

2011 Legislative Session: Fourth Session, 39th Parliament
SPECIAL COMMITTEE ON COSMETIC PESTICIDES
MINUTES AND HANSARD

MINUTES

**SPECIAL COMMITTEE ON COSMETIC
PESTICIDES**



Monday, November 7, 2011

1:00 p.m.

420 Strategy Room, Morris J. Wosk Centre
580 West Hastings Street, Vancouver, B.C.

Present: Bill Bennett, MLA (Chair); Rob Fleming, MLA (Deputy Chair); MLA, Scott Fraser, MLA; Barry Penner, Q.C., MLA; Michael Sather, MLA; John Slater, MLA; Ben Stewart, MLA; John Yap, MLA.

1. The Chair called the meeting to order at 1:08 p.m.
2. Opening Statements by the Chair, Bill Bennett, MLA.
3. The following witnesses appeared before the Committee and answered questions:

- 1) West Coast Environmental Law
- 2) CropLife Canada
- 3) Canadian Association of Physicians for the Environment
- 4) Dr. Bruce Lanphear
- 5) Douglas Justice

Andrew Gage
Pierre Petelle

Dr. Cathy Vakil

4. The Committee recessed from 3:37 p.m. to 3:45 p.m.

- 6) FortisBC

Jennifer Robertson
Business Council of British
Columbia Ken Peacock
Greg D'Avignon

5. The Committee adjourned to the call of the Chair at 4:19 p.m.

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REPORT OF PROCEEDINGS
(Hansard)

SPECIAL COMMITTEE ON
COSMETIC PESTICIDES

MONDAY, NOVEMBER 7, 2011

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Chair:

* Bill Bennett (Kootenay East BC Liberal)

Deputy Chair: * Rob Fleming (Victoria–Swan Lake NDP)

Members: * Barry Penner (Chilliwack-Hope BC Liberal)
* John Slater (Boundary-Similkameen BC Liberal)
* Ben Stewart (Westside-Kelowna BC Liberal)
* John Yap (Richmond-Steveston BC Liberal)
* Scott Fraser (Alberni–Pacific Rim NDP)
* Michael Sather (Maple Ridge–Pitt Meadows NDP)

* *denotes member present*

Clerk: Kate Ryan-Lloyd

Committee Staff: Morgan Lay (Committee Researcher)

Witnesses: Greg D'Avignon (President and CEO, Business Council of B.C.)
Andrew Gage (West Coast Environmental Law)
Douglas Justice
Dr. Bruce Lanphear
Ken Peacock (Vice-President, Business Council of B.C.)
Pierre Petelle (CropLife Canada)
Jennifer Robertson (FortisBC)
Dr. Cathy Vakil (Canadian Association of Physicians for the Environment)

The committee met at 1:08 p.m.

[B. Bennett in the chair.]

B. Bennett (Chair): Good morning, ladies and gentlemen. My name is Bill Bennett. I'm the Chair of the legislative committee, the Special Committee on Cosmetic Pesticides.

Before we get into the rules of engagement here, first of all, I'd like to introduce Kate Ryan-Lloyd, who is the Clerk, and Morgan Lay, who also works in the Clerk's office, our researcher at the back table. Monique Goffinet Miller and Michael Baer are with Hansard Services over here.

Let me have my committee introduce themselves, starting with Mr. Stewart.

B. Stewart: I'm Ben Stewart. I'm the MLA for Westside-Kelowna. I've been a farmer for 35 years, and I've been elected for the last two and a half and served as Minister of Citizens' Services, Minister of Community and Rural Development and Minister of Agriculture.

J. Slater: John Slater, MLA for Boundary-Similkameen. I, too, have been a professional farmer for 20 years. Prior to that I grew up in the Okanagan, and we were surrounded by farms, and I certainly have a farming background before that too.

J. Yap: Good afternoon. I'm John Yap. I'm the MLA for Richmond-Steveston. I'm also the Parliamentary Secretary for Clean Technology. I have not had the opportunity to be a farmer like my two colleagues here, but I am keenly interested in, of course, agriculture and this issue.

I also previously served as the Minister of State for Climate Action for the province of British Columbia.

R. Fleming (Deputy Chair): I'm Rob Fleming. I'm the MLA for Victoria–Swan Lake, and I serve as the official opposition's critic for Environment.

S. Fraser: Scott Fraser. I'm the MLA for Alberni–Pacific Rim. I'm also the Aboriginal Relations critic. I have also not been a farmer, but I am an enthusiastic consumer of farm goods.

[1310]

B. Bennett (Chair): Rob Fleming is also the Deputy Chair for the committee, and Barry Penner, one of our former Environment Ministers, should be here momentarily. We have Michael Sather on the phone.

We can hear you loud and clear. In fact, you can shout us down pretty easily. What's

your riding, Michael? What's your constituency?

M. Sather: I'm the MLA for Maple Ridge–Pitt Meadows and deputy Environment critic. And since we're doing farming.... Yes, I have a background in farming as well.

B. Bennett (Chair): Okay. Thanks, everyone.

The routine here this morning is that you have half an hour. You can spend the half-hour any way that you want to, but if you'd like to leave some time at the end for questions, I think that's always useful.

We are starting late. That's our fault, not yours, so you'll get your full half an hour, Andrew, if you want to introduce yourself and then proceed.

Presentations

A. Gage: Thanks very much to the committee for having me. I'm very pleased to be able to present to you and that you're deliberating on this important topic.

West Coast Environmental Law is one of Canada's oldest public interest environmental law organizations. We've been working for over 35 years on issues of sustainability and protecting the environment, including on pesticide issues. I was the co-author of *A Citizen's Guide to Pesticide Use and the Law* as well as the author of our *Pesticides and You* booklet series. I've been working advising people on pesticide issues for some years now.

I've titled my submissions "A Legal Perspective on Cosmetic Pesticides." I want to emphasize that, of course, if you are looking for evidence on the toxicity and risk of pesticides, you don't go to a lawyer, particularly. I'm not a scientist by training, and I don't pretend to be. Rather, you look to lawyers for evidence on whether the current pesticide laws do or could adequately manage the risks associated with pesticides. So that's what I intend to speak to.

I'll leave it for other witnesses to speak to the risks that I do believe are present in the use of these pesticides but instead focus on two issues. First of all, the meaning of "acceptable risk" under the Pest Control Products Act. You've heard about this from prior witnesses. Secondly, I know you've heard suggestions that you should be adopting an integrated pest management approach rather than a ban on cosmetic pesticides, so I thought I would spend a few minutes on what that term means under B.C.'s Integrated Pest Management Act and why it's not an appropriate alternative to a ban.

Moving to the first of those two topics, the meaning of "acceptable risk." If you read the labels.... I know some of you have a background in farming and probably have read pesticide labels before. I didn't want to presume anything, however, so I've given you a bundle of pesticide labels.

I just can't emphasize strongly enough that I don't think anyone reading a pesticide label, whether it be for agricultural or domestic use — these ones are all for

domestic use because of the nature of topic you're looking at — would read these labels and say: "Well, these are safe products that we don't need to be concerned about at all." They are clearly very powerful chemicals that have consequences.

I've just copied a few of them up here, but they're in the written submissions as well. I mean, these are not anything to be sneezed at. Rather, you may sneeze, depending on the particular side effects. I think people are sometimes surprised by that.

As you've heard from Health Canada, they take great pride in their ability to assess the risks of pesticides. The question, I guess, is: why, if these have such significant health and environmental effects, can Health Canada say that there is an acceptable risk of the use of these pesticides? The definition of "acceptable risk" is found in subsection 2(2) of the Pest Control Products Act. It is actually a fairly strong legal test.

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The problem I have with how Health Canada applies that and interprets that section can be seen from how it was explained to you earlier by Mr. Lindsay Hanson from Health Canada. This is what his explanation was. I've just taken the slide directly out of his presentation. He said that the acceptable risk is "reasonable certainty of no harm to health, future generations and the environment from use or exposure when used in accordance with labelled directions."

Now, the first two parts of those are a very difficult test to.... There's a lot of scientific uncertainty. It's not a task I envy anyone to try and assess. Where I'm going to challenge Mr. Hanson a bit is on the final of these: "when used according to labelled directions." In other words, they assume — and this does reflect how Health Canada understands their mandate and their responsibility — 100 percent compliance with every single requirement on the label. If you don't have that, you don't have Health Canada certifying that the risks of this pesticide are acceptable.

That's not what the Pest Control Products Act actually says. They say "taking into account" the label or conditions. So you can look at what the label says and consider that some portion of the population may follow that and some may not, but you cannot just blanket assume that every single condition will be followed, and Health Canada does.

It's very clear not only from their presentation to you but also if you review any of their evaluations and re-evaluations. That's exactly what they do. They'll identify the health or environmental risks. They'll say: "Therefore, we'll put in place a no-entry period or requirements around safety gear, and therefore, there's no exposure. There's no risk associated with that. We've taken care of that." That's not actually what the Pest Control Products Act mandates them to do.

We know that labels aren't being followed because we have cases of poisonings. There are 6,000 cases of poisoning reported in Canada annually. That's considered to be an underestimate, an under-reporting, but those are the documented cases. In terms of the

whole.... Every one of these labels says to keep out of the reach of children, but the fact is that there are over 2,800 cases a year of pesticide poisoning involving children. That shouldn't be occurring if we have 100 percent compliance with the labels.

Similarly, there are conditions of the labels that relate to protecting children. But anyone who has.... I have two small children, and I wouldn't be confident in my own ability to make sure they didn't enter a treated area unless I was watching them non-stop. Children don't read labels. They also don't necessarily listen to what the most responsible users of pesticides may ask them to do.

Similarly, Statistics Canada tells us that 42 percent of Canadians are functionally illiterate, in the sense that they cannot read complicated instructions or warnings — as I understand it, the specifics of that — use hazardous waste label warnings as an example of what they're not able to read. Of course, that becomes even more of a problem in areas where there is a high rate of people who have a first language other than French and English because the labels are only available in French and English.

We also know that pesticides are getting into the environment and having an impact on the environment. These are a couple of the labels that you have, in terms of their conditions related to toxicity to aquatic organisms. I'm sure you've heard about the study from the Ontario Ministry of Environment that showed there were pesticides present in urban streams and that those disappeared once the cosmetic pesticide ban was brought into force.

What I want to emphasize is not just that those pesticides were there, but that in a certain number of the cases — not a large number but in some of those cases — the levels of the pesticides actually exceeded the levels known to cause problems for fish — the standards that were in place to protect fish. Again, that should not be occurring. The only one that didn't disappear, that didn't fall below that level after the cosmetic pesticide ban was brought in, was permethrin.

The authors of the study speculated that that was because there were actually certain uses of this particular pesticide that were still allowed under the cosmetic pesticide ban. But the point is that those types of levels should not be showing up in the environment unless the labels aren't working for one reason or the other. Either the label requirements aren't sufficient to protect the environment, or the label requirements are not being followed. We don't know which it is, of course.

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Finally, a chronic problem with many of the labels is that they're written in ways that actually aren't terribly

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enforceable or that require an unusual level of knowledge among the users. My favourite is the idea that a domestic pesticide user is going to know whether their soils are permeable and the depth of the water table.

Moving from that topic to the legal concept of integrated pest management, I want to

distinguish between the philosophical concepts. I mean, I think the basic idea of an approach to pest management which emphasizes alternatives to pesticide use, which uses the less risky alternatives first, which doesn't try to totally eliminate pest populations but only to manage them.... These are all interesting and useful concepts, and we've actually stated that we do think that for certain industries it can be a useful tool in reducing the use of pesticides.

As a legal concept, it's actually much more difficult to pin down. That's the problem I want to speak to. The Integrated Pest Management Act was brought in, in 2003. It prescribes content for integrated pest management but not actually how you do it. Someone following integrated pest management under the act will need to look at issues such as thresholds and the available alternatives, but there's nothing in the act, at least not very explicitly, that requires them to prioritize less risky pest control alternatives.

In terms of the actual content in the act, it's not a terribly enforceable concept. It's very weak. In fact, there's no actual evidence that we've seen a reduction of pesticide use in those industries that have been regulated under the Integrated Pest Management Act.

I checked with the provincial government because I couldn't believe they'd actually not released.... Up to 2003, every four years they would release a summary of how many pesticides were used in the province and for what. Domestic pesticides were not included in those assessments, but they did include them for most major industries. They stopped doing that in 2003. We haven't had that type of summary from the province, so we don't know for sure. And of course, 2003 is when the Integrated Pest Management Act came into force.

We don't know for sure whether there has been an increase, a decrease or no impact whatsoever of that act on the use of pesticides in these industries. We've reviewed a number of pest management plans, prepared, apparently, under integrated pest management principles, which we don't believe do prioritize non-chemical uses over pesticide use. We also are aware of some operations which didn't previously use pesticides, but under the new act, they actually do.

So we're very skeptical of the claim that the integrated pest management approach, as implemented in B.C. law, has actually had the promised effects of integrated pest management. That may be related to the fact that we've actually seen a decline in enforcement under the Integrated Pest Management Act as compared to previous acts.

The fact that integrated pest management is actually difficult to enforce creates some problems. Now, I don't want to pretend that that's the only thing that's going on with this graph, because there have been similar declines in enforcement under other statutes during the same period. Nonetheless, the fact that integrated pest management is actually such a malleable, flexible concept does make it difficult to enforce.

On that, I think you'd like to think of what that means for cosmetic pesticide use, because this is, of course, an area where you can expect to get a lot of complaints. Neighbours are unlikely to care whether pesticides are being.... They may not care whether pesticides are being applied by their neighbours themselves or by someone hired by them. They may be calling, looking for clarification about whether integrated pest management and the rules were correctly followed, to complain.

I think you can expect this type of approach applied to cosmetic pesticides may end up eating up a fair amount of time for the conservation officer service, which will be called up to mediate between neighbours about what an appropriate level of pesticide use is. The conservation officer service, I think, has better things to be doing with their time. As a practical matter, it is not an appropriate place for them to be putting their resources, I would submit.

[1325]

I think that brings me to the end of what I wanted to cover. I'm open to questions.

I simply wish to emphasize that Health Canada is making an incorrect assumption when it assumes that pesticide users will always follow the requirements of the labels. Therefore, the use of these pesticides, while potentially still justified for certain industries — that's a debate that society can have — is certainly difficult to justify, in our view, for something that is largely about achieving aesthetic results.

Secondly, integrated pest management in the context of cosmetic pesticides doesn't provide an effective alternative to a ban.

B. Bennett (Chair): Thanks very much. Good submission.

B. Stewart: Thanks very much, Andrew. I'm just trying to understand the position — your last comment you said about cosmetic pesticides. It seems to me that....What I'd like is a point of clarification. When you define cosmetic, what do you mean? And when you talk about IPM, I would assume that IPM is only relevant to commercial users. So could you just...?

That's the way I.... You know, having practised IPM, having been certified as an organic producer, I can relate to all of these different approaches. Is your objection to all types of use in any shape or form, or...? When you say

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cosmetic, I'm not assuming that that's what that means, so that's what I'd like clarification on.

A. Gage: Yeah. There's obviously a range of different types of use, and it's going to be.... It's part of your committee's task, I guess, to try to craft a rule. I'm not sure I have tried to articulate a simple rule here. In general, when I say cosmetic pesticide, though, I would refer to one that isn't causing structural or direct economic damage — which is more about achieving an appearance rather than some particular economic goal.

B. Stewart: Then, to follow on that, how would you define structural economic damage?

A. Gage: I'm sorry. I realize I missed the second half of your first question, which I did want to get to, so I'm going to back up just a second.

