
TIME TO
RENEW

Remember to Renew Your ABCFP Membership

How to Renew

Easily and Quickly Renew Online

Renew your membership through the ABCFP website at www.abcfp.ca (Members > Manage My Membership). You'll need to sign in to access this page.

Three steps to renew your membership:

Step 1 Submit your 2019 Self-Assessment Declaration.

The self-assessment declaration is mandatory for all members, except those who are on leave of absence, unemployed, residing outside British Columbia, retired and lifetime members, and enrolled members in training (ASFIT, FIT, ASTFT, TFT, TNRP).

Step 2 Notify the ABCFP if there has been a change in your indictable offence status.

Step 3 Pay your fees.

► ***Your membership will not be renewed until you have completed all of the required steps.***

Changing Your Status

If you wish to take a leave of absence, retire, resign, or reinstate, you must apply for a change of status. This can be done online through the Status and Name Changes page of our website www.abcfp.ca (Members > Status & Name Changes).

Renew Early To Ensure You Complete The Steps In Time

Failure to complete all of the required steps to renew or change your status by January 31, 2020, will result in you being removed from ABCFP membership and barred from practising forestry in BC.

NOTE: Do not let your membership lapse. If you are planning to leave the field of forestry or retire, you must apply to change your status to "Resigned" or "Retired." Letting your membership lapse by not renewing means your name will be published with a list of members who failed to renew and you will be responsible for fees in arrears if you choose to reinstate at a later date. Plus, it could leave you vulnerable to practice infringement. For the consequences of removal, visit our website at www.abcfp.ca (Members > Steps to Renew).

Be Sure To List Your Areas Of Practice

As part of the renewal process, please list your top three practice areas. As the government moves forward with the implementation of the *Professional Governance Act*, this information will be vital to how we track competence and professional development activities..

2020 MEMBERSHIP RENEWAL	DATES
You will receive your membership renewal notice by email or regular mail.	October 1, 2019
Annual fees due for all member categories. Self-assessment declarations **must** be completed and submitted by all members, except those who are on leave of absence, unemployed, residing outside British Columbia, retired and lifetime members, and enrolled members in training (ASFIT, FIT, ASTFT, TFT, TNRP).	December 1, 2019
A $55 administrative fee plus GST will be added to the fees of members who fail to complete all required steps to renew.	December 2, 2019
Final deadline for membership renewal. ►	January 31, 2020
Any members who have not renewed will be removed from the membership roll. Reminder: Letting your membership lapse by not renewing means your name will be published with a list of members who failed to renew. Plus, it could leave you vulnerable to practice infringement and responsible for fees in arrears if you choose to reinstate at a later date.	February 1, 2020

BC Forest PROFESSIONAL

NOVEMBER – DECEMBER 2019

Mount Newton Seed Orchard:
40 Years of Sustainability

Caribou Habitat Restoration in a
Complex Landscape

Ecosystem **Health and Disturbance** Research

Supporting Sustainable
Forestry on Private Land

Emerging **Fire** Management Research

Forest Stewardship Plans and Protecting the Cultural Heritage Resource Value

CORRECTION

The authors of *Slash Burning Can Be a Beneficial Tool in Mitigating the Influence of Climate Change on Wildfire Behaviour*, published in the September-October 2019 edition of *BC Forest Professional*, would like to clarify that within most Interior and coastal (excluding hypermaritime) ecosystems, harvested areas benefit from prescribed-burning prior to reforestation.

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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Email: **editor@abcfp.ca**

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Email: editor@abcfp.ca Website: abcfp.ca/web

Managing Editor: Dean Pelkey
Editor: Cheryl Waddell

Editorial Board:
Ali Araghi-Rahi, PhD, FIT; Sam Coggins, PhD, RPF; Janelle Dale, RPF; Tom Hoffman, RPF; Gordon Prest, HM; Will Sloan, RFT; Shawn Tougas, RPF; Norah White, RPF; Jack Woods, RPF; Peter Zhang, FIT

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The Association of BC Forest Professionals and *BC Forest Professional* magazine acknowledge our province of British Columbia is located within the traditional territories of Indigenous nations.

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Motion-actived camera capture: wolves in pursuit of a cow moose and calf. Photo: Brendan Carswell **14**

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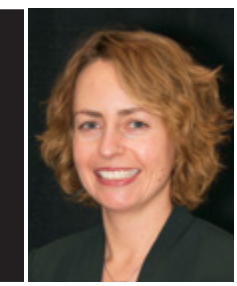
Cover story photo – Culturally Modified Tree (CMT): A post-1846 Aspen tree with bark removed for basket making. Photo credit: Sally Sellars, RPF

Exploring our Role: Reconciliation for the Regulator

When I assumed my term as president, one of my priorities for the association centred on reconciliation with Indigenous Peoples. After several years of the association having a strategic goal to enhance trust with Indigenous Peoples, and given recent federal and provincial commitments to the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), I felt it was the right time to step back and evaluate what's next as we look forward. Therefore, when council convened its strategic planning session in September, one of the topics we tackled was reconciliation and specifically, what is the role of the ABCFP?



Identifying a common understanding was one of the most interesting parts of council's conversation at our strategic planning session. Regarding reconciliation, each council member and ABCFP senior staff member participating reflected differently on what they understand reconciliation to mean, and how that connected to the association's role to maintain and uphold trust. During the discussion I heard reconciliation is a journey and a process. Reconciliation is happening in society, around the profession, and within the profession. The discussions led council to a shared understanding and affirmation that the association has a role to play in reconciliation alongside its individual members. And as council reflected on association activities over the past decade, we observed the ABCFP has engaged in reconciliation-type activities and should persist and deepen this work in keeping with its legal mandate.

In my September-October column, I thanked each of the approximately 25 per cent of active forest professionals who participated in the strategic issues survey in August. Your input was used by council during the strategic discussion and helped support strategic alignment among council about what is the view of practising forest professionals, what we should consider, and what may not be in the best interest of the profession and association as a regulator. Related to engagement with Indigenous Peoples, there were two stand-out observations for me from the survey results:

1. 71 per cent of respondents told council it is important or very important, that the association itself place an emphasis on improving effective working relationships with Indigenous Peoples. This was good for council to hear and reassuring that we have been working along a path supported by our registrants by increasing the awareness of our organization to Indigenous Peoples; by building partnership and relationships where we identify shared interests; and by providing awareness and education opportunities for both our registered forest professionals and those in-training to become registered.
2. 27 per cent of respondents said the most significant emerging issue that will affect their practice and forest management at large in the next two to five years is the evolving land ownership and rights of Indigenous Peoples. This was the most popular answer amongst the choices, and likely not a surprise for anyone.

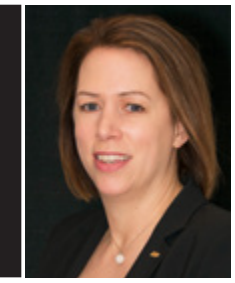
Council discussed what that may mean to the ABCFP in its business delivery and identified the importance of ensuring the ABCFP ensure those entering our profession have sufficient knowledge about this evolution with Indigenous People, but also support all existing forest professionals who are a part of the association. Forest professionals must have knowledge and awareness about the legal context and commitment to reconciliation but also the interpersonal skills and competencies to be able to work in this area which may include enhanced skills for conflict resolution, and a stronger ability to recognize and deal with bias and unconscious bias.

I have only been able to express a fraction of the rich discussion that occurred during the strategy session and which will influence the development of the next strategic plan (and annual operational business plan that cascades below it). But with respect to what reconciliation means for the profession and setting our collective path for the next five years, I expect our approach to be moderate, informed and flexible to how Indigenous interests, rights, title, and ownership evolves between now and 2025 (i.e. when the association will form its next strategic plan). Council also recognized the need to continue to be a leader and make sustained progress.

Section 7 of the *Professional Governance Act* stipulates the superintendent is responsible for the oversight of systemic or general matters related to professional governance, including promoting or establishing policies or best practices with respect to promoting awareness among regulatory bodies to support reconciliation and implementation of UNDRIP. When its time for those conversations, I believe the ABCFP will be a leader, with a progressive decade-long track record and a future-oriented outlook.

Resiliency in the Face of Uncertain Change

It was a powerful experience to hear the horns and see the convoy of logging trucks arrive in downtown Vancouver during the Union of BC Municipalities (UBCM) convention to raise awareness about the impacts of mill closures and curtailments. Two days later, climate change rallies happened around the globe followed by Orange Shirt Day, to raise awareness of the terrible effects of the residential school system and the resulting intergenerational trauma. These three occurrences within the span of a week are stark reminders of how much the world forest professionals work in is changing in social, economic, and environmental spheres.



Also changing are the rules that guide forest management, notably with amendments to the *Forest and Range Practices Act* (FRPA) in the summer and further changes planned next year. And with the passing of the *Professional Governance Act* (PGA) in November 2018, there will be changes in how the professional practice and conduct of forest professionals are governed.

Change is inevitable, and without a doubt there is a lot happening right now across the whole of the forest arena. But the critical question is, how will any of the changes come to bear on the forestry profession and its professional regulation? Secondly, how do we best position the ABCFP and the forest professionals it regulates, for the future business shifts of those relevant changes?

These are some of the fundamental questions ABCFP Council and senior staff spent hours discussing at the last council meeting in September. In its discussion of a new five-year strategic plan for the association, council concluded significant shifts to the existing core regulatory duties of the ABCFP are not expected because the association is established through legislation, despite the introduction of the PGA. But how some of these duties are performed will change within the next five years. These changes will be reflected in changes to our program design and the annual operational business plan as opposed to the strategic plan. There are also some duties beyond the common regulated duties typically held by professional regulators, where shifts could be seen within the five-year timeframe of the next strategic plan. One such duty relates to stewardship advocacy.

Under the *Foresters Act*, it is a mandated duty (object) of the ABCFP to advocate for and uphold principles of stewardship of forests, forest lands, forest resources, and forest ecosystems. In December 2019, the *Foresters Act* will be amended to strike the words "to advocate for and" leaving the remaining language of "Uphold principles of stewardship of forests…" What does this mean for the association? What does it mean in terms of a priority in our strategic plan for the next five years? We don't know the answer yet; it's a conversation that will occur with the newly-installed superintendent of professional governance to get better clarity for the future.

The association was given an advocacy mandate in concert with the introduction of FRPA. From the outset, the association's advocacy mandate was confined to forest stewardship. Council approved additional policies in the 2000's to clarify and direct that advocacy topics must affect the practice of professional forestry and/or be related to upholding principles of stewardship of forests, forest lands, forest resources, and forest ecosystems. In the same policy, council also explicitly stated the association must NOT advocate for member or membership benefits, corporate entities, or financial gain.

While we may not know how the superintendent may or may not prescribe the association's future role in advocacy for forest stewardship, I do believe a professional culture that upholds and promotes good forest stewardship will always be important in caring for BC's forests. And equally important in caring for BC's forests is making recommendations to support continuous improvement of the forest management model.

A new five-year strategic plan is set to be released by council at our AGM in February 2020 in Nanaimo. The plan will describe the broad, overarching direction set by council to ensure the association fulfils its legal responsibilities. It will clarify the top priorities of the association as it moves forward over the next five years. But what it won't include is the details of how these strategic goals and objectives will be realized. For that, you will need to stay engaged in the work of the profession by reading association publications, by participating in committees, by participating in conferences, workshops, and webinars. And importantly, by talking with council and staff. We look forward to hearing from you as we chart our path forward in these changing times.

Election Update

The election for the 73rd ABCFP Council will run from December 11, 2019 to January 11, 2020. Members will elect two councillors at large, one RPF and one RFT.

Registered Professional Forester Candidates

The election for a councillor from the Registered Professional Forester (RPF) category has two candidates vying for one position with a three-year term. In alphabetical order, the candidates are:

- Jason Fischer, RPF #4597
- Dustin Meierhofer, RPF #4725

Registered Forest Technologist Candidates

The election for a councillor from the Registered Forest Technologist (RFT) category has two candidates vying for one position with a three-year term. In alphabetical order, the candidates are:

- Larry Fedorkie, RFT #0342
- Kelly Kitsch, RFT #0367

Also on the ballot are Trevor Swan, RPF, for council president, and Trevor Joyce, RPF, for council vice-president.

Member Registration 2020 Dues

ABCFP Council at its September meeting approved a two per cent increase in member dues.

The increase will be applied to all 2020 member renewals. This increase matches the rate of inflation, currently running at two per cent in BC.

Council members discussed at length the additional costs the association has, and will, incur in the upcoming year to comply with the new *Professional Governance Act*. Despite these new and rising costs, ABCFP staff will continue to look for ways to reduce operational expenses and offset the need for a levy or larger fee increase in light of changing industry conditions.

