



REGIONAL DISTRICT OF BULKLEY-NECHAKO

AGRICULTURE COMMITTEE AGENDA

THURSDAY, APRIL 4, 2019

PAGE NO.

ACTION

AGENDA – April 4, 2019

Approve

Supplementary Agenda

Receive

MINUTES

2-6

**Agriculture Committee Meeting Minutes
- March 7, 2019**

Receive

DELEGATION

PUBLIC HEALTH ASSOCIATION OF BC

(via teleconference)

Margo Peill, Northwest Region Community

Animator, Farm to School BC

RE: Introduction to Farm to School BC Program

REPORTS

7-12

**Debbie Evans, Agriculture Coordinator
- Update on Funding Proposal for Updating
RDBN Agriculture Plan**

Direction

CORRESPONDENCE

13-44

**Bulkley-Nechako/Fraser-Fort George Adaptation
Strategies: Workshop #2 Summary**

Receive

45

**RDBN Letter to Business Risk Management
Branch - 2018 Canada – British Columbia Wildfire
Recovery Initiative – Tax Implications**

Receive

SUPPLEMENTARY AGENDA

NEW BUSINESS

ADJOURN



REGIONAL DISTRICT OF BULKLEY-NECHAKO

AGRICULTURE COMMITTEE MEETING
(Committee Of The Whole)

Thursday, March 7, 2019

PRESENT: Chair Mark Parker

Directors Shane Brienen
Mark Fisher
Dolores Funk
Tom Greenaway
Clint Lambert
Brad Layton
Linda McGuire
Rob Newell
Bev Playfair
Jerry Petersen
Kim Watt-Senner –left at 1:28 p.m.
Gerry Thiessen

Directors Taylor Bachrach, Town of Smithers
Absent Michael Riis-Christianson, Electoral Area "B" (Burns Lake Rural)

Alternate Director Doug Bysouth, Electoral Area "B" (Burns Lake Rural)

Staff Melany de Weerd, Chief Administrative Officer
Cheryl Anderson, Manager of Administrative Services
Debbie Evans, Agriculture Coordinator
John Illes, Chief Financial Officer
Jason Llewellyn, Director of Planning and Protective Services
Maria Sandberg, Planner – arrived at 2:24 p.m., left at 2:29 p.m.
Deneve Vanderwolf, Planning Technician/Regional Transit Coordinator – left at 1:03 p.m.
Wendy Wainwright, Executive Assistant

Others Linda Berg, Executive Director, Lake Babine Nation – arrived at 1:00 p.m., left at 1:03 p.m.
Linda Harmon, Transit Crown Agency Programs, Ministry of Transportation and Infrastructure – left at 1:03 p.m.
Rob Ringma, Manager, Government Relations, BC Transit - left at 1:03 p.m.

Media Blair McBride, Lakes District News

CALL TO ORDER

Chair Parker called the meeting to order at 12:49 p.m.

AGENDA

Moved by Director Brienen
Seconded by Director Lambert

AG.2019-2-1

"That the Agriculture Committee Agenda of March 7, 2019 be adopted."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

MINUTES

Agriculture Committee Meeting Minutes
-January 3, 2019

Moved by Director McGuire
Seconded by Director Layton

AG.2019-2-2

"That the Minutes of the Agriculture Committee Meeting of January 3, 2019 be received."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

REPORTS

BC Ministry of Agriculture Agricultural Advisory Committee Workshop 2019

Moved by Director Layton
Seconded by Director Watt-Senner

AG.2019-2-3

"That the Agriculture Committee recommend that the Regional District of Bulkley-Nechako Board of Directors receive the Agriculture Coordinator's February 26, 2019 memo titled "BC Ministry of Agriculture Agricultural Advisory Committee Workshop 2019."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

RDBN Emergency & Livestock Preparedness Workshops Update

Moved by Director Watt-Senner
Seconded by Director Newell

AG.2019-2-4

"That the Agriculture Committee receive the Agriculture Coordinator's February 26, 2019 memo titled "RDBN Emergency & Livestock Preparedness Workshops Update."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Director McGuire brought forward the potential to distribute the "RDBN Emergency & Livestock Preparedness Workshops Update – Granisle" via mail box. Due to the smaller population base the cost is approximately \$40.

RDBN Agriculture Plan 2019 Update

Moved by Director Lambert
Seconded by Director Layton

AG.2019-2-5

"That the Agriculture Committee receive the Agriculture Coordinator's February 26, 2019 memo titled "RDBN Agriculture Plan 2019 Update."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Discussion took place in regard to including a marketing plan for the RDBN Agriculture 2019 Plan Update once complete and including a list of agriculture groups and emergency management planning in the updated plan.

REPORTS (CONT'D)

Bill 52 and ALC Regulation Changes

Moved by Director Layton
Seconded by Director Lambert

AG.2019-2-6

"That the Agriculture Committee receive the Planner's February 26, 2019 memo titled "Bill 52 and ALC Regulation Changes."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Jason Llewellyn, Director of Planning and Protective Services provided a brief overview of the Bill 52 and ALC Regulation Changes. Concerns were expressed in regard to the changes and impacts to the region. Foreign ownership of agricultural lands continues to be a concern also.

Break for Regional Transit Committee Meeting at 1:01 p.m.

Reconvened at 2:11 p.m.

CORRESPONDENCE & INVITATION

Correspondence

Moved by Director Brienens
Seconded by Director Fisher

AG.2019-2-7

"That the Agriculture Committee receive the following:

Correspondence

- Province of B.C. – Legislation to Protect Farmland Now in Force
- Province of B.C. – New Agricultural Rules Will Better Protect Human Health, Environment
- Beef in BC – An Update – BC Beef Packing Plant
- Country Life in BC – Province Boosts Risk Management Funding."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

**Smithers Farmers' Institute
-Carrots to Cattle 2019:
Growing from the Ground Up**

Moved by Director Layton
Seconded by Director Brienens

AG.2019-2-8

"That the Agriculture Committee recommended that the Regional District of Bulkley-Nechako Board of Directors ratify Agriculture Chair Mark Parker's attendance at the Smithers Farmers' Institute – Carrots to Cattle 2019: Growing from the Ground Up."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

VERBAL REPORTS

Chair Parker – Nechako Regional Cattlemen's Update

- Provided an overview and update
- Brought forward the ALC Regulation changes
- Ms. Evans provided a Fire Smart presentation
- Nechako Regional Cattlemen's had a last minute resolution submitted in regard to a land use issue
 - o Chair Parker identified that the land being within the Agriculture Land Reserve, a provincial zone, is under the jurisdiction of the Agriculture Land Commission
 - o Mr. Llewellyn provided an update in regard to the non-farm use of the land
 - o Director Petersen mentioned that the BC Cattlemen's Association will address the resolution at its meeting in May, 2019
- Staff provided information in regard to the RDBN Zoning Bylaw review that is currently taking place and the process to provide feedback

Chair Parker/Director Fisher/Debbie Evans, Agriculture Coordinator – Carrots to Cattle Update

- Really good event and presenters
- Met with Ian Paton, Official Opposition Co-Critic for Agriculture
 - o Discussed concerns in regard to the ALC changes
 - o Foreign ownership
- Agriculture Regulation changes in regard to soil sampling was also discussed
- Good to have staff in attendance
- Approximately 100 people were in attendance with individuals in attendance from as far away as Vancouver Island
- Director Fisher spoke of the need to support and build capacity within community groups
- Ms. Evans noted that it was good to participate in the tradeshow
- Very good representation of the Agriculture sector

Director Greenaway mentioned the benefit of having a similar event in the Fort St. James/Vanderhoof area. Director Fisher commented that he would be willing to work with Directors and local groups to facilitate relationships between community groups throughout the region to potentially host a similar event.

Verbal Reports

Moved by Director Lambert
Seconded by Director Layton

AG.2019-2-9

"That the Agriculture Committee receive the verbal reports as presented."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

NEW BUSINESS

Water Sustainability Act -Licensing Groundwater Use

Director Lambert brought forward concerns in regard to the *Water Sustainability Act* – Licensing Groundwater Use. He spoke of other groups and regions having concerns. Chair Parker mentioned bringing the issue forward at a future RDBN meeting.

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ADJOURNMENT

Moved by Director Layton
Seconded by Director Lambert

AG.2019-2-10

"That the meeting be adjourned at 2:31 p.m."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Mark Parker, Chair

Wendy Wainwright, Executive Assistant



REGIONAL DISTRICT OF BULKLEY-NECHAKO

Memorandum
March 28, 2019

TO: Chair Parker and Agriculture Committee

FROM: Debbie Evans, Agriculture Coordinator

DATE: March 28, 2019

SUBJECT: Update on Funding Proposal for Updating RDBN Agriculture Plan

Purpose

The purpose of this memorandum is to update the Agriculture Committee on the funding application to Investment Agriculture Foundation, IAF, for the RDBN Agriculture Plan Update 2019.

Background

An application was submitted to the IAF on February 1, 2019 for the due date of February 8th application deadline for the General Application for updating Agriculture Plans. Confirmation for the submission was received at the time the application was submitted and stated that the application was received successfully. The timeline of the project was going to be from late March to be finished October 24, 2019.

