



Public Service Week - Victoria

Photo's submitted by: Roley Chiu, Internal Communications Coordinator

To celebrate this year's Public Service Week, FLNR staff in the Victoria area enjoyed a Picnic in the Park, with ADM Gary Townsend and Trevor Morrison, Manager, Executive Services playing their traditional roles as grill-masters. Hot dogs, beef and veggie burgers, cake, snacks and soft drinks were enjoyed by all at the Beacon Hill Park location.

Kudos and thanks to Sarah Blenkin, Allison Tripp, Juliane Binas, Christine Boyd, Alexis Webb, Sarah Andrews, Melanie Boyce, Jennifer deBree, Donna Hall, Christine Gelowitz, Caroline Slydell, Brenda Larkin, Raylene McCully, Lin Thompson, Roley Chiu, Sonia Donison who organized the event and a big thank you to all for your continued dedication and commitment to this ministry.



Advisory Group Vision:

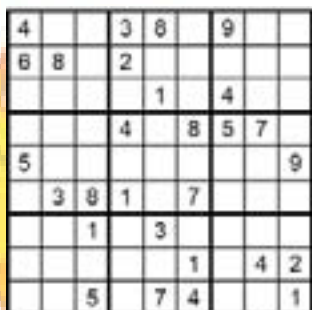
"True to our proud histories, informing ministry staff through balanced and timely communication"

The Dirt Facebook

To join "The Dirt" facebook page, simply go to the link below and ask to join the group. <https://www.facebook.com/groups/flnrnews/>

Issues of "The Dirt" will be posted online quarterly. The newsletter and facebook group are for all employees and former employees of the Ministry of Forests, Lands and Natural Resource Operations.

Sudoku - do you play?



SOLUTION

Have a Story idea?
Send *The Dirt* Advisory
Group your ideas!

The Dirt Contents, June 2014

Click on a # to jump to page

IN THIS ISSUE

Public Service - Victoria	1
<i>The Dirt</i> Facebook	2
Catching a Glimpse	3-4
Trap Shoot	4
Prescribed Fire	6
Tracking Devices	7
Jordan Turner	7
Revelstoke Caribou	8

RECOGNITION

Bill Chapman	5
North Island Clean up	9
Seed Orchard Workshop	10

AROUND THE MINISTRY (links)

Provincial Golf
Provincial Golf Registration

Retirees Receive *The Dirt*!

If you are a former employee and want to keep up with the latest Dirt, please contact Richard Dominy and he will add you to the retiree's email distribution list. Provide email, home phone and home mailing address. You can contact Richard directly at: Richard.Dominy@gov.bc.ca.

Catching A Glimpse

Submitted by: Berry Wijdeven, Species at Risk Coordinator, Haida Gwaii District



The radio receiver, though dialled way down, squeaks loudly, insistently.

Somewhere, within 10 meters or so, a radio collared female grouse is hiding. Possibly nesting. We want to find that nest and put a camera near it to see whether the chicks fledge successfully or whether the nest fails. But we don't want to disturb the bird, potentially flush her off her eggs, so we proceed with great caution.

The radio signal originates from a nearby stump, which is surrounded by a dense growth of salal. Entering that growth would surely alarm the grouse, so here we stand, hoping to catch a glimpse of a bird that is likely watching us.

Inventory studies have suggested that the number of Haida Gwaii Sooty Grouse has declined substantially. That's a problem for the grouse population, but also of concern to the Northern Goshawk, a species listed as threatened, which is having a tough go of it on Haida Gwaii, and for whom grouse is a major prey item. Figuring out why the grouse population has declined could help manage both species.

Thanks to a partnership including FLNR Haida Gwaii Natural Resource District and Coast Area Research, Parks Canada and the Habitat Conservation Trust Fund, we have been studying grouse for the last three years, looking at habitat use, seasonal movement, juvenile dispersal, survival rates and causes of mortality.

As part of this research, we are monitoring nesting success where motion detection cameras have proven to be an effective and cost-effective method

to determine what happens at the nest site. But first we have to find the nests.

Over the last three years we have caught some 70 female grouse and equipped them with radio transmitters, each with their own radio frequency. We monitor these transmissions year round to see where the birds are and what habitat they use. Grouse move between breeding and winter home ranges, so in spring we increase our monitoring efforts to pinpoint their breeding home range. When the signal stops moving through the landscape, it could indicate that the female has started to nest.

