

BC

Forest PROFESSIONAL

JANUARY - FEBRUARY 2018

Is **Glyphosate**
Persistence in Native Plants a
Concern for **Northern BC?**

Sustainability & Forestry:
An Interview with Shawn Hedges, RPF

Ever Wonder About the Differences
between **EFI** and **NFI?**

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Forest Week 2017**

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Tales from Nepal





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KEY CONTACTS

Garry Mancell, R.P.F.
Counsel
+1 604 643 2977

Brian Hiebert
Partner
+1 604 643 2917

Jeff Waatainen
Associate
+1 604 643 6482



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Photo: Jeff Roberson, FIT

Tremella Mesenterica, National Forest Week Photo Contest Runner up Award

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RE: An Introduction to Urban Forestry, BCFP Sep-Oct 2017

Living in the urban forest, I read the three articles on urban forestry with great interest. Since moving to Victoria four years ago I have invested time, talent(?) and energy in a group of *Abies grandis* in the grounds of an urban church. The trees are a 100+ years old, 30-40 metres tall and up to 50 centimetres diameter at breast height. They are a scruffy looking lot, with wavy stems and battered crowns and are fixing very little carbon. These are the survivors from when the church was built in 1950s; an unknown number have been removed over the years but others remain close to the church. My immediate conclusion is most of the trees were an unacceptably high hazard and removal and replacement was a high priority.

After a detailed inspection of each tree, having read TRAQ, I presented an unsolicited assessment and recommendation that, though the assessed risk was relatively low, the high hazard merited immediate removal. An arborist later examined the stand, identified a root rot tree for removal, and refused any other felling.

End of story, until the arrival of the journal. In all three articles, hazard is mentioned, but there seems to be no or little recognition of the unforeseeable and inevitable fall. It is senseless after a tree has fallen to say, "Oh shit." I have seen too many come down due to a variety of weather events to feel that refusal to accept the inevitable and prevent significant economic damage, or even loss of life, is unjustified. I recall a 30-metre windfirm Douglas-fir blown over with a huge root wad only a 100 metres from my house. I also recall the snow and freezing rains of the 1950s and the havoc left by freak winds.

Professional assessments may be perfectly completed but when a safe tree falls, who is at fault? Who pays? Who suffers? Not the arborist, nor the professional forester! Not the civic government, which regulated! And not the vocal public! They may turn up with flowers.

I suggest we need more proaction. Thirty+ metre trees do not belong next to a house. Hazard must be given higher weight in felling and replanting decisions. There are plenty of trees that don't exceed a reasonable height — maybe 20 metres in built up areas, more in parks. Deciduous trees are less likely to be weather statistics and are excellent providers of light in winter and shade in summer, especially in leave strips where water temperature is critical, and a food source for the aquatic ecosystems. It is time for arborists and foresters to advocate for safer regulations and planning in urban areas. Unpopular as it may be with many, it is time to take a new look at hazard and begin a phased removal of high hazard trees.

David Handley, RPF(Ret)

PS: I still expect one of the protected Grand firs to fall before I die!

Have a Compliment or Concern? Write us!

The *BC Forest Professional* letters section is intended primarily for feedback on recent articles and for brief statements about current association, professional, or forestry issues. The editor reserves the right to edit and condense letters and encourages readers to keep letters to 300 words. Anonymous letters are not accepted.

Please refer to our website for guidelines to help make sure your submission gets published. Send letters to:

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Managing Editor: Dean Pelkey
Editor: Cheryl Waddell

Editorial Board:

Janelle Dale, RPF; Ron Hart, RPF; Erika Higgins, RPF;
 Tom Hoffman, RPF; Marie-Lou LeFrancois, RPF; Kristin Storry, RPF

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RE: ABCFP CEO's Op-ed, *Vancouver Sun*, October 2017, BCFP Sep-Oct 2017

The underlying implication of CEO Christine Gelowitz's op-ed, *Bringing public confidence to B.C.'s forest management*, published in the *Vancouver Sun* on October 10, 2017 is that the Council and membership of the Association of BC Forest Professionals support the existing deregulated, legislative framework that governs the management of BC's public forests.

In its discussions with government on professional reliance, I am presuming the Association's executive is basing the Association's position on some sort of survey or polling of the membership. I should note that I have not been asked for my opinion but I should like to see the Association's summary of opinion gleaned from other members and the questions they were asked.

If indeed the membership does support the existing legislative framework and the reliance it places on members to take resource decisions without good, supportive, regulatory provisions in law, then, why does the author leave it to the reader to infer the position of the Association on professional reliance? Instead, she could have plainly stated that the Association will be participating in the government's evaluation of the professional reliance.

Sincerely,

Anthony Britneff, RPF(Ret)

RE: Changes to BC Forest Professional

Congratulations on the changes to *BC Forest Professional*; it has certainly rejuvenated my interest in the magazine with the interesting mix of articles in the November-December 2017 issue. The themes format that was introduced a few years back certainly focussed readers' attention on particular issues, but in another respect it stifled wider coverage. Finding a balance between a comfortable and familiar format and rejuvenating the magazine from time to time is also important. I especially liked the new column *The Watchdog's View*. Some tension between BC's forest professional association and forest practices watchdog is necessary and healthy, and providing this opportunity for the Board to speak directly to professional members is a nice move. The opening article by Garth Lord on road construction on steep slopes was timely and well done and addressed a theme of considerable public interest.

Mike Nash

Lay Councillor, ABCFP (2002-2005)

Board Member, FPB (2008-2014)

RE: Professionalism in a World of Post Truth, CEO's Report, BCFP Sep-Oct 2017

I take strong exception to the assertions made by Christine Gelowitz in her CEO's Report titled "Professionalism in a World of Post Truth." Gelowitz either attempts to rewrite history or to write something wholly inconsistent with the facts.

Gelowitz asks, "Why the sudden attention to professional reliance?" This attention is not sudden. In 2009, the Association of BC Forest Professionals (the Association) asked the forest ministry to refrain from legally establishing "Specified Areas" for several species of wildlife.

Doug Konkin, then Deputy Minister of the Environment, responded on May 17, 2010, stating that the expected results from such a proposal "...leaves government with diminished confidence that environmental values will be adequately managed on the basis of simply providing information to professionals, as compared to establishing legal standards."

Konkin went on to write, "Information on how government can be assured that environmental values will be adequately managed where standards are not legally established would be most appreciated."

Clearly this information is still lacking and is a fundamental reason for the government's review of the professional reliance system.

Gelowitz refers to the Mount Polley mine tailings failure and the contamination of Shawnigan Lake residents' drinking water as "Two isolated events (that) certainly do not imply a systemic failure of a model and a need for more government oversight..."

Little is isolated about these two events as the following examples illustrate:

In 2015, Mark Haddock of the Environmental Law Society published an evaluation of the professional reliance system in which forest legislation did not make the grade.

A recent Forest Practices Board statement indicates that: "From 2005 to 2011, the board carried out 58 compliance audits involving 117 licensees and 17 BC Timber Sales districts, publishing its findings in 65 separate reports. Of those audits, there were 37 instances of significant non-compliance, of which 22 were related to roads and bridges."

In their respective reports on grizzly bears, both the Board and the Auditor General implicitly speak to the failure of professional reliance on guidelines unenforceable in law to protect grizzly bear habitat.

All resource professionals need to act with the authority of legally enforceable standards and guidelines — without that authority, they are powerless. If laws are weak, so then are the professionals.

Fred Marshall, RPF

What I've Learned as ABCFP President

With my term as president coming to a close, my thoughts go to a few different places. First of all, it has been a privilege serving as the president of the 70th Council of the ABCFP. I have gained some unique and valuable experiences in the past year and during my past four years on council. I have thoroughly enjoyed the opportunity being involved with the governance of our association.

When I started my term, I wanted to focus on two priority areas from our Strategic Plan: Member Engagement and Enhancing Trust with First Nations. I am pleased that the president-led task groups that I formed have made recommendations which can be used by the association to move forward in these areas. I now have a better understanding of the considerable time, effort, and resources to move the dial on any one of the many important items in our strategic plan. I would encourage all of you to go to our website and have a look at our Strategic Plan 2017-2019, as it is important that all members are aware of it. If you feel we are missing the mark, we need to hear from you either directly or through our member surveys.

Most of the association's resources are focused on delivering on our legislated requirements of enrolling and maintaining competent members and advocating for and upholding principles of forest stewardship. When something like the provincial government's review on professional reliance comes along, it can be very challenging for the association. Although the ABCFP welcomes the review and improvements that can be made to the professional reliance model, it has meant dedicating an enormous amount of time and effort by ABCFP staff, especially given the tight time lines of the review. I would like to take this opportunity to thank them for all of their extra time and effort over the last few months.

During the past year, I have been fortunate to attend several conferences of other forestry and natural resource professional organizations and these have provided me with some important takeaways. One thing I've realized is our annual conference and AGM is one of the best out there and offers good value for the money. I encourage you to attend an ABCFP conference, especially when it comes to your region of the province. I hope to see many of our Island members in Victoria on February 21-23 for the 2018 conference. I applaud employers who support members attending

the ABCFP conference. This a fantastic way to show appreciation for the good work your forest professionals do, and for helping employees maintain their competency through the practical workshops and continuing education opportunities available at the conference.

It is interesting to see the trends and challenges facing other professional associations. Most have an ageing demographic, financial struggles (such as not being able to fulfill their mandates given their budgets, or having to run deficit budgets), and they grapple with the value proposition for their members. I believe the ABCFP is in great shape with regard to these challenges. Although some of our members are, or are about to retire, the number of newly enrolled members is keeping pace with the number of retiring members. With regards to those retiring members, they have a great wealth of knowledge and new-found time that we should be tapping in to rather than letting it slip away. Financially, we are on very sound footing, running balanced budgets and we have a healthy reserve fund for rainy days. We continue to look at ways to add value to our membership. Our soon to-be-released guidance documents on visuals and hydrology, our *Career Learning Strategy*, our annual conference, *BC Forest Professional* magazine, and member meetings are great examples of this.

As I transition to Past President, I see the value of our governance model as a whole and specifically the built in succession planning where the Vice President becomes the President and then the Past President. This succession allows for mentoring and continuity for the executive committee. The other member of the executive committee — our CEO Christine Gelowitz, RPF — has been invaluable to the executive committee. As Council's only directly reporting employee, it is crucial the CEO is extremely capable and can run the operations of the association effectively while engaging with council on strategic matters. Fortunately, we have a diverse and engaged council who are able to provide solid strategic direction, set priorities, evaluate risks and provide oversight. As recent governance training attended to by the executive committee confirmed, effective implementation of this governance model is important for organizations such as ours to be successful moving forward. I believe the ABCFP has all of the pieces in place to face our challenges and to be successful now and in the future. ✪



Reflecting on the BC Government Professional Reliance Review

Ambiguity surrounds the term professional reliance. Reflecting on my discussions with members and non-members, and in reviewing member feedback captured in ABCFP surveys, there appears to be three common perspectives.

For some, the term professional reliance means the role of the individual professional; the fundamental concept of relying upon a professional for their knowledge and judgement.

A second group interprets professional reliance as being about the regulatory regime that forest professionals work within and their perceptions regarding the shift made in 2004 from a prescriptive Forest Practices Code to a results based regulatory regime (the Forest and Range Practices Act, FRPA).

Finally, the third group sees professional reliance as correlating to the forest management system in its totality, the pillars and foundational elements that form the FRPA regulatory framework. This includes objectives set by government, practice requirements, compliance and enforcement, reliance on profes-

sionals, and effectiveness monitoring and research. It also means considering the role of all the players in the model: the government, the resource user, the professional, and the professional's regulator.