The timeline to hear back on the application is 35 days, so on March 18th, the Agriculture Coordinator contacted Coreen Rodger Berrisford, Director of Client Relations with IAF to inquire when the RDBN would be hearing back on the application. Coreen replied back on March 19th to apologize that the IAF had a shuffling of files and the RDBN application was missed in the February 8th intake.

The IAF had a pre-board meeting on Friday, March 15th and had no concerns about the project, but needed the timeline dates to be adjusted, as no project can start before being officially approved. The IAF Board adjudication will be meeting on April 10th where the RDBN application will hopefully be granted official approval.

The Agriculture Coordinator resubmitted a revised application with dates adjusted. The start date is now May 1, 2019 with a project completion date of December 5, 2019. Coreen had suggested that an end date be a year out, but want the 2019 Update to fall in the RDBN 2019 fiscal year.

Coreen also supplied email, attached, questioning the role of the Agricultural Advisory Committee, AAC, for the project and supplied link to BC Ministry of Agriculture Strengthening Farming link about AACs. On the attachment you will see the Agriculture Coordinator's response back to Coreen about the RDBN Agriculture Committee. Coreen responded back that the application will be submitted for the April 10th meeting.

Coreen also suggested requesting letters of support from the BC Min of Agriculture, Regional Agrologist and the ministry's Land Use Planner.

I would be pleased to answer any questions.

RECOMMENDATION:	(All/Directors/Majority)
Direction:	

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Debbie Evans

From: Debbie Evans
Sent: March 22, 2019 2:10 PM
To: Mark Parker
Subject: FW: B0016.48 GOT it working

From: Coreen Rodger Berrisford <crberrisford@iafbc.ca>
Sent: March 22, 2019 8:37 AM
To: Debbie Evans <debbie.evans@rdbn.bc.ca>
Subject: B0016.48 GOT it working

Thanks Debbie!

Have a good day – we will submit as it is. It would be helpful to have a letter of support from the Regional Agrologist with the Ministry of Agriculture. I understand Reed Radley is the Land Use Planner for the Ministry in your region.

Kind regards,

Coreen

Coreen Rodger Berrisford, M.Sc, P.AG
Director of Client Relations
Investment Agriculture Foundation
T 604.492.2674
C 604.839.6053

From: Debbie Evans <debbie.evans@rdbn.bc.ca>
Sent: March 22, 2019 8:10 AM
To: Coreen Rodger Berrisford <crberrisford@iafbc.ca>
Subject: RE: B0016.48 GOT it working

Hi Coreen,

The RDBN has an agriculture committee, comprised by Board members reporting to the RDBN Board of Directors. The Agriculture Committee meeting and motions are approved by the whole Board of the RDBN and presentations to the whole RDBN Board are organized when needed and the updated 2019 Agriculture Plan would be presented to the whole Board. We have agriculture panels in communities that assist with ALC applications with the RDBN Planning Department. I report to the Agriculture Committee as the RDBN employee for Agriculture. The RDBN made a decision in 2016 not to follow the Strengthening Farming – Agricultural Advisory Committee and has established a strong RDBN Agriculture Committee with agriculture producers and regional elected officials making up the majority of the committee.

I expanded who would be included in the working group on the application.

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I hope this helps.



Debbie Evans P. Ag.
Agriculture Coordinator
Regional District of Bulkley-Nechako
Tel: 250-692-3195
Toll Free: 1-800-320-3339
Address: 37 3rd Ave, PO Box 820, Burns Lake BC, V0J 1E0
Email: debbie.evans@rdbn.bc.ca
Website: www.rdbn.bc.ca

"A World of Opportunities Within Our Region"

From: Coreen Rodger Berrisford <crberrisford@iafbc.ca>
Sent: March 21, 2019 12:17 PM
To: Debbie Evans <debbie.evans@rdbn.bc.ca>
Subject: B0016.48 GOT it working

Hello Debbie,

Could you please let me know role of the Agricultural Advisory Committee for this project? I understand that there is a Working Group – the working group is more of a steering committee and should include a Ministry of Agriculture and potentially Agricultural Land Commission representative, but the program does require that an Agricultural Advisory Committee be involved. An Agricultural Advisory Committee reports directly to the RD Board of Directors.

Please see: <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/strengthening-farming/agricultural-advisory-committees>

I will unlock the application again so that you can address this question.

Kind regards,

Coreen

Coreen Rodger Berrisford, M.Sc, P.AG
Director of Client Relations

Investment Agriculture Foundation
3rd Flr, 808 Douglas St
Victoria, BC V8W 2Z7
T 604.492.2674
C 604.839.6053
E crberrisford@iafbc.ca
F 250.953.5162

From: Debbie Evans <debbie.evans@rdbn.bc.ca>
Sent: March 21, 2019 9:26 AM
To: Coreen Rodger Berrisford <crberrisford@iaabc.ca>
Subject: RE: GOT it working

Hi. The corrections have been made and submitted.
 Thanks so much and look forward to hearing back.
 Take care



Debbie Evans P. Ag.
 Agriculture Coordinator
 Regional District of Bulkley-Nechako
 Tel: 250-692-3195
 Toll Free: 1-800-320-3339
 Address: 37 3rd Ave, PO Box 820, Burns Lake BC, V0J 1E0
 Email: debbie.evans@rdbn.bc.ca
 Website: www.rdbn.bc.ca

"A World of Opportunities Within Our Region"

From: Coreen Rodger Berrisford <crberrisford@iaabc.ca>
Sent: March 21, 2019 9:10 AM
To: Debbie Evans <debbie.evans@rdbn.bc.ca>
Subject: RE: GOT it working

Oh good!

From: Debbie Evans <debbie.evans@rdbn.bc.ca>
Sent: March 21, 2019 9:09 AM
To: Coreen Rodger Berrisford <crberrisford@iaabc.ca>
Subject: GOT it working

Hi. It is working!!! I hope to have to you this evening.
 Thanks
 Debbie

From: Coreen Rodger Berrisford <crberrisford@iaabc.ca>
Sent: March 19, 2019 9:28 AM



To: Debbie Evans <debbie.evans@rdbn.bc.ca>
Subject: B0016.48 Application for the Updated RDBN Ag Plan

Hello Debbie,

My apologies, we had a shuffling of files and your notification was missed. We have received your application, numbered it B0016.48 as above. I will be handling your application myself. We had our pre-board meeting on Friday and no concerns were raised on this project. However, the start date cannot be before our Board adjudication which is on April 10th. It is good to see First Nations involvement, I hope that materializes. I do suggest you give yourself some more time to complete the project as it is our experience that they do tend to take more time in consultation and finalization processes. I would suggest it could take up to a year to complete the activities as identified in your work plan.

We have unlocked the application so you can make those changes and resubmit. I need the final version by Friday noon to get it into our Board package.

Kind regards,

Coreen

Coreen Rodger Berrisford, M.SC, P.AG
Director of Client Relations

Investment Agriculture Foundation
3rd Flr, 808 Douglas St
Victoria, BC V8W 2Z7
T 604.492.2674
c 604.839.6053
E crberrisford@iafbc.ca
F 250.953.5162
W iafbc.ca

From: Debbie Evans <debbie.evans@rdbn.bc.ca>
Sent: March 18, 2019 1:45 PM
To: Coreen Rodger Berrisford <crberrisford@iafbc.ca>
Subject: RE: Application for the Updated RDBN Ag Plan

Good afternoon Coreen,

I am wondering when the RDBN will be hearing back on the application submitted on February 1st.

Thanks so much!

Sincerely,

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Debbie Evans P. Ag.
Agriculture Coordinator
Regional District of Bulkley-Nechako
Tel: 250-692-3195
Toll Free: 1-800-320-3339
Address: 37 3rd Ave, PO Box 820, Burns Lake BC, V0J 1E0
Email: debbie.evans@rdbn.bc.ca
Website: www.rdbn.bc.ca

"A World of Opportunities Within Our Region"

Bulkley-Nechako/Fraser-Fort George Adaptation Strategies: Workshop #2

Summary of Small Group Discussions

Prince George February 4th, 2019 and Quick February 7th, 2019

Prince George Summary

Total Participants: 34

Producers: 19

Agricultural experts/support staff: 4

Government/other: 11

IMPACT 1: Increasing Wildfire Risk

Goal 1.1: Enhance tools and resources for wildfire preparedness and mitigation

Strategy 1.1A: Assess and pilot collaborative fuel management strategies for high-risk agricultural interface areas

Action 1: Identify options for co-management of forest fuels near agricultural operations (e.g. fuel thinning, fuel chipping, fuel shredding).

Action 2: Evaluate possible opportunities and challenges related to particular approaches.

Action 3: Determine the scope and focus of one or more pilot projects. These pilot projects could be cross-regional (e.g. implemented in partnership with groups in the Cariboo region and/or other partners).

Action 4: Implement pilot projects and monitor results to inform broader fuel management strategies.

Discussion on collaborative fuel management:

- Since there is quite a lot of agricultural land and operations near parks, working within BC Parks could be a logical scope for a pilot project.
- Identify legislative and financial obstacles and barriers to fuel management.
 - Can get fined for treating or being on crown land.
- Identify areas where opportunities exist to streamline planning and permitting process for fuel management on crown land.
- Increase the size of right of way clearings: Creating large breaks (e.g. 5 hectares) in the forest to enhance grazing and break up fire.
- Identify farm/grazing practices to reduce fuel loads on crown land.

