REGIONAL DISTRICT OF BULKLEY-NECHAKO
RURAL/AGRICULTURE COMMITTEE
AGENDA
Thursday, March 7, 2024

PAGE NO.		ACTION
	AGENDA, March 7, 2024	**Approve**
	Supplementary Agenda	**Receive**
	MINUTES	
2-5	**Rural/Agriculture Committee Meeting Minutes - February 8, 2024**	**Approve**
	AGRICULTURE REPORT	
6-8	**Megan D'Arcy, Regional Agriculture Coordinator -BC Vegetable Marketing Expands Regulated Area**	**Receive**
	DEVELOPMENT SERVICES	
9-10	**Deneve Vanderwolf, Planning Technician Recent Agricultural Land Commission Decisions**	**Receive**
	ENVIRONMENTAL SERVICES REPORT	
11-28	**Janette Derksen, Waste Diversion Supervisor -Agricultural Plastics (3-year) Pilot Project**	**Further Discussion**
	SUPPLEMENTARY AGENDA	
	NEW BUSINESS	
	IN-CAMERA MOTION	

That this meeting be closed to the public pursuant to Section 90(1)(k) of the *Community Charter* for the Board to deal with matters relating to the following:

- **Future Service Provision**

ADJOURNMENT

REGIONAL DISTRICT OF BULKLEY-NECHAKO

RURAL/AGRICULTURE COMMITTEE MEETING

Thursday, February 8, 2024

PRESENT:	Chair	Clint Lambert
	Directors	Judy Greenaway Shirley Moon Chris Newell Mark Parker – left at 2:59 p.m. Michael Riis-Christianson – arrived at 2:37 p.m. Stoney Stoltenberg
	Staff	Curtis Helgesen, Chief Administrative Officer – left at 2:59 p.m. Cheryl Anderson, Director of Corporate Services – left at 2:44 p.m., returned at 2:57 p.m., left at 3:04 p.m. John Illes, Chief Financial Officer Jason Llewellyn, Director of Planning – via Zoom Wendy Wainwright, Deputy Director of Corporate Services

CALL TO ORDER Chair Lambert called the meeting to order at 2:35 p.m.

AGENDA Moved by Director Newell
Seconded by Director Greenaway

RDC.2024-2-1 "That the Rural/Agriculture Committee Agenda for February 8, 2024 be approved."

(All/Directors/Majority) CARRIED UNANIMOUSLY

MINUTES

Rural/Agriculture Committee Meeting Minutes -January 11, 2024 Moved by Director Parker
Seconded by Director Stoltenberg

RDC.2024-2-2 "That the minutes of the Rural/Agriculture Committee meeting of January 11, 2024 be approved."

(All/Directors/Majority) CARRIED UNANIMOUSLY

DEVELOPMENT SERVICES

Referrals

Crown Land Application Referral No. 6409460 Electoral Areas B (Burns Lake Rural) and G (Houston/Granisle Rural)

Moved by Director Riis-Christianson
Seconded by Director Greenaway

RDC.2024-2-3

"That the attached comment sheet be provided to the Province as the Regional District's comments on Crown Land Application No. 6409460."

(All/Directors/Majority) CARRIED UNANIMOUSLY

Discussion took place regarding:

- First Nations notification and consultation
- Potential noise concerns of wind farms
- Application is to test wind levels for a potential wind farm if a proposal for a wind farm is submitted it would come forward to the Board
    - If application is brought forward more information will be required regarding impacts to residents and First Nations consultation.

RURAL REPORTS

Rural Budget Summary and Draft Requisition

Moved by Director Parker
Seconded by Director Moon

RDC.2024-2-4

"That the Committee receive the Chief Financial Officer's Rural Budget Summary and Draft Requisition memorandum."

(All/Directors/Majority) CARRIED UNANIMOUSLY

The following was discussed:

- Administration Expenses – Admin recoveries
- Electoral Area "B" General Government Requisition
- Building Numbering Requisition
- Electoral Area "G" Waste Disposal Requisition
- Grant in Aid monies carried forward.

RURAL REPORTS (CONT'D)

Grant in Aid Policy Update

Moved by Director Stoltenberg
Seconded by Director Greenaway

RDC.2024-2-5

"That the Committee recommend that the Board approve the updated RDBN Grant in Aid Policy as amended as follows:
3. c)…Failure to submit a report will (replacing "may") impact consideration of future applications."

(All/Directors/Majority) CARRIED UNANIMOUSLY

NEW BUSINESS

Old Growth Deferral on Crown Agricultural Land Reserve Lands

Chair Lambert brought forward the Provincial Old Growth Deferral in relation to Agricultural Land Reserve (ALR) Land and concerns regarding the inability to harvest fibre for agricultural purposes such as shavings. Discussion took place in regard to bringing forward the issue to the Agricultural Land Commission, Ministry of Forest and Ministry of Agriculture and Food. The Old Growth Deferral mapping was also discussed.

Letter to Ministry of Forests Re: Old Growth Deferral on Crown Agricultural Land Reserve (ALR) Land

Moved by Director Riis-Christianson
Seconded by Director Newell

RDC.2024-2-6

"That the Committee recommend that the Board write a letter to the Ministry of Forests requesting information regarding old growth management areas encompassing Agricultural Land Reserve (ALR) Land and outline how the impacts to the ALR Land is being considered."

(All/Directors/Majority) CARRIED UNANIMOUSLY

Liability Insurance for Grazing Licensees and Lease Land

Chair Lambert spoke of grazing licensees and lease land holders are now required to have a $2 million liability insurance policy. Discussion took place regarding the potential impacts to lease holders.

ADJOURNMENT Moved by Director Stoltenberg
Seconded by Director Greenaway

RDC.2024-2-6 "That the meeting be adjourned at 3:14 p.m."