Often, all three interpretations of professional reliance form part of a single discussion with no delineation made when shifting from one perspective to another.

Prior to the provincial government's release of the terms of reference of the review, the ABCFP suggested to elected and appointed government officials the scope of the review should include the forest management system in its totality because the components of the FRPA regulatory framework are dynamically interconnected. Despite our efforts, the review has a more limited scope.

The review focuses on whether professional associations that oversee professionals are fulfilling their obligations, and whether government's existing oversight of professionals and their regulators is adequate. The government is also reviewing whether the 27 regulatory regimes that resource professionals work within (primarily FRPA in the case of forest professionals) have adequate government oversight mechanisms.

An audit of professional associations was held in November. During audit interviews, the government asked 53 questions of the ABCFP about the work and function of the association, and the related regulatory regime in which forest professionals operate. The government also asked the association to respond to a follow up questionnaire containing an additional seven multi-part questions.

The audit was designed to help the government determine the association's compliance in fulfilling our mandate as set out in our statute, the Foresters Act. While by its nature an audit can feel somewhat uncomfortable, it presented an opportunity to reflect on the good work the association has done to ensure the essential components of being a regulator are delivered; namely in guidance, competency, and accountability.

With respect to guidance, we pointed to 30 different practice guidance documents developed since the shift to FRPA. Examples include the series of guidance papers regarding non-statutory expectations in 2012 and the Professional Reliance Evaluation Tool in 2013. It also included guidance documents in areas of professional practice where risks and concerns have been identified, such as crossings in 2014, or our more recent work on Visual Resource Management, and Watershed Assessments — set to be finalized in early 2018.

Competence means working to ensure our members have appropriate education, training, and experience. We demonstrated the rigour found in our registration and enrolment processes. We showcased improvements made in 2016 to overhaul the registration system and policies. We reviewed the association's practice review and peer review program aimed at proactively working with members to ensure their competence in daily practice, and spoke to the lessons learned. We discussed changing workforce demographics and potential impacts on lowering the average years of experience of practising members and in response, steps the ABCFP began this year to review our continuing education program.

In the area of accountability, we reviewed measures the association has taken to increase public transparency and strengthen our complaints process from publishing names of members found guilty, to publishing discipline case digests, and recruiting members of the public to be on committees involved with discipline. We discussed steps taken this year to enhance consistency within our investigations process and its timeliness. We discussed steps taken to address potential infringements of practice, including the recent change to our leave of absence policy.

As the ABCFP participates in the government review and the various engagement opportunities, we will continue to draw on inputs received from members in surveys, workshops, and one-on-one dialogue. With different perspectives on professional reliance, and given our large diverse membership, I have appreciated the members who have reached out directly to me to discuss their views. I welcome any member who may be wondering about whether a particular matter is, or has been raised, by the ABCFP and any other questions about the review, to contact me directly. ✕



Early Bird Rates for 2018 Forestry Conference End January 17

There's still time to secure the early-bird registration rate for the 70th ABCFP Forestry Conference and AGM, February 21-23, 2018 in Victoria. Early-bird rates end January 17, 2018.

Managing Forests: Expectations vs Realities features a number of prominent guest speakers, including:

- George Heyman, Minister of Environment and Climate Change Strategy, discussing the government's review of professional reliance;
- David Usher, internationally renowned speaker and musician who will talk about how to bring creativity, innovation, and inspiration into our workplace;
- Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations, and Rural Development, speaking about his ministry's work and priorities;
- Chief Ian Campbell from the Squamish First Nation; and
- A public lecture on wildfire from Professor Scott Stephens, wildfire expert from the University of California Berkeley.

Check out the conference website at abcfp.ca/WEB/ABCFPConference to register now. See you in Victoria.

Update on Government Review of Professional Reliance

Since the provincial government's October 3 announcement of its review of professional reliance in the natural resource sector, ABCFP staff and council have been busy responding to government requests and participating in an audit of professional associations. The government is addressing questions around:

- Whether professional associations that oversee qualified professionals (QPs) employ best practices to protect the public interest;
- Whether government oversight of professional associations is adequate; and
- Conditions governing the involvement of QPs in government's resource management decisions and the appropriate level of government oversight to assure the public its interests are protected.

In November, the ABCFP underwent the compliance audit component consisting of an in-person interview with government representatives where ABCFP senior staff responded to 53 questions about the work of the profession, the functioning of the association, and the related regulatory regime in which professionals operate. The government has also asked the association to respond to a follow up questionnaire containing an additional seven multi-part questions.

The list of the questions asked during the audit interview and the follow-up written questions can be found in the Professional Reliance section on the Members Only page of the ABCFP website (log in required). Other related materials regarding the review can also be found there.

In December, the government asked ABCFP members to respond to a survey seeking their opinions and thoughts about the state of professional reliance. We hope many of you took the time to respond and share your perspective on what is working well in professional reliance as well as what could be strengthened. The survey will remain open until January 26, 2018 so there is still time to respond. The survey of qualified professionals came on the heels of a public engagement process the government announced December 1, where it sought public opinions about the state of professional reliance. The public survey is available on the government's public engagement web portal and will remain open until January 19, 2018.

The ABCFP also accepted the government's invitation to professional associations to make formal submissions as stakeholders through the public engagement process. Members can view the ABCFP submission to government on the ABCFP website in the Members Only section page on the professional reliance review.

ABCFP Annual General Meeting Takes Place February 22 in Victoria

The ABCFP's 70th AGM will take place on Thursday, February 22nd from 2:15 pm to 4:30 pm as part of the annual forestry conference. All members are invited to attend the AGM portion of the conference free of charge and pre-registration is not required. The AGM will take place at the Victoria Conference Centre, 720 Douglas Street, Victoria. Only registered members, limited license holders, and associate members in good standing may vote at the AGM.



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Embracing Continuous Improvement through Effectiveness Monitoring



WHEN THE FOREST AND RANGE PRACTICES ACT (FRPA) WAS ENACTED IN 2004, it was a new type of resource legislation that provided freedom for professionals to manage within the bounds of objectives established by government for 11 forest values. However, there were strings attached to this new freedom to manage. Effectiveness monitoring would evaluate how well government's objectives for the 11 values

are being achieved and professionals would embrace the ongoing "Plan, Do, Check, Act" cycle of continuous improvement to adjust and improve practices.

The Forest Practices Board just published its report¹ on government's program for monitoring the effectiveness of forest and range practices — the *Forest and Range Evaluation Program (FREP)*. The Board's evaluation looked at how well the program has been implemented, using a standard outcome-based evaluation approach. As part of our evaluation, we consulted with seven monitoring specialists based in BC and interviewed over 100 individuals working in industry and government — most of whom are forest professionals.

The Board's evaluation revealed that FREP is not yet achieving what it set out to do and this is a concern, given that the program has been in place for over 10 years. The report identifies four key issues that are affecting FREP's progress in achieving its intended program outcomes and the Board is making five recommendations for government to improve the program.

Through our time working on this evaluation, it is clear that FREP has embraced the philosophy of continuous improvement in its work. Not only does FREP carry out evaluations aimed at continuously improving practices, it also looks inwards at ways of continuously improving the monitoring program — embracing the "Check" in the continuous improvement cycle. For example, FREP recently became aware that better engagement with professionals is needed and you

Monitoring staff evaluate the condition of a riparian area adjacent to a cutblock.

might have seen FREP's recent efforts to "Act" by stepping up face-to-face engagement with forest licensees about the work of the monitoring program. Their small stream

workshops are a good example of these efforts.

Government is considering the Board's recommendations and we have asked for a response by the end of March 2018. In the spirit of continuous improvement, we encourage all professionals to be part of the solution and to help make the program a success. Why? Because embracing continuous improvement is what we signed up for with FRPA and what the public expects. Helping FREP become a success could include engaging with monitoring staff — even observing field monitoring — discussing FREP's monitoring results with other professionals, attending monitoring workshops, and implementing FREP's suggested opportunities for improvement as they apply to your practices.

The bottom line is that FRPA can only succeed if FREP succeeds, and forest professionals are a key part of making FREP a success. ☺

The Forest Practices Board is BC's independent watchdog for sound forest and range practices, reporting its findings and recommendations directly to the public and government.

Reference

1. Forest Practices Board, Special Report on The Forest and Range Evaluation Program, November 2017. <https://www.bcfpb.ca/wp-content/uploads/2017/11/SR54-Forest-Range-Evaluation-Program.pdf>

Doug Wahl is an RPBio and has been with the Board as an auditor and investigator since 2008. He has worked on a variety of special projects and complaint investigations and enjoys engaging with people to hear their views on improving resource management.

Darlene Oman is the director of corporate performance and communications for the Forest Practices Board (FPB). With FPB since 1997, Darlene was previously FPB's director of special projects. The FPB audits and investigates forest and range practices on public lands, reports its findings to the public, and makes recommendations for improvement to practices and legislation.

WHAT'S THE DIFFERENCE BETWEEN EFI AND NFI?

Demystifying Current Acronyms in Forest Inventory in Canada

Forest inventories in Canada are evolving as new technologies are incorporated into the inventory process. Governments and industry are under increasing pressure to reduce inventory costs, while simultaneously producing improved information to support the increasingly complex demands associated with forest management. For forest professionals, keeping up-to-date on technological innovations and understanding the different sources of forest inventory information available (and the associated terminology) can be challenging.

Amidst all this change in forest inventories in Canada, there are two acronyms in particular that seem to invite confusion: NFI¹ and EFI². NFI stands for National Forest Inventory and represents a type of inventory with a very specific purpose: an NFI is typically designed to provide high-level information to support national-level forest policy and reporting information needs. Enhanced Forest Inventory (EFI) represents an approach to forest inventory that makes use of advanced remote sensing technologies such as Airborne Laser Scanning, also known as LiDAR (light detection and ranging) — in combination with ground plot data — to generate inventory attribute information.

NFI and EFI differ in their spatial and temporal characteristics. Canada's NFI is sample-based, meaning only a small portion of the total forest area is actually measured to characterize Canada's entire 347 million hectare forested area. The NFI uses representative samples of different forests from across Canada. In contrast, EFIs are spatially explicit and provide complete spatial coverage of a management area of interest. These "wall-to-wall" forest inventories are very detailed and are generated over forest management areas in Canada, in excess of one million hectares.

Temporally, NFI and EFI also differ. Canada's NFI measures changes in forest attributes through time, so consistency in measurement is important, with the same sample areas remeasured approximately

every 10 years using comparable techniques. EFIs on the other hand provide precise characterization of current forest conditions to support present-day operations and management, as well as mid to long-term planning exercises, such as timber supply forecasting.

National Forest Inventory

Provincial, territorial, and federal governments have been collaborating since 2000 to collect NFI data consistently across Canada on an ongoing basis to detect and analyze forest changes over time at regional and national scales. A national network of permanent sample plots is used to ensure that all forest types are surveyed in a representative manner. The NFI maintains a network of 1,114 permanent ground plots and 13,158 remote sensing plots across Canada. Statistical techniques are used to get from what's known (forest conditions in the sample plots) to what's of interest (forest conditions in the overall forest, or population).

NFI plots were first established and measured across the country between 2000 and 2006, and again between 2008 and 2017. The first statistical estimates of forest change in Canada will be published when processing of all second measurement data has been completed. Meanwhile, a third round of measurements will begin. As time passes and repeat measurement data are collected, scientists will have more information to use for analyzing forest changes, studying relationships between changing variables and figuring out what's driving forest change over the long term. The data are used to produce reports for Canadians, such as The State of Canada's Forests Annual Report 2017³, and for international reporting. The NFI data are also used in combination with other data, such as those collected by provinces, territories, and the federal government into Canada's National Forestry Database, to track progress toward sustainable forest management.