For our research we have chosen an area which is dissected by logging roads, which makes getting around the rugged Haida Gwaii landscape somewhat feasible.



Sometimes the hens are kind enough to locate their nest close to one of those roads. At other times we are not so lucky, and a serious cross-country slog is required. Cedar stands with boggy soils and chest-high salal stands which suck down your boots or tangle them in a web of branches remain my favourite hiking destination. As we follow the radio signal through the forests, trying to compensate for signals bouncing off trees, hills and rocks, we become increasingly vigilant, for the birds have some creative methods to hide their nests.

Grouse are the Rodney Dangerfield of the bird world, often getting little respect. Stupid and tasty are the two adjectives heard most often when discussing grouse. Truth be told, people generally don't pay

Grouse continued...

much attention to a grouse when they see them standing by the side of the road, or worse, in the middle of the road. But once you see a mother hen, mostly defenceless, guard her chickens throughout the summer from a multitude of dangers, you start revisiting your thoughts on grouse, and what she is potentially guarding as she stands motionless in the middle of that road.

Up close grouse are beautiful birds, with delicate and intricately patterned feathers. Males, generally a dark blue, puff themselves into magnificent creatures during the mating season, showing off their bulging yellow air sacks, fanned tail and inflated orange combs. Their size and appearance at this time of year contrasts sharply with their usual look and provide a rare splash of colour amongst the multitude of forest greens.

But it's a hen we are trying to locate, and the females, mostly shades of brown, are blessed with impressive camouflage. We circle the salal, trying to determine from which side the radio signal is strongest, but fail to determine the bird's location. So we stand there, staring intently at the growth. And then we see something, through a small opening between some leaves. An eye, staring back at us just as intently. There she is! We quickly determine that the hen is indeed nesting, note the location and deploy the camera. Then we retreat, leaving the grouse to do her thing. Hopefully she'll be successful in fledging her young. We'll see.

For a video of a Haida Gwaii male grouse displaying, follow this link:

http://youtu.be/3ioP_g3U7EI

43rd Annual BC Forest Service Alexis Creek Trap Shoot

Alexis Creek - May 24th, 2014

PDF photo album

Submitted by: Dan Hicks, Stewardship Technician,
Regional Operations Division -
South Area

A little rain, a little sun, and lots of fun defined the 43rd Trap Shoot at Alexis Creek's Chilcotin Rod and Gun Club Range on Saturday, May 24, 2014. Some 85 shooters comprised 15, 5-person shotgun trap and skeet teams, and individual 22 caliber rifle shooters.

So accomplished were this year's shot-gunners at hitting their

airborne clay pigeons that an emergency supply of the birds had to be rushed in from Williams Lake. Brian Rosengren, Alexis Creek's Forester for the Cariboo-Chilcotin Natural Resource District, organized the event and the Ravens Fire Crew setup the tents, tables and chairs. Barry Jenkins and Mike Carlson served as range masters, Barry for the shotgunners, and Mike for the rifle shooters.



Lots of people, lots of birds, other dogs, & food – a wonderful gathering!

Once again, the Quesnel Quality was the highest scoring trap and skeet team, awarded the Jack Lynn Memorial Trophy were team members Andres and Terry Street, Ted Traer, Adam Veley, and Gord Wall. Adam Veley was also the male Top Gun, and Judy Jenkins was the female Top Gun. Wes Beaulieu was the last man standing on the first Annie Oakley trap shoot line, winning the Kevin Frittenburg Memorial Trophy. Adam Veley triumphed on the second Annie Oakley line.

The 22 caliber rifle shooting

winners, listed first to third, were; for women, Michelle Beaudry, Tricia James, and Myanna Schmid; and for youth, Andres Street, Seamus Murphy, and Journey Carlson-Campbell.

The Wild-Firers lost to the Call Girls, distinguishing themselves as the lowest scorers, and, though its more bashful members vanished, a sporting remnant of the team proudly posed with their lowest-score trophy.

