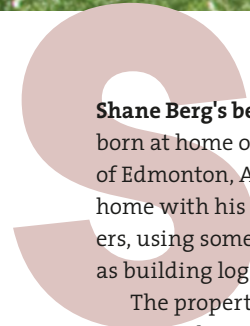


# New Chief Forester Shares His Vision for



**Shane Berg's beginnings in forestry** were born at home on a 65-hectare ranch west of Edmonton, Alberta, helping build a log home with his dad and two younger brothers, using some of the trees they harvested as building logs.

The property was populated with aspen and spruce. Berg helped his father, a career public servant with Agriculture Canada, clear the building site, fell the trees, and de-bark them. They took courses to learn how to hone the notches. Berg got comfortable using a chainsaw over the 10 years or so it took to finish the home.

Working in nature, building something, led Berg to a BSc degree in forestry from the University of Alberta.

"Little did I know that once you got into management, being a 'field forester,' wasn't going to be your future," says Berg, appointed BC's 18th chief forester, and assistant deputy minister for the Office of the Chief Forester, in August.

His journey to that position spans 35 years, and much of what shapes his vision for the future of forestry in this province was influenced by the many roles he's held

*Mike Hall is a senior communications specialist with the Association of BC Forest Professionals and former journalist and editor.*

*Nursery greenhouse, BC. Photo credit: Patrick Armstrong / Moresby Consulting Ltd., courtesy naturallywood.com.*

throughout his forestry career, including those west of the Rocky Mountains.

## A Start in Silviculture

Berg, RPF, has worked throughout BC, starting in the late '80s as a 59-day silviculture technician in Invermere, Southern Interior Forest Region (SIFR).

Cliff Beliveau saw the potential in Berg and convinced him to find a sponsoring forester.

"For many of us, our first jobs early on in our careers had you looking after a program, handed a budget and a truck, and you were thrown off into the woods," recalls Berg.

Those who succeeded showed initiative, flexibility, and courage; some early signs that you might be matching the public service values.

"Cliff put me in charge of the district site prep program. And I needed to look up what site prep actually meant when I arrived, but soon realized this was a very important part of the silviculture program."

Berg brought new equipment to the southern Interior, such as disc trenchers, which originated in Sweden and were being used in Prince George to prepare areas for planting. "I literally site-prepared every square metre of the Invermere forest district. It wasn't sufficiently re-stocked in three summers," he adds.

To move forward in his career, Berg knew he had to become an RPF. He took the exam in 1989.

"Once you got your RPF, you were a commodity worth hiring. It just seemed that the sky was the limit for entry-level positions within the BC Forest Service, at least, and so I got a permanent job quite quickly after obtaining my RPF," he says.

Berg worked as a district silviculturist in Grand Forks and a forest planning manager in Squamish. He also held district manager roles over 14 years with the BC Forest Service, both in Hazelton and Kamloops.

When the ministry downsized in 2000, some district offices closed. Berg entered a competition pool with other district managers and was re-assigned to the 'Flagship District' of the Thompson Okanagan — the Kamloops Forest District.

Then in 2003, the province experienced one of the worst fire seasons on record.

"And so I really got a sense of what it meant to be managing forests while looking after people responding to a crisis and the challenges associated with that."

Berg remained a district manager in Kamloops until 2011, when he moved to a regional executive director position with what is now the Ministry of Indigenous Relations and Reconciliation.

"That was probably the most enlightening, educational, and fulfilling role that I've had," he says.

Berg spent six years working with the then Ministry of Aboriginal Relations and Reconciliation before becoming the province's deputy chief forester in April





# Future of Forestry in BC



2017, working under his predecessor, Diane Nicholls, RPF.

As chief forester, an independent statutory decision-maker, Berg is responsible, under the *Forest Act*, for determining the allowable annual cut (AAC) for each of the province's 70 timber supply areas and tree farm licences. Under the *Forest and Range Practices Act*, he also sets seed, seedling, and stocking standards for the reforestation of BC's forests.

