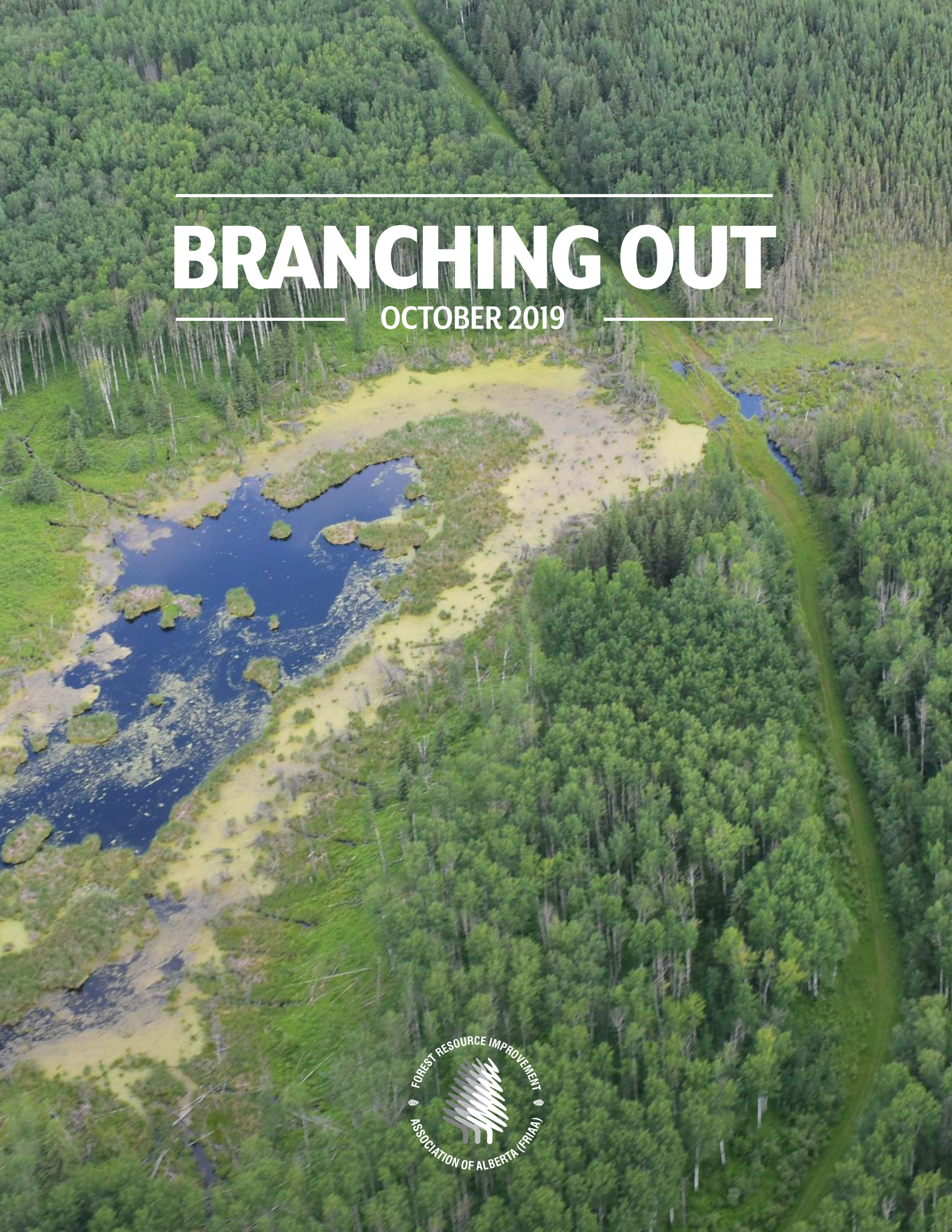


BRANCHING OUT

OCTOBER 2019

FOREST RESOURCE IMPROVEMENT ASSOCIATION OF ALBERTA (FRIAA)

WORKING TOGETHER TO MANAGE OUR VITAL FOREST RESOURCES

Branching Out is the newsletter of the Forest Resource Improvement Association of Alberta (FRIAA). It is published quarterly to communicate the objectives and activities of the association to members and other interested parties. The purpose of FRIAA is to enhance the forest resources of Alberta for the benefit of all Albertans. It encourages improved forest management activities over and above those required by government regulation. It is, uniquely, an organization able to collaborate with academia, government, municipalities, industry and the Ministry. It has supported practical and applied research, on-the-ground forest improvement strategies as well as innovative approaches to forest inventory and planning that helps Alberta manage its forest resources in a sustainable manner. Editorial material in this newsletter may be reproduced and disseminated with the following credit attached: "Courtesy of Forest Resource Improvement Association of Alberta"

President's Message

The past several months have been a wild ride of unpredictable weather, northern wild fires and southern flood conditions. With this spring being the driest on record for northwestern Alberta, conditions were ripe for igniting and sustaining wildfires. This was followed by a "summer" in north-central Alberta, which ended up being the second rainiest on record.

