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British Columbia's Forest Health Crisis
Charting a New Course

Speech to the Western Silvicultural Contractors Association

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Check Against Delivery

Good afternoon.

It is no exaggeration to say that we today confront one of the greatest forest health crises ever to befall British Columbia. It's a crisis that will continue to have significant implications in the short-term and in the long-term for communities throughout the province's Interior. And sadly, it's a crisis that we are nowhere near to adequately addressing.

As I hope to show in the next half hour or so, we aren't pouring the proper resources into researching the beetle attack that has overrun millions of hectares of our forestlands. We aren't adequately funding the work required to figure out a comprehensive and more importantly effective response to the unfolding calamity. We aren't collecting the most basic information on what has been lost as a result of the ongoing attack. And finally, we aren't seeing any formal commitment by the provincial government or the industry to step up to the plate and properly fund a reforestation plan that:

A - helps to ensure that we address a looming timber supply gap,

and

B - adequately conserves Interior forests and grasslands in ways that help to create healthier pine-dominated landscapes in the years ahead.

Everyone in this room knows this to be true. The central challenge before us is what we choose to do in response to that knowledge. My hope is that what we choose to do is realize that there is very likely a broad base of support for a comprehensive plan to address the unfolding forest health crisis in this province. Broad though it is, it needs to be nurtured. Various groups need to realize that at their core they share similar values and a common vision for what the future of our Interior forests should be. Once individual organizations realize that, then it becomes possible to build coalitions that can effectively lobby for the necessary human and financial resources to address the unfolding crisis.

I want to thank the Western Silvicultural Contractors Association and in particular John Betts for inviting me here today to speak about this issue. I am not, as many of you know, a forestry professional. But I have spent a lot of time over the past 18 years talking to many forestry experts and I have written on forestry and other natural resource issues pretty much uninterrupted since covering the forest industry for *The Vancouver Sun* back in the 1980s. During the course of that work I have spent time in forests all over the province, from the northern boreal forest, to the pine forests on the back end of the Chilcotin Plateau, to the Interior rainforests in the Cariboo Mountains and the distant archipelago known as Haida Gwaii. And in all those travels I have spent time with people just like you – people who care about those landscapes, people who care about our shared resources, people who in the very work they do demonstrate their care and commitment to the future wellbeing of our public forestlands.

So I think I have a reasonably informed appreciation for the magnitude of the challenges now confronting your members, woodworkers, Interior communities, conservationists, professional foresters and others as they wrestle with what, exactly, is the best response to the ongoing beetle attack.

The old saying that "what goes around comes around" is certainly apropos to today's discussion. As most of you know, we have seen some substantial beetle attacks in the past. In fact, while covering forestry for *The Sun* I wrote extensively about the mountain pine beetle infestation on the Chilcotin Plateau west of Williams Lake and the huge increase in logging rates in response to that incident. Back then my particular focus was on what the fallout of those logging increases would be. What goes up must come down. If you cut a whole bunch of "extra" wood today, well tomorrow you can expect to cut a whole lot less.

What I didn't write about then, because I just didn't appreciate it, was that big infestations like the one then unfolding presented unique opportunities to learn what worked and what didn't work in managing our Interior forests. Had proper research been done then, we might be in a much better position today to say what an informed response to the current outbreak would be. But that research wasn't done. Nobody funded the work to track what happened in forests that were attacked by beetles and left to recover on their own. Nobody tracked what happened in forests that were salvaged logged and then replanted. Nobody looked at what happened to forests that were salvage logged and left to recover on their own. Nobody calculated when beetle-attacked forests turned from carbon sinks to carbon contributors. Nobody bothered to figure out how the hydrology in beetle-attacked forests changed over time, and whether or not planting trees helped address that. And if anybody did do that work, nobody bothered to publish it in reports that could inform us about what we should be doing today in response to the beetles.