- This is also a structural/power imbalance problem – how can agriculture influence forestry practices?
- Fuel management can be cost prohibitive.
- Need to identify funding opportunities to alleviate costs.
- The logistics of fuel management are challenging, for example meeting the safety requirements for controlled burns.
- Producers have difficulty keeping up with projects on their private land, let alone contributing (financially or otherwise) to projects on crown range.
- Work with BC Wildfire Service and the Regional Districts to develop fuel management pilots. These parties are proactive and good at getting technical information out to producers.
- Using silvopasture/agri-forestry to take away understory (pilot project).
- Landscape level controlled burns – encourage practices to take place.
- Work to reduce barriers and increase opportunities for fenceline protection and increasing size of right of ways.
- Farm practices for range to remove low fuels (although cattle can't always get in to graze when overgrown).
- Bring agriculture and agencies together to identify and address barriers to fuel management (permits/ policy).
- Tie into existing resources for fuel management.
- Anecdotally, in some cases foresters are not following the Forest Practices Act – however whether they are meeting their obligation is hard to establish.
- Need a mechanism to report contraventions (on crown land) – e.g. fuel left on forest floor, etc. (e.g. Improve lines of communication between agriculture and enforcement agencies).

Stakeholders/Possible Partners:

- BC Cattlemen Sustainable Forage Initiative (Warren Stump)
- Chinook Emergency Response Society

PROPOSED ACTION: Improve supports for on-farm fuel management

PROPOSED PRIORITIZED ACTION: Pilot a special exemptions program (for fuel close to homes) and look for other opportunities to better management on crown lands – such as policy change to allow fencing on range to assist during an emergency (e.g. special license, no stumpage fee).

- Currently producers are not always able to have fences and or/corrals on crown land. In the event of a wildfire alert, when a producer might need to collect their cattle in order to relocate them, having permission to install fencing on crown land to serve this purpose would be helpful.

Strategy 1.1B: Enhance and expand farm/ranch level planning and support small group wildfire preparedness planning

Action 1: Partner with existing initiatives [e.g. Regional District of Bulkley- Nechako (RDBN) wildfire preparedness workshops, FireSmart workshops, community-based initiatives, BC Cattlemen's Association] to expand and extend CAI agriculture wildfire preparedness planning templates for farm/ranch preparedness.

Action 2: Partner with existing initiatives (listed above) to enable/support expansion of small group wildfire preparedness planning for farm/ranch neighbours.

Action 3: Provide small group planning support in areas of BN/FFG.

Discussion:

- Farm-level planning is important.
- Workshops are a valuable venue.
- Some neighbours know everything about their neighbour's properties and can easily help with emergency response during a wildfire.
- In some cases small hobby farmers are not prepared, as they have to move small numbers of different types of animals.
- Small producers tend to have a harder time organizing to move animals, etc.
- FireSmarting your property is still one of the most effective things you can do to prepare for a wildfire.
- Explore community wildfire protection at a smaller scale than even neighbourhoods.
 - Borrow from neighbourhood 'community pods' program in the Kootenays.
 - This is a community organized response system.
- Funding is available for the Regional District through the Union of BC Municipalities for Community Wildfire Protection plans – these plans are expensive to create, so if we can scale them down to the neighbourhood (or smaller) level, we may be able to more easily access funding.
- Templates for community planning already exist (can build on these).
- Having a response plans is important for BCWS – they can access these during an emergency and then have access to good local information. Need to ensure that response agencies get a copy of the community or neighbourhood level plans.
- An Australian example was given of producers staying to defend and leaving early. We need to get info to producers on how to be safe if they are staying behind the lines, and how to make the decision about when to leave. BC has S100 training, which could support producers with fire-fighting abilities.
- Identify opportunities to train producers to respond to fires – producers can be effective at protection their properties but need training and a plan.
- Producers need timely wind and weather data to make good decisions: however it was noted that not even BCWS has this information, and also fires are very dynamic and producers should not be making predictions about fire behaviour.

- Local equipment inventories would be helpful.
- Community leaders are key to successful community level plans.
- Farms can be prepared but need to address fuels off farm on crown land.
- Fire behaviour is changing and the scale and intensity of recent fires is unprecedented. BCWS is only finding out about fires once they've reached 200 hectares -by that point they are difficult to manage.
- BCWS has limited resources and cannot fight all of the fires. We need to create a culture of shared responsibility.
- Not everyone is as capable as others, need to pool resources.
- Being prepared makes everyone feel better about leaving – know that there is plan in place.
- Can follow practices similar to BCWS pre-season prep for firefighters (training)
- Having water distribution systems on the farm/ranch would be an asset for fighting wildfire.
- Develop an irrigation program to create safe zones.

PROPOSED ACTION: Improve information flow during wildfire emergencies

- Get producers better information (hazard, contact information)
- Incorporate local producer knowledge into wildfire response (farmers know their land best).

Discussion re: communications

- Communication is key for preparedness.
- A strategy is needed to circumvent the lack of connectivity in some areas. How do we get around lack of cell service?
- Special training for rural police would be helpful on how to minimize conflict and maximize understanding during evacuation orders.
 - This could be a program to have locals representatives show the RCMP around, show them local geography & familiarize them with the area.
- Need to build trust between BCWS and producers. For example, a debrief at the end of the season to explain how fires progressed and why they decided to fight some fires in a certain way.
- Training producer(s) to be delegates to BCWS and EOC - good way to get messaging out to agriculture sector.
- Incorporate an agricultural representative into the Emergency Operations Centre (EOC).
- Wildfire agriculture liaison – either through RD, or put agricultural people in the EOC to act as a liaison (but this requires commitment)

PROPOSED ACTION: Support and establish community response societies

Stakeholders/Possible Partners:

- Rio Tinto
- RCMP
- Regional Districts
- Kevin Smith (assistant fire chief in the Kootenays has some good ideas)

Goal 1.2: Facilitating agriculture sector engagement with forestry sector (re: fuel management and wildfire risk)

Strategy 1.2A: Review current landscape level/forest management practices from an agricultural risk perspective

Action 1: Through research and consultation with producers summarize current forestry management practices and their potential impact to agricultural operations (for a producer audience) including:

- o clarification on fence line clearing regulations/policy on Crown land,*
- o understanding how forest management practices affect wildfire risk,*
- o how the forest ecosystem is changing, how wildfire impacts may change this composition, and also how forest composition and replanting protocols affect wildfire risk.*

Action 2: Host a forum to connect agricultural leaders and stakeholders to forestry decision and policy-makers and/or licensees.

Action 3: Initiate a body (working group, committee, advisory) pertaining to this issue that includes on-going input from agriculture.

- Need to improve consultation with the agriculture sector about how they are affected by forest management practices.
- Individuals don't have a way to dialogue with the forestry sector (whose primary focus is to get fibre out of the forest).
- It is difficult for individual farmers/ranchers needs and concerns to be represented (power imbalance and no established relationships between sector).
- We need to bring agricultural values into planning (trees should not be the only priority).
- There is some research taking place (e.g. impact of brush on seedlings). Good information can help to shift forestry practices.
- The crown needs to do more work to keep fence lines clean. We need to engage the appropriate departments/branches.
- There is an appetite for coming together for this dialogue.

- BCWS has noticed that their capacity is decreasing (as fire intensity and fuel loads increase), they also know they need to change their tactics in terms of narrowing the focus with what can they do with their resources and how can they empower others to do more.
- All parties need to understand values on the landscape and treatment options. [If you treat x, will reduce risk by z (or won't have as high of a risk)].
- In our areas this type of risk analysis is what we need for forest practices based on current and future Biogeoclimatic (BEC) zones.

Stakeholders/Possible Partners

- Lara Beckett (RD director) has a background in alternative forestry
- Chinook Emergency Response Society

IMPACT 2: Increasing Variability and Changing Crop Suitability

Goal 2.1: Supporting sector capacity to innovate, diversify and share knowledge to create resilient farm systems and farm businesses

Strategy 2.1A: Facilitate producer-led research and knowledge transfer on innovative farm practices

Action 1: Complete an analysis of innovative practices that would allow producers to take advantage of shifting suitability ranges (while managing variability).

- Update Canada Land Inventory (soil classification) to improve accuracy.

Stakeholders/ Possible Partners:

- Industry Associations
- Ministry of Agriculture
- College of New Caledonia
- University of Northern BC

Action 2: Host events and field days, or support learning hubs for producer-to-producer learning re: variability and innovation.

- Bring knowledge holders and those who want to gain new knowledge together to learn/communicate.
- Peer to peer learning is valuable.
- Vary events by production type, season & commodity.
- It is easier to learn hands on.
- It is important for producers to have access to knowledge and professionals.
- Share ideas.
- Support innovation.
- Demonstration.
- Coordinator funding needed for this action.

- Connection of associations to producers is needed, as not all producers are active in the associations that are there to represent them.
- A online communication hub could be useful.