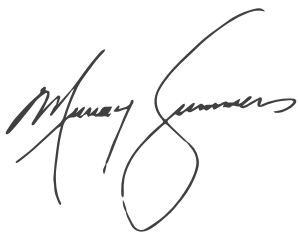
While many communities were directly impacted by wildfire this season, and the mark left on the landscape is huge with over 883,000 ha burned, our resilient forest-based communities have rallied in spite of these challenges.

As an update on our Board of Directors, we offer many thanks to outgoing Director Norm Denney for his contributions and welcome Allan Bell as the newest Director. We're also thrilled to announce several program awards that have occurred over the past few months as we continue to put dollars to work in Alberta. This past winter we conducted our annual program review with an online survey and we're ready to share that feedback here. Thank you to everyone who participated! If you requested information and provided your contact information, we will be reaching out to you soon.

For our program stories in this edition of Branching Out, we're excited to share news about a couple of our Forest Resource Improvement Program projects. Read on for details on the Outland Youth Employment Program which has been hugely successful in creating positive impacts with Indigenous youth. Additionally, we have an insider's perspective on advances in new technology, specifically, Tolko reveals what they learned about SkyForest™, a satellite-based remote sensing interpretation tool. We also have Canfor's insight into what it takes to protect a seed orchard from the destructive Mountain Pine Beetle.

I hope you enjoy catching up with us and, as always, please feel welcome to share your feedback and input with us.

Thank-you,



Murray Summers
FRIAA President

Board of Directors Update

With our sincerest thanks for his four years (two terms) of service, FRIAA bids a fond farewell to Norm Denney as he steps down from the Board of Directors. Norm's sound counsel and valuable industry insight will be missed. Wishing you all the best in your next phase of retirement, Norm!

In the cycle of renewal, FRIAA is pleased to welcome Allan Bell of Tolko Industries Ltd. to the Board. Allan's significant career accomplishments include over 20 years of service at Tolko, currently in the role of Manager of Tenures and Stewardship – Prairies. Allan explains what he hopes to accomplish as he begins working more closely with FRIAA, "it's about investing in the sustainability of our forests and forest-dependent communities." Allan has previously engaged with FRIAA initiatives, including numerous Forest Resource Improvement Program (FRIP) projects and several Wildfire Reclamation Program (WRP) projects. Allan also works closely with the Boreal Center for Bird Conservation (on the Board of Directors) and the Lesser Slave Lake Forest Education Society in support of FRIAA-sponsored projects.

Having graduated from both the NAIT and University of Alberta forestry programs in 1990 and 1995 respectively, Allan's professional forestry career extends over 30 years. He has work experience across coastal and interior B.C., Alberta, Saskatchewan, and even Finland! Recently, Allan was inspired to join the FRIAA Board to "help promote an effective mechanism for the Forest Industry to reinvest into Alberta's forests. This goes above and beyond our regulated requirements, which is exciting."

Outdoor pursuits occupy Allan outside of the office, where you may find him downhill or cross-country skiing on the slopes from B.C. to Saskatchewan, and as far south as Washington state. Come summer, you're more likely to find Allan on a white-water river, paddling his kayak. Be sure to ask him about the memorable highlights from this summer as he ventured out on the Wenatchee River, WA!

THE SEARCH IS UNDERWAY FOR A PUBLIC AT LARGE DIRECTOR. STAY TUNED FOR OUR NEXT NEWSLETTER WHERE WE EXPECT TO ANNOUNCE ANOTHER VALUABLE ADDITION TO THE BOARD.

Tapping Into Local Youth Employment is Just Natural

For 20 years, the Outland Youth Employment Program, (OYEP) has worked towards providing equity and opportunity for Indigenous Youth (ages 16 to 19) through land-based education, training and work opportunities.