(All/Directors/Majority) CARRIED UNANIMOUSLY

_____ _____

Clint Lambert, Chair

Wendy Wainwright, Deputy Director
of Corporate Services

Regional District of Bulkley-Nechako
Rural/Agriculture Committee

To: Chair and Committee

From: Megan D'Arcy, Regional Agriculture Coordinator

Date: March 7, 2024

Subject: **BC Vegetable Marketing Commission Expands Regulated Area**

RECOMMENDATION: **(all/directors/majority)**

Receive.

BACKGROUND

The BC Vegetable Marketing Commission issued the attached bulletin on February 2, 2024. As is mentioned on their website, the BC Vegetable Marketing Commission is organized under the Natural Products Marketing (BC) Act and the British Columbia Vegetable Scheme. Before January 1, 2024, the area covered under this regulation was the southern half of the province below the 53rd parallel, but that has now changed, and the regulation now covers the entire province.

The definition of a producer in the British Columbia Vegetable Scheme is as follows, "…a person who operates a farm on which one tonne or more of the regulated product has been produced during the immediately preceding 12 months." (see link below for reference).

Commercial producers are defined in the BCVMC General Orders as "…a Producer whose name has been entered and remains registered in one or more of the registers of Commercial Producers referred to in **Section 5 of the Scheme**. In accordance with Section 7 of the Scheme, a Producer qualifies to be registered as a Commercial Producer if, during the immediately preceding 12 months, Regulated Product of at least a gross value to the Producer of $5,000 has been grown on the farm and marketed through an Agency, through a licensed processor, or as a Producer-Shipper." (reference link to General Orders also in footnotes).

ATTACHMENTS

BULLETIN – BCVMC Expands Regulated Area

BCVMC
BC VEGETABLE MARKETING COMMISSION

Issued: February 2, 2024

The British Columbia Vegetable Marketing Commission Expands Regulated Area North of the 53rd Parallel Latitude

All vegetables grown in the province are subject to the BC Vegetable Marketing Commission's (Commission) authority. Prior to December 31, 2023, the Commission's General Orders applied only to regulated storage, processing, and greenhouse vegetables grown below the 53rd parallel north latitude (53rd parallel), in the southern half of British Columbia. On January 1st, 2024, this restriction was removed from the General Orders and the regulated area was expanded to encompass the entire province. As a result, all areas of the province north of Quesnel (a city in the Cariboo Regional District of British Columbia that lies astride the 53rd parallel) are now included. This decision was made in consideration of climate change and changes in agricultural practices that utilize controlled environment structures.

The Regulated Product components are:

Storage Crops
(Regulated for fresh and processing use)

- Beets (tops off)
- Green Cabbage
- Red Cabbage
- Carrots (tops off)
- Parsnips
- Potatoes (all types &varieties)
- Rutabaga
- White (purple top) turnips
- Yellow Onions

Greenhouse Crops
(Regulated for fresh and processing use)

- Cucumbers (all types)
- Tomatoes (all types)
- Peppers (all types)
- Lettuce (as defined)

Processing Crops
(Regulated for processing use)

- Beans
- Broccoli
- Brussels Sprouts
- Cauliflower
- Corn
- Peas
- Strawberries

A Greenhouse is defined by the General Orders and means an enclosed structure where Regulated Product is grown.

All producers of Regulated Product north of the 53rd parallel, including producers applying innovative agricultural technologies such as vertical farming within an enclosed structure, are subject to the Commission's authority and required to be licensed by the Commission to grow, process, or market Regulated Product.

BC VEGETABLE MARKETING COMMISSION

The BC regulated vegetable industry is organized under the *Natural Products Marketing (BC) Act* and the British Columbia Vegetable Scheme (Scheme). The Scheme prescribes the rules and procedures, and their application. The Commission is the first instance regulator and acts by the authority delegated through the *Natural Products Marketing (BC) Act* and its Regulations. It is responsible for administering the Scheme, including coordinating producer activities, to ensure Orderly Marketing. Orderly Marketing is achieved through the promotion, control, and regulation of production, transportation, packing, storage, and marketing of vegetables. The Commission's General Orders set out the rules on how it manages the industry.

Information concerning the application of these regulations can be obtained from the Commission's website www.bcveg.com, or by contacting the Commission directly. Please direct your inquiries to the Commission's Compliance Manager.

BCVMC
#207 - 15252 32nd Ave
Surrey BC
Canada, V3Z 0R7
Tel: (604) 542-9734
Toll Free in BC: 1-800-663-1461
E-mail: info@bcveg.com

Regional District of Bulkley-Nechako
Rural/Agriculture Committee

To: Chair and Committee

From: Deneve Vanderwolf, Planning Technician

Date: March 7, 2024

Subject: **Recent Agricultural Land Commission Decisions**

RECOMMENDATION: **(all/directors/majority)**

Receive.

DISCUSSION

The following table is a summary of Agricultural Land Commission decisions issued over the past 12 months. Please contact the Planning Department if you would like a copy of the ALC Minutes or Resolution for these applications.