Stakeholders/ Potential Partners:

- Support existing organizations (Farmers Institute, Cattlemen's Association) to put on events and access resources.
- An extension position at Ministry of Agriculture could serve this role.
- A co-op student from UNBC or CNC could support this action.

Action 3: Coordinate producer-led research, and/or seed trials and share results.

- Create online courses to teach research methods to producers.
- Long term trials are needed.
- Resources are required to fund an organizer/coordinator position.
- A good communication network with producers would support this action.
- This action should be on-going rather than grant driven.
- Incorporate UNBC or another institution for consultation with producers to drive research that supports local farmers in region and research from a farm level.
- There are limits on the existing UNBC program that is engaged in agricultural research.
- There is a challenge for producers to access professionals (i.e. agrologists).
- Research needs to be whole farm focused.
- This action supports innovation and transfers innovation to others.
- An agriculture coordinator at the Fraser-Fort George Regional District could serve this role.

Stakeholders/ Potential Partners:

- An extension position at Ministry of Agriculture could serve this role.
- BC Forage Council
- Group purchasing of seeds (for this action and subsequent action) could be done through Farmers' Institutes and Cattlemens' Associations.
- UNBC
- BNRD agriculture coordinator

Action 4: Determine interest in, and feasibility of, bulk seed purchases to secure difficult to access seeds/varieties and reduce input costs (to allow for experimentation with new varieties and innovative mixes).

- Develop co-operative seed purchasing and shared infrastructure: Set up a co-op to bulk purchase seeds for distribution and to buy machinery to share amongst a collective.

Action 5: Explore interest in, and feasibility of, local seed saving programs and storage.

- Provincial support would be needed for this, including funding and personnel.

Discussion

- It is important to link back to national strategies and provincial strategies and work plans. There is a need to ensure that what we plan to do regionally links back to federal and provincial objectives.

PROPOSED ACTION: Co-op for equipment and infrastructure/ machinery to reduce barriers and reduce costs.

Strategy 2.1B Bolster and extend research on potential new crops and their market viability

Action 1: Extend the UNBC Cash Crop Study (or launch a similar study) to cover the Fraser-Fort George region.

- Crops should be considered that producers can grow to diversify their operations and to complement their existing crops.
- Site micro climates should be considered for crops to trial.
- Supported crop trials and diversification will reduce risks for producers.
- Crop trials should focus on local sustainability and resilience.

Action 2: Partner with UNBC Cash Crop study to strengthen the climate change lens and enhance the changing crop suitability information within the analysis.

- Benefits of trying a new commodity need to be clear.
- Participants did not see the need to use the term “cash” crops.

Action 3: Share the UNBC Cash Crop study (and other study) results, through development of fact sheets or other complementary resources.

Action 4: Complete additional climate modeling and/or analysis for future crop suitability.

- UNBC could also be a partner on this action.

Action 5: Provide support with marketing of new crops, possibly by initiating collective marketing to create demand/market products.

PROPOSED ACTION: Develop a co-op to share infrastructure/ machinery.

PROPOSED ACTION: Establish a regional food hub. Establishing a regional food hub would support this action and would be the mechanism for implementing actions such as this.

Discussion:

- This research should be scoped to assist producers in the region with competing in the world market.
- Find a commodity that generates by-products, which can support other farming initiatives and create a revenue stream for waste products of the original commodity.
- Explore opportunities for vertical integration.
- A value chain coordinator could look at the system as a whole and explore opportunities related to vertical integration and complementing the global market.
- Focus on crops not just “cash” crops: forage, grazing, diversification of farms.
- Research needs to be long term to capture the differences season to season.
- Long term research is expensive.

Strategy 2.1C Integrate climate change/ resilience information into farm business planning resources

Action 1: Partner with agricultural business planning programs (e.g. Ministry of Agriculture and/or Columbia Basin Trust) to add climate change information and considerations to farm business planning templates/programs.

Stakeholders/Possible Partners:

- Community Futures
- Fraser Basin Council

Action 2: Incorporate information into planning tools on future crop suitability and opportunities.

- This is integral for new farmers.
- Updating crop suitability information is needed.
- Online tools would be useful.

Action 3: Ensure comprehensive information on agricultural insurance options is available to producers as a module of business planning.

Action 4: Improve producer awareness of, and access to, these resources through outreach/communications activities.

- Connect distribution of this information with distribution of other timely information (e.g. pest information)
- Email is efficient (but inboxes can get overloaded and many producers are not on e-mail lists).
- If Farmers’ Institutes had farmers’ contact information they could share information broadly.

Goal 2.2: Improving sector access to baseline weather information for daily decision-making, identification of climate (and micro-climate) trends, and long-term planning

Strategy 2.2A: Establish a regional weather monitoring network and increase sub-regional agricultural weather stations.

Action 1: Assess coverage of current weather monitoring and identify geographic and data gaps.

Action 2: Identify and convene key partners to develop and implement a plan for improving and maintaining agricultural weather data (including consistent collection and quality control of data).

Action 3: Determine which (if/any) decision support tools could be made available in the region with improved climate data.

Action 4: Establish a long-term outreach and extension plan to communicate availability of improved weather/climate data to producers.

DISCUSSION:

- Integrate air quality/smoke data into the weather data system.
- Long term funding is needed for weather station infrastructure.
- Local technical knowledge is needed to maintain stations.
- Ability to model and extract data is needed.
- Website/communication device to share weather information would also need long term funding.
- Connect to wildfire models to examine information.
- Connect to river forecast system infrastructure.
- The BC Agricultural Climate Adaptation Research Network (BC-ACARN) weather gap analysis is a start that can inform regional work.
- Need farms/partners for sites.
- Ideal locations for station siting would need to be identified.
- Resources for long term oversight of any new system is needed.
- The data collection and station infrastructure would need to be reliable/ consistent.

IMPACT 3: Warmer and Drier Summer Conditions

DISCUSSION

- Field days to provide information are good since it is not always easy/possible to access information online.
- Water stewardship is an important aspect of water management.
- These actions need to consider integration with the Environmental Farm Plan (EFP).
- Ranchers have tried to co-ordinate irrigation with wildfire preparedness plans
 - E.g. set up irrigation for specific areas for prevention

- Historically the Robson Valley didn't irrigate, there is change of mindset now considering irrigation.
- Explore programs to cost-share dugouts that co-benefit wildfire preparedness/fighting & agricultural water needs.
- There is an inconsistent approach to regulation
 - There is a need to clarify the bureaucratic process for farmers to navigate
 - Front Counter BC is a useful place to look for advice
- Information sessions in different regions/districts would be useful.
- Could a number of 'pre-designed solutions' for water storage be developed, similar to what exists for septic fields? e.g. flow chart considering soil type, volume, etc.
- Dugout management is an important component.
 - Controlling livestock that can cause erosion
- The regulatory landscape is complex and there is too much information for the average busy producer to wade through.
 - It takes an 'expert' to work through it all
- The question was raised of how well we understand what water supply exists.
- Not possible – too many site-specific considerations.
- Is fodder a feasible practice here?
 - This is not practiced in the region yet, but it could be applicable in some situations.
- The Nechako Valley produces more forage than the Peace (anecdotally), this is an important forage area!

Goal 3.1: Supporting and facilitating the establishment of agricultural water storage

Strategy 3.1A: Streamline and improve communication & information about regulatory and technical aspects of water storage

Action 1: Identify and implement mechanisms to connect producers more directly to resources and expertise (e.g. FLNRORD Regional Hydrologists):

o Through expanding the Agricultural Dam Safety workshop sessions to BN/FFG, and/or

o Through industry association presentations and/or workshops.

- Add information sessions to the second bullet with opportunities for Question and Answers periods with technical advisors and regulators.
- Develop aids for navigating permitting process.
- Develop a list/database of human resources (consultants, government, other producers) available to assist with regulatory and technical questions (could be held and distributed by Front Counter).

Action 2: Facilitate dialogue between producers and key agencies (FLNRORD and Ministry of

Agriculture) regarding the needs and challenges of agricultural water users -possibly through a forum or working group.

Action 3: Pilot a position to provide short-term support/ assistance to producers with meeting (regulatory) requirements related to water use and water storage.

- This position would be a “go-to” agricultural water advisor.
- Subsidize a consultant for a fixed time period to deliver this service.

Action 4: Offer workshops or field visits to assist producers with water development and/or water storage improvements/projects.

- The field day and presentations delivered in the Cowichan region, which were tied to the Islands Agricultural Show, are a good model to follow for this action

Strategy 3.1B: Assess the feasibility of developing water storage utilizing excess run-off (with co-benefit of reducing localized flood risks)

Action 1: Map selected areas of the agricultural land base (that are under production) which are prone to seasonal site-specific flooding.

- A mapping project in Delta was complete that looked at soil workability. Areas with higher soil moisture were mapped. This example highlights what digital mapping can achieve.

Action 2: Identify locations where additional water storage is needed that are also prone to flooding and excess run-off.

- Quick replanting after forest fires in high-risk areas will also mitigate flooding and erosion risk.

Action 3: Evaluate the feasibility (economic, technical, regulatory) of establishing new water storage to also act as a flood retention/control measure.

- Include irrigation in feasibility studies: monitor data collection and support farmer-led research.