It seems to me that any credible plan to address today's forest health crisis needs to be grounded in thorough and ongoing research. While the Canadian Forest Service is doing much work in this regard, there has been a troubling decline in research efforts by the province. Like many of you, I was vaguely aware that some of the people to lose their provincial government jobs in the past decade were forestry researchers. But I had no idea until I embarked on a study of my own just how many provincial Forest Service research staff were so affected. In the past 10 years, starting with the NDP and accelerating under the Liberals, research jobs in the Forest Service have declined by 40 per cent. More than 100 men and women whose jobs were to go out into the field and understand the complexities

of life in our forests are gone. Worse yet, their job losses are only part of a much bigger and connected chain of events that has seen a full scale withdrawal of public servants from our public forestlands.

Equally troubling to the declines in research are those in the areas of forest inventory and silviculture. Nobody can claim to make an informed decision on forest management in the absence of knowing what, exactly, is out there. That's why we employ people to do inventory work – to count what we've got and to constantly revise those figures based on unfolding events. Many would argue that there is no more important job performed on the public's behalf when it comes to publicly owned forests than forest inventory work. In the absence of knowing what exactly we've got how can we possibly make informed decisions on how our shared resources are to be managed, let alone in a sustainable way?

Again, under the NDP and accelerating under the provincial Liberals we have lost huge numbers of Forest Service jobs in this vitally important area. In fact, the decline has been on the order of 85 per cent in the past 10 years. More troubling still, the provincial government's remaining inventory staff - a scant couple of dozen people - don't even work for our Forest Service anymore. They work for the Ministry of Sustainable Resource Management. A Ministry, by the way, that has seen one in two of its staff cut since the new Ministry was created by the current government. And our remaining forest inventory staff is now forced to rely on information from the forest companies to update their databases – hardly something that should fill the public with confidence that there is adequate public oversight of their public forestlands.

Another sharp decline in the ranks of the Forest Service occurred in an area of interest to all of you – silviculture or reforestation. Between 1995 and 2005, four in five Forest Service staff doing silviculture work lost their jobs. The Forest Service silviculture roll fell from nearly 500 employees to less than 100 in just 10 years. Many of the men and women to lose their jobs did extensive fieldwork. They assessed areas that had been logged, whether or not there were sufficient numbers of trees growing on those lands, whether planting, brushing or spacing was required, and a host of other things. The sharp decline in the number of Forest Service personnel doing silviculture work is, in large part, a reflection of the fact that various reforestation programs under Forest Renewal B.C. and previously under cost-shared Forest Resource Development Agreements came to an end during this time. But the scary thing now, as everyone in this room knows, is that the gap between what is being denuded and what is being reforested is growing for the first time in years. And anybody who has bothered to look at the rate at which beetles have attacked our Interior pine forests, knows that the gap is going to widen dramatically in the years immediately ahead.

These job losses are among many that are quantified in a report that I co-researched with Kerri Garner a graduate of the University of Victoria's Environmental Studies Program. Using the government's own data, we documented 800 job losses in the Ministry in the past three years alone. The report, released by the Sierra Club of Canada's BC Chapter, was called Axing the Forest Service. And I have brought several copies along with me for those of you who want one. Perhaps the most gratifying response to the report, one that I think speaks to a growing convergence of opinion on where forest policy is going in the province, came from the Association of BC Forest Professionals. The Association and the Club have certainly been at odds in years past. But in this instance, the Association felt strongly enough about the findings to write Premier Gordon Campbell. And it went on to post a copy of the letter on its web site.

"While the report is not without its flaws," the Association's president Rick Sommer wrote, "it does raise issues that we ourselves have become concerned about, such as the limited resources currently being focused on research, inventory and forest health."

"Without a solid foundation of information," Sommer said, "it will become increasingly difficult for our members to make sound, science-based, forest management decisions. The bottom line is that forests remain vital to BC's future. This fact, together with the reality that forestry is a very long-term discipline, involving social, economic and environmental elements and requiring science of the highest order, make it clear that forest resource management is no place for minimalist, short-term thinking."