Historically, council approves fee increases inline with inflation. Most recently council approved a three per cent increase for 2019 dues, and no increase in fees for 2018.

Business Resolutions For 2020 AGM Must Be Submitted Before Jan. 2, 2020

The deadline to submit a business resolution for the ABCFP AGM is January 2, 2020 (at least 35 days before the AGM). Business resolutions are now being accepted.

You can learn more about resolutions (including the differences between business and advisory resolutions) on the Resolutions page of the ABCFP website (log in required).

Business resolutions will be discussed during the AGM on Thursday, February 6, 2020 (from 1:45 pm to 3:00 pm). Advisory resolutions will be discussed during the Resolutions Session on February 7, 2020 (from 11:15 am to 12:00 pm). Forms to submit your advisory resolution can be obtained from the registration desk during the conference dates.

Upcoming Continuing Professional Development Opportunities

The *Coffee with Council* session at the 2019 AGM provided great feedback about the learning needs of members. All agreed maintaining and building competencies was critical. Some members indicated that learning opportunities must be widely available and in a range of formats, while others stated, "on-the-job" learning was key for early career professionals. Consequently, we are working hard to provide forest professionals with a range of learning opportunities aligned with professional, inter-personal and practice area competencies. Some projects we are working on include, *Climate Change Adaptation* e-courses developed in partnership with the Inspiring Climate Action Network, the *Wildfire and Forest Fuel Management* training program, and online *Visual Quality Management & Assessment* courses.

We have also created three practice guidance e-courses including the *Standards of Professional Practice, Principles of Stewardship, and Professional Quality Field Work*, available on the Member's e-courses page. In development is a Competency Self-Assessment Tool that will help members better determine their level of mastery of key competencies in order to identify and fill learning gaps. Remember to visit the Member Competence and Professional Development page to find free e-courses, guidance documents, links and other learning resources. Your feedback is critical. Send your comments to Troy Lee, manager, member competence and engagement at tlee@abcfp.ca.

Register Now - Forest Professionals Save $100 on the 2020 ABCFP Conference in Nanaimo

Registration for the 72nd ABCFP Forestry Conference and AGM, at the Vancouver Island Conference Centre in Nanaimo, February 5-7, 2020 is now open. Early-bird rates are available until December 11. Our past two conferences sold out, so register early to save your seat.

We've included our session line-up on pages 18-19 and we'll be adding more information on our website as speakers are confirmed. Hotel reservations for either the Coast Bastion or Best Western Dorchester are now available at the conference rate.

For more information, please visit abcfp.ca/WEB/ABCFPConference.

Help Shape the Future of Forestry: Donate to Support a Student

ForesTrust is the ABCFP's registered charity. It provides scholarships and bursaries to forestry students through 10 endowments at eight post-secondary institutions in BC. ForesTrust also provides funding for educational activities focused on how we care for and manage BC's forests. To date, ForesTrust has provided funding to 11 such initiatives, including National Forest Week.

Now you can donate directly to ForesTrust through our website or easily add it to your membership renewal (login required). Monies raised go to help a student out at BCIT, College of New Caledonia, Selkirk, TRU, UBC, UBC-Okanagan, UNBC, or VIU.

By supporting a student, you can help shape the future of forestry. Donations of $20 and more are eligible for a tax receipt. To donate, go to abcfp.ca/WEB/ABCFP/DonateNow.

Managing Risks to Watershed Values

Recent Forest Practices Board work highlights the need for forest professionals to understand the risks of harvesting to downstream infrastructure and private property, to assess risks and to plan accordingly. The Board has addressed numerous complaints and concerns about the effects of harvesting on water resources — in fact 22 per cent of complaints investigated since 2013 involve this topic. Examples include our complaint investigation reports on McClure Creek, Bonneau Creek, and Yates Creek.

In some recent cases, significant storm events in watersheds with recent harvest activity caused stream flooding that damaged resource roads, public access roads, and private property. In the end, the licensees and government paid the costs to repair the damage and to apply mitigation measures to avoid future impacts.

These significant storm events, and especially rain on snow events, are expected to occur more frequently in the future. The July 2019 Preliminary Strategic Climate Risk Assessment for BC[1] identifies the top threats to BC and among the risks are seasonal flooding, and extreme precipitation and landslides.

A recent FPInnovations report[2] noted that "adaptation of resource roads and infrastructure to climate change includes any administrative, policy, standards, planning, design maintenance or construction activity that is implemented to address projected changes in climates." Under the *Forest and Range Practices Act* (FRPA) structure, licensees, government and the ABCFP have the administrative, policy and standards functions. The ABCFP takes the position that forest professionals "are well positioned to assess risks and implement measures to adapt to the effects of climate change ... Such measures include ...planning road and crossing structures for water management."[3]

Forest professional not only plan road and crossing structures, but make forest management decisions that can affect hydrology. For example, forest professionals plan things like timing of harvest, area harvested, and silviculture system selected. With that knowledge, forest professionals should be assessing the risk to downstream values.

The Board has found that licensees usually carry out their legal obligations for harvesting and road maintenance, but forest professionals have not always advised the licensee about increased hydrologic risks to downstream values due to planned harvesting. In light of climate change effects, that becomes more important. A hydrologic assessment is an added expense so some licensees do not always do one, unless required for a community watershed. We have also seen cases where the forest professional did not calculate an equivalent clearcut area (ECA) to see if there is an indication that the planned harvest could increase the risk of flooding. This is a basic consideration that should be done to identify whether there is a potential risk that warrants further assessment work.

Once alerted to the risk, a licensee can consider appropriate measures to reduce the risk. For example, someone doing a pre-harvest drainage review could prescribe a larger culvert for a site that is close to its capacity. Implementing a robust drainage stabilization plan before equipment leaves an area could reduce the risk of environmental damage and associated mitigation costs.

While a hydrological assessment may recommend more costly road improvements to reduce risk, the appraisal system may compensate a licensee for necessary improvements. But the costs of repairs and improvements done after the fact are borne by the licensee.

Forest professionals not only have an obligation to their employer, they also have an obligation to the public. If the risk is elevated, forest professionals could inform others whose infrastructure or private property is at risk so they can take measures to protect it.

To help address these risks, and in response to a Board recommendation in its Community Watersheds Special Investigation, a Task Force of the ABCFP and APEGBC Joint Practices Board recently developed guidelines: *Professional Practice Guidelines: Watershed Assessment and Management of Hydrologic and Geomorphic Risk in the Forest Sector.*

Section 2 of the guidelines provide a framework for the management of hydrologic and geomorphic risk. The framework sets out a standard of practice for professionals who have responsibility for making forest management decisions that could affect watershed values. The guidelines also address climate change and risk management.

The Board, and the public, expect forest professionals to be aware of the downstream values potentially at risk, routinely consider the risk during planning and design of forest operations, and carry out risk assessments where appropriate, regardless of what the FRPA legislation requires. Stakeholders and the public rely on professionals to identify and manage for risks when planning and conducting forestry operations. This new guidance document is a great resource to help professionals do just that.

Glen Pilling, RPF, graduated with a BSF from UBC in 1986 and briefly worked in consulting and for the forest service in silviculture, timber, and planning. In 1996, he joined the Forest Practices Board as an investigator and has been there ever since. Glen has been lead investigator for dozens of public complaints and several special investigations.

REFERENCES

1 https://www2.gov.bc.ca/gov/content/environment/climate-change/adaptation/risk-assessment

2 Adapting Resource Road Infrastructure to Climate Change FPInnovations Technical report no. 61 – December 2017

3 ABCFP Climate Change Position Statement; available online at https://abcfp.ca/WEB/Files/policies/ABCFP-Climate-Change-Position-Statement-2017.pdf?WebsiteKey=4b6af123-da4f-4a97-a963-579ada9e5955&=404%3bhttps%3a%2f%2fabcfp.ca%3a443%2fWEB%2fabcfp%2fFiles%2fpolicies%2fABCFP-Climate-Change-Position-Statement-2017.pdf

Mount Newton's orchard operation includes both long-established and newly planted seed trees.

MOSAIC'S MOUNT NEWTON SEED ORCHARD:

40 Years of Sustainability

Mosaic Forest Management's Mount Newton Seed Orchard celebrates its 40th anniversary in 2019, marking four decades of commitment to producing the best seed in support of sustainable forestry on BC's coast.

The 40-hectare orchard property on the Saanich peninsula was originally purchased and established by Crown Zellerbach and BC Forest Products in 1979. Today, the orchard is owned by TimberWest Forest Corp., and managed by Mosaic Forest Management, the new company established in November 2018 as timberlands manager for both TimberWest and Island Timberlands.

"Mount Newton Seed Orchard is a foundational component of our commitment to sustainable forestry," says Domenico Iannidinardo, RPF, RPBio, P.Eng, vice president of forest and sustainability and chief forester for Mosaic.

"By ensuring we grow our seedlings from the best possible seed today, we set the stage for the health of our forest estate in the coming decades, and ultimately the quality of the product we provide to our customers."

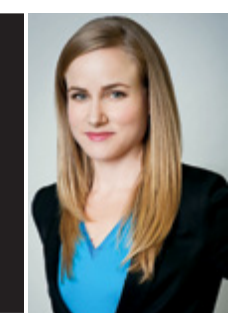
Over its history, the orchard has produced enough seed to grow a staggering 250 million seedlings. Douglas-fir is the mainstay of the orchard production, followed by western redcedar. A small component of western hemlock trees are kept in the orchard and a western white pine grove was recently added and is expected to produce its first crop of seed in 2020.

The orchard is expanding its production to meet the seed needs of TimberWest and Island Timberlands, with a target to increase Douglas-fir seed production from eight million potential seedlings today to 12 million over 10 years. Bevin Wigmore, RPBio, tree improvement manager, and her team are focused on maintaining genetic gain while increasing production.

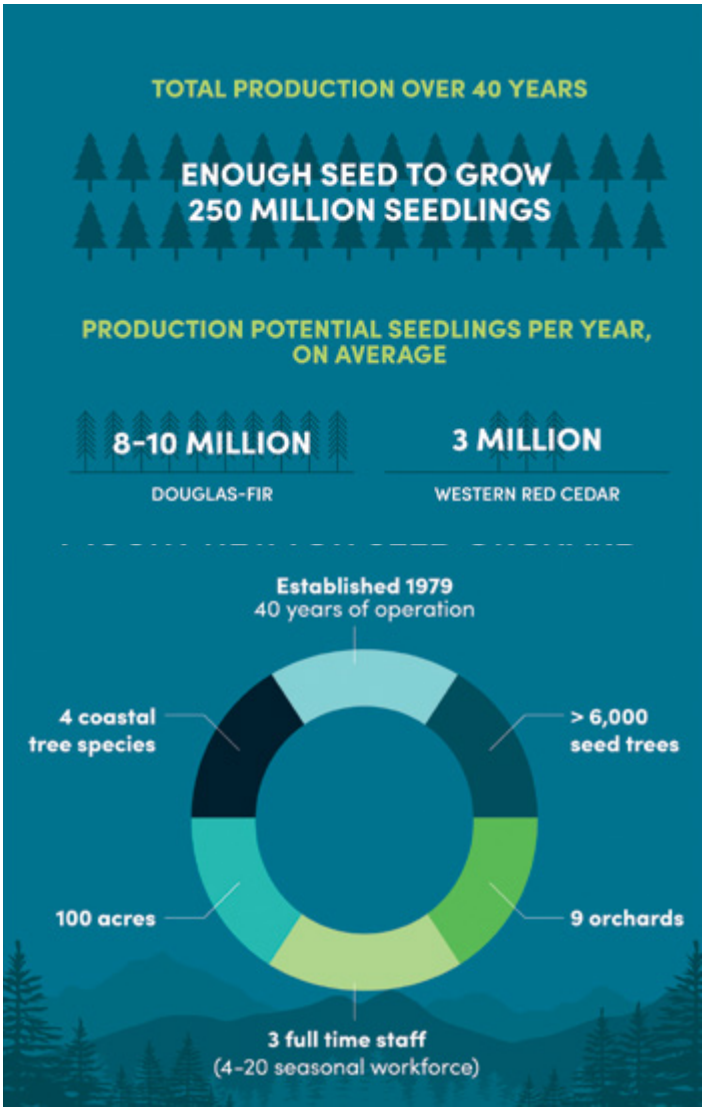
"We have been very successful, in partnership with the provincial Forest Genetics Program, in increasing genetic gain, which is measured as the expected volume gain of wood harvested at a rotation age of 60 years compared to B-class or woods-run seed," Wigmore said.

"It is a key objective for Mosaic to increase genetic gain, but from an orchard management perspective, that requires removal of the old first-generation orchard trees that produce the most seed, and replacing those with next generation plus-trees. It is a balance every year between genetic quality and production, and that's our biggest management challenge as we grow our seed output."