"I would say that the priorities I've been working on as deputy chief forester over the last five years will continue," Berg says of his vision.

## Reviewing Old Growth

One of those priorities is managing BC's old forests.

The recent Old Growth Strategic Review, which included 14 recommendations, resulted in a technical panel identifying 2.6 million hectares of old growth, in addition to the areas already protected in parks or that exist outside of the timber harvesting land base, that are intended to be deferred from further developments until more conversations take place with Indigenous communities.

"We're putting together an old growth strategic action plan, which we are currently in the process of engaging with Indigenous communities and key stakeholders across the province, to get a sense of how we can implement those 14 recommendations across the province."



*Reforestation seed bag full of Western Red cedar.* Photo credit: Nik West, courtesy naturallywood.com.

The Office of the Chief Forester is responsible for delivering on those recommendations, in partnership with the newly formed Ministry of Lands, Water and Resource Stewardship (LWRS).

"My role as chief forester is to ensure that we are practising sustainable forest management. I don't make land-use decisions. I make decisions on how the timber harvesting land base is operated and to ensure that the forest and range practices being employed are following current legislation and guidance. Decisions made to further protect our most 'at risk' old forests will be addressed through the recommendations endorsed by government from the Old Growth Strategic Review. There will still be old forests within the timber harvesting land base that need to be managed appropriately."

Linked to that are changes to forestry policy and legislation.

The provincial government passed the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act) into law in November 2019.

The *Professional Governance Act* (PGA) then replaced the *Foresters Act* on February 5, 2021.

The Office of the Superintendent of Professional Governance (OSPG) now oversees the operation of all professions under the PGA, setting policy directives regulators must follow, and auditing against those policies and regulatory standards.

"We've had two major acts passed in the last three years. And we are working on the regulations to enact those and to implement those acts, not the least of which is specific to forest landscape plans (FLP) becoming a reality and being an operational replacement to the current planning process," Berg says.

FLPs will replace the current forest stewardship plans as part government's commitment to modernize forest legislation in BC, including the *Forest and Range Practices Act* (FRPA).

The new FLPs will identify where and how forest management activities

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can occur, such as timber harvesting and road layout, as well as provide clarity on overlapping direction from strategic plans and land use objectives, such as wildfire risk reduction and access management plans.

"Forest landscape planning is going to revolutionize the way that we work cooperatively and collaboratively with not only Indigenous communities, but with the stakeholders, industry, and the general public in a way that we've never seen before. FLPs will definitely be a priority for me over the next two years and beyond," Berg says.

### Working Together

Part of that is co-developing forest management plans with Indigenous communities.

"Government's intentions paper speaks to our commitment to partner with First Nations in how our forests are managed, and to have more participation by First Nations in the forest industry itself," Berg added.

The Office of the Chief Forester is incorporating First Nations involvement in its timber supply review to honor that commitment.

"We've seen tremendous First Nations participation in our timber supply review, to the point that some First Nations are producing their own timber supply analysis that are provided as factors for consideration when I make my allowable annual cut decisions," Berg says.

The annual volume of timber harvested in the province peaked at almost 90 million cubic metres in 1987 and since has averaged around 67 million cubic metres.

BC was forecast to have a stable mid- to long-term timber supply of about 70 million cubic metres a year. However, recent government analysis projects decrease in timber supply to about 58 million cubic metres per year by 2025, due to accelerated mountain pine beetle salvage over the past two decades and losses due to wildfire.

The forecasted timber supply returns to approximately 65–70 million cubic metres per year by 2075, according to the province.<sup>1</sup>

### Timber Supply Solutions

"There is a tremendous amount of pressure on the province's timber supply currently," Berg says.

"The challenge is looking at how we manage our forest and range resources for all British Columbians, recognizing that

there are things influencing it that we haven't seen before? How is climate change impacting the health of our forests? How is it impacting the growth of our forests?"