Bill Chapman Winner of the “2013 Tony Milligan Book Award”

Submitted by: Teresa Newsome , Research Silviculturist, Cariboo Office



Dr. Bill Chapman, our soil scientist in the Cariboo Region, and his associate Becky Bravi recently won the “2013 Tony Milligan Book award”. This award was presented by the BC Technical and Research Committee on Reclamation for the most practical paper presented at the 2012 symposium in Kamloops. Bill has long been

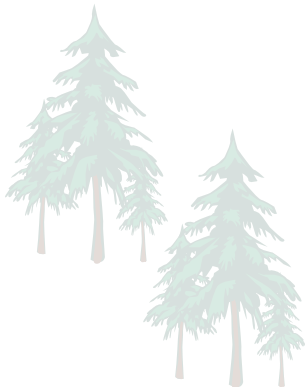
known for his fascination with soil ecosystems. He will tell you that life underground dictates life above ground! He has also been known for investigating unusual ideas. Not many would consider lodgepole pine a primary colonizer, but Bill knew better. His recent work with a researcher in Finland has definitely shown that lodgepole pine will fix nitrogen in association with an ectomycorrhizal fungi “*Suillus tomentosus*”. The ability to fix nitrogen in very nitrogen deficient mine spoil material is critical to the re-establishment of vegetation. Most sites with mine spoil were previously forested and therefore better suited to growing conifers than commonly

used legume crops or grasses. Unfortunately, pine seedlings grown in nurseries are not well suited to reclamation efforts as they don’t come with the requisite mycorrhizal associations and do not adapt well to the very harsh conditions. Direct seeding is a possible method to achieve conifer regeneration; however, application of seed directly onto the site can fail due to predation and desiccation. None of this deterred Bill and Becky, as some of these issues had already been successfully investigated in their direct seedling trials on recent burns on the Chilcotin Plateau. Knowledge and experience from these forestry trials and was extended to reclamation efforts in the mining industry. Bill and Becky have tried several methods of treating seed prior to planting to enhance mycorrhizal associations. Also, they have tested different seeding techniques and erosion control mats.

Innovative ideas and practical applications of research assist us in improving resource management. Thanks and congratulations to Bill and his colleagues.

A link to Bill’s paper is:

<http://www.trcr.bc.ca/2013-tony-milligan-book-award-winners/>



Have a Story idea?

Send *The Dirt* Advisory Group your ideas!

Don’t forget about the Facebook page

<https://www.facebook.com/groups/flnrnews/>

Prescribed Fire Spotlight

Submitted by: Jordan Turner, Communications Officer, Southeast Fire Centre

For most of the last century, Wildfire Management in British Columbia has focused on being a reactive force. Our crews and officers were trained to always, and without question, hit hard and hit fast. Although this is still the case in many instances, such as when structures or communities are at risk, there has been a significant shift in thinking in regards to our role in relation to our landscape.

We've become a proactive agency, harnessing the positive effects fire can have on the environment. Essentially, we are now able to work with fire rather than always against it.

Perhaps the most forward-thinking, important, and yet misunderstood modern practice in the wildfire industry is prescribed burning; and, we should take steps in our ministry to make the conscious effort to evolve what we are sharing with both our colleagues and the public about these burn projects.

The language we choose to use with colleagues, the media, friends and neighbours does have an influence on how the ministry is perceived, and on the general perception of what we do here. One great and easy way to improve this perception is to follow the trend of the greater wildfire industry and shift away from using the term "prescribed burn," and instead refer to the practice as having a "prescribed fire." Of course, this is just a suggestion. And the debate on which word to use continues, even inside our own offices.

To get a handle on all this, first we need to know the reasons for prescribed fires. We perform these projects in order to:

- ☐ Reduce hazardous fuels
- ☐ Dispose of logging debris
- ☐ Prepare sites for seeding and planting
- ☐ Improve Wildlife habitat
- ☐ Manage competing Vegetation
- ☐ Control disease
- ☐ Improve forage for grazing
- ☐ Enhance appearance
- ☐ Improve access
- ☐ Perpetuate fire-dependent species
- ☐ Cycle nutrients
- ☐ Manage endangered species
- ☐ Keep ourselves entertained

All of the above boxes are not always checked on every prescribed fire, but several of them usually are.