In terms of the suggestion that integrated pest management only applies to commercial users, I actually largely agree with that. In fact, we made submissions in the first rounds of consultations to the province where we suggested that the idea of using integrated pest management in relation to cosmetic pesticides was nonsensical. It contradicts the whole purpose of integrated pest management in that....

There's a variety of reasons for that, but I guess, at the core integrated pest management is about setting thresholds. It's about modern populations of pests, and it's about creating situations where pests don't arise in the first place. All of those are difficult to do in a cosmetic context. I mean, how do you set the thresholds based on anything other than an aesthetic sense? There's nothing there to base those on.

Is a property owner phoning a lawn care company really going to say: "Oh, okay. I accept that I've got to have some level of dandelions because that's consistent with the principles of integrated pest management"? Or are they looking for the perfect lawn, which has, in their view, no dandelions whatsoever? I just don't think the concepts apply very neatly to home use at all, so I agree on that. I don't know that the lawn care companies are necessarily going to have the level of control over the lawns that you would associate with someone who is really practising integrated pest management.

In terms of economic harm, certainly.... I represent a group which thinks.... We are a group that emphasizes trying to reduce these pesticides. I would probably take a broader view of what cosmetic is than some other organizations or groups.

[1330]

You'd probably want to look at specific examples of where I would draw the line, I suppose. I would think that ornamental plants — roses and flowers or whatever.... Potentially, even when used in a garden context, which may have some indirect economic loss there, I would still want to define them as cosmetic. I think it's about appearance, and the people who are paying there are paying for the appearance of the garden.

Some of it comes down to.... I mean, there are a lot of cosmetic results that can be achieved without the use of pesticides. It's a fairly defined area you're trying to control the pests in. There are more resources you can put into it than, say, a forestry context or an agricultural context, potentially, for that matter.

I'm not sure if I answered your question.

B. Stewart: It's enough. That's good. Thank you.

The last one. Do you, then, support licensed pesticide applicators, being that they have been trained properly to use as the label direction, to understand soil permeability, etc.? Are you in support of that?

A. Gage: In a cosmetic context? No.

B. Stewart: Well, I'm talking about licensed pesticide applicators, whether I happen to be a greenhouse operator, an orchardist or farming any other type of crop. Are you suggesting, then, that you oppose the licensed applicators using the chemicals or pesticides that are there to balance economic risk against the...? I mean, it's not cosmetic when you're dealing with a crop.

A. Gage: Yeah.

B. Stewart: I'm just asking whether you support licensed applicators being able to use any types of products under the Pesticide Control Act in a licensed manner, whether they're qualified or not qualified. Sorry, I'm assuming that they're qualified, being that I have a certificate. So I'm asking you if you support them being able to use pesticides. I'm not talking about in the context that they're being used. It's whether you support them being the people that should be using them.

A. Gage: If we are going to allow pesticides to be used in a given context, then it should be done by people who are trained in their use. But I don't believe that the approach they're supposed to take under that training transfers well at all to cosmetic pesticides. Again, as an environmental organization, I think we would probably prefer a good deal less of it being used overall.

B. Bennett (Chair): We'll have to move on. Thanks very much, both of you.
Interesting exchange.

S. Fraser: Thanks, Andrew, for the presentation. I guess two questions.

The first one, very quick. You mentioned 2,800-plus poisonings that were reported in Canada. Do you have any context for that? Was that from exposure to, like,

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kids playing on a lawn that was just sprayed? Or is this kids that found something in the cupboard?

A. Gage: The statistic comes from the report *Northern Exposure* that the David Suzuki Foundation prepared. In many cases they requested the information from poison control centres from the different provinces across Canada. You could ask them, but my understanding is they didn't have the level of information that you're asking for there, much as I'd love to give it to you.

S. Fraser: Okay, fair enough. I'll pursue that on my own, then.

On the next thing, just a bit of context here. We have, you've mentioned, Lindsay Hanson's submission to us. It was one of our first. So we've talked to Health Canada. In theory, for many people, that's: "Well, Health Canada says it's okay, so what are we doing here as a committee?" But we're not just assuming that Health Canada's regulations are sufficient for the public — at least in my mind. I'm keeping it open that that may not be sufficient.

There's certainly evidence from parliamentary committees and that that suggest.... In one case a committee suggested that the pest management regulatory agency might be unduly influenced just by the nature of in-house reporting of the industry. So that might be a problem, and it might not be objective.

We have also raised issues around the fact that there have been a number of products that have been, certainly, okayed by Health Canada and then have been pulled because subsequently they've found that there are risks.

Then currently there were some iron-based pesticides that have been okayed by Health Canada, and I know there are health conditions that a lot of Canadians have — like, tens of thousands of Canadians have — that certainly are affected by iron-based products. Hemochromatosis, I think, is one of the terms used.

[1335]

There is some evidence that shows there are risks to those, just from pesticides that have been okayed by Health Canada. Also, amphibians, bees, fish smolt — there are a number of other non-human potential hazards there.

As a legal mind, is there a remedy? If we are to know, as a committee, that there is evidence — or even, by precautionary principle, a risk — that Health Canada is not covering off, there might be a moral imperative here, but is there a legal imperative for us to apply that? Or would there be a risk to not applying that precautionary principle?

I'm asking you for a legal kind of reading. I realize you're not....

A. Gage: I'm not entirely sure that I know where you're going with that. Are you asking about...? Okay, I will say that I have always interpreted section 7 of the Canadian Charter of Rights and Freedoms as requiring government to do its best to protect the "life, liberty and security of the person," of the public, even in an environmental context. I don't think that there's necessarily a.... When you say a legal obligation, are you suggesting that we could somehow challenge you if you failed to bring in the...?

S. Fraser: Yeah. I mean, naively, yes.

A. Gage: No. This is clearly a policy decision. I think if we have strong beliefs that the rights of the public to a clean environment are being compromised, it's probably Health

Canada who would be the subject of a legal challenge rather than the province for failing to regulate in the area.

But on the question of not assuming that there's complete safety, the courts have been very clear that that is a role that the province can and should play. And for that matter, municipalities have a role there too.

There are a number of court decisions that talk about the sort of overlapping jurisdictions in this area and the role of the province in looking not at the overarching safety issues but at how pesticides are being used in a particular way or in a particular place. That is an appropriate role, according to the courts, for the provinces to engage in. A lot of that jurisprudence comes out of B.C., actually, mostly under the previous Pest Control Products Act.

B. Bennett (Chair): Can we go to the next questioner.

R. Fleming (Deputy Chair): Thank you, Andrew, for your presentation. I wanted to ask you just a couple of questions. I won't drag you into things that I think are probably outside of the purview of this committee, because it's a Special Committee on Cosmetic Pesticides. I'm sure you have views on agriculture and forestry and perhaps even the golf industry. But I don't think, based on the legislation from other jurisdictions and the definition of cosmetic pesticides that we're operating under, that's going to be within the purview of this committee.

So I wanted to ask you a question about cosmetic pesticides used in residential areas in provinces where there are bans now in place — the six or seven provinces in Canada that have banned cosmetic pesticides. We have heard, from a couple of presenters previous to your appearance today, that there are occasions where you can have an interface transfer from an urban area to, perhaps, a farming operation. Codling moth, I think, is one example that was used. That's a situation that, obviously, nobody would want to see.

My question is really about other jurisdictions that now ban cosmetic pesticides in residential areas — if you could comment, to your knowledge, about the minister-

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ial exemptions and permits that exist for specific situations like that, where there is a commercial concern that is identified. Do you know how applications like that are made for special circumstances where there may be risks, business risks, to areas that are not covered by a cosmetic pesticide ban?

A. Gage: I'm afraid I don't.

[1340]

R. Fleming (Deputy Chair): Okay. The other thing I wanted to pick up was your point around the Ministry of Environment's data, which sort of abruptly ends in 2003.

We've had the Ministry of Environment appear here. We've asked them if there's a trend line amongst consumers around pesticide use, and we haven't been able to get any answers on that because the data sets simply aren't there. Although they are able to collect, if they wished, and require retailers to collect statistics on how much pesticide is being sold and we could track that annually, it's not being done.

I wanted to ask, though, if there are, in the view of your association, any reliable indicators out there that show what Canadian and, hopefully, British Columbian consumer consumption patterns are around pesticides.

We know, for example, in Quebec that before the ban was put in place that about one in four households owned and maybe occasionally used cosmetic pesticides. It's now down below 4 percent.

Is there a trend line that's happening in B.C. or Canada that you're aware of that can be discerned both in places with a ban and without a ban? I know that RONA, for example, has voluntarily withdrawn all products from their retail operations in Canada. I was just wondering if you can comment on that in any way.

A. Gage: Not in terms of the types of hard numbers that you're looking for. I do have a couple of comments related though, I guess. When I spoke to the Ministry of Environment staff in preparing for this presentation, they gave me to understand that they actually are now trying to assemble some data for 2010. They hope to have that available — they wouldn't give me a timeline — relatively soon, potentially by the end of the calendar year.

Again, those figures don't include domestic use, as I understand it. But it will at least be something in terms of the commercial context and whether or not my suggestion that integrated pest management hasn't resulted in a dramatic decline in those industries is correct or not.

In terms of the use across Canada in the more domestic sense, the main thing, I guess, would simply be.... Health Canada has been doing a re-evaluation of the older pesticides, and we know, by their own figures, that something in the neighbourhood of 80 percent of the labels they've looked at have resulted in changes to those labels because they've identified problems with what they had approved originally.

Certainly, some of what our friends at the Pesticide Action Network would describe as the bad actor chemicals.... We know that some of those have been discontinued, in many cases voluntarily by the pesticide companies rather than because of Health Canada's direct actions, at the domestic level. So one would hope and expect that we would see a shift to less dangerous pesticides at the domestic level over time. That, ironically, might actually result in an increase in use if the replacements are perceived as being less effective. So there is an interesting tension there.

I guess the only other comment is simply.... It's very well documented how many municipalities have adopted cosmetic pesticide bans, and presumably, you would see a trend based on those, as well, in terms of decreased use in those municipalities.

B. Bennett (Chair): I'm going to have to cut it off there, I think, Rob and Andrew.

We're a bit over time here.

Andrew, thank you very much for your presentation and for answering the questions.

A. Gage: My pleasure. Thank you for having me.

[1345]

B. Bennett (Chair): Appreciate you coming.

Our next witness is Pierre Petelle from CropLife Canada.

Pierre, I think you were here this morning when the committee members introduced themselves and, also, when I gave my quick summary of the amount of time that you have — 30 minutes. You can use it however you want to, but the more time you leave for questions, probably the more opportunity members will have to speak with you. It's your choice on the use of the time.

P. Petelle: Thank you very much, Mr. Chair, and thank you to the committee for inviting us to speak with you today. Like my slide says there, I'm Pierre Petelle with CropLife Canada. We're the trade association that represents the manufacturers, developers and distributors of the products we're talking about here.

Just to start, I'm going to throw out a few facts here that I'll say nobody disputes, but maybe some do. Nobody disputes that urban green spaces have a benefit to both public health — mental and physical — the environment and the economy. That's one fact that we think is indisputable, and there is lots of data coming out — in fact, three recent studies from this year — showing that that is the case, that there are tangible, measurable benefits to these urban green spaces.

The second is that because these are living systems — they're trees, shrubs, grass, whatever — they are subject,

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occasionally, to pest issues. The real debate here is really about what tools should be made available to control those pests when they do arise.

The products that our members make... These are solutions providers — the members of CropLife. The products they provide are valuable tools that contribute to improved human health and a better environment. I'll give you a few examples. The users of our products — such as farmers, growers that we talked about earlier today — offer healthy foods to Canadians and the world's growing population. Other sectors of the economy use our products for securing energy transmission and safe rights of way to protect the environment and human health from mosquito-borne diseases and diseases such as that.

We know that they also enhance urban spaces, which can in turn increase levels of physical activity and community pride.

CropLife Canada does believe in integrated pest management. We think that is the best approach to controlling pests, no matter what the setting is, and that when a pesticide is the tool that's chosen — and it's not always the last resort, and it's not always the first choice.... When the pesticide is chosen as the tool, the best tool, we feel that Health Canada–approved products should be the ones that are chosen.

This whole distinction between "certain products should be okay for cosmetic use and others shouldn't" usually is around this whole alternative or natural products versus synthetic products, from the experience that we've had. There's no scientific merit for that distinction, because you can have very toxic natural products and very safe synthetic products.

We heard a little earlier today about precautionary language on labels. We feel that, quite the contrary, that's not a basis for a ban. That is evidence that the system is working, that the evaluators are looking at every detail of those pesticides. I'll bet that if other products on store shelves that are freely available were run through the same system as a pesticide approval, you'd see a lot more of that precautionary language on common, everyday products.

Again, Health Canada bases its pesticide assessments on the science, so whether it's natural or synthetic is irrelevant. There's a comprehensive risk assessment in place, and they look at the basic principles of the product, the hazards that the products compose and the risk mitigation measures that are appropriate for it.

Our industry develops products that are safe and effective. We ensure proper life-cycle stewardship. I'll give you an example. Last month we were in various cities in B.C. doing obsolete pesticide collections through our sister company CleanFARMS, where we offer, free of charge.... Farmers that have old products that either they don't use anymore or the label's worn or they're not comfortable using anymore can bring them, free of charge, to these sites for proper disposal. That's just one of our commitments to proper stewardship of these products.

We support a strong, science-based regulatory system for all pesticides, whether they're domestic or for agriculture and — again, I listed some of the earlier uses for the products — whether they're for urban green spaces, agriculture, forestry, industrial veg, structural pest control, golf courses or even personal pesticide, such as insect repellent that people put actually on their skin, or pool chemicals that are applied to their backyard pools.

All these products, regardless of use, have to go through the Health Canada process to ensure that reasonable certainty of no harm is met — that very stringent criteria.

[1350]

My second bullet there is about public policy. We think public policy shouldn't be based on public opinion polls. It should be based on scientific evidence. That said, I'll be talking about some polling results in a minute — ironically enough, but I'll explain why.

We feel that pesticide restrictions that ignore the scientific evidence that Health Canada and B.C. Environment utilize may actually jeopardize the health and the

environment of the very communities they're trying to protect. That'll come out a little bit in some of the results I'll show you momentarily.

So what has been done on this issue federally? I've heard some people say that if the federal government had done more on the urban pesticide issue, provinces and municipalities wouldn't have ended up where they ended up. Well, I'm just going to cover briefly what has been done, and some of this you did hear from Health Canada themselves on.

We do have in Canada the most modern piece of pesticide legislation in the world. The Pest Control Products Act, which was brought into force in 2006, has special provisions in it for children, for pregnant women, for various segments of society.

It is the most transparent process in the world. If you want to access the data that our members submit on a confidential basis, there are reading rooms that you can access and actually look at the data, look at the evaluations that the scientists did on those products. If you have a question, if you have an issue with the way the study was conducted, you can raise that in a very transparent, open fashion.

Very few other regulatory systems allow this type of openness. You also heard that there are new sales provision requirements, incident reporting, which you heard about from the Health Canada speaker.

There was also a federal-provincial-territorial committee that developed the healthy lawn strategy. This was a number of years ago. The purpose of that was to inform the public about lawn care, about alternative methods

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exactly using IPM principles. Let your grass grow long, etc., and when you need to use a pesticide: "Here are some steps to take." That was all done as a collaborative process among all the provinces and PMRA.