ALC File #	RDBN File #	EA	Submitted to ALC	ALC Decision Date	Applicant	Description	Staff	APC	Board	ALC
56320	1244	A	July 14, 2022	May 16, 2023	James and Melicia Robinson 6779 & 6787 Tatlow Road	Subdivision application to divide subject property in to two parcels.	Denial	Approval	Approval	Denied
68040	1257	A	May 29, 2023	October 20, 2023	Leslie Ellis, BC Hydro Walcott Road	Non-farm use and subdivision to accommodate the development of a capacitor station	Approval	Approval	Denial	Approved
68154	1260	A	Aug 14, 2023	Feb 21, 2024	John Perry 9362 Old Babine Lake Road	Subdivision application to divide subject property in to two parcels.	Approval	Approval	Approval	Denied
61977	1227	A	May 28, 2021	Not Decided	Telkwa Coal Multiple properties SW of Telkwa	Non-farm use for • A Transportation Terminal • soil (gravel) removal • access corridor; • and associated soil deposit.	Approval	Approval	Approval	Pending
67515	1248	A	May 11, 2023	Not Decided	Sam and Aleisha Larson Hwy 16 W	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending
67668	1250	A	May 11, 2023	Not Decided	Vihar Construction Ltd. Skillhorn and Morris Road	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending
67672	1251	A	June 23, 2023	Not Decided	Greg and Robin Burns Hwy 16 and Raymond Rd	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending
67769	1253	A	June 23, 2023	Not Decided	West Fraser Concrete Ltd. Hwy 16 and Donaldson Rd	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending
67512	1255	D	June 23, 2023	Not Decided	Alvina and Michael Plowman Le Poidevin Rd	Subdivision application for a boundary adjustment	Approval	Approval	Approval	Pending
67450	1256	F	July 14, 2023	Not Decided	Canadian Forest Products Kluskus FSR	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending
68105	1258	A	Sept 29, 2023	Not Decided	Clinton and Cynthis Pidherny 2925 & 2929 Laidlaw Frontage Road	Non-Farm Use-Removal of Soil	Approval	Approval	Approval	Pending

Regional District of Bulkley-Nechako
Rural/Agriculture Committee

To: Chair and Committee

From: Janette Derksen, Waste Diversion Supervisor

Date: March 7, 2024

Subject: **Agricultural Plastics (3-year) Pilot Project**

RECOMMENDATION: **(all/directors/majority)**

Further Discussion

BACKGROUND

In 2021, the RDBN Board approved the recommendation to sign on with CleanFarms to host collection sites for a 3-year pilot program on Agricultural Plastics. 50% funded by a grant from Agriculture and Agri-food Canada (AAFC) through the Canadian Agricultural Strategic Priorities Program (CASPP) and 50% by RDBN. Please see the attached 2023 Update Report for the results and expenses occurred up until December 2023. As we are approaching the end to the pilot program in June, it is time to start considering the next steps.

CleanFarms appeared as a delegation to present on the pilot project at the February 22 Board meeting to discuss the options of continuing. Staff is bringing this item forward to the Rural/Ag Committee, seeking direction on whether to consider continuing with the project after June 2024.

OPTIONS

CleanFarms is proposing a pilot extension to allow for more time to further understand the impacts of the program and gather more information relative to the generators needs, materials collected and the markets available for recycling this material. Please see the attached proposal submitted by CleanFarms, providing 3 Options with projected costs for each option.

Option 1: 3-year Extension with On-Farm Trials

Option 2: Annual Renewal

Option 3: Finalize Current Project (Conclusion)

SUMMARY

The programs impact to staff saw some initial growing pains but was relatively low impact in the day-to-day requirements for attendants. With the new shipping cages and the proposed on-site farm trials, staff foresee lower impacts under the proposed extension to the pilot program. It is understood that the baseline for this material was a bit vague to start with due to the historical on-farm practices and no segregated data collection in the region. To learn more about how the program would be best suited in Northern BC, staff feels that moving forward with extending the pilot program could be beneficial to prepare for a provincial incentive program. Funding by a grant from Agriculture and Agri-food Canada (AAFC) is currently not secured and uncertain, therefore the RDBN could be faced to covering the full amount of the continuation of the pilot program. The possibility for other grants may decrease the impact to the Environmental Services Budget.

ATTACHMENTS: ATTACHMENTS

1. CleanFarms Agricultural Plastics Pilot 2023 Update Report
2. CleanFarms Agricultural Plastics Pilot Extension
3. RDBN 2024-27 Pilot Extension Cost Assumptions

Agricultural Plastics Pilot 2023 Update Report

Regional District of Bulkley-Nechako

2023 Update

RDBN Update Report – 2023 Year End

The pilot program is reaching the completion of its term of collection. As of this report, approximately 38,700 kgs of material has been collected and sent for recycling since the beginning of the program. The processor, BBRD, has finished baling the material collected, which has allowed for more accurate tracking of the tonnage collected. The pilot is running with 89% of the total budget spent to-date. The pilot is set to wrap up by June, 2024.

The pilot remains in good financial standing. Cleanfarms staff continue to trouble-shoot challenges around material consolidation for efficient transportation and contractor availability.

Tonnage Collected

To date, 25,600 kgs of agricultural plastics have been baled and are ready to ship from the Bulkley-Nechako region for recycling with the remaining 13,100 kgs being processed currently. Approximately 26,000 kgs of bale wrap, 10,700 kgs of twine, and 2,100 kgs of silage film has been collected from farmers across the region. The Knockholt Landfill and Southside Transfer Station saw their first collections of the program this year.

Material collected from each site is listed below (Table 1) based on the number of bags of each material picked up by the drivers.

	Collections (# of bags)			
Site name	**2021**	**2022**	**2023**	**Total bags Collected**
Vanderhoof Transfer Site	44	351	94	489
Smithers-Telkwa Transfer Site	30	545	60	635
Burns Lake Transfer Site	58	58	106	222
Fraser Lake Transfer Site	113	55	98	266
Southside Transfer Station	-	-	46	46
Knockholt Landfill	-	-	68	68
Total collections YTD	**245**	**1,009**	**472**	**1,726**

Table 1 - Collections by Transfer Site Since Program Inception

The most active sites by volume are the Vanderhoof and Smithers-Telkwa Transfer Stations. To better service these sites, Cleanfarms has distributed steel cages (Image 1) to optimize pick up and receiving by the hauling partner (GFL) and processor (BBRD). The feedback from both parties has been overwhelmingly positive and has allowed GFL to schedule pickup runs more easily with only one driver instead of a driver and a labourer saving significant costs. The Fort St. James site which was initially included in the pilot is no longer participating because of almost negligible collection rates. The few bags it has accumulated was moved to a neighbouring site and collection was ceased.