The letter ended by questioning whether the current level of financial and human resources is "appropriate" to support the work needed to ensure healthy forests now and in the future.

I believe that letters like this tell us that there is a growing consensus on the need for thoughtful and informed action to deal with the current forest health crisis. And I think that if people were asked to reflect on it, most would agree that any effective response should be grounded in what I call the three Rs – Research, Restoration and Reforestation. And it is those three Rs that I will spend the rest of my talk this afternoon addressing.

In case people need to be reminded, the current beetle outbreak is unlike anything previously seen. Its scale, its rate of spread, its simultaneous uprising in pockets of forest covering a wide area of the Interior, suggests a convergence of events resulting in the mother of all infestations.

Global warming is clearly fuelling the outbreak. Warmer average winter temperatures have allowed the beetles to survive in record numbers. Upon emerging from their host trees, new armies of beetles thrive in the extremely dry and hot summers. But this is just one of the reasons for the unprecedented attack. An equally important factor is that there is a preponderance of older pine trees across the landscape. In fact, the Canadian Forest Service estimates that the pine trees most favorable to attack are three times greater in number than they were less than a century ago. How could this be? The major reason is fire suppression. Our pine forests need fires to regenerate. So it stands to reason that if we try our hardest to prevent forest fires we sew the seeds for future forest destruction. And as the magnitude of today's beetle attack shows, that destruction can be near biblical in proportion.

Perhaps the most troubling aspect of the attack is its current northeastern thrust. Last summer while working on a feature-length article on the beetle outbreak for Vancouver's *Georgia Straight* newsmagazine, I was fortunate to spend time with a bug expert at the Canadian Forest Service named Allan Carroll. Among Carroll's many fears is that the beetles, which historically have been confined to British Columbia's Central Interior, will jump the wall as it were. Somehow they'll get over the northern Rocky Mountains and into the rolling Peace River country. Once there, they'll be dangerously close to the cross-country boreal forest, which just so happens to be dominated by jack pine – a tree not dissimilar to lodgepole pine. In lab tests, Carroll and others have shown that mountain pine beetles discriminate little between the two species of pine. They like them both. More troubling, in field tests last year Carroll confirmed that the beetles have, indeed, jumped the formidable northern Rocky mountain barrier. They're now in the Chetwynd area, and in troubling close proximity to the boreal forest.

These facts and many, many more require quick, responsive and ongoing research in order for us to begin to make some informed decisions about what should be done in response to this unfolding calamity.

Based on initial discussions with a number of forest researchers, I would suggest that there are a host of research initiatives that should be immediately undertaken. First of all, we need to look at finding some relatively large areas of unlogged forest where we can quickly establish test plots to determine how forests rebound following beetle attacks.

At the same time that we are looking at how natural forests respond, we need research into how areas that are salvage-logged change due to human intervention. In that research, we need to concentrate both on areas that are logged and then not replanted but left to reforest on their own, as well as areas that are logged and then immediately replanted. On the replanting front, we need to look at the wisdom of replanting all to pine or replanting a mix of species. And we need to be looking at what species may be best to plant given the continued warming cycle.

In addition to such basic research we need to start getting answers to a whole range of other questions. One, how much forest will never be salvage logged? Two, how much of that forest may be suitable to replanting efforts? Three, how much of that forest should simply be left alone to evolve on its own? Four, should we worry about beetle-attacked forests becoming carbon-contributors? And if they do, what should be our response? Five, should we worry about beetle-attacked forests losing some of their important hydrological functions? For example, dead trees don't store water and they don't transpire water. How concerned should we be about that? On the other side of the coin, standing dead trees still moderate water flows to a certain degree by providing shade. The shade may not be as great as when the trees had needles, but there will be shade nonetheless. So clearly we don't want to knock all of them down.