PROPOSED PRIORITIZED ACTION: Explore co-benefits of water storage/ irrigation

- There are co-benefits to storage and irrigation for wildfire protection.
 - Deliver strategic support for irrigation in locations where it can mitigate wildfire risk.
- Assess the value of the many co-benefits that farm/ranch water management has on the broader community (e.g. flood risk reduction, habitat & ecological services, groundwater regeneration).
- This strategy benefits the whole community and the many co-benefits should be considered.

- Irrigation would be beneficial to productivity in some years.
- The economic feasibility of irrigation needs to be further explored.

Goal 3.2: Optimizing agricultural water use and management

Strategy 3.2A: Provide knowledge transfer for agricultural water management

Action 1: Update water and irrigation management tools for improved functionality in interior BC.

Action 2: Share and promote existing (BC specific) water and irrigation management tools and resources (e.g. irrigation scheduling calculators).

Action 3: Provide workshops and field days on existing water management best practices (including sharing practices across sectors). These may include:

- o Crop protection technology (blocking wind, reducing evapotranspiration)*
- o Improving soil water retention*
- o Efficient irrigation*
- o Ram pumps, what to do with algae blooms and installing aeration in dugouts*
- o Other management for settlement ponds and pumping between ponds*
 - Workshops are always a useful way to learn

Action 4: Provide information on utilizing less water by adapting farm design, crops and crop management to dry/drought conditions including:

- o Whole farm design*
 - o Using fodder instead of hay for cattle feed*
 - o Drought tolerant crops*
 - o Native grasses*
- Provide this information through on-farm water management demonstrations.
 - Encourage farm-led research and develop system for collection, sharing and monitoring on-farm research.

IMPACT 4: Changing pests and beneficial insect populations

Goal 4.1: Enhancing and sharing information & resources about invasive species and pest management

Strategy 4.1A: (1 vote) Identify and share best practices to prevent pest and invasive species establishment on agricultural land.

Action 1: Consult with sector and industry specialists to prioritize existing and emerging

pests/invasive species.

Action 2: Work with partners to enhance information about agriculturally significant pests and invasive species, and to expand distribution of resources.

- Work with partners to enhance information about agriculturally significant pests and invasive species and to expand distribution of resources. This needs to include raising awareness of the breadth of the potential impact of invasive species to agricultural production (including reaching out to CN Rail etc.)
- Start a public education campaign re: invasives and wildflower mixes.
- Initiate dialogue with Canfor re: their seed mix and problem plants in their seed mix.
- Strengthen bridge between agriculture and North West Invasive Plant Council (NWIPC). This program is not inclusive of mechanical controls etc. Increase promotion of the NWIPC program and figure out how to increase uptake.
- BC Cattlemen’s Association has a real estate pilot, re: educating real estate agents on how open range work. Maybe this pilot could be expanded to include coverage of weed management responsibilities.

Action 3: Conduct outreach/knowledge transfer about:

o Creating an environment that is more resilient to invasives, pests and diseases.

o Avoiding crops that can result in damage to nearby fields by attracting pests.

- Outreach/ knowledge transfer should focus on integrated pest management.
- Increase education/awareness of integrated pest management.
- Need more education/uptake on beneficial animals (like goats).
- This impact area is connected to over grazing. Healthy pastures are needed to be resilient against weeds and invasives.
- Identify native plants (weeds) that are adapting well and may prevent establishment of weeds (which may also be good for pollinators).
- Bring back natural grasses.
- Provide information re: weed spread after a fire.
- Make agricultural research station info available. Get this info and put it online.
- Conduct outreach re: new Invasive Species Council of BC weed ID app and best management practices (weed Best Management Practices). Note, you don’t need cell service to use this app. They have the staff in place to do quality control on the weed identifications that are sent in. And, the app is geo-reference in order to record automatically where the weeds are found.

Action 4: Identify and provide incentives for reducing weeds on leased and fallow lands.

- Identify and provide incentives for reducing weeds on leased and fallow lands. This is connected to land use planning and people living further into rural area.

Action 5: Identify options for increasing access to unutilized farm land/ grazing lands for BC agriculture.

PROPOSED PRIORITIZED ACTION:

- Supporting enforcement of the Noxious Weed Act is important.
 - The Act only applies to plants on the northwest invasive list.
- Work with BC Forage Council to get weed act enforced.

Goal 4.2: Improving understanding of climate change impacts on pests and pollinators

Strategy 4.2A: Evaluate the impacts of climate change, weather conditions and management practices on pollinators and pollinator/crop interactions.

Action 1: Undertake a vulnerability assessment of climate change impacts on pollinators.

- Winery in Prince George wants to do a study on the health of native pollinators and how to support them. There may be opportunities to join forces with the winery.

Action 2: Evaluate the interactions between weather, cropping systems and pollinators.

- Note: UNBC entomologist, UNBC Bee Club and community bee clubs are all possible partners. 3 entomologists at UNBC are doing broad research which may relate.

PROPOSED ACTION: Create opportunities to share best practices.

- Connect to existing honeybee events to have a panel, or workshop, or session on best practices as they connect to climate change.
- There is a producer in Terrace (or Prince Rupert) that is breeding their own bees.
- Host field events to encourage networking between local entomologists and farmers.
- Note: for the clover crop, irrigation might be resulting in healthier hives.
- Note: less fireweed noticed in forests (linked to pine beetle trees dying?) Fireweed comes after a fire- so we might see more.
- The ability to move bees and to diversify crops is a management adaptation.
- There is honeybee information available from the lower mainland and elsewhere to draw upon re: pollinators and management of crops.
- Looking at different queens etc. (from Russia) that might be more resilient to future climate conditions here.
- Support and increase communication between neighbours re: spraying or not.

PROPOSED PRIORITIZED ACTION: Create habitat for pollinators.

- Approach partner organizations (City of Prince George etc.) to plant pollinator friendly plants
- Create an environment for native pollinators to thrive (e.g. BC Hydro Plantings), Hwys etc. Support pollinator corridor plantings.
- Create resources for farmers re: fallow area, cover crops, riparian areas, shelterbelt plants that will attract native pollinators.

Strategy 4.2B: Research and document the effects of dry conditions on emerging problem pests and declining pasture health

Action 1: Research declining pasture health (from dry conditions and other climate factors) and its relationship to toxic plants and animal health.

Action 2: Conduct research with agriculture sector, industry specialists and animal health experts to understand this emerging issue and links to climate change.

Action 3: Establish a monitoring program to track incidence and breadth of these issues and track emerging pests of concern

- Need decision support and information on when to harvest for maximum yield in light of pest problems (thresholds).
- To gather information from producers (and improve monitoring), see about having pest questions added to end of year Stats Canada survey for agriculture as a monitoring.
- Share with producers that there is the option to send pests to Abbotsford for ID.
- Need more information on integrated pest management.
 - Including practices like establishing a crop later in season to miss early outbreaks.
- Research the Assart effect and how to manage for it.
 - This relates to how plants are more palatable and grazing is very good after a fire because there is a nutrient flush into the plants.
 - Good grazing for about 4 year.
 - Then no deep nutrient cycling after 4 years, so there is a decline in plant quality/nutrients.
- Expand BC Forage Council pasture rejuvenation work (if funded) to BN/FFG.
 - They plan to explore no-till methods of pasture rejuvenation.
 - Testing methods from prairies and elsewhere to see if they work here.
 - Measuring weed competition and soil health in response to these methods as part of the project.

Telkwa/Quick Summary

Participants: 20

Producers: 6

Agricultural experts/support staff: 4

Government/other: 10

IMPACT 1: Increasing Wildfire Risk

- Prince George has a forest carbon initiative, to mitigate CO2 emissions. The goals of this initiative can be at odds with fuel management, before moving ahead with fuel management project we should make sure they are in alignment, or at least communicate with this initiative.
- Well-designed broadcast burns create less CO2 than pile burns; need good info to make good management decisions.
- These are fire-driven ecosystems, can't take fire out of the equation without large impacts (we have created fuel continuity by suppressing fire).
- Regional District Emergency response people are trying to do two jobs during an emergency (their usual job and working in the Emergency Operations Centre).
- Network connectivity is a big issue during emergencies, not everyone has a phone/cell service.
- In the United States there is a system where a coloured rock in front of a home, at the end of the driveway, indicates which homes are FireSmart.

Goal 1.1: Enhance tools and resources for wildfire preparedness and mitigation

Strategy 1.1A: Assess and pilot collaborative fuel management strategies for high-risk agricultural interface areas

Action 1: Identify options for co-management of forest fuels near agricultural operations (e.g. fuel thinning, fuel chipping, fuel shredding).

Action 2: Evaluate possible opportunities and challenges related to particular approaches.

Action 3: Determine the scope and focus of one or more pilot projects. These pilot projects could be cross-regional (e.g. implemented in partnership with groups in the Cariboo region and/or other partners).

Action 4: Implement pilot projects and monitor results to inform broader fuel management strategies.