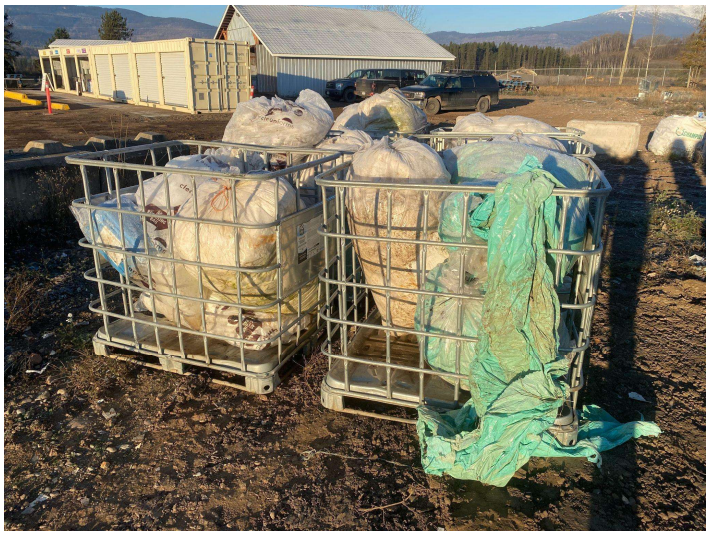


Image 1 - Cages used to collect material at the Vanderhoof and Smithers transfer sites.

BBRD has begun baling material after several attempts. It took the operations staff at BBRD some time and trial and error to understand how best to bale the material with the existing equipment in Witset. The material collected since the program inception has now been baled and weighed (Image 2). The data below (Table 2) represents a best estimate on weight collected per site based on the number of bags picked up from Table 1. We have assumed that each bag weighs approximately the same and have used ratios to calculate volume collected per material type per site.

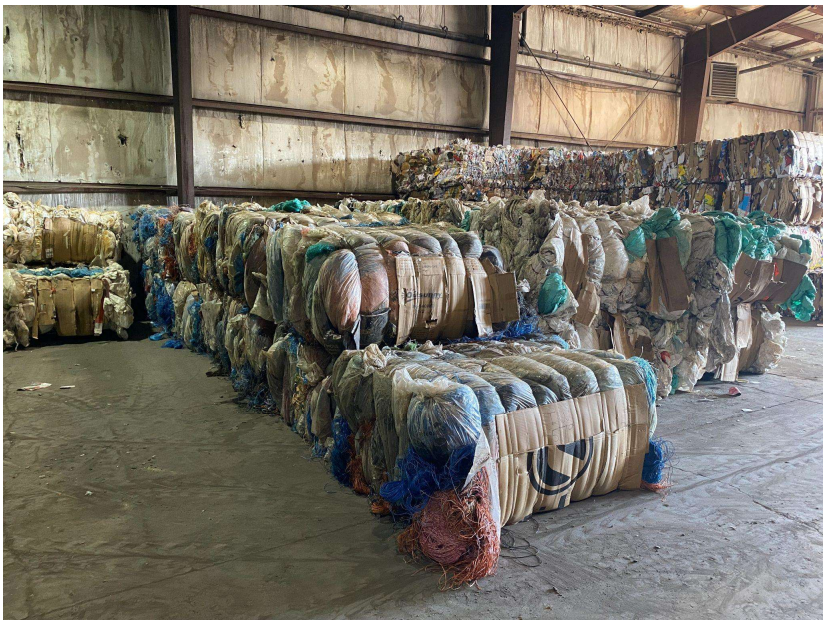


Image 2 - Baled material ready for shipping

Site name	Collections (kg)			
	Bale Wrap	Twine	Silage Wrap	Total Material Collected
Vanderhoof Transfer Site	6,430	3,400	953	10,783
Smithers-Telkwa Transfer Site	10,468	3,532	624	14,624
Burns Lake Transfer Site	3,318	1,303	176	4,797
Fraser Lake Transfer Site	4,330	1,537	289	6,156
Southside Transfer Station	314	489	-	803
Knockholt Landfill	1,107	393	74	1,574
Total collections YTD	**25,967**	**10,654**	**2,116**	**38,737**

Table 2 - Estimated KGs Collected by Site

Financial Report

The following tables show the program financials to Dec 30, 2023. Table 3 represents the RDBN contribution to the program (50% funding) for Q1 and Q2 2023, and Table 4 represents the total project costs to-date, including those supported by Cleanfarms (cumulative 100%).

Table 3 – Total project costs; 50% RDBN contribution

Project Total	RDBN program costs – Year 1 (2021)	RDBN program costs - Year 2 (2022)	RDBN program costs - Year 3 (2023)	Total program costs	% Budget Spent	Total Project Budget
Collection Costs	$7,798.40	$24,819.48	$33,824.36			
Communication	$3,616.74	$ -	$0.00			
Administration	$3,239.54	$5,832.04	$6,531.54			
Revenue	$ -	$ -	$ -			
Total	**$14,654.68**	**$30,651.52**	**$40,355.91**	**$85,662.11**	**89%**	**$96,501.50**

Table 4 – Total project costs; May, 2021 – Dec, 2023

Project Total	Total program costs – Year 1 (2021)	Total program costs - Year 2 (2022)	Total program costs - Year 3 (2023)	Total program costs	% Budget Spent	Total Project Budget
Collection Sites Costs						
Material Consolidation	$3,449.26	$21,617.00	$33,796.55			
Baling costs	$ -	$ -	$23,277.18			
Transport to end market	$ -	$ -	$10,575.00			
Collection bags	$12,147.54	$5,766.96	$ -			
Total Collection Costs	$15,596.80	$49,638.96	$67,648.73			
Communication	$7,233.48	$ -	$ -			
Administration	$6,479.08	$11,664.08	$13,063.09			
Revenue	$ -	$ -	$ -			
Total	**$29,309.36**	**$61,303.04**	**$80,711.81**	**$171,324.22**	**89%**	**$193,003.00**

