

AGRICULTURAL SERVICES BOARD MEETING AGENDA

Date: Thursday, April 25, 2024

Time: 9:00 AM

Location: Committee Room

262075 Rocky View Point

Rocky View County, AB T4A 0X2

			Pages
A.	CALL	MEETING TO ORDER	
		there will be no meeting of the ALUS Partnership Advisory Committee following agricultural Service Board meeting	
В.	UPDA	ATES/APPROVAL OF AGENDA	
C.	APPR	OVAL OF MINUTES	
	1.	March 14, 2024 Agricultural Service Board Meeting Minutes	2
D.	REPO	DRTS	
	1.	Agricultural Fieldman Report	9
	2.	Alberta Agriculture and Irrigation Report	12
E.	APPC	DINTMENTS	
	1.	9:30 AM - Rocky View County Agriculture Sector Profile	14
		Presenter: Aaron Latimer, Economic Development Manager, Rocky View County	
	2.	10:00 AM - Rockyview 4-H District	83
		Presenters: Ashley Morison and Amy Nielsen, Rockyview 4-H District	
F.	GEN	ERAL BUSINESS	
	1.	Agricultural Service Board Strategic Plan	84
	2.	Livestock Emergency Preparedness Plan	89
	3.	Upcoming Events	190
G.	FARM	1 MEMBER REPORTS	
	1.	Farm Member Reports	
н.	NEXT	MEETING	
	The 1 2024	next meeting of the Agricultural Service Board is scheduled for September 19,	
I.	ADJC	DURN THE MEETING	



AGRICULTURAL SERVICES BOARD MEETING MINUTES

Thursday, March 14, 2024 9:00 A.M.

Committee Room 262075 Rocky View Point Rocky View County, AB T4A 0X2

Present: Councillor S. Wright

Member T. Birchall Member T. Fehr Member L. Gallelli

Absent: Councillor G. Boehlke, Chair

Member A. Bates, Vice-Chair Deputy Reeve D. Kochan

Also Present: K. Lines, Manager, Agriculture and Environmental Services

T. Andreasen, Lead Legislative Officer, Legislative Services

M. Chilakos, Agricultural Services Officer, Agriculture and Environmental Services

D. McNaughton, Agricultural Services Officer, Agriculture and Environmental

Services

L. Poile, Agricultural Services Officer, Agriculture and Environmental Services

A. Stewart, Agricultural Services Officer, Agriculture and Environmental Services

A Call Meeting to Order

As both the Chair and Vice-Chair were absent, the Agricultural Service Board chose an Acting Chair in accordance with section 13 of the *Procedure Bylaw*.

The Agricultural Service Board chose Member Gallelli as the Acting Chair by general consensus. Member Gallelli proceeded to preside over the meeting as the Acting Chair.

The Chair called the meeting to order at 9:05 a.m.

B Updates/Approval of Agenda

MOVED by Councillor Wright that the March 14, 2024 Agricultural Services Board meeting agenda be approved as presented.

Carried

C-1 January 18, 2024 Agricultural Services Board Meeting Minutes

MOVED by Member Birchall that the January 18, 2024 Agricultural Services Board meeting minutes be approved as presented.

Carried



D-1 Agricultural Fieldman Report

Kristyn Lines, Manager of Agricultural and Environmental Services, reported the following:

- The Provincial ASB Committee has now posted the 2024 resolutions on their website https://agriculturalserviceboards.com. Ten resolutions were debated and passed at the ASB Provincial Conference. Letters will be delivered to the Federal and Provincial governments and their responses will be posted on the website as soon as they are received.
- 2) Agricultural & Environmental Services is actively recruiting and interviewing for our seasonal positions. We are currently recruiting Mower Operators, Sprayer Operators, Weed Inspectors a Crop Inspector and a Seasonal Administrative Clerk. The postings will remain open until suitable candidates have been found for all positions. The seasonal positions will start on May 13, 2024 with the exception of the mowers who will start on May 27, 2024.
- 3) Nominations are now open for the 2024 Alberta Agriculture Hall of Fame. The award honours those who have significantly contributed to agriculture, the agri-food industry and rural life in Alberta. Every two years, Alberta's Agriculture Hall of Fame recognizes up to three individuals whose outstanding leadership, innovation and business practices have advanced Alberta's agriculture and food industry. Nomination forms and a list of past inductees are available on the Alberta Agriculture Hall of Fame webpage. Nominations close on May 3, 2024.
- 4) Registration is open for farms wanting to share their agriculture story with consumers during Alberta Open Farm Days. Farms wishing to participate have until April 30, 2024 to register. This year's event will run province wide the weekend of August 17 and 18, 2024. This is a collaborative, province wide, two-day event that gives Albertans an opportunity to experience the farm and understand where their food comes from. Farms can register online at https://albertaopenfarmdays.ca/host-farms/.
- 5) Based on the Alberta Utilities Commission (AUC)'s inquiry, Alberta is working on five policy and regulatory changes to clarify the rules for renewable energy development:
 - a) Taking an agriculture first approach to protect prime agricultural land from development unless the proponent can demonstrate the ability for both crops and/or livestock to co-exist with the renewable generation project.
 - b) Standardizing developer responsibility for reclamation costs via bond or security.
 - c) Establishing 35 km buffer zones around protected areas and pristine viewscapes.
 - d) Conducting meaningful engagement on the possibility of renewable development on Crown lands.
 - e) Developing changes to Alberta's transmission regulation.

The intended outcome is to support continued responsible renewable energy development, while ensuring responsible land use, protecting the environment and Albertans' property rights, and providing long-term investor confidence.

MOVED by Member Fehr that the Agricultural Fieldman Report be received as information.

Carried



D-2 Agricultural Fieldman Report

Laura Poile, Agricultural Services Officer, on behalf of Kellie Jackson, Agricultural Service Board Regional Liaison, reported the following:

Drought

- Canada-Alberta Drought Livestock Assistance initiative was extended to 23 new areas that were not originally included in the eligibility requirements. Applications opened Jan 29th with a Feb 22nd deadline.
- Alberta is currently in stage 4 of 5 in its water shortage management response plan with 51 water shortage advisories across the Province.
- The Drought Command Team is in negotiations with major water license holders to strike water-sharing agreements for the Red Deer River, Bow River, and Old Man River basins. Expect to have sharing agreements in place at the end of March.
- According to provincial statistics, agriculture and irrigation combined amount to 46.6
 per cent of Alberta's water allocations, while oil and gas make up an even 10 per cent.
 Commercial and cooling accumulatively make up 23.4 per cent, while municipalities
 account for 12 per cent.

<u>Funding</u>

- SCAP Water Program is open and accepting applications for on farm irrigation and on farm water supply stream projects. https://www.alberta.ca/water-program
- Alberta Innovates Water Innovation Program, funds projects that lead to safe, secure drinking water; healthy aquatic ecosystems; and reliable water supplies for a sustainable economy. https://albertainnovates.ca/funding/water-innovation-program/
- RDAR will be delivering an OFCAF (on farm climate action fund) through 2025 and is accepting applications for 2024 https://rdar.ca/funding-opportunities/ofcaf

Budget 2024

- Relatively stable for AGI Budget 2024: a responsible plan for a growing province
- ARA's are getting some capital funding; Ag Societies \$ for infrastructure.

AGI 2024-2027 Business Plan

- We now have a publicly reported measure in the AGI 2024-2027 business plan https://open.alberta.ca/dataset/64244985-f26d-437d-b600- e4cb84760264/resource/582cd928-166b-4ce6-889d-efcbd196430c/download/agriculture-and-irrigation-business-plan-2024-27.pdf
- This measure was made possible by data collected through ASB grant annual reporting.



2.b Performance Indicator: Number of surveillance and monitoring activities completed for crop-limiting diseases and pests

Controlling diseases and pests lowers production risks, enhances yields, provides quality assurance and supports access to crop markets. This indicator tracks completed surveillance and monitoring activities that back market confidence in Alberta's crop and forage production. This is a new metric.

	2018	2019	2020	2021	2022
Pest Surveillance and Monitoring Completed	16,047	18,113	16,612	16,609	16,234
Weed Surveillance and Monitoring Completed	39,061	57,614	52,417	47,930	75,731
Total	55,108	75,727	69,029	64,539	91,965

Weed Review

- Request is with the Minister's office and is under review.
- Once we have approval we'll proceed with the engagement webinar and survey.
 Fieldmen/ASB's will have additional questions based on their legislated role as the delegated authority for managing regulated weeds.

ASB/ADM Biannual Townhall

• Next townhall will be in early June, expect invitations to be sent out in April.

MOVED by Councillor Wright that the Alberta Agriculture and Irrigation Report be received as information.

Carried

F-1 Appointment of Agricultural Fieldman

Kristyn Lines, Manager of Agricultural and Environmental Services, reported the following:

- 1) The *Agricultural Service Board Act* directs Councils and Agricultural Service Boards to appoint an Agricultural Fieldman. As well, the appointment of the Agricultural Fieldman is defined in the Rocky View County Delegation Order as follows:
 - Section 2.1 (a) states that the Agricultural Fieldman is to be appointed by the Municipality as a designated officer, as defined in the MGA, to carry out the duties and responsibilities of "Agricultural Fieldman' under the *Agricultural Service Board Act.*
- 2) Rocky View County's Agricultural Service Board was established in 1945 and a fieldman was appointed at that time. Since then, the fieldman and all supporting staff have worked to implement agricultural policies and programs within the County.

MOVED by Member Fehr that the Agricultural Service Board recommends to Council that Kristyn Lines be appointed as the Agricultural Fieldman.

Carried



F-2 Master Farm Family Award

Kristyn Lines, Manager of Agricultural and Environmental Services, reported the following:

- 1) The Master Farm Family Award has been presented annually since 1989. It recognizes Rocky View County farm families who show excellence in the areas of community involvement, agriculture business & industry involvement, team farm management and technical farm practices.
- 2) Administration reviews nominees annually and recommends their selection to the Agricultural Service Board. When multiple farm families are nominated in one year, they are carried forward to the following year for consideration again.

MOVED by Member Birchall that the Agricultural Service Board selects the farm family recommended by Administration, with the announcement of the recipient at the annual agricultural tour on July 25th, 2024.

Carried

F-3 Agricultural Service Board Annual Report

Kristyn Lines, Manager of Agricultural and Environmental Services, Matthew Chilakos, Agricultural Services Officer, Delaney McNaughton, Agricultural Services Officer, Laura Poile, Agricultural Services Officer, and Ashley Stewart, Agricultural Services Officer, reported the following:

- 1) The Agricultural Service Board (ASB) is a Committee of Council created under the *Agricultural Service Board Act*. The Agricultural Service Board Annual Report identifies the activities and achievements of the ASB and Agricultural Services in 2023.
- 2) Agricultural and Environmental Services presents their annual report yearly to ensure that the Board and Administration are working towards or have achieve the goals outlined in the ASB strategic plan.

MOVED by Councillor Wright that the Agricultural Service Board Annual Report be received as information.

Carried

The Chair called for a recess at 10:27 a.m. and called the meeting back to order at 10:35 a.m.

F-4 Upcoming Events Report

Laura Poile, Agricultural Services Officer, reported the following:

- 1) 2024 Environmental Stewardship Award (Alberta Beef Producers) nomination deadline is March 15, 2024.
- 2) Nominations for 2024 Alberta Agriculture Hall of Fame deadline is May 3, 2024.
- 3) Kochia Lunch 'N' Learn webinar series
- 4) Advancing Women in Agriculture conference, Calgary March 17-19
- 5) Alberta Invasive Species Council (AISC) conference, Olds March 20-21



- 6) Foothills Forage & Grazing Association AGM, High River March 21
- 7) AgriStability and AgriInvest Changes under the Sustainable Canadian Agricultural Partnership, virtual March 27
- 8) Agricultural & Environmental Services workshop list

MOVED by Councillor Wright that the Upcoming Events Report be received as information.

Carried

G Farm Member Reports

Member Fehr

- Recent moisture has made them happy. The banks of the Rosebud River have flooded and it even looks like the Bow River. The water table may be rising.
- There is a lot of water in certain areas that they have not seen before. Culverts that have not been used in years are now being used.
- Producers in their area have started to calve and many are done. Calf prices are pretty good this year, but grain prices are pretty low at the moment.

Member Birchall

- Producers are just getting started with calving. Livestock prices are high which is pleasing producers.
- Producers are talking about recent water runoff and what the spring rains will look like.

Member Gallelli

- There appears to be some water runoff which is a good sign. The media is full-fledged on drought being a major issue this year, but most producers are waiting to see what happens.
- Grain prices are low. It would be nice if they increased. Producers are just starting to calve in their area. There is an overabundance of coyotes and gophers are beginning to come out.