The next bullet there is about building public confidence. This has been an initiative that Health Canada has been striving to engage Canadians in for a number of years — basically, to make sure that people have that confidence in the regulatory system. This is being undermined, frankly, by some of the actions being taken by certain provinces.

Just while we're on this point, we heard about the Commissioner of the Environment and Sustainable Development audit that was conducted in 2003. This was raised by other speakers. I've seen it in *Hansard*.

What hasn't been brought to this committee, however, is that in 2008 the same CESD did a follow-up audit. So this is more recent — 2008. What they found was that for both re-evaluation and for new chemistries, PMRA was adequately protecting Canadians and that all of the criticisms they'd levied in 2003 had been clearly addressed. I just wanted to clarify that point about the CESD audit, and that is all publicly available information.

Then what else did Health Canada do? Well, they prioritized.... Even though they weren't necessarily high up on the list in terms of re-evaluation of products because of their toxicity profile, they said: "Well, this is a controversial issue. We'll look at all the eight

most widely used pesticides for lawn and garden use, and we'll start with those." That was a criticism that was levied for many years, which said: "Many of these products — 2,4-D, etc. — haven't been looked at in 20 years, 30 years, so the chemistry is old." That was a major criticism.

When they did prioritize and re-evaluate these products, then people's arguments changed. Well, now it's PMRA. Is there something wrong with their assessment? I think as the criticisms get levied and corrective action is taken, the criticisms then change along the way. That's our experience with this file.

The economics. Just bringing bans into effect, especially in this climate, does harm economic growth and job creation. Recent polling, which I'll talk about, in Ontario shows that the landscape industry has been severely negatively affected. Homeowner polls are showing that people are just buying the products that they need south of the border instead of at their local retailer, where they used to buy it.

[1355]

Our industry, which is driven by science and innovation, is also being negatively impacted because the research and development decisions and the innovation decisions are made on a global basis quite often. Frankly, Canada is becoming a less and less attractive place to invest those dollars.

I think regulatory harmonization and modern scientific approaches are the global direction. We've seen that in a lot of... You heard that from your PMRA speakers. Global joint reviews bring the best international science together. That's the direction the federal system is going, while some provinces, such as Ontario, appear to be going the opposite direction — lack of harmonization and predictability.

We commissioned a couple of studies, polls, to determine, frankly, if this is an issue. If Ontario can bring in a ban as wide-ranging as they did and the public not be too concerned about it, well then we need to maybe re-evaluate our involvement on this file.

What we did is we commissioned two separate polls — one on the commercial landscape industry, the other a public poll. They were conducted... I can provide all the statistical information that you need, and it was a very transparent process. The questions are all available — what we asked to make sure that it was completely non-biased.

This first slide is on the commercial side. We asked people in the landscape industry: has the Ontario pesticide ban had a negative impact on your business? Well, 60 to 72 percent say they have been negatively impacted. This could be number of employees, profit margins, just business overall — number of clients, etc.

The second poll we did was a public poll, and it was a fairly robust 1,400 people that were surveyed. They had to own a home and a lawn in order to be considered, based on the questions we were asking.

Basically, this slide shows the level of satisfaction with the products that were left over after the ban. Overwhelmingly, close to 90 percent said: "Yes, there is a need for different products, because the ones we have now are just not meeting our needs." When we asked

the same question about the products available prior to the ban, the numbers were the complete reverse.

This next slide shows a number of different results. I won't go through them all, but we basically asked: "What have you done, subsequent to the ban being brought into force?" A couple of the more alarming ones are that people have used leftover pesticide from before the ban — not alarming from a health-and-safety standpoint because they are federally approved products. But from a provincial enforcement standpoint, you've got 42 percent of people in a poll admitting that they are using products that are now banned in that province.

We also see people re-sodding their lawns, at close to 40 percent. The cost of that... You had a question about the economics of this. There's a fairly significant economic cost right there. "Converting your green space into patios and decking and rock gardens" — 23 percent. A fairly significant number of people saying that they are just removing that green space altogether.

Then this slide continues: "Developed your own mixture to kill weeds or insects." A full 19 percent admitted to doing that. Health Canada is issuing advisories against that at the same time. Or: "Brought in your pesticides

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from the U.S. or other provinces" — 13 percent. So some of the negative consequences that we're seeing directly as.... And this is only after two years of the ban being in force in Ontario.

The next question is: "Would you like to see the ban changed?" So 49 percent had said that yes, they would like to see changes; 27 percent said that the rules are just too strict and there aren't enough products available; another 22 percent said just abolish the whole thing; and then 32 percent said that they're happy with the ban as it is.

Lastly, on the polling: "Did the Ontario government do the right thing by banning cosmetic pesticides?" Fifty-five percent said no, they didn't do the right thing versus 37 percent that said they did the right thing.

Again, we've said it before publicly, and I'll say it again today. We don't think that public policy should be based on polls. We think that it should be based on scientific evidence. But what I've been hearing, and what we needed to go and seek out, was if there are consequences to these bans.

[1400]

When I hear certain groups say that businesses have adapted, they're thriving, and homeowners are adapting as well, the negative consequences are so minimal that it only makes sense. Well, these polls show that that is not the case, that there are some serious negative consequences.

Just in my two final slides, our industry is science-based and innovation-focused, and I said it earlier. A lot of our member companies are global in nature. We do have Canadian-

specific companies as well, but those are R-and-D dollars, and that investment in that innovation needs to be based on a predictable, science-based system.

We think we have that at the federal level. The move towards global harmonization, joint reviews, that kind of thing, can only help farmers in B.C. and elsewhere. Especially in B.C. with the minor crops, the small-acreage crops that are grown here, the need for those new technologies is even more pressing.

We think that the modern protections are in place on the federal side, with the 2006 Pest Control Products Act as well as the fairly recent IPM Act here in B.C. Most provinces don't have as modern legislation as this province does.

We think, as I said earlier, that unscientific restrictions of pesticides undermine existing regulatory safeguards. They stigmatize all uses of pesticides and create an additional unnecessary cost for local governments, school boards, businesses and homeowners. The negative consequences I just went through in a fair amount of detail there, whether it's people mixing their own products or cross-border shopping, etc. — removing that green space, and so on.

We think that IPM systems are the way to go, that they do reduce pest damage and, when necessary, that the products that are chosen have had their safety assessed and have been approved by Health Canada.

I think that's the assessment there. If there's an issue around public education, if people aren't reading the labels — this shouldn't just be limited to pesticides — of consumer goods, consumer chemicals, that may have a negative impact on their health or the environment if misused, then there's an opportunity to collaborate, to discuss how to engage that public out there and to make sure that they are properly using all products.

I'll stop there so that we have time for some questions.

B. Bennett (Chair): Thanks very much, Pierre.

Questions over here on this side of the table? I've gotten a number on this side.

S. Fraser: Yes. I don't want to monopolize, so I'll let somebody else go through.

J. Yap: Thank you, Pierre, for your presentation.

Your last bullet on public education. I wanted to follow up on that. It has been suggested that one of the issues is the labels and how consumers may or may not read and understand labels. As a trade association, obviously this is an area of concern for you. Your members would want to ensure that you have the right quality of labels so that consumers will be able to understand.

What do you say to those who have concerns about the quality of label information and how consumers are understanding the label information?

P. Petelle: Part of the issue, I guess, is that in some cases it's maybe overly scientific

language on some of the labels, and there has been a label improvement project at PMRA for a number of years, looking at how to improve readability of domestic labels — the use of more white space, more bulleted text, plain language.

That project has been underway, and there have been some improvements to some terms that were typically used that were maybe wordier than needed and more technical than they needed to be. Those are slowly being modified, but there is a label improvement initiative underway at PMRA, and we fully support that — to make labels more understandable.

J. Yap: As a follow-up to that, how do you assess the quality of your labels? Do your members do some kind of assessment or surveys to see if consumers are understanding the labels and following the labels?

P. Petelle: I know that several of our members that are strictly in the domestic business have done a number of in-store displays to supplement the label. They've had spokespeople at stores explaining the products to them, and they've done that on a voluntary basis for a

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number of years now to try to get that interaction with consumers.

[1405]

They've had, like I said, consumer displays within the stores, to help, again, with that plain language — when to use which product, under what conditions.

B. Penner: A couple questions. One, could you tell us more about the reference to reading room access? Where is that reading room, and what does it contain?

Then my next question — I'll let you answer these in series — regards the methodology of the poll that you referred to in the summary with which we have been provided. Could you tell us more about how that was conducted, whether it was an Internet poll, how many people were surveyed and what the date of that poll was? But first, I'm just curious about the reading room.

P. Petelle: The reading room was a provision in the new Pest Control Products Act brought in, in 2006. What it stated was that anyone in the public should be able to access the actual raw data that companies submit, as well as the evaluation reports by the scientists who review those, in a public setting.

What they did is set up a reading room, which is currently housed in Ottawa, but I believe there are provisions that can be made if you're not able to travel there. Basically, you can access.... You have to sign a confidentiality agreement that you will not use the information for commercial purposes, etc. But you can go in there, and you can look at all

the raw data, those 200-plus studies that we've talked about. The assessments of those by all the different people at PMRA are all freely available for viewing.

B. Penner: And you have to physically go to this place, or is the information posted on the Internet?

P. Petelle: No, because of the confidential nature of the information and the need to sign an affidavit that you won't use this information, you have to be physically present there. But again, I think there are provisions, if I'm not mistaken, to account for geographical distance.

B. Penner: And in regard to methodology?

P. Petelle: Yes, the methodology. I'll provide this as a follow-up to the committee — all the methodology used by the Blacksheep Strategy group. But basically, on the public poll, it was the using the Ipsos-Reid on-line form that they have. They've got over 100,000 people sort of on a database that you can access and ask different questions about, or you can choose different segments of society.

That's what we did. We asked them to develop a poll for us with a series of questions. Again, they had to have a lawn or a garden. Other than that, there weren't too many restrictions on the poll. But I'll provide all the follow-ups to the committee.

B. Bennett (Chair): Before I go to MLA Fraser....

MLA Sather, if you have a question, just speak up.

M. Sather: Well, I just wanted.... I guess it's a bit more of a comment, but perhaps the presenter would have a response to it. When you talked about the regulatory framework in Ottawa with a great deal of confidence in it.... I have to say that overall I don't share your degree of confidence, due particularly to the level of deregulation that I see in play the last number of years. Whether or not we're getting as much information as we should be out of Ottawa these days is a concern for me. If you wanted to comment on that. I think you've made your position on it.

P. Petelle: Well, I can't speak to overall regulatory levels for other regulated products, but I can speak for pesticides. I can absolutely say emphatically that there has been no deregulation. In fact, the regulations continue to increase, and the regulatory burden continues to increase, for pesticides. And that is irrefutable.

S. Fraser: Thanks, Pierre, for the presentation. I guess I'll just begin with the same question I began with, with the previous presenter. He indicated that there'd been a number of incidents — 2,800-plus poisonings — with these products in Canada in the last year, I think it was.

He didn't have the level of detail about what that meant. Do you have any information on that, about what happened to these kids that found this product in the garage and took a sip? Or was it playing in a yard or on a lawn that was just sprayed? Do you have any idea?

[1410]

P. Petelle: That specific report that was referred to, from the David Suzuki Foundation, I believe was submitted to PMRA for comment, and I believe there is a response from PMRA on what they found and what actions, if any, were being taken. So I would like to defer that specific question to PMRA.

In terms of what's changed in the past number of years is mandatory incident reporting, which Lindsay Hanson mentioned to you earlier during his appearance. So in the new Pest Control Products Act, any information like that.... For poisoning or someone feels that they've been negatively affected by a pesticide, when they call the number on the label, the manufacturer is then legally obliged to provide that information to PMRA, and those reports are all publically available on the website.

If there are a series of them that have a similar trend, PMRA will produce a report, describing what they are,

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what action has been taken, if any, or whether they feel that it's related to the pesticide or not. So this is all publically available on the incident reporting section of PMRA's website.

S. Fraser: I'll follow up on that. Thank you, Pierre. You spoke quite a bit about.... You referred to agricultural uses and the importance of these products. Again, the integrated pest management end of this, to my mind, doesn't normally apply to the homeowner that's trying to get the perfect lawn or trying to deal with a home issue. They go to the hardware store and get a product and, hopefully, read everything and use it appropriately. So the integrated pest management doesn't really come into it. Although, the questions that I had for Lindsay Hanson and Health Canada is....

It's sort of the accumulated use that could occur in some home uses on top of.... The province sprays 50,000 tonnes of pesticides every year on provincial land for various reasons — noxious weeds and such. That also can overlap with private managed forest lands that are also using a certain amount as are any agricultural users. It could all be within the same watershed as the local homeowner that wants to use cosmetic pesticides, often for aesthetic reasons. So that's where we're looking at.

I'm concerned about that accumulated use, and I didn't get anything out of Lindsay that led me to be confident that Health Canada or anyone else actually knew the total amount of exposure — to a particular watershed, for instance. Maybe the titration dish, maybe the use of the cosmetic on a lawn would be just that much more than is necessary and could potentially have a long-term health risk.

P. Petelle: There are two parts to that. One is strictly for aesthetic, which is how you termed it. Obviously, we don't agree with that assessment. Our products should be used not for the perfect lawn or other comments that I may have heard. They're used when there's a pest issue that is impacting whatever the greenscape that we're talking about. That's when they should be used to protect that investment.

But on your other question about cumulative assessment, again, I think there is some pretty good messaging on Health Canada's website explaining aggregate and cumulative exposures, but if I can just summarize what they do.

It is a very conservative approach when they look at all the potential uses for that active ingredient. So whether it's going to be used on a lawn or for food production or in forestry for conifer release, all of those uses are looked at in a very conservative way. The assumptions are made that all those acreages will be treated with that active ingredient, which is probably not likely the case. They do take all of those uses into account in a cumulative assessment to measure the exposure.

I don't know if that didn't come through clearly in Health Canada's response, but that is the approach that they take.

S. Fraser: If I could just finish off, there's a lack of knowledge....

B. Bennett (Chair): We're just about out of time here, Scott.

S. Fraser: Okay. Yeah.

B. Bennett (Chair): And MLA Slater has been very patient through two witnesses, so I'm going to let him get a quick question in here.

J. Slater: Thank you for your presentation. I'd just like to add that I sat on the B.C. Vegetable Marketing Commission when the IPM program came out in 2001-02, and we took that forward. The agriculture community probably does 80 or 85 percent of all the IPM stuff. That's how it started. That's what it was for. But what we're missing here is this interface area, where somebody's got 25 rose bushes in her back yard adjacent to a ten-acre cherry orchard, and the aphids get off the roses and go into the orchard.

[1415]

Under current laws those aphids wouldn't be allowed to be killed in her back yard, and yet it could devastate ten acres of orchard. I think that's part of the problem.

We talked about the codling moth issue a couple of weeks ago as well. It's the same kind of thing. When people have plants in their back yards that create pests that go into the adjacent agriculture community, how do we do that? How do we take care of the fungicides? It's all that interface area, invasive weeds....

You know, if we can't control the properties adjacent to our farming community, we're going to end up using stronger chemicals in the orchards. I mean, I'm a greenhouse grower, and I look at what's happening in China and Mexico. The CFIA is stopping some of the stuff at our borders and saying: "That's got dangerous chemicals on it that we don't approve, so you're not allowed to bring that in." But they miss probably 80 percent of it. So the PMRA has to do this juggling act with the U.S., with Europe, with Asia, with Mexico, with South America to try and control some of these chemicals.

In your survey was there an agriculture component? You know, you said 32 percent don't want to change to the ban and 49 percent said: "Yes, let's change it a little bit." Was there an agriculture component in that?