During a 6-week natural resource-based training program, youth experiences include Workplace Safety, Training Week, Science Week, Industry Week and two weeks of silviculture work projects such as tree planting and brush cutting – all the while gaining life skills and transferable skills. "Multi-year FRIP funding allows us to focus on tailoring curriculum and recruiting youth, creating the best experience possible," expresses Hamish Black, OYEP Coordinator.

OYEP collaborates with local Indigenous communities and consults with Elders to ensure youth feel culturally and spiritually supported. OYEP participants have exceptional rates of graduating high school, entering post-secondary programming and, as a result, entering into meaningful, prosperous careers. "Youth go back to their communities more confident, having found their voice, and spread that to the community – they are growing into the future leaders," emphasizes Black. "They develop connections with each other and network with industry contacts."

The Indigenous community is a workforce solution for resource development companies, with over 600,000 youths entering the labor market by 2026. With intimate knowledge of the physical landscape and ecosystems, close proximity to operations and familiarity with land-based activities, they have the ability to lead land-management decision-making processes. "Everyone sees the potential," says Black. "The program enables youth to see different opportunities because we showcase a broad spectrum of experiences and a range of choices and various paths to get there. Youth see how to connect the dots to enter and begin down a career path, and are okay with knowing that path may weave over time."

"In just six weeks I've seen individuals blossom and transform, time and again."

Hamish Black
Outland Youth Employment Program (OYEP) Coordinator

Program Award Updates

Enhanced Reforestation of Legacy Disturbance (EnRLD) Program

In June 2019, FRIAA published a Request for Proposals (RFP) for the "Enhanced Reforestation of Legacy Disturbance in Alberta's Public Forests Program – 2019 Site Assessment Project". The total Eligible Disturbed Area was estimated at 18,698 ha, separated by geographic location into 4 Service Areas as follows: North West (2,947 ha); West Central (2,887 ha); East Central (11,216 ha); and South West (1,669 ha).

Project Awards were made to:

- Incremental Forest Technologies Ltd. for the North West, West Central, and South West areas.
- Northland Forest Products Ltd. was awarded the East Central area.

Caribou Habitat Recovery Program

In December 2018, FRIAA published a Request for Proposals (RFP) for the "Caribou Habitat Recovery Program – Inventory of Legacy Seismic Lines for Caribou Habitat Restoration in the Bistcho Caribou Range". Proposals were due in February 2019. Five proposals were received.

The project was awarded to:

- GreenLink Forestry Inc.

In January 2019, FRIAA published a Request for Proposals (RFP) for the "Caribou Habitat Recovery Program – Implementation of Caribou Habitat Restoration in the A La Peche Caribou Range". Proposals were due in February 2019. Six proposals were received.

The project was awarded to:

- Eric Auger & Sons Contracting Ltd.

FRIAA FireSmart Program

In August 2019, FRIAA published a Request for Expressions of Interest (RFEOI) for FireSmart projects. Fifty-four proposals were received, asking for a total of $7,903,718 in grant funding. Awards are expected to be finalized in December 2019.

The disciplines applied for were:

- 5 FireSmart Planning
- 9 Public Education
- 2 Inter-Agency Cooperation
- 38 Vegetation / Fuel Management

Telling the Mountain Pine Beetle to “Take A Hike”!