MOVED by Councillor Wright that the Farm Member Reports be received as information.

Carried

H Next Meeting

The next meeting of the Agricultural Service Board meeting is scheduled for April 25, 2024.



I Adjourn the Meeting

MOVED by Member Fehr that the March 14, 2024 Agricultural Services Board meeting be	
adjourned at 10:42 a.m.	
	Carried

Chair or Vice-Chair	•
Chief Administrative Officer or designate	



Agricultural Service Board

Subject:	Agricultural Fieldman Report
Date:	April 25, 2024
Presenter:	Kristyn Lines, Manager Agricultural & Environmental Services
Department:	Agricultural & Environmental Services

REPORT SUMMARY

This report provides updates on Agricultural & Environmental Services matters since the last update provided on March 14, 2024.

ADMINISTRATION'S RECOMMENDATION

Administration recommends that the Agricultural Fieldman report be received as information.

BACKGROUND

Program highlights within Agricultural & Environmental Services since the last meeting.

DISCUSSION

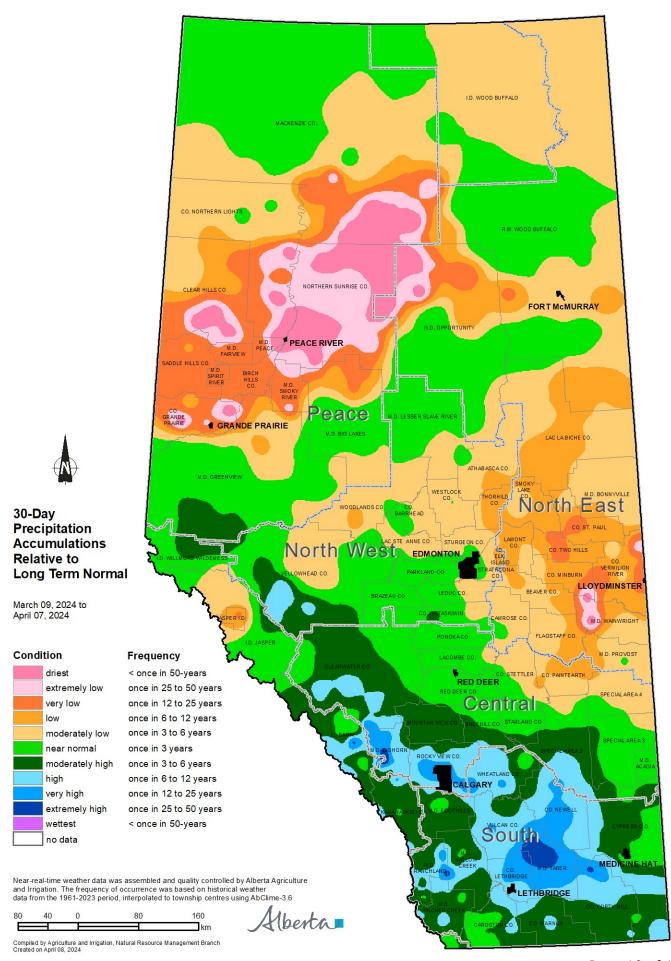
- The Government of Alberta is seeking input on weeds being considered for reclassification, removal or addition to the Weed Control Regulation (WCR). A confidential survey was circulated to Agricultural Fieldmen and ASB Chairmen for input. Administration has completed the survey and will inform the Agricultural Service Board of any relevant changes to the WCR and how it may impact operations.
- Administration continues to monitor the moisture situation as our producers prepare for seeding. Recent precipitation trends have been near to above normal through much of the Southern and Central Regions. Historically, April marks the very beginning of the wet season in Central Alberta. The 30-day and 180-day precipitation accumulations relative to normal maps have been included in this report for review.
- 3. The Central Region ASB Chair, Brenda Knight, has called a meeting with Ag Fieldmen and ASB Chairs on Friday, May 31st at the Lacombe Memorial Center. The agenda and meeting details will be shared once they are available.

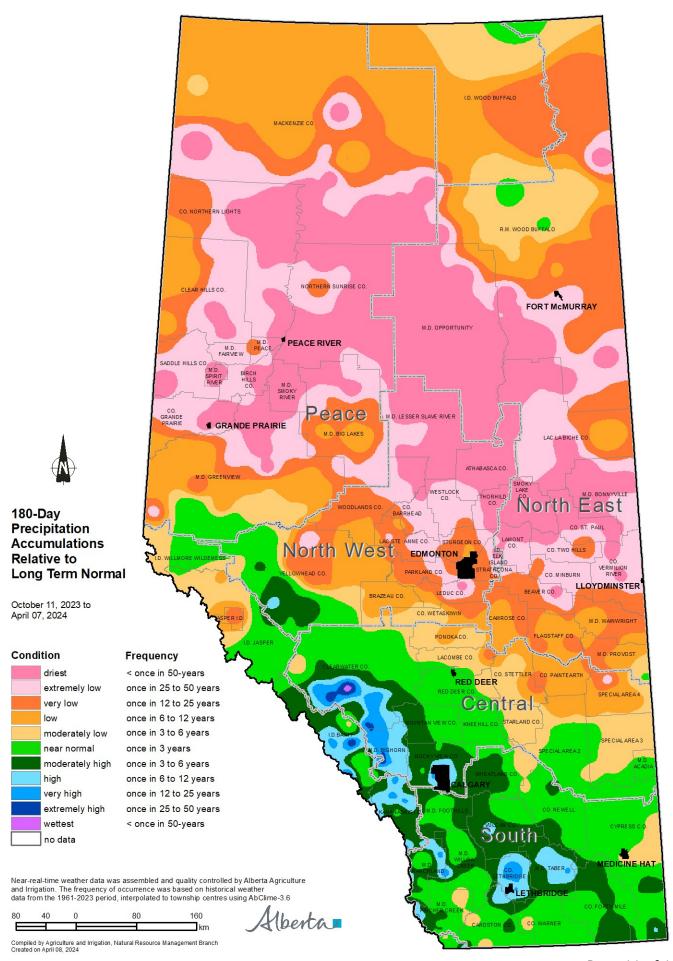
ALTERNATE DIRECTION

No alternate option for the board's consideration.

ATTACHMENTS

Attachment A: 30-day precipitation accumulations relative to normal Attachment B: 180-day precipitation accumulations relative to normal







Agricultural Service Board

Subject:	Alberta Agriculture and Irrigation Update
Date:	April 25, 2024
Presenter:	Kellie Jackson, Strategic Evaluation Specialist
Department:	Alberta Agriculture and Irrigation

REPORT SUMMARY

This report provides updates from Alberta Agriculture and Irrigation.

ADMINISTRATION'S RECOMMENDATION

Administration recommends that the Alberta Agriculture and Irrigation Report be received as information.

BACKGROUND

Alberta Agriculture and Irrigation (AAI) transitioned the Agricultural Service Board Key Contact Program to a Regional Liaison approach. The intent of the program remains the same and serves to promote open and effective communication between ASB's and Alberta Agriculture and Irrigation.

DISCUSSION

Highlights:

- Reminder the ASB/AAAF regulated weed review survey is open until April 26th. Weed Control Regulation Review | Alberta Online Engagement. Please complete this survey and not the one for other stakeholders as your survey contains additional questions that reflect your delegated authority role. No decisions on additions, reclassifications or deletions have been made. All feedback will be reviewed by the weed review committee (includes ministry, AAAF and industry representatives) with recommendations identified for the Minister to make any decisions.
 - o If you work with other stakeholders (organizations such as ALUS or producers crop or livestock that have an interest in regulated weeds) you can share the stakeholder survey link https://your.alberta.ca/weed-control-regulation-review/survey tools/weed-reg-review-written-submissions
- Next grant cycle survey feedback is being analyzed and will be considered to update grant
 program terms and conditions, application with greater alignment to reporting and field visits.
 We will be sharing a "what we heard" report shortly. Once we have updated the draft grant
 documents they will go through a review by Finance and Legal, then go up to the Minister for
 approval. We are targeting to have it ready for distribution in the fall.

- The Cooperative Agricultural Extension model feedback survey deadline has been extended and is still open for feedback.
 - The Working Group would sincerely appreciate your constructive feedback to continually evolve the proposed model. Your feedback will be used to inform design and implementation improvements to best meet Alberta agricultural extension service provider and producer extension needs. Results will be shared in a future stakeholder update prior to pilot launch.
 - o Click here to access the Cooperative Agricultural Extension model feedback survey.
 - o The survey should take no more than 20 minutes to complete.
 - A second survey will be released in April and will focus on determining critical specialist gaps (both holistically and regionally) to help direct specialist hiring requirements and inform initial Communities of Extension that will provide the most cross-industry extension value.
- Save the date ASB/ADM Biannual Townhall for Tuesday June 4, 11:00 am 12:00 pm. Invitations will be sent out to ASB Chairs and Ag Fieldmen by early May.

ALTERNATE DIRECTION

No alternate option for the board's consideration.

ATTACHMENTS

There are no attachments.



Agricultural Service Board

Subject:	Rocky View County Agriculture Sector Profile
Date:	April 25, 2023
Presenter:	Aaron Latimer, Manager Economic Development
Department:	Economic Development

REPORT SUMMARY

This report provides a summary of the Rocky View County Agriculture Sector Profile developed by the Economic Development department to assist with investment attraction, business retention, and expansion of the agriculture sector in the County.

ADMINISTRATION'S RECOMMENDATION

Administration recommends that the Rocky View County Agriculture Sector profile report be received as information.

BACKGROUND

Council approved a five-year economic development strategy in November 2023. The County's Strategic Plan identified four key sectors within which the County intends to focus economic development efforts to build upon existing strengths and promote new investment. Agriculture and value-added Agriculture is one of the four key sectors.

The Strategy contains objectives to grow and diversify in each of the four key sectors. This is a vital step to define the value proposition that will attract potential investors and stakeholders which will enable the County to compete more effectively with other regions.

DISCUSSION

The purpose of the Rocky View County Agriculture Sector profile is to promote the County as a choice destination for investment in agriculture among local and international audiences. Foster strong relationships with local businesses to understand their needs and growth opportunities.

ALTERNATE DIRECTION

No alternate option for the board's consideration.

ATTACHMENTS

Attachment A: Rocky View County Agriculture Sector Profile

Attachment B: Rocky View County Agriculture Sector Profile - Summary

Overview of Agri-Value and Production for





March 19, 2024



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A. Introduction

Rocky View County (the County) is located in the southern portion of the province of Alberta, just west of the Canadian Rocky Mountains, on the Canadian prairies which power Canada's agricultural output. The County surrounds the city of Calgary, a market of 1.5 million, in a horseshoe-shape to the west, north and east. It is about three and a half hours north of the United States border in the State of Montana.

Rocky View County		
Elevation:	1,048.43 meters or 3,439.71 feet above sea level. Elevation varies within Rocky View County.	
Latitude:	51° 03′ 07″ N	
Longitude:	114° 22′ 14″ W	
Time Zone:	Mountain Standard Time (MST)	
Area:	393,463 hectares or 972,264 acres (approximately 42 townships)	
Hours of sunshine per year:	2,405+	
Average daily max summer temperature:	21°C	
Average daily max winter temperature:	-0.4°C	

Alberta is a hub for sustainable food production and environmental stewardship.

Rocky View County has a:

- Diverse and skilled agricultural business community.
- Varied growing season and soil types which support numerous agricultural production types.
- Access to a significant and affluent population.
- A well-developed infrastructure base including a regional transportation system and irrigation infrastructure.
- A favorable tax structure with a very competitive non-residential property tax rate and no municipal business tax.



B. Industry Trends

Population fuels demand for food, and the global population is expected to reach 8.5 billion by 2030 and 9.7 billion by 2050; up 31%. Global demand for protein (meat, aquaculture, plant sources) is increasing due to rising middle class (incomes) in emerging markets, particularly in Asia (China and India). Farmed seafood (aquaculture) has recently surpassed the wild fish catch. All these farms will require feed, and the Canadian prairies will be able to provide a cheap supply of food.

B.1 Plant based Proteins

New trends are emerging in agriculture and agri-processing. Plant-based protein (e.g. peas, lentils, pulses) is in high demand and is the fastest growing food processing segment in Canadian agriculture right now. This is being driven by clean labels and allergen concerns, changing consumer preferences, and a shortage of plant protein material – especially in Europe, China, and Southeast Asia.

A 2019 analysis conducted by the National Research Council of Canada found that "annual global sales of plant-based meat alternatives have grown on average eight per cent a year since 2010, with projections forecasting that, in 25 years, 20 per cent of meat will consist of plant-based and clean meat."