All tree improvement research is carried out by the BC government's Forest Genetics Research Program, with support from the Forest Genetics Council of BC, to ensure the strictest standards are maintained to preserve genetic diversity. Improvement is undertaken through the same methods as all classic breeding programs, where individuals with certain desirable traits are



Corinne Stavness, RPF, is a forest industry consultant based on Vancouver Island. She holds a BSc in forestry from UBC and an MSc in forest economics from the University of Helsinki. She is currently a member of the Ministry of Jobs, Trade and Technology's Emerging Economy Task Force. Corinne also works with the Ending Violence Association of BC, a non-profit organization focused on building safe and respectful communities for women and girls.



All photos and infographics in this spread courtesy of Mosaic Forest Management.

LEFT ABOVE: ***Seed cones ready for harvesting on a western redcedar tree.***

LEFT MIDDLE: ***Cone collection is done by hand, each year, during the fall.***

LEFT BELOW: ***Douglas-fir is the mainstay of the orchard's production.***

selected from within the original population and bred together. The resulting offspring are planted on a wide variety of test sites and are evaluated at quarter rotations (12 to 15 years), with parents that pass on the desirable characteristics selected as the new breeding population. The best of these superior clones are then provided to Mosaic for seed production.

Currently, Mount Newton has more than 6,000 established seed trees, with a genetic gain ranging from eight to 30 per cent. Jimmy Hodgson, RPF, Mosaic's senior manager, forestry operations, sees the impact of seed quality on the ground.

"Beyond the key benefits of gains in growth and yield, utilizing improved seed gives us confidence in seedling quality and resilience in the face of changing climate conditions. Adaptation for climate change is a key focus area for our forest practices, and we are involved in many cooperative projects, such as the Assisted Migration Adaptation Trial and provenance trials with the Ministry, to ensure we are deploying seed with climate change in mind," Hodgson said.

"It is truly a focus on sustainable forestry from the ground up, and as we celebrate Mount Newton's 40th anniversary, we are focused on the next 40 years and continuing science-based improvement of our forestry practices," Iannidinardo added.

Caribou Habitat Restoration in a Complex Landscape

Restoration of important caribou habitat for priority herds in British Columbia is a key management tool identified by BC's Caribou Recovery Program (2017) to address limiting factors within caribou sub-populations. Habitat restoration provides multiple benefits to caribou. Strategically located and effectively executed restoration can impact wolf movement, effectively reducing predation risk, or make significant gains in providing effective caribou habitat over the long term.

The methods associated with both functional (i.e. aimed at disrupting predator and/or human access) and ecological restoration (i.e. aimed at longer-term recovery of large areas of effective habitat) are well understood (Golder 2012, Pyper et al. 2014, Golder 2015). In northeast BC, most of the region is considered a working landscape and restoring caribou habitat presents infinite opportunities in both the scale and scope of anthropogenic disturbances to restore. For this reason, restoration of caribou habitat in this region poses significant challenges to implement a program that is effective for caribou within identified subpopulations. Conflicting government mandates, overlapping tenures across multiple industrial sectors, a lack of coordinated access management, limited funding and funding sources, protection of restoration investments from new exploration and development, and a desire by industry and the public to keep the backcountry open are a few of the challenges to be addressed.

Habitat restoration supporting species management or recovery in BC is not new. Non-profit organizations such as Ducks Unlimited Canada, the Nature Trust of BC, and the Habitat Conservation Trust Foundation, have enhanced and restored habitats for numerous species over many decades. However, caribou habitat restoration in BC is a relatively recent initiative and the scale of the task in the northeast is daunting due to the extensive historical and ongoing anthropogenic disturbance of habitat.

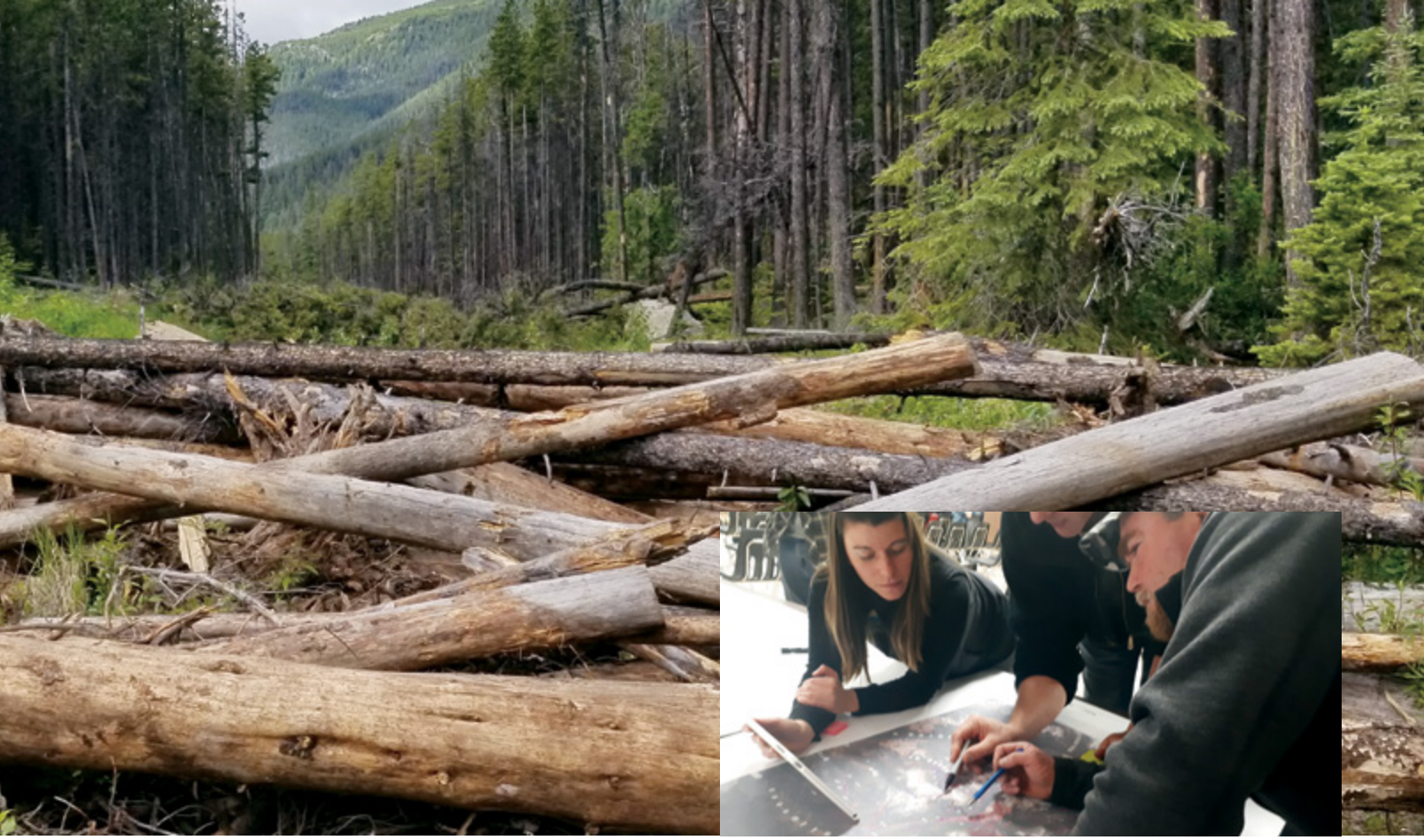
For example, the Quintette caribou sub-population, whose range is greater than 6,000 square kilometres surrounding the village of Tumbler Ridge, has experienced extensive disturbance since the 1980's including habitat fragmentation and loss due to exploration and development associated with forestry, mining, oil and gas, and wind energy. An unintended consequence of the industrial footprint in this area is increased feasibility for motorized and non-motorized recreation, some of which directly overlaps core winter or summer range.

Since 2012, BC has developed multiple plans[1] to address conservation and recovery of this sub-population. Two of these plans, the Quintette Caribou Habitat Restoration Plan (March 2017) and the Preliminary Tactical Restoration Plan for the South Peace Northern Caribou Ranges (June 2018) provide strategic and tactical guidance to internal and external restoration implementors. The tactical plan identifies key criteria to define priority lands within the range, where and what type of restoration should be undertaken, how to sequence and coordinate restoration, and how to monitor success. Following guidance within these plans BC[2] initiated a pilot restoration program in 2018 to progress towards meeting commitments made to Canada and to demonstrate on-the-ground action to support Quintette caribou recovery.

Within the Quintette sub-population there are 1,487 kilometres of candidate restoration area. Due to the extensive overlap of multiple industrial-sector tenures, as well as public interest in motorized and non-motorized recreation in the Tumbler Ridge area, provincial staff held a public open house in early 2018 to discuss candidate sites for caribou habitat restoration. The session provided an opportunity for public, industry, and recreation stakeholders to provide input on plans and to identify features such as seismic lines or roads that locals believe important for their continued use. Provincial staff then focused on linear features in high caribou use areas that were untenured and that could be restored effectively for caribou.

Specific engagement with Treaty 8 First Nations occurred in summer 2018 to share restoration initiatives, identify opportunities, and seek feedback on methods for integrating Indigenous knowledge and communities in restoration planning, implemen-

Joelle Scheck, RPBio, MScF, is the Northeast Caribou team lead with MFLNRORD and the Caribou Program Area Lead for restoration. She is passionate about caribou recovery and committed to achieving the province's caribou recovery goals. Joelle is a long-time resident of Fort St. John, where she lives with her husband, Devin, and children Max and Martina.



Functional restoration of an untenured industrial road within the Quintette local population unit. Photo credit: Scott Schilds, wildlife ecologist, NE FLNRORD.

Public providing feedback at restoration prioritization open house in Tumbler Ridge, 2018. Photo credit: Hillary Morgan, former land and resource specialist, NE FLNRORD.

tation, and monitoring. Several Treaty 8 First Nations have demonstrated leadership in planning and implementation of caribou habitat restoration, and the engagement allowed the exploration of opportunities to work together.

Starting in fall 2018, on-the-ground habitat restoration activities commenced within the Quintette range. These activities were overseen by provincial staff and the Society of Ecosystem Restoration in Northern BC (SERNbc), which provided in-depth experience and oversight of operations. Activities were carried out by a combination of Indigenous and non-Indigenous contractors familiar with specific techniques required for caribou habitat restoration work. Restoration treatments included tree felling to block access (functional restoration), site preparation/screefing to improve seedling survival, and the planting of seedlings (ecological restoration). In total, 32.5 kilometres of linear features (29.4 hectares) received restoration treatments, with some areas receiving a combination of the different treatment options. A monitoring program will be conducted to ascertain the effectiveness of the treatments, as well as use of the treated features by both humans and wildlife. Additionally, monitoring will inform recommendations for continuous improvement in meeting objectives for caribou.

In an effort to publicly share spatial and a-spatial data related to these restoration efforts, an interim solution for tracking of restoration investments is currently pending government approval while a long-term solution is explored. Publicly accessible tracking is a first step in protecting restoration investments, but additional regulatory protections may be required especially in areas where further industrial activity is anticipated. Reporting of the Quintette pilot project used FLNRORDs Reporting Silviculture Updates and Land Status Tracking System (RESULTS), which is a system that is directly linked to clearance and land status tools, provides for canned report functionality and is available as a layer on ArcGIS Online.

By all accounts, the 2018 pilot project in the Quintette was a success. However, given the large number of candidate linear features within this herd's range, we have a long way to go to have a positive impact on the Quintette sub-population and its habitat. The investment in time and resources to develop plans from the strategic to the site level, to undertake engagement with First Nations, the public, and stakeholders, and to organize and coordinate implementation is substantial. Success in a complex landscape can only be achieved through partnerships and coordination with others so resources can be leveraged and desired outcomes realized in an efficient and effective manner.

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2. Ministry of Forests, Lands, Natural Resources and Rural Development – Regional Operations, Northeast

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The Provincial Ecosystem Health and Disturbance Research Portfolio

This article is the second in a six-part series about the important body of scientific research and achievements from hundreds of researchers and technicians contributing to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development's Research Program. The six main research portfolios we'll be covering in this series are: ecosystem stewardship, ecosystem health and disturbance, water, species and habitat, timber supply, and the bioeconomy.

Province-wide, forest ecosystems are changing in response to direct and indirect human activities. Evaluation of current and anticipated impacts presents a significant challenge requiring interpretation of the driving variables and components of change across temporal, spatial, and ecological scales. These dynamics also present the opportunity to evaluate the mechanism(s) underlying ecosystem response to changes in external functions. The Ecosystem Health and Disturbance Intended Outcome's (EHDIO) primary goal is to identify and quantify risks and reduce impacts on terrestrial ecosystem values from biotic and abiotic disturbances and management practices.

