



The Understory

As our ministry explores greater opportunities to promote partnerships through program-level operations and government-to-government mandates towards reconciliation with Indigenous peoples, we look for ways to share these stories with our coworkers and to continue to implement the *Declaration Act* and the Truth and Reconciliation Calls to Action. The FLNRORD Understory Newsletter welcomes your experiences on this path of learning and healing, and offers a space for staff to communicate their views and on-the-ground efforts for all aspects of their work.

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Feedback? Questions? Story ideas? Write to [FLNR News](#).

BERG'S EYE VIEW

by Shane Berg



Berg's Eye View



Photo by Gabrielle Mustapich on Unsplash



Eagle Pass Mountain Lookout turns 100 Years Old

By: Kevin Lavelle, Former FLNRORD Employee

August 24, 2021



Figure 1: Photo courtesy of Trails to the Shuswap, 2nd Edition, Barz, Crowley, Crowley and Wharton, 1976.

This year marks the 100th Anniversary of the activation of Eagle Pass Fire Lookout, a Dominion built structure that was used for wildfire detection services for both the federal and provincial governments until about 1932. It is located west of Revelstoke, B.C., and was one of a number of Dominion Fire Lookouts built to protect the “Railway Belt,” a 20 mile wide strip of forest either side of the Canadian Pacific Railway. Later this summer, three former BCFS staffers, Jim Wright, Peter Rennie and Kevin Lavelle will hike up to the lookout and celebrate the centennial with a tribute to those hardy souls who built the trail and manned the lookout all those years ago.



Figure 2: Photo courtesy of Kevin Lavelle, 2021.

Jim Wright conducted research into the history of the lookout and writes, “Work on the lookout, located on top of a prominent 7700 foot (2351 m) peak overlooking the Eagle River valley, began in 1920. John ‘Jack’ Mizon the first fire ranger for the valley, built the 13 mile (21 km) long pack horse trail up the Crazy Creek valley from the Taft railway station and supervised construction of the lookout, telephone line, and a log cache cabin halfway along the trail. His 19-year-old son Christopher, beginning a long career as assistant forest ranger with both Dominion and BC Forest Branches that lasted until 1956, packed supplies and materials up the trail. The federal government paid him \$1.10 per day for his horse, plus 10 cents for shoeing it. Jack Aubrey of Malakwa was the first lookout man. The abandoned building slowly deteriorated, losing its roof some time prior to 1975.”



Figure 3: Photo courtesy of Kevin Lavelle, 2014.

Today, the hike up to the lookout has become increasingly popular since it was designated an official trail by Recreation Sites and Trails BC several years ago. A controversial new cabin was built on top of the original stone and mortar base in 2016. Since then, a multi-stakeholder committee has been assigned the task of sorting out what to do with the structure that will ensure a safe, properly constructed and maintained lookout that considers First Nations and other user groups.

Happy Anniversary Eagle Pass Mountain Lookout!



Figure 4: Photo courtesy of Kevin Lavelle, 2021.





Toadal Nerds at BC Timber Sales

By: Heather Soo, Planning Forester, and Hilary Fraser, Forest Technologist

BC Timber Sales – Strait of Georgia Business Area

August 24, 2021

Since 2015, the folks at BC Timber Sales (BCTS) Strait of Georgia Business Area have been informally monitoring a great migration of wee proportions: every summer, thousands of tiny toadlets make their way from a lake, hardly bigger than a pond, across the adjacent forest service road to disperse into the forest. About one per cent make it to adulthood, but those that do migrate back to the very same lake every spring.

The species, *Anaxyrus boreas* or Western Toad, is federally ranked as a Species of Special Concern and is yellow listed in British Columbia as a species at risk. Eager to fully understand the scope of the toads' spawning and migratory activity in order to implement a best management strategy, BCTS stepped up their monitoring efforts in 2018 and brought a herpetologist, Elke Wind, onboard to help take stock of the toads' migratory patterns.

As it turns out, BCTS was not the only one monitoring these little amphibians. Over the past few years, they have become social media stars thanks to photographer Maxwell Hohn, who has been documenting the toadlets' migration on Instagram. After Hohn and BCTS' paths crossed, he accompanied BCTS staff on one of our field visits. We were able to connect Hohn with our herpetologist, so Hohn could use his platform to increase awareness and better educate the public on Western Toads. [Hohn's mini documentary "The Big Little Migration"](#) captures the toadlets' travels and features our own forest technologist, Hilary Fraser!



Figure 1: Hilary Fraser, forest technologist, with a Toad Crossing sign. Photo credit: Maxwell Hohn.