Given the hugely important role that fire plays in such ecosystems, we also need to immediately implement field trials in which we purposely burn some forests in order to replicate what naturally occurs. Fire needs to be reintroduced into the landscape. And the question from a research perspective is how best to do that, while still ensuring a reasonable level of public health and safety. Tied in with the fire issue, is another matter of great ecological importance. It seems counterintuitive to many, I know, but too much forest cover is not a good thing – at least not from the perspective of promoting greater biological diversity. By suppressing fires, we have unwittingly encouraged the loss of grasslands. In the absence of flames, forests are encroaching on once open landscapes, endangering one of our most important ecosystems. We need to find ways now to bring more grasslands back to our Interior landscapes. This would have the benefit not only of restoring endangered habitat, but also it would serve to break the landscape into more of a patchwork quilt. And by interrupting the continuous expanse of forest cover, we might actually make it harder for future generations of pine beetles to do the kind of damage they are doing now.

All of this research and more requires money. It's not research that the companies appear willing or able to take on. And with looming government surpluses it seems reasonable to suggest that at least some of that work could be done by taking a portion of the projected surpluses and channeling them into much needed Forest Service research initiatives.

Onto the second R – restoration.

Rather than looking at the unfolding beetle attack as bad, we could instead look at it as a great opportunity to practice restoration on a grand scale. As I said a moment ago, we have robbed our Interior pine forests of nature's most important rebuilding tool. We need to reintroduce fire into this landscape. And we need to accept in doing so that not all trees are there to be logged. Clearcuts do not, as the forest industry often suggests, mimic forest fires – far from it.

Sometimes fires burn over incredibly wide areas. Sometimes they burn in tiny pockets. But what they most definitely do not do is remove trees from the landscape. There is important structure left behind following a fire. Those standing dead spires of graying wood and isolated unburned islands of green left behind following fires offer shade and moderate water flows, particularly during the spring months when snow melts. We also know from people who spend their lives studying plant life in forests, that in areas that are burned important plant life springs up following fires. We also know through their work that in areas where forest fires burn and in areas where large numbers of standing dead trees may be found following insect attacks, that there may still find be an abundance of things like lichens. Terrestrial lichens tend not to be found in great volumes in harshly dry and open clearcuts or in densely stocked plantations. Such realities are important if we care about maintaining habitat for threatened and endangered species such as woodland caribou, that rely on lichens for a good portion of the food they eat. So burned forests and some beetle-attacked forests are good, something to be embraced. By allowing them their rightful place on the landscape, we help to promote a much different looking kind of landscape. One that is a whole lot more diverse, and therefore less susceptible to the kinds of pest infestations now being witnessed.

We have a unique restoration opportunity with grasslands as well. Given the grand scale of the beetle attack and the large number of trees killed, we may now, through a judicious use of fire and other means, be able to restore grasslands to their rightful place in parts of the Interior. As I said earlier, research tells us that we have many more mature pine trees on the landscape than just a century ago. Some of those trees have encroached on grasslands because of our fixation with fighting fire. We can bring some of these open areas back through the use of fire. Or we can use other means to do so. Research trials have shown, for example, that pine trees can easily be bulldozed over in winter months when the ground is frozen and protected from disturbance by heavy machinery. That work will probably be even easier when directed at dead, brittle, beetle-attacked trees. Selective use of mechanical tree clearing can go a long way toward creating future grasslands. And, as I said earlier, create more of a desired patchwork quilt on the landscape. By breaking up the homogeneity of a landscape dominated by pine forest we would not only encourage greater biological diversity, but we would also help to interrupt the continuous expanse of mature pine trees that have contributed so much to the course of the current beetle outbreak.

Once again, finances are needed to address such work, a theme I will return to in a minute or two.

The last of our three Rs – reforestation – is, of course, what is of most concern to the people in this room and, I would venture to say, many Interior communities today. Without adequate reforestation efforts right now, Interior communities will be robbed of viable, forestry-based economic activities in the years ahead. The only response the current government has to the unfolding crisis is to log it or lose it. As a result, logging rates in several Timber Supply Areas have been elevated to rates never

before seen. While this will provide some stimulus to local economies, it's bound to be short-lived. By dramatically increasing logging rates now, we eat into the natural capital that is meant to sustain future generations.