- Fuel management funding is available for crown land treatments to reduce or eliminate private costs.
- Need to make producers more aware of this funding and how to access it.
- There are opportunities for fuel management on range (adjacent to other homes).
- Explore range management practices to reduce risk/fuel loads.
- Remove pine beetle trees (as these are high fire risk are should be a priority).
- Grass and fireweed are also important fuels. Need a 5-10 year fuel management plan – currently we treat fuel once and then consider the area done, but this is not always the case.
- One approach is to thin an area, then follow through with grazing management (Paul Hesberg – fire ecologist). Prescribed burns are very effective.
- An idea for a pilot would be fuel removal followed by grazing management.
- Different ecosystems need different management practices (e.g. coastal forests vs. ponderosa pine forests).
- Important to influence fuel management on private lands/woodlots; producers need better information.

Stakeholders/Possible Partners:

- s100 training available through Firesmart
- UBCM has funds for fuel management work: Community Resilience Initiative
- Paul Hesberg: fire ecologist

Strategy 1.1B: Enhance and expand farm/ranch level planning and support small group wildfire preparedness planning

Action 1: Partner with existing initiatives [e.g. Regional District of Bulkley- Nechako (RDBN) wildfire preparedness workshops, FireSmart workshops, community-based initiatives, BC Cattlemen's Association] to expand and extend CAI wildfire preparedness planning templates for farm/ranch preparedness.

Action 2: Partner with existing initiatives (listed above) to enable/support expansion of small group wildfire preparedness planning for farm/ranch neighbours.

Action 3: Provide small group planning support in areas of BN/FFG.

- Still a big need for farm-level preparedness and having animal relocation plans.
- Plans should facilitate discussion of options around what opportunities exist and how to take advantage of them, what is best suited to one's local area.
- For farm level preparedness, those delivering workshops etc. need to value people's time. Need to identify who will take the lead in completing the plan. Farm-level workshops and kitchen table planning are good approaches.
- Don't assume everyone knows about FireSmart.

- For farm-level preparedness people need to come back together after the plans are in place to close the loop.
- Create industry champions and train and support them. This person can coordinate neighbourhood/community planning and possibly sit in Emergency Operations Centre as agricultural liaison.
 - It is good to have an organized group to make response more effective and this requires one point of contact.
 - Need an organizer, someone to put energy into making things happen.
 - A stipend could be offered to support these activities.
- It was noted that the RD should have access to farm-level plans.

Stakeholders/Possible Partners:

- Shannon Irvine at BCWS does home visits
- Pleasant Valley Cattlemen developed group livestock relocation plans (Sandy Anaka). They just renewed them.
- Skeena Regional Cattlemen
- Range agrologists (to share wildfire information since they interface directly with producers).

Goal 1.2: Facilitating agriculture sector engagement with forestry sector (re: fuel management and wildfire risk)

Strategy 1.2A: Review current landscape level/forest management practices from an agricultural risk perspective

Action 1: Through research and consultation with producers summarize current forestry management practices and their potential impact to agricultural operations (for a producer audience) including:

*o clarification on fence line clearing regulations/policy on Crown land,
o understanding how forest management practices affect wildfire risk,
o how the forest ecosystem is changing, how wildfire impacts may change this composition, and also how forest composition and replanting protocols affect wildfire risk.*

Action 2: Host a forum to connect agricultural leaders and stakeholders to forestry decision and policy-makers and/or licensees.

- There is a 2-day intensive targeted at forestry (spring of 2019). This action could offer something similar for agriculture, and we could have agricultural observers at workshops in spring 2019 to start to build bridges (and offer insight at how workshop could be adapted for agriculture).

Action 3: Initiate a body (working group, committee, advisory) pertaining to this issue that includes on-going input from agriculture.

- Agriculture and forestry need to come together and discuss options

PROPOSED ACTION: Promote information sharing between BCWS/EOC/producers

- There may need to be more than 1 person as an agricultural liaison for information sharing.
- One option is to have information (farm-level preparedness plans, equipment inventory etc.) in tubes at the end of the driveway so that fire fighters can access this information.

IMPACT 2: Increasing Variability and Changing Crop Suitability

Goal 2.1: Supporting sector capacity to innovate, diversify and share knowledge to create resilient farm systems and farm businesses

Strategy 2.1A: Facilitate producer-led research and knowledge transfer on innovative farm practices

Action 1: Complete an analysis of innovative practices that would allow producers to take advantage of shifting suitability ranges (while managing variability).

Action 2: Host events and field days, or support learning hubs for producer-to-producer learning re: variability and innovation.

- Coordinate producer land-linking for trials. People are land rich and are willing to share what they learn.

Action 3: Coordinate producer-led research, and/or seed trials and share results.

Action 4: Determine interest in, and feasibility of, bulk seed purchases to secure difficult to access seeds/varieties and reduce input costs (to allow for experimentation with new varieties and innovative mixes).

Action 5: Explore interest in, and feasibility of, local seed saving programs and storage.

- Smithers feed store has expressed interest in getting new seeds and providing sample packs to farmers.
- It is difficult for producers to get knowledge when they need it.
- Support for new entrants is needed.
- Bring producers together to share knowledge.

Strategy 2.1B Bolster and extend research on potential new crops and their market viability

Action 1: Extend the UNBC Cash Crop Study (or launch a similar study) to cover the Fraser-Fort George region.

- Ministry of Agriculture used to have enterprise budgets that were useful in business planning.
- With the Haskap berry example, producers are putting crops in without plans in place of where they are going to sell them. They need business planning and marketing support.
- Need for diversification (e.g. pasture grown pork, custom grazed beef) to provide a variety of income streams.
- Encourage diversification to support risk of variability.
- Extend the UNBC cash crop study (or launch a similar study) to cover Fraser-Fort George region too and other areas such as up near Smithers and Bulkley area.
 - Trial crops as a next step with producer cooperators.
 - Need local examples for analysis.
 - Begin a new iteration of a similar study looking at other possibilities too.
 - Incorporate First Nation's knowledge into potential crop studies (RDBN is engaging First Nations into their Agricultural Advisory Committee).

Action 2: Partner with UNBC Cash Crop study to strengthen the climate change lens and enhance the changing crop suitability information within the analysis.

Action 3: Share the UNBC Cash Crop study (and other study) results, through development of fact sheets or other complementary resources.

- Build up Curt Gesch's newsletter as a way of promoting research/sharing information

Action 4: Complete additional climate modeling and/or analysis for future crop suitability.

Action 5: Provide support with marketing of new crops, possibly by initiating collective marketing to create demand/market products.

- Tie food security into local market development (people are doing great work but we need to showcase them).

PROPOSED ACTION: Facilitate better information sharing between Nechako and Bulkley Valley producers.

PROPOSED PRIORITIZED ACTION: Create a common database of research results from producer-led trails

- Track common variables on different sites.
- Take baseline measurements to compare.
- Have a common unifying theme among producer-led trails.

PROPOSED PRIORITIZED ACTION: Explore opportunities to enhance processing and storage

Strategy 2.1C Integrate climate change/ resilience information into farm business planning resources

Action 1: Partner with agricultural business planning programs (e.g. Ministry of Agriculture and/or Columbia Basin Trust) to add climate change information and considerations to farm business planning templates/programs.

- Comment: this should be a provincial effort, rather than using regional funding for this action.

Action 2: Incorporate information into planning tools on future crop suitability and opportunities.

Action 3: Ensure comprehensive information on agricultural insurance options is available to producers as a module of business planning.

- Skeena Regional Cattlemen is doing sessions on this, but this might not capture the horticulture sector. There will have been good exposure to these sessions in the Bulkley area, but not sure about the rest of the region.

Action 4: Improve producer awareness of, and access to, these resources through outreach/communications activities.

- Smaller farms (under a threshold of \$10,000) don't have access to existing business development programs.

Goal 2.2: Improving sector access to baseline weather information for daily decision-making, identification of climate (and micro-climate) trends, and long-term planning

Strategy 2.2A: Establish a regional weather monitoring network and increase sub-regional agricultural weather stations.

Action 1: Assess coverage of current weather monitoring and identify geographic and data gaps.

- Find out if any of the stations run by other agencies provide data useful for agriculture.
- Data needed by producers includes Growing Degree Days, soil moisture & evapotranspiration.
- Anecdotally, UBC has a highly accurate prediction system compared to others. (UBC forestry weather ensemble).

Action 2: Identify and convene key partners to develop and implement a plan for improving and maintaining agricultural weather data (including consistent collection and quality control of data).

- A few producers at the table were theoretically interested in hosting a station.

Action 3: Determine which (if/any) decision support tools could be made available in the region with improved climate data.

- There was almost no interest in using decision support tools from the sub-sectors/commodities represented at the workshop who are producing in this region.
- Information would be useful on when to do first cut of hay (to weigh the balance of leaving it for more volume vs. cutting early for re-growth potential).

Action 4: Establish a long-term outreach and extension plan to communicate availability of improved weather/climate data to producers.

IMPACT 3: Warmer and Drier Summer Conditions

Goal 3.1: Supporting and facilitating the establishment of agricultural water storage

Strategy 3.1A: Streamline and improve communication & information about regulatory and technical aspects of water storage

Action 1: Identify and implement mechanisms to connect producers more directly to resources and expertise (e.g. FLNRORD Regional Hydrologists):

- o Through expanding the Agricultural Dam Safety workshop sessions to BN/FFG, and/or*
- o Through industry association presentations and/or workshops.*

- Dams:
 - Regulations around construction and licensing are complicated.
 - The amount of water to store in order to enable irrigation is significant.
- Technical information should include more than just engineering information, also should include on-farm supply and distribution requirements.
- Information on dam constructions that is easy for producers to understand is needed. Livestock and water regulations is a topic of concern.