BCTS' Western Toad monitoring project concluded in 2020. The project report that resulted has helped to inform our management plans for the species' migration and habitat. Potential management options include installing culverts for toads to use as road underpasses, installing directive fencing or structures to keep the toads off the main road, or simply gating off the road during the peak of the migration. While we determine our path forward, we have posted "Toad Crossing" signs on the road the toads use en masse every year. This interim approach alerts the public to the hundreds of thousands of tiny summer road users and asks them to share the road responsibly. Be sure to check out [Hohn's spectacular eight-minute nature documentary on YouTube](#) to learn more about these little creatures and their big journey!

Western Toad regions in B.C.: Vancouver Island, Lower Mainland, Thompson, Kootenay, Cariboo, Skeena, Omineca, Peace, Okanagan.

Listen to the [Western Toad Call](#).



Figure 2: Western toadlets impersonating a rock. Photo credit: Heather Soo.



Photo by Gabrielle Mustapich on Unsplash



Guardian and Steward Training – June 2021

By: Holly Frederickson, Compliance and Enforcement Branch

August 24, 2021

Twenty Guardian Watchmen and Stewards from across B.C. completed online training June 8-10 under the expert guidance of CEB trainers. The participants represented Skél7awlh Stewards (Lílwat N'Quatqua), S'ólh Téméxw Guardians (Stó:lō/S'ólh Téméxw Stewardship Alliance[STSA]), Musqueam Indian Band Environmental Stewardship Department and Fisheries, Penticton Indian Band Member Guardians, Okanagan Indian Band, Nisga'a and Saulteau First Nations.

“Guardian Watchmen are often referred to as the ‘eyes and ears’ of the land and sea. Guardians are often hired by their nations to act as protectors and stewards of the lands and waters they and their ancestors have inhabited for millennia. Guardians are involved in a wide range of work, from gathering knowledge about the state of ecosystems, to enforcing the prohibitions and restrictions declared under Indigenous law, to seeking further support from the Canadian state.” (Source: [gw laws to protect land and sea final.pdf](#) [wcel.org])

This opportunity was made possible through the liaising efforts of CEB's NRO Investigator, Kat McNamara, and NROs Tammy Jones and Lisa Taylor, who worked closely with the training team to organize the session.

To support this important role of Guardian Watchmen, the purpose of the training is to:

- Recognize the importance to observe, record and report incidents;
- Understand how information received by NROs is used; and
- Build on the foundations for a successful, forward-looking relationship.

The three-day virtual training started by explaining the role of NROs. It then focused on Basic Law, field observations, investigative skills, note-taking and photography, plus details about the BC Courts system and giving testimony. The third day provided Tactical Communications training.



Figure 1: Pictured here are NRO Supervisors, Daniel Smallacombe (Campbell River) and Tony Temple (100 Mile House). Not pictured are NRO Supervisor, Sam Isaak, and Training and Education Coordinator, Holly Frederickson.

Thank you to the instructors who shared their extensive experience and knowledge in this new learning format!





Out with the old, in with the first step towards modernization

By: Candace Marynuik, Internal Communications and Online Content, ENV

and Dona Stapley, Business Change Advisor, IIT

August 24, 2021

The Integrated Forestry Project



In the mid 2000s, it was evident that many of the current forestry suite of systems were becoming outdated, increasingly more expensive to maintain and nearing failure. As these systems headed towards their end of life, it became challenging to accommodate the necessary upgrades and the mandated changes required. These downfalls would result in lost revenue and a poor perception of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD). They could also potentially result in road safety lawsuits for the Province.

As the [Resource Roads Project](#) contemplated an application to support a possible new Resource Road Act, it appeared to be the perfect time to begin the process of modernizing the [Forest Tenure Administration \(FTA\)](#).

Around the same time, the [Natural Resource Permitting Project](#) (NRPP) was formed and one of the projects under that umbrella was the Cutting Permit Streamlining Project, which also would require FTA changes. As a result, the Cutting Permit Streamlining Project joined forces with the Resource Road Act Business Innovation Team capital project in 2018. These projects then collectively transformed into the Integrated Forestry Project (IFP).

IFP was the first step towards modernizing the outdated forest tenure suite. The project has been broken down into smaller modules that are easier to manage and more cost effective to maintain. Over time, these changes have evolved FTA into FTA 5.0.

One of the new modules, the Cutting Permit, Road Permit and Road Use Permit smart forms on the Natural Resource Online Services Portal, helps make amending road permits easier for forest licensees and gives them the ability to apply for a road use permit to use Forest Service Roads.

Administration processes will also be improved as the data uploaded will be integrated across all platforms and applications. This will allow administrative staff more time to handle higher priority tasks and initiatives. The data from the Resource Roads System (RRS) will also be accessed by other corporate applications, such as Land Resource Manager Operations, which now provides the ability to track and monitor assets (bridges and culverts) and user of forest service roads, reducing government liability.