Plant-based proteins are supported through the Protein Industry Supercluster - one of Canada's Innovation Superclusters Initiative. Canadian pulse crops account for about 35% of the world pulse trade. Pulses are grown mainly in Saskatchewan, but production is rising in parts of Alberta, Manitoba, and British Columbia.

The Canadian pulse industry has set a goal to have 25% of pulse production marketed into new uses by 2025. They are working to achieve this by creating new demand for pulses and for pulse ingredients in non-traditional markets, including into retail food products and in the foodservice industry.

B.2 Generation Y and Z

In February 2024, Statistics Canada officially reported that millennials (those born between 1981 and 1996), also known as Generation Y, are now Canada's largest age cohort and have supplanted baby boomers as the country's largest demographic.

Alberta's population has the highest proportion of millennials. Millennial values will influence the future of the food industry:¹

- Millennials are more racially and ethnically diverse than prior generations. They have a
 preference for ethnically diverse food and snacks.
- Millennials rely on friends and family as their primary source of information about food.
- Millennials are more likely than baby boomers to replace meals with snacks.
- Millennials advocate for clean labelling, better sourcing of ingredients, and healthier options.

¹ Charlebois, Sylvain. "Millennials' values will influence future of food industry." March 1, 2024.



Generation Z (Gen Z) makes up 30% of the world's population (and ~18% of Canada's population). Gen Z impacts on the food industry include:

- Food represents who Gen Z are. They take a picture of it and post it to their social media.
 According to AgVision Media, an agricultural insights and consulting company, Gen Z spends more money on food than they do clothes.²
- Gen Z's heightened social and environmental awareness will push the industry even further towards transparency, sustainability, and innovation. They are more likely to support local and small-scale producers who align with their values of sustainability and community.
- Their preference for alternative protein sources will likely accelerate the shift towards to sustainable food production.
- Their emphasis on authenticity and experiences may lead to a rise in experiential dining and unique food offerings.

B.3 Changing Consumer Preferences

The way people buy food is changing. Today's buyers are interested in the locality and origin of the food they purchase. Food and drink that is both sourced and supplied locally and backed by stories on the roots of the ingredients that make up the finished product are leading the way for premium produce.

Additionally, the sales of ethical and sustainable produce have increased. Consumers value fresh, quality product and taste.

People are increasingly shopping for food online and using food delivery services such as vegetable boxes and meal kits. Many consumers are buying food from local food producers. The COVID-19 pandemic changed consumer attitudes towards food in unexpected ways. Locally produced food and direct farm-to-consumer shopping increased during the pandemic as a result of consumers wanting to avoid standing in long queues, trade issues such as international transport restrictions, and supply chain issues.

Health, wellness, and functionality are increasingly sought-after by conscious consumers who want their food and drink to contain nutritional and health-focused properties. Today's alcohol consumers are moving away from mainstream brands toward higher end craft and super-premium offerings.

B.4 Farm Direct-to-Consumer Sales

Selling direct allows producers to put a "face" on who is growing the product. Consumers do not necessarily get this from traditional retail food outlets. Additionally, farm direct marketing provides a direct link between urban consumers and rural food producers; this also helps to support sustainable communities.

² https://brandpointspluscanada.com/big-trends-time-to-mine-the-untapped-potential-in-gen-z/



Data from the 2021 Census of Agriculture shows that the number and proportion of farms reporting direct sales have increased, compared with the 2016 Census for both unprocessed agricultural products and value-added products. Furthermore:³

- Farms in smaller revenue classes (\$0 to \$9999 and \$10,000 to \$24,999) are more likely to use direct sales to consumer.
- Fruit and vegetable farms have the highest rates of direct sales among farm types.
- Farms reporting organic products are more likely to use direct sales.
- Farm operators in the 35 to 54 years age group work on farms that have the highest rate of direct sales.
- Farms managed by female operators are more likely than farms managed exclusively by male operators to report direct sales.

C. Current state of Rocky View County's product categories

Rocky View County, along with its neighbours, including the City of Calgary, are home to a critical mass of companies. Additionally, an agreement has been signed to develop a world class agri-food corridor between Calgary and Olds. The "Calgary-Olds Smart Agri-Food Corridor" is meant to leverage Calgary's global corporate presence and distribution hub with the College's Smart Farm applied research and integrated learning facility. Through the corridor, companies and entrepreneurs have access to a world-class agribusiness environment that supports the development and scaling of new technologies designed to drive innovation in smart agri-food production.

Agri-Processors in Rocky View County:

- Balzac Meat Processing
- Bragg Creek Distillers
- Canada Malting Co. Ltd.
- Crystal Rill Trout
- Harmony Beef Co. Ltd.
- Highline Mushrooms
- HydraGreen Produce
- Long Run Ranch Beef

- Pleasant View U Pick Berries
- Prairie Berry
- Sage Creek Permaculture
- Souto Farms
- Sweet Life Saskatoons
- TK Ranch Natural Meats
- Winters Turkey
- Your Local Ranch

Other Key Players in the Agriculture Supply Chain in Rocky View County:

- Alta Genetics
- Badger Ridge Farm Greenhouse
- Barrett Veterinary Practice
- Bova-Tech Ltd. (BTL)
- Brandt Agriculture
- Century Downs Racetrack and Casino
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant

- Nutrien Ag Solutions
- Parish & Heimbecker Ltd.
- Remuda Building
- Rocky Mountain Equipment
- Thorlakson Feedyards Inc.
- Tractorland
- Viterra
- Wenstrom Equipment

³ St. Pierre, Michelle. "Canada's farms are adjusting the ways they sell their products to consumers." Statistics Canada. Release date: February 9, 2023. Catalogue no. 96-325-X. ISSN 2817-0202.



Ranching and cropping activities have been the dominant agricultural land uses over the past several years in Rocky View County.

Rocky View County's three most noteworthy crops by amount of land (2021) are:

- Canola (134,094 acres)
- Barley (131,923 acres)
- Wheat (123,864 acres)

followed by:

- Alfalfa and Alfalfa Mixtures (56,036 acres)
- All Other Tame Hay and Fodder (34,009 acres)
- Dry Field Peas (13,965 acres)

C.1. Grains and Oilseeds

Grain and oilseed milling is the second-largest component of Alberta's food manufacturing sales, valued at C\$5.5 billion in 2022.4

Appendix A includes the Annual Crop Inventory Map for Rocky View County.

C.1.a Canola

Rocky View County Production:

- Canola (134,094 acres) approximately 2% of provincial acres.
- Canola is grown at the most farms (359 farms).

Export Markets:

- Canada exports approximately 17 million tonnes of canola annually. Alberta produces 30% of Canada's canola.
- Canadian exports of canola seed goes to: China, Japan, Mexico, Pakistan, and the United Arab Emirates. China has long been the largest importer of Canadian canola.

Rocky View County Players:

- Brandt Agriculture
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions

- · Parish & Heimbecker Ltd.
- Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

⁴ Government of Alberta. Ministry of Agriculture and Irrigation. "Alberta Agriculture." September 2023. https://open.alberta.ca/dataset/6c886ec7-c329-4fa3-9c12-847037e02c73/resource/25a31dca-c30a-49e3-8a7b-cca8e13ad91f/download/agi-alberta-agriculture-2023.pdf



Product Needs:

- Rocky View County and the province of Alberta is an ideal place to grow crops like canola because it has an ideal mix of warm days and cool nights.
- Western Irrigation District (WID) provides access to a dependable commercial and residential
 water source. Lands in the east central and southeast regions of the County have access to this
 irrigation infrastructure. In 2022, 18,867 acres of canola were under irrigation within the WID.⁵

Research & Development and Producer Supports:		
Alberta Canola	funds research projects that help farmers succeed; whether it's finding better ways to grow canola, investigating new uses and health benefits for canola oil, or promoting the use of canola meal in livestock feed rations.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	located in Olds, the FCDC is recognized as a world-class research facility.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks, conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Potential Opportunities:

Oilseed milling/canola crushing. Canola seed is purchased from growers, then cleaned, graded
and crushed to extract the oil. Canola meal, a byproduct, is used as a protein feed supplement
for livestock. The meal is toasted, cooled, dried, and granulated. It is sold as pellets or mash and
is particularly popular among dairy farmers as it has been proven to increase milk production by
one litre per cow per day.⁶

⁵ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. https://open.alberta.ca/publications/3295832

⁶ https://hellocanola.ca/



- Food production. Canola oil is refined and processed into cooking oil, margarine, salad oils, and
 other. Canola oil contains half the saturated fat of olive oil and has the most plant-based omega3 fats of all common cooking oils.
- Biofuel production. Canola is used in biofuel production because it's a low-carbon, sustainable
 and renewable resource with an abundant supply. Canola-based biofuel can be used by
 passenger vehicles and trucks, as well as off-road equipment used in mining, forestry,
 construction, agriculture and marine industries.⁷ Canola is an efficient source of biodiesel as it
 produces more oil per unit of seed than other oilseeds.
- Other industrial uses. Canola oil can be used in a variety of industrial applications to make lubricants, oils, fuel, soaps, paints, plastics, cosmetics and inks.

C.1.b Wheat

Rocky View County Production:

- Wheat (123,864 acres) approximately 2% of provincial acres.
- Spring wheat (excluding durum) = 114,877 acres approximately 2% of provincial acres.
- Wheat is grown at the second most farms (355 farms) behind canola.

Export Markets:

- Alberta produced 33% of Canadian wheat. The province grew the second highest number of acres of spring wheat.
- Alberta exports wheat to 70 countries worldwide, averaging nearly 7 million tonnes per year. The United States is a top importer of wheat and durum.
- Alberta's wheat is mainly going through west coast ports to reach Asian destinations (South Korea, Japan, Bangladesh, and Indonesia). Durum is just as likely to go through an east coast port to reach Europe and the Middle East.⁸

Canadian wheat has a worldwide reputation for uniformity and consistency.

Rocky View County Players:

- Brandt Agriculture
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions

- Parish & Heimbecker Ltd.
- Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

⁷ https://www.canolacouncil.org/biofuels/

https://www.alberta.ca/benchmark-of-current-grain-flows-of-canadian-wheat-board-grains#:~:text=Wheat%20and%20barley%20are%20mainly,Europe%20and%20the%20Middle%20East



Product Needs:

- Rocky View County is in the main production zone for wheat growing on the prairies.⁹
- Western Irrigation District provides access to a dependable commercial and residential water source. Lands in the east central and southeast regions of the County have access to this irrigation infrastructure. In 2022, 9,823 acres of hard spring wheat, 1,451 acres of Canada Prairie Spring (CPS) wheat, 2,324 acres of soft wheat, and 893 acres of durum wheat were under irrigation within the WID.¹⁰

Research & Development and Producer Supports:	
Alberta Grains	is a farmer-directed, not-for-profit organization that represents the interests of and serves as the single voice for all of Alberta's wheat and barley producers. They support research projects that aim to improve crop management, reduce input costs and environmental impact, and increase yield and grain quality.
Canadian International Grains Institute (Cigi)	is a not-for profit institute providing pre-market and in-market technical support for the Canadian grain sector.
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.
Field Crop Development Centre (FCDC)	in Olds is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.
Food Science and Technology Centre	in Brooks, conducts funded, applied research to develop value-added food/feed products from local crops.
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.

⁹ https://open.alberta.ca/dataset/2d548ade-7a0c-42a8-bd41-ab965082e24f/resource/e6c0c20f-3987-45ce-98e4-4aac0eb2b0c8/download/af-western-canadian-grain-catchment-benchmark-of-current-grain-flows.pdf

¹⁰ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. https://open.alberta.ca/publications/3295832



Potential Opportunities:

- Small scale or specialty milling wheat is transported to a mill where it is tested, cleaned and milled into flour. In Alberta, there are two major millers: ADM Milling Co. in Calgary, and the Lethbridge Parrish & Heimbecker Flour Mill.
- **Food production**. The milled flour can be sold as flour or used to create more products like bread or baked goods, fresh or dried pasta (durum wheat), baking mixes and more.

C.1.c Barley

Rocky View County Production:

- Barley (131,923 acres) approximately 3% of provincial acres.
- Barley is grown on 316 farms.

Export Markets:

- Canada is one of the world's largest barley suppliers, producing about eight million tonnes annually. Alberta is home to over half of Canada's annual barley production, yielding an average of over 4.5 million tonnes of barley per year.
- Alberta's barley exports are mostly used as feed for livestock, and malt for brewing and distilling.
- Alberta's barley is mainly going through west coast ports to reach Asian destinations.
- The US is one of the top importers of Alberta barley along with Japan and China. The middle east, led by Saudi Arabia, also imports Alberta barley.
- Each year a quarter of all barley grown in Canada is selected for malt, with the remainder used for feed. Canada uses about 350,000 tonnes of malt domestically while exporting approximately 800,000 tonnes of processed malt and one million tonnes of malting barley annually.¹¹

Barley grown in Alberta is recognized internationally for its superior product qualities.