He has to figure out how to maximize the fibre from BC forests.

"I'd really like to be part of this solution to move from a volume- to a value-based system," Berg says. "How can we get more from the fibre that we have access to? How can we utilize our fibre better? We're taking great strides in shifting from burning slash piles to trying to use the slash for other purposes. The innovation that we're applying to new products, the bio-economic opportunities that are being developed not only within BC and across Canada, but also in Europe are areas that I really think



BC's 18th Chief Forester Shane Berg, RPF.

we need to focus more attention on. And in doing so, using more of the fibre and ensuring that we're maximizing the recovery, while mitigating wildfires and reducing our greenhouse gas emissions."

Berg says innovations being looked at include creating products from fibre that would normally be considered waste and turning it into something with higher value, from oriented strand board to lignin to bio foam.

"There's technology being used to extract the lignin from fibre and replace some of the petrochemicals that are commonly used. We're using lignin to replace bitumen in asphalt on a trial basis around the prov-

ince, as well as replacing lithium in electric vehicle batteries," he says. "We're using fibre to make bio-concrete and recently partnered with the Wet'suwet'en to make bio-foam to replace Styrofoam."

"It's those kinds of technologies, new science, and research, that I think is exciting as the Office of the Chief Forester works to promote this innovative approaches to using fibre across province."

To achieve these goals, Berg has the support of a deputy minister, an associate deputy minister and an experienced executive, and minister with strong commitments to forest management and sustainable forestry practices.

### Reducing Wildfire Risks

Berg and his office are also looking at different ways to reduce wildfire risks, while managing priorities with respect to forest carbon and climate change.

According to the Ministry of Forests<sup>2</sup>, the areas affected by wildfires in 2017 (1.2 million hectares), 2018 (1.3 million hectares), and 2021 (0.9 million hectares) were the three largest in 102 years of recorded wildfire history in BC.

As a way to reduce such risks, the forests ministry is using cultural and prescribed burning to mitigate the susceptibility for wildfire.

Berg says prescribed burning was more common when he first started with the ministry.

"We started to get away from that because of the potential liability and the public's concern about air quality and smoke. If you had a prescribed fire that got out of control, there were tremendous penalties and liabilities that you would inherit. And I think the other reason was just public support, or lack thereof, for prescribed burning," he adds. "When people saw smoke in the air, it wasn't something that they attributed to a good practice... and nobody likes smoke during their summer holidays."

So the use of fire became less and less. But that changed after the Abbott/Chapman report<sup>3</sup> on the 2017 wildfires.

"Our ministry's intentions paper<sup>4</sup> also talks about a return to the use of prescribed and cultural fires," Berg says. "So the challenge is to ensure that you've got the right infrastructure in place including the inclusion of Indigenous expertise (i.e.





*Slyvan Vale Tree Nursery in Black Creek, BC on Vancouver Island. Photo credit: Brudder Productions, courtesy naturallywood.com.*

Fire Keepers), and the right people trained to do it, that you have the appropriate environmental conditions to do it safely. And we're taking great strides and making that happen. We have a provincial, cultural and prescribed wildfire steering committee that's working to implement more cultural and prescribed burning each year and, with that, I think it will return to a time when fire was used as an appropriate silvicultural tool and also mitigating wildfires in the future."

### Planting a Seed

Another part of addressing the impacts of climate change, is using the best seed to planting more resilient seedlings.

"We're developing standards to use different seed to reforest parts of the province based on their climate suitability. We're making climate change-informed species selection and climate-based seed transfer guidelines a priority so that we're putting the right tree in the right place," Berg says. This coming spring, the province will have planted almost 1.1 billion trees over the past four years.

The provincial government has committed to planting more trees and to be a leader in the federal 2 Billion Trees<sup>5</sup> program.