Solving the problems identified aligns with the Province's strategy around forestry revitalization – engaging with First Nations and commitments to the United Nations Declaration on the Rights of Indigenous Peoples, increasing global competitiveness, and supporting B.C.'s economy and rural communities. Thousands of external stakeholders will be affected by IFP's launch, as well as hundreds of internal stakeholders.

There have been many changes to legislation and planned legislation since the inception of IFP including the decision to not move forward with the Natural Resource Road Act. However, the need to make changes to modernize the applications has always remained.

IFP will result in more effective and efficient systems for forest tenure administration, increased confidence in the data within these systems, and will help forecast revenue expectations. The new systems are easier to use, reduce complexity, and will be more responsive to change in a timely manner.

IFP's success was entirely due to the unwavering commitment and dedication of many individuals and teams to get the project over the finish line.

Teams that contributed to IFP's success were:

- IFP User Acceptance Testing Team
- Information, Innovation and Technology Division
- Engineering Branch
- Timber Pricing Branch
- Forests Implementation Leads Team
- Forests Resource Regions
- Forest District Tenures and Engineering Staff
- Forests GIS Community of Practice
- Forests Business Administration Leadership Team
- Downstream Business Application Owners

Thank you to everyone involved.

For more information on IFP, please email [Leslie Kilpatrick](#), IFP Project Manager.





FLNRORD Research Program – Brief Summary of Achievements – North Area

By: Francesco Cortini, PhD RPF, Research Management Lead

Forest Improvement and Research Management Branch

August 24, 2021

The North Area includes the Skeena, Omineca and Northeast Regions, and the Research Program is represented by 17 research scientists that conducted 48 research projects during the past fiscal year (2020-21). These projects fall under the Research Program's portfolios as follows: Water – 21 projects, Ecosystem Health and Disturbance – 9 projects; Ecosystem Stewardship – 9 projects; Timber – 6 projects; Species and Habitat – 2 projects; and Bioeconomy – 1 project. The research scientists from the North Area also worked on more than 10 additional research projects funded outside the program.

A good example of the research conducted in the Skeena Region is the Date Creek Research Forest where research has taken place for more than a quarter of the century. Date Creek is located near Kispiox in Gitksan territory and was recently showcased in a virtual tour video posted on YouTube. Even though travel has not been possible over much of the last year, this video allows the viewer to experience the interior cedar hemlock forests of Date Creek and to learn about some of the scientific results. Research at Date Creek has spanned a wide range of forest values, from timber to water, wildlife, biodiversity, and more recently, carbon sequestration and storage.

Watch the [virtual tour link](#) or search for “virtual tour of the date creek research forest.”



Figure 1: Foresters, managers, researchers, school groups, and the public have been visiting the Date Creek Research Forest since it was initiated in the early 1990s. The Northern Silviculture Committee tour pictured here visited shortly after logging treatments were applied.

A good example from the Omineca Region is the work conducted by Jewel Yurkewich, Regional Forest Pathologist: Investigating “diesel stain” in spruce wood and ecological linkages.

In 2016, the local industry raised concerns about the potential economic losses due to “diesel stain” of spruce wood and the possibility of the stain to be linked to the ongoing spruce beetle outbreak. In response, the Ministry initiated a project in collaboration with the local industry and the University of Northern British Columbia to address this concern by sampling lumber with “diesel stain.” The results indicated that “diesel stain” is associated with fungi and thus, the name “diesel rot” was adopted. These fungi are not reported as the typical fungal “hitch hikers” associated with spruce bark beetle, but are instead characteristic of decadent, dying, damaged or dead trees. Thus, the co-occurrence of these fungi and spruce bark beetle within old spruce forests must be expected based on the principle of ecological niche.

Since “diesel rot” affects wood quality and strength, this study suggests that early detection of wood decay and susceptible timber types will help mitigate the processing challenges associated with rot. The industry might consider tracking the ecological information of the wood entering the mill to rank the likelihood of wood decay incidence.