Rocky View County Players:

- Bragg Creek Distillers
- Brandt Agriculture
- Canada Malting Co. Ltd.
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions
- Parish & Heimbecker Ltd.
- Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

¹¹ Canadian Barley Research Coalition. "National Barley Research Strategy." Prepared by: Gina Feist (Brewing and Malting Barley Research Institute) and Kara Barnes (Barley Council of Canada)



Product Needs:

- Barley crops thrive in southern Alberta's long summer days and cool nights.
- Western Irrigation District (WID) provides access to a dependable commercial and residential
 water source. Lands in the east central and southeast regions of the County have access to this
 irrigation infrastructure. In 2022, 8,643 acres of barley and 3,299 acres of malt barley were
 under irrigation within the WID.¹²

Research & Development and Producer Supports:		
Alberta Grains	is a farmer-directed, not-for-profit organization that represents the interests of and serves as the single voice for all of Alberta's wheat and barley producers. They support research projects that aim to improve crop management, reduce input costs and environmental impact, and increase yield and grain quality.	
Canadian International Grains Institute (Cigi)	is a not-for profit institute providing pre-market and in-market technical support for the Canadian grain sector.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds, is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks, conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

¹² Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. https://open.alberta.ca/publications/3295832



Potential Opportunities:

- **Livestock feed**. Cattle consume the majority of barley, followed by poultry and swine. The pet food industry also uses barley as a healthy grain additive.
- **Malt processing**. Western Canada has ideal growing conditions for malting barley, which has resulted in a reputation for very high quality.
- Food Barley. In North America, there is renewed interest in barley for its nutritional qualities: In 2012 Health Canada awarded barley with an official health claim linking the consumption of barley beta-glucan to a reduction in blood cholesterol. Food barley can appeal to consumers from a whole food perspective, as it is locally grown and there are no genetically modified varieties.¹³
- Industrial Uses. Industrial applications for barley include bioethanol, paper and wood composites, cosmetics, packaging material, natural emulsifiers, and pharmaceuticals.¹⁴

C.1.d Forage Crops: Alfalfa and Alfalfa Mixtures

Rocky View County Production:

- Alfalfa Mixtures (56,036 acres) about 2% of Alberta's acres.
- All Other Tame Hay and Fodder (34,009 acres) about 2% of Alberta's acres.

Product Needs:

- Alfalfa is a widely used source of high protein roughage for livestock in pasture and hay mixes.
 Alfalfa is recognized as a high-quality feed with a lot of versatility and is used extensively in the dairy industry. It can be harvested and fed as greenchop, hay, cubes, haylage, or silage, or it can be grazed.
- Alfalfa hay is widely grown in Western Canada, as Western Canada has ideal growing conditions
 for this nutrient rich legume. Furthermore, the foothills of the Canadian Rockies provide ideal
 climatic conditions the region's higher altitudes, the long warm days and cool nights, the rich
 soil, clean air, and pristine setting make ideal growing conditions for hay and forage.¹⁵
- Western Irrigation District (WID) provides access to a dependable commercial and residential
 water source. Lands in the east central and southeast regions of the County have access to this
 irrigation infrastructure. In 2022, 10,739 acres of alfalfa, 1.187 acres of alfalfa hay, 2,229 acres of
 grass hay, and 1,851 acres of timothy hay were under irrigation within the WID.¹⁶

¹³ Canadian Barley Research Coalition. "National Barley Research Strategy." Prepared by: Gina Feist (Brewing and Malting Barley Research Institute) and Kara Barnes (Barley Council of Canada)

https://barleyresearch.ca/wp-content/uploads/2021/08/CBRC NatBarleyResearchStrategy-v4.1.pdf

¹⁴ Ibid.

¹⁵ https://www.barr-ag.com/

¹⁶ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. https://open.alberta.ca/publications/3295832



Export Markets:

- Alfalfa hay typically goes through alfalfa dehydration and hay compaction in preparation for export. Most of the processing occurs in the Canadian Prairies. Products include dehydrated alfalfa meal and pellets, sun-cured alfalfa pellets, alfalfa cubes and compressed bales of alfalfa hay. These products are exported to: Japan, Korea, China, United States, United Kingdom, Ireland, United Arab Emirates, Taiwan, and other Middle Eastern countries.¹⁷
- Canada is also a major exporter of alfalfa seed, with alfalfa seed produced almost entirely in the
 prairie provinces. The bulk of exports go primarily to the US (50%) followed by China (35%). The
 remainder of Canadian exports are spread throughout the world.¹⁸

Research & Development and Producer Supports:		
Alberta Alfalfa Seed Commission (ASCA)	is a farmer directed, organization focused on promoting activities that enhance the viability of alfalfa seed and leafcutter bee industries in Alberta. It has a mandate to fund and partner on research that will enhance all aspects of the alfalfa seed and leafcutter bee industry in Alberta.	
Canadian Cocoon Testing Center (CCTC)	located in Brooks, is the national testing centre for alfalfa leafcutter bee cocoons.	
Canadian Forage and Grassland Association	is the national voice for all sectors of the forage and grassland industry. Its main role is to uphold the robust forage industry and realize the potential of the domestic and export forage market.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds, is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks, conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

¹⁷ https://www.barr-ag.com/

¹⁸ https://www.alberta.ca/alfalfa-seed-marketing-in-canada



Potential Opportunities:

- Compressed Hay. "Compressed hay" refers to various forage products compressed into tightly bound, high density, low moisture bales. The Canadian compressed hay industry was first established in the early 1980s. Most of the industry is located in Alberta.
- Nutritional supplements. Alfalfa can be used for human consumption and as a nutritional supplement.
- Industrial Purposes. The potential exists for alfalfa to be used for industrial purposes, providing farmers with new high-value products and adding to their profit margin. Although the technology to develop alfalfa into important value-added goods like biodegradable plastics and improved textiles is still relatively nascent. 19

C.1.e Dry Field Peas

Rocky View County Production:

Dry Field Peas (13,965 acres)

Export Markets:

In 2019, Alberta's pulse growers grew 1,685,900 metric tonnes of field peas on 1,743,300 acres with farm cash receipts of \$387 Million. Alberta dry pea exports were valued at \$508 Million with China accounting for the majority of exports at \$294 Million, Bangladesh at \$105 Million, followed by India (\$30 Million), Cuba (\$20 Million), United States (\$15 Million), Nepal (\$10 Million), as well as Colombia, Pakistan, Taiwan, Philippines and other countries. 20

Product Needs:

- Field peas are a cool season annual plant grown adapted to cool temperate zones such as Western Canada. Optimum temperatures are 23°C daytime and 10°C evening.
- Field pea is the most widely grown pulse crop in Alberta and is grown in Southern Alberta, Central Alberta, or the Peace River Region.²¹
- Field peas grow well in the black and thin black soil zones in Rocky View County.

¹⁹ University of California. Division of Agriculture and Natural Resources. "Alfalfa for Industrial and Other Uses." Publication 8305. July 2008. https://alfalfa.ucdavis.edu/sites/g/files/dgvnsk12586/files/media/documents/UCAlfalfa8305Industrial-reg.pdf ²⁰ https://albertapulse.com/growing-peas/

²¹ Ibid.



Research & Development and Producer Supports:		
Alberta Pulse Growers Commission	based in Leduc, Alberta Pulse Growers Commission is a not-for-profit organization that supports over 5,400 Alberta farmers who grow pulses, including dried peas, beans, chickpeas, lentils, soybeans and faba beans.	
Protein Industries Canada (PIC)	is an industry-led, not-for-profit organization created to position Canada as a global source of high-quality plant protein and plant-based co-products.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds, is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks, conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Potential Opportunities:

• **Fractionation**. With the growing demand for their pea protein, there is an increasing need to expand pea processing capacity, such as dry fractionation or protein isolate manufacturing, in order to further develop commercial-ready pulse ingredients for the Canadian food sector.





C.2. Livestock

C.2.a Cattle

Rocky View County Production:

Number of Cattle: 126,545 - about 2% of province's cattle inventory.

Calves 47,291 - 3% of province's cattle inventory Steers 9,745 - 1% of province's cattle inventory Heifers 23,622 - 3% of province's cattle inventory

- Heifers for slaughter or feeding 13,398
- Heifers for beef herd replacement 9,756
- Heifers for dairy herd replacement 468

Cows 42,041 – the majority of which are beef Bulls 3,846



- 548 farms about 3% of the province's cattle farms. Over one-third (34.8%) of Rocky View County's 1,142 farms are primarily engaged in beef cattle ranching and farming.
- Production primarily on western side of the county.

Export Markets:

- In 2020, Canada exported 47.4% of total beef and cattle produced in Canada.
- Alberta led the nation in cattle and calf inventory, accounting for more than 42% of Canada's total. As Canada's leading beef-producing province, Alberta is also a significant exporter of beef and live cattle.
- Most of Canada's beef is processed in Alberta.
- Most of Canada's beef exports go to the United States (over 70%), followed by Japan, Mexico, Hong Kong/Macau and China.

Players in Rocky View County:

- Alta Genetics
- Balzac Meat Processing
- Barrett Veterinary Practice
- Bova-Tech Ltd. (BTL)
- Harmony Beef Co. Ltd.
- Long Run Ranch Beef

- Sage Creek Permaculture
- Souto Farms
- TK Ranch Natural Meats
- Thorlakson Feedyards Inc.
- Your Local Ranch

Needs of the product:

- Alberta's beef industry benefits from province's favorable climate and geography. The province has an arid climate, which is ideal for raising cattle. The dry climate reduces the risk of disease.
- Alberta has vast expanses of natural grasslands that provide excellent grazing opportunities for cattle. These grasslands are rich in nutrients and are an essential part of the cattle's diet, contributing to the overall quality of the beef.²²

²² https://darcysmeats.ca/blogs/blog/what-makes-alberta-beef-unique



- Cattle raised in Alberta's spacious pastures have access to clean water, fresh air, and natural grazing areas.
- Alberta's cattle feed is also a critical factor in the superior taste and quality of its beef. While
 grass and forage are the foundation of the cow-calf industry, feed for finishing cattle in Alberta
 is grain-based. The ration typically contains a high percentage of barley grain, augmented by
 barley silage. These grain-based rations provide superior quality products with exceptional
 flavor and texture.

Research & Development and Producer Supports:		
Alberta Beef Producers	works on behalf of more than 18,000 beef cattle producers to maintain the Canadian beef advantage: outstanding genetics; robust food safety, beef grading, animal health and environmental standards; efficient production practices; high standards of animal care; responsible environmental stewardship; and world-class processing facilities that consistently produce safe, nutritious, high quality, and great tasting beef.	
Canadian Cattle Association (CCA)	is the national voice of Canada's 60,000 beef farms and feedlots. It was founded by producers and led by a producer-elected board. The CCA works to address issues that concern Canada's beef producers.	
Alberta Cattle Feeders' Association	is an advocacy organization representing the interests of members on a broad range of government policies and economic issues impacting the competitiveness of the production of beef and beef products in Alberta.	
Canadian Beef Centre of Excellence	is located in Calgary. It is a globally recognized leader of Canadian Beef and Veal innovation, training, education and culinary expertise.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Lethbridge Research and Development Centre	leads research on beef cattle production systems (health and welfare, food safety, microbiology); crop production and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Potential Opportunities:

- Meat and specialty meat processing.
- Snack foods e.g. beef jerky
- Direct sales.