P. Petelle: Not in this poll. The only time agriculture came up was from 3 or 4 percent, I think, that said: "Expand the ban to include all uses — agriculture, forestry...." But in terms of your comment, though, I think

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you're absolutely right. When a province takes the action, like Ontario, of a wide-scale ban like it did, anytime there is a need to do invasive weed control or a farmer wanting to do spraying on his land, that public is so much more sensitized to this issue.

The stigmatization that I talked about — it is real. We saw that in Toronto a couple of years ago during the garbage strike. They had temporary garbage piles in all the public parks, rotting garbage with rats and mice and flies. When they hired an exterminator to come in and spray for flies and to put some rodenticide for the rats, were the public upset about the rats, a known vector of disease?

No, they were concerned because they were spraying pesticides just after the provincial government had imposed this ban because of "health reasons." It makes the uses that survive these bans much more difficult, absolutely.

B. Bennett (Chair): Thank you very much, Pierre, for your presentation — appreciate it.

Dr. Vakil, this is MLA Bill Bennett. I chair the committee. I think I heard you come on the line maybe 20 minutes ago. We've got almost a full committee here today in Vancouver. Where are you this afternoon?

C. Vakil: I'm in Kingston, Ontario.

B. Bennett (Chair): You're in Kingston, Ontario. That's a great place. That's where I went to law school. Beautiful town. That's where Don Cherry is from too — not that that's relevant.

We've got your presentation, your slide deck in front of us. You have 30 minutes in total. There are seven MLAs present and one on a line, so there are plenty of folks here who

would ask questions if you don't use your full 30 minutes up in your formal presentation.

C. Vakil: Okay. The slides are just a very short synopsis. You could sort of go through them as I'm talking. You'll probably figure out that they aren't really numbered. I'm just going to speak and you can kind of go from one to the other, and it's pretty obvious what I'm talking about — which slide will correspond.

Firstly, I'd like to thank you, the B.C. Special Committee on Cosmetic Pesticides, for this opportunity to discuss the proposed law to ban the use and sale of cosmetic pesticides.

[1420]

I'd also like to congratulate the B.C. government for considering this extremely health-protective action which will help to ensure that B.C.'s children have the same health benefits as children in Quebec, Ontario and other provinces that have passed legislation ensuring that their children are not exposed to these toxins unnecessarily. After my talk, I hope you'll realize that this is a huge step forward in public health to help reduce the rate of many illnesses caused by pesticides, including childhood cancer, which has increased dramatically in past years, partly due to pesticide use.

Now, I've been a family doctor in Ontario for 25 years. Presently, I'm a professor in the department of family medicine at Queen's University. I've been on the environmental health committee of the Ontario College of Family Physicians for over ten years. I'm on the board of directors of the Canadian Association of Physicians for the Environment and of Physicians for Global Survival, and I believe passionately that the environment plays a key role in human health. I think it's my role as a physician to protect the environment because it's a major issue in preventive medicine and in maintenance of children's health.

Now, I understand that polls indicate that a majority of British Columbians support this legislation, somewhat similar to citizens of other provinces. Certainly in Ontario, where the law was implemented two years ago.... The recent election resulted in the Liberal government being re-elected, and Ontarians clearly support their pesticide ban law. In fact, it wasn't an election issue at all. After this ban, concentrations of some of these pesticides have dropped as much as 97 percent in some urban Ontario streams and waterways. The Ontario ban has improved some businesses that deal in organic lawn products. I understand in Halifax, in response to the municipal ban, landscaping and lawn care businesses grew by over 50 percent — similarly in Toronto after the municipal bylaw was implemented.

In addition, health care costs of pesticide-related diseases such as cancer will decrease as the benefits of these laws banning pesticides are manifested in less disease. This will decrease the financial burden on a system that is increasingly strained by an aging population.

But I'm really here to describe to you the reasons why I believe a provincewide ban on cosmetic pesticides is absolutely necessary to protect the health of British Columbians, especially children. In 2004 I co-authored a review of the medical literature looking at the human health effects of pesticides for the Ontario College of Family Physicians, the

association of family doctors in Ontario representing 9,000 family doctors. This was a systematic review, meaning that all the studies were chosen in a non-biased, systematic, standardized method.

We looked at over 100 studies and found very strong evidence that pesticides cause birth defects, infertility, neurological diseases like Parkinson's disease and a number of cancers. And the alarming thing we found was that rates of childhood cancers, including leukemia, lymphoma and brain tumours, were increased with typical home and garden use of pesticides during, after and even before pregnancy. Again, this means children are developing cancer due to the home use of pesticides.

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More recent studies have corroborated this and include exposure not just to infants and children and pregnant women but to fathers as well. This is why the proposed legislation in B.C. is so important. It will ensure that children will not develop cancer because of use of pesticides in homes and gardens.

Now, the PowerPoint presentation you have in front of you is just a short synopsis of our findings, and I'll briefly summarize the results.

We looked at a total of 165 scientific studies, 109 of them dealing with cancer. Some were just on children and some on adults, looking at both occupational and household use of pesticides. Some of the studies on children were looking at whether parental exposure — mothers and fathers, both occupational and home use of pesticides — caused an increase in cancer in their children.

We found that most of the studies on all types of cancer for both children and adults were positive, meaning they showed pesticide exposure was associated with an increase in cancer risk. One particular study — you should have it up there — by Kristensen, looking at the children of Norwegian farmers, found an increase in brain tumours in their children, with higher exposure causing higher risk. This finding has been replicated in many other studies. It's not known whether the men were bringing home pesticide residues on their clothing and exposing their children and their wives who were pregnant, or if there was some sperm damage which eventually caused cancer in the child.

All the studies on kidney cancer were positive. Similar to the above study on fathers, a large study by Fear found an elevated risk of kidney cancer in children whose fathers were employed in agriculture.

All eight studies on prostate cancer were positive, and a very detailed, methodologically sound study on pesticide applicators in the U.S. by Alavanja showed a significant elevation in risk of prostate cancer, especially with methyl bromide, which is a fumigant for rodents and insects, and particularly in men with a family history of prostate cancer.

But the most compelling studies were those on leukemia in children, and repeatedly, the studies were consistent in showing higher rates of leukemia in children whose mothers were exposed to pesticides, usually in the home and especially during pregnancy. This is consistent with many theories that suggest childhood cancer is actually due to a prenatal insult.

One very high-quality study by Ma showed elevated rates of childhood leukemia in all exposure windows: that is pre-conception; pregnancy; and first-, second- and third-year of life — especially during pregnancy. Again, this shows the importance of protecting pregnant women from household and garden use of pesticides.

Another very important study was a Canadian study by Infante-Rivard which showed increases in leukemia risk with parental use of pesticides in the home. They studied a subgroup of these children that metabolized pesticides slowly, and they estimate that's about 40 percent of the population, where the risk of developing leukemia was even higher, as much as fivefold. This indicates a subsector of the population may be at particular risk when exposed to pesticides.

Studies on non-Hodgkins lymphoma, which is a type of cancer of the lymph nodes, were as convincing and consistent as a leukemia studies. Most were positive, meaning people exposed to pesticides had a greater risk of getting this type of cancer. Elevated rates of non-Hodgkins lymphoma have been found in golf course superintendents; farmers in Canada, with increasing risk with numbers of acres sprayed; and also children who lived in homes where pesticides were used.

The studies on neurologic function consistently showed impact of pesticides on a number of measures. Now there's rapid development of nerves in children under the age of six, which means we should be extremely cautious of the potential neurotoxins that they're exposed to. One of those slides shows drawings done by children with exposure to pesticides compared to those without, and the exposed group clearly has suffered neurologic damage, meaning pesticides have damaged the children's brains and nervous system.

In addition, studies on Parkinson's disease, a serious degenerative neurological disease, has shown that people who metabolize pesticides slowly are more likely to develop Parkinson's disease with exposure to pesticides.

Further slides describe the positive findings of studies on birth defects, including heart, nervous system and facial defects. Other studies show positive associations with low birth weight. This is important because it's a significant determinant of health problems in childhood and later in life and with miscarriage, stillbirth, chromosomal aberrations, which is damage to chromosomes by some insult to the cells. That's known to cause cancer, birth defects and genetic disease.

Now I'd like to describe a few more recent studies on the subject of pesticides and childhood cancer that have been published since our original review. I don't think there are slides on this.

One study published in 2006 in the journal *Pediatrics and Child Health*, called *Pesticide Assessment: Protecting Public Health on the Home Turf*, focuses attention on 2,4-

D, which is a herbicide most commonly used to kill weeds in grass. The authors conclude: "The balance of epidemiological research suggests that 2,4-D can be persuasively linked to cancers, neurological impairment and reproductive problems."

Another study — this is not on your PowerPoint — pooled results of 40 studies in a meta-analysis, where results of a number of studies are combined to increase numbers and strengthen results. It found the risk of a

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child developing lymphoma or leukemia increased significantly when the mother was exposed to pesticides during pregnancy.

The risk of brain cancer was correlated with paternal exposure — that's the father's exposure — before and after birth. Importantly, this exposure was household exposure, which is the type of exposure that would be banned with the provincewide laws being proposed in B.C. This underlines the importance of protecting pregnant women and men of childbearing age from the effects of pesticides in order to protect the fetus and young child.

Another meta-analysis, looking at home use of pesticides, found an increased risk of childhood leukemia with pest control treatments during pregnancy and early childhood years. The authors concluded that residential pesticide use during pregnancy and early childhood is associated with childhood leukemia. All of these studies are consistent with previous medical literature and with our conclusions from the Ontario College of Family Physicians review.

I just want to talk about one more extremely important study that I'd like to tell you about which was done in 2004 in New York City looking at birth weight and exposure to insecticides. Remember, low-birth-weight babies have higher risk for many health problems later in life.

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A ban of insecticide use was in force in 2001 in New York City. Babies born before the ban had higher level of pesticides and lower birth weights. Babies born after the ban had substantially lower concentrations of pesticides and no depression of fetal growth. This is strong evidence that bans on pesticides, such as the one proposed in B.C., are already health protective with measurable improvements in children's health.

As you can see by briefly perusing it, the evidence is clear that pesticides cause many serious and fatal illnesses, and unnecessary use should be banned.

It's well known that children are more vulnerable to the toxic effects of pesticides. They eat and drink more per kilogram of weight. They play on or near the ground, giving them more exposure, and small children put things in their mouths, increasing their ingestion of pesticides indoors and outdoors.

Remember that exposures to pregnant women affect women as well as the growing fetus. If the fetus is female, she has the developing eggs in her ovaries that will, in

adulthood, be her own children. So pregnant women's exposure not only exposes the woman and her fetus but her grandchildren as well. This is why we need to be extremely careful with protecting the health of pregnant women, as exposures during pregnancy affect generations to come.

By implementing a provincewide ban on at least the cosmetic, non-essential use of pesticides, B.C.'s children would at least have the health protection enjoyed by other children across the country living in provinces that enforce such a law.

I represent over 9,000 family doctors in Ontario. Doctors are an unbiased group of professionals whose job is to keep people healthy. We do not have any financial interest in banning pesticides, and our goal is to improve the health of our patients and all Canadians. The best way to do this is through preventive medicine.

This proposed legislation is an excellent way to protect the health of B.C.'s children, and I urge you to support a law banning the use and sale of non-essential pesticides, based on Ontario's law, which is the most health-protective in North America.

Does anybody have any questions?

B. Bennett (Chair): Thanks, Dr. Vakil. I'm sure that there'll be some questions. Committee members?

S. Fraser: Thanks, Doctor, for this. Thanks for taking the time by calling all the way from Kingston. It's three hours later.

Your arguments are very compelling. We do hear submissions that often seem to contradict each other, so we're trying to sort of weave our way through that.

As you know, Health Canada has taken a position that they.... They have okayed these products for use. Their pest management regulatory agency okays this based on the fact that they're safe. Your evidence seems to refute that. It doesn't seem to. It does refute some of the assurances made by Health Canada.

Can you comment on that, Doctor? How are we supposed to figure this out?

C. Vakil: Well, Health Canada looks at industry-funded animal studies. They look at one pesticide at a time in a measured, controlled lab environment. They only look at that one active ingredient.

All of these pesticides have what they call inert substances, which are the vast majority of the volume, which in themselves can be harmful. They don't look at combinations with other pesticides, which is the reality. Most people have exposures to many pesticides. They don't look at the combination of the pesticides with other pollutants. And they're animal studies. They aren't on humans. So it's a different set of data that they're looking at.

What I just described to you were the long-term effects on humans that, if you want to call it.... It's post-marketing surveillance. It's looking at what actually has happened once these pesticides have been used over a number of years — real people in real situations and

combinations of many different pesticides. And it's long term. Some of these pesticides.... The latency period, meaning the time between exposure and developing a

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disease, can be decades. There are two different sets of medical literature here.

Health Canada has a long history of approving things like pesticides, medications — because it's the same kind of process. As a doctor, I can tell you there have been many medications Health Canada has approved, based on industry-funded, short-term studies that over and over.... I can give you many examples where, after they've been out and patients are using them, they discover that they aren't safe after all, and they're pulled from the market. It regularly happens, and now this is happening with pesticides.

B. Penner: Thank you, Doctor, for your presentation. I haven't had a chance to go through your presentation in detail, but just listening to your summary, it comes across as very unequivocal and not containing any element of doubt.

[1435]

I know that often with scientific research, there always is some element of doubt. Am I accurately summarizing your presentation? You're saying the evidence is completely unequivocal?

C. Vakil: Well, the problem with studying pollutants of any kind is that the gold-standard study is what's called the randomized control trial, where they take a group of people and they expose them with something or they give them a treatment and then another group that they don't, and they follow them over many years and they see what happens to each group.

When you're looking at environmental pollutants or potential poisons, you can't do those kinds of studies. All you have are these cohort or case-control studies — they're different study types that you can do — and you look at, say, groups of people that have exposures to pesticides, or you measure levels in blood or breast milk or umbilical cord blood of pregnant women, etc., to get an idea of how much exposure they have. Then you look at what happens.

Some of these are very long-term studies, prospective studies. Sometimes they're looking in the past. There is no such thing as absolute, 100 percent proof ever when you have studies like this.

Studies on pesticides.... This controversy has been going on since the 1960s. There are many, many studies. If you look at any one of them, you cannot say absolutely, 100 percent, this is absolute proof. But when you have many, many studies over many years, consistent results over and over, you go with what's called the preponderance of evidence.

This is exactly what happened with smoking. You can never say absolutely, 100

percent, this person's lung cancer is because they smoked. Nobody can say that. But when you have many, many studies — and it took 40 years for us to do this — finally we say, yes, it sure looks like smoking is related to lung cancer.

This is exactly the same kind of thing. I would say, in my opinion, having looked at hundreds of studies, I am convinced that pesticides are harmful.

B. Penner: Again, the reaction of Health Canada. When you present this information to them, what do they tell you?

C. Vakil: Well, I've never talked to anybody from Health Canada. But I would assume they will say that their studies are just as good. And I would refute that. Their studies are industry-funded animal studies in very controlled lab situations and short term.

B. Penner: And you've never tried to speak to somebody from Health Canada?

C. Vakil: I've never spoken with anybody from Health Canada, no.

B. Stewart: Thank you for your presentation, Doctor. I just wanted to better understand how your group sees the definition of "unnecessary cosmetic pesticides" as you use those words.