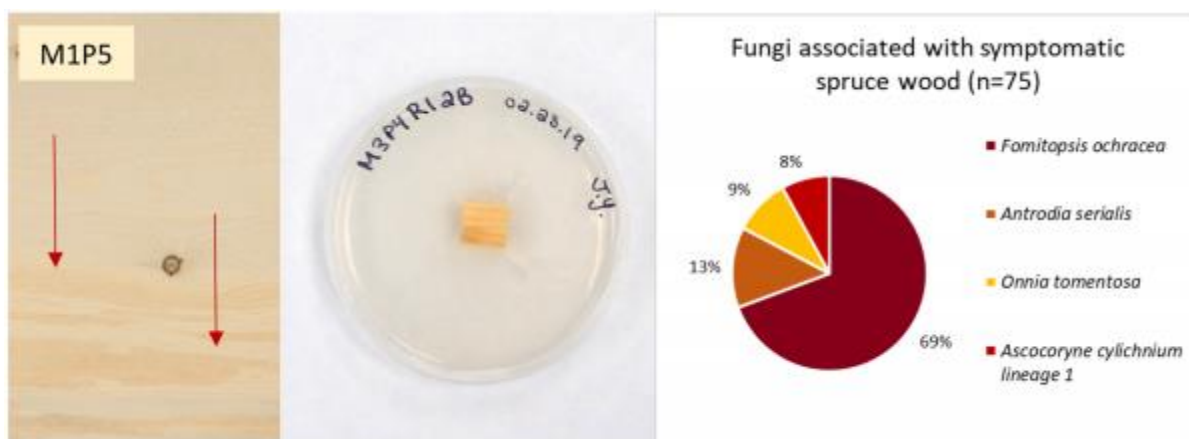


Figure 2: Characteristic diffuse, irregular pattern and “wet” appearance of symptomatic “diesel rot” in raw, pre-kiln dried lumber (red arrows; left). Initial culture preparation with surface sterilized wood cube on water agar (middle). Fungi associated with symptomatic spruce wood as determined by DNA sequencing of 75 pure cultures (right).

In the Northeast Region, Richard Kabzems, Research Silviculturist, is working in co-operation with the Tumbler Ridge Community Forest and Dr. Che Elkin at UNBC to assess wildfire hazard reduction treatments and to consider innovative management regimes which may combine community forest use with reduced fire hazard into the future.

This study quantifies the baseline residual structure, tree composition, volume and type of fuel levels after wildfire hazard reduction activities using aerial LiDAR in combination with field data. The SORTIE-ND model was used to generate a variety of silviculture options including: 1- natural regeneration only, 2- planting low density (600 st/ha) or higher (1400 st/ha) densities of white spruce or lodgepole pine, 3- planting pine or spruce in a clumped rather than a uniform distribution, and 4- implications of leaving mature aspen stems after the initial harvest. The results of this study will be available in 12 months.

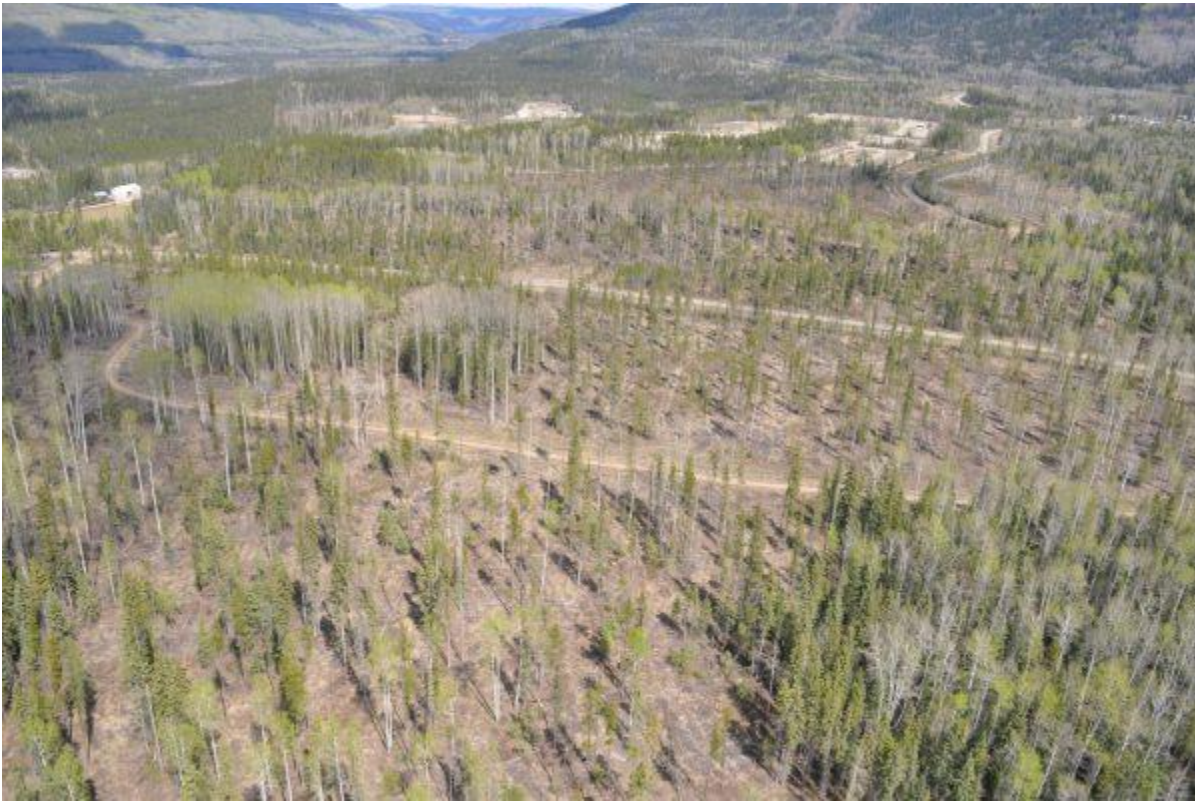


Figure 3: Aerial view of wildfire hazard reduction harvest area near Tumbler Ridge townsite in May 2019, two years post harvest. Photo courtesy Duncan McKellar, Tumbler Ridge Community Forest.