Ecosystem Health and Disturbance is one of six research themes, or intended outcomes (IO), of the research program of the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD). The purpose of a research IO is to oversee research projects and their associated funding to achieve an overarching goal and management objective.

Tim Ebata, MSc, RPF, is the forest health officer with the Resource Practices Branch in the Office of the Chief Forester in the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. He also co-chairs the Ecosystem Health and Disturbance Intended Outcome. Tim co-ordinates the Provincial Forest Health Program, including leading the annual provincial aerial overview survey program and the gypsy moth eradication program.

Harry Kope, PhD, P.Ag, is the provincial forest pathologist with the Resource Practices Branch in the Office of the Chief Forester of the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development and co-chair of the Ecosystem Health and Disturbance Intended Outcome. Harry's work focuses on co-ordinating the development, implementation, monitoring, and treatment strategies for forest diseases.

The strategic importance of the EHDIO is to provide information on the prediction and mitigation of impacts from biotic disturbances, such as insect and disease outbreaks, and abiotic disturbances, such as landscape processes and wildfire, and anthropogenic activates, such as timber harvesting and resources development.

Research under this initiative will provide estimates of potential losses in forest resource values affected by various disturbance agents by type and by associated temporal and spatial scales. Loss estimates can be used to adjust expectations for timber supply and other forest resource values and set priorities for investment in activities that mitigate these impacts. Three examples of currently funded research by the EHDIO are given below.

Example 1

Dr. Lorraine Maclauchlan (Forest Entomologist, Thompson Okanagan Region) has identified that the balsam weevil, Pissodes striatulus, is acting as a primary tree killer of subalpine fir (Abies lasiocarpa). It typically acts as a secondary insect that attacks after trees are killed by Western Balsam Bark Beetle (WBBB), however, the weevil has been documented as mass attacking and killing subalpine fir on its own. She has found the balsam weevil present and active in many low- to mid-elevation subalpine fir stands throughout the Thompson Okanagan Region. Together, both the bark beetle and the weevil are responding to climate-induced stress on its host subalpine fir, and they cause tree mortality and having an impact on basal area tree growth (Figure 1). With more frequent drought events and longer summers, these insects may both increase their range and impact in these forests. This research will provide:

- A risk analysis for subalpine fir ecosystems that can be included in provincial and timber supply area forest health strategies;
- A description of stand, climate and ecological parameters that influence insect response and population dynamics in Engelmann Spruce Subalpine Fir subzones; and
- An estimate of annual in-stand losses in subalpine fir ecosystems and recommendations for management.

OPPOSITE PAGE: ***Wolves in flight. Captured by a motion-activated camera at the shelterwood road site at the UBC Alex Fraser Research Forest.*** Photo credit: Brendan Carswell

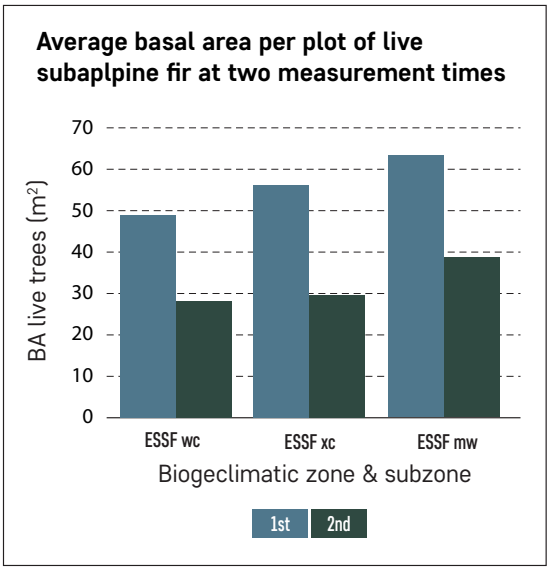


FIGURE 1. ***Average basal area of live subalpine fir sampled at two different measurement times (6 – 10 years apart) in plots located in three biogeoclimatic subzones.***

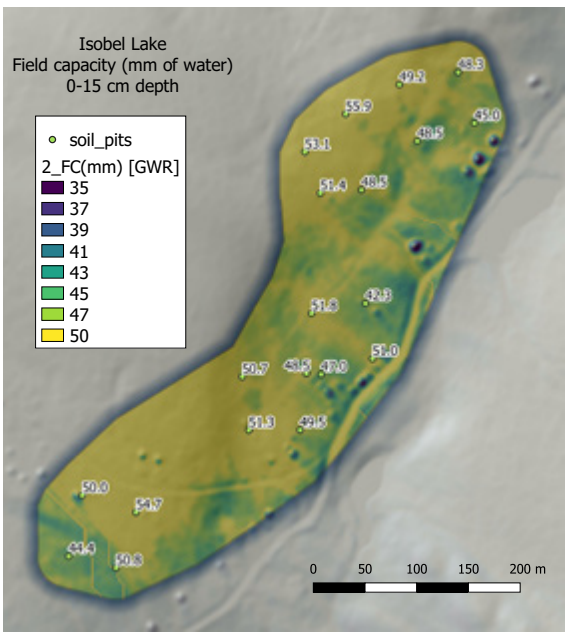


FIGURE 2. ***Field capacity (FC: mm of water) in the top 15 cm soil layer, predicted with geographically weighted regression. FC is an important parameter for soil water availability and forest productivity. The blue dots in the lower part of the image are slash piles and the FC results there should be ignored.***

Example 2

Doug Terpsma, MSc student, Thompson Rivers University; Brian Wallace, range soils ecologist, Thompson Okanagan region; Chuck Bulmer, soil scientist, Thompson Okanagan region; and Tom Pypker, Thompson Rivers University, have evaluated the fine-scale variability of soil condition and topographic position and their effect on the survival and growth of new forests. The project has developed a series of topography attributes that were calculated at one-metre resolution from the LiDAR-derived elevation model, which are used to gain a better understanding of the variation in soil conditions and water accumulation/redistribution across a small hillslope, and to gain a detailed picture of the microenvironment experienced by the roots of planted trees (Figure 2). The study will lead to improved growth and survival of seedlings by amending planting practices to accommodate microsite conditions. The results expected from this study are:

- Detailed microtopographic and physical evaluation of soil moisture and nutrient regime for young forest stands;
- Detailed evaluations of temporal and spatial variation in the moisture and nutrient status in the root zone; and
- The establishment of monitoring network for soil moisture and aeration status of the root zone.

Example 3

Brendan Carswell, Honours student, and Roy Rea, University of Northern British Columbia, compared mule deer and wildlife use of root rot centers and adjacent non-root rot affected Douglas-fir forests in mule deer winter range in the Cariboo. Ministry research funding was secured with input from David Rusch, regional forest pathologist, Thompson/Okanagan and Cariboo Regions.

In the summer of 2017, a study set out to investigate differences in habitat use by various wildlife species (with a focus on mule deer) in Armillaria and laminated root diseases centers and adjacent non-root rot affected mature Douglas-fir stands. The study was conducted at UBC Alex Fraser Research forest in three separate sites in the transition snow pack zone of mule deer winter range in the SBSdw1 (northeast of Williams Lake).

Vegetation, coarse woody debris, winter snowpack depth, and wildlife usage in the root rot and non-root rot areas were compared. Wildlife cameras were used to capture wildlife usage. Camera data recorded the presence of moose, squirrels, bears, lynx, cattle, deer, and hares, but only mule deer numbers in the summer and periods of high winter snow accumulation were significantly different. The root rot areas had more shrubs and deciduous trees, and significantly less crown closure.

Later in the season, these differences in tree species and stand structure affected snow depth during the winter months. During the deep snow period, mule deer used the root rot centres less than the adjacent healthy mature Douglas-fir stands, suggesting that snow depth could be factor in limiting the use of root rot centers by mule deer during the winter. The study's authors also concluded that root rot centers increased forest biodiversity within mule deer winter range.

Other funded and ongoing research topics in the EHDIO cover a range of disturbance agents that include stem and root diseases, landslides, soil disturbance, spruce beetle, lodgepole pine dwarf mistletoe, Elytroderma needle cast, young pine pests, tsunamis caused by landslides, and fire — most with some aspect of climate change included in the research.

The EHDIO provides valuable information to forest managers who must address disturbances at various scales by estimating their impacts and encouraging new or modified practices to minimize these impacts.

Acknowledgments

The EHDIO steering committee, comprised of Chuck Bulmer, PhD, P.Ag; Tim Ebata, MSc, RPF; Harry Kope, PhD, P.Ag; Lorraine Maclauchlan, PhD, RPF, RPBio; Brendan Miller, and Jewel Yurkewich, RPF, collectively contributed to the development of its strategic plan and in evaluating research projects appropriate to this intended outcome.

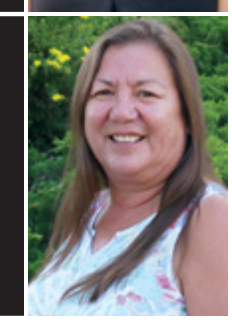
Examples of Cultural Heritage Resources - FROM LEFT TO RIGHT: *Rose hips are an excellent source of vitamin C, which helps prevent colds and flu, as well as provide a great boost in energy; choke cherries are also a source of vitamin C. They can be boiled, drained, and mixed with water for juice drinks and also dried and carried to mix with food sustenance;*

Forest Stewardship Plan Strategies

Since 2006, the Forest Practices Board recommended improvements to forest stewardship plan (FSP) content. The Board's most recent special report on FSPs examined whether FSP content has improved over time and found there is still room for improvement for FSP results and strategies to meet government objectives for resource values.

Cultural heritage resource management under *Forest and Range Practices Act* (FRPA) supports the ongoing connection of Indigenous Peoples to their cultures, traditions, histories, and philosophies. This aligns with and supports the resolutions in the *United Nations Declaration on the Rights of Indigenous Peoples*.

In this article, we look at the cultural heritage resource (CHR) value and offer some thoughts on how forest professionals can write a result or strategy that is likely to conserve, or if necessary, protect CHR.



Ask the Right Questions

FSP holders need to specifically ask affected First Nations to identify all known or potential CHR.

Tracy Andrews, RPF, is manager of audits and investigations with the Forest Practices Board. Tracy has worked for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development at the South Island Natural Resource District as a senior licensed authorizations officer, and for Tembec Industries in the East Kootenays.

Sally Sellars, RPF, works for Ministry of Forest, Lands, Natural Resource Operations and Rural Development. Northern Secwepemc born and raised in Xat'sūll/C'metem (Soda/Deep Creek), Sally graduated from UBC's Faculty of Forestry in 2006 with a BScF in Natural Resources Management and received a Natural Resources Technologist Diploma from Nicola Valley Institute of Technology in 1997.

Many CHR strategies make a basic commitment to share information with affected First Nations in accordance with government consultation agreements. Consultation agreements with First Nations address the potential impact of an activity on the rights and title of a First Nation, not on CHR.

All CHR dating to post-1846 are regulated under FRPA, not the *Heritage Conservation Act* (HCA)[1]. Any CHR that pre-dates 1846 automatically becomes an archaeological site and is regulated under the HCA. Archeological sites are defined as localities containing physical evidence of human use or activity predating 1846, burial places, Aboriginal rock carvings or paintings, or designated archeological sites[2].

Most First Nations make little or no distinction between archaeological sites and more recent CHR, as both contribute to a broader understanding of how First Nations people lived, and continue to live, on the land. For this reason, it is difficult to consider the two independently[3].

To understand which CHR require conservation or protection under FRPA, forest professionals need to develop an overall understanding of the types of features that exist on the land and what legal framework applies. This starts with asking First Nations for the type of information you are looking for. The *Forest and Range Evaluation Program (FREP) Protocol for Cultural Heritage Resource Stewardship Monitoring* includes a good description of CHR and the common documented and undocumented sources of CHR information.

Involve the First Nations in the Process

Full participation of First Nations in the process of CHR identification and the determination of necessary conservation or protection measures is ideal. First Nations communities are the keepers of a wealth of cultural knowledge. Some of this knowledge is documented, but much of it remains embedded in the minds of Elders and those who continue to use the resources today. Some First Nations



Douglas-fir pitch; a post-1846 Culturally Modified Tree (CMT), specifically, a Douglas-fir; and another post-1846 CMT where the base of the Douglas-fir shows how it was cut as a trail marker and also used to burn the pitch in cold weather for warmth, medicinal purposes and tree for shelter. All photos by Sally Sellars, RPF

and the Cultural Heritage Value

have inventories and technologies in place to enable spatial queries for CHR information, such as the Xat'sūll First Nation near Williams Lake. Their stewardship portal is a valuable resource that only Xat'sūll Nation members can access. Other First Nations may not have sophisticated inventories, but if taken to the site, they can identify if any cultural use occurs there.

Building relationships and trust with First Nations can lead to development of a higher level of understanding of their use of the land over time. This level of understanding enables forest planners to address conservation or protection of CHR values at strategic levels rather than on a block-by-block basis.