C. Vakil: I think it's just to do things like remove dandelions that they don't like. It does not include anything that's a health risk like some kind of rat infestation or wasps or poison ivy or something that's harmful. There are, no doubt, people out there that are spraying their lawns because they don't like dandelions or they don't like some particular kind of plant that's growing, some weed. That's what we mean by "cosmetic non-essential use."

B. Stewart: So in the case of licensed applicators, people that are knowledgeable about application rates, etc., are they doing that? Not knowing Ontario, exactly, the playgrounds, school grounds, etc., where dandelions would be — obviously the same problem as here in British Columbia — would the applicators be allowed to do that, or are they completely and outright banned in all those situations?

C. Vakil: I think they're completely and outright banned. Again, I don't know the details of these laws. I'm here to tell you about the medical information.

R. Fleming (Deputy Chair): Well, thank you, Dr. Vakil. I wanted to ask you a question. We had a previous submission that suggested that provinces like the one that you live in that have banned cosmetic pesticides are placing Canada against what most global jurisdictions are doing. That is not my understanding.

I'm aware of a number of Scandinavian, North Atlantic countries that have implemented national bans similar

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to what you have in your province. I'm just wondering, in the first place, whether you think it's an accurate statement that British Columbia, in looking at what Ontario is doing, is against what is happening in most jurisdictions; and secondly, whether you have taken the studies that you've done, which are primarily in North America — I know you had some examples from Norway and other places — and looked at countries that have had national bans in place for, in some cases, several decades to see if the opposite happens when pesticide use is reduced and whether cancer incidence also declines.

C. Vakil: For the first part, I understand that Canada is way behind with respect to pesticide usage, that most other countries have far less lax laws than we do.

Secondly, I just know that Sweden, which banned 2,4-D, I think, back in the 1980s, has a notably lower rate of non-Hodgkins lymphoma. That was the pesticide most related to non-Hodgkins lymphoma. That's the only post — if you want to call it post — marketing surveillance I've seen, as well as this study from New York City.

B. Bennett (Chair): Okay. Well, thank you very much, Dr. Vakil. We appreciate your time today. If we have any follow-up questions, we'll be in touch.

C. Vakil: Absolutely. And thank you for allowing me to speak to you.

B. Bennett (Chair): Next witness is Dr. Bruce Lanphear.

I think I spotted you when we first came in, so you've been here for the introductions of members.

B. Lanphear: I arrived about an hour ago.

B. Bennett (Chair): Oh, you did. Okay. I think, while you're just getting set there, we'll just do a really quick introduction of members. We'll just go through quickly here and introduce ourselves.

S. Fraser: Scott Fraser, MLA for Alberni–Pacific Rim. Welcome.

R. Fleming (Deputy Chair): Rob Fleming, MLA for Victoria–Swan Lake and Deputy Chair to the committee.

B. Bennett (Chair): MLA Bill Bennett, Chair of the committee.

J. Yap: I'm John Yap, the MLA for Richmond-Steveston.

J. Slater: John Slater, the MLA for Boundary-Similkameen.

B. Penner: Barry Penner, MLA, Chilliwack-Hope.

B. Stewart: And Ben Stewart, MLA for Westside-Kelowna.

B. Bennett (Chair): I'll get my stopwatch going here, and you'll have a half-hour in total. You can use it however you want to, but if you leave some time at the end for questions, that would be great.

B. Lanphear: Thank you very much for the opportunity to be here and to present to this committee. What you're deliberating is, I think, of utmost importance to the health of B.C. citizens. I am a clinician-scientist at the Child and Family Research Institute, a professor in the faculty of health sciences at Simon Fraser University and still, for another year, the director of the Cincinnati Children's Environmental Health Center.

My work for the last 15 years has been to try to understand the consequences of chronic, low-level exposures to lead, tobacco and other environmental contaminants like bisphenol A and pesticides. We don't have specific information on the impact of some of these pesticides used in the homes, but we have studies that have begun to look at pesticides and their impact on children. That's what I'd like to focus on today — some of those emerging studies.

In fact, based upon the systematic review that was just presented by the last speaker, when there were only two studies specifically looking at the impact of pesticides on children's growth and development.... There've been quite a few, particularly in the last year or so, that have come out. I'll provide some summary of those.

First, I wanted to put some of this into context. We have been told for a long time that low-level, chronic exposures to environmental contaminants are safe and innocuous. Some of you remember Rachel Carson and her book *Silent Spring*, which was published 50 years ago next year. She was taken down by industry.

[1445]

At this time my father was a horticulturist. He was learning to find ways to use chemicals, like herbicides that we're talking about today, to try to bring about the chemical revolution. He has since changed his ways. I'll say more about that later.

What Rachel Carson pointed out then, which I now believe to be true, is that thalidomide and pesticides represent our willingness to rush ahead and use something new

without knowing what the results are going to be. We are paying dearly, as a society, for our decisions to rush ahead.

With the control of many of the old diseases of childhood — measles, polio, tuberculosis — we have begun to see, beginning in the 1960s, a whole slew of new diseases; new morbidities, they've been called; or new epidemics — autism, conduct disorder, learning problems, ADHD, asthma and preterm birth.

Many of these — including learning problems, ADHD, asthma, preterm birth and even, in some unpublished

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work, autism — have been associated with different types of pesticides, not necessarily the kind we're talking about today, but in some cases they have, such as ADHD and learning problems. So I'll focus on some of those today.

First, one of the more common classes, organophosphate pesticides, were developed for biologic warfare. They were designed to be toxic, and they interfere directly with not only acetylcholine but other nervous system functions. The vast majority of these organophosphate pesticides have not been tested for developmental neurotoxicity — that is, the impact on brain, on behaviour, on learning ability in rats or children.

These have largely been grandfathered in. This is, I think, one of the reasons why our regulatory agencies are having such a hard time determining what chemicals are toxic. It is that they've been grandfathered in.

In some cases — let me speak from the U.S.; that's where I have most of my experience — there is actually a disincentive for industries to test these products. If you identify that one of your products is toxic, you have to report it, and more is required because of that. So what's an industry to do? Maybe they shouldn't test it too carefully.

The vast majority of pesticides in use are organophosphate pesticides. Some of those are, in fact, used in the home.

First, I'm not in animal toxicology studies, but the kinds of things we're seeing are important in those studies. This is the way we get around the problem of not being able to do randomized trials in children. Of course, we wouldn't want to.

How can we take away any confusion about whether these pesticides are truly causing an effect? What we look to, whether it's lead or whether it's pesticide, is: are there adverse consequences in controlled experimental studies in animals?

What we see here is consistent with impacts on the central nervous system of rodents. There's a reason we're spending billions of dollars of our medical research money on animal studies. They have a lot of concordance with what we see. That's been proven time and again over the past 30 or 40 years — particularly in my field, with behavioural toxicology.

This study, which was done by a Canadian researcher using U.S. data, shows that as urinary DAP exposures increase — now, these are metabolites of organophosphate pesticides — they see decrements in children's learning abilities. Fairly striking, these kinds

of learning abilities, as you can see here.

Working memory. As the exposures to organophosphate pesticides during pregnancy increase, there is a decrement in children's working memories, in their perceptive reasoning, in their processing speed and in their full-scale IQ. These functions are critical for children to succeed in society, to thrive and to contribute.

This is the study that was mentioned in the previous study, where chlorpyrifos, an organophosphate pesticide used in the homes of children for cockroach control, was banned. This is looking across the board at all of the children. What they found was that the children with the highest exposure to chlorpyrifos — this is the parent compound found in the serum of the mothers — were at increased risk for something called pervasive developmental disorder. This is: problems interacting socially with others.

It's arguably on the scale of autism spectrum, but it is not autism. It's very hard to define autism at this point. There is some unpublished data suggesting that a pesticide is associated with autism, but it's not yet published. So this is just, perhaps, a clue of where we need to look further.

[1450]

ADHD. ADHD is one of the most common and disabling problems of children in the United States. It impacts about 9 percent of kids. We don't know the prevalence in Canada. We do know that the use of drugs to treat ADHD has gone up tremendously, but it's hard to tease apart marketing from prevalence of ADHD.

In this particular study they looked at prenatal exposures to organophosphate pesticides and, overall, found about a fivefold increased risk in ADHD among children at the highest levels of exposure. A tenfold increase in pesticide exposure was associated with about a fivefold overall increased risk. As you can see here, the greatest risk, which was about tenfold, occurred in the boys, which is consistent with what we see. Boys are about two and half times more likely to suffer from ADHD as girls.

Finally, another study, again by a Canadian researcher travelling in the U.S., found — if you look over here at the circle — whether you look at the dimethyl metabolites or the total metabolites, there's about a 70 percent or a 35 percent increased risk in ADHD among children who are exposed. This is concurrent. The previous studies are the strongest study design we have, short of randomized, controlled trials. That is where you identify kids during pregnancy, you measure exposures, and then you follow them forward. So just short of randomized, controlled trials, these new studies are actually quite robust.

What do we know about the failure of toxicity testing? Again, this gets back to the problem of: why isn't Health Canada doing more? Again, I have to speak more from the standpoint of the United States, but it's really the same dilemma. Of the nearly 3,000 high-production-volume chemicals, 75 percent lack even the most basic toxicity tests. Part of this is because they were grandfathered in and didn't require the extensive testing that they might today.

Pesticides are dealt with a little bit more stringently, but still, of the 140 registered

pesticides that the EPA

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considers to be neurotoxic, the majority have not been sufficiently tested for developmental neurotoxicity.

In a broad scope, let me just try to give you some of my insight that I've learned over the past 15 years looking at lead, tobacco, pesticides, plastics like bisphenol A or phthalates.

First, despite the assurances from industry over the past 50 years, what we're learning is that there is increasing evidence that environmental chemicals are toxic at levels previously thought to be safe or innocuous. Subtle shifts in cognition, behaviour, birth weight or physiologic parameters in children are often antecedents of disease and disabling disorders in older children and adults.

The effects of most of the environmental toxicants, if not all, that I have studied and that have been studied, are systemic. We might see pesticides being associated with ADHD, but if we look further, we tend to find more consequences of exposure.

Finally, and I think perhaps most importantly, disease and disability associated with environmental chemicals are preventable. We don't need more research. The evidence is clear in some cases and, where it's not, where there is no essential use of a product, we can take action without knowing definitively the results.

I want to come back to my father, who, I mentioned briefly, was a horticulturist. It so happens he died of ALS last year. The two strongest risk factors for ALS that we have today are herbicides and lead, two of the things that I am studying. We don't necessarily need to know whether my dad died of ALS because of those exposures. We have evidence from other studies. But if we take action today, we can prevent diseases we haven't even begun to think about. There will be more. Based on my evidence, we can count on that.

B. Bennett (Chair): Thank you very much, Dr. Lanphear. I'm just going to ask an introductory question, and then we'll hear from other members, I'm sure.

You differentiate neurotoxicity from the sorts of other health issues that other witnesses have raised and, I'm sure, will raise. We're hearing from the Canadian Cancer folks, I think, tomorrow. I didn't quite understand or didn't quite get your point about the testing that relates to neurotoxicity. You mentioned the number of chemicals that weren't tested by the EPA, but in Canada....

[1455]

I know that Health Canada takes a lot of its information and direction from the EPA. In Canada, with regard to the pesticides that we're all familiar with, that are on the shelf of the local Canadian Tire store.... The chemicals that are in those products — are they tested for neurotoxicity impacts?

B. Lanphear: The vast majority would be consistent with United States data, which is to say there may be some data in animal models. Oftentimes if there are, they're not done at environmentally relevant levels. If they are done at environmentally relevant levels, they may not be given at the right exposure route. But in many cases they haven't even been tested for neurotoxicity.

Why do I distinguish neurotoxicity? In part because I realize that others are going to be focusing, for example, on cancer. And we do a better job, overall, at looking at cancer endpoints than we do neurotoxicity — mental health issues, ADHD, for example. So that's why I distinguish that from some of the others.

B. Bennett (Chair): So one of the follow-ups for the committee with Health Canada might be to ask them what they do around testing for neurotoxicity.

B. Lanphear: Right. I think the other thing to help understand.... This always struck me as a bit odd, but we have required numerous studies to look at adverse consequences — for example, with neurotoxicity in rodents and in humans — before we take action. So it's not enough that we know, for example, that OP pesticides cause toxic effects on animal models. We do know that. That's pretty clear. Not in every particular type of pesticide, but by and large, we know that.

Why don't we take action based upon that data alone? Because we have required, up till now.... That's beginning to change a little bit in Canada, not in the U.S. Why haven't we required it now? Because we have required confirmatory testing in human studies.

Now, what that means is a little bit troubling. It means that we're going to allow our kids, for example, to be exposed to pesticides or other chemicals and then expect us over the next generation or two, epidemiologists like me, to go out and try to tease that apart from other problems — other characteristics, other exposures. That's what we have required thus far.

That's beginning to change. Certainly, Health Canada is beginning to move in this direction with the chemicals that they've set as high-priority chemicals. They decided to declare bisphenol A toxic probably before they would have otherwise. They were ahead of the game on that.

But typically what happens then is that they say, "Okay, do we see evidence of effects in humans at this level or at this level or at this level?" which, again, takes a lot of time. And it means that there's a lot of harm likely to happen before we declare something toxic.

J. Slater: Just on that point. Organophosphates have been around for decades, basically. I mean, I remember when I was a kid, we used to go stand at the bus stop and the guy spraying his orchard with the sulphur sprays and the DDTs — rinse them out in the creeks, and all the rest of it. You know, today we look at a chemical, Guthion, which was outlawed three years ago, I guess. It took two years to get it off the shelves.

How do the medical guys work with Health Canada, with their scientists, to say: "Look, we've got to do a quicker job on this. We've got to get these products off the market because those rats are all dying, or they're all...?" Where's that dovetailing between Health Canada and the science world and the doctors we've just heard from earlier today as well? Like, where does that come into play?

B. Lanphear: It really depends. I have been involved in a number of scientific advisory committees. I've also been kicked off several during the Bush administration. So it happens sometimes not so well.

With lead, it's taken about ten years since we had pretty good evidence that there is no safe level for us to get to this point today. Health Canada has sort of gotten stalled. They used my data as the key study, but they got stalled, I think in part because of the enormity of the problem. It's a bit overwhelming. How many houses might contain lead-based paint, for example? In the case of bisphenol A, we had a committee last year in Ottawa, and we reviewed several hundred animal studies and about 23 human studies.

[1500]

I think where we get stymied, why it can't move forward, is that we're basing a lot of this on obsolete regulatory frameworks — that is, again, you have to see dead bodies before you take action. It's not a very rational way to deal with it. I think, from the standpoint of physicians and scientists, that all of this is sort of done in addition to our regular duties.

Most of us, I think, see this as part of our job. We're public servants of a sort. But in many cases, like in the States, it's not. I mean, we get tenured because we bring in lots of money and we publish, not because we're going off and sitting on advisory committees. So it takes us away from what people evaluate us for.

I think there's a challenge in doing it, but I think it really goes back to: is the regulatory framework sufficient? Or does it, in fact, require a tremendously high bar, an extraordinary amount of proof?

The fact that we saw — for example, in these three studies looking at prenatal exposure to organophosphate pesticides and cognitive deficits in kids — consistency across all three is extraordinary, because the amount of chance that we don't allow to occur is extraordinary.

Pesticides we can measure on one day, and two weeks later there is some correlation, but it's, like, hit-and-miss, and yet we see a fairly strong signal. That's extraordinary. What it means is that we have created this bar that makes it extraordinarily difficult for us to protect human health from environmental chemicals.

S. Fraser: Thanks, Dr. Lanphear.

These studies.... I'm going to ask a question. Is there a safe level of exposure?