Our prescribed fire crews and staff deserve all the recognition they can get for the important work they are doing to protect local communities and environments, much of which takes place in the shoulder-seasons when many staff are on leave and the media isn't always keen on wildfire news. Here are just a few examples of prescribed fires that have taken place across the province this past spring:

Kamloops Fire Centre – Lytton: <http://bcwildfire.ca/hprScripts/WildfireNews/DisplayArticle.asp?ID=2107>

Coastal Fire Centre – Pemberton: <http://bcwildfire.ca/hprScripts/WildfireNews/DisplayArticle.asp?ID=2124>

Cariboo Fire Centre – Grassland: <http://bcwildfire.ca/hprScripts/WildfireNews/DisplayArticle.asp?ID=2109>

Prince George Fire Centre – Omineca: <http://bcwildfire.ca/hprScripts/WildfireNews/DisplayArticle.asp?ID=2123>

Southeast Fire Centre –Cranbrook: <http://bcwildfire.ca/hprScripts/WildfireNews/DisplayArticle.asp?ID=2112>

State-of-the-art Animal Tracking Devices

Submitted by: Michael Riis-Christianson, Resource Clerk, Skeena Region

FLNR wildlife biologists are hoping that state-of-the-art animal tracking devices can provide insight into factors affecting moose mortality in BC.

Moose populations have declined in some parts of the province—including the Lakes District—and experts feel that landscape changes may be at least partially to blame. The good news; however, is that in the management units that make up the southern portion of the Lakes TSA, the most recent survey indicated that moose populations were actually stable.

Nevertheless, ministry officials are testing the hypothesis that the mountain pine beetle epidemic and resultant increase in salvage logging may have made moose more susceptible to predators (including man). It's possible that other factors—disease, parasites, nutrition, temperature, and climate—are also having an adverse impact on the ungulates.

In an effort to better understand the problem, earlier this year, wildlife officials placed radio collars on 45 moose south of Ootsa Lake in Management Units 6-1 and 6-2. Some of the animals were fitted with tracking units that will transmit their location via satellite once per day for five years, while others now sport GPS devices that send data from up to eight locations each day for two years. Moose survival rates will be compared between areas with and without pine beetle, and with and without salvage logging.

When the collars are stationary for eight hours, they switch into mortality mode and send a text message alerting biologists that the host animal has died. To date, biologists monitoring the devices have received and investigated one mortality signal, and found that the host animal had been killed by wolves. The remaining 44 collars are still functioning.

The project is expected to last five years, and is one of five being undertaken throughout the Central Interior.

To watch a short video of the capture procedure, see:

<https://vimeo.com/97934542> Password: moose



Welcome Newsletter Advisory Group Member—Jordan Turner, Communications Officer, Southeast Fire Centre



My name is Jordan Turner, and I am starting my second season as a Communications Officer at the Southeast Fire Centre's main office in Castlegar and am happy to be the newest member of *The Dirt* Advisory Group, replacing Karlie Shaughnessy while she is on maternity leave.

Before I joined Wildfire Management I spent most of my time reading or bartending, which culminated in a Master's Degree in English Language, Literature and Creative Writing from the University of Windsor. I chose to study in Windsor for a variety of reasons, but mostly because the campus is a ten minute drive from Joe Louis Arena and my beloved Detroit Red Wings. My poetry and fiction has since been published in literary journals in Canada, the United States and Ireland.

Revelstoke Caribou Rearing in the Wild Update

Submitted by: Cory Legebokow, Habitat Officer



You may recall the article in the December 2012 edition of "The Dirt" in which the Wildfire

expected to be born by June 23rd. Within 24 hrs of birth newborn calves were collared, ear tagged, sexed, and a fur sample collected for DNA analysis. The newborns weighed in at around 9 kg and 5 of the 7 have been females. The moms and their calves will be held in the maternity pen until the youngest calf is approximately 3-4 weeks old, which will significantly increase their ability to escape predators after release back into the wild.

Based on a similar project conducted in the Yukon, we expect to at least double or even triple calf survival to 10 months of age. This year is strictly a trial for our project to ensure all goes well.

Subsequent years will see between 20-25 females in order to make a population level difference. This project in conjunction with the many other mountain caribou recovery measures implemented in the Revelstoke area is expected to result in an increasing trend for the Columbia North sub-population over the 3-5 year project.

Management Branch detailed their involvement in a mountain caribou recovery project near Revelstoke.

Thanks to their 200 man days of work preparing the site as well as the dedication and hard work from all of the Revelstoke Caribou Rearing in the Wild (RCRW) Society members and volunteers, the maternity pen became operational in March of this year.

Twelve mountain caribou including two 10 month old calves were successfully introduced into the maternity pen on March 24th. Since that time, they have transitioned from a diet of handpicked arboreal lichen (thanks to the many volunteers who helped pick 250 kg of it at our local ski hill) to a commercial caribou chow. The 12 caribou have been cared for and guarded from predators 24/7 by First Nations shepherds and a 12' high barrier including an 8' 8000 volt electric fence that surrounds the 6.4 ha maternity pen.