**BBRD has not yet submitted the latest invoice for the baling costs associated with the material collected to-date. The first invoice received covered material baled until November 2023 and the following is expected to be issued in Q1 2024.*

Key Challenges and Learnings

Programming Updates

Uptake of the on-farm compactors has been slow in RDBN. So far, only one of the six compactors that were shipped to the Vanderhoof Transfer Station has been claimed by a farmer in the region. Cleanfarms staff continue to work with local stakeholders to gauge interest and distribute the presses. Learnings from neighboring districts have shown that demonstration events increase the likelihood of adoption of the manual compactors. Holding a demonstration day and inviting farmers in the area may be a good approach to educate and distribute more units.

On-farm compactors increase the tonnage of material that can be accepted through the pilot by densifying materials, making it easier and more efficient to store and transport. Admittedly, the manual versions are tedious to use. In other regions, manual compactors have been converted to stand-alone hydraulic compactors that are operated using the hydraulic connectors typically found on a skidsteer or tractor. Cleanfarms is exploring funding options in order to retrofit a few units to trial on sites in order to increase the convenience of use for the farmers or RD site staff.

Contractor Development

As described above, steel cages were introduced at two of the highest-volume collection sites this spring to help make on-site material storage and pickup more efficient. The early feedback from trialing cages at collection sites, namely at the Vanderhoof and the Smithers-telkwa Transfer Sites, was well received by GFL (collector) and BBRD (processor). GFL found that only a single employee was required to handle a collection at a location that has cages instead of two employees. Instead of hand-bombing material into the truck which is time-consuming they are able to get a cage of material lifted onto the truck by a site operator. This has reduced the number of employees needed to handle a collection at a site by the contractor to one allowing for easier scheduling. Once the site staff at the transfer stations were informed of how the cages should be used, they have been diligent with using them to store material and have been cooperative with helping to load the full cages during collection. Generally, when full cages are picked up at a site, GFL will drop off new empty cages at the same time. Moving forward, Cleanfarms is actively looking to acquire more cages to distribute to the sites as well while maintaining an adequate reserve at the GFL and BBRD warehouses to replenish with every pickup.

BBRD has finished baling all collected material at the time of this report. Baling was delayed by several months due to some technical challenges with material handling related to how the material, mainly bale wrap and silage film, was reacting to their balers. BBRD tested their new cardboard baler in an attempt to solve the problems, however they found that upon baling with the new machine, the material would tend to fall out of the bales and the integrity of the bale

would be lost over time. They returned to the original baler and unpacked the material out of the collection bags and found this helped the bales maintain their shape. Interestingly, the twine baled better in collection bags because it prevented the material from spreading out and jamming the machinery. The contractor has reported that they are now confident in their process and are ready to continue accepting material from the program.

Promotions and education

Two separate one-page tools have been developed as hand-outs for farmers explaining the usage of the compactors and general information about the Cleanfarms collection programs in the Bulkley-Nechako region. They are an easy and cost-effective way to increase awareness of the options available to farmers. A few of the tools are included in this report and can be seen in Appendix A. Site staff are encouraged to continue handing out program information to growers in the Regional District whenever possible.

Other Activities and Updates

Market Development

End markets for agricultural plastics continue to develop. A detailed summary of ag plastics market development has been included in Appendix B.

Appendix A: Promotions and Education

Large volume operator one pager

Are you a producer using large volumes of bale wrap or silage covers in your operation?

Get involved!

Contact Enzo Casal (enzo@viosustainability.com, 778-889-5696) or info@cleanfarms.ca for more information.

Recycle your silage covers and bale wrap

Cleanfarms is seeking large scale producers interested in trialing on-farm compacting units for ag plastics in RDBN.

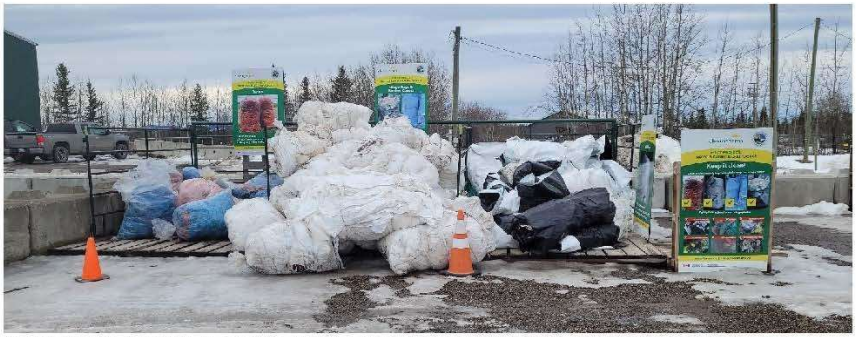
On-farm compactors:

- help keep your operation tidy
- allow you to manage materials on-site
- support efficient recycling systems

SCAN ME

Collection depot one pager

Recycling twine, bale wrap, silage covers



Keep it up! Farmers in RDBN have been doing a great job preparing and returning these ag plastics for recycling.

Prepare your materials

- Shake the material to remove debris. This works best when it is dry.
- Place each material type into a separate ag collection bag (twine, bale wrap, silage cover), or roll and tie large pieces of plastic.
- Avoid bagging materials with large clumps of debris attached.
- Tie the bag shut and store away from mud and debris
- Return to a local collection site

Not accepted

- Net wrap
- Lumber wrap
- Mixed materials
- Grain/feed tote bags

Collection bags and material drop-off available for free at:

- Vanderhoof Transfer Station
- Fort St. James Transfer Station
- Area "D" (Fraser Lake) Transfer Station
- Burns Lake Transfer Station
- Knockholt Landfill
- Southside Transfer Station
- Smithers/Telkwa Transfer Station

For more information

Contact Enzo Casal (enzo@viosustainability.com, 778-889-5696) or info@cleanfarms.ca for more information.