Enhanced Forest Inventory

LiDAR is a transformative technology for forest inventory. Airborne LiDAR instruments acquire data by emitting laser pulses from an aircraft flying above the forest and measuring the time it takes for those laser pulses to be intercepted by an object (e.g. foliage, branches, ground) and returned to the instrument. The resulting data is a three-dimensional (3D) point cloud representing the vertical distribution of vegetation through the forest canopy, providing precise measurements of tree heights and detailed characterizations of forest vertical structure.

These 3D data are combined with spatially precise ground plot measurements to model forest inventory attributes such as height, basal area, and volume. LiDAR data also provide precise characterization of the ground under forest canopy, generating detailed digital elevation models (DEMs), which are an important information source for planning forest operations.

A new tool, digital aerial photogrammetry (DAP) is emerging as another source of 3D data to support EFIs. Airborne imaging



Graham Stinson is Manager of Canada's National Forest Inventory, based out of Pacific Forestry Centre in Victoria. Graham has worked with the Canadian Forest Service for 16 years in the fields of forest carbon science and forest inventory.



Joanne White is a Research Scientist with the Canadian Forest Service (Pacific Forestry Centre, Victoria). Joanne has worked in the fields of remote sensing and GIS for more than 20 years, and has worked for private, provincial, and federal forest agencies. Specializing in remote sensing applications in forestry, primarily with optical and LiDAR data, Joanne has co-authored more than 100 peer-reviewed scientific publications.



technologies and image processing software have advanced to the extent that it is now possible to generate canopy height models (CHMs) and 3D point clouds from digital airborne imagery that are similar, but not the same, as CHMs and point clouds generated from airborne LiDAR data. DAP data are less expensive than LiDAR data and may be useful for updating EFIs cost-effectively.

Forest managers use LiDAR and EFIs to reduce operational costs and increase profitability through improved planning and efficient fibre utilization. The cost savings can be substantial, as many current inventories in Canada are old (more than 20 years) and lack the spatial detail for operational and tactical decision-making. LiDAR-derived DEMs provide useful information for operational planning and improve the efficiency of block and road layout. EFIs also provide more information to support the management of other ecosystem goods and services, such as wildlife habitat and riparian areas. In the longer-term, enhanced inventories can improve projections of future timber supply and can reduce uncertainty that is currently associated with ageing, less-detailed forest inventory data.

The Intersection of EFI and NFI

Forests are inventoried for multiple purposes. Forest information is gathered to support strategic, tactical, and operational forest planning and management. Whereas EFI is an approach used for operational- and management-level forest inventory and NFI is a strategic-level forest inventory program, the two are not mutually exclusive. Many countries are exploring the use of LiDAR-derived forest attribute information in their NFIs. Canada's NFI aligns with provincial and territorial forest inventory programs and when these inventory programs start using EFI, the data will find their way into the NFI's remote sensing survey as a new way of measuring stand attributes such as height and volume.

The NFI is a key program of the Canadian Forest Service, and EFI is key research priority. Both NFI and EFI are important concepts for the future of forest inventory in Canada. ✕

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A FORESTRY STORY FROM ABROAD

The Nepal Micro-

Forests without Borders (FWB), a registered Canadian charity under the Canadian Institute of Forestry (CIF), conducts forestry and conservation projects in the international community. One such project is the Nepal Micro-Nursery Project.

Inspiration for this project began in 1995 when Robin Clark, RPF, a friend and colleague of mine, invited me to go and view his presentation on Nepal at a CIF Vancouver section meeting. The combination of Himalayan forest ecosystems and rich culture stayed in my mind. My desire to explore Nepal was elevated in 2005 when my son Jordan Benner, FIT, went trekking in Nepal. He returned with marvelous stories and made a good Nepalese friend, Bikash Shahi.

In 2014, the concept of a semi-retired lifestyle became my goal and an email out of the CIF advertising a forestry tour of Nepal piqued my interest. I was lucky to get the last seat on the 18-member crew; a good mix of professional foresters from across Canada.

After the 25-day trek with the group, I remained for another five weeks, with the goal to better educate myself on the silviculture and nursery practices commonly used in Nepal by government and private nurseries. In Kathmandu, I made contact with Bikash Shahi and his NGO group TEAM Nepal. They operate a children's home in a village located in the Melamchi River Valley where the Talarang River joins. The small village of the same name sits at the bridge crossing. This newly constructed home has 20 full time children, ages five through 17. Many have been in the home for a decade.

Overall research in 2014 and 2015 provided valuable knowledge to plan and develop a micro-tree nursery that would have high probability of success and sustainability. A pan-Himalayan research organization named International Centre for Integrated Mountain Development (ICIMOD) had their large research station located near Kathmandu and afforded easy access to the site and the professionals that operate it. Both forest and agro-forest trials are numerous and the duration of these trials provided practical and tangible examples of native tree species uses and seedling propagation.

In 2016, the project was given the green light and approved by the FWB Board of Trustees and by mid-December the project launched.

The project vision is to develop a sustainable and continuous micro-tree nursery on the private property where TEAM Nepal operates a children's home and volunteer centre. The annual objective is to produce 10,000 tree seedlings grown from seeds germinated in the FWB project-supplied greenhouse. The total will comprise a variety of tree, shrub, and vine species selected in consultation with numerous Nepalese forest professionals, myself, the nursery management team, TEAM Nepal, and the local community. The selected species will be based on multiple factors, including:

- local climate suitability;
- high degree of successful propagation;
- species preferred by the local community farmers, the local Talarang community forests user groups, and TEAM Nepal for fodder, fruit, and timber; and
- high market value for revenue generation

Additional goals include training and demonstration of techniques and local environmental sustainability of agro-forestry employed by local production of tree seedlings. TEAM Nepal will develop a program with the local schools to facilitate field trips to the nursery and the children living in the home will be regularly included in the complete stages of the tree propagation to instill a basic knowledge and inspire them to take advanced training in the natural sciences. ✘

Jerry Benner, RPF, is owner of forest consulting company Benner Forestry Ltd. He's served on the North Island Woodlot Association Board of Directors since 2000. His passion is operating the family run woodlot and his company. Other professional activities include forest research, teaching the Wildlife Danger Tree Assessor's course, volunteering with Forests without Borders, biking, kayaking, and travelling.





Nursery Project

1. Several coats of paint were applied to the greenhouse under the warm afternoon sun and then erected with concrete holding the posts into position.
2. Building the terrace and screening soil-with local farmers. From L to R: Kanchha Tamang, Jerry Benner, RPF, and Pasang Tamang.
3. The greenhouse plastic goes on.
4. On the Hindu Holy day, Maghe Sankranti, everyone received blessings from the Priest and a Bindi mark on the forehead made of a rice and spice paste with ground flowers.
5. From L to R: Bikash Shahi, Secretary-Treasurer, TEAM Nepal; Jerry Benner, RPF; and Uttam Adhikari, the children's home manager and onsite supervisor for the nursery project.
6. The exciting day was when all the children and staff transferred the polybags into the greenhouse and outside beds. 11,000 native tree seeds were planted. Even the youngest are helping. The polybags are used as the container for the full cycle of the seedling until planting in the field. They are filled with a special mixture of soil, composted buffalo manure, sand, and jungle soil collected from the forest to inoculate each tree with mycorrhizal fungi and other macro fauna and flora.
7. Khadja Kharel seeding directly into the polybags and marking the various species.
8. A quick break before watering each seed by hand to ensure the soil remains around the seed.
9. Preparing the outdoor bed for the hardier species.



10. Sumitra (right), the primary nursery caretaker, buffalo milker, goat farmer, and head vegetable gardener; and Kubita (left) the heady cook who helps with the gardening and the tree nursery.

All photos courtesy of Jerry Benner, RPF



Healthy Forests Mean M

“Forests are the lungs of our land, purifying the air and giving fresh strength to our people.” - Franklin D. Roosevelt.

British Columbia is the largest producer of softwood lumber in North America. One in every four manufacturing jobs in BC are in the forest industry and 140 communities in the province are dependent on forestry. In 2013, total economic output for the province’s forest sector was \$31.4 billion. Total Gross Domestic Product (GDP) from the sector for that year was \$12.4 billion, of which \$5.8 billion was direct GDP. So, there is no disputing the economic value of forests, especially in places like BC. And, of course, when managed properly, forests can be a dependable source of renewable prosperity, much like hydro-electric power and sustainably managed fisheries.

Yet, there are many other value dimensions associated with forests. These include our wildlife, fish, and plant diversity and a host of ecological services that benefit communities and people in ways that cannot be measured in board feet or replaced by stumpage fees. Trees release oxygen and store considerable amounts of carbon in their wood, thus potentially slowing or moderating the pace of climate change. The forest canopy intercepts sunshine and with it, cancer-causing UV rays. Forest transpiration and shading cool the air, while leaves absorb lower-atmospheric ozone and capture other small particle pollutants that can worsen chronic

respiratory diseases and trigger acute pulmonary and cardiac incidents in people. Acting like giant filters, forests not only cleanse the air we breathe but also help regulate water temperatures in lakes and rivers. Forest processes help drive the water cycle while also controlling run-off and helping to prevent soil erosion and flooding. Ecologically speaking, forests support ecosystems and provide habitats for an enormous range of wild species, and provide wild sustenance for large numbers of British Columbians. Forests also serve as theatres for outdoor recreation of all kinds and provide a host of medicinal plants on which humans rely.

Given these many obvious benefits, it is indeed surprising that, according to the International Union for Conservation of Nature (IUCN), the crucial role forests play in supporting the mental and physical health of people worldwide “is often overlooked within health strategies, and in everyday human lifestyles”; and presumably in forest management legislation, policy, and practices as well. This is especially significant today as society’s concept of healthcare shifts away from treatment of human injury and disease and toward prevention, with an emphasis on healthy lifestyle choices. In modern society, good health means more than simply the absence of disease, illness, or infirmity. The World Health Organization defines it much more broadly as “a state of complete physical, mental, and social well-being.”²

International research demonstrates that time spent in natural areas not only aids in the prevention and treatment of health problems such as asthma, cardiovascular disease, and obesity, but that green spaces contribute significantly to overall human wellness, including psychological health and vitality. A 2010 study found



Shane Mahoney is President of Conservation Visions Inc. and also serves as Vice-Chair of International Union for Conservation of Nature’s Sustainable Use and Livelihoods Specialist Group (SULI).



More than Jobs and Timber

that even five minutes of exercise in a forested space can improve mood and self-esteem.³

In this context, it may seem surprising that approximately 80 per cent of the population in Canada and the US is urban. Even in BC, it is the new normal that most people live within closer proximity to Walmart than the woods. Yet, Natural Resources Canada reaffirms that forests and the forest sector play a vital role in the welfare of all Canadians, including those who live in urban areas⁴. The fact is, regardless of where you live, work, or play, healthy forests help provide for society's physical, economic, social, recreational, and spiritual needs.

Connecting or reconnecting people with nature, through outdoor recreational activity requires greater emphasis in public policy planning that showcases the many essential benefits and services forests provide. Maximizing benefits requires detailed attention to how we utilize and manage our forests, ensuring that all forest resources are considered in planning cycles and harvest practices, not just the wood fibre that resides there. Wildlife is especially important. In the harvest of wildlife and fish, BC's hunter and angler community obtains wild meat — nutritionally rich and locally sourced food — to share with family, friends, and neighbors. Forests, we ought to remember, are also vital components of our food security system. Regardless of one's recreational pursuit, the opportunity to engage with and observe wildlife is a major motivational factor, often providing one of the most memorable aspects of any forest experience.