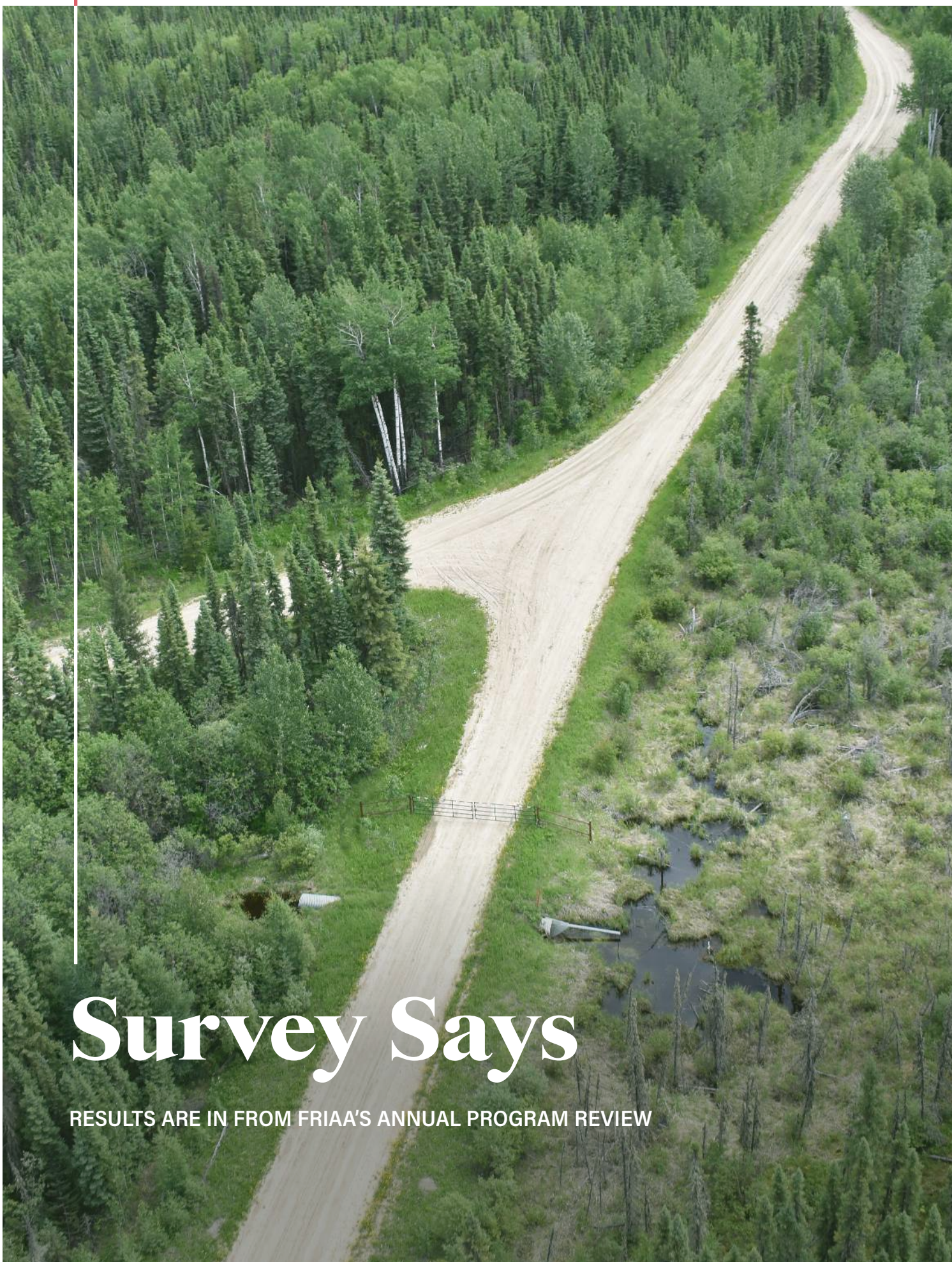
- Sustainable forest management is supported by the prompt reforestation of harvested areas. Creating and collecting improved seed gives seedlings a fighting chance to establish a new forest. Seed orchards are cultivated to allow careful cross-pollination of trees that exhibit superior attributes in the wild.

The Huallen Seed Orchard Company (HASOC) is located 40 km west of Grande Prairie and is at risk of destruction by Mountain Pine Beetle (MPB). Since the 2006 MPB flight from B.C., Alberta has been investing in protecting our most valuable assets, including this orchard. Initiated in 1986, the Lodgepole Pine orchards will eventually produce 12 million seeds annually. "Loss of these orchards would mean losing years of research, loss of a significant seed source and a restriction on improved gains in tree growth, which ultimately impacts the future ability to harvest timber," says Christine Kreibom Quinn, Silviculture Forester with Canadian Forest Products (Canfor).

Quinn continues, "It's critical that we proactively protect this investment." The goal is to detect, control and prevent infestation in these valuable orchards. Detection utilizes Lindgren funnel traps, prevention deploys the pheromone verbenone to discourage attack, and control ranges from scraping infested areas free of beetle larvae to cutting and burning of heavily infested trees.

"Beyond selecting for superior growth traits and insect and disease resistance, climate adaption is also a consideration. Good parents, good genes. We pick the best of the best. We need to protect them!" reiterates Quinn.

INSECTS COMMUNICATE USING PHEROMONES. VERBENONE IS A SYNTHETIC ANTI-AGGREGATION PHEROMONE THAT TELLS ARRIVING BEETLES THE TREE IS FULL, THE FOOD SUPPLY IS INSUFFICIENT, AND THAT THEY SHOULD LOOK ELSEWHERE FOR A SUITABLE HOST.