Appendix B: Ag Plastics End Market Development

As pilot programs for agricultural film and twine continue to expand, end market opportunities also continue to develop. Increasing demand for recycled resin is being driven by major sustainability commitments by international brands in Canada and abroad, in addition to upcoming legislative changes in the US and Canada that will require minimum levels of Post-Consumer Recycled (PCR) content in new products and packaging. The increase in demand for PCR resin has spurred interest and investment in plastics processing and recycling infrastructure in Canada and the US.

Today, there are several different streams of agricultural plastics managed through pilot programs across Canada. Agricultural plastics are unique to other consumer plastics and packaging in use and in collection, often requiring specialized end markets that can manage excessive contamination and bulky materials. As the demand for recycled resin increases in Canada and the US, recyclers are becoming more interested in accepting agricultural films as supplementary feedstock to help bridge the demand gap. The following is an overview of the current end market situation for agricultural plastics collected through the Cleanfarms pilot programs:

Grain bags – Strong, stable end markets in Canada

Low-density Polyethylene (LDPE) grain bags are one of the least challenging agricultural film products to recycle due to the low contamination levels and high-quality plastic. There are 2 commercial-scale recycling facilities in Alberta accepting grain bags, as well as a commercial-scale facility in the Southern USA. The combined demand of these three facilities exceeds the supply generated through the Cleanfarms collection programs. Grain bags are processed into pellets and used in the manufacture of new film products (construction and agricultural sheeting products).

Twine – Strong, limited end markets in the USA

Polypropylene (PP) twine is a high-value plastic product but is challenging to process, requiring specialized equipment. There is currently only one recycler in the Northern USA accepting twine for recycling. Demand of this facility exceeds the supply generated through the Cleanfarms collection programs. The twine is processed into pellets and used in the manufacture of automotive parts and as an additive in the roofing industry.

Silage covers and silage bags – developing end markets in Canada and the USA

LDPE silage pit covers (tarps) and silage bags are very similar to grain bags in composition, however often contain more organic contamination due to their use on-farm, and require more complex processing than grain bags. Markets are currently limited but developing in Canada and the USA, with a new facility in Lethbridge, Albera expected to start production in late 2024. Silage covers and bags, once processed, are recycled into products such as plastic lumber and new film products like garbage bags and construction sheeting.

Bale wrap – Limited but developing end markets in Canada and the USA

Linear Low Density Polyethylene (LLDPE) bale wrap is one of the most difficult products to recycle. Bale wrap is very thin gauge plastic with an additive to make it stick together, which traps organic material and moisture between the layers. Today, there are 2 Canadian bale wrap recyclers – one in Ontario and one in Quebec, with another located in the Eastern USA, making transportation from Western Canada inefficient and costly. A new facility in Lethbridge, Alberta is expected to begin production in late 2024.

cleanfarms

Agricultural Plastics Recycling – Pilot Extension

Regional District of Bulkley-Nechako, British Columbia

From 2021 to 2023, the Regional District of Bulkley-Nechako (RDBN) in cooperation with Cleanfarms has operated a successful pilot program to collect and recycle end-of-life bale wrap, silage tarp, and baler twine. To-date, more than 38,700 kgs of material have been collected in the Regional District. The three-year pilot program - set to wrap up in June 2024 - has been 50% funded by a grant from Agriculture and Agri-food Canada (AAFC) through the Canadian Agricultural Strategic Priorities Program (CASPP) and 50% by RDBN.

At this time, further CASPP funding is uncertain. RDBN staff have indicated a desire to explore options to extend the pilot program that would be fully funded by the Regional District in the absence of matching funding.

Option 1: 3-Year Extension with On-Farm Trials

A draft budget proposal has been prepared based on feedback from RDBN staff that builds on the success of the previous pilot program. Some notable changes include:

Paid advertising – In other areas of the province, paid advertising was used to increase awareness of the program, which ultimately resulted in increasing tonnages returned the following year. This budget includes a new line item allocating $5,000 a year for a paid advertising campaign in RDBN to help increase awareness of the program amongst resident farmers in the Bulkley-Nechako region.

On-farm compactor trials – Over the last several years Cleanfarms has been developing and improving on a farmer-developed prototype for a standalone on-farm compactor for bale and silage plastics (image 1). The original version of the compactor was manually operated, mobile, low-cost and required no electricity, making it convenient to use and store on-farm. 6 manual compactors were delivered to RDBN in 2022, however the manual nature of the compactors resulted in low uptake by farmers. The newest version is a hydraulic model that can be powered using common hydraulic farm equipment. These compactors have been particularly successful with large farmers who prefer to accumulate material for longer periods of time. Today, over 200 compactors are in use across the country. On-farm compaction helps to keep materials clean and eliminates the cost and effort required to collect materials in collection bags. Most importantly, the bales can be transported directly to a recycler without the need for further baling greatly reducing costs. The first on-farm compactor trial has started in the Fraser-Fort George Region in 2023 and has shown costs savings of up to 50% compared to the transfer site model. The proposed extension including 40% of material compacted on-farm would result in savings of up to $20,000 across the 3 years. The budget includes the purchase and deployment of six hydraulic compactors to supplement the current six already purchased by RDBN.

Option 2 – Annual Renewal (1 year)

A draft budget proposal has been prepared that extends the current program by 1 year carrying forward with the transfer site collection model. Advertising will be included to maximize the materials brought back to the collection sites.

Option 3 – Finalize Current Project (Conclusion)

The final option would be to wind down the current program with a completion of service scheduled for June 2024.