On May 24th the first calf was born into the maternity pen and since that time 6 other moms have given birth. The remaining 2 calves are

It's challenging to provide the full scope of this exciting project in only a few words. If you'd like to find out more, please see our website "RCRW.ca", our FaceBook page "[Revelstoke Caribou Rearing in the Wild](#)" or simply follow us on Twitter.



Have a Story idea?

Send *The Dirt* Advisory Group your ideas!

Don't forget about the Facebook page
<https://www.facebook.com/groups/flnrnews/>

North Island Clean

Submitted by Scott Mitchell, Woodlands Manager, BC Timber Sales



Way back in June 2006, an article appeared in the “Forest Service News” acknowledging Sunshine Coast District staff participation in a local community cleanup in Powell River. Never too proud to capitalize on someone else’s great idea, staff at the North Island-Central Coast District and Seaward-tlasta Business Area in Port McNeill were inspired to take action. Why not organize a North Island cleanup? What better way to show community leadership and environmental stewardship? And what better way to show a little respect to our forests during National Forest Week!

And so it started....

In September 2006, the inaugural North Island cleanup event occurred with 35 staff and families joined by 20 other volunteers from the broader community. Together, nearly 20 tonnes of garbage was collected from forestry roads around Port McNeill, followed by a BBQ lunch for volunteers.

and continued...

April 2007—50 tonnes collected

September 2007—20 tonnes collected

May 2010—30 tonnes collected

May 2012—another 30 tonnes....

Fast forward to present. On Saturday May 31, 2014, our core group of FLNR, local government, forest

industry and community volunteers once again joined forces to do the right thing. Forty people participated, working in both the Port McNeill and Port Hardy areas. Local governments provided staff and heavy equipment to support the effort. Four hours of hard work later, the fruit (albeit some of it stinky and rotten) of our labour was another 40 tonnes of garbage and scrap metal properly disposed of at the regional landfill.

Also in keeping with local tradition, volunteers were treated to a delicious BBQ lunch afterwards; our way of saying thanks!

2014’s cleanup effort puts our group total over the 190 tonne mark! While it’s incredibly sad that this much material has been dumped in our local forests, FLNR staff in Port McNeill are extremely proud that we’ve been able to foster a cleanup ‘movement’ within our local communities that has persisted through all these years. Working together side by side has built new relationships between our staff, other government agencies, forest companies, local government and the general public. The result.... nothing short of remarkable.

A big thank you to Rob Short of the North Island-Central Coast Natural Resource District and Patrick Donaghy of the Mt. Waddington Regional District, for organizing this year’s cleanup event. Great things never happen without great leadership.

Future cleanups will be planned, if and when necessary. This year’s volunteers were encouraged that there are visible signs that illegal dumping is diminishing. We continue to be optimistic that, at some future point, we’ll run out of work!



BC Seed Orchard Association's bi-annual Workshop

Submitted by: Brian Barber, Director, Tree Improvement Branch



The BC Seed Orchard Association's bi-annual workshop was held in and near Salmon Arm, June 17-18.

The host organizing committee included: Tia Wagner, Vernon Seed Orchard Co (VSOC), Mike Brown, PRT, Gary Giampa, FLNR, Penny May, FLNR, Hilary Graham, FLNR and Stephen Joyce, FLNR. These folks were supported by local staff and an excellent slate of invited speakers. Field tours included the private Skimikin Nursery and FLNR's Skimikin Seed Orchards.

There are approx. 100 seed orchards in the province located on large agriculture-like sites (like Skimikin) managed by FLNR and private companies. These orchards are managed to produce cones and seed for specific species and areas of the province. The orchards consist of trees selected and tested through conventional tree breeding for improved growth, form and pest tolerance. Seed orchards produce ~70% of all tree seed used to grow the 250 million seedlings planted annually in BC. The average level of genetic improvement of orchard seed for growth is 16% higher compared to wild seed, increasing timber supply for future generations. All tree seed is registered, tested and stored at FLNR's Tree Seed Centre in Surrey in accordance with the Chief Forester's Standards for Seed Use. Tree improvement and related activities are coordinated in BC by the Forest Genetics Council of BC.

The meeting was attended by over 90 people, including a large x-border contingent from Alberta, Idaho, Washington, Oregon, and Norway, representing tree improvement co-ops, and private and public seed orchards. Group photo courtesy of Dave Kolotelo, Tree Seed Centre.