I mean, our job as laypeople is to try to adjudicate legislative change in the public interest, in protecting health — weighing that. As a layperson, I've done some literature searches on various things and various pesticides.

If you look worldwide, even glyphosate, Roundup, is used quite routinely. The name sounds innocuous too. But if you look at literature from France, from the University of Cannes, there is literature linking the use of glyphosate to reproductive disorders, that sort of thing.

What I'm also seeing in the recent literature is reference to trace elements and how there are specifically physiological effects being related to way lower levels than Health Canada does as a level, because trace elements have a different mechanism of effect or something.

Do you have any comments on that? As a layperson, again, I look at that as sort of the stuff like they do with second-hand smoke. That was not even considered to be an issue at one point. Now we realize it is an issue, or at least the evidence seems to indicate that.

Am I in the right direction here? What's going on?

B. Lanphear: Yeah, it's an extraordinarily important question. What we saw with lead about a decade ago.... Not only are there effects at the lowest measurable levels but something really counterintuitive as well. That is that, proportionally speaking, there are greater decrements in IQ at the lowest levels compared to levels 10 micrograms per decilitre or higher.

Right now Health Canada says that above 10 micrograms per decilitre — that's about 100 parts per billion — are levels too high. An increase from less than one to five — let's say 50 parts per billion — is associated with about a three- to four-IQ-point decrement. From ten to 15 is associated with about a one-point decrement. So there are steeper decrements, greater effects at the lowest levels. Cumulatively speaking, it's worse having a bloodletting of 15 or 20 than five or ten, but it's steeper at the lower levels.

We've seen that with lead consistently. It has been confirmed across the world. We've seen it with not my research, but others have seen it with particulate matter, PM-2.5, fine particle matter, and death from heart disease and stroke. The steepest increase in risk at the lowest levels of exposure.

Smoking and birth weight — the greatest decrements in birth weight at the lowest levels of exposure. Benzene and leukemia — steeper increases in risk at the lowest levels of exposure. What all of those would suggest is that there is no acceptable level, because all of the regulatory management studies have looked at the higher levels, smaller decrements that have pushed them to lower the allowable levels.

Now we're saying that even at the very lowest levels, we see, with just a minor increment in increase, steep increase risks that are probably going to be greater than the ones that led to the reduction ten years ago. So that's key.

Can I say, based upon the existing evidence, that that's true for organophosphate pesticides? I can't. It's not there. We're going to wait for somebody to do that study, and maybe in another five or ten years it will be there.

[1505]

The question is: how much more harm will happen before then? Or we could say: "We've seen it with tobacco. We've seen it with air pollutants. We've seen it with lead. We've seen it with benzene." What's unusual about those? Those are some of the most well-established toxicants. So we could flip it around and say, "Well, maybe we should start to assume that there's no threshold, and maybe that there are even greater effects at the lowest levels," if we're really interested in protecting public health.

S. Fraser: Prove otherwise.

B. Lanphear: Prove otherwise — exactly right.

J. Yap: To get back to MLA Slater's line of questioning, what happens when Health Canada is confronted with these studies that show this correlation? It seems, from what you've shown here in this summary graph form, quite compelling — right? So what does Health Canada...? How do they react to this?

B. Lanphear: Health Canada. I actually don't recall if these particular pesticides are one of their 200 high-priority chemicals.

J. Slater: Yeah, 170, yeah.

B. Lanphear: Some of them are, you say?

J. Slater: They're in the 170 for sure.

B. Lanphear: Then Health Canada has sort of begun to think of this differently, which is to say that if they've considered a high-priority chemical, they have said, "We might consider a more precautionary approach" — right? So instead of what I was lambasting a moment ago — that we wait for a generation or two; we wait for dead bodies — we're still looking at arms and legs now, but they've set up a higher-priority approach to begin to look at this and review it more quickly. But it does take a long time.

I mean, even when you start a review process to revise or reconsider the level of toxicity for a chemical, reasonably, it can take three to five years. Some of that is the delay

that it just takes time to do all this — to give public comments, to convene panels and so on and so forth. I think, again, with this, the challenge panel, that could happen faster, but 200 is a lot to go through, isn't it?

R. Fleming (Deputy Chair): You know, the point you just concluded on is interesting. I wonder. It's really a question for Health Canada. The percentage and amount of money invested in industry-sponsored research, self-reporting to the regulator versus independent research by yourself and others — I'm just wondering how that might compare and stack up against each other.

What I wanted to ask about. Because you've talked about developmental disorders, some of the links that research has provided to the persistence and accumulation of pesticides in the environment and in our bodies, I'm just wondering. You didn't present any research today about fertility rates, which may be declining, and whether there's any evidence from your research on that. If you could comment on that, that would be great.

The other thing that I think this committee is going to be interested in, and this might not be your area of expertise, is the concentration of chemicals in our environment, the riparian areas and areas where they may disrupt wildlife — salmon populations, for example, or birds — and whether you have anything to comment on that. There has been a lot of literature about endocrine disruption. If you could provide any comment on that, that would be appreciated.

B. Lanphear: Endocrine disruption, I think, is an increasingly important problem.

Some of the work we did that got a lot of attention last week was looking at bisphenol A. It's a sealant used in canned foods, cash register receipts and dental sealants. What we found is that with prenatal exposure to higher levels of that but still within the range that children in Canada are going to be exposed to or that pregnant women will be exposed to, we saw higher rates of depressive symptoms, anxiety and hyperactive behaviour in three-year-old girls. Now, that's one study.

If we're using the old framework, we may need to do three or four more of those studies, which might take another decade, although we do have an ongoing study of 2,000 children in Canada, looking at the impact of environmental chemicals.

In other cases the phthalate plastic has been associated with smaller penises in animal models — and in one study of just a hundred boys, smaller penises. Now, how worried should we be about that? To some of us, it just feels like it hits right at home. What we have again gotten ourselves into is maybe another decade or two until we can prove that. Now, by that time a lot can happen.

[1510]

The endocrine disruptors, I think, are particularly important. There are a number of chemicals out there that we know — for example, flame retardants, Teflon, PCBs.... All of these, we know, have a direct impact on thyroid hormone. We're all exposed to these — all

of us. I could measure your urine, your blood, your hair. I'll find DDT in 80 percent of you, and DDE, its metabolite, in 95 percent, and your kids as well. It's biomagnified, and it's transferred through the placenta.

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Organophosphate pesticides. About 80 percent of Canadians have organophosphate pesticides at any one time — including pregnant women, of course. Metals like lead, mercury — 100 percent. PCBs — 100 percent. These things are ubiquitous, and we're finding more and more that they're associated with harm, whether it's reproductive effects, endocrine-disrupting effects, central nervous system effects.

I think the best analogy that I've come up with is that prior to the thalidomide epidemic — everybody's familiar with the thalidomide epidemic — there were a number of people, a couple of dozen people, who were really pushing for drug regulatory reform: "We need to test the drugs we use — medicinal pharmaceuticals — before they're marketed." Up to that point they weren't.

The chemical industry, which was the same as the pharmaceutical industry at that time, balked and said: "Look, we'll go bankrupt if you do this." It took the thalidomide epidemic. It took a crisis, and I think that's really what we're waiting for now — something like autism to be linked to a pesticide or some other chemical, which will force our hands and make us re-evaluate our regulatory framework.

But there's no question in my mind and in most people's minds. The European Union several years ago shifted its approach. They require industry now to prove that the chemicals they use are safe before they're marketed. I think that's where we're heading now, but it's going to be a question of how long it will take us.

B. Bennett (Chair): Thank you very much. We appreciate it, Dr. Lanphear. That was very interesting.

Our next witness is Douglas Justice.

Mr. Justice, do we need to have the committee introduce themselves, or have you been here for a few minutes?

D. Justice: No, I was here at the last introduction.

B. Bennett (Chair): Okay. You know that you have 30 minutes in total, and you can combine that or divide that however you want to. We'll let you introduce yourself and get started.

D. Justice: Sure. I think everyone has the text of my remarks. These are essentially my comments. I decided, rather than make a PowerPoint presentation, to actually have you look at me, not that there's anything wrong with PowerPoint.

My comments — and I'm actually going to read to some degree from the text — are based on my experience at UBC Botanical Garden, where I work as a horticulture instructor at UBC; and at Kwantlen Polytechnic University, where I worked previously; as a horticulture consultant; as a grower and propagator of nursery stock; as a garden centre employee; and, early in my career, as a gardener and an indoor plant store clerk.

In all, I've been involved in horticulture for about four decades, and throughout my career I've been closely involved with the use of cosmetic pesticides, either as an applicator myself, as a manager, as a teacher or as a policy-maker in the job that I have now.

When I started in horticulture — and this point has been made a couple of times, I'm sure numerous times throughout these hearings — there was a kind of Wild West approach to the application of pesticides. Today attitudes are significantly different, particularly about the value and the true cost of pesticides. I welcome this opportunity to share my views on this important subject, and I thank you for inviting me.

My comments draw specifically on the history of pesticide use and common pest management practices at UBC Botanical Garden. The analyses and conclusions are my own and may not represent the views or policies of the University of British Columbia.

[1515]

Now, prior to about 15 years ago — this is well before I started working at UBC — pesticides were routinely used at UBC Botanical Garden for all manner of pest, weed and disease problems. Pesticide use was never significant, except in the nursery and in the food garden. Even in these areas, applications were much less than would have been recommended by government for commercial growers.

Outside the food garden and the nursery, staff observed that problems other than weeds would generally diminish in intensity when nothing was done — that is, in the absence of pesticide sprays. In more intensively gardened areas, such as the food garden, there was a gradual shift to applications of "organically acceptable" materials — for example, lime sulphur, dormant oil, fixed copper, soaps and the like — to deal with pests and disease.

Currently the list of acceptable products includes only materials accepted by the Certified Organic Associations of British Columbia. A combination of resistant-cultivar selection, timely spraying — that is, particularly for fruit trees — and appropriate cultural practices, such as crop rotation, companion planting and the use of cover crops, keeps the food garden area productive and free of significant pest and disease problems.

We don't consider pesticide use on food crops as cosmetic, and that might be one of your questions. Pests, diseases and weeds all adversely affect productivity, and it's certainly true that the food garden provides the most challenging pest control challenges. But our goal is to apply the same practices across the botanical garden as a whole. All of the produce that's derived from the food garden is harvested for a soup kitchen on Vancouver's Downtown Eastside.

In the botanical garden nursery there has been a gradual transition from the regular use

of synthetic pesticides to the adoption of what are now known as least toxic — more specifically targeted compounds and, most recently, to more widespread use of biologicals

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for both control of damaging insects and mites and for fungal pathogens.

Biologicals include biocontrol agents such as insect predators and parasites, parasitoids — those would be things that would be purchased commercially — as well as fungal protectants and mycorrhizae, and even insectivorous plants on occasion. The use of biologicals requires considerable managerial expertise, particularly because of the open, often crowded environments in the nursery and the potentially diverse pest species attracted to the ever-changing variety of the plants grown there.

The botanical garden's collections are used for research and education as well as for public amenity, so nursery pest management is not merely for cosmetic purposes. But the point is that, for the most part, we can do without pesticides.

Weed control along pathways, which was traditionally carried out with regular herbicide applications throughout the botanical garden and can correctly be categorized as cosmetic, is now tackled by more generally labour-intensive methods. Hoeing and hand-pulling, regular mowing, and deep mulching with organic materials are our most common techniques for ongoing weed control. We also employ, to a lesser degree, infrared burners and steam machines as well as natural, so-called, herbicides such as acetic acid and citric acid combinations for temporary control.

Now, outside the botanical garden nursery and food garden — that is, in the rest of the garden — significant plant disease problems are rare and can, in our experience, almost always be corrected by improving cultural conditions. In extreme situations, susceptible species are removed.

Rhododendrons and junipers are good examples. With the former, keeping roots well oxygenated and moist by mulching and applying summer irrigation, lifting plants higher in the soil profile to avoid saturated conditions in the winter and providing overhead shade to reduce heat stress keep rhododendrons healthy and disease at sublethal levels.

The majority of junipers, on the other hand, are inherently predisposed to fungus infections that are not easily controlled in cool, humid winter climates. Extraordinary above- and below-ground measures — that would be improving deep drainage characteristics; providing superlative air circulation and maximum sun exposure, basically, making it feel like Kelowna to them; as well as regular fungicide applications on stems and foliage — are required to keep junipers alive. Thus, they are seldom grown and never recommended.

[1520]

Insect and mite pest infestations, like disease problems, are often environment- and species-related. Viburnum beetle is a case in point. The larva of the beetle is known to attack susceptible species of viburnum in local landscapes. This typically happens

repeatedly — that is, every year — to the degree that some species may be weakened to the point of death. Under some conditions, however, the presence of larval damage on the same susceptible species diminishes after an initial infestation and does not appear to significantly weaken plants in the long term.

The reasons may be complex — that is, they could be related to weather, predation, disease or the like — but in gardens where there is considerable biodiversity, viburnum beetle has not proven to be a significant pest as it is otherwise.

In all cases — that is, with weeds, with viburnum beetle, with juniper twig blight, etc. — there are cosmetic pesticides that are available. They can help control these pests or reduce their damage.

At the botanical garden, however, we are more interested in finding alternatives. For one thing, the botanical garden staff don't want to spray pesticides. While that in itself is telling — professional gardeners generally know more about pesticides than others in the general public — there are other compelling reasons to reject pesticide use.

Leaving aside issues of public acceptance and human health, it is well documented and observable both that biodiversity builds resilience in ecosystems and that pesticide use generally reduces biodiversity and degrades environmental health.

A well-known corollary is known as the pesticide treadmill — that is, the more pesticides are used, the more difficult it becomes to control pests without them. In large part, the natural checks and balances — that is, the organisms representing biodiversity — are also adversely affected by pesticides.

Still, some people and some segments of the horticulture industry are reluctant to abandon the convenience and ostensibly low cost and effectiveness of certain pesticides. Admittedly, it required some knowledge of pest biology and pest ecology to effectively manage biocontrol agents. It requires a different aesthetic to accept the high-cut multispecies lawn, a greater level of patience to wait for landscape pest numbers to naturally drop to less-damaging levels and more physical labour to manually control weeds.

Nevertheless, it would be safe to surmise that most ecologists, environmental toxicologists, professional biologists and horticulturalists are convinced that it is worth the effort, for ecosystem health alone, to avoid pesticides wherever possible. There are alternatives.

The insidious nature of synthetic chemicals is not limited to the well-documented dangers of their manufacture, transport, storage, application and local and downstream effects. Their presence and promotion in the marketplace also effectively suppresses demand for alternatives and the research and development that would help to make them obsolete.

I'll just finish by pointing out that I've included our pesticide-use policy at the botanical garden, which essentially reflects the attitudes that I've proposed today.

I wanted to get through that quickly because I thought that everyone would be familiar with

gardening and would be happy to ask me questions.

Interjections.

D. Justice: Exactly. While I recognize that the impact of my statements is not perhaps as great as the previous speaker, whose remarks I found compelling, I think that ecosystem health is a significant enough issue that we need to pay attention to that as well. Obviously, the two are related.

B. Bennett (Chair): Thank you very much. I know we'll have some questions.

J. Slater: I love the term "pesticide treadmill." Being in the greenhouse industry, I try and use 90 percent biologicals. Every once in a while something will get out of control, usually from outside of the greenhouse.