Action 2: Facilitate dialogue between producers and key agencies (FLNRORD and Ministry of Agriculture) regarding the needs and challenges of agricultural water users -possibly through a forum or working group.

Action 3: Pilot a position to provide short-term support/ assistance to producers with meeting (regulatory) requirements related to water use and water storage.

- A position for extension should be accompanied by information/resources to assist producers (i.e. the on the specifications for correct installation).

Action 4: Offer workshops or field visits to assist producers with water development and/or

water storage improvements/projects.

- Consider water quality, not just availability and quantity when storing.
- Cost is a big factor here.
- Collaboration & expertise of the agricultural community should be drawn upon.
- Any information needs to address whether current water storage designs are adequate under a changing climate.
- The agricultural community needs neutral advice.
- A workshop could showcase innovative and interesting examples.

Strategy 3.1B: Assess the feasibility of developing water storage utilizing excess run-off (with co-benefit of reducing localized flood risks)

Action 1: Map selected areas of the agricultural land base (that are under production) which are prone to seasonal site-specific flooding.

- Understand the temporal changes in water availability due to climate change, in particular in smaller water courses, but also aquifers.
- There is a need to standardise the mapping of water so people can capture information that could go into a functional GIS which includes spatial and temporal elements.
 - Create mapping layers for hydrology (including seasonal/temporal element) that could overlay existing mapping resources (soil, topography, agricultural capability) to better select locations for storage.
- Runoff is occurring at different times than we are accustomed to.

Action 2: Identify locations where additional water storage is needed that are also prone to flooding and excess run-off.

- Consider shifts from climate change.
- Identify where groundwater can be accessed (where there is unallocated supply).

Action 3: Evaluate the feasibility (economic, technical, regulatory) of establishing new water storage to also act as a flood retention/control measure.

- Include the environmental needs and water availability/ possible allocation.
- Evaluate/pilot soil & crop management practice to reduce runoff.
- Identify holistic uses for dugouts beyond watering livestock.
- There was discussion around the many benefits of ponds.

- We are losing river volumes and seeing changes in the timing of high river flows.
- Winter precipitation is not being stored (as snow) and not returning as summer precipitation.
- When looking at economic feasibility of technologies, the additional costs of buying feed in drought years should be factored in.

Goal 3.2: Optimizing agricultural water use and management

Strategy 3.2A: Provide knowledge transfer for agricultural water management

Action 1: Update water and irrigation management tools for improved functionality in interior BC.

Action 2: Share and promote existing (BC specific) water and irrigation management tools and resources (e.g. irrigation scheduling calculators).

- EFP is a wealth of knowledge on irrigation.

Action 3: Provide workshops and field days on existing water management best practices (including sharing practices across sectors). These may include:

o Crop protection technology (blocking wind, reducing evapotranspiration).

o Improving soil water retention.

o Efficient irrigation.

o Ram pumps, what to do with algae blooms and installing aeration in dugouts.

o Other management for settlement ponds and pumping between ponds.

- Tours and conferences always need extra financial support.
- Some parts of the region need better access to professionals for workshops.
- The Smithers Farmers' Institute is an effective organisation in the Bulkley area.
 - o Held water usage workshops.
- Permaculture design includes water catchment/management.
- There is little information/support for drip irrigation systems.
- A workshop on how to use water efficiently/effectively would be useful
- Soil management practices for increased water storage in soil is a topic of interest.
- Without irrigation we get one crop, with irrigation it might be possible to get two.
 - o Longer growing season might make 2nd crop more likely

Action 4: Provide information on utilizing less water by adapting farm design, crops and crop management to dry/drought conditions including:

o Whole farm design

- o Using fodder instead of hay for cattle feed*
- o Drought tolerant crops*
- o Native grasses*

- Researching plants/varieties that are drought resistant could be useful.
- Economic feasibility needs to be considered.
- Warm windy days are problematic for moisture loss.
- In terms of looking at irrigation feasibility, facilitation with local producers around this topic specifically is needed:
 - What are producers experiencing? How do they 'change' for their situation? So few farmers are actually irrigating, so it may be premature to have discussions around improving techniques or increasing supply.
- Provide information on utilizing less water by adapting farm design, crops and crop management to dry/drought conditions.

PROPOSED PRIORITIZED ACTION: Knowledge transfer & support for establishing new irrigation infrastructure

- Financial support exists through EFP for improving existing irrigation

IMPACT 4: Changing pests and beneficial insect populations

Goal 4.1: Enhancing and sharing information & resources about invasive species and pest management

Strategy 4.1A: (1 vote) Identify and share best practices to prevent pest and invasive species establishment on agricultural land.

Action 1: Consult with sector and industry specialists to prioritize existing and emerging pests/invasive species.

- Identify top risks to sector. Model this process after the Cariboo *Emerging and Priority Pests Scan*.

Action 2: Work with partners to enhance information about agriculturally significant pests and invasive species, and to expand distribution of resources.

Action 3: Conduct outreach/knowledge transfer about:

o Creating an environment that is more resilient to invasives, pests and diseases.

o Avoiding crops that can result in damage to nearby fields by attracting pests.

- Support/promote soil testing to understand link to weeds.
- Understand aspen populations/colonies, risks posed to them, related ecological effects and benefits of aspen colonies.

- Create an environment that is more resilient to invasives, pests and diseases. Possible outreach topics include:
 - Norm Dueck could possibly talk about soils and soil health to prevent weeds.
 - Managing inputs/fertilizers to reduce weeds.
 - UNBC soil test kit might be helpful with this.
 - Need more support with soil testing.
 - Avoiding crops that can result in damage to nearby fields by attracting pests.
- The Kootenay and Boundary Farm Advisors model is a good one to helping producers access more information (on this topic, or on others).

Action 4: Identify and provide incentives for reducing weeds on leased and fallow lands.

- Do this through supporting enforcement of the associated regulations.
- The barriers to this currently are a combination of lack of enforcement, lack of awareness and having access to the necessary tools.
- The Northwest Invasive Plant Council offers grants/ reimbursement for noxious weed eradication.

Action 5: Identify options for increasing access to unutilized farm land/ grazing lands for BC agriculture.

PROPOSED PRIORITIZED ACTION: figure out control measure for Hawkweed

- New tools are needed for managing Hawkweed. Hawkweed is a major pest in perennial systems. It is less of a pest in annual systems.

PROPOSED ACTION: Create local newsletter and information alert.

- Locally knowledgeable person could be funded to curate a newsletter and write articles and also do a literature review to pick people's brains and share information.
- Consolidate and share what producers.
- This would be a combination of a literature review and local knowledge.
- Could focus on pests for a season or a time period, and then cover other agricultural topics.

PROPOSED ACTION: Isolate/separate different zones through fencing.

- I.e., grass and aspen, fence riparian areas, separate and encourage both types of plants.
- Using fencing to separate different zones of the farm (might apply to toxic plants like Hemlock also).

Goal 4.2: Improving understanding of climate change impacts on pests and pollinators

Strategy 4.2A: Evaluate the impacts of climate change, weather conditions and management practices on pollinators and pollinator/crop interactions.

Action 1: Undertake a vulnerability assessment of climate change impacts on pollinators.

Action 2: Evaluate the interactions between weather, cropping systems and pollinators.

PROPOSED PRIORITIZED ACTION: Integrate pollinator habitat into farms

- Integrate habitat into any areas with opportunity (i.e., riparian, shelterbelts, homestead areas, edges etc.)
 - Need to know co-benefits of buffer areas for bees, field productivity/drainage etc.
- Note: alfalfa is mostly pollinated by bumblebees and other native bees.
- Raise awareness re: role of native pollinators.
- Note: the fall is important for honeybees as they are storing food for winter.
- Note: in fall grazing pressure is also higher, this is a more critical time for good management. Farmers need all the land to graze, so it is harder to leave buffers in the fall. Fencing is very important at this time if areas are to be preserved.
- Create pollinator habitat in and around the home, farm buffers and riparian zones to become reservoirs for beneficial insects. Leave some areas natural near fence lines.
- Protect and preserve natural areas that surround farm land.
 - Raise awareness of the value of these areas.
- Need clear good information of how to manage dandelion for soil health/ crop yield as well as pollinator habitat. (E.g. when to keep dandelion, when to cut it, whether nutrients it pulls from soil will be reintegrated if you mow it back into soil, etc.)

Strategy 4.2B: Research and document the effects of dry conditions on emerging problem pests and declining pasture health

Action 1: Research declining pasture health (from dry conditions and other climate factors) and its relationship to toxic plants and animal health.

- Solutions to this are either access to more land for grazing, or ways to make existing land more productive (e.g. through irrigation).
- There is some room for improved grazing management.
- More agricultural leases on crown land are needed to access more land for grazing.
- Note: expanding range of ticks.
- Note: some wasps can be beneficial such as yellow jackets.

Action 2: Conduct research with agriculture sector, industry specialists and animal health experts to understand this emerging issue and links to climate change.