"We look forward to seeing those forests grow to maturity to realize that full potential, but knowing that we are investing in our silvicultural practices, knowing that we're planting 300 million trees a year, and that we

are planting trees that have come from seed orchards, selected to have attributes that will hopefully see them reach their potential. This will ensure that our regenerated forests will be resilient into the future and also support healthy ecosystems," Berg says.

### Future of Forestry

It's also important to have registered forest professionals providing advice and making decisions on managing those forests.

"It's pretty clear what a forest professional has the right to do. And the new *Professional Governance Act* clearly identifies which professionals have the right to practice and which have the right to title. So I'm confident that we'll continue to ensure that we have people with professional accreditation making decisions that are defined in that act," Berg says.

He also acknowledges the challenge of attracting young people to pursue a career in natural resource sciences.

"I've got family and friends with children in natural resource programs in colleges and universities in western Canada and none of them think they'll be building logging roads or laying out cutblocks. They've gone into these university programs to become conservation biologists or to be wildlife habitat managers, and those are important professions," Berg says.

"What I do tell these young people is that the things they want to do in these career

paths are exactly what a professional forester does. We need more of our young people considering a path into natural resource management and hopefully, also becoming registered professional foresters." He reminds the students that he meets, that a career as a professional forester must be fulfilling because he's being doing it for almost 35 years.

"We need people who are going to look after our forest in the future. If you want a career that allows you to do something that is going to, hopefully, benefit generations to come, being a forester and working in the natural resources allows you to do that. I think that's attractive to some young people; that they can truly make a difference in how this province's world-renowned resources are sustained now and into the future." ❌

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5. 2 Billion Trees Commitment, online at <https://www.canada.ca/en/campaign/2-billion-trees.html>





Continued from **Page 15** *Alternative Forestry on Nisga'a Land*

bance was minimized and that removing trees for these trails did not exceed 25 per cent of the stand (when also considered with the inblock road). Secondly, when marking the trails, a suitable number of rub trees also needed to be identified; these act to protect trees with higher ecological value, and so bear the brunt of impacts from skidding. And lastly, that timber harvesting would have to be carried out in the winter to reduce damage to the roots of remaining trees. This was important, given KATC's timber harvesting contractors are set up with large coastal timber harvesting equipment, rather than low impact light machinery, and the road into the block is set to be a winter road due to year-round wet conditions.

### What was the outcome?

The outcome of this prescription was that KATC was able to work with other professionals to ensure the integrity of the forest is maintained. The goal of this will be to mitigate impacts to wildlife values, while bringing in much needed income to a fledging company that is working to establish a solid economic foundation. The block is planned for harvesting in late 2022, or early 2023; KATC is hoping to employ thinning and other alternative silvicultural systems elsewhere in Nisga'a Lands.

The downside of that is timber harvesting becomes more difficult at a time when operators are hard to come by and fuel prices are increasing. However, if successful, this type of prescription paves the way for similar work to be undertaken

in the future. KATC's foresters will mark trees for harvesting, as well as rub trees, to ensure an even balance of species is left in the block and that the correct proportion of trees are removed under each section of the block. As logging progresses, foresters will monitor progress and will ensure other aspects of the site plan are within compliance (e.g. soil degradation: five per cent).

Overall, there was and still is a lot to consider in planning to use alternative silvicultural systems. Since researching the use of thinning and other silvicultural systems in British Columbia it seems these are not widely used. KATC was able to discuss implementing a thinning with nearby professionals who had and continue to successfully use thinning and patch cuts. Overall, the sections of the block that require alternatives to clear cut required a little more planning after the boundary layout. Foresters need to consider the most appropriate locations for trails in the block. While this was initially time consuming, if more of these prescriptions are undertaken KATC's foresters will likely become more adept at this work.

Thinning reduces the revenues that may be realized if a block were clearcut. However, thinning reduces visual impacts, maintains ecological integrity, and still provides an income. By planning thinning for the future, trees can be felled over large areas in increments, as long as log markets remain favourable. ❌

### WEB LINK

1. <https://www.nisgaanation.ca/legislation/nisgaa-forest-act>