C.2.b Pigs

Rocky View County Production:

Number of Pigs: 23,190

Export Markets:

- Canada is among the world's top five pork exporters with products being shipped to approximately 30 countries. Alberta, like most of Canada, exports approximately 70% of its pork production.
- The major markets for Alberta pork sales (fresh, frozen, chilled, including offal) in 2021 included Japan, United States, Mexico, South Korea, China and the Philippines. These countries account for nearly 96% of the total value of Alberta pork exports (\$515 million).²³

Needs of the product:

- Pork production in Alberta benefits from its environment, superior swine genetics, and quality feed.
- Alberta's wide land mass and lower hog population, pig farms are widely distributed, leading to better disease control and herd health status.
- Alberta is Canada's largest feed grain producer with abundant supplies of barley, wheat, canola
 and clean pure water. This natural advantage makes Alberta a prime location for hog
 production, with high-quality barley making up the largest part of the feed rations used for hogs
 raised in the province. Alberta's grain-fed pork is famous for its tenderness and firm white fat,
 leading to a better flavor and texture experience.²⁴

²³ https://www.alberta.ca/agri-news-global-appetite-for-pork

²⁴ Government of Alberta. Ministry of Agriculture and Irrigation. "Alberta Pork." September 2023. https://open.alberta.ca/dataset/18791042-4f65-4ee4-960c-affcbddbb4fd/resource/4f075c15-cb55-4e06-8143-7f91c9c73679/download/agi-alberta-pork-2023.pdf



Research & Development and Producer Supports:		
Alberta Pork	is a non-profit organization representing the province's registered hog producers before government, industry partners, media, the general public and other interest groups.	
Lacombe Research Facility	is Agriculture and Agri Food Canada's meat research centre for beef and pork. They have a farrow to finish unit stocked with Genesus Genetics. They undertake research on farm in on site abattoir and with various meat quality measuring protocols with world-class equipment. Genesus, the only Canadian-owned swine genetic company, is collaborating on several projects with Lacombe with the goal to produce ever-better pork.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Swine Research Technology Centre (SRTC)	located at the University of Alberta, SRTC research programs center on nutrition and metabolism, feeds and feedstuff utilization, and reproduction and breeding herd management.	
Food Processing Development Centre	in Leduc, features the Agrivalue Processing Business Incubator , which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Potential Opportunities:

- Meat and specialty meat processing.
- Snack foods.
- Direct sales.

C.2.c Other Livestock

Rocky View County Production:

- Number of Hens and Chickens: 186,690, approximately 1% of the provincial inventory.
 Egg Production Number of Table Eggs: 8,984,068 (dozens), approximately 13% of the provincial inventory, and 4% of the province's farms.
- Number of Sheep: 4,354, approximately 2% of the provincial inventory, and 4% of the province's farms
- Number of Horses and Ponies: 2,159 approximately 2% of the provincial inventory, and 4% of the province's farms.



C.3. Controlled Environment Agriculture

Controlled Environment Agriculture (CEA) is an indoor technology-based production system where crops are grown under a modified and highly conditioned environment. The greenhouse sector and its derivatives, such as vertical farming and hydroculture, are the most common forms of CEA used in horticultural production. The Canadian greenhouse industry is the largest and fastest growing segment of indoor farming.

Rocky View County Production:

• Greenhouses: 20 - approximately 4.6% of provincial greenhouse operations.

Fruits and vegetables: 15

• Square footage: not available.

Export Markets:

- Greenhouse and CEA production is growing primarily to address homegrown produce shortages.
 Canada's fresh produce market (fruits and vegetables) is highly dependent on imports from the US, Mexico, and other international markets.
- Alberta's exports of food crops grown under cover in 2019 were \$4.7 million. Imports were \$26.9 million. Exports of nursery and floriculture products were \$122,269; import were \$10,777,493.²⁵

Rocky View County Players:

- Badger Ridge Farm Greenhouse
- Highline Mushrooms

HydraGreen Produce

Product Needs:

- Alberta's relatively warm climate, consistent sunlight, low-cost natural gas, availability of water and reasonably priced land makes it an ideal location for greenhouses. The present size of Alberta's greenhouse crops industry is estimated to be 404 acres, 164 hectares, 17.62 million square feet, or 1.64 million square metres.²⁶
- Crops grown using Controlled Environment Agriculture need up to 95% less water than traditional crops because none is wasted.
- Affordable land/site: One of the main goals is to compete with lower-priced field-grown crops.
- Zoning. One of the most common barriers to urban agriculture and vertical farming is zoning restrictions. While the vertical farming industry is on the rise, many Canadian municipalities are lagging in amending their zoning bylaws to include urban agriculture. It makes the most sense to build facilities on agricultural land because it's cheaper, but not all jurisdictions recognize indoor farming as "farming", so getting approval to put a facility on land zoned for agriculture can be complicated.

 $\frac{\text{https://open.alberta.ca/dataset/f3bed9fa-0896-41c1-b4d4-f33717545e47/resource/dff6c633-02b9-4b3e-9903-aa466c238d69/download/af-ecb-profile-greenhouse-industry-alberta-2019-2020-08.pdf}{^{26}\text{ lbid.}}$

²⁵ Government of Alberta. "Profile of the Greenhouse Industry in Alberta 2019." Prepared by Emmanuel Anum Laate and Dr. Mirza Consultants Inc. September 2020.



- **Steep startup costs**: Because startup costs are steep, most startups cannot afford to wait for zoning regulations to be decided.
- High energy costs and costs of the facility itself means the operation has reach a significant scale before it becomes economically viable.
- As operations find success, they get larger, so it makes sense to build them near a distribution hub to cut down on transport.
- CEA production is labour intensive, requiring workers for a range of critical production tasks including propagation, planting, movement and management of plants, cleaning, harvesting, pest management, pruning, sorting and packaging. The agricultural sector in Canada already faces chronic labour shortages and has difficulty attracting and retaining workers. More specifically, the greenhouse industry has the largest labour gaps, with positions reportedly the toughest to fill, accounting for 59% of the industry workforce and 90% of the current labour gap.²⁷
- A vertical farmer can produce a much larger quantity of produce. And those crops can be grown all year round. Less seasonal work.

Potential Opportunities:

- There is a strong case for Canada to invest in opportunities and supports to enable domestic and local production in fresh produce to meet consumer demand gaps and put downward pressure on potential pricing and access issues.²⁸
- Fast-food service providers have been "rapidly switching" much of their produce supply to greenhouses because of inconsistencies in the outdoor farming supply chain that exist. Crops grown using CEA are more reliable, as they're not at the mercy of extremes of temperature and rainfall. There are no pests to eat the crops, and no bacteria or diseases to damage them.
- In addition to selling produce from CEA, there is an opportunity to sell the technology.

Highline Mushrooms' farm in Rocky View County is its most technologically advanced farm in Canada.

They are able to purchase their composting straw from local farmers.



²⁷ https://ised-isde.canada.ca/site/innovative-solutions-canada/en/enhancing-automation-controlled-environment-agriculture-farming

²⁸ https://chamber.ca/wp-content/uploads/2021/08/SupportingStrongerSecureSustainableCAFruitsVegetablesMarket.pdf



D. Rocky View County's Strategic Advantages

D.1. Concentration of primary products and producers

Ranching and cropping activities have been the dominant agricultural land uses over the past several years in Rocky View County. The County holds about 2% of Alberta's cropland with 512,091 acres.

D.2. Growing Conditions

Black chernozemic soil covers most of the County. This soil is described as a very black topsoil, rich in organic matter, typical of cool to temperate semiarid regions. Most of the County is plant hardiness Zone 3b, although southern portions of the county are Zone 4a. The province is an ideal place to grow crops like barley, canola, and pulses because it has an ideal mix of warm days and cool nights.

D.3. Irrigation

The Western Irrigation District (WID) provides access to a dependable commercial and residential water source. Lands in the east central and southeast regions of the County have access to this irrigation infrastructure.

D.4. Market Access

Rocky View County borders the Calgary Metro Region – a market of 1.5 million. Half the population in downtown Calgary is part of the millennial generation; the highest in the country. Downtown Calgary is one of the downtowns that saw the fastest population growth between 2016 and 2021.

Rocky View County is within a day's drive of a market of over 18 million people, and 50+ million people within 24 hours.

The County is a one-day drive from the Ports of Vancouver (Canada's largest port) and Prince Rupert.



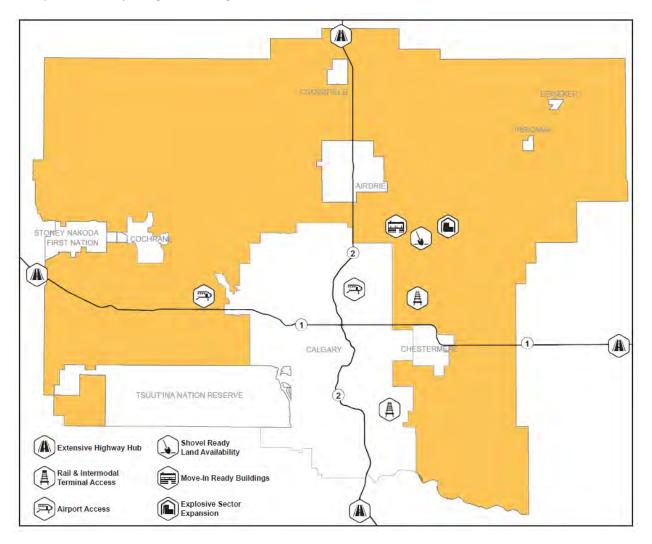


Canada is the only G7 nation having comprehensive free trade agreements with all other G7 members, and having preferential access across the Americas, Europe, and the Asia-Pacific region. Canada has entered into a free trade agreement with ten other countries in the Asia-Pacific region with the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). With the CPTPP and the elimination of tariffs and non-tariff barriers, Canadian exports are expected to increase and expand across a wide range of sectors, including agriculture (beef, pork and vegetable oils) and non-agriculture (forestry, industrial machinery, heavy equipment and services).

Firms operating in Alberta have preferred market access to 49 countries representing approximately 1.5 billion consumers with a combined GDP of \$49.3 trillion USD.

D.5. Strategic Connectivity

Rocky View County has great strategic connections via road, rail, and air.





Transportation and Logistics	
Highways:	The County is at the epicentre of major east/west and north/south highway routes: • Trans-Canada Highway, which connects eastern and western Canada. • QE II, which forms part of the CANAMEX corridor, which connects northern Canada with the US and Mexico.
Class 1 Rail / Intermodal:	 CPKC mainline and CPKC terminal access. CPKC is the first and only single-line rail network connecting a continent - Canada, the United States and Mexico. CN Rail via their CN Logistics Park provides direct rail access to two deep sea Pacific ports (Port of Vancouver and Port of Prince Rupert). Facilities handle: bulk agricultural commodities such as fuels, fertilizers, feed mineral and potash; large volumes of containers.
International Airport:	Calgary International Airport (YYC) is a connecting hub for cargo services between North America, Asia, and Europe. YYC's four runways can handle some of the world's largest planes.
Inland Port:	Access to Calgary Region Inland Port which has Foreign Trade Zone status.

D.6. Warehouse and Distribution Connections

A high concentration of **food distribution warehouses** in Rocky View County and region provides producers with a direct local link to distribution channels, which in turn provides an efficient, and cost-competitive movement of goods.

Players in Rocky View County:

- Amazon
- Gordon Food Service
- Smucker Food Distribution Centre
- SYSCO (Calgary)

- Costco Distribution Centre (Airdrie)
- Loblaw Distribution Centre (Calgary)
- Sobeys Distribution
- Walmart Distribution



D.7. Industrial Land and Sites

CN Logistics Park:

- 80-acre park offers fully serviced, build-to-suit sites for warehousing and distribution, with direct rail connection;
- Canada's only intermodal business park;
- Significant drayage savings containers move direct from train to warehouse;
- Co-location within a CN intermodal yard eliminates one truck move;
- Access to all key logistics services in one place, like: rail, intermodal, warehousing and distribution;
- Easily accessed by North America's largest highways; and
- Modern, state-of-the-art facilities with dedicated teams to handle cargo.

High Plains Industrial Park:

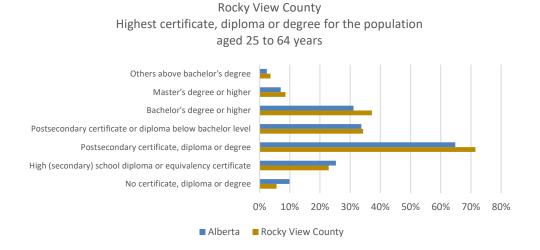
Located immediately north of Calgary in Rocky View County, High Plains Industrial Park
offers efficient highway access, an excellent labor force, significant real estate tax savings
compared to the City of Calgary.

D.8. Local Labour Force

Rocky View County has access to a talented workforce. In addition to the County's population, there is a strong regional labour force with the cities of Airdrie, Calgary, and Chestermere, and the towns of Cochrane, Crossfield, and Strathmore, and villages of Irricana and Beiseker. The workforce has the opportunity to live in either a more urban or rural setting and still work in a rural, agricultural setting.

1,225 of Rocky View County residents (5.6%) are employed in the agriculture, forestry, fishing, and hunting industry. 1,775 residents (8.0%) have occupations in natural resources, agriculture, and related production occupations.

Rocky View County residents are well educated:





According to the Major Field of Study – Classification of Instructional Programs (CIP) 2021 for the population aged 25 to 64 years in private households, for Rocky View County:

- 13.7% Physical and life sciences and technology (compared to 2.4% for Alberta)
- 2.5% Agriculture, natural resources and conservation (compared to 1.5% for Alberta.