Some highlights for me included overviews of orchard worker safety by Carol Reid, nutrient deficiencies in conifer plants by the entertaining and knowledgeable Mario Lanthier.

One Skimikin Nursery staff praised the excellent services of FLNR's Tree Seed Centre and the effectiveness of the Seed Planning and Registry System (SPAR)—great stuff for a 'bureaucracy'. Guy Burdikin, West Fraser, also gave a strong plug for A Class seed, "the foundation of silviculture in BC", during his talk the second day.

FLNR speakers included Hilary Graham, Stephen Joyce, Vicky Berger, Jim Corrigan, Dave Kolotelo and Dr. Greg O'Neill—pictured here



contrasting the growth and form of interior spruce (Sx) seedlings grown from seed collected from different locations/climates. Field trials like this are being used to develop guidelines to better match tree seed sources with current and projected climates of planting sites.

This meeting was not only very educational for seed orchard workers, it served as an excellent showcase of the cooperation between public and private agencies involved in tree improvement across the Pacific Northwest. Fortuitously, the meeting was held during BC's Public Service Week.

Many thanks to the host committee, supporters, sponsors and presenters who contributed to this successful event.

The Dirt Photographers!

Due to the lack of photos received for this edition we will try to resume the contest in the September edition. Any photo submitted for the June and September edition will be judged for the next photo contest. Get your photos in no later than September 12!

You don't want to miss out on our great new prizes!

Time to get out and snap some photos! *The Dirt* Advisory Group increasingly requires good quality digital photos for the quarterly newsletter. We acknowledge that there are skilled photographers among ministry staff and would like to showcase your photos in each quarterly edition.

Categories

Photos can consist of:

- Workplace images – individuals or groups / teams in office and field settings; health, wellness and social activities;
- Community involvement;
- Wildlife; or
- Scenic.

Submission Details

- Deadline for submissions is changed with each edition and will be noted on the previous edition.
- Images can be submitted to: FLNRNews@gov.bc.ca
- The contest is open to all ministry employees and retirees.
- Interested staff can make submissions to as many editions (season/category) as they want, but there is a limit of five images per category.
- We are looking for recent photos, please limit your entries to shots taken within the past 2 years.

View and Select your Prize!!

(embroidery: *The Dirt* - Newsletter Advisory Group)

Prizes

Prizes and Judging

- There will be an overall 'Best' image in each category;
- Judging will be done by the Advisory Group;
- Images will be judged on composition, clarity, exposure, creativity, relevance to the ministry and category fit;
- The winner of the 'Best' image in each category will be sent a prize for their photo;
- Individuals can win only one prize; and
- All winners will be announced with their photo in the edition of the newsletter.

Technical Specifications/Requirements

The following specifications and requirements have been established to ensure that images can be used in a variety of applications.

1. All images must have relevance to the ministry and be submitted in digital format.
2. All images must be in full colour or black and white.
3. Photo dimensions (image size) should be at 300 dots per inch (DPI) and preferably in a jpg format and sent to FLNRNews@gov.bc.ca
4. Images can be digitally enhanced (i.e., colour / exposure adjusted composite photos are okay), but not digitally altered (i.e. NO "Photo-Shop" images must portray subjects and / or material in photo as they were captured).
5. When submitting images, some descriptive information should also be included – category of image and location.
6. All images submitted, whether or not selected as a winning image, may be published in future issues of the newsletter.

For further information, contact:

FLNRNews@gov.bc.ca

DEADLINE IS September 12, 2014

Don't forget to try your hand at writing a limerick or poem. Send *The Dirt* Advisory Group your ideas!



Daniel Becker, Natural Resource Officer
The Dirt Cartoonist and Advisory Group Member!

The Dirt is a quarterly newsletter for all employees and former employees.

Sonia Donison is providing management and coordination support for the newsletter. Questions or comments about the newsletter should be directed to Sonia at 250-356-9638 or via [email](#).

Call for Stories/Ideas

The success of the newsletter depends upon the active engagement of staff throughout the organization. One way for people to support the newsletter is to share your ideas, news, stories, successes, experiences with revitalization and learning, celebrations and photos for use in future editions of the newsletter. People are asked to check with Sonia at 250-356-9638 or via [email](#) about their idea or ideas before writing a story. Stories are to be submitted no later than 2 weeks prior to each quarterly edition—deadline for articles is September 12.



SUBMISSION GUIDELINES