For more information, please contact Francesco Cortini at Francesco.Cortini@gov.bc.ca.



DOS Consultation and Relationship Building Series is a Hit!

By: Kelly Chiatto, Senior Advisor, and Meaghan Murphy, Advisor
Okanagan Shuswap Natural Resource District Indigenous Relations Team
August 24, 2021

This Spring, the Okanagan Shuswap Natural Resource District (DOS) Indigenous Relations Team delivered a six-week Learning Series. The team's Senior Advisor Kelly Chiatto and Advisor Meaghan Murphy, created the series for staff who are new to consultation and for those who wished to improve their Indigenous knowledge, relationship-building skills with First Nation communities, and gain a greater understanding of how to implement the Truth and Reconciliation Calls to Action. The Learning Series had an average of 47 attendees per session, including staff and managers across business lines and program areas from throughout the Thompson Okanagan Region.

The first three sessions were delivered by guest facilitators. Kristen Brewer, the Manager of Aboriginal Litigation and Consultation, presented an introduction to case law and Indigenous history in Canada. Kristen provided a foundation of Indigenous history and the Indigenous experience in Canada, and the legal relationship between Indigenous peoples and the Provincial and Federal Governments. The next two sessions built on Kristen's module, providing a deeper understanding of our shared history and Government-Indigenous relations. Nicole Gagnon, who leads cultural safety and reconciliation training for FLNRORD, presented the two-part UN Declaration and Truth and Reconciliation Commission Group Discussion. The staff that attended these sessions received credit in My Learning as part of the Fundamental 5 Actions.

Meaghan developed and presented Session Four, an overview of consultation from policy to practice. The session included a review of history and case law, how the UN Declaration and the *Declaration Act* changed consultation practices, practical steps for implementing consultation, including a demonstration of consultation tools, and a fulsome question and answer period to address individual concerns and examples.

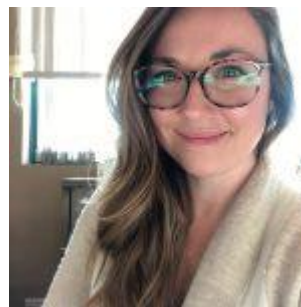
Kelly and Meaghan developed and presented much of the Session Five content; however, they also reached out to Sarah Desrosiers, an Advisor in the Cascades Natural Resource District, to present on the Nlaka'pamux Nation. The session focused on the rich and distinct cultures of the Syilx, Secwepemc and Nlaka'pamux Nations, and a deeper examination of the impacts of colonialism and our shared history on Indigenous communities while recognizing and honouring their resilience. It gave an overview of ethnohistories, context and understanding, including residential schools, the many ways Indigenous communities are reclaiming their culture and language, and a high level overview of the Nations we work with, including government-to-government collaborations.

The final session tied everything together with a focus on building better relationships with Indigenous peoples and guidance on how to implement the Truth and Reconciliation Calls to Action. Kelly developed Session Six to provide strategies and tools for staff to improve relationships and perform their daily work in the spirit of Truth and Reconciliation. One of her objectives was to demonstrate that collaborating with Indigenous communities and building stronger relationships both fulfills our mandate and supports internal capacity. The session covered topics like allyship, cultural safety, steps to building and maintaining authentic relationships, tips on what to say and what not to say, and the creation of a Truth and Reconciliation Action Plan.

The team received positive feedback from the Learning Series, with comments like: "I see the importance of starting with the relationship first"; "I didn't really understand privilege until today"; and, "I've been working with First Nations for years and I still learned something new in those last sessions." They are receiving requests to run parts of the Learning Series again, so keep your eyes open for new training announcements in the coming months.



Kelly Chiatto



Meaghan Murphy





FireSmart BC Uses Gardening and Landscaping Boom to Boost Awareness

By: Amanda Reynolds, FireSmart Education Officer, BC Wildfire Service

August 24, 2021



Figure 1: Garden Centre Outreach with FireSmart Canada's Guide to Landscaping.

Gardening and landscaping are having a moment.