It's hard to argue with this in some respects. No one wants to see a valuable resource go to waste. But if this is our only response, we're in a lot of trouble. We need to think very carefully right now about the significant areas of forestland that will never be subject to logging and that are now sitting in a scary limbo.

Thanks to changes in provincial forestry legislation, the provincial government is not on the hook for any reforestation costs on lands not logged by the industry. That includes lands attacked by the beetles as well as lands burned in recent forest fires. Let me be clear, I do not for the moment suggest that all these lands should be replanted, far from it. First of all, we can't hope to plant them all. It's physically and financially impossible. Second, we shouldn't replant many of these lands on purely ecological grounds.

But given the magnitude of today's outbreak, it's fair to say we should be initiating comprehensive plans right now to replant some lands outside of those where the forest industry has direct responsibility, in other words on public lands not logged for commercial purposes. And we should be doing so where it makes the most ecological and economic sense. In doing that, we may help to offset some of the predicted falldown in future harvesting rates due to today's logging increases. And, with careful planning in terms of what is planted, we may help to make the forests of tomorrow less prone to the kind of sweeping insect attacks now underway.

The need to do so is obvious to the provincial government. By the estimates of its own Forest Service, the area of forest land deemed "Not Satisfactorily Restocked" or NSR, is on the rise. And given the magnitude of the insect attack, the government knows full well that the area of forestland classified as NSR is poised to skyrocket in the months and years ahead. Despite a growing awareness of the problem, however, public sector investment in reforestation has been on a troubling downward spiral. While the provincial government no longer has a legal responsibility to reforest lands not logged by the industry, many people suggest that given the forest sector's obvious economic importance to British Columbia, the Province has a moral duty to act.

The lack of provincial government investment in reforestation and silviculture initiatives is obvious when one looks at the last few years of public sector investment. In 2001, the last year of Forest Renewal B.C., provincial government reforestation investments were $82 million. The following year, provincial government silviculture spending plummeted to $19 million after the creation of the new Forest Investment Account. The downward trend continued in 2003, when silviculture spending dropped by more than half to $7 million. This past year it went down again by more than half, hitting just $3 million.

In short, the provincial government has done nothing of note on reforestation during the past four years as the beetles laid waste to millions of hectares of pine forest.

These numbers contrast sharply with the provincial and federal government funds that went into reforestation efforts through the 1980s and 1990s, decades where significant inroads were made in

replanting lands that had been denuded and that had not been sufficiently replanted. Under two jointly funded Forest Resource Development Agreements, the federal and provincial governments each anted up $250 million to reduce NSR lands. At the height of public sector investment – 1995 - $150 million was invested.

The results are there for all to see, published in provincial government documents. Between 1981 and 1998, there was more than a twofold increase in silviculture surveys. Preparation of sites for replanting leapt by 67 per cent. The areas replanted nearly tripled. Lands cleared of brush to allow for more rapid tree growth increased by twenty times, while there was nearly a tripling in tree spacing efforts in order to promote more rapid tree growth.

Under the present circumstances, renewed public sector investments in reforestation seem downright reasonable. A goodly amount of that money ought to come from the provincial government, which directly benefits from logging activities in the province. But arguments can also be made, I think, for federal participation as well. First of all, the northeastern trajectory of the current beetle attack is troubling to say the least. If mountain pine beetles reach Canada's cross-country boreal forest, we will confront a far more serious forest health crisis, one that we should do our level best to avert. To do so money needs to be spent now to identify what forests in and around Chetwynd have just been attacked and quickly clear them before the beetles move again. We may also want to promote tree-thinning programs in the area and other measures that can slow or halt the beetles' further incursion into this new landscape. The other obvious benefit of federal government participation is that Canada is a signatory to the Kyoto Protocol. As such, we should be doing our best to curb CO2 emissions. By promoting the planting of even a portion of the forestlands attacked by the beetles we will help turn new carbon contributors back into carbon sinks.