> The **objective set by government for cultural heritage resources** is to conserve, or if necessary, protect cultural heritage resources that are
> (a) the focus of a traditional use by an Aboriginal people that is of continuing importance to that people, and
> (b) not regulated under the *Heritage Conservation Act*

Make a Commitment and Communicate It

To be enforceable, there must be a commitment to conserve, or if necessary, protect the CHR in the CHR strategy. Documentation of the presence of a CHR and the conservation or protection measures in the site plan facilitates communication with those implementing the plan. This documentation helps prevent future impacts to a CHR by other tenure holders in a timber supply area who see an unharvested polygon with accessible timber values. If a CHR is protected in a wildlife tree retention area or other stand-level reserve, there is no evidence — other than the site plan — to communicate this important information. Documentation in a site plan also facilitates post-harvest monitoring.

Many First Nations are sensitive to sharing cultural information that could be made public knowledge in a site plan. There are good reasons for this sensitivity, as they do not want their special sites to become overused and abused. This sensitivity to documenting the presence of CHR adds risks to the ability to conserve or protect the value over time.

Monitor Results and Adapt as Necessary

It is important to know whether the measures put in place to conserve or protect a CHR were effective so that modifications can be made in future planning. For example, did the buffer of trees protecting a CHR endure the winter storms, or did the change in light levels affect the patch of medicinal plants? Again, involvement of the First Nations in the monitoring is important to build relationships and develop an understanding of what measures have better success in conservation and protection of CHR.

In summary, these four elements form the basis of a CHR strategy that is likely to conserve or protect CHR:

1. Share information on planned blocks and roads with First Nations with a request to indicate the presence of a known or potential CHR.
2. Invite First Nations to participate in the process of CHR identification and determining necessary conservation, protection measures, and monitoring measures.
3. Make a commitment to conservation or protection measures and document them in the site plan.
4. Monitor the effectiveness of the measures and adapt as required.

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1. Heritage Conservation Act; available online at http://www.bclaws.ca/civix/document/id/complete/statreg/96187_01
2. British Columbia Archaeological Handbook for Local Governments, https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/archaeology/forms-publications/archaeological_handbook_for_local_governments.pdf
3. Province of British Columbia, 2011. Protocol for Cultural Heritage Resource Stewardship Monitoring. Forest and Range Evaluation Program, B.C. Ministry of Forest, Lands and Natural Resource Operations and B.C. Ministry of Environment, Victoria, BC. https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/frep-docs/chr_protocol_may_16_2016.pdf

The ABCFP's 72nd Annual Forestry Conference and AGM will take place February 5-7, 2020, in Nanaimo at the Vancouver Island Conference Centre.

Our 72nd forestry conference will focus on explore a diverse line-up of topics, including managing old growth, herbicide use, the *Professional Governance Act*, forest hydrology in a changing climate, diversity in forestry, mental health and resilient communities, UNDRIP and the growing Indigenous economy, and much more.

Wednesday, February 5, 2020

8:00 AM – 12:30 PM	OPTIONAL FIELD TOUR **BC Forest Discovery Centre and North Cowichan Municipal Forest** Separate registration required. Cost: $45. Only 40 spaces available. Lunch provided.
12:00 PM	**Registration Opens**
1:30 PM – 3:00 PM	IN-DEPTH DISCUSSIONS **Old Growth: How are We Managing the Resource and the Expectations?** Sonia Furstenau, MLA – Cowichan Valley, Green Party of BC Shannon Janzen, RPF, vice president and chief forester, Western Forest Products Inc. Al Gorley, RPF, president, Triangle Resources Inc. **Are Herbicides Getting a Bad Rap?** Len Ritter, PhD, professor emeritus, toxicology, School of Environmental Sciences, University of Guelph Neil Hughes, RPF, forest establishment leader, Resource Practices Branch, Ministry of Forests, Lands, Natural Resource Operations and Rural Development
3:00 PM – 3:30 PM	COFFEE BREAK
3:30 PM – 5:00 PM	PLENARY PANEL **Thinking Locally: BC Communities and Forest Management** Gary Foster, Mayor, Northern Rockies Regional Municipality (Fort Nelson) Sharie Minions, Mayor, Port Alberni Bev Playfair, Mayor, Fort St. James Gary Bull, PhD, professor and department head, Department of Forest Resources Management, University of British Columbia
7:00 PM – 10:30 PM	**ICEBREAKER RECEPTION and TRADE SHOW**
9:00 PM	**Registration Closes**

ABCFP 2020 Nanaimo

Thursday, February 6, 2020

7:00 AM	**Registration and Trade Show Open**
7:00 AM – 8:00 AM	BREAKFAST
7:15 AM – 8:00 AM	**OPENING WELCOME**
8:00 AM – 9:00 AM	OPENING KEYNOTE **Meet the Superintendent of Professional Governance** Paul Craven, superintendent of professional governance, Ministry of the Attorney General Christine Gelowitz, RPF, CEO, Association of BC Forest Professionals
9:15 AM – 10:30 AM	BREAKOUT SESSIONS **Too Much Water; Not Enough Water: Forest Hydrology in a Changing Climate** Bill Floyd, PhD, RPF, research hydrologist, Ministry of Forests, Lands, Natural Resource Operations and Rural Development; adjunct professor, Vancouver Island University. John Rex, team lead, research and stewardship, Omineca Region, Ministry of Forests, Lands, Natural Resource Operation and Rural Development Domenico Iannidinardo, RPF, RPBio, P.Eng, vice president, forest & sustainability and chief forester, Mosaic Forest Management **Wildfire: Adapting and Managing for Continued Change** Jeff Mycock, RPF, chief forester, West Fraser Timber Mike Flannigan, PhD, professor, Department of Renewable Resources, University of Alberta; director of the Western Partnership for Wildland Fire Science Mike McCulley, research and innovation senior officer, BC Wildfire Service **Diversity in Forestry: Why Should I Care?** Kelly Cooper, founder and president, Centre for Social Intelligence Jonathan Lok, RFT, managing director, Strategic Natural Resource Consultants Inc.
10:30 AM – 11:00 AM	COFFEE BREAK
11:00 AM – 12:00 PM	BREAKOUT SESSIONS **UNDRIP and the Growing Indigenous Economy** Carol Anne Hilton, MBA, founder & CEO, Indigenomics Institute **Lessons from the Forest Practices Board: Managing for Fish Habitat** Doug Wahl, RPBio, manager, audits & investigations, Forest Practices Board Derek Tripp, RPBio, Tripp & Associates Consulting Ltd. Sam Coggins, RPF, director, investigations, Forest Practices Board **The Art of Public Engagement: Sharing the Story of Sustainable Forest Management** Stewart Muir, executive director, Resource Works Mackenzie Leine, RPF, vice president, business development and Indigenous partnerships, A&A Trading Rick Monchak, RPF, board member, Forest Practices Board
12:00 PM – 1:30 PM	KEYNOTE LUNCHEON with Jordin Tootoo **Aiming for Wellness Together: Mental Health and Resilient Communities**
1:45 PM – 3:00 PM	**72nd ABCFP ANNUAL GENERAL MEETING**
3:00 PM – 4:00 PM	**CONVERSATION WITH COUNCIL**
5:30 PM – 6:30 PM	**EXHIBIT HALL HAPPY HOUR**
6:30 PM – 11:00 PM	**PRESIDENT'S AWARDS BANQUET**
6:30 PM	**Registration and Trade Show Close**

Friday, February 7, 2020

7:00 AM	**Registration and Trade Show Open**
7:00 AM – 8:00 AM	BREAKFAST
8:00 AM – 9:15 AM	PLENARY Ministry of Forest, Lands, Natural Resource Operations and Rural Development Representative
9:15 AM – 9:45 AM	COFFEE BREAK
9:45 AM – 11:00 AM	BREAKOUT SESSIONS **What's a Forest Worth? Forest Resources, Ecosystem Services, and Natural Capital** Vic Adamowicz, PhD, vice dean, Faculty of Agricultural, Life and Environmental Sciences, University of Alberta; distinguished university professor, Department of Resource Economics and Environmental Sociology, Faculty of Agricultural, Life & Environmental Sciences, University of Alberta Emanuel Machado, chief administrative officer, Town of Gibsons Michelle Molnar, technical director, Municipal Natural Assets Initiative Brendan Mohan, RPF, operations manager, CFPC - Alcan **Reconciliation and Coastal Forest Revitalization** Keith Atkinson, forestry manager, Petroglyph Forestry Robert J. Dennis, Chief Councilor, Huu-ay-aht First Nations Trevor Joyce, RPF, manager, economic partnerships and sustainability, Interfor Seanna McConnell, director Indigenous relationships, Western Forest Products **The State of BC's Forest Inventory** William Bourgeois, PhD, RPF, president, New Direction Resource Management Ltd; chair, BC Forest Inventory Review Panel Ian Moss, PhD, adjunct professor, Faculty of Forestry, University of British Columbia Tim Salkeld, RPF, manager, forest inventory, Office of the Chief Forester Division, Ministry of Forests, Lands, Natural Resource Operations and Rural Development Eleanor McWilliams, RPF, analyst, project manager, J&E McWilliams and Associates Ltd.
11:00 AM – 11:30 AM	COFFEE BREAK
11:15 AM – 12:15 PM	**ABCFP ADVISORY RESOLUTIONS SESSION**
12:00 PM	**Registration Closes**
12:30 PM	**Trade Show Closes**
12:30 PM – 2:00 PM	**INDUCTEES' RECOGNITION LUNCHEON**

Keep an eye on our conference website for the most up-to-date information, including session summaries and speaker profiles.

FOR MORE INFORMATION, PLEASE VISIT abcfp.ca/WEB/ABCFPConference

Note: Program Subject to Change

BC'S MANAGED FOREST PROGRAM:

Supporting Sustainable Forestry and Long-term Forest Cover on Private Land

Jon Spalding is the fourth generation owner of his family's managed forest on South Pender Island. Above is an image from an earlier generation – a reflection on the longevity of sustainable forestry on private forest land.

With 95 per cent of BC's land publicly owned, many British Columbians have limited exposure to the role of the private-managed forest program in BC's forest sector, the diversity of managed forest holdings, and the contribution of these lands to the BC economy, local communities, and environment. The Private Forest Landowners Association (PFLA) represents managed forest owners across the province, with a dual mandate of advocacy and education.

Private-managed forest land is not simply forest that is privately owned. Managed forest land is a BC Assessment property classification (Class 7) established in 1988 to encourage private forest owners to manage their lands for long-term forest production, and to protect key public environmental values, namely fish and critical wildlife habitat, water quality, soil conservation, and reforestation. Private managed forest landowners who voluntarily join the managed forest program commit to managing their forests in accordance with the *Private Managed Forest Land Act* (PMFLA). Additionally, more than 30 other statutes govern land in the managed forest program, including the *Water Sustainability Act, Fisheries Act*, and others. Private forest land that is not part of the managed forest program is not subject to the regulatory oversight provided by the PMFLA and associated regulations.

There are more than 280 forest owners enrolled in the managed forest program covering more than 800,000 hectares of forest land. The program is overseen by the Managed Forest Council, an independent agency of the provincial government, established to administer the program, set and monitor forest practices, and enforce and perform audits. Managed Forest Council Chair, Rod Davis leads the five-member council.

"A key responsibility of the council is to review and approve landowner management commitments, and ensure that the requirements of the *Private Managed Forest Land Act* are being met

by landowners," Davis said. "Every year, we employ a team of independent registered forest professionals to conduct comprehensive field inspections, delivering on a key mandate of the Council to monitor and enforce forest practices on the ground."

While private-managed forest lands are found across the province, they play a significant role in BC's coastal forest sector where approximately 28 per cent of the coastal timber harvest comes from private lands. The Okanagan, Shuswap, and Kootenay regions are also home to many privately managed forest properties.

This diversity in ownership and the unique and important role of private managed forest lands are two key themes emphasized by the PFLA and its members through the recent public comment period for the BC government's review of the private-managed forest program. The PFLA is hopeful that one outcome of the review will be a broader understanding of the role of managed forest lands in BC and the program's importance for long term, sustainable forest management on private land.

PFLA members are incredibly diverse, and the managed forest program provides a regulatory framework that encourages and recognizes sustainable practices across large and small landholdings alike. The flexibility provided to implement innovative forest practices is a unique and important complement for private lands. There are examples from across the PFLA membership of innovative approaches to tackle important forest management challenges such as trials using tree seed from other jurisdictions to better withstand climate change impacts. As an association, the PFLA works to build understanding of the work its members do to advance sustainability and balance economic realities as private landowners, and ensure policies and regulations support ongoing success of sustainable forestry on private lands.