The attached budgets reflect 100% of the estimated costs for a one-year and three-year pilot project extension for the collection of bale wrap, silage film and twine. Cleanfarms continues to pursue additional funding through CASPP and other sources, however it is unclear if the CASPP program will be renewing funding in 2024. If RDBN approves a pilot extension based on the enclosed budget estimates, the Region should be prepared to fund the pilot extension in its entirety. If additional funding becomes available through CASPP or another source before or after the extension begins, the cost matching will resume.

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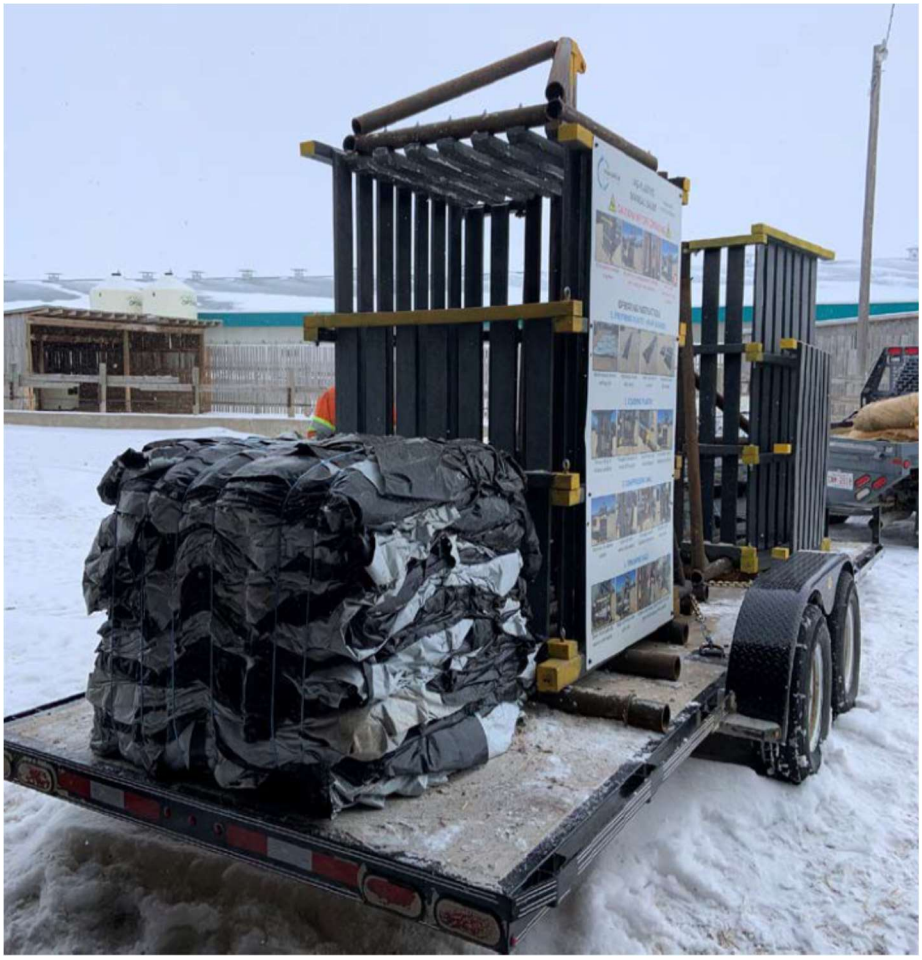

Image 1 – on-farm compactor for film plastics. The compactor above is trailer-mounted for use by a collection contractor. The same unit is available for standalone use directly on farm. It is manufactured in Alberta from plastic lumber made from recycled plastic.

Please contact Shane Hedderson with any questions:

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Option 1: RDBN 2024-2027 Pilot Extension					
Cost assumptions					
Year	24-'25	25-'26	26-27		
Communications					
Design (updates required to existing materials)	$1,000	$1,000	$1,000		Outdoor sign design/contamination education, etc.
Printing costs (ie. Postcards, brochures)	$2,500	$1,000	$1,000		Outdoor signs, other operational comms materials/handouts
Advertisement	$ 5,000	$ 5,000	$ 5,000		
Total communications	**$8,500**	**$7,000**	**$7,000**	**$22,500**	
Collection site related					
Assumptions - sites, collection volumes					
Bale and silage wrap used (MT)	198	198	198		From waste characterization
Twine used (MT)	17	17	17		From waste characterization
Bale wrap collection rate	10%	15%	20%		estimate
Twine collection rate	10%	15%	20%		estimate
Bale wrap collected (MT)	20	30	40		
Twine collected (MT)	2	3	3		
Total collection (MT)	22	32	43	97	
Assumptions - costs & compensation					
On-farm compactors - 40% of total bale and silage plastic collection	7.92	11.88	15.84		
Compactor retrofits	$12,000	$0	$0		6 compactors, $2000/unit to retrofit to hydraulic
Loading on-farm	$100	$100	$100		Per tonne based on costs in other regions
Transport to end market	$250	$250	$250		Full load (18 MT) transported to S. AB
Transfer site collection - 60% of total bale and silage + 100% twine	13.58	20.37	27.16		
Baling (per ton) - all materials	$200	$200	$200		BBRD baling cost @ 1mt/hr
Consolidation at baling site - all materials	$500	$500	$500		GFL pickup of bagged material in bins/cages
Collection bags - twine and bale wrap	$1,195	$1,793	$2,390		Approx $2.20 each, delivered (30 kg/bag + 20% bag loss)
Transport to end market (per tonne)	$350	$350	$350		Lower volumes; not likely to have full truckloads to S. AB
Revenue from sale of Twine ($/MT)	$100	$100	$100		
Revenue from sale of bale/silage film ($/MT)	$0	$0	$0		
Cost to recycle bale/silage film ($/MT)	$0	$0	$0		
Calculations					
Baling costs	$2,716	$4,074	$5,432		
Material consolidation	$6,790	$10,185	$13,580		
Transport to end market	$6,733	$10,100	$13,466		
Loading on-farm	$792	$1,188	$1,584		
Collection bags	$1,195	$1,793	$2,390		
Compactor retrofits	$12,000	$0	$0		
Contingency	$7,500	$5,000	$5,000		
Total Site collection costs	**$37,726**	**$32,339**	**$41,452**	**$111,517**	
Administration					
Pilot program operator (25% of expenses; staff time, non-direct program expenses)	$9,432	$8,085	$10,363		
Total administration	**$9,432**	**$8,085**	**$10,363**	**$27,879**	
Expenses subtotal	**$55,658**	**$47,424**	**$58,815**	**$161,896**	
Revenue from sale of material					
Twine revenue	$170	$255	$340		
Bale wrap/silage film revenue	$0	$0	$0		
Total revenue	**$170**	**$255**	**$340**	**$765**	
Grand total	**$55,488**	**$47,169**	**$58,475**	**$161,131**	
Cost contribution RDBN				$161,131.48	