BC is blessed with magnificent forests and this brings tremendous responsibility to manage them effectively for everyone. In the past, great emphasis has been placed on fibre production and BC

has obviously benefited greatly from the management strategies that have been applied. However, challenges exist with wildlife species and other forest components and, undoubtedly, future forest management will require continued efforts to broaden the framework of sustainability to emphasize other ecosystem and social values. Continued success in the management of BC's forest ecosystems will likely become more challenging as the frequency, intensity, and timing of wildfires, weather events, and insect and disease outbreaks shift in response to human activities and climate change. No one should believe that forest management is an easy thing to get right.

As humans, we are inclined to protect and maintain that which has value to us. As citizens, we must strive to connect with nature, understand the linkages between human health and livelihoods and healthy forests, and then take action to support government, industry, and conservation-based non-governmental organizations in creating and administering sustained healthy forest initiatives. Maintaining healthy forests cannot be the sole responsibility of government or industry. It must be viewed and exercised as a social responsibility by the broad citizenry of this province. ☘

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Figure 1: Cutblock treated with aerial application of glyphosate to remove aspen competition. Understory plants may receive non-lethal doses of glyphosate.

Is Glyphosate Persistence in Native

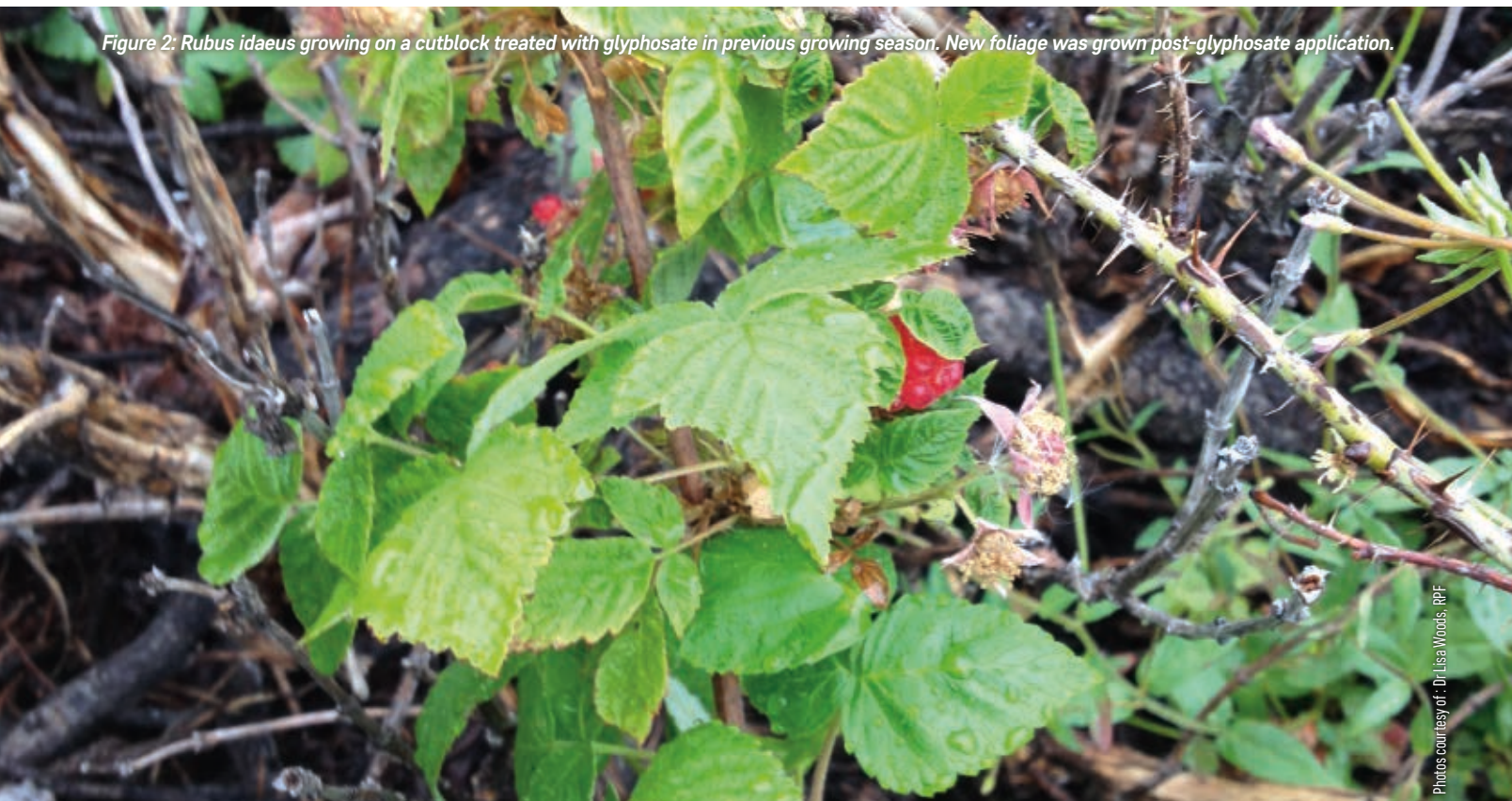


Figure 2: Rubus idaeus growing on a cutblock treated with glyphosate in previous growing season. New foliage was grown post-glyphosate application.

Photos courtesy of: Dr. Lisa Woods, RPF

Herbicides have been used annually in forestry (and other industrial) operations in BC for over 30 years. The total forested area of BC over which herbicides have been applied is approximately 650,000 hectares¹, and the yearly average area sprayed since 2000 in forests, according to BC's Ministry of Environment, is approximately 17,000 hectares per year. Glyphosate (N-(phosphonomethyl) glycine - C₃H₈NO₅P), is the active ingredient in widely used herbicides such as Vision[®] and Roundup[®]. Glyphosate is highly soluble in water, which allows it to translocate rapidly into plants. Once present in a plant system, glyphosate inhibits enzymes and amino acids that are used in plant growth and other biochemical processes. Plants that are not killed after this process are usually reduced in health and growth function.²

Most early research conducted on the environmental fate of glyphosate identified a rapid degradation process; reported values for half-life ranged from 14 days to 151 days.³ However, limited information exists on half-life and persistence in northern regions and even less deals with northern boreal plant species. A difference in rate of breakdown of glyphosate in northern environments compared to studies conducted in laboratories, or more southern locations, has been attributed to the temperatures of air and soil.^{4,5,6} Northern BC only receives approximately 90-120 frost-free days per year. Cold soils lead to low microbial activity for most of the year, which is the sole source of glyphosate breakdown.^{5,6} Studies conducted in Scandinavia revealed longer-than-average persistence periods for glyphosate in northern

was to better understand exactly how long glyphosate remained in non-target plants exposed to non-lethal doses of glyphosate. Study species included both woody shrubs and herbaceous species of value as medicinal and edible plants; for example, red raspberry (*Rubus idaeus*) (Figure 2), willow (*Salix* spp.), pink wintergreen (*Pyrola asarifolia*), palmate coltsfoot (*Pedicularis palmatus*), and sweet-scented bedstraw (*Galium triflorum*).⁹ Glyphosate was preliminarily detected in varying amounts in the root and shoot tissue of a variety of species growing one or more years after glyphosate applications. The plant material sampled was not in direct contact with glyphosate at the time of treatment; roots were of course buried under the soil and shoots sampled were grown from the perennial root mass in years after applications took place.

Based on the preliminary results of where and when glyphosate was detected, some theories were formulated: At time of treatment, glyphosate would have landed on leaves and translocated down to root tissue, where, if the plant was not killed, glyphosate molecules may have then been stored. In the following spring, glyphosate may be translocated back up the shoot to stem, leaf and fruit portions of the plant with new shoots arising from the root mass. Thus far, sampling shows that only some plants stored and translocated glyphosate in this way, and therefore this may be a species-specific action. The goal of future research will be to verify these findings.

While herbicides can be an important tool for forest managers, it

Plants a Concern for Northern BC?

boreal forest soils.^{4,5} Half-life in soil can increase two to three times with an approximate 10 degree Celsius decrease in soil temperature.⁷

Non-target plants are, at times, subject to a treatment of glyphosate due to over-spray, spray drift, or simply because of their proximity to targeted plants in a vegetation management scenario. Many common forest understory plants have valuable edible and medicinal uses that may be destroyed if plants contain glyphosate. Research suggests that plants treated with non-lethal doses of glyphosate may store the glyphosate molecules indefinitely, may translocate glyphosate out of their tissue into the surrounding environment, and/or may slowly

break down glyphosate.^{5,8} Identifying glyphosate persistence in northern BC is important for the traditional-use of plants for food and medicines. Uses by some BC First Nations include the use of berries and seeds for nutrition, and root and shoot portions of many different plants for salves, poultices, and tinctures.⁹

is important to acknowledge that recent research demonstrates that glyphosate does not disappear after application (particularly in northern areas). We need to determine how long we can expect glyphosate to remain in plant tissues after treatments, to ensure that resources are protected for food and medicinal quality. We must also understand the risk of the cumulative impacts of glyphosate in natural environments with lengthy environmental persistence. Development of a glyphosate-use tool, to allow forest managers to make an informed decision regarding the use of glyphosate in any given environment, may be warranted to predict glyphosate's behavior prior to application and to protect public interests and maintain social licence. ✖

Dr. Lisa Wood holds an MSc in Forestry from the University of Northern British Columbia, and a PhD in Geography from the University of Victoria. She is a Registered Professional Forester in BC. Her research interests include forest and plant ecology, climate change, and silviculture. Current areas of research include the impacts of climate dynamics on forest productivity and wood quality, and the use of chemical herbicides in forest operations.

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In 2013, I initiated a research project specifically targeting northern British Columbian environments where aerial application of glyphosate had been conducted (Figure 1). The goal of this research

break down glyphosate.^{5,8} Identifying glyphosate persistence in northern BC is important for the traditional-use of plants for food and medicines. Uses by some BC First Nations include the use of berries and seeds for nutrition, and root and shoot portions of many different plants for salves, poultices, and tinctures.⁹



Clear Cutting: Are We Blindly

All foresters should be aware of the various silvicultural systems that can be applied in forest management.¹ The choice of a specific system depends on silvics, stand structure (even-aged versus uneven-aged), and forest management objectives. So, why is clearcutting the predominant silvicultural system used in British Columbia, despite the fact that we have a variety of shade tolerant tree species, as well as both even-aged and uneven-aged stand structures?

We have lost over 50 per cent² of the mature pine in BC and there is no doubt that clearcutting was the appropriate silvicultural system in managing this shade intolerant species with its even-aged stand structure. The creation of large (thousands of hectares) openings as a result of clearcutting for mountain pine beetle could not be avoided. However, resulting negative ecosystem changes are reflected in the loss of landscape level diversity and wildlife habitat.

Fortunately, we still have a significant area left with shade tolerant species, such as spruce and fir in BC. We should be asking ourselves if we can utilize a form of partial-cutting for these shade tolerant species instead of allowing a clearcutting approach, with its known negative consequences.

Recently, the pressure to harvest spruce dominant stands has increased dramatically in BC. There are several reasons for this, including the fact the salvage of merchantable dead pine volume is almost exhausted, there are tremendous merchantable volume losses due to wildfires, and there is also the growing spruce beetle infestation in some regions. Spruce dominant stands are now a primary focus of harvesting in BC.