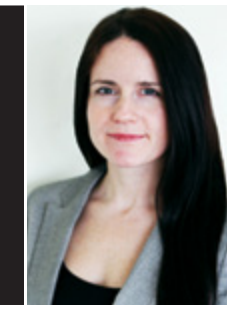
Jon Spalding is the fourth generation owner of his family's managed forest on South Pender Island, and shares the view that a deeper understanding for the role of active forest management would benefit small forest operations like his.

"Our experience is not unlike many of the managed forest owners, in that several generations have enjoyed a revenue base and rural lifestyle that was supported by long-term husbandry and harvesting of the forest," Spalding said. "A big focus of our efforts today is working with regulatory bodies like Islands Trust and local communities to build understanding on the importance of forest health, wildfire prevention, and sustainable forestry practices to support the viability of our family forest operation for four more generations and beyond."

Over the past several years, the Managed Forest Program has seen an increase in First Nations landowner members. Khowutzun Forest Services, a full-service forest management company owned and operated in partnership with Cowichan Tribes, manages the Nation's community forest tenure and private managed forest lands.

"The Managed Forest Program provides a regulatory framework that recognizes the benefits of long-term maintenance of the forest while respecting our decision-making authority as indigenous landowners," said Margaret Symon, RPF, Khowutzun's planning forester. "We see benefits in our enrolment in the program beyond the designation as managed forest land, particularly in the partnerships we build with other private landowners to implement management approaches that extend beyond our small private forest more broadly across our traditional territory."

Detailed information on the managed forest program, including legislation and regulation that guides professional practice on managed forest lands, is available on the Managed Forest Council website (mfcouncil.ca). Learn more about the Private Forest Landowners Association, its members and their activities, at pfla.bc.ca.



Megan Hanacek, RPF, RPBio, is the CEO of the non-profit Private Forest Landowners Association. For more than 25 years, Megan has led project work throughout BC with the provincial and federal governments, private industry, First Nations, non-governmental organizations, and academia. Megan was previously a forest stewardship specialist with the Association of BC Forest Professionals, managing director of the Association of Professional Biology of BC, and planning forester with the Ministry of Forests.

EMERGING FIRE MANAGEMENT RESEARCH:
New Fire Occurrence Models and Fire Behaviour Prediction Scheme

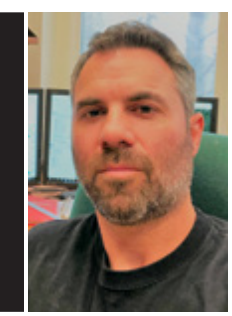
Introduction

Wildfires are in people's minds like never before in western Canada. In British Columbia, record-breaking fire seasons in 2017 and 2018 have prompted serious examinations of everything from ecosystem health to forest industry sustainability. A much quieter season in 2019 highlights the challenges of managing an extremely variable and unpredictable phenomenon.

With a heightened wildfire reality upon us, fire managers and researchers are both looking to new tools and resources to address the threat. "Management is prediction," said W. Edwards Deming, noted statistician and management guru, and this article introduces two new prediction schemes led by scientists from the Pacific Forestry Centre (Natural Resources Canada – Canadian Forest Service) in Victoria.

New FOP models for BC and Canada

Steve Taylor, RPF(Ret) is the lead investigator of a project to develop a suite of daily fire occurrence prediction (FOP) models for use across Canada. Although the idea of predicting the daily number of fires starts in a region with statistical models was introduced in the 1970s, new data-science techniques and computing power allow us to harness the rich information contained in decades of fire management data, including agency fire reports, fire weather observations, and lightning strike records.



Daniel Perrakis, PhD, is a fire research scientist with the Pacific Forestry Centre in Victoria, BC. He has more than 20 years of experience working in a variety of wildfire behaviour, ecology, and management positions, in both research and management roles. His current research focusses on creating practical decision support tools to assist fire and land managers.

Steve Taylor, RPF(Ret), research scientist, has worked on problems in prescribed fire, smoke management, ecosystem restoration, natural disturbance dynamics, fire behavior, and danger rating since 1985. He has also been deployed as a fire behavior analyst in severe fire years in BC. His current research is on predicting fire occurrence and load, fire behavior, and wildfire management decision analysis.

This project was supported by the Department of National Defence's Canadian Safety and Security Program and presents new person-caused, lightning-caused and large fire models, providing wildfire managers with greatly improved predictions[1].

In BC for example, Taylor and his collaborators constructed a dataset of 18 million 'voxels' with several dozen environmental variables in which approximately 60,000 fire starts were recorded over 30 years (1985-2014). Each voxel represents one day in a 20 by 20 kilometre grid cell across the province. Since 99.5 per cent of voxels saw no fires (since fires do not occur in a given location on most days), the researchers examined what factors could explain when and where fires ignite in the remaining 0.5 per cent.

"It is a bit like fraud detection, finding a few suspicious records in millions of credit card transactions" says team member Khurram Nadeem, assistant professor of statistics at the University of Guelph.

Using statistical methods known as lasso-logistic regression and some associated machine learning techniques, the researchers developed relationships between fire ignitions and factors such as fire weather, lightning, and other environmental variables. Models have now been finalized for BC and most other provinces; the next step involves integrating them into operational systems with real-time weather and lightning observations and forecasts. This will provide managers from provincial agencies with enhanced tools to predict the likely number and location of new starts during the fire season (e.g. Figure 1), allowing them to better pre-position initial attack resources (crews, aircraft, etc.) from other regions to the nearest attack base for the affected area. Such intelligence can also support decisions on whether to export crews and equipment if the need is greater in neighbouring provinces, for instance, or whether to "keep the powder dry," and hold resources close to home when a spike in new fires is expected.

This study has also confirmed the importance of various predictors: well-known factors such as lightning strike density and relative humidity as well as less obvious variables including atmospheric stability and a weekend effect for human-caused fires (in fact, more fires are detected on weekends than on weekdays).

The use of new analytical tools depends fundamentally on large volumes of high quality data as well as an understanding of the underlying processes. More work is needed in both these areas to keep refining our prediction tools.

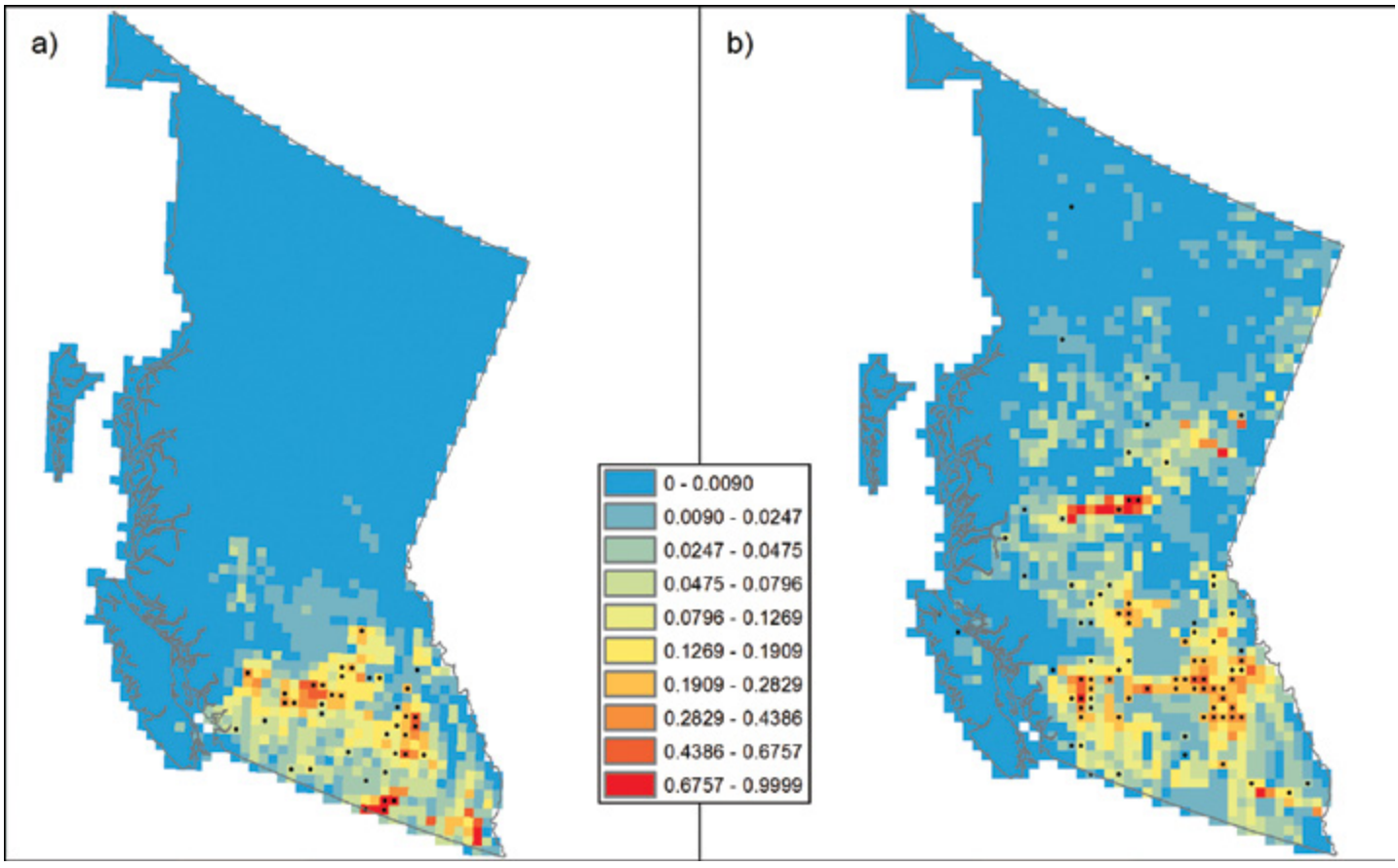


FIGURE 1. *Predicted probability of a fire occurring within a 400 square kilometre cell and locations of observed fires (●) on two days in the test dataset (adding the cell probabilities over a region gives an estimate of the number of fires). (a) Lightning caused fires on July 27, 2009: predicted 49.3, observed 39; (b) Lightning caused fires on August 1, 2009: predicted 84.4, observed 84.* Credit: Randy Moody

New Fire Spread Modelling Scheme – Canadian Conifer Pyrometrics

After a fire is detected, fire behaviour models can be used to predict the speed, intensity, and other related fire characteristics. These factors are critical for keeping fire crews safe and for efficiently deploying resources when multiple fires are active. Fire behaviour models are also frequently used in fire-risk mapping, as well as in planning treatments such as prescribed burns.

The Canadian Fire Behavior Prediction System (FBPS) was developed by fitting simple statistical models to fire observations from field experiments and wildfires, a 30-year effort completed in the early 1990s.[2] Since then, fire managers have used the FBPS to predict fire behaviour by means of computer models and look-up tables[3]. There are 16 fixed vegetation models ('fuel types') in the system, developed by researchers in order to simplify complex stand conditions into manageable categories.

However, the simplicity of the FBPS fuel types is also a limitation, as they are inflexible to varying conditions, such as site differences. For instance, in a mature lodgepole pine stand (FBPS 'C-3' fuel type) with 7 metre high canopy base height (CBH), the probability of a crown fire developing under dry and windy conditions is likely significantly higher than in an otherwise similar stand with an 11 metre CBH; but such comparisons are not possible using the present FBP System. More nuanced models that account for structural variation are sometimes needed.