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Option 2: RDBN 2024-2025 Pilot Extension			
Cost assumptions			
Year	24-'25		
Communications			
Design (updates required to existing materials)	$1,000		Outdoor sign design/contamination education, etc.
Printing costs (ie. Postcards, brochures)	$2,500		Outdoor signs, other operational comms materials/handouts
Advertisement	$ 5,000		
Total communications	**$8,500**	**$8,500**	
Collection site related			
Assumptions - sites, collection volumes			
Bale and silage wrap used (MT)	198		From waste characterization
Twine used (MT)	17		From waste characterization
Bale wrap collection rate	10%		estimate
Twine collection rate	10%		estimate
Bale wrap collected (MT)	20		
Twine collected (MT)	2		
Total collection (MT)	22	22	
Assumptions - costs & compensation			
Baling (per ton) - all materials	$200		BBRD baling cost @ 1mt/hr
Consolidation at baling site - all materials	$500		GFL pickup of bagged material in bins/cages
Collection bags - twine and bale wrap	$1,892		Approx $2.20 each, delivered (30 kg/bag + 20% bag loss)
Transport to end market (per tonne)	$350		Lower volumes; not likely to have full truckloads to S. AB
Revenue from sale of Twine ($/MT)	$200		
Revenue from sale of bale/silage film ($/MT)	$0		
Cost to recycle bale/silage film ($/MT)	$0		
Calculations			
Baling costs	$4,300		
Material consolidation	$10,750		
Transport to end market	$7,525		
Collection bags	$1,892		
Contingency	$7,500		
Total Site collection costs	**$31,967**	**$31,967**	
Administration			
Pilot program operator (25% of expenses; staff time, non-direct program expenses)	$7,992		
Total administration	**$7,992**	**$7,992**	
Expenses subtotal	**$48,459**	**$48,459**	
Revenue from sale of material			
Twine revenue	$340		
Bale wrap/silage film revenue	$0		
Total revenue	**$340**	**$340**	
Grand total	**$48,119**	**$48,119**	
Cost contribution RDBN		$48,118.75	

RDBN 2024-2027 Pilot Extension

Cost assumptions					
Year	24-'25	25-'26	26-27		
Communications					
Design (updates required to existing materials)	$5,000	$1,000	$1,000		Outdoor sign design/contamination education, etc.
Printing costs (ie. Postcards, brochures)	$2,500	$1,000	$1,000		Outdoor signs, other operational comms materials/handouts
Advertisement	$ 5,000	$ 5,000	$ 5,000		
Total communications	**$12,500**	**$7,000**	**$7,000**		**$26,500**
Collection site related					
Assumptions - sites, collection volumes					
Bale and silage wrap used (MT)	198	198	198		From waste characterization
Twine used (MT)	17	17	17		From waste characterization
Bale wrap collection rate	10%	15%	20%		estimate
Twine collection rate	10%	15%	20%		estimate
Bale wrap collected (MT)	20	30	40		
Twine collected (MT)	2	3	3		
Total collection (MT)	22	32	43	97	
Assumptions - costs & compensation					
Baling (per ton) - all materials	$200	$200	$200		BBRD baling cost @ 1mt/hr
Consolidation at baling site - all materials	$500	$500	$500		GFL pickup of bagged material in bins/cages
Collection bags - twine and bale wrap	$1,892	$2,838	$3,784		Approx $2.20 each, delivered (30 kg/bag + 20% bag loss)
Transport to end market (per tonne)	$350	$350	$350		Lower volumes; not likely to have full truckloads to S. AB
Revenue from sale of Twine ($/MT)	$200	$200	$200		
Revenue from sale of bale/silage film ($/MT)	$0	$0	$0		
Cost to recycle bale/silage film ($/MT)	$0	$0	$0		
Calculations					
Baling costs	$4,300	$6,450	$8,600		
Material consolidation	$10,750	$16,125	$21,500		
Transport to end market	$7,525	$11,288	$15,050		
Collection bags	$1,892	$2,838	$3,784		
Contingency	$7,500	$5,000	$5,000		
Total Site collection costs	**$31,967**	**$41,701**	**$53,934**	**$127,602**	
Administration					
Pilot program operator (25% of expenses; staff time, non-direct program expenses)	$7,992	$10,425	$13,484		
Total administration	**$7,992**	**$10,425**	**$13,484**	**$31,900**	
Expenses subtotal	**$52,459**	**$59,126**	**$74,418**	**$186,002**	
Revenue from sale of material					
Twine revenue	$340	$510	$680		
Bale wrap/silage film revenue	$0	$0	$0		
Total revenue	**$340**	**$510**	**$680**	**$1,530**	
Grand total	**$52,119**	**$58,616**	**$73,738**	**$184,472**	
Cost contribution RDBN				$92,235.94	
Cost contribution Cleanfarms				$92,235.94	