies and the information from Health Canada supports the overwhelming conclusion that BtK has been frequently used and its use has not resulted in significant harm to human health or the environment. I find that the studies submitted by the Applicants are insufficient to establish that their interests will likely suffer irreparable harm if the stay applications are not granted. The people in one of the studies relied on by the Applicants were exposed to 500 times more BtK than the average person would be during a spray program, and even then, those people only experienced minor skin, eye or respiratory irritation.

[85] A further New Zealand study was considered by Health Canada when it reviewed BtK for continued registration in Canada in the Proposed Acceptability for Continued Registration 2006 report [the "2006 report"] submitted by the Respondent. In the 2006 report, it was noted that in the New Zealand study[2], the most frequently reported concern was "fear of unspecified future disease", followed by a headache and respiratory symptoms such as a sore throat. Two general medical practitioners, one located in the heart of the infested area with a widespread patient population and the other near the perimeter of the spray zone with both exposed and nonexposed patients, were selected to identify any change in patients' consultation frequency for asthma, lower respiratory problems other than asthma, upper respiratory problems, rheumatoid arthritis and other autoimmune disorders, chronic fatigue syndrome, headaches, conjunctivitis, and dermatitis. Based on information from those two medical doctors, no adverse patterns were found.

[86] I find it compelling that the information from Health Canada does not require any special precautions during aerial spray of Foray 48B, including staying indoors. Therefore, even people who might not receive notice or are unaware of the spray, but happen to be out during the spraying, will unlikely to suffer any adverse health effects. The Respondent has also submitted an Agriculture and Agri-Canada Study which noted that no negative impacts from the use of BtK as a pesticide were associated with invertebrate predators, fish, amphibians, birds, or mammals. I give significant weight to the findings of the Agricultural and Agri-Canada Study and find the weight of evidence does not support BtK is likely to cause irreparable harm to the environment. I acknowledge Dr Frangou's reliance on the Boulton et al 2007 report; however, the full study was not submitted with his stay application and the abstract suggests that the non-target lepidoptera recovered in the treatment zones.

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[2] Aer'aqua Medicine Ltd. 2001. Health Surveillance Following Operation Ever Green: A Programme to Eradicate the White-Spotted Tussock Moth from the Eastern Suburbs of Auckland. Report to the Ministry of Agriculture and Forestry in May 2001.

[87] I note that documents from Health Canada also indicate that BtK only becomes toxic in the alkaline gut of specific lepidopteran insects in the larval (caterpillar) stage of their life cycles. I give significant weight to this evidence that it does not affect adult moths and butterflies, other insects, honeybees, fish, birds or mammals. The U.S. Environmental Protection Agency categorizes the risks posed by BtK to non-target organisms as "minimal to non-existent" and I give significant weight to this information.

[88] I find that there is little likelihood of irreparable harm to the environment, including watersheds or drinking water as a result of applying the pesticide under the Amended Permit. In reaching this conclusion I give significant weight to the 2006 Continued Registration Report, at page 17, which states:

> Drinking water exposure is expected to be minimal as Canadian B. thuringiensis subsp. Kurstaki and B. thuringiensis subsp. tenebrionis labels limit direct application to, or contamination of, water bodies and B. thuringiensis subsp. israelensis labels prohibit application to treated, finished drinking water. The low toxicity associated with B. thuringiensis and its safe history of use suggest that human exposures through drinking water do not pose a significant risk.

[89] I acknowledge that BtK is not harmless. There is no dispute that it does kill lepidopteran caterpillars. However, I must be satisfied on the evidence before me that the Applicants' interests will likely suffer irreparable harm if the pesticide treatments continue before the Board decides the merits of the appeals. Based on my review of the evidence submitted, I am not persuaded that irreparable harm will likely occur if the stay applications are denied. While there is some potential for minor harm to humans related to irritations caused by potential exposure, this is not irreparable harm. I am not persuaded that the evidence supports a conclusion that irreparable harm will occur to human health or the environment based on the Applicants' arguments that the pesticide will drift. The Applicants did not provide compelling evidence to support their argument that there will be a general increased susceptibility to BtK because of the COVID-19 virus. There is persuasive evidence before me to conclude BtK will not likely cause irreparable harm to human health or the environment. The Applicants have not demonstrated that any harm to their interests resulting from the use of the pesticide will likely be irreparable.

[90] I find that the Applicants have not met the requirement of stage two of the *RJR-MacDonald* test. I considered whether I should proceed consider the final stage in the three-stage test. In this respect, I am adopting the analysis in *Gibraltar Mines Ltd. v. Director, Environmental Management Act*, Decision No. EAB-EMA-21-A006, January 27, 2022 [*GML*]. In *GML*, the panel said:

> There are conflicting decisions in the common law on whether, in considering a stay application, the decision-maker should end the analysis once part two of the three-part test in *RJR-MacDonald* fails.
>
> At paragraphs 12 and 13 of *Njoroge v. British Columbia (Human Rights Tribunal)*, 2020 BCSC 1723, the Court described the application of the test from *RJR-MacDonald* as follows:

> The three factors are not to be treated like a checklist of separate watertight compartments, but instead are interrelated and strength in one part of the test can compensate for weakness in another: *British Columbia (Attorney General) v. Wale* (1986), 9 B.C.L.R. (2d) 333 at 346–47, [1987] 2 W.W.R. 331 (C.A.), aff'd [1991] 1 S.C.R. 62, 53 B.C.L.R. (2d) 189 [69]

However, at paragraph 3 of *Canada (Public Works and Government Services) v. Musqueam First Nation*, 2008 FCA 214 (CanLII), the Court described the application of the test from *RJR-MacDonald* as follows:

> The three factors are conjunctive: failure to satisfy any one factor will lead to the denial of the interlocutory injunction. The onus is upon the applicant to satisfy each factor.