It is not a surprise that the way we manage spruce in BC is of great significance for the provincial timber supply, as spruce is the most abundant merchantable volume in BC.³ Utilizing spruce resources efficiently may ensure that we minimize future declines in the allowable annual cut (AAC). This could be addressed by the utilization of partial

cutting in mixed spruce/fir stands. The application of a form of partial cutting is silviculturally appropriate in such an ecosystem. It may also be beneficial for addressing several issues, including the reduction of spruce beetle caused mortality⁴; ensuring the achievement of management objectives in areas with restricted harvesting, such as fisheries sensitive watersheds (FSW); maintenance of stand level and landscape level biodiversity; and minimizing effects on wildlife habitat.

Spruce beetles first attack over-mature trees, which results in group mortality distributed unevenly in stands. Large numbers of trees⁵ with a diameter at breast height of less than 20 centimetres — including spruce, as well as the fir component — usually survive these infestations. These conditions create an opportunity to utilize a form of partial cutting, resulting in significant advantages such as the removal of infested spruce while accessing and treating a larger area than would occur with clearcutting. This could control spruce beetle infestations, as well as use trap trees more effectively.

Presently, large clearcuts are utilized, despite the fact only a small amount of stand volume is infested. To harvest the current equivalent to clearcut volume — with a partial cutting system — would require planning harvesting on a significantly larger area with multiple entries to the stand.

Partial cutting would mean taking full advantage of advanced regeneration and natural regeneration. This may have a positive impact on the midterm timber supply. Reliance on advanced and natural regeneration will have additional advantages in addressing climate change. It ensures that future stands are more genetically diverse, and therefore more resilient to unknown climatic changes. Additionally, advanced regeneration will increase the current carbon sequestration as compared to clearcut harvesting and artificial plantations.

Despite all the arguments supporting partial cutting systems in spruce/fir ecosystems in BC⁷, there is little evidence that partial cutting



Photo: AdobeStock

Following Past Practices?

systems have been given any serious consideration in forest management. Although there are a couple of trials with shelterwood systems located in the Sub-boreal Spruce Biogeoclimatic zone (SBS), I am not aware of any partial cutting systems being applied commercially.

There may be several barriers to an extensive application of partial cutting in spruce/fir ecosystems. The most important is cost. The cost of partial cutting versus clearcutting is higher due to the increased planning costs of logging and road construction.

Data from FPInnovations in Quebec shows the costs of harvesting in a first entry shelterwood cut amounts to \$1.87 per cubic metre more than if a clearcutting system was used⁸. However, the higher costs are largely compensated for by the higher value of harvested trees with partial cutting systems. To decide if higher costs are a barrier in the implementation of partial cutting systems in BC, we need larger scale operational trials to generate economic data.

Jacek Bankowski, MScF, RPF, is currently a Stewardship Officer in the Prince George Natural Resource District. Jacek is a graduate of Warsaw University of Life Science, Poland, with a Master of Forestry and Forest Engineering, and from the University of Toronto with a Master of Science in Forestry (Silviculture). Jacek has spent the past 19 years working primarily in silviculture related work in the Peace and Omineca Regions.



The propensity to maximize profit results in pressure to reduce costs by maximizing the harvested volume and minimizing the time required for harvesting. Unfortunately, this objective is not compatible with the nature of utilizing partial cutting silviculture systems where at least a couple of entries to the stand are required and harvesting is distributed on a larger area compared to clearcutting systems. BC's

predominantly volume based tenure system does not promote a long-term interest in a given land base and therefore provides little incentive to manage multiple passes.

Because not all models of harvesting equipment utilized in clearcutting systems may be employed when a partial cutting system is applied, it may be necessary for logging contractors to invest in training to develop skilled operators and equipment more suitable for strip cutting or shelterwood systems.

There is a reluctance to use partial cutting in spruce stands because of the risk of windthrow. However, this risk may be preventable during planning by considering topography, soils, species, and the direction of prevailing winds.⁹

Considering all the arguments against partial cutting, the potential positive benefits in spruce/fir ecosystems to forest health, ecosystem diversity, wildlife habitat, fisheries sensitive watersheds, and genetic diversification suggests the time has come for its implementation beyond small experimental trials and towards larger scale operational trials in commercial application. ✖

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Forest Leadership:

An Interview with BC Timber Sales Director of Sustainability, Shawn Hedges, RPF

Since the creation of the Chief Foresters' Leadership Team in the summer of 2015, chief foresters across the province have been busy working together on forest sustainability in the context of current resource management challenges. Part six of our special series is an interview with BC Timber Sales Director of Sustainability & Forestry, Shawn Hedges, RPF.

You have more than 30 years' experience working in forestry. How has the job of a forest professional changed over that time?

It seems like the past 30 years or so have gone by in the blink of an eye. I can distinctly recall some family and friends questioning my decision to pursue a degree in forestry at the University of British Columbia in the 1980's and becoming a professional forester in a "sunset industry." Well, the sun didn't set. On the contrary, I've had a diverse and enriching career to-date as a professional forester and see an equally bright future for younger generations of foresters that will follow.

That said, I've seen and experienced a considerable degree of change over the years, but that's normal given the rapidly evolving societal, economic, and environmental demands forest professionals have had to deal with. Without a doubt, the job of forest professionals has become increasingly complex and challenging. It requires a higher degree of training and continuing education than ever before; particularly in respect of business management and economics. To be effective the job also requires more collaboration, consultation, and communication with other professionals, government agencies, First Nations, forest tenure holders, and a myriad of stakeholders. All of this takes far more time and resources than ever before. It has also increased demand for data to support informed decision-making and that means an increased reliance on technology.



What advantages do you see for foresters in belonging to a professional organization like the ABCFP?

There are a number of compelling benefits to belonging to the ABCFP. First and foremost, I see it as the cornerstone of the social contract we have with the citizens of BC who provide professional foresters with the exclusive right to practice forestry. In return, the ABCFP is duty bound to ensure that the public interest respecting the practice of professional forestry is upheld by ensuring the competence, independence, professional conduct, and integrity of its members.

Belonging to an organization has other advantages as well. The ABCFP advocates for the principles of stewardship and the sustainable management of forest lands, resources, and ecosystems; and I think the association can and should do more of this. Being a member of the association also provides networking and training opportunities and provides members with an opportunity through publications like BC Forest Professional to keep abreast of and engage on an array of topical forest management issues.

How has having the RPF designation helped you in your career and in making decisions?

Having the RPF designation has been helpful in a number of ways. It's provided me with a career path that has taken me all around the province and enabled me to lead a high-quality life, provide for my family, and make a meaningful contribution to sustainable forest management and the economic well-being of BC. It's also helped with decision-making, by reminding me of what it took to earn the designation and what is required to keep it.

Your job title at BC Timber Sales is Director, Sustainability and Forestry. What do you say to critics of BC's forest sector who claim we aren't practicing sustainable forestry?

Sustainable forestry is about trying to manage forests over the long term to ensure they continue to yield a sustainable and desirable mix of values and benefits in the face of ever-changing and often increasing environmental, economic, and social expectations and pressures. Given the scope and scale of

forestry in this province, it can be hard to develop a good sense of the extent to which we're sustainably managing provincial forests, but I'm convinced that the evidence shows that we are meeting the challenge.

To illustrate, let's look at BC Timber Sales (BCTS). Sustainable forestry is an integral part of the program's over-arching vision, mission, and core mandate. BCTS has operations throughout the province and currently manages approximately 18 per cent of the provincial allowable annual cut. Although the program isn't subject to cut control requirements that apply to non-BCTS forest tenure holders, the program must ensure it doesn't sell more than its total apportionment over a five-year business cycle.

BCTS is also 100 per cent certified under one or more sustainable forest management systems. This provides the public, stakeholders and the marketplace with credible, independent third party verification that forests in BCTS's care are well managed. Speaking of third party audits, every year several of our business areas around the province are audited by the Forest Practices Board. While there's always room for improvement, non-compliances — when they do occur — tend to be relatively minor in nature and are quickly addressed to the extent they are within BCTS' control.

As well, last year BCTS conducted an internal fibre sustainability analysis of all of its operations. We looked at a number of key variables such as harvest by species, slope, and age relative to the timber harvesting land base and non-BCTS operations. We also looked at planted area, densities, species diversity, and stand composition at harvest versus free growing. There's room for improvement here too, but overall, I'm very satisfied with the results.

Lastly, BCTS continues to innovate. Earlier this year, the program developed and deployed a new Coastal Legacy Tree best management practice guidance document. As well, BCTS recently expanded its pilot of the Forest Professional Oversight and Certification concept to every business area in the province. Under this pilot, our licensees are required to hire an independent forest professional who must assess and certify that harvest activities were conducted in a manner consistent with the results and strategies that apply to the site.

Increasingly, we hear from communities opposing harvesting plans. Is there a disconnect between local communities, government objectives, and the industry? As forest professionals, how can we get everyone on the same page?

I don't think there's a disconnect at all, but we do need to do more and be more innovative than we have been. We need to engage communities earlier in the planning process and with more meaningful and detailed information than what's in forest stewardship plans. We also need to tell our story better, as well as listen carefully to community concerns and be willing to adapt our plans to achieve a better balance between timber harvesting versus other forest values that are important to communities.

The creation of the Great Bear Rainforest designated a substantial amount of BC's old growth forest as protected and excluded from harvesting. Recently, the Sierra Club and Wilderness Committee have campaigned to halt old growth harvesting and protect more land on Vancouver Island. How do we find a balance between working forests and protected forests? What's the correct mix?

We've come a long way since the 1980's and the legacy and network of protected and special management areas that have been established throughout the province since then speaks for itself. Have we found the balance yet? Possibly, but not for long. Social, economic, and environmental values will continue to change; and probably at an accelerating pace given the effects of factors like climate change and First Nation reconciliation and treaty making.

Since the early 2000's, forest professionals have worked under the professional reliance model. But opinions among forest professionals on what constitutes sustainable forestry can vary greatly. How would you recommend forest professionals resolve issues when professional opinions and recommendations conflict?

Start by reviewing the ABCFP's Code of Ethics; particularly Section 6 – The responsibility of a member to other members. Then find an appropriate way to engage the professional(s) in a respectful and fact-based dialogue and attempt to resolve the issue. Try and keep an open mind and really listen to what's being said and look for win-win opportunities rather than adopting a win-lose approach. Sometimes the outcome is that the parties agree to disagree, but more often than not, folks can find a path forward.

First Nations are playing a growing role in forestry. How will that change the way the industry operates moving forward?

In a word, dramatically. However, I see it as a new and interesting challenge and one that BCTS and industry are gearing up for. In 2015, BCTS developed and began implementing a First Nations Relationships strategy. The goals of the strategy are to develop relationships with First Nations that:

- Support BCTS in effectively selling its volume;
- Enable BCTS to effectively deliver on its consultation and accommodation responsibilities; and
- Result in business agreements that are of mutual benefit and that help increase First Nation's capacity and participation in the forest sector.

We've had some successes to-date, but we can and need to do more; especially with respect to business-to-business agreements that also involve major licensee's and their harvest quotas. ☒

Sustainability, Climate Change, and Innovation



The Chief Foresters' Leadership Team and the Kamloops field tour supporting staff.

The Chief Foresters' Leadership Team (CFLT) is a group of major licensee chief foresters from across British Columbia, led by the province's Chief Forester Diane Nicholls, RPF. From July 5-7, the CFLT met with local resource management, municipal, and First Nations leaders in Kamloops to discuss sustainability issues.

On July 5, the CFLT met with the Regional Executive Director, District Managers, and Resource Directors from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Thompson Okanagan Region, where the engaging informal discussion ranged through a variety of topics from sustainability to competitiveness and the need for collaboration on all levels. Following that discussion the CFLT met with members of the Secwépemc Reconciliation Framework Agreement leadership on how forest companies and the province can better engage with First Nations on the topic of forestry and resource management. At the end of the meeting the comment was made from a Secwépemc representative that this type of strategic discussion between First Nations, government, and industry had not been seen before and that more of this type of discussion needed to happen.