D.9. Vicinity to Post-Secondary Institutions

There are many reputable agriculture, food, and nutritional science programs in nearby institutions that help to create a skilled workforce with relevant knowledge and training in agriculture including: Olds College of Agriculture & Technology, Lethbridge College, Lakeland College, Medicine Hat College, University of Lethbridge, University of Calgary, University of Alberta.

The University of Calgary's **W.A. Ranches**, an actual working ranch, is located in Rocky View County. W.A. Ranches is used for teaching and learning, research, and community engagement purposes.

Students and faculty across different disciplines and from around the world can benefit directly with access to this working ranch. The study of cattle in the complex, real-farm context enables research that can improve management practices for ranchers as well as academic programming that produces better veterinarians with more hands-on experience.



D.10. Technology and Sustainability

Agriculture in Canada is among the most sophisticated and technologically advanced in the world. Farmers use scientific crop and soil analysis as well as state-of-the-art equipment. Alberta reported the third highest use of automated guidance systems (auto-steer) in 2020. Nearly one-third (31.1%) of farms in Alberta reported using auto-steer equipment compared to the national average of 26.8%. Over a third of these farms were oilseed and grain farms.

Alberta reported the third highest rate of use for drones at 4.2% in 2020 compared. The national average is 3.6%.

In Rocky View County, 326 farms reported use of automated guidance steering systems (auto-steer) – about 2.5% of the province's reported farms.

The Calgary region has a one of the highest concentrations of high-tech workers among Canadian cities and boasts a burgeoning tech ecosystem. It is estimated that there are 123 Food and Agriculture Tech startups in Calgary.²⁹

D.11. Rocky View County's Agricultural Services Board

The mission of Rocky View County's Agricultural Service Board (ASB) is to act as an advisory body to Council on agricultural matters affecting residents, while promoting and developing agricultural polices to meet the needs of the municipality.

ASB programming works to:

- manage agricultural weeds and pests;
- conserve soil and water;
- enhance and protect viable and sustainable agricultural practices;
- control of animal diseases; and
- develop municipal policies.

ASBs are key to Alberta's robust pest surveillance network that helps Albertans maintain market access by mitigating the risk of agricultural pest threats. This in turn enables the industry to provide assurance to trading partners and continue to produce high value crops and livestock.

D.12. How Rocky View County Can Assist

Rocky View County offers a full suite of support to all potential development partners who may have an interest in acquiring and developing land in the County. Our team of experts from Planning & Development, Engineering, Permitting, and Economic Development provide a tailored approach to working with investors assisting them through the entire development process.

²⁹ https://tracxn.com/d/explore/food-and-agriculture-tech-startups-in-calgary-canada/ HLjEqT-6UhEoCJ4cQUdHKGLNSvLqvkUEY7TeAzXEJ8/companies



E. Rocky View County Opportunities

Adding value to its commodities is one of the greatest opportunities for Rocky View County's producers.

E.1. Local food / Farm direct marketing

There is an opportunity for the agriculture community to capture some potential from the growth in the distribution of locally grown foods and specialty crops. These opportunities are often best suited to smaller footprint operations. Rocky View County is strategically located to capture some of the growing market potential in the local food sector with a significant affluent population in the area, and major transportation thoroughfares. Additionally, consumers are increasingly interested in culinary experiences that incorporate local foods.

Farm direct marketing including farm gate sales, farmer markets, u-picks, gift baskets and mail order, e-commerce.

Rocky View County examples include: Crystal Rill Trout, Pleasant View U Pick Berries, TK Ranch Natural Meats, Winters Turkey, Your Local Ranch

A **Made in Alberta** voluntary labeling program helps consumers easily identify Alberta-made products.

Alberta producers and processors can use the new label on their locally made products.

The label will help shoppers quickly identify food products made in the province when choosing an item at their local farmers' market or grocery store.

Alberta Open Farms Days is a collaborative, province-wide, two-day event every August that gives
Albertans an opportunity to experience the farm and understand where their food comes from. It is a
backstage pass to meet the farmer, experience Ag-tourism in Alberta and taste local foods direct from
the producer.

E.2. Ag Tech

Agriculture is increasingly dependent on technology and the acceleration of the rate of industry adoption of ag tech is likely to continue over the coming years.

Alberta is among the national leaders in use of auto-steer and drone technology.

The Calgary region is a hotbed for ag tech opportunities, and the County serves as a direct access to a strong and historical agricultural base.



E.3. Organics

The organic market in Canada was worth approximately \$6.5 billion in 2021 compared to \$5.4 billion in 2017. Globally, Canada accounts for approximately 4% of annual organic trade revenues. The organic market is growing in Canada, and the country has a lot of potential to increase its share of the global organic food market.³⁰

Demand for organic produce in Canada is growing. In the past four years, the growth rate has been over 8% annually, and in 2020, the sales of organic produce were around \$7 billion. At present, there is not enough domestic supply. Many Canadian processors of organic food are having to rely on imports and face difficulties in finding consistent and reliable Canadian ingredient producers.

In 2019, Canada exported \$461 million worth of tracked organic goods. Exports to the United States represented around 18% of organic food exports from Canada.

Canada imported \$789 million worth of tracked organic food products. Almost half (45%) of the imports were horticultural products from the United States. Organic foods imported from the United States include strawberries, spinach, lettuce, and carrots.

Provincially, the largest organic market is in Ontario, while British Columbia has the highest per capita organic sales. Albertans are the most likely to buy organic produce with 74% of the province's population buying organic products every week.

E.4. Snack foods

Snack foods have been one of the fastest growing value-added product categories in the domestic market in recent years. Snack foods continue to evolve both as between-meal snacks, as part of main meals and as meal replacements. Snack foods are well-positioned as value-added products with potential to address the above noted changing consumer needs and wants.³¹

E.5. Beverage processing

Alberta is experiencing a boom in craft beverages with breweries, distilleries, wineries, and cideries opening up across the province. These processors are utilizing Alberta's locally produced agriculture inputs.

Alberta's beverage industry produced \$21.4 billion in revenues in 2021.

In terms of liquor manufacturing in Alberta, Alberta Gaming, Liquor and Cannabis (AGLC) is one of the most accommodating and supporting regulatory bodies in Canada. They have an open liquor market or open border system, which allows for wide variety including some of the best products in the world.

³⁰ https://madeinca.ca/organic-food-statistics-

canada/#:~:text=The%20demand%20for%20organic%20produce,is%20not%20enough%20domestic%20supply

³¹ Government of Alberta. "Consumer Corner: Consumer demand for value-added food products: snack food." Issue 59. November 2020.

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Alberta is known for producing excellent rye whisky which is made from rye crops that thrive in our cold northern climate and add a distinctive spicy, bitter edge to the drink.



F. Alberta Strategic Advantages

F.1. Labour

Alberta's agricultural and agri-food sector employs over 69,800 Albertans. More than 21,000 Albertans hold degrees in agriculture operations and related sciences. Post-secondary institutions across the province offer innovative agriculture and agribusiness-related programs.

F.2. Incentives and Support

Alberta's new **Agri-processing Investment Tax Credit** program offers a 12 per cent non-refundable tax credit based on eligible capital expenditures to corporations investing \$10 million or more to build or expand agri-processing facilities in the province.

The Sustainable Canadian Agricultural Partnership (**Sustainable CAP**) is a new \$3.5-billion, 5-year agreement (April 1, 2023, to March 31, 2028), between the federal, provincial, and territorial governments to strengthen the competitiveness, innovation, and resiliency of the agriculture, agri-food, and agri-based products sector. The agreement includes \$1 billion in federal programs and activities and \$2.5 billion in cost-shared programs and activities funded by federal, provincial, and territorial governments.

Alberta has over 22 research and innovation facilities specializing in crop and cereals, poultry and swine research, agronomy, biomaterials, and food safety. Public/industry approaches like the Results Driven Agriculture Research (RDAR) are funding research to benefit farmers, ranchers, and consumers.

Support organizations include various producer associations e.g. Alberta Lamb Producers, Alberta Egg Producers and more. The Ostrich Association of Alberta is based in Rocky View County.

Other industry support organizations include:

 Canadian Agri-Food Automation and Intelligence Network (CAAIN) - Their mission is to create technological solutions for the most challenging problems facing Canada's agri-food

ATTACHMENT A: Rocky View County Agriculture Sector Profile



- sector. It is supported primarily through funding from Innovation, Science and Economic Development Canada (ISED)'s Strategic Innovation Fund (SIF).
- Canadian Food Innovation Network champions innovation and collaboration across
 Canada's food sector. It provides free membership to: manufacturers, processors,
 operators, distributors, retailers, foodservice, tech companies, service providers, and
 funders.



F.3. Post-Secondary Institutions

There are many reputable agriculture, food and nutritional science programs in nearby institutions that help to create a skilled workforce with relevant knowledge and training in agriculture including:

- University of Alberta;
- University of Calgary;
- University of Lethbridge;
- Olds College of Agriculture & Technology;
- Lethbridge College;
- Lakeland College;
- Medicine Hat College and its Brooks Campus;
- Red Deer Polytech; and
- Northwest Polytech.

The University of Calgary recently created the *Simpson Centre for Food and Agricultural Policy*, an academic policy institute that supports Canadian agri-food and agriculture. Their aim is to apply transdisciplinary research to drive better policymaking and decision-making for a more sustainable, inclusive, and resilient agricultural industry.



F.4. Startup Ecosystem

Alberta, and in particular the Calgary region, has a growing startup ecosystem. Calgary's startup ecosystem moved up a bracket in Startup Genome's Top 100 Emerging Ecosystems list and now places among the top 60 ecosystems globally. There are a number of ecosystem supports particularly related to agtech and agri-foods:

Ecosystem supports for agtech and agri-foods:	
District Ventures Capital	Based in Calgary, is a venture capital fund investing in innovative companies in the food & beverage and health & wellness sectors. The fund is led by entrepreneurs, including Managing Partner, Arlene Dickinson. Dickinson is preparing to launch Venturepark , which will house her network of companies with a focus on supporting brands in the food and health Consumer Packaged Goods (CPG) space.
SVG Ventures – Thrive	a global agri-food venture capital firm, set up its Canadian headquarters in Calgary in 2021. Along with funding from the Opportunity Calgary Investment Fund (OCIF), Thrive Canada will mentor Canadian agri-food startups. Calgary was chosen in part because of the strong talent pipeline for entrepreneurs and because southern Alberta is a place with a strong agriculture base.
Zone Startups Calgary	United Farmers of Alberta (UFA) and Zone Startups Calgary, an accelerator for pilot-ready tech startups, announced a partnership to collaborate and support early-stage agriculture technology companies with technical and commercial validation through their program offerings.
Carrot Ventures / AVAC Group	Calgary venture capital firm AVAC Group announced the launch of a new \$15 million venture capital fund called Carrot Ventures . The fund will focus on investing in Canadian agricultural technology startups.
The51 Food and AgTech Fund	makes early-stage investments in four sectors across the agricultural value chain: Agriculture Biotechnology, Automation, Farm Innovation, and Food Innovation.
CDL-Rockies' Ag stream	the Creative Destruction Lab or CDL-Rockies' Ag stream is based in Calgary and leverages the region's vast pool of expertise in agricultural innovation to help founders rapidly scale and commercialize their science- or technology-based startup.



F.5. Alberta's Agriculture

Alberta's abundance of arable land and sunshine enables the province to effectively grow crops and raise cattle. Alberta offers a **high-quality supply of primary products** and is the third largest exporter of agri-food products in Canada.

- Alberta beef is known for its superior flavour, texture, and quality.
- Alberta's grain fed pork is famous for its tenderness and firm white fat leading to a better flavour and texture experience.
- Barley grown in Alberta is recognized internationally for its superior product qualities.

Alberta is an experienced exporter of genetics of various species of livestock. These genetics include semen, embryos, and breeding stock. The province also provides a range of technical and consulting services, like genetic selection, nutrition and health, animal care and management, and biosecurity.

Alberta's natural gas infrastructure provides affordable heat and power to rural farms and greenhouses.

In 2022:

- Alberta exports of agricultural and food products were valued at a record \$16.2 billion, up
 14.6% from 2021.
- Alberta produced 33% of Canadian wheat, 30% of canola, 54% of the nation's barley, and 32% of Canada's pulses. It is the nation's top grower of barley, and grew the second highest number of acres in canola and spring wheat.
- The top 5 international markets for Alberta's agri-food exports were the United States (\$7.3 billion), China (\$2.6 billion), Japan (\$1.7 billion), Mexico (\$867.9 million) and South Korea (\$420.9 million). These accounted for 80.2% of the total.
- Alberta's top 5 products in 2022 accounted for 65.9% of the total. These were beef (\$3.6 billion), wheat (\$3.1 billion), canola seed (\$1.9 billion), oilseed cake and meal (\$1.1 billion) and crude canola oil (\$963.3 million).
- Alberta led the nation in cattle and calf inventory, accounting for more than 42% of Canada's total. As Canada's leading beef-producing province, Alberta is also a significant exporter of beef and live cattle.