The COVID-19 pandemic has locked down billions of people around the world for much of the past year or so, and many of them have been using the extra time to bring their land to life. From flowers, food, and fences to statues, stones, and shrubbery, homeowners are filling in the hours by using gardening and landscaping to improve their properties.

Canadians have been no exception to this global trend, especially when it comes to raising their own produce. According to a [survey published in October 2020](#), 51% of respondents reported growing at least one fruit or vegetable at home, and 17.4% said they had started doing so since the pandemic began. Additionally, one must simply see the empty shelves at their local hardware store or garden centre for anecdotal evidence on the national boom on growing and landscaping.

Individual homeowners may be surprised to learn how gardening and landscaping can not only beautify their yard or put food on the table but also protect their properties from wildfire, and that they can do most of it themselves. The new FireSmart BC Landscaping Guide explains how to ensure that if and when a wildfire threatens your property, you already have taken a series of simple steps to help keep the flames from engulfing your home, including:

- Spacing out trees and pruning lower branches to slow the spread of fire;
- Breaking up the continuity of plants to deny flames a direct route;
- Keeping your lawn trimmed to less than 10 centimetres to reduce the intensity of any fire that takes hold; and,
- Being strategic by planting only fire-resistant species of trees, shrubs, plants and grasses.

Based on FireSmart Canada's Guide to Landscaping, this first iteration of the FireSmart BC Landscaping Guide was created by individuals and organizations from across British Columbia with a passion for FireSmart and landscaping. Those participating in development of the guide included First Nations community members, representatives from Emergency Management British Columbia (EMBC), the BC FireSmart Committee (BCFSC), the Union of BC Municipalities (UBCM), the BC Wildfire Service (BCWS), and the First Nations' Emergency Services Society (FNESS).

Despite this collective effort, a resource like this is only useful if people put the ideas into action, and the best way to make that happen is to make it easy. Accordingly, we also have developed the FireSmart BC Fire-Resistant Plant Tagging Program, which visually shows gardeners which plants are considered more fire-resistant, right at the point of purchase. This reduces the need for in-depth knowledge or advanced research, and also educates all buyers, not just those fortunate enough to have downloaded a copy of the Landscaping Guide. Naturally, we also enlisted our favourite FireSmart messenger, [Ember](#), to help get the word out.



Figure 2: FireSmart BC Fire-Resistant Plant Tagging Program.

As a prelude to implementing this program across the province, we are piloting it at two local garden centres in wildfire-susceptible areas: [Art Knapp Kamloops](#) and [Art Knapp Prince George](#). Both pilots were recently launched with events that also included BC Wildfire Staff, Fire Departments, and Local Regional Districts. The outreach at these events was a major success, with numerous local green thumbs picking up copies of the FireSmart BC Landscaping Guide for their studies, as well as fire-resistant plants, clearly labelled as such, for their properties. Given the strong uptake prompted by this trial run, we feel confident that the tagging program will have a major impact when we roll out the full-size version next summer.



Figure 3: Pilot program at local garden centres in wildfire-susceptible area.



Figure 4: British Columbians can now look for the new guide at their local garden centre.

In the meantime, we've distributed the guide to participating retailers across the province, so British Columbians keen to protect their properties should look for it at their local garden centre.

Making it quick and easy to select fire-resistant vegetation is just the latest effort by FireSmart BC to help mitigate the risk of wildfire. But because this particular program piggybacks on a market that is growing by leaps and bounds, it has unusually strong potential for some truly penetrating awareness-building. Partnering with garden centres enables communication with a huge and growing sector of the population, all of them people who take an interest in their yards. With such a large and well-predisposed audience on hand, we look forward to making further use of this unique platform.





Talking about old growth

By: Claire Grant, Strategic Priorities Group

August 24, 2021

I would like to talk about *talking about old growth*.

I am part of our ministry's web team and I helped with the province's new old growth webpages. This project was full of optimism when we started. I remember one of the subject matter experts exclaiming: "There have been so many great people working on this for many years. I am so glad that the public can finally see the hard work and passion we have invested!"

While the pages were under review, conversations about old growth became louder and more frequent. Statements like: "There is only 2% of old growth left," "the government doesn't care about old growth," or "only government and industry think old growth should be logged" seemed commonplace.

I remained silent during these exchanges, reassuring myself that once our work went live, I would be able to have informed rational conversations with those I love. Unfortunately, it wasn't that easy.

Fairy Creek has ignited lots of rage for a variety of people for a variety of reasons. This rage is almost always directed at the government. As if the government is a big evil corporation who only cares about industry, and I am too insignificant to change anything.

We are not insignificant cogs in a gigantic machine. We are powerful people working for the diverse and nuanced public.

Talking about old growth almost always turns into a war between "black and white." Despite that, I have been advocating for gray.