As a team, the CFLT spent July 6 in the field discussing and viewing examples of climate change adaptation and the importance of the utilization of the full species, as well as value and terrain profiles within a management unit. The CFLT discussed amongst themselves the ties between forestry activities, such

as harvest and reforestation, and timber supply projections — whether from timber supply reviews or other forward looking planning.

The following morning the CLFT met with local municipal community leaders of the area around Kamloops to have an informal discussion on how forest companies and the province can better engage with communities on the topic of forestry and resource management. One of the results of this meeting was the recognition that all parties need to improve communication on the importance and contribution of forestry to local communities and that communication has to be done in a manner that promotes understanding.

The Chief Forester's Leadership Team discussions centre on the sustainable management of BC's forest resources. Initial discussions of this team focused on developing timber management objectives to ensure forests are managed sustainability over the long term. The objectives will be implemented within the context of the current economic environment, while considering BC's societal goals for a long-term supply of economic fibre and a healthy environment. The CFLT also identified further opportunities that they will explore in-depth to coordinate and integrate existing programs, management actions, and investments to foster economic and sustainable management of forest ecosystems. In-depth discussions about these opportunities will be shared in future editions of *BC Forest Professional*. ✪



Photo: Kelly Kitch, RFT

2017 National Forest Week in Review

NATIONAL FOREST WEEK FELL SEPTEMBER 24-30 THIS YEAR AND WHILE

BC's summer of wildfires limited participation from many communities and volunteers, a wide range of activities were still held, showcasing the multiple values forests hold for British Columbians.

Battle of the Network of Forest Professionals

The annual Battle of the Network of Forest Professionals was quiet this year. Nevertheless, forest professionals in Port Alberni retained their crown by partnering with the McLean Mill National Historic Society to stage an event that attracted more than 300 Grade 4/5 students. The kids learned about riparian ecosystems, forest regeneration, wildfire suppression, forest products, and First Nations cultural use of forests, and was again featured in local Shaw TV coverage.

Forestry in the Schools

There was strong interest from schools to have forest professionals come and speak to students in the classroom. We received about 50 requests from teachers, but unfortunately, were only able to fulfill about half of those.

Community Events

Although the number of community events held in 2017 decreased from past years, notably in the Cariboo-Chilcoltin which was hard hit by wildfires, volunteers in communities along the coast continued to fly the National Forest Week flag. In total, 25 community events were held.

Photo Contest

The 2017 ABCFP National Forest Week photo contest received a wide assortment of submissions ranging from stunning to pixilated photos taken with a phone. It was a hard choice for the judges but in the end they determined the winning photo (as seen on the cover of this issue of *BC Forest Professional*), came from Jeff Roberson, FIT, in Prince George.

Jeff also earned first runner up for his photo of *Tremella Mesenterica*, seen on the index page. Second runner up was Kelly Kitch, RFT, from Mission with her shot of a barred owl, as seen above. ✕

Dean Pelkey is the ABCFP's director of communications. He has more than 25 years of experience in public relations and corporate communications, focusing on strategic communication, project management, media relations, issues management, social media strategy, and writing and editing stemming from a career at crown corporations, publicly-traded companies, non-profits, and newspapers.



Inspiration in the Woods: A National Forest Week Young Artist Showcase

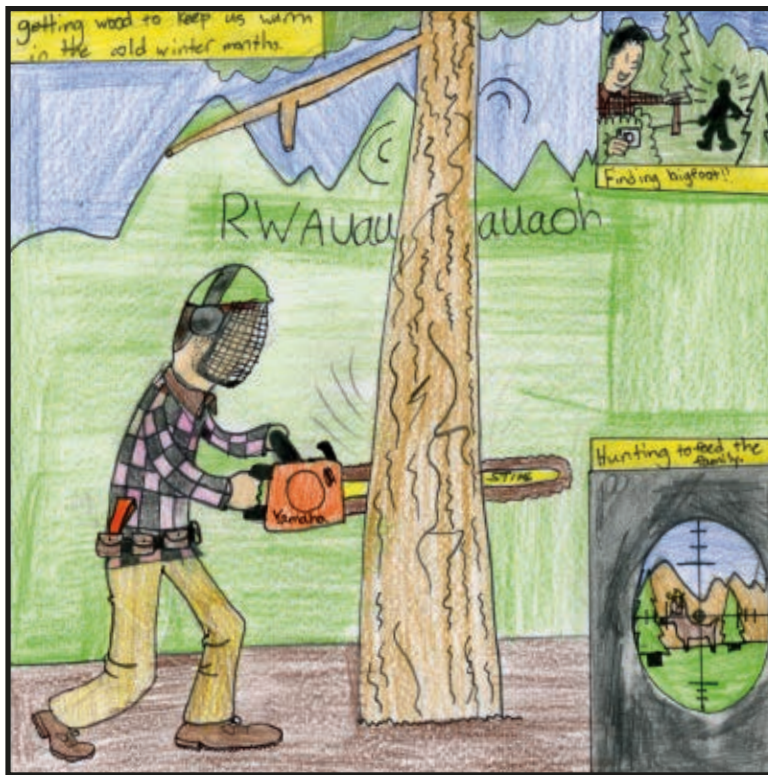
The ABCFP and Truck Logger's Association annual art contest for children continued to be a popular event, drawing hundreds of entries from across the province in all three age categories.

The entries were colourful, whimsical, and at times unintentionally amusing. Overall, it was tough to pick three winners, but after much deliberation, the judges narrowed down their choices.

In addition to appearing in these pages, all of the selected pictures will be posted on both organizations' websites. The winners in each category will receive \$50 gift cards from Indigo. We thank everyone who entered and congratulate this year's winners and runners up. ✖

AGE GROUP	WINNER	RUNNERS UP
4-5 years	Finn Cavlek, age 5, Kamloops	Selena Arauz, age 5, Victoria and Audrey De Pass, age 5, Victoria
6-8 years	Jaycee Doerr, age 7, Campbell River	Rhys Griffin, age 8, Burns Lake and Del Boehm-Streukens, age 8, Nelson
9-12 years	Branden Fisher, age 12, Lumby	Tucker Knudson, age 10, Port Alberni and Marie Adby, age 9, Port Alberni

AGE CATEGORY 9 – 12 YEARS



1 Branden Fisher, age 12, Lumby



2 Tucker Knudson, age 10, Port Alberni



3 Marie Adby, age 9, Port Alberni

AGE CATEGORY 6 – 8 YEARS



4 Jaycee Doerr, age 7, Campbell River



5 Rhys Griffin, age 8, Burns Lake



6 Del Boehm-Streukens, age 8, Nelson

AGE CATEGORY 4 – 5 YEARS



7 Finn Cavlek, age 5, Kamloops



8 Selena Arauz, age 5, Victoria



9 Audrey De Pass, age 5, Victoria

MEMBER PROFILE:

Candace Parsons, RPF(Ret), Life Member

This year we are proud to honour one of our most notable members with Life Membership. Life membership is a special honour awarded to retired members in recognition of their exemplary contribution to the profession of forestry or the practice of forest technology.

We'd like to extend our congratulations to Candace Parsons, RPF(Ret) on receiving this special honour.

Incredible Dedication to the ABCFP

Candace began her work with the ABCFP as our Assistant Registrar and then Registrar from 1986 to 1991. She has been an avid association volunteer ever since:

- AGM host committee volunteer for three terms (1996, 1999, and 2011).
- ABCFP council member from 2002-2004.
- Recipient of the *Jim Rodney Memorial Volunteer of the Year* award in 2008, in recognition for her outstanding volunteer service to the association and the profession.



"I find it very satisfying to be involved in worthwhile and meaningful forestry activities and encourage all young forest professionals to get involved in both the ABCFP and CIF in their local areas."

Candace Parsons, RPF(Ret), Life Member

Unbroken Conference Attendance Streak Since 1987

In 2016, Candace received the ABCFP's *30 Year Achievement* award for her unbroken conference attendance streak. The upcoming conference and AGM in February 2018 will be her 32nd in attendance in a row.

BC's "Forestry Mom"

As the Director of Student Services at UBC's Faculty of Forestry, Candace helped guide more than 700 young foresters through their studies between 2003 and 2011. In 2006, in recognition of her contributions to the growth and success of forestry students at UBC, Candace received UBC's Just Desserts award.

A Galvanizing Force for the Canadian Institute of Forestry (CIF)

Since 1984, Candace has served as treasurer, council member, annual conference host-committee member and chair of the Vancouver Section of the Canadian Institute of Forestry. She helped to re-energize CIF's Vancouver Section in the early 2000s, subsequently earning Vancouver the CIF's Section of the Year award in 2008.

In 2015, Candace received the CIF's prestigious national *Presidential Award*, in recognition of her "outstanding service and commitment to the Institute [CIF] and exemplifying a devotion and passion for the profession of forestry."

Candace is still actively volunteering as CIF's Vancouver Section Treasurer and also works on the National Forest Week BC Coalition committee year-round.

Thank You

A professional forester, an active ABCFP member, and an amazing volunteer; we are so proud to honour Candace with ABCFP Life Membership this year. Thank you for your exemplary contributions, Candace.

A photograph of three forestry workers in orange safety vests and hard hats, standing in a forest and looking at a large map or document. The scene is outdoors with trees in the background.

Plans change.
Make effective communication part of your operation.

The planning decisions you make today can affect the health and safety of workers tomorrow. Find resources to help prevent accidents and injuries at worksafebc.com/health-safety.

WORK SAFE BC

Professional Judgement in View

The term **professional reliance** has been used in many contexts during the past year, but what does it mean to the forest professional in daily practice?

Relying on the judgement of a professional is nothing new. As a society, we do this every day in areas of importance, such as human health, safety, and our environment. Using professional work to inform our actions is smart because it reduces risk, improves decisions, and provides consistent outcomes. This also means there are rising expectations that the professional can continuously improve their competence and solve the real world problems of today. The task seems daunting; however, I have met many forest professionals who are passionate in their work toward healthy forests and public interest and they are eager to meet the challenges of enhanced reliance on forest professionals in a results-based management regime.

Some of the challenges in professional reliance we observed this past year include managing timber supply, a changing forest inventory of forest resources, managing habitat that is the subject of recovery strategies for species at risk, defining old growth values, adapting tomorrow's forests for the impacts of climate change, planning forest recovery from wildfire, managing forest cover for water quality and quantity in watersheds, and improving professional methods for implementing visual resource management.

The conversation on these issues always comes around to the role of the forest professional in achieving successful forest management. There are several ways that various management frameworks rely on professional judgement.

In the forest sector, under a results-based management system,

resource professionals help the government and industry understand the science, predict outcomes, and make decisions. Each component of BC's oversight framework for forest management requires the advice and interpretation of forest professionals who have dedicated their careers to the science and knowledge of forest resources. Additionally, all of the components in the framework need to be fully implemented and work in concert to be successful.

The coming year will pose a number of important resource management challenges that require not only specialized knowledge but professional competencies and skillsets as well. Demonstration of competence, collaboration, and resolving conflicts will be some of the imperatives on the professional reliance front. The ABCFP has worked hard at untangling the knot of issues reported under the heading of professional reliance, and will continue to assist forest professionals in addressing the challenges they face in fulfilling their role in the management of forest resources.