Daniel Perrakis is leading the development of the tentatively-named Canadian Conifer Pyrometrics (CCP) System, part of the 'Next Generation' modelling that aims to introduce dynamic stand structure capabilities. Many of the new elements in the CCP are adaptations of a previously-published set of models, termed the Crown Fire Initiation and Spread (CFIS) system[4]. The CCP is a bridge between the FBP and CFIS systems – retaining the empirical basis and weather index components of the FBPS while adding variable stand structure and probabilistic crown fire initiation

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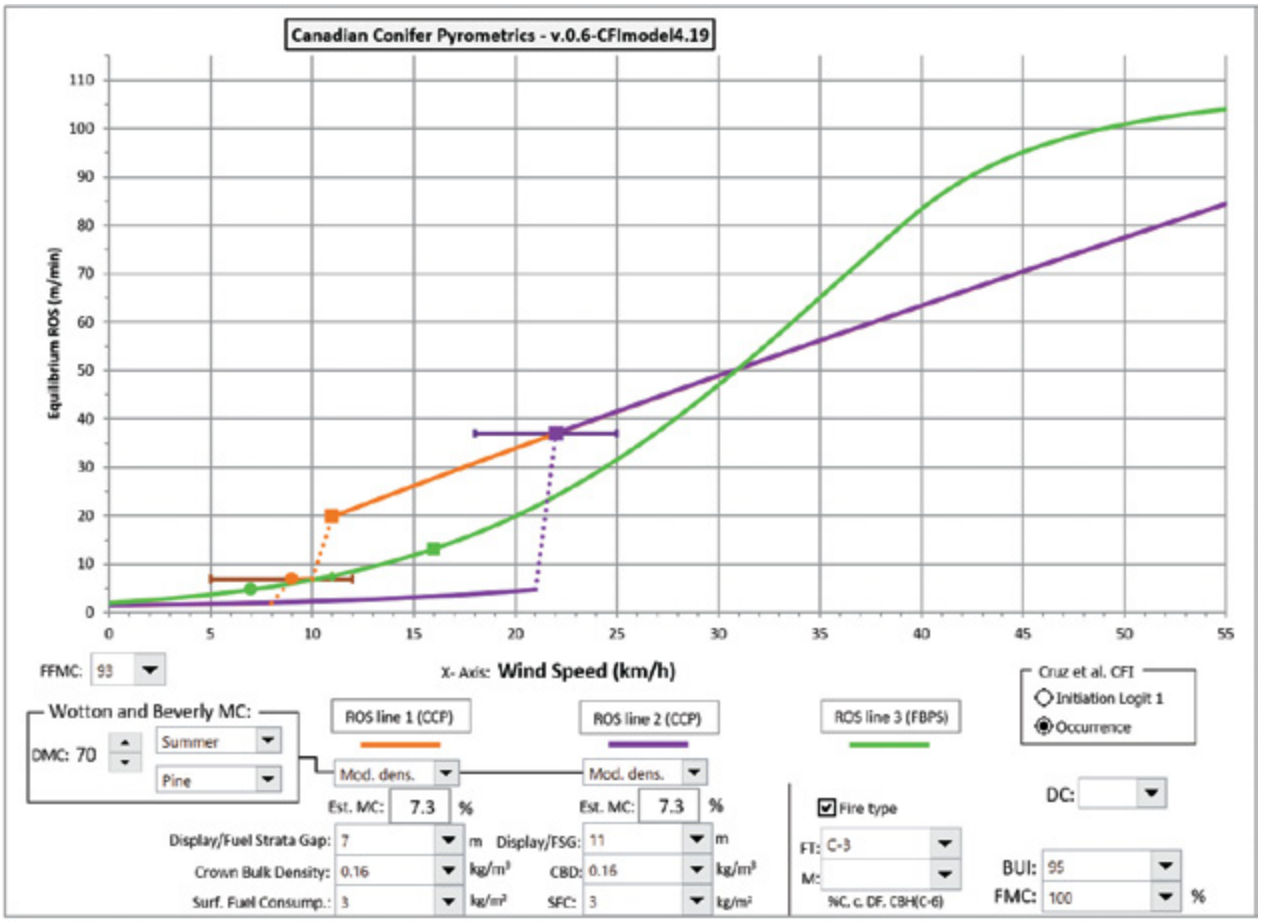

FIGURE 2. ***The FuelGraph tool is an MS Excel-based interactive tool for visualizing and comparing fire behaviour using the CCP and FBPS modelling systems. In this example, two different stands have crown base heights (termed 'Fuel Strata Gap' in the figure) of 7 and 11 metres, respectively. The predicted spread rate in the two stands using the CCP (orange and purple lines) can be contrasted with the FBP System prediction (green line). CCP System details are still being finalized.*** Credit: Randy Moody

concepts introduced by CFIS. The CCP system links separate surface fire, crown fire initiation, and crown fire spread models, and incorporates new research findings on fuel moisture content. By allowing users to vary stand parameters, the CCP potentially can be used to represent thinning treatments and other silvicultural changes, something that cannot be accomplished with the existing FBPS fuel type models.

The CCP System is still in development but a draft calculation tool (Figure 2) and conference paper describing the model structure[5] have been completed for potential users to test. In the example given above, the two stands with different CBH values can be compared (orange and purple lines), showing that a much higher wind speed is needed to initiate crown fire in the higher-CBH stand (purple line). The example also demonstrates the linkage between three models of surface fire spread, crown fire initiation, and crown fire spread (orange and purple lines) in contrast with the existing FBP system (green line is the C-3 fuel type) where these processes are implicit in a one simple spread curve. For those interested in learning more, a CCP workshop will be delivered at the upcoming Wildland Fire Canada 2019 conference (see www.wildlandfire2019.ca).

Ultimately, fire managers are tasked with preparing for and responding to wildfires, while forest managers manage vegetation to maintain economic value and resilient landscapes. Researchers can contribute to these efforts with innovative and relevant quantitative prediction tools. By implementing the best available research, managers can make decisions with precision and confidence.

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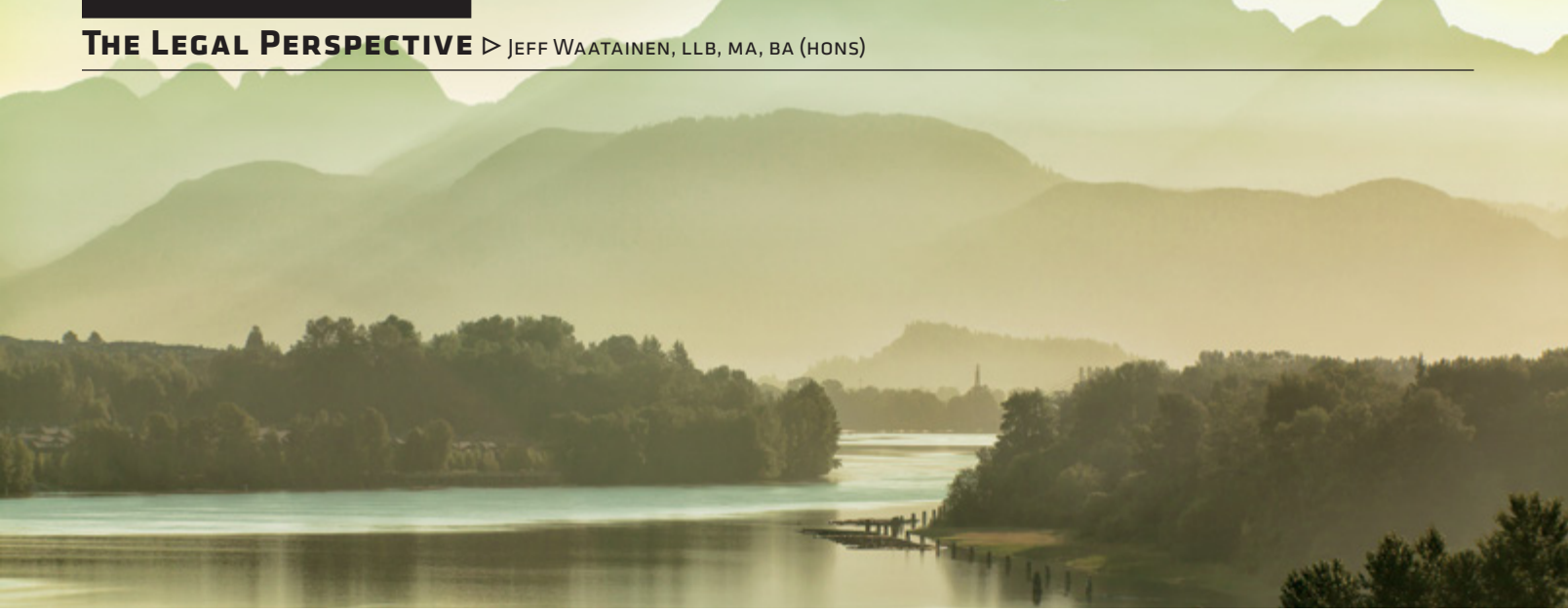
2. Forestry Canada Fire Danger Group. 1992. Development and structure of the Canadian Forest Fire Behavior Prediction System, Information Report ST-X-3, Forestry Canada, Ottawa, ON.
3. Taylor S.W., Alexander M.E. 2018. Field guide to the Canadian Forest Fire Behavior Prediction System. Special Report 11 (3rd edition) Nat. Res. Can., Northern Forestry Centre, Edmonton, AB.
4. CFIS is a series of papers and a simple software application developed by M.G. Cruz, M.E. Alexander and R. Wakimoto. See https://www.frames.gov/applied-fire-behavior/cfis for details and downloads.
5. Perrakis, D. D. B., M. G. Cruz, M. E. Alexander, S. W. Taylor, and J. L. Beverly. 2019. Linking Dynamic Empirical Fire Spread Models: Introducing Canadian Conifer Pyrometrics. Proceedings of the 6th Fuels and Fire Behaviour Conference, 29 April-03 May 2019, Marseille, France. Int. Assoc. Wildland Fire (In Press). See https://www.researchgate.net/publication/336013042



Bill 22, the *Forest Statutes Amendment Act*, 2019:
TRANSITIONING CONTROL OF FOREST TENURES

***The Forest Statutes Amendment Act, 2019* ("Bill 22") was introduced** into the Legislature for First Reading on April 11, and then brought into force on May 30, 2019. Bill 22 and companion amendments to the newly-named *Disposition and Change in Control Regulation* (the "Regulation") have changed how "dispositions" of forest tenures and "changes of control" of corporate forest tenure holders are regulated under the *Forest Act*.

Prior to Bill 22, whether a disposition or a change of control was permissible under the *Forest Act* depended upon whether the transaction would "unduly restrict competition" in the markets for standing timber, logs or chips. In the new post-amendment world, the test is whether the transaction is "detrimental to competition" in the marketing of fibre. Previously, the minister was required to permit the transaction unless it would "unduly restrict competition" whereas after the amendments, the minister must not permit the transaction if it is "detrimental to competition."

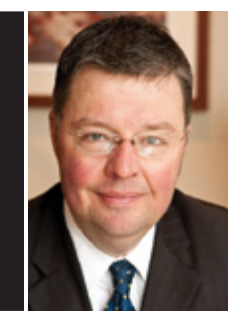
On the face of the language used in each test — "unduly restrict competition" and "detrimental to competition" — the new standard appears more difficult for the parties to a transaction since any reduction in competition is, arguably "detrimental," whereas any reduction in competition may or may not "unduly" restrict competition.

The amendments also require that government not permit a tenure disposition or change of control if it is "not in the public interest," so a proposed disposition or change of control must now pass both a "competition test" and a "public interest test." Neither the amendments in Bill 22 nor the related amendments to the Regulation include any legally meaningful language to define what is and what is not in the "public interest."

The transition from the old world to the new world was not really so much a "transition" as it was a dive straight into the deep end. Bill 22 included language to give the appearance that the pre-Bill 22 rules would apply to a disposition if there was a "notice of disposition" filed with government in relation to the disposition prior to the introduction of Bill 22 for First Reading, and would continue to apply to any change of control completed prior to that date. On that same date, however, the Regulation was amended to include a complex and archaic formula that employed the "Herfindahl-Hirschman Index" (HHI) to establish a threshold for whether a disposition or change of control did "unduly restrict competition." Before this, there was no regulatory test to determine what unduly restricted competition - it was a matter of government discretion.

At this point, there was no language included in the Regulation in relation to the new "detrimental to competition test" contemplated in Bill 22; the Regulation only addressed the old "unduly restrict competition." On July 19, 2019 (and, curiously, over six weeks after Bill 22 and the detrimental to competition test were in force), the Regulation was amended again to provide a test for whether a transaction was "detrimental to competition." With the July 19 amendments, the test previously included in the Regulation to determine whether a transaction would "unduly restrict competition" effectively became the test to determine whether a transaction was "detrimental to competition." While one cannot say, strictly speaking, that the July 19 amendments simply replaced the term "unduly restricts competition" in the Regulation with "detrimental to competition," that is their essence.

The July 19 amendments also added a transitional provision to the Regulation to confirm that the "unduly restrict competition" test that came into the Regulation on April 11 would continue to apply to a disposition with a notice of intended disposition filed before April 11, or a change of control that occurred before April 11. This was even though the test for "unduly restrict competition" introduced into the Regulation on April 11 is essentially the same test that the Regulation now applies to determine if a transaction is "detrimental to competition." So, while there was a transition from the old terminology to the new terminology, there was no substantive transition — the old world ended the minute the April 11 amendments to the Regulation were brought into effect.



Jeff Waatainen has served as an adjunct professor of law at UBC, practiced law in the forest sector for over twenty years, and works in the Forestry Law Practice Group of DLA Piper (Canada) LLP's Vancouver offices. This column is in the nature of general commentary only, and is not in the nature of legal advice or opinion.

Managing Risk in Multi-phase Operations:

Are You in Co

Imagine driving through a forest on a resource road. You round a corner and enter a cutblock in the middle of active harvest. Multiple harvesting phases are working in close proximity, including workers on foot. The question you should immediately ask yourself is, "Am I looking at safe phase integration or phase congestion?"

What is Phase Integration?