Other facts about Alberta's agriculture and agri-food production:

- In 2021, farms in Alberta reported 25.6 million acres of hay and field crops 27.6% of the country's hay and field crop area.
- Alberta has the largest irrigated area in Canada with nearly 680,000 hectares of irrigated land.
 An \$815 million investment will modernize irrigation infrastructure and increase water storage capacity.
- Alberta reported the fourth highest inventories of pigs and chickens.



- In 2020, farms in Alberta reported \$22.2 billion in farm operating revenues. This was more than any other province and accounted for 25.5% of Canada's total farm revenues.³²
- The province has developed an **Agri-food Investment and Growth Strategy** to amplify Alberta's first-class reputation for high-quality agricultural products and increase capacity to help meet the global demand. This integrated 3-pillar strategy includes:
 - Investing in value-added agricultural processing capacity;
 - Increasing agri-food exports; and
 - Expanding irrigation.

G. Conclusion

Producers in Rocky View County recognize that proximity to a strong metropolitan base, both for access to labour and for market access, are key advantages to their location. Additionally, access to good transportation infrastructure and linkages are beneficial.

Rocky View County is supportive of local producers by organizing annual food tours that bring promotion and attention to local operations. The County's Agricultural Service Board (ASB) is an advisory body to Council regarding agricultural matters that affect residents, while promoting and developing agricultural polices to meet the needs of the municipality.

The County has a team of experts from Planning & Development, Engineering, Permitting, and Economic Development willing to provide a tailored approach to working with investors and assisting them through the entire development process.

For more information, contact:

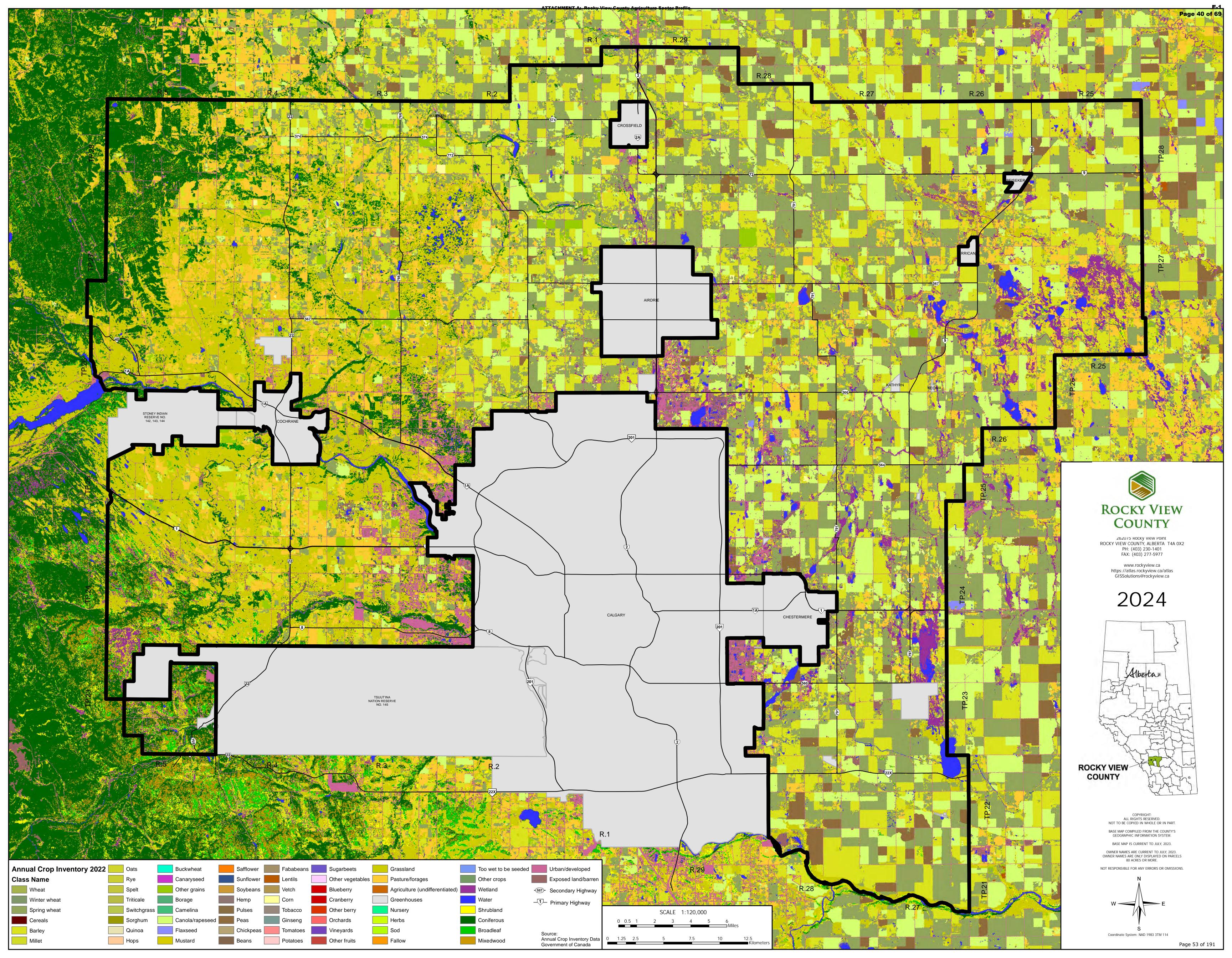
Aaron Latimer, Manager, Economic Development 262075 Rocky View Point | Rocky View County, AB | T4A 0X2 Phone: 403.520.8195 | Mobile: 403.835.0059 | alatimer@rockyview.ca www.rockyview.ca

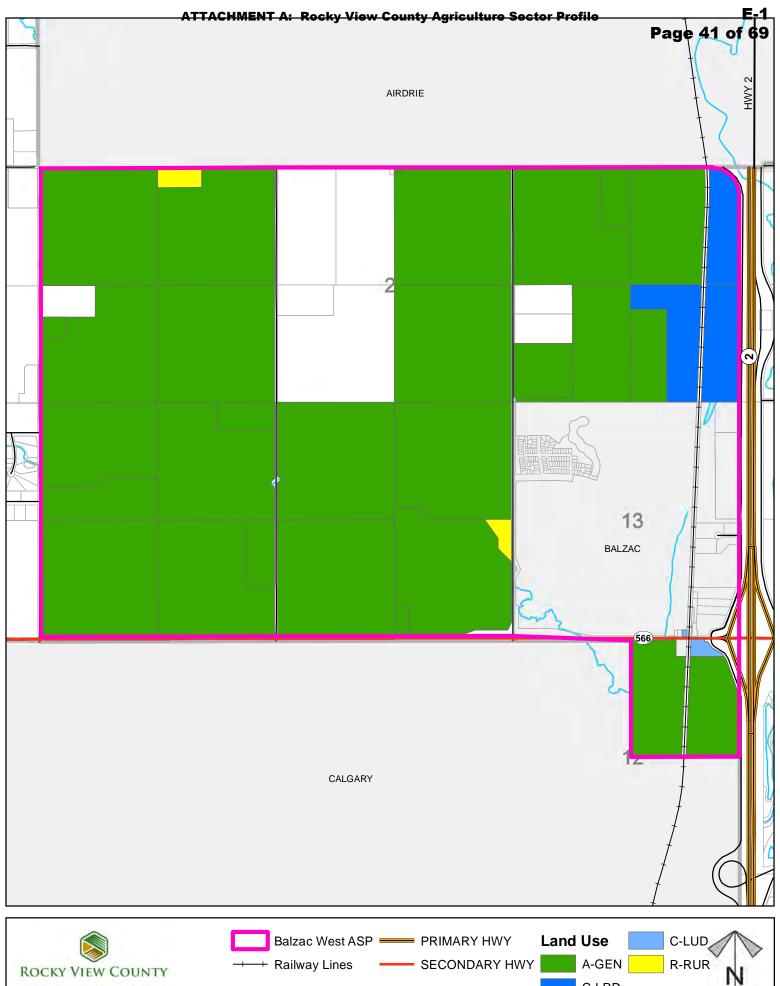


³² St. Pierre, Michelle, and Mike McComb. "Alberta has the highest farm operating revenues in Canada." Statistics Canada. Release date: June 15, 2022. Correction date: February 3, 2023. Catalogue no. 96-325-X.