In 2017, we asked you about your perspective on professional reliance in our member survey. The responses indicated ABCFP members have widely varying opinions about the effectiveness of professional reliance in BC's Forest Management Oversight Framework. Perhaps the real question is, do we, as forest professionals, believe that our knowledge and experience provides value to managing BC's forests and that knowledge and experience should be incorporated into forest management decisions? Alternatively, do we as a profession, believe a more prescriptive forest management regime where government vets recommendations by professionals is a more appropriate model? Perhaps the answer lies somewhere in between. ✘



STAY SHARP



BC Forest Safety

Slips, trips and falls are the second most common workplace injury. Stay on your feet with proper footwear, being aware of where you step and carrying only what is needed. **It's easier to stay well than get well.** www.bcforestsafes.org

MEMBERSHIP STATISTICS

Note: Individuals may have applied for a change to their status since this posting. Check the member directory on the ABCFP website at member.abcfp.ca/web/ABCFP/Members/directory.aspx for the most current list of members. You will need to sign in to access this page.

ABCFP November 2017

NEW REGISTERED PROFESSIONAL FORESTERS

Jamie Paul Black, RPF
Colin Trevor Campbell, RPF
Kari Doyle, RPF
Darcie Lynn Fodor, RPF
Andrew Willson Lilly, RPF
Jeffrey Nathan Palatnick, RPF
Janice Marie Stadey, RPF

NEW REGISTERED FOREST TECHNOLOGISTS

Kenneth Joseph Sharp, RFT

NEW FORESTERS IN TRAINING

Jozsef Hamari, FIT
Alistaire Axel Huggins, FIT
Jocelyn Sylvie Poirier-Hardy, FIT

NEW TRAINEE FOREST TECHNOLOGISTS

Dylan Robert Moesker, TFT
Jerad Ryan White, TFT

The following people are not entitled to practice professional forestry in BC:

RESIGNED RPF

D. Hubert Burger
Glenn A. Burrell
Aaron Nicholas Day
Stephen J. Edwards
Kevin B. Lavelle
Paul G. Lavery
Gregory J. Lawrance
Carl M. McLennan
Owen Lee Smith
Robert Douglas Thompson
David W. Weaver

RESIGNED RFT

Stephen John Chaplin
Errol Stanley Widdis
Sarah Michelle York

RESIGNED ATE

Peter Semenoff

RESIGNED RPF RETIRED

Pieter J. Bekker
Reginald A. Brick
Keith L. Dufresne

Barry J. Kasdorf
Cameron P. Leadbeater
John D. McClary
Stephen H. Osborn
Sargent A. Pereverzoff
Joanne A. Ramsay
Stephen J. Sheldon
Thomas E. Volkens
Alan K. Wanderer

RESIGNED RFT RETIRED

Alvin L. Boyer
Roy George Vidler

RESIGNED FIT

Samuel Patrick Lennon Field
Dayna Nicole Griffiths
Leland B. McKeeman
Shawn Alan Wolansky

RESIGNED TFT

Annik Rachel Aubin
Jennifer Angela Kropp
Tyler Smith Lindberg

ABCFP December 2017

NEW REGISTERED PROFESSIONAL FORESTER

Alycia Lavinia Fennings, RPF
Colin Wesley Jack Langston, RPF
Jillian Patricia MacDonald, RPF

NEW REGISTERED FOREST TECHNOLOGIST

Kaitlin Ashley Conroy, RFT

NEW FORESTER IN TRAINING

Emily Margaret Ackroyd, FIT
Maxine Carissa Cusack, FIT
Christopher Ismu Langevin, FIT
Nicole Elizabeth Richardson, FIT
Eric Leander Scott, FIT
Jillian Grace Spies, FIT
Tasha Dawn Townsend, FIT
Jonathan Michael Van Elsander, FIT

NEW TRAINEE FOREST TECHNOLOGIST

Andrew Sterling Cosens, TFT
Mark Jeffrey Dyer, TFT

Caleb Taylor Garriott, TFT
Jason William Gilkes, TFT
Michelle Marie Latulippe, TFT
Helen Elizabeth Turner, TFT

REINSTATEMENT - RPF

Ksenia Erin Konwicki, RPF
Bradley Gordon Mitchell, RPF

REINSTATEMENT FROM LOA - RPF

Drew Marshall Alway, RPF
Katherine P. Bleiker, RPF
A. Paul Blueschke, RPF
Jan Bossanyi, RPF
Ken Chalmers, RPF
Michael Leigh Davis, RPF
Mark Timothy Gillis, RPF
Dawn Marie Guido, RPF
Erin Irene Holtzman, RPF
Christie Marie Hoy, RPF
James Ryan Jordan, RPF
Laszlo Kardos, RPF
Jamie Dean Kroschel, RPF
Monica Anne Larden, RPF
Stacey D. Larsen, RPF
R. Gregory Lay, RPF
Jeffrey Kevin Leahy, RPF
Kristina M.M. Luke-Airey, RPF
Colin Raymond Mahony, RPF
Mark Messmer, RPF
Darcy W. Moshenko, RPF
Sarah Elizabeth Quinn, RPF
Shawn D. Rice, RPF
Dana Allen Robichaud, RPF
Karen Schening, RPF
Daniel Eugene Stanyer, RPF
Roger D. Tailleux, RPF
Grant B. Webber, RPF

COMPULSORY REINSTATEMENT - RPF

Samuel Dennis Flanagan, RPF
Stephen C. Hewitt, RPF
Barry W. Hunter, (on LOA)
Barry A. Kropp, RPF
Rodney Walter March, (on LOA)
Tavis Aaron McDonald, RPF
Aurnir Nelson, RPF
Sam Otukol, RPF
Michael Mathew R. Shook, RPF
Christopher A. Waite, RPF
Robert G. Windeler, RPF

REINSTATEMENT - RFT

Timothy Robert Chester, RFT

REINSTATEMENT FROM LOA - RFT

David Christopher Banham, RFT
James Newton DeCoffe, RFT
Gerald Graham Hills, RFT
Brandy Deanne Hughes, RFT
Kirk Bradley Hughes, RFT
Jennifer Lynn Hutt, RFT
Kurtis Randolph Isfeld, RFT
Jennifer Eve Martin, RFT
Tim Mergen, RFT
Keith Daniel Mullens, RFT
Andrew Eric Oetter, RFT
Dustin Victor Price, RFT
Robert Henry Rose, Jr., RFT
Aaron Matthew Smeeth, RFT
Kelly James Williams, RFT
Steven Donald Williams, RFT

COMPULSORY REINSTATEMENT - RFT

Rayanne Alm, RFT
John (Jackie) Victor Brown, RFT
Aaron Todd Cutler, RFT
Ronald Ewanysbyn, RFT
Colette P. Fauchon, RFT
James Kirkman Garbutt, RFT
Matthew John Lamb-Yorski, RFT
Kimberley Lillian Meyer, RFT
Leslie Olsen, RFT
Jody Robert Rhodes, RFT
James Leonard Smith, RFT
Timothy James Taggart, RFT

REINSTATEMENT FROM LOA - FIT

Jillian Jane Atmore, FIT
Natalie Miriam Clark, FIT
Amanda Jean Girard, FIT

COMPULSORY REINSTATEMENT - FIT

Kingsley Kyere-Donkor, FIT
Tara Lynn Rooney, FIT

REINSTATEMENT - TFT

Nicola Erin Isobel Heaps, TFT
Amanda Mae Simoes, TFT

COMPULSORY REINSTATEMENT - TFT

Theresa H.C.N. Denton, TFT

December 2017 stats cont.

The following people are not entitled to practice professional forestry in BC:

NEW RETIRED RPF

Richard J. Anderson, RPF(Ret)
Francis J. Barber, RPF(Ret)
Harry A. Barrett, RPF(Ret)
Joyce A. Beaudry, RPF(Ret)
Bruce F. Beech, RPF(Ret)
James Fulton Blake, RPF(Ret)
Philip R. Blanchard, RPF(Ret)
Kathryn L. Buchanan, RPF(Ret)
Randy F. Butcher, RPF(Ret)
Stephen G. Byford, RPF(Ret)
Merle D. Collinge, RPF(Ret)
James D. Crover, RPF(Ret)
Nancy L. Densmore, RPF(Ret)
Thomas J. Dielissen, RPF(Ret)
Kelly E. Finck, RPF(Ret)
Shawn A. Flynn, RPF(Ret), ATC(Ret)
Ian R. Hamann, RPF(Ret)
Kevin J. Hardy, RPF(Ret)
Nelson J. Harrison, RPF(Ret)
Bernard Heuvelman, RPF(Ret)
Sonny S.N. Jay, RPF(Ret)
Rene Labbe, RPF(Ret)
David R. Landry, RPF(Ret)
Joanne J. Leesing, RPF(Ret)
Barbara L. Lenardt, RPF(Ret)
Steve J. Lindsey, RPF(Ret)
Harold R. MacLean, RPF(Ret)
Roger M. Marshall, RPF(Ret)
Laurie Jane McCulligh, RPF(Ret)
Robert A. McDougall, RPF(Ret)
Angus J. McLeod, RPF(Ret)
J. Harry Mitchell, RPF(Ret)
George A. Newsome, RPF(Ret)
Teresa A. Newsome, RPF(Ret)
Brian M. Robinson, RPF(Ret)
David F. Simpson, RPF(Ret)
John A. Smit, RPF(Ret)
Alan G. Smith, RPF(Ret)
William V. Smith, RPF(Ret)
Glen R. Sparrow, RPF(Ret)
Hugh J. Sutcliffe, RPF(Ret)
Shawn M. Switzer, RPF(Ret)
Wayne E. Thorp, RPF(Ret)
John G. Wakelin, RPF(Ret)
Susan B. Watts, PhD, RPF(Ret)
Garth Webber Atkins, RPF(Ret)
Raoul J. Wiart, RPF(Ret)
Allan J. Willcocks, RPF(Ret)
W.C. (Bill) Williams, RPF(Ret)
John Carter Worthen, RPF(Ret)

Abdel-Azim M.A. Zumrawi, PhD,
RPF(Ret)

NEW RETIRED RFT

James Berild Atkinson, RFT(Ret)
Gordon Arthur Bower, RFT(Ret)
George Dennis Buis, RFT(Ret)
Patricia Shelley Burns, RFT(Ret)
Michael Walter Cawley, RFT(Ret)
Paul Charles Davidson, RFT(Ret)
Gordon Allan Johnson, RFT(Ret),
ATE(Ret)
Lianne Lawlor, RFT(Ret)
Darrell Arthur Lissell, RFT(Ret)
William Clifford Loughheed, RFT(Ret)
Scott Watson Thompson RFT(Ret)
Geoffrey Harold Tindale, RFT(Ret)
Stanley Glen Waneck, RFT(Ret)

REINSTATEMENT - RPF RETIRED

Gerald McVeigh, RPF(Ret)

LEAVE OF ABSENCE (REGISTERED MEMBERS)

Paul M. Albu, (on LOA)
Kenneth Matthew Anderson, (on LOA)
Robert Samuel Anderson, (on LOA)
Colin Fraser Angus, (on LOA)
Ryan Christopher Marcel
Arsenault, (on LOA)
Anthony Drani Baru, (on LOA)
John C. Bastone, (on LOA)
Gregory E. Belyea, (on LOA)
Tara Leigh Bergeson, (on LOA)
Sandi L. Best, (on LOA)
Balvinder S. Biring, (on LOA)
Karl J.F. Branch, (on LOA)
Douglas R. Braybrook, (on LOA)
Mark Winston Brown, (on LOA)
Susann Melissa Brown, (on LOA)
Brian P. Broznitsky, (on LOA)
Peter E.F. Buck, (on LOA)
Roger G. Butson, (on LOA)
Cory Martin Byron, (on LOA)
Kelly T. Carpenter, (on LOA)
Steven Charles Chambers, (on LOA)
Gabriel Blair Coleman, (on LOA)
Owen Stewart Coombes, (on LOA)
Laverne A. Cormier, (on LOA)
Carol Ann Crouse, (on LOA)
Ruby Deanna Decock, (on LOA)
Terence Russell Dodge, (on LOA)
Peter Dodic, (on LOA)
Craig E. Dorion, (on LOA)
Leonard B. Eddy, (on LOA)
Darren Michael Fantin, (on LOA)