Phase integration is a management model that incorporates the operation of more than one forestry phase at a time within a single operating area, creating a multi-phase worksite; whereas, phase congestion occurs when poor integration of phases in a forestry operation creates risk to workers. Phases are not limited to road building, harvesting, and log hauling. Timber cruisers, survey crews, or on-site researchers are other examples of phases that may contribute to a multi-phase operation. Silviculture may also bear the consequences of poor phase integration. Even though silviculture activities may not enter a block until after other phases have left the site, some post-harvest conditions and road deactivation can increase the risk of hazards to silviculture workers.

There is nothing wrong with phase integration when done safely. Multi-phase harvesting operations in BC have become the norm. Issues arise within multi-phase operations when there is a breakdown in planning, supervision, and/or communications leading to workers becoming vulnerable to an increased level of risk.

Managing for Safe Phase Integration

What can you do as a forest professional to mitigate the risk of phase congestion in operations under your supervision? How do you ensure safe phase integration? First, ensure the licensee's harvest plan can be executed in a safe manner by the contractor(s) on site. For example, poor block layout or a rushed log delivery schedule is not conducive to safe harvesting practices. Second, ensure each contractor conducts a risk assessment of the operation, and then review the assessment with each contractor to ensure all phases and workers can operate safely.

Darcy Moshenko, RPF, is an industry specialist – forestry with WorkSafeBC. After growing up in Prince George, Darcy attended UBC and received his BSF in forest harvesting. Over his 30-year career, Darcy has held various roles in forest operations, fibre procurement, operations research, and safety.

Key steps for managing risk:

- Identify hazards and ask yourself, "Can one phase or worker affect the safety of another phase or worker at any point in time during the harvest schedule?"
- Assess the risk and establish parameters for low, medium or high-risk ratings. High-risk hazards are a priority and need to be controlled immediately.
- Identify threats — events, actions, or other factors that may lead to an incident if phase congestion were to occur. Ask yourself, "What can happen or change within the operation that would put workers at risk and increase the chance of congestion?" Some common examples include weather changes, mechanical breakdowns, personnel changes, adding phases or people to the work site, slope and terrain variability, transitioning timber types, and decreasing size of work area as the block nears completion or activities approach boundaries.
- Implement controls and procedures that prevent phase congestion incidents. Common examples of controls include signage, gates, road closures, traffic control, safe work procedures, plans/maps and schedules, tailgate meetings, whistles, horns, hand signals, radios, qualified supervision, worker training, re-scheduling or moving equipment and/or workers to safe work zones, and company policies. Be specific with how you will use the control and how these messages are communicated to workers and supervisors.
- Ensure critical controls are in place. These are the last line of defence in prevention of incidents. Examples may include stop work procedures, refusal of unsafe work, proximity detection equipment with shutdown features, and telematic/geomatic systems for safety. New technology has the potential to revolutionize workplace safety.

When suitable controls are in place, and they are understood and followed by all phases and workers, then the risk level of phase congestion should remain low.

What are Suitable Controls for Preventing Phase Congestion?

Suitable controls will depend on each individual operation. The key questions to ask yourself are:

- What controls do I need in place to ensure scheduling of the operation is executed according to plan?

ntrol?

- What controls do I need in place to ensure qualified supervision is on site to execute the plan?
- What controls do I need in place to ensure hazards and the harvest plan are effectively communicated to workers, and that all workers are able to effectively communicate with each other on site? Also, if there are changes to the harvest plan, how will this be communicated to workers and contractors?
- If all other controls are breached, what critical control(s) is in place to prevent an incident?

Ensuring Everyone Goes Home Safely

Historically, the forest industry has had a "get it done" attitude that has sometimes led to an acceptance of high risk situations. Workers push hard for production and sometimes can take shortcuts, or are put in situations that make them and others vulnerable. The forest industry's injury rate has improved in recent years; however, it's now time to take the next step and manage safety with a lower tolerance for controllable risk, and continue reducing the injury rate.

If safety is not on your mind, just remember that safety is on the mind of those waiting for you and your workers to return home at the end of the day. The final question to ask yourself again, when it comes to avoiding phase congestion is: Are you in control?

For More Information

For more information, please read the *Phase Congestion Review* by the BC Forest Safety Ombudsman, Roger Harris, at bcforestsafe.org. Search "phase congestion" to view the report.

Note: Individuals may have applied for a change to their status since this posting. Check the directory on the ABCFP website at www.abcfp.ca/web for the current list of registrants. Names may also appear more than once if the individual has/had multiple designations or multiple changes within the same month.

August 2019

NEW REGISTERED PROFESSIONAL FORESTER
Thomas Dean Kress, RPF

NEW REGISTERED FOREST TECHNOLOGIST
Dominique Ray-Lee Bailey, RFT
William Graham Brown, RFT
Robin Christoph Kessler, RFT
Benjamin Matthew Trerise, RFT
Serena Ann Westendorp, RFT
William Tyler Wood, RFT

NEW FORESTER IN TRAINING
Timothie Chapman, FIT
Agnieszka Maria Duszynska, FIT
Sydney Nicole Eriksen Havenga, FIT
Dana Nicole Hopfauf, FIT
Anisa Ishak, FIT
Patrick Riley Ladyman, FIT
Felicya Lau, FIT
Esmee Tamar MacDonald, FIT
Danielle Alexina Main, FIT
Derek Allan McLean, FIT
David Jonas Montwé, FIT
Quentin Cole Joseph Nelson, FIT
Dominik Piatek, FIT
Emily Michelle Pollington, FIT
Alexander Benjamin Ritz, FIT

NEW TRAINEE FOREST TECHNOLOGIST
Henry Alfred Anthony, TFT
Reece Beach, TFT
Augustus E.W. Dolan, TFT
Chadwick Nikolas Warrender Garriock, TFT
Hayden Wyatt Leo, TFT
Jesse Roberts Pratt, TFT

NEW ACCREDITED TIMBER CRUISER
Thomas William Liam Boal, ATC
Tyler Smith Lindberg, ATC
Alexandre Paz Castro, ATC

REINSTATEMENT - RPF FROM LOA
Balvinder S. Biring, RPF

DECEASED
William Thomas Charke, RPF
Peter L. Fuglem, RPF(Ret)

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

NEW RETIRED RPF
John Paul Thibeau, RFT(Ret)

RESIGNATION - RPF
David S. Bain
Carlos Molina

RESIGNATION - RPF RETIRED
Arthur A. LaCourciere

RESIGNATION - RFT
Richard Lee Winje

RESIGNATION - FIT
James Michael Hogan
Victor Ramirez Nery

RESIGNATION - TFT
Jeremy David McIntyre Green
Sam Mackenzie Powell

September 2019

NEW REGISTERED PROFESSIONAL FORESTER
Peter Charles Dowding Cherniwchan, RPF
Jason Dwayne Davis, RPF
Montana Goddard, RPF
Jeffrey David Hamilton, RPF
Lucian L. Serban, RPF
George Carl Simpson, RPF
Lisa Beth Spingle, RPF, ATC

NEW REGISTERED FOREST TECHNOLOGIST
Rianna Sarah Martindale, RFT
Corey Andrew Plester, RFT
Jared Seth Wicklund, RFT

NEW FORESTER IN TRAINING
Ryan Anthony Banwarth, FIT
Yingbing Chen, FIT
Aaminah Cole, FIT
Jared Daniel Collen, FIT
Drew Nyal Cook, FIT
Casie Jade Gano, FIT
Yuan Gao, FIT
Justin C. Goodman, FIT
Alexis Mary Gottfriedson, FIT
Felicia Cerasela Grigoras, FIT
Amber Heather Anne Kelly, FIT
Anne Nitsa Lumumba, FIT
Nathan James MacNutt, FIT
Khoi Dang Mai, FIT
Taylor Aaron Makinen, FIT
Jonathan Rothwell, FIT
Michelle Lynn Seager, FIT
Alyssa-Ashely Janet Skov, FIT
Ryan Tate, FIT
Steven Franco Tostenson, FIT

NEW TRAINEE FOREST TECHNOLOGIST
David Bibeau, TFT
Kaitlin Danielle Fader, TFT
Trisha L. James, TFT
William David Johnson, TFT
Scott Thurston, TFT
Jessica Lee-Anne Wiens, TFT
Lucas Kenneth Wilford, TFT

TRANSFER FROM FIT TO TNRP
Laura Elizabeth Young, TNRP

REINSTATEMENT - RPF
Jessica Meren Amonson, RPF

REINSTATEMENT - RPF FROM LOA
Athena Grace Andritz, RPF
Joanna Grace de Montreuil, RPF
Rhiannon Elise Poupard, RPF
Jennifer Dawn Wright, RPF

REINSTATEMENT - RFT FROM RETIREMENT
Brian Michael Dureski, RFT

REINSTATEMENT - RFT FROM LOA
Alan Herman Glencross, RFT

DECEASED
Jeffrey David Alexander, RPF

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

NEW RETIRED REGISTRANTS
Douglas Layden, RPF(Ret)
James A. Northrop, RPF(Ret)

REMOVAL - TFT
Caleb Daniel Crain

RESIGNATION - RFT
James Blackstock McBride
Darrell Craig Van Os

RESIGNATION - FIT
Anisa Ishak

Statistics: Totals (Year-to-Date)

Professional Foresters								Professional Technologists				Associate Categories							Net Effect
RPF	RET	LIFE	FIT	FP	SP(V)	SP(T)	SP(L)	RFT	RET	LIFE	TFT	ATC	ATE	TNRP	NRP	SAS	AM	HM	
2682	505	140	469	0	1	0	7	1276	118	3	297	95	58	1	2	9	0	20	5683

It is very important to many registrants to receive word of the passing of a colleague. Registrants 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 registrants:

Jeffrey David Alexander,
RPF #3502

October 3, 1971 —
August 23, 2019

It is with deep sadness we announce the passing of Jeffrey David Alexander. Jeff was on holidays, chartering his fishing boat when he passed away. Jeff leaves behind his loving wife Nyree; his children Haley, Mackenna, Ethan; and grandson Leland.

Jeff was born in New Westminster, BC and spent most of his childhood and teenage years in 100 Mile House. He loved the outdoors and spent his early years training and racing a sled dog team, skiing, fishing, and hunting. After high school, Jeff decided to pursue an education in forestry. He spent two years at BCIT and moved to Prince George where he received his bachelor's degree at UNBC. After graduating in 1996, Jeff and Nyree moved to Williams Lake where he began his forestry career. Jeff became a registered professional forester in 1998. He was a dedicated and well-respected employee of Tolko Industries Limited and recently completed 23 years of service.

Throughout Jeff's forestry career, he built strong relationships, collaborating, mentoring, and supporting others. He had a genuine eagerness to educate and help the next generation of forest professionals be equally strong and confident. He was very proud of his forest renewal rehab projects, planning initiatives, development work and all the close working relationships he built with First Nations and local communities.

Jeff's zest for life was evident in everything he did. He approached every day with enthusiasm that was felt by his family, friends, and co-workers. He was a very personable, genuine, open, and honest person with a great sense of humor and an infectious smile. He had the ability to connect to anyone and always wanted people to feel included. He was a great leader, mentor, and friend to so many people. He will be dearly missed and leaves a void that will be very difficult to fill.

Lou K. Tromp,
RPF #1487

April 10, 1956 —
August 29, 2019

Lou K. Tromp, RPF, passed away in Chemainus, BC on August 29, 2019, following a courageous battle with cancer with Alice, his wife of 40 years, by his side.

Born and raised in Duncan, Lou had a love of the outdoors that led to a long career in the forest industry after graduating in forestry at UBC in 1979 and receiving his RPF in 1981. Lou's career began after graduation, starting in timber cruising for BC Forest Products, based out of Vancouver, before moving to Port Renfrew in 1980. Positions with the BC Forest Service followed in Williams Lake in 1986, Smithers in 1989, and Victoria in 2013. Lou possessed qualities that embodied the consummate forest professional: honesty, integrity, the ability to tell right from wrong, and the courage to always do the right thing.

Of Dutch origin and a farmer at heart, Lou enjoyed running the Tromp U-Pick Strawberry Farm and raising beef cattle with Alice in Smithers. They also spent many weekends and holidays camping with their two daughters.

Lou retired from the Forest Service on January 31, 2019 and was looking forward to travelling with Alice and spending quiet time on the lake fishing. He had also taken up cycling while living in Victoria and he and Alice enjoyed going for long rides together on the weekends in the summer and walks on the beach in the fall and winter.

Lou is survived by two daughters, Colleen (Devon) Van Veen and Cheryl Tromp (Dave); three grandsons, Trayke, Tyson, and Jeremiah Van Veen; two brothers, Jelmer (Wendy) Tromp and Ralph (Ginny) Tromp; as well as numerous extended family members and friends. A memorial was held for Lou in Duncan on September 7, 2019.

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