I have started talking about the awesome things we do that I know will be considered "good" to the person I'm talking to. Like breeding pest resistant trees, putting restrictions on how and when raw logs are exported, or protecting animal habitats.

This practice of adding a little bit of gray to the "black and white" has worked wonders. Since it doesn't make sense to be against the government in general (that would mean also being against pest resistant trees), they must be against a specific program or policy.

I am glad to say that I am now able to talk about old growth with those I love.

I hope this helps, but even if it doesn't, you do matter. Our work is significant whether those we love understand it or not.



Photo by Gabrielle Mustapich on Unsplash



BC Timber Sales Seedling Services Community Engagement

By: Mark Hay, Manager, BCTS Seedling Services

August 24, 2021



Since 2003, BC Timber Sales' (BCTS) Seedling Services group has managed over 1 billion seedlings to reforest harvested areas and areas affected by natural disasters, such as fires, to ensure future productivity. On average, BCTS manages more than 90 million seedlings a year from a mix of over 20 different native tree species seed to help maintain ecosystem processes, resilience and diverse habitats.

Developing strong relationships and partnership opportunities with First Nations, communities, major licensees, contractors and other divisions of government for mutual benefit are essential to delivering our services. Our BCTS Seedling Services group regularly donates seedlings and BCTS Grow-Your-Own Tree kits to various events, including Earth Day celebrations, trade shows, school projects, and other requests from the public. As well, we have been donating trees to the Kal Research Community Tree Give Away in Vernon for many years and regularly work with the Ministry's Tree Improvement Branch, supplying seedlings for research purposes to their sites around the province.



This year, along with the donations mentioned above, seedlings and Grow-Your-Own-Tree kits were made available to the South Island Foster Parent Association for their “plant a Christmas Tree” initiative, the Fort Saint James School District for their Earth Day celebrations, and to the We Wai Kai and We Wai Kum First Nations for their School District tree planting initiative in Campbell River. Thank you to the BCTS seedling services staff for coordinating these seedling donations. We look forward to future opportunities to continue these community engagement activities. More information about BCTS and our seedling services can be found in the [BCTS webpages](#).



Provincial Groundwater Observation Well Network Program celebrates 60 years in 2021!

By: Jillian Kelly, P.Ag, Groundwater Monitoring Specialist
BC Ministry of Environment and Climate Change Strategy
August 24, 2021



Figure 1: Observation Well #393, located in Nanoose, was installed in 2011 in partnership with the Regional District of Nanaimo and the Geological Survey of Canada. This well monitors groundwater levels in surficial sand and gravel aquifer #219 and was included in the Natural Resources Canada Nanaimo Lowland Groundwater Study Atlas found [here](#). Photo credit: Graeme Henderson.

2021 represents an exciting milestone for groundwater monitoring in British Columbia! The Provincial Groundwater Observation Well Network (PGOWN) program is the sole source of provincial long-term groundwater level data in British Columbia and is celebrating a 60-year anniversary in 2021.

A primary purpose of the network is to collect and produce high quality environmental monitoring data. This data is used for science-based decision making to support water resource management, climate change adaptation, and a healthy environment.

There are currently 217 active wells across the province, operated under a Memorandum of Understanding between the Ministry of Environment and Climate Change Strategy (ENV) and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).

To function as efficiently and effectively as possible, this important network requires the expertise of Regional FLNRORD Groundwater Technicians, Groundwater Protection Officers, Regional Hydrogeologists and Water Officers in Smithers, Prince George, Fort St. John, Kamloops, Penticton, Surrey and Nanaimo, in addition to ENV Senior Hydrogeologists, Data Specialists, Information Officers, Technology Specialists and Monitoring Specialists in Victoria, Courtenay and Nelson. It is truly a team effort!

The team and the network were recently nominated for a Public Service Premier's Award in the evidence-based design category.



Figure 2: The soil cores in the photo above come from the drilling of Observation Well #478 in Whistler. The core on the left is from 40-50 feet below surface, while the core on the right is from 30-40 feet below surface. The stratigraphy illustrates the changing environment of the area from forested, to wetlands to glacial deposits. Photo credit: Bryan Jackson.

Monitoring data from this network has been used for various purposes, including detection of saltwater intrusion in coastal environments, highlighting potential overextraction of groundwater, informing the increase in groundwater levels, as well as in research studies on surface water and groundwater interactions and how groundwater may recharge surface water and vice-versa, and to inform the historical and current groundwater levels of specific aquifers across the province.

High quality, continuous long-term groundwater level data records are also potentially useful for detecting patterns or relationships regarding climate. Research currently underway from Simon Fraser University may have detected a relationship between the cycle in sea surface temperatures and air pressure, known as El Niño and the Southern Oscillation, and groundwater levels in some PGOWN wells.