- It is very difficult to predict the risk of different pests.
- Utilize the tool developed by Babine Lake Watershed Trust to evaluate the level of risk and level of knowledge of the pest management issue
 - This is a process and an adaptive management framework.

Action 3: Establish a monitoring program to track incidence and breadth of these issues and track emerging pests of concern

- For monitoring: tie producer data back into regional datasets.
- Monitor via “citizen science” through apps that are developed for this purpose.
- Capitalize on student expertise by piloting a student field position for monitoring. Have the student train the trainer (producers) while on farms (across various commodities) collecting data.

PROPOSED PRIORITIZED ACTION: Irrigation feasibility work

- Existing irrigation systems are not being used.
- Need to know cost of investment and timeline for return on investment for irrigation.
- This needs to include energy costs.
- This needs to include a filter for climate change impacts and whether future climate scenarios change the business case.

Strategy and Actions Ranking

Strategy	Action	Prince George	Telkwa	Total
1.1A	Identify options for co-management of forest fuels ... <i>(i.e. silvopasture/agri-forestry and remove low fuels)</i>	7	1	5
	Implement pilot projects and monitor results ...	1	0	1
	<i>Pilot special exemptions for crown forests within certain range of homes/infrastructure...(i.e. Fenceline protection, increasing right of ways)</i>	7	0	4
	<i>Identify methods to reduce cost-barriers ...</i>	2	0	2
	<i>Improve supports for on-farm fuel management...</i>	2	0	2
1.1B	Partner with existing initiatives to expand planning templates for farm/ranch preparedness.	8	1	9
	Partner with existing initiatives to enable small group wildfire preparedness planning...	16	0	16
	Extend Climate Action Initiative small group planning pilot to areas of BN/FFG	1	0	1
	<i>Create a culture of shared responsibility around wildfire risk mitigation</i>	1	0	1
	<i>community response – pod system in the Kootenays – Create an organized community response system (i.e. “pod system” and Ag EOC liaison, promote Information sharing)...</i>	4	2	2
1.2A	Conduct research, consult with producers and summarize current forestry management practices	2	0	2
	Host a forum... <i>(i.e. 2-day intensive – targeted at forestry)</i>	4	4	8
	Initiate a body (working group, committee, advisory) pertaining to this issue and <i>Forest Practices Act...</i>	4	0	4
2.1A	Complete an analysis of innovative practices...	3	2	5
	Host events and field days, or support learning hubs...	17	6	23
	Coordinate producer-led research, and/or seed trials...	4	3	7
	<i>Create a common database of research results from producer-led trails</i>	0	4	4
	Determine interest in, and feasibility of, bulk seed purchases...	2	0	2
	Explore interest in, and feasibility of, local seed saving programs and storage	0	0	0
	<i>Co-op for equipment and infrastructure/ machinery....</i>	5	0	5
2.1B	Extend the UNBC Cash Crop Study. <i>(And add trials)</i>	3	8	11
	Partner with UNBC Cash Crop study to strengthen the climate change lens & changing crop suitability info...	2	0	2
	Complete additional climate modeling and/or analysis for future crop suitability.	1	0	1
	<i>Establishing a regional food hub to implement this strategy area...</i>	2	0	2
	<i>Encourage diversification (e.g. pasture grown pork, custom grazed beef) ...</i>	0	3	3

	<i>Increase information sharing (in general) between Nechako Valley & Bulkley Valley producers.</i>	0	3	3
	<i>Explore opportunities to enhance processing and storage needed</i>	0	5	5
2.1C	Integrate climate change/ resilience information into farm business planning resources	3	3	6
	Partner with agricultural business planning programs...	3	0	3
	Incorporate information into planning tools on future crop suitability ...	5	1	6
	Ensure comprehensive information on agricultural insurance options....	0	2	2
	Improve producer awareness of, and access to, these resources ...	5	0	5
2.2A	Establish a regional weather monitoring network and increase sub-regional agricultural weather stations.	0	5	5
	Assess coverage of current weather monitoring..	1	0	1
	Identify and convene key partners ...	1	0	1
	Determine which (if/any) decision support tools ..	0	0	1
	Establish a long-term outreach and extension plan to communicate availability of improved weather/climate data to producers.	1	0	1
3.1A	Identify and implement mechanisms....	3	2	5
	Facilitate dialogued between producers....	2	0	2
	Pilot a position....	6	4	10
	Offer workshops or field visits...	4	3	7
	<i>Develop a list/database of human resources</i>	4	0	4
3.1B	Map selected areas of the agricultural land base...			
	Identify locations where additional water storage...	0	2	2
	Evaluate feasibility of new water storage....	3	3	6
	<i>Develop basic models...</i>	1	0	1
	<i>All: encourage farm-led research and develop system...</i>	1	0	1
	<i>Assess the value of the many co-benefits....</i>	3	0	3
	<i>Understand the temporal changes in water availability...</i>	0	1	1
	<i>Evaluate/pilot soil & crop management practices...</i>	0	3	3
3.2A	Update water and irrigation management tools...	1	0	1
	Share and promote existing water and irrigation tools...	1	2	3
	Provide workshops and field days on existing....	6	6	12
	Provide information on utilizing less water...	4	1	5
	<i>Explore co-benefits of irrigation & wildfire protection...</i>	7	0	7
	<i>On-farm water management demonstrations</i>	4	0	4
	<i>Knowledge transfer & support for establishing new....</i>	0	6	6
4.1A	Identify and share best practices to prevent pest and invasive species establishment on agricultural land.	0	1	1
	Consult with sector and industry specialists to prioritize	0	0	0
	Work with partners to enhance information...	2	1	3
	Conduct outreach/knowledge transfer about...	9	2	11

	Identify and provide incentives for reducing weeds on leased and fallow lands.	0	1	1
	Identify options for increasing access to unutilized land...	2	0	2
	Research effective control measures for Hawkweed specifically.	0	3	3
	<i>Work with partners to figure out mechanism to enforce the Weed Act.</i>	4	0	4
	<i>Increase education/awareness of IPM</i>	2	0	6
	<i>Create local newsletter and pest information alert</i>	0	1	1
	<i>Isolate/separate different farm/ranch zones through fencing to utilize different plant management approaches in different zones</i>	0	4	4
4.2A	Undertake a vulnerability assessment of climate change impacts on pollinators.	3	2	5
	Evaluate the interactions between weather, cropping systems and pollinators.	2	0	2
	<i>Integrate pollinator habitat into farm/ranch design & protect and preserve adjacent natural areas...</i>	0	3	3
	<i>Host field events to encourage networking between local entomologists and farmers...</i>	2	0	2
	<i>Approach partner organizations to plant pollinator friendly plants/corridors...</i>	4	0	4
	<i>Create resources for farmers re: fallow area, cover crops, riparian areas, shelterbelts that will attract native pollinators.</i>	2	0	2
4.2B	Research and monitor incidences of emerging pests (in particular in relation to dry conditions)	0	1	1
	Research declining pasture health...	1	0	1
	Conduct research to understand this emerging issue and links to climate change.	3	0	3
	Establish a monitoring program...	0	0	0
	<i>Research and raise awareness about post-wildfire grazing and nutrient cycling...</i>	1	0	1
	<i>Utilize adaptive management tools to evaluate the level of risk and level of knowledge of pest management ...</i>	0	2	2
	<i>Conduct irrigation feasibility work (in part as a measure to establish healthy soils and prevent pests)</i>	0	7	7

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37, 3RD AVE PO Box 820
BURNS LAKE, BC
VOJ 1E0

REGIONAL DISTRICT
OF BULKLEY-NECHAKO

“A WORLD OF OPPORTUNITIES WITHIN OUR REGION”

March 18, 2019

Business Risk Management Branch
Attn: Byron Jonson, Executive Director
200 1690 Powick Road
Kelowna BC V1X 7G5

Dear Mr. Jonson,

The Regional District of Bulkley-Nechako, RDBN, had many agriculture producers experience extraordinary expenses necessary for recovery and to return to production as a result of the 2018 wildfires. Producers applied for the 2018 Canada – British Columbia Wildfire Recovery Initiative and have received financial assistance through this initiative. While financial assistance is greatly needed and the support is appreciated by the producer, the program hasn't fully served its intended purpose due to tax implications.

Some producers have contacted the RDBN Agriculture Committee Chair to report their frustration that the taxation on the assistance, with other farm management decisions that had to be made as a result of feed shortage, resulted in inflated income and taxes due.

The RDBN, on behalf of all its agriculture producers, would like to have the BC Ministry of Agriculture and Agriculture Canada, through the Canadian Agricultural Partnership consider potential changes to taxation of 2018 and future Wildfire Recovery Initiatives. In 2018, producers faced increased taxation and were essentially penalized for having applied to the 2018 Canada – British Columbia Wildfire Recovery Initiative. Financial assistance is necessary to assist producers with extraordinary costs of emergencies and to keep producers in the industry.

Thank you for your time to review the situation.

Sincerely,

Mark Parker, Chair
RDBN Agriculture Committee

cc: Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food, Canada
Honourable Lana Popham, Minister of Agriculture, British Columbia
Iain MacIntyre, Program Technician, BC Ministry of Agriculture

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PH: 250-692-3195
FX: 250-692-3305
TF: 800-320-3339