[1525]

It comes in from the orchards, the wind or whatever. There are some chemicals that are very, very low toxicity to 95 percent of the bugs. But the one.... Whether it's a spider mite or an aphid or white fly or something like that, you can target that specific critter and still use biologicals. It won't kill the biologicals around it. Do you envision this getting a higher and higher profile in the outdoors, or is that possible?

D. Justice: Perhaps I should have made a simpler presentation, not because I don't think you understand what I'm talking about but because I think the point is that in the garden situation, which I think is different from the greenhouse situation...

J. Slater: Yeah, because you get so much outside influence.

D. Justice: ...there's really no good reason to use cosmetic pesticides.

J. Slater: You're talking ornamentals.

D. Justice: Sure. Absolutely. There are sufficient alternatives available. Now, I do have some experience in the greenhouse industry. While I would agree, sort of, in general that there probably is less risk when you're using a targeted — like an aphicide or something specifically for those pesky thrips.... The previous speaker may suggest that the problems are otherwise — that there is no safe level. I'm not qualified, certainly, to speak on that, but it does make me wonder.

The second point I think I was trying to make is that with the availability of pesticides, particularly for cosmetic.... These are essentially frivolous pursuits, whether or not it's a hydrangea or a kalanchoe that you buy at the supermarket. If it has a blemish on it, is that

really a good enough reason to risk the environmental health of whatever?

So I think the whole point of having this discussion is to really separate out the vested interests. It's clear to probably most of us that the people who benefit from not having a ban on cosmetic pesticides are going to argue against having a ban. So I think one has to, from my perspective, evaluate why.

It's not in my presentation, and I may get into trouble at some point, but I think the turf industry, the golf course industry, is perhaps the industry that really brings it to a head in that the amount of money involved in the golf industry is enormous. I've read the transcripts of the people who've presented, and it really is very easy to put a kind face on that industry. But the availability of pesticides means that they're going to use pesticides. If those are not available, then they'll find alternatives to those pesticides.

Now, they're going to kick and scream and complain that it's not going to be the same. Your golf game is not going to be the same. But there are lots of jurisdictions in the world where you're not using heavy fungicides on golf courses.

J. Slater: But it's climate too — right?

[1530]

D. Justice: Well, it's climate, but it's the same argument, it seems to me. This is where I'm probably going to get into trouble. It's the same argument as slave owners made. They have a comparative advantage because they have slaves. Well, golf courses have a comparative advantage because they're allowed to use materials that potentially.... You know, it really takes looking at it from a very different point of view. And that is that if you are of the opinion that there is no safe level of pesticides, then we're all guilty. We're all basically part of the problem.

J. Slater: All I can say is from my perspective, living in the Okanagan, if we didn't use chemicals like Quintozene as a fungicide to kill the fungus, there wouldn't be one golf course in the Okanagan.

D. Justice: Yeah, and I'm not saying that that's not the case. But I'm saying the golf industry — I've been involved in the golf industry — is reliant on chemicals. Somebody's going to say: "You can't do that." They're going to say: "We're all going to die. We won't be able to have a golf industry." But I'll bet you that there is, and I'll bet they find alternatives. The reason they find alternatives is because they have to. The profit motive is a very, very strong motivator.

J. Slater: You bet. Okay. Thank you.

B. Bennett (Chair): Just a couple of quick questions. The botanical garden at UBC — how many hectares do they...?

D. Justice: About 30 hectares.

B. Bennett (Chair): And is it all outdoors? Is it all exposed to the elements?

D. Justice: Yes. Well, we have a nursery, which has glass houses and....

B. Bennett (Chair): That's not part of the 30 hectares?

D. Justice: Well, it's actually just.... Okay, it's 31 hectares.

B. Bennett (Chair): Okay. And is that out where the main campus is? Is that where it's located?

D. Justice: Yeah, we're on the southwest corner of the campus. The nursery is actually on south campus, near where all that new development is.

B. Bennett (Chair): How long has the botanical garden been in existence?

D. Justice: Since 1916. John Davidson was hired by UBC from the provincial government to start a botanical garden at UBC. All those big trees that you see in the middle of campus.... And do you know where Ponderosa is?

B. Bennett (Chair): No.

D. Justice: Well, right down....

B. Bennett (Chair): I couldn't get into UBC.

D. Justice: Okay, yeah. I couldn't get in until I was a mature student.

Right down West Mall is where the original botanical garden was. So it's really in the centre of campus. But in 1968 the garden moved to the present location.

B. Bennett (Chair): To a point that my much more knowledgeable colleague John Slater has made to a couple of witnesses, it's often the interface where the threat comes from — in the case of his greenhouse, in agriculture. But I'm just wondering, in terms of the botanical garden, how isolated it is from external influences — from agriculture, lawns,

gardens, etc.

D. Justice: I'm not sure I understand the question, but we have the same.... We have people visit. We have people pay to come in. If they see a sign that says, "This area closed because of pesticide use" — that used to be the case — then we get some blowback from the general public. So it was a conscious decision at some point around 2000 to absolutely say: "No, we're not going to use any pesticides." The main campus — you know, 40,000-plus students and 15,000 staff, etc. — has now been pesticide-free for a few years.

The pressures are not the same as they are in agriculture, but there are still the urban pressures. We have lawns, and we have trees. We have viburnum beetles and we have European chafer.

[1535]

B. Stewart: Just one question. Thanks very much, Mr. Justice.

The people that are paying to see the botanical gardens — I take it that they're not comfortable with the sign that warns about a re-entry period for pesticide use. But they are comfortable with the fact that you're using, as you've shown here, the listing of products that you use at the botanical gardens, which is part of COABC's list. So they're satisfied that those products are safe, and they're comfortable with those in the environment?

D. Justice: That's a very interesting question. I think people make the assumption that if it has the word "organic" in it, then it's probably safe. We're not above making people feel happy, but I think the underlying philosophy is that we're going to use materials that are acceptable to the broadest range of organic producers for a number of reasons.

One of them is that we want to make sure that we can grow produce, but we also want to make sure that we don't run afoul of either the organic industry or the general public. So I think, yes, it's a political statement.

B. Bennett (Chair): Thank you very much, Mr. Justice. Appreciate it.

Before we have our last witness come forward, could we have maybe just a maximum five-minute health break for the committee? It's a recess. "Health break" is not technical, apparently.

The committee recessed from 3:37 p.m. to 3:45 p.m.

[B. Bennett in the chair.]

B. Bennett (Chair): Committee members, I think, for the benefit of our next witnesses, we'll just introduce ourselves again.

I'm Bill Bennett. I'm the MLA for Kootenay East, and I'm chairing this committee. My

Deputy Chair is Rob Fleming from Victoria–Swan Lake.

Scott, why don't you introduce yourself?

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S. Fraser: Scott Fraser. I'm the MLA for Alberni–Pacific Rim. Welcome.

B. Bennett (Chair): We'll move over here to Ben Stewart.

B. Stewart: I'm Ben Stewart, the MLA for Westside-Kelowna.

B. Penner: Barry Penner, MLA for Chilliwack-Hope.

J. Slater: John Slater, MLA for Boundary-Similkameen.

J. Yap: John Yap, MLA for Richmond-Steveston.

B. Bennett (Chair): You folks are with the B.C. Business Council, and Ken, we had you down as our witness, so why don't we have Jennifer and Greg introduce themselves.

G. D'Avignon: My name is Greg D'Avignon. I'm the CEO and president of the Business Council of British Columbia, and I'm joined by a member, a colleague of ours, Jennifer Robertson.

J. Robertson: I'm with FortisBC, the gas division. I'm the environmental affairs manager.

B. Bennett (Chair): Okay, thank you. You have 30 minutes for your presentation. You can divide that up however you want — 15 formal, 15 questions, or 20 and ten — whatever you want to do. If you happen to get close to 30 minutes, I'll let you know that.

G. D'Avignon: Thank you, Mr. Chair, and thank you to the committee members for allowing us the opportunity to speak on this important issue to our membership, which represents multiple sectors of the economy and the jobs that are dependent on their activity and operations in an efficient way.

As I said, before I begin, I am joined today by my colleague Ken Peacock, from the Business Council of British Columbia, and Jennifer Robertson, of Fortis, who is a technical expert on the aspects of pesticide use in industrial settings.

For those of you not familiar, by way of background, the Business Council of B.C. was established in 1966 in association with organizations and companies that number approximately 260 of the largest enterprises engaged in business in British Columbia. Our

members are drawn from all major sectors of the economy and represent leading companies in every key area of the province.

We maintain active involvement in environmental policy and regulatory issues and, taken together, our membership comprises roughly one-quarter of all the jobs that are created and maintained in British Columbia.

We have tabled with the Clerk today a submission informed through our environment committee, which is comprised of professionals that are responsible for the health and safety of their employees and company workers as well as the sustainable management development of the province of British Columbia. The committee membership of representatives, as I said, of these key companies that are members of our organization come from every area of the province.

The Business Council understands the motivation, certainly, for this review, and our members support public policies that are grounded in science and that are aimed at protecting the environment and human health. However, we also believe it's essential to have a balanced review process that acknowledges, in this case, two things. One is that pesticides and herbicides are already a heavily regulated entity in Canada and British Columbia; and two, that pesticides have many valid and important applications, especially in the industrial realm in operating in British Columbia.

As a baseline for the committee's review, the Business Council believes it is necessary to recognize that pesticide-herbicide use in Canada is already strictly regulated. Indeed, pesticides are among the most rigorously tested products in the world, and all pesticides sold in Canada must be accepted for use by the pest management regulatory agency of Health Canada. I'm aware that this committee has previously heard testimony from Health Canada outlining the rigorous processes under which the agency employs methods to evaluate pesticide products and their use.

Before a pesticide is regulated for use, as you know, the manufacturer is required to provide scientific information on its effectiveness, its toxicity, any food and feed residues, its fate in the environment and the chemistry of the pesticide itself. Health Canada then tests these products for safety and only approves those which show no increase in health risk. This well-established regulatory framework is designed to ensure the acceptability of risks, merit and the value of pest products sold in Canada.

Moreover, here in British Columbia the Integrated Pest Management Act and regulation effectively regulates the use of these products to provide further protections for the environment and human health.

[1550]

The act and regulation require that pesticides used on public land and those employed by pest control services be applied under the direct supervision of a person trained in pesticide use. Further, it's illegal to treat pests with products not governed by this legislation and/or the companion legislation, federally, or to use herbicides in a way that is not consistent with the product label.

The IPMA also stipulates that pesticides used in an IPM program and under the IPM process can only be employed when no practical alternatives are available.

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In effect, the IPMA mandates integrated pest management, a process that uses a mix of techniques to manage pests in the case of commercial and industrial uses on public land and for uses on private land, industries like forestry, utilities, transportation and pipelines. The IPMA does not apply to agriculture uses or to uses by homeowners.

Given the extensive testing and regulatory environment governing the use of pesticides in Canada and, indeed, in British Columbia, the Business Council believes that the committee should refrain from recommending any sort of comprehensive, blanket ban on cosmetic use of pesticides in British Columbia.

That said, should the committee decide that additional restrictions or regulation of the cosmetic use of pesticides are, in fact, warranted, we would propose that such a step be taken by a number of other measures and recommendations.

I'll turn to my colleague Ken Peacock to review those recommendations.

K. Peacock: Thanks, Greg. As Greg noted, we do think that if there were a move to put further restrictions or bans on cosmetic use of pesticides, there are a number of things that should accompany that. In this regard, we have three main points.

First off, we believe that all policy changes affecting pesticide use should consider the cost of disallowing these applications and the implications of shifting to alternative methods. Only in this way can there be a proper weighting of costs and benefits in the decision-making process. From our perspective, this approach would be consistent with the Ministry of Environment's commitment to a science-based regime for regulating pesticide products.

We note that the principle of ensuring cost-effective compliance and enforcement is sometimes overlooked but is an important consideration in making sound public policy. Regulations do add to operating costs, and while a few additional regulations may seem insignificant, policy-makers need to be sensitive to the cumulative impact of regulations.

Please, let me be clear here. This is not an argument in favour of zero regulation. Clearly, regulation by responsible public agencies is necessary in many domains, including the use of pesticides. The point, rather, is simply that legislators should be looking to develop smart regulation that meets the goals set by public policy in the most efficient and cost-effective manner possible.

Our second point is that if the committee concludes that additional restrictions are warranted, we urge it to think carefully about how "cosmetic" is defined or whether the term is even appropriate for legislation. The council is concerned that the "cosmetic" descriptor is potentially problematic because it can be subject to a wide range of interpretations.

The term is commonly interpreted to mean using pesticides for non-essential or

aesthetic purposes. Still, both "cosmetic" and "non-essential" are vague and subjective. What is viewed as necessary or essential by some parties could be viewed as cosmetic or superfluous by others. Importantly, whether or not something is essential is invariably intertwined with issues of cost.

The council believes that the terms "cosmetic" and "non-essential" fail to recognize the usefulness of pesticides in many contexts. Insect and disease infestation can quickly destroy a green space. Effective use of appropriate pesticides may be required to prevent significant loss or damage to landscape. Although weed infestations are more gradual, these, too, can be costly to control and result in severe damage if left unchecked. These benefits are often overlooked in discussions of pesticide use and are diminished by the terms "cosmetic" and "non-essential."

If the intention of introducing restrictions on cosmetic use of pesticides is to limit their application on school grounds, in public parks and in residential settings, then it may be wise to explicitly identify these uses and applications, rather than adopting vague terminology that is open to interpretation.

We note that a number of other provinces specifically identify restricted use on lawns, while also explicitly permitting pesticide use in settings such as golf courses. Some provinces still allow herbicides to be applied on lawns when done by licensed applicators.

We urge the committee to review the regulatory practices and experiences of other provinces that have addressed concerns around cosmetic uses of pesticide products in developing recommendations for British Columbia.

[1555]

Turning to our third point, any legislation that may be introduced should clearly distinguish between intended restrictions — so-called cosmetic uses — and industrial uses. For us, this is particularly important. We support the Ministry of Environment's recognition that non-cosmetic uses of pesticides include uses designed to prevent economic damage or health impacts and that exclusions have often been made to allow the use of pesticides for such activities as public health and safety, including the protection of public works structures, agriculture, forestry, research and scientific purposes and to protect natural resources.

When necessary, herbicides are used in B.C. and in other provinces to manage vegetation on railways, electrical facilities, along transmission rights-of-way and around oil and gas pipelines, among other industrial settings. While most of these applications would reasonably be interpreted as non-cosmetic and thus, presumably, would not be affected directly by new limits on cosmetic uses, there is a risk that legislation aimed at cosmetic uses could spread over time to industrial uses.

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For this reason, the Business Council recommends that any new legislation adopted in B.C. include language that explicitly exempts non-cosmetic industrial uses from the scope

of any new restrictions.

If revisions to the statutory provisions governing pesticides are intended primarily to reduce their use on residential lawn applications, parks and other urban contexts, the language making this clear should be incorporated into the purposes section of the legislation.

Finally, it is important to note that private property adjacent to any types of industrial facilities or infrastructure sites mentioned above can serve as a source of infestation. Prohibiting all applications of pesticide on domestic property could undermine the effectiveness of integrated pest management programs. Allowance for such uses should therefore be included in any new legislation that the committee recommends.

At this point I will turn it back to Greg for some concluding comments.

G. D'Avignon: Recognizing the time allotment, I'll conclude by saying that we have a final comment really related to the patchwork nature of regulation in this domain. We strongly support the implementation of a coherent set of rules across the province. I think, hearing the testimony earlier, that the committee is aware that there are differences in terms of the urban-rural environment and that that may warrant some different treatment and approach to the application that you bring.