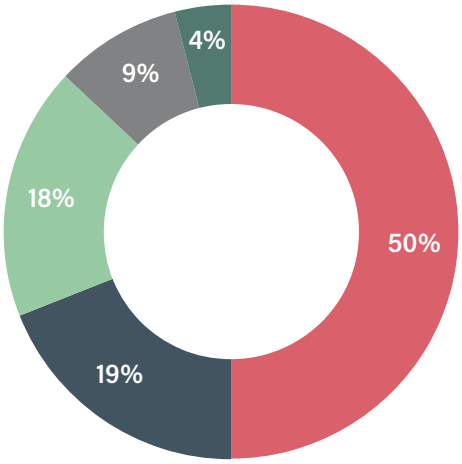


Survey Says

RESULTS ARE IN FROM FRIAA'S ANNUAL PROGRAM REVIEW

FRIAA is pleased to share the results of our Annual Program Review survey, conducted online this spring. We had 77 respondents provide valuable feedback on their experience with various FRIAA programs.

RESPONSE RATE BY PROGRAM



- FRIAA FireSmart 50%
- Wildfire Reclamation & Community Reforestation Programs 19%
- Forest Resource Improvement Program 18%
- Mountain Pine Beetle Programs 9%
- Caribou Habitat Recovery Program 4%

What we learned

Over half of the respondents (54%) did not know that they could sign up for program specific email updates on the FRIAA homepage (www.friaa.ab.ca).

Most respondents were satisfied with our programs and staff interactions, but we heard a few people say that we could do better. We are working on incorporating your feedback and will be providing individual responses to people who provided their contact information. Several common themes emerged, which are addressed below.

WORKING TO IMPROVE YOUR EXPERIENCE:
The two-stage application process (Expression of Interest, followed by Request for Proposals) is utilized to reduce overall workload and maximize applicants' chances of developing a successful proposal. A review has occurred to reduce duplication in information requests.

OUTCOMES-BASED FUNDING:
FRIAA grant funding programs are primarily outcomes-based. Interim and final payments require a results report and demonstration of actual costs incurred. FRIAA works diligently to ensure funding dollars are awarded appropriately to complete high-value projects with fair-market value costs.

KEEPING TIMING RELEVANT:
FRIAA's FireSmart Program usually has two application intakes a year, allowing forward-looking projects to be designed and approved in advance of seasonal project kick-offs. Our other programs solicit applications as funding becomes available. Funding opportunities are posted on our website, announced on Twitter (@FRIAA_AB) and shared by email.

TIMELY PROCESSING:
Complete reporting and submission of required information and deliverables will facilitate efficient processing of reporting and expense claims. Required forms or templates are available on our website, by program.

On our end, the FRIAA team is working to improve our processes. Sometimes factors are beyond our control and in more ordinary circumstances, what we can commit to improving is our communication around timelines related to funding opportunities and decision timelines (although sometimes the answer is: we don't know).

Better Managed Forests Using Space Tech

Tolko Industries Ltd. recently set out to test SkyForest™, a new satellite-based remote sensing technology, to update the forest overstorey metrics.

The objective for this FRIAA funded project was to determine the current relative proportion of conifer and deciduous stands in FMU F11, so as to provide a limited comparison of the government's existing (approximately 30-year-old) Alberta Vegetation Inventory (AVI).

SkyForest™ technology automates the processing of satellite and airborne imagery to quickly create forest inventory data. "Because the process is automated, it is a cost-effective and efficient system, producing results much quicker" explains Tim Gauthier, Manager, Planning and Sustainability at Tolko. "More work is needed in this area, but potentially this type of modelling tool could become a replacement for traditional interpretation methods."

This is the first assessment of SkyForest™ in Alberta. The project demonstrated the potential of using freely available public satellite data to detect change in the Alberta Vegetation Inventory using SkyForest™. "In addition to reducing elements of human error, using satellites allows for greater flexibility in collection of data multiple days in a row, or several times in a season to obtain cloud-free imagery," adds Trina Vercholuk, Project Coordinator at Tolko.

Tolko was able to analyze AVI stands individually and compare them to the current forest condition on key metrics of interest. The project included a field sampling program. "While this modern forestry application has a lot of potential, and builds on related remote sensing work done with LiDAR, more work is still needed to refine the tool before human interpreters are no longer needed," Gauthier observed. Tolko remains optimistic that the use of technology in inventory updating is a viable forest management tool.


The project demonstrated the potential of using freely available public satellite data to detect change in the Alberta Vegetation Inventory using SkyForest™

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