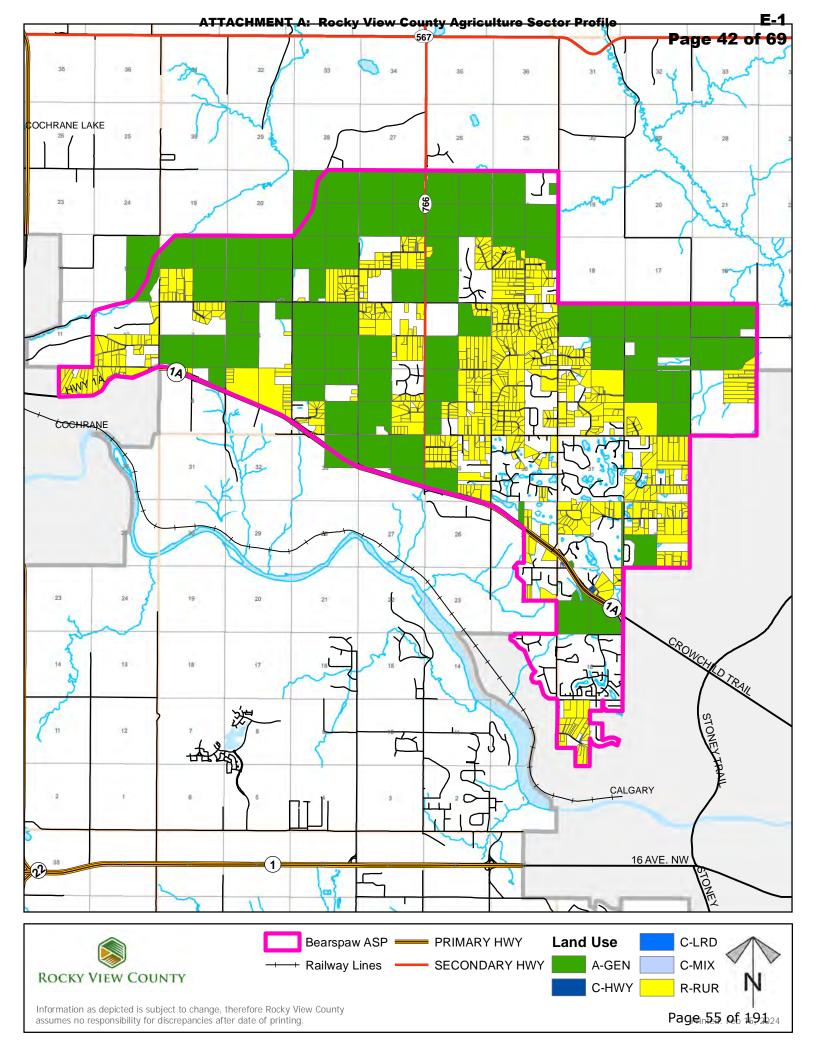


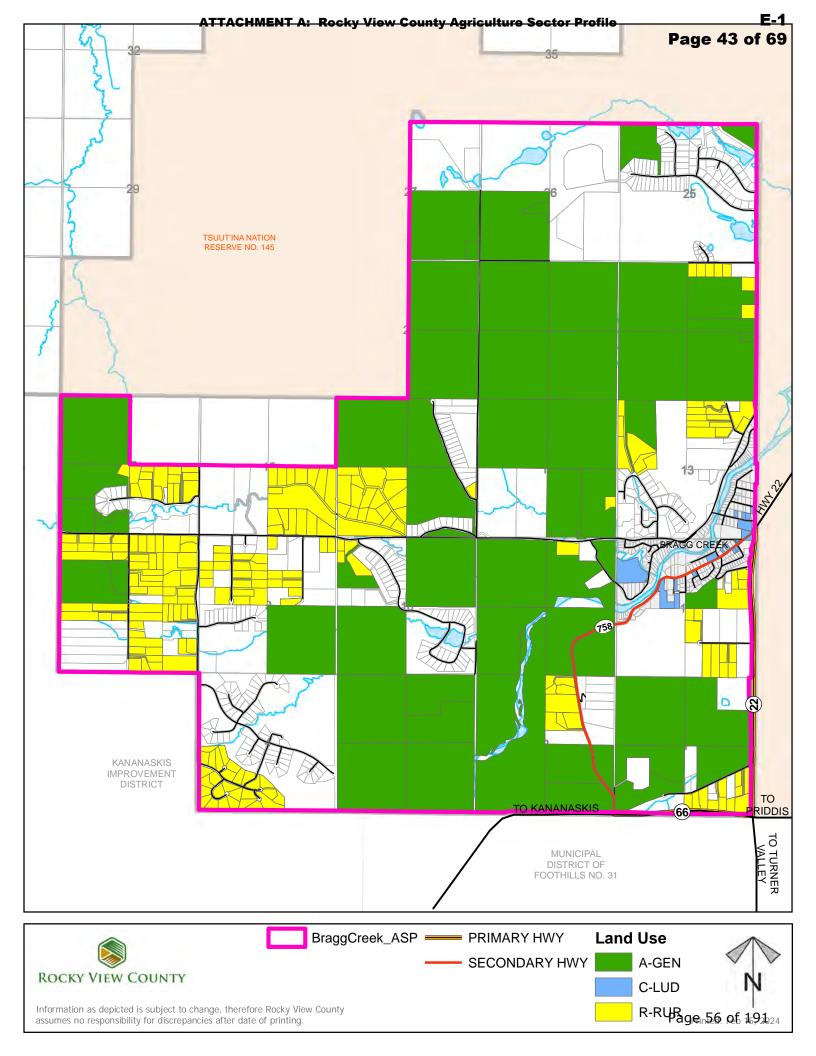
Appendix A: Rocky View County Maps

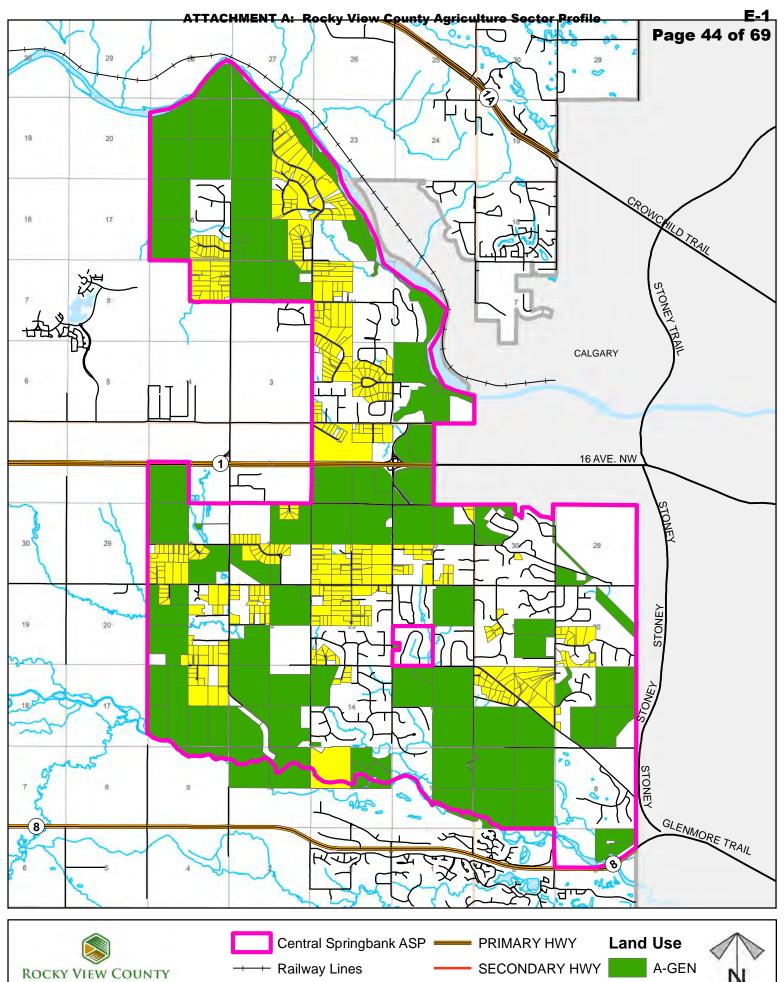




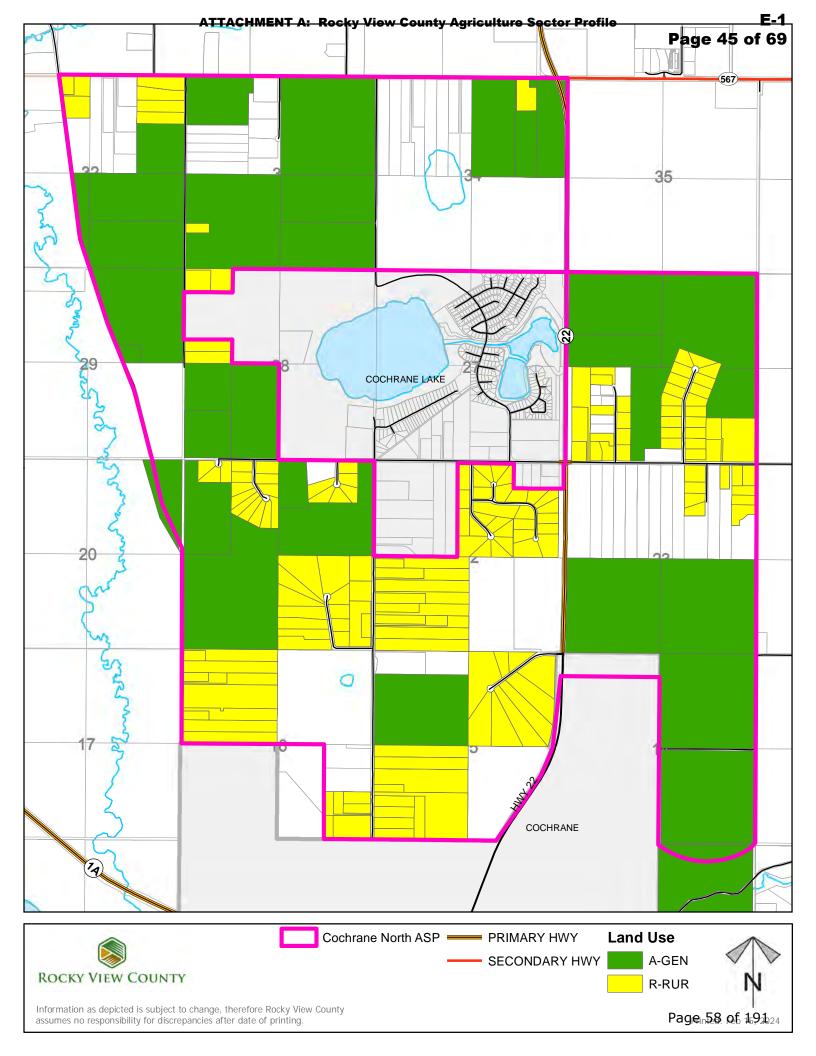


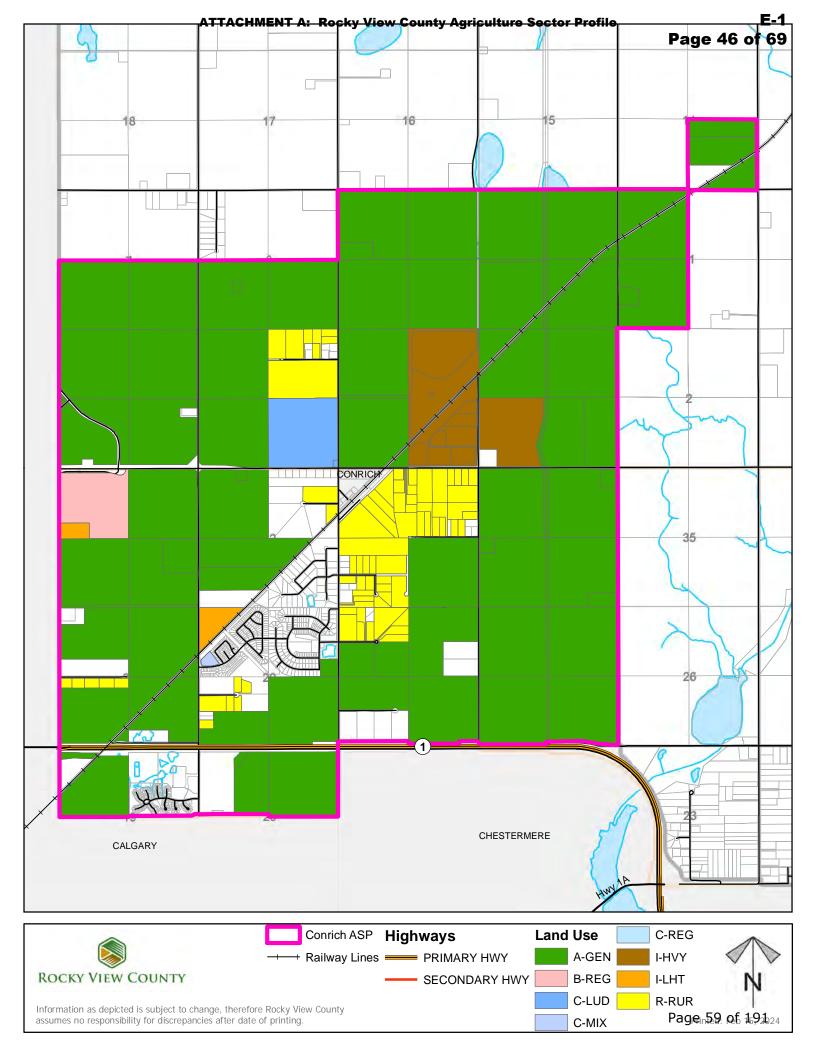


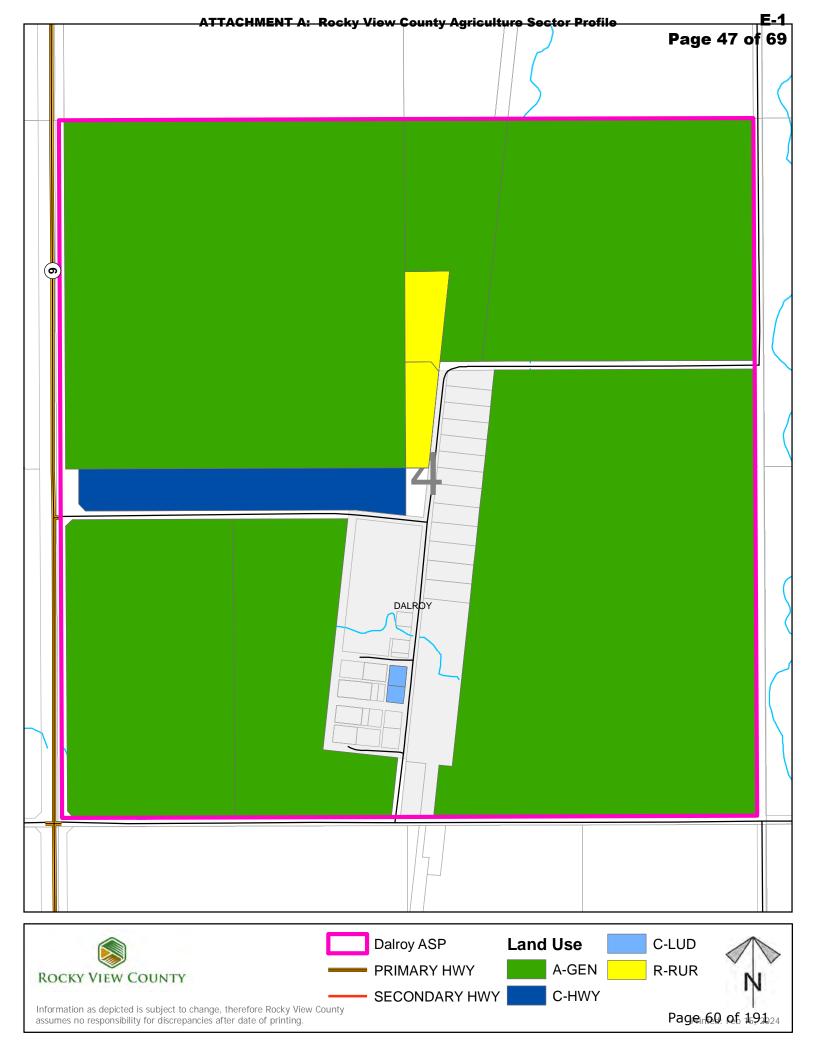