As we understand it, around 20 municipalities in British Columbia currently have taken steps to restrict pesticide use in the province, with some prohibiting all pesticides in their jurisdictions and others allowing some applications with a municipally issued permit. Having an array of different or conflicting rules in different communities creates unnecessary confusion for industry as well as consumers and leads to higher compliance costs and a lack of integrated enforcement.

The Ministry of Environment should ensure that all changes touching on the cosmetic use of pesticides will supersede municipal regulations in order to establish a coherent provincial regulatory framework for the use of pesticide products specifically.

The Business Council certainly appreciates the opportunity provided us today to offer our input and insights into this important issue, and we certainly welcome questions from the Chair and the committee.

B. Bennett (Chair): Thank you very much. You're well within time, so we have some time for questions.

Committee members? It's getting late in the day. Everyone's getting tired.

MLA Sather, you're first on the list. Proceed, please.

M. Sather: To the presenters, you used the phrase that the council is interested in science-based methodology and approach. Now, a number of presenters that we've had to the committee have used that phrase as well. I don't know if you were here earlier when the doctor presented her rather extensive history of medical examinations of pesticides that seemed quite troubling. I'm wondering if.... Are you suggesting that the opposition to

pesticides and, more in particular, cosmetic pesticides, is not scientific?

G. D'Avignon: Well, it's difficult. We didn't hear the presentation or haven't seen the research or had any chance to vet the science, so it'd be purely irresponsible for me to comment on it. But I think that at the end of the day, often this issue gets wrapped up in emotion and self-interest as opposed to science and practical approaches to trying to solve what might be a smaller problem in a regional area of the province as opposed to a broader, well-thought-out and well-supported scientific approach to a particular issue.

[1600]

What we tried to raise in our presentation is that there is rigour that's brought to bear significantly in Canada with respect to the products themselves, the licensing and the use, and that's overlaid and supported — specifically, in the case of industry — with further legislation through the Integrated Pest Management Act. In those circumstances there's a comfort level — certainly, not only with the regulatory construct but also with the professionals that are obligated under the law to ensure that their pest management plans, on a company basis, are adhered to.

There's not only reputational risk, but there are other punitive risks exposed to the individual and companies. We feel quite comfortable that that has been operating well for the last 15 to 20 years since the introduction of the legislation.

R. Fleming (Deputy Chair): Thank you to the Business Council and Fortis for being here this afternoon. One of the things picked up in your submission here was, understandably, a concern around anything that may impact on jobs and employment in British Columbia from potential new regulations.

Earlier today — it was interesting — we had some polling information coming out of Ontario, where, of course, there is a comprehensive cosmetic pesticide ban in place and where I don't think they struggle with the definition of what that means in legislation. It's been in force for a number of years now.

But even by an industry association poll, it's suggested that in terms of jobs and employment, one of the impacts of the ban there was that 21 percent of Ontarians are more likely to hire a lawn or maintenance service while only 20 percent have cancelled a lawn or maintenance service as a result of that. Now, this is self-reporting, understandably, but it seems to me that it's a wash or perhaps a net gain for that industry.

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Another thing that has emerged from Ontario is that there are new production facilities that have opened up for non-synthetic products that can treat weeds and serve a function for pest control. So those are Ontario manufacturing jobs that a marketplace has been created for.

I'm just wondering if you have any comment. You've said in your submission that it's important to understand some of the risks that come from regulation. I'm wondering if your association has looked at some of the potential benefits for a province like British Columbia to emerge from the back of the pack amongst provinces, in terms of its regulation on this matter, to becoming an environmental leader and what we might be missing out on, in fact, from not having laws like other jurisdictions have in place.

G. D'Avignon: Well, again, I think it's a bit of a subjective question, given the economic construct of Ontario and the geography of Ontario compared to British Columbia. Just the nature of the economy itself is markedly different. The other reality is that the debate on this issue is wide-ranging, from an outright ban on everything through to moving the clock back 50 years. So it's difficult to try and do an analysis on whether there's a net gain or a net benefit as a result of chemical manufacturing, as an example.

I think it's difficult, really, to do that kind of evaluation, Mr. Fleming, going forward, but certainly, we can canvass our membership. I'm always a bit suspect about polls because you never know how the question was asked, as opposed to who was canvassed, generally speaking.

I think you're going to hear some testimony tomorrow from some experts in the field on pest use and some of their concerns from a public perspective around some of the same polling that gets done, so I'll leave it to them to speak on it.

I don't know if there's any analysis or comments that my colleagues have on this issue or not.

K. Peacock: I'll jump in with a just a couple of thoughts. The 21 percent of Ontarians more likely to hire a lawn service — again, that's 80 percent not, so that's, presumably, a wealthy segment. I know that here in the Lower Mainland probably a larger proportion of households struggle, compared to most cities in Ontario, I would say, just because of high housing costs and comparatively low wages. You might not get the same response if you did a similar poll here in British Columbia.

In terms of developing other products and jobs, it's my understanding... I'm by no means an expert in this, but I don't think we have many manufacturers of those types of products here in B.C., so I wouldn't expect any upside benefit from jobs.

[1605]

Finally, I'm not sure this discussion should really be done in the context of job creation and job loss. It's more about cost and cost benefit and regulatory issues. With employment, you get into: "It's going to create X many jobs" or "It's going to lose X many jobs." It's difficult, at the end of the day, to ascertain the accuracy of that on sort of a provincewide basis.

R. Fleming (Deputy Chair): I appreciate those comments. I would just think... It

was raised in your submission. It seemed to emphasize that there was a downside to what this committee is tasked with looking at. I was just asking you to imagine an upside that may be being realized in other provinces where they have taken the kinds of steps that this committee may wish to recommend to the Legislature.

B. Penner: Just further to my colleague Rob Fleming's questions. You haven't had the benefit of seeing the survey. I did ask the presenters to provide us with background on the methodology of that survey site. Like Mr. D'Avignon, I'm always curious about the types of questions, the order of the questions and whether it's an on-line poll or a telephone poll.

Nevertheless, it was interesting to see in the survey that 16 percent of householders indicated that since the implementation of the ban in Ontario, they've gone outside the province to acquire products they can no longer acquire inside Ontario — 13 percent going to the United States or to another province and another 3 percent ordering on line from outside of Ontario. So a bit of leakage outside the province of Ontario from an economic perspective, according to the survey.

Again, I'm curious to see the methodology of that survey and when it was conducted and by what means. I just thought I'd offer that.

K. Peacock: I'll just jump in. I agree with you. It would be important to see the methodology, but it's not surprising to hear those numbers. Anytime you put a regulation in place, you're going to have people finding ways around it.

G. D'Avignon: Not to belabour a poll, because although there's science involved in doing polling, it's not the science that we're really here to discuss today.

The reality is in my municipality 100 percent of people would be more inclined to use a lawn service that doesn't use pesticides, because they're banned in my municipality. It's a bit of a mug's game. You'd have to pull every respondent out of my municipality out of that survey, which skews the numbers, if you will — if you follow my logic on the math.

I'd be happy.... I think more information is good, but at the end of the day, it's not really the science that we're talking about on the review.

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B. Stewart: I guess my question is directed towards Jennifer Robertson, just to ask, when we look at.... This is a term that's very generic, as you've pointed out in your presentation, Ken. I kind of wonder, from the economic point of view for business.... In terms of the Lower Mainland here, in terms of rights-of-way and things like that, where businesses provide hydro for us, provide services, has there been any work done in terms of what the increased cost or impact would be to ratepayers of utility services and things such as that?

The public, I understand, want the benefits of this, and I'm assuming that rights-of-way here are often used for playing games and other things like that. But I'm thinking that if that

takes effect, what would the alternative methods cost? Is there any kind of work that's been done on that for the Business Council?

J. Robertson: Not as of yet. My understanding is that this would be a ban of cosmetic pesticides. The importance is that we are in industrial vegetation management, using integrated vegetation management.

Herbicides are just one tool that we have in our box of integrated vegetation management, and we will look to mechanical, biological, cultural and potential chemical. There's only a small select group of herbicides that we'll use. We don't use them consistently around the province, but we need to have them as a tool that we can use.

The importance is that if there's a ban on cosmetic use, it's not impacted on those where we have to use it from an industrial point of view. You know, pipeline integrity, public safety — those are of foremost importance to FortisBC, both from a gas and an electric point of view.

We have two pest management plans throughout the province, on our rights-of-way and our facilities for the gas division, and we have three on behalf of the electric. We have our pole treatment as well as our rights-of-way and our facilities.

But we don't jump to just the use of the chemical piece. We will look at that integrated vegetation management approach, and we need to have the ability to do that to manage these things effectively from a pipeline and electrical safety point of view.

B. Stewart: I guess just to further follow that along, what I'm alluding to is that if there were some overlapping restrictions that impeded businesses' ability — and this doesn't just have to be Fortis — there could be the possibility of some downstream...

J. Robertson: There will be some costs, potentially.

[1610]

B. Stewart: ...costs to ratepayers because of that, and although it does create jobs, which I guess would be one thing I can think of — brushing the power lines.... I'm only just kind of speculating that I think those are the tools that would be available. It would mean that you're probably using best practices.

J. Robertson: We are, and there's the invasive piece. There's also the wildfire risk, and there are a number of different avenues that need to be looked at when we do our risk-based approach to our veg management.

But in certain communities we will not use a herbicide. It just depends on the community, and it depends on what the environmental risk and the public perception is. However, we need to have that ability to use it if it's the most effective point of view from a pipeline integrity or electrical safety point of view.

G. D'Avignon: Jennifer can correct me, but I think in the case of Fortis, for example, just on pipelines there are almost 40,000 kilometres of right-of-way that needs to be managed in one company. So the context of that is that whether it's a public utility or private utility or other infrastructure around the province, it's hundreds and hundreds of thousands of kilometres of rights-of-ways and rail lines and other things that need to be managed.

I think the key point that we want to make is that the industrial approach and the integrated pest management strategy and regulation that are in place today work well, because there is a myriad of tools in the toolkit that enable professionals to make an informed decision around how best to manage that in the best interests not only of ratepayers but also customers, their stakeholders, communities and the others that they have to work with on a daily basis in their general operation.

J. Yap: Thanks for your presentation. I just thought to ask you, as you were answering the last question, Jennifer.... FortisBC, my understanding is, places a strong premium on its social responsibility throughout the province.

I'm wondering: from your perspective, has the corporation, as you have seen this issue evolve over the last short while, started to make some changes in the way that you deal with the issue, with herbicides, pesticides, even without regulation? I'm thinking in terms of your social responsibility, which I know FortisBC is very much concerned about.

J. Robertson: We have always implemented an integrated vegetation management approach, and there has always been some sort of herbicide or chemical use, as there must always continue to be to effectively manage it from an integrity point of view.

But yes, we often canvass our property owners. We canvass our First Nations. We make sure that if we are applying the chemicals to a portion of the right-of-way,

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we've identified where those environmental receptors are, where there are organic practices that are going on. We send out notification to our property owners to make sure they know we're coming through and that integrated vegetation management and potentially some herbicide application....

So, very much the whole property owner discussion and consultation piece is a part of it. We have altered our practices to make sure that we're addressing a combination of interests. But the herbicides are something that we continue to use and need to be able to use to effectively manage our rights-of-way.

G. D'Avignon: I think maybe just to feed on that. One of the things that's happened is that decades ago there used to be an exclusion process where you had to apply for a permit on every circumstance and application. What's happened is that you now have an integrated approach using professionals that are integrating to your point with their customer base,

with their communities and with their stakeholder groups.

If you revert back to that exclusion type of a model, you end up in a myriad of subjectivity, of people on the ground interpreting the rules differently, of a backlog of interveners and approval processes. As a result, you end up with something far worse and far less efficacious and more disintegrated, if you will.

Certainly the experience, I think, industry generally has had is that the regulation applied to industry is appropriate and progressive.

J. Slater: If I could add to that. The rail lines are a perfect example, but you guys can't take steamers on the tracks — right? They would go and steam anywhere there was a riparian area or anywhere near a creek. Or if there was a river on one side, they'd use steam, and then they'd use chemical on the rest of it.

But for you guys, it's pretty tough. That's where that regulation came in. They said: "Okay. If you're within 30 or 40 metres of a riparian area, then you have to use another alternative." For the rest of the dirt they can use the chemical.

[1615]

G. D'Avignon: As you point out, on a right-of-way you can have every topographical circumstance and every vegetative circumstance known to the province.

J. Robertson: Very much so.

B. Bennett (Chair): Thank you very much. I appreciate your presentation today. Oh, I'm sorry. Hang on just one second.

Scott, did you have a question?

S. Fraser: Yeah, if we have a moment.

B. Bennett (Chair): Absolutely. We'll let you have the last word.

S. Fraser: Thank you very much, Mr. Chair.

Just on the issue of our mandate, our title — "Cosmetic Pesticides." The Chair has pointed this out to another group. That was handed to us by legislation. We don't really have any way to affect that term, but other people and other groups have mentioned it. It's somewhat subjective what that might be, but being mindful of that, just on to a sort of local government issue.

Jennifer, you've touched on this already. There are some communities that have a very vocal opposition, maybe, to pesticide use. Local government has taken their own initiatives as far as legislation goes around banning cosmetic pesticide use in some communities.

J. Robertson: Some communities. That's correct.

S. Fraser: I guess I'll aim this at Greg, though.

Greg, you said something about that whatever we'd come up with as far as a recommendation and potential legislation on this, it should supersede local government. Now, what if local government in an area has a higher standard than maybe what this committee comes up with or the legislation reflects? Are you suggesting that it should override a local community?

G. D'Avignon: Yes.

S. Fraser: You are saying that.

G. D'Avignon: The difficulty that local communities often have on these issues is that they lack the expertise, the contextual information and, quite frankly, the resources to be able to do a rigorous assessment of what might constitute, in that instance, a public health issue.

You saw it in the debate recently, I think, on smart meters, as an example, where there was a myriad of different opinions from different communities, very few of them consistent. The consequence of that is that you end up with a lack of leadership and a lack of direction. I think this is a piece of legislation that's important to the province. It's important to individual citizens from a health and safety perspective and also from a quality-of-life perspective.

I think, as the province has done on a myriad of different environmental legislation, they take the leadership role and ensure that that's done to the best and highest use, using scientific information, and take those opinions into places where some communities have significant concerns and interests around environmental and health and safety issues.

S. Fraser: That may be problematic though. I mean, it is an overriding of a local government's author-

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ity, which is reflective, potentially, of the community it represents. So it does open up a.... It may not be as simple as that.

G. D'Avignon: I'll commend that to your role, then.

The other thing you talk about, in terms of being directed through legislation around this, is the cosmetic committee. I'd also suggest that I've seen committees in the past make recommendations around even the language of the name of their own committees, so I'll let you think about the application of that as well.

B. Bennett (Chair): Well, that's very nice of you to suggest that right at the end of your presentation, Greg.

G. D'Avignon: Well, you said Scott was going to have the last word, so I'll leave it to Scott.

B. Bennett (Chair): I think you had the last word, and fair enough. Thank you very much for your presentation.

That ends our formal deliberations for today. Let me just say for tomorrow, we're reconvening here at 10:30, so we should try to be in our chairs maybe ten minutes ahead of that, if possible. It's 10:30 tomorrow morning, so let's be here by 10:20 at the latest. If we're on time, we'll go till 3:30 or probably a few minutes after that. We'll probably end sometime between 3:30 and four o'clock tomorrow.

Again, thank you very much.

The committee adjourned at 4:19 p.m.

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