[91] Like the panel in *GML*, given the conflicting approaches in applying the test in *RJR-MacDonald*, I will proceed to analyze the final stage in the test.

3. Whether any harm that the Applicants will suffer if a stay is refused exceeds any harm that may occur if a stay is granted (the "balance of convenience" test)

Summary of the Applicants' Submissions

[92] In consideration of the final stage in the *RJR-MacDonald* test, Ms. Smardon submits the balance of convenience favours granting the stay of the Amended Permit. Ms. Smardon submits granting the stay will preserve the status quo of taking a cautious approach to spraying pesticides.

[93] If the stay application is denied, Ms. Smardon says she and others will be adversely exposed to BtK in the communities identified in the Amended Permit. She submits that the irreparable harm suffered by thousands of people and vast areas of the environment due to drifting favours granting the stay.

[94] In contrast, Ms. Smardon submits that only 10 Lymantria moths were detected in the View Royal area in the past year and there is very limited risk to suspending the spray program. She submits that if the spray program does not occur in View Royal area, the Respondent and the Permit Holder will not suffer irreparable harm.

[95] Ms. Smardon submits that the Board should take a cautious approach in considering whether to allow the spray program to continue until the merits of the appeals are decided.

[96] All the Applicants submit that it would only be an inconvenience to suspend the spray program, and a cautious approach should be taken to protect the environment and human health.

Summary of the Respondent's Submissions

[97] The Respondent submits the balance of convenience favours denying the stay applications and allowing the pesticide treatment program to proceed, pending the Board's decision on the merits of the appeals. The effectiveness of the eradication program is based on the life cycle of the moth, and BtK is only effective during the larvae stage of the moth's development. The Respondent submits

Lymantria moth larvae hatch from eggs in early and mid-April, and feed on foliage of over 300 plants during this time. They eventually reach maturity and will pupate in cocoons over a period of one month, typically in July.

[98] The Respondent submits that if the stay applications are granted, then the spray programs under the Amended Permit will not be completed in the necessary timeframe, which will likely result in a significant breeding population and spread of the moth. The Respondent submits that Lymantria moths are an invasive species and pose a significant risk to B.C.'s forest ecology. The preferred food source of the moths are oak trees, including the vulnerable Garry Oak, but they have been known to eat the leaves of over 300 tree species. If left untreated, the moth populations in the spray areas will defoliate large numbers of trees, which will cause the trees to die or become weak and vulnerable to other pest infestations.

[99] The Respondent also submits that evidence provided by the then Provincial Forest Entomologist, Jennifer Burleigh, was referenced in the Board's decision in *Jones*, at para. 111:

> As an example of what can occur, Ms. Burleigh refers to a failed attempt to eradicate the moth population on southern Vancouver Island in 1998 through a ground spray program. The moth population increased and expanded in area to Nanaimo. The CFIA imposed a large quarantine zone, covering 139,600 hectares in Victoria and 9,900 hectares in Duncan, affecting a large number of industries including Christmas trees, nursery stock, non-propagative forest products with bark attached, outdoor household articles, military vehicles and equipment and recreational and personal vehicles and equipment.

[100] A report published in 2019 titled "The Economic Feasibility of the Gypsy Moth Eradication Program in British Columbia", authored by B. Sun, B. Boddanski and B. Van Hezewijk, Canada Forest Service, Victoria, B.C., 2019 (the "Sun et al study") sets out the following regarding the history of the Lymantria dispar (formerly referred to as gypsy moth):

> Since 1978, [Canadian Food Inspection Agency] and the Government of British Columbia have engaged in a surveillance and eradication program. The concern has been that [Lymantria dispar dispar] establishment will lead to severe damage of trees and other susceptible plants, and result in the imposition of regulations to further address the spread of the [Lymantria dispar] to other jurisdictions, most notably the western United States.

[101] According to the Sun et al study, the Canadian Food Inspection Agency regulates the movement of restricted materials to counter the spread of the Lymantria moth in Eastern Canada but these regulations are not fully effective on stopping spread of Lymantria moth within Canada because:

> Long-distance movement of the [Lymantria moth] from quarantine areas to non-quarantine areas typically involves people traveling by vehicles between regions with unnoticed [Lymantria moth] egg masses affixed to vehicles or their cargo. While regulations tend to work well between countries as crossing points are limited and generally have inspection resources, within

> country regulation is often less effective, particularly when no resources are provided to monitor and enforce the existing regulations.