Additional resources:

[More information about the Provincial Groundwater Observation Well Network.](#)

[Interactive map that provides details on each PGOWN well, including water level data.](#)



Mental Health Week – a Summary

By: Chelsea Resch, People & Workplace Strategies

August 24, 2021

Mental Health Week is a [national campaign](#) hosted by the Canadian Mental Health Association. This year, it took place May 3 - 9, 2021, and the theme, #GetReal about how you feel, encouraged the healthy expression of the full range of human emotions and how to address them effectively.

Corporately, participation during Mental Health Week was widely promoted and encouraged. Some of the resources and information shared during the week have been summarized below.

@Work Articles:

- [Mental Health Week 2021](#)
- [Get Real About How You Feel](#)
- [How to Have a Supportive Conversation](#)

@Work Blogs:

- [Depression in the Time of COVID](#)
- [Stretching our Resilience in a Pandemic](#)
- [Finding Belonging in the BCPS](#)
- [Unpacking the Stigma of Mental Health Medication](#)
- [How Anti-Asian Racism Affects My Family](#)
- [Embracing My Reflection](#)
- [Depression: My Evolving Journey](#)

Corporate Resources:

- [Health, Safety & Sick Leave Resources](#) on MyHR
- [Mental Health & Well-Being Resource Hub](#) on @Work
- [Health Where You Work](#) on @Work

Although the workshops ran during Mental Health Week were not recorded, you can watch recordings from previously delivered sessions for the following courses:

- [Mental Health and Well-Being: Caring for Self, Caring for Others](#)
- [Psychological Safety in the Workplace](#)
- [Workplace Loneliness](#)

Did you know?

The Public Service Agency regularly offers a suite of [Health & Well-being workshops](#) through the Learning Centre. Please email [Claudette Kolarich](#) to be added to the email distribution list.

In FLNRORD, Ministry Executive supported this initiative through various communication platforms, including email, video and in-person dialogue. In addition, Executive launched the new FLNRORD [Mental Health Response Strategy](#) during Mental Health Week. You can learn more about the Strategy in the links below. All employees are encouraged to complete their own personal Action Plan using the template provided and to share this information with their supervisor.

Ministry Resources:

- [Watch](#) Deputy Minister Rick Manwaring's video on the Ministry's Mental Health initiatives and view his personal Action Plan
- [Executive Mental Health Pledge](#)
- [FLNRORD Mental Health Response Strategy](#)
- [Action Plan template for Employees](#)
- [Action Plan template for Executive](#)

Addressing the Kamloops Residential School Tragedy

The news about the remains of over 200 children located at the site of the former Kamloops Residential School was released shortly after Mental Health Week. This information serves as a stark reminder of the tragic and traumatic history of the residential school system and will understandably impact many staff and their families.

As a reminder, mental health and crisis supports are available during this time:

For Indigenous peoples and survivors:

- **Indian Residential School Survivors Society** – for former residential school students and those affected. Emotional and crisis referral services available by calling 24-Hour National Crisis Line: 1-866-925-4419.
- **KUU-US Crisis Line Society** – within B.C., the KUU-US Crisis Line Society provides a First Nations and Indigenous specific crisis line available toll-free at 1-800-588-8717.
- Other supports include mental health services offered through the First Nations Health Authority, and Métis Nation BC.

For BC Public Service staff:

- Supports are available, including Indigenous counsellors, through the BC Public Service Agency, with a focus on culturally safe offerings.
- For those wishing to access support from an Indigenous counsellor, a dedicated toll-free line, 1-866-839-1828.
- Employees calling the regular LifeWorks line (1-800-655-5004) indicating they need support due to this event, will be transferred to a Client Care Counsellor.
- Specialized services are also being provided within ministries, as requested.
- Any individuals who experience issues or barriers trying to access these services should contact PSA Health Program Manager Heather Bishop at 250-217-0825.

Additionally, within the ministry we have [Critical Incident Stress Management program](#). It is a comprehensive resource established to provide support and trauma education to help manage stress in situations just like this. Please do not hesitate to reach out to the people at CISM if you are experiencing any challenges.

Next Steps

The conversation around mental health is ongoing. The ministry's leadership team is committed to supporting mental health in our organization and applying an intersectional approach. Moving forward, leadership will continue to promote mental health initiatives and communicate about the ministry's mental health action plan as it is developed.





49th Annual Provincial Golf Tournament

August 24, 2021



September 11 and 12, 2021

Williams Lake Golf and Tennis Club

104 Fairview Dr.

Williams Lake, B.C.

V2G 3T3

Please send all completed [registration forms](#) to Kyla.Arduini@gov.bc.ca.

Registration deadline is September 9, 2021, at 16:30.

COVID policy in place. Event will follow all PHO orders.