In closing, it seems to me that what we need to be doing a lot more of now is thinking about the value of our shared public resources.

Public forestlands in British Columbia are of huge benefit not only to Interior communities but of value to all of us. While working on the Axing the Forest Service report, I talked to one senior Forest Service official familiar with the sorry decline in public sector silviculture spending. For obvious reasons, he did not wish to speak on the record.

He said one instructive way of looking at our forests is to think of the total value of all the standing timber. Just how much is all that timber we've got out there worth on today's markets? The answer – which is admittedly "timber centric" – and does not take into account all kinds of other values in our forests be they ecological, social, cultural or economic – is somewhere around $250 billion. On a yearly basis, the commercial timber stock is temporarily reduced by a fraction and converted into lumber, pulp, paper and other forest products, generating $16 billion in export revenues and, last year nearly $1 billion in revenues to the Crown through such things as stumpage payments.

"The question for the public is do you want to maintain that asset value over time?" the staff person told me. If the answer is yes, he continued, then some level of public investment will be required. It's a lot like a homeowner keeping her or his home in reasonable shape. At some point they'll have to re-shingle or re-roof the house. It will be a big cost, perhaps requiring a loan and payments over time. But it will be necessary if the asset value is to be maintained, let alone grow.

There is, of course, another choice. Do nothing. And that may be fine, as long as the decision is made with the knowledge that the asset value will be diminished as a result.

During the years of intense public sector investments in reforestation big social and economic benefits were realized. Much of this must be attributed to the core of primarily young people working for silvicultural contractors who did the physically taxing work of hand planting denuded mountainsides and valley bottoms. But it's also the case that a strong corps of public servants in the Forest Service played a key role too, working with logging companies and contractors to ensure that the right reforestation occurred in the right places. It seems to me that at this critical juncture in forest health, we need to find ways to fund and reinvigorate that highly productive partnership.

I don't think it's unreasonable to suggest, based on the magnitude of what confronts us, that an initial investment of a $1 billion, cost-shared between the provincial and federal governments would be a proper opening response to what is happening. And I don't think its unreasonable to suggest that the provincial government also immediately begin to explore what means can be found to get the private sector more involved. Let's not lose sight of the fact that if the forest companies do manage to process all of the added wood that the government has opened up to them through the salvage-logging program, that billions of dollars in additional forest products will be produced – and sold – in the years ahead. Under the circumstances, some kind of forest health levy seems reasonable, especially considering the nominal amount most companies will pay in stumpage fees for the beetle-attacked trees that they do log.

Returning for just a moment to the issue of returns on investment. Dollars spent today in silviculture yield big dollars tomorrow. Think about tree-pruning as an example. A pruned tree produces a lot more clear wood. And clear wood is worth a lot more money than its knotty counterpart, four to six times as much to be exact. People don't see that return for years down the road, but by making investments now, people are employed doing the labour intensive work of trimming the lower tree branches. Ultimately, there's a double payoff from that investment – jobs today in silviculture, and jobs tomorrow when the pruned trees are logged and the highly desired clear wood is processed.

In the coming months, I will be spending my time doing more research and writing work on these issues in my new capacity as a resource policy analyst with the Canadian Centre for Policy Alternatives. It is my hope, through talking to a host of people familiar with the unfolding forest health crisis that I will be able to produce an accessible, widely available report that will put some much-needed dollar and employment figures to what is needed to adequately respond to the present crisis. We desperately need an integrated and comprehensive plan in response to the beetle infestation. And I think a plan firmly rooted in the three Rs of Research, Restoration and Reforestation is the way to go. A plan based on nothing more than logging it or losing it won't achieve the desired results. And it will, on its own, leave us all the poorer for it.

Thank you for listening to me today. I look forward to working more closely with you in the months ahead.