Craig E. Farnden, (on LOA)
Tim C. Fenton, (on LOA)
Robert G. Foster, (on LOA)
Cole Arthur Alan Gorner, (on LOA)
Mark D. Greene, (on LOA)
Michael Eric Hak, (on LOA)
David Lloyd Hale, (on LOA)
Roderick Lloyd Hillyard, (on LOA)
William P. Horbal, (on LOA)
David A. Horne, (on LOA)
Lisa H. Hunka, (on LOA)
Barry W. Hunter, (on LOA)
Christopher John Hunter, (on LOA)
Cara Helena Pauline Illerbrun, (on LOA)
Trina A. Innes, (on LOA)
Kevin A. Johnston, (on LOA)
Aaron B. Jones, (on LOA)
Jason Richard Kennedy, (on LOA)
Ralph M. Kossinn, (on LOA)
Jodie Krakowski, (on LOA)
Janet Louise Lane, (on LOA)
Hayley Erin Letchford, (on LOA)
W. Hugh Loughheed, (on LOA)
Julie MacDougall, (on LOA)
James M. MacMillan, (on LOA)
Rodney Walter March, (on LOA)
Christopher David Mardell, (on LOA)
Peter Markovich, (on LOA)
Ayrilee Palm McCoubrey, (on LOA)
Margaret (Peggy) Jean McDougall,
(on LOA)
Denise L. McGowan, (on LOA)
John E.G. McQueen, (on LOA)
Keith R. Monroe, (on LOA)
Timothy Jarrett Moser, (on LOA)
William J. Nash, (on LOA)
R. Brian Nielsen, (on LOA)
Wesley John Ogloff, (on LOA)
Elaine Ellen Oneil, (on LOA)
Raeshelle Marie Pickering, (on LOA)
John Everett Pitts, (on LOA)
David Hugh Porter, (on LOA)
Pasi Kalevi Puttonen, (on LOA)
Stewart Gordon Pyper, (on LOA)
Andrea Marie Rainey, (on LOA)
William Redhead, (on LOA)
Shane Ernest Ritter, (on LOA)
Luc R. Roberge, (on LOA)
Craig Spencer Robinson, (on LOA)
Abram Robert Yeshe Seargeant,
(on LOA)
Alette Marion Seigel, (on LOA)
Alina Janina Skiba, (on LOA)
Kathrine Clare Smith, (on LOA)
Liane C. Spillios, (on LOA)

R. Dean Stewart, (on LOA)
Terrance John Sullivan, (on LOA)
Kathleen M. Thompson, (on LOA)
Owen B. Trumper, (on LOA)
Betty A. van Kerkhof, (on LOA)
Cindy Jane Verschoor, (on LOA)
David W.N. Wark, (on LOA)
Marise Eleanor Wickman, (on LOA)
Katherine Mary Wolters, (on LOA)

LEAVES OF ABSENCE (ENROLLED MEMBERS)

Emily Kathleen Beavan, (on LOA)
Amanda Louise Brown, (on LOA)
Treasure Grace Burton, (on LOA)
James Richard Dickinson, (on LOA)
Shawn Cameron Fearing, (on LOA)
Sile Mairead Gaughan, (on LOA)
Sara Michel Goertzen, (on LOA)
Gregory Allen Greene, (on LOA)
Jason Micheal Hamilton, (on LOA)
Jamie Leigh Hopkins, (on LOA)
Janel Patricia Kennedy, (on LOA)
Kalene Judith Kerley, (on LOA)
Garrett Andrew Lakey, (on LOA)
Adrienne Rebecca Langley, (on LOA)
Darcy Allan Macleod, (on LOA)
Amber Jean Merko, (on LOA)
Jan Nojszewski, (on LOA)
Diego Luis Sánchez Gonzalez, (on LOA)
Rhys Turner, (on LOA)

RESIGNED RPF

Richard A. Mazzocchi
W. Frederick Oliemans
Janet M. Pritchard
Brian Westgate

RESIGNED RFT

Rena Mary Gibson-Protzner
Barbara Aline Harrison
David Alan Keely
Micheal Leonard Scarff

RESIGNED ATE

Reginald Graham Gardner

RESIGNED RPF RETIRED

Vicky V. Grainger
Karen Margaret Scheffers
Gerald W. Still
Brian D.H. Storey
Grant A. Thompson

RESIGNED RFT RETIRED

Reginald Graham Gardner

It is very important to many members to receive word of the passing of a colleague. Members have the opportunity to publish their memories by sending photos and obituaries to editor@abcfp.ca. The association sends condolences to the family and friends of the following members:

Michael Richard Carlson, PhD, RPF

RPF #1778

JUNE 9, 1944 – SEPTEMBER, 2017



It is with deep sadness, we announce the death of our friend and colleague Dr. Michael Carlson. Michael lived life to the fullest, and his impact on BC forestry and forest genetics resources will be felt for many years.

Michael was born in Los Angeles, CA. At age 17 he enrolled in civil engineering at Humboldt State University. In 1964, part way through the program, he and three friends drove from Los Angeles to Alaska. Seeing the old growth forests of the Pacific Northwest changed his life forever and the next year he transferred into the forestry program and vigorously pursued his new passion.

After receiving his BSc and serving in the U.S. Coast Guard, Michael received a Master's Degree from the University of Washington in Forest Genetics and a PhD from the University of California, Davis, in Genetics and Plant Breeding.

In 1982, Mike joined the Research Branch, BC Forest Service at the Kalamalka Research Station, Vernon, where he worked as a research scientist and the lodgepole pine tree breeder. Mike quickly and aggressively took the pine program to a new level: many open-pollinated progeny trials were established, and after 10-15 years, second generation trees were selected, crossed, and established in genetics tests, which are now 10-15 years old.

In Mike's 'spare time' he became very involved with provenance and progeny testing with minor but commercially important species in B.C. He knew that eventually they would become important. His work with poplars, birch, western white pine, ponderosa pine, and the walnuts, left the province with a rich heritage for genetic improvement.

Michael was also very active in local and provincial environmental issues. He was one of the pioneers of Vernon's land-based waste-water effluent program using poplars and other forest trees, and for over 20 years served as a Director of the Allan Brooks Nature Centre, Vernon. In his volunteer time, he assisted surgeons in 'Doctors without Borders' in Ecuador and Brazil. He received numerous awards for his community and professional work, including the Queen's Diamond Jubilee Medal for Community Involvement, B.C. Forest Excellence Award, and the Forest Genetics Council of BC Achievement Award.

Michael officially retired from the B.C. Forest Service in 2010, but remained working and mentoring junior staff under the Emeritus Scientist program. He combined his Emeritus work with more fishing, kayaking, and volunteer work. Sadly, in spring 2017, Michael was diagnosed with Lou Gehrig's Disease. The disease progressed rapidly and he passed away in September 2017 at the age of 73 — far too young for someone with his energy, wisdom, curiosity, creativity, and zest for life. He was larger than life and a true Indiana Jones of the forestry community.

Michael is survived by his lovely daughters, Kirsteen and Gretchen, grandchildren Anika and Kai, life partner, Marilyn Wells, and their faithful Golden Retrievers.

Submitted by Barry Jaquish, RPF #1891; Alvin Yanchuk, RPF #2320; Michael Stoehr, RPF #2822; John Russell, RPF#2000; Charlie Cartwright, RPF#2572; Greg O'Neill, RPF#2958; and Nick Ukrainetz, RPF #4572.

Karl Wilhelm Rieche, RPF(Ret)

RPF #627

NOVEMBER 7, 1926 – AUGUST 22, 2017

Karl Wilhelm Rieche, RPF(Ret), died at St. Joseph's Hospital in Comox, BC on August 22, 2017. Karl is survived by his wife Heather, son Fraser Rieche, daughter-in-law Stephanie and granddaughter Isabella in Vancouver, daughter Alexandra Bartoszewski, son-in-law Wladyslaw Bartoszewski, and granddaughters Antonia and Caroline in Poland. He leaves brothers and sisters in Germany.

Karl studied forestry in Germany and came to Canada in 1951. He worked briefly in Ontario and moved to Victoria, BC in 1952, where he worked for the BC Forest Service, Engineering Division until retirement in 1987. He graduated from the University of Victoria with a Masters Degree in Public Administration and became a Registered Professional Forester in 1981.

Karl was a great gardener, creating beautiful gardens at his homes in Queenswood in Victoria and Union Bay in the Comox Valley. He was also an accomplished watercolour artist, inventor, outdoorsman, and avid sports fisherman.

When asked about his profession, Karl always said, "I have the best job in the world."

Why Hire a Forest Professional?



Reduce Employer Risks & Liabilities

Hiring a registered forest professional ensures you are getting someone you can trust to have integrity and who has the appropriate education, skills and experience to manage or implement forestry-related work.

As members of a professional association, registered forest professionals are accountable for their work and advice. They can face fines, penalties, or lose their licence to practice if they undertake work for which they do not have the required competencies.

When you hire a registered forest professional, you can be certain they have the proper academic credentials to practice professional forestry. A part of the job of the Registrar is to verify claims about academic background and training when members enrol.



Publicly Trusted

Forests matter to British Columbians, which is why the public decided 70 years ago to make forestry a registered professional practice.

The public trusts forest professionals to follow the laws governing the use of forests and the environment while balancing the health and sustainability of forests. For 20 years, independent public opinion research finds the public ranks forest professionals as the most trusted source for providing information regarding BC's forest resources – more trusted than academics, environmentalists, government managers, and industry.

Every registered forest professional subscribes to a code of ethics and to standards of professional practice. Anyone, including a member of the public, can lodge a complaint about a member's professional conduct or competence to practice professional forestry.



It's the Law

In British Columbia professional forestry is a registered, exclusive right-to-practice profession. That means only those registered by the Association of BC Forest Professionals are legally able to practice professional forestry in BC no matter how knowledgeable they are about forests.

The "practice of professional forestry" is purposely broad because forest management is dynamic and spans many activities in BC. Professional forestry occurs when someone is paid to provide advice on, perform or direct works, services, or undertakings that relate to forests, forest lands, forest resources, and forest ecosystems.

Your forests are in good hands with BC forest professionals.

PRACTICE OF PROFESSIONAL FORESTRY

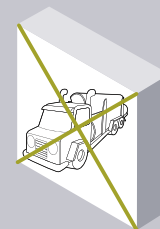
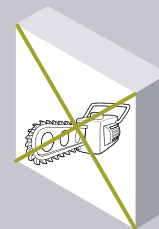
The legal definition is found in the *Foresters Act* and includes the areas of:

inventory, classification, valuation, appraisal, conservation, protection, management, enhancement, silviculture and rehabilitation, harvesting, forest roads & transportation systems, timber supply analysis, monitoring & evaluation of professional forestry, and auditing, examining and verifying the results of professional forestry activities.

Undertakings in these areas of practice range from:

planning, providing advice, directing, approving methods for, engaging in and reporting on, to supervising.

Anyone who undertakes activities that are the practice of professional forestry must be a registered forest professional or be supervised by a registered forest professional.



Some activities that are NOT the practice of professional forestry include work in mills to manufacture forest products, tree felling and logging, tree planting and the transport of logs to mills.



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