[102] The Sun et al study notes that in 1998, actions to eradicate the Lymantria moth did not occur quickly enough, so the Canadian Food Inspection Agency imposed a quarantine area in and near Victoria and Nanaimo. The quarantine area was imposed until the Lymantria moth was eradicated using BtK, a bacterium found naturally in soils and lethal to lepidopterans such as the Lymantria moth.

[103] According to the Sun et al study, eradication treatments were carried out in 28 years out of a 38-year period between 1979 and 2016. The Sun et al study explains on page 11 the extensive monitoring program for the Lymantria moth carried out by the Canadian Food Inspection Agency and B.C:

> Each year, in high-risk areas across southern British Columbia, approximately 6000 pheromone traps are deployed (Figure 1). In most of this area traps are deployed on a grid with 1.6 km spacing between traps. Outside of the core area (Southern Vancouver Island and the Lower Mainland), traps are placed along major highway routes, ports and in campgrounds thought to be high-risk due to the frequency of out-of-province visitors. Each fall, after the GM [gypsy moth] flight season is over, the trapping results are reviewed. In cases where only a few moths are caught in isolated traps, the usual recommended management action is the placement of a higher density delimitation grid of traps (6.2/ km2 within 1.6 km of any trap that caught moths) for the following two years. In many cases, these small introductions do not persist and require no further management. If a population is found to increase or spread in subsequent years, then an eradication program is launched.

[104] The Respondent submits that if the Lymantria moth becomes established, there is potential for significant impact on the Provincial economy. The Respondent references the Sun et al study which estimated the annual costs of from damaged trees due to Lymantria moth infestation over 35 years. The Sun et al study found:

> The mean estimated lost values from commercial forests is $271,485 from the value of lost timber and released carbon. The mean estimated lost value and tree removal cost of damage to urban street trees is $1,071,504. The mean estimated lost value from agricultural trees, including fruit trees, nursery stock and Christmas trees is $707,865. Further, the potential costs from quarantine regulations if Lymantria moth becomes established in BC, would be either $5.1 million or $2.4 million annually, depending on the discounting scenario over 35 years.

[105] The Respondent submits that impacts of granting the stay applications could impact the rights of others including farmers, forestry companies, recreational businesses, and tree nurseries.

[106] The Respondent submits that I should adopt the reasons and analysis, on the potential harm associated with spraying BtK versus the harm of not spraying BtK, from the Board's decision in *Ecological Health Alliance v. British Columbia (Ministry of Water, Land and Air Protection)*, Appeal Nos. 2004-PES-002(a), 2004-PES-004(a), 2004-PES-005(a), April 14, 2004, at page 14:

> The Panel finds that the adverse effects of the proposed spray program are not unreasonable in the circumstances of this Permit. The Panel is satisfied, based on the Technical Report and the evidence of MOF, that the harm to the environment will be limited to non-target Lepidoptera and will be temporary, and the risks to human health, should any persons be directly exposed to the pesticide, will be temporary and relatively minor. The Panel finds that those adverse effects do not outweigh the potential economic harm to the provincial economy if a gypsy moth population became established and trade sanctions were imposed on certain forestry and nursey products exported from British Columbia.
>
> In addition, the Panel finds that MOF's evidence establishes that the potential negative impacts on the sensitive Garry Oak groves of southern Vancouver Island could be harmful if the gypsy moth is not eradicated.

[107] The Respondent submits it is in the public interest to deny the stay applications because the harm to the forestry ecosystems and the B.C. economy, including other unrepresented parties in the application, outweigh the potential harm to the Applicants.

Panel's Findings

[108] At this stage of the *RJR-MacDonald* test, I must determine which party will suffer the greater harm from either granting or denying the stay application. I find the comments in *RJR-MacDonald* (at para. 71) to be instructive in determining how to weigh the relative impact of private and public interests in such a decision:

> The test will nearly always be satisfied simply upon proof that the authority is charged with the duty of promoting or protecting the public interest and upon some indication that the impugned legislation, regulation, or activity was undertaken pursuant to that responsibility. Once these minimal requirements have been met, the court should in most cases assume that irreparable harm to the public interest would result from the restraint of that action.

[109] In this decision, I have found that the Applicants have not established that their interests are likely to suffer irreparable harm if the stay applications are denied. Conversely, the Respondent has provided evidence of examples in the past from this geographic location where the Lymantria moth eradication program was delayed and the resulting increase in moth populations resulted in quarantines of Vancouver Island forestry products. The Sun et al. study provides compelling evidence establishing the potential harm and costs that might arise in the event that the Lymantria moth becomes established.

[110] I find that the potential harm to the public interests served by the Amended Permit, if a stay is granted, outweigh the minor harm to the Applicants' interests if a stay is denied. This includes the minor harm to human health and the environmental ecology, even though I have found it is unlikely that any potential harms will materialize.

DECISION

[111] For the reasons provided above, I deny the applications for a stay of the Amended Permit.

"David Bird"

David Bird
Panel Chair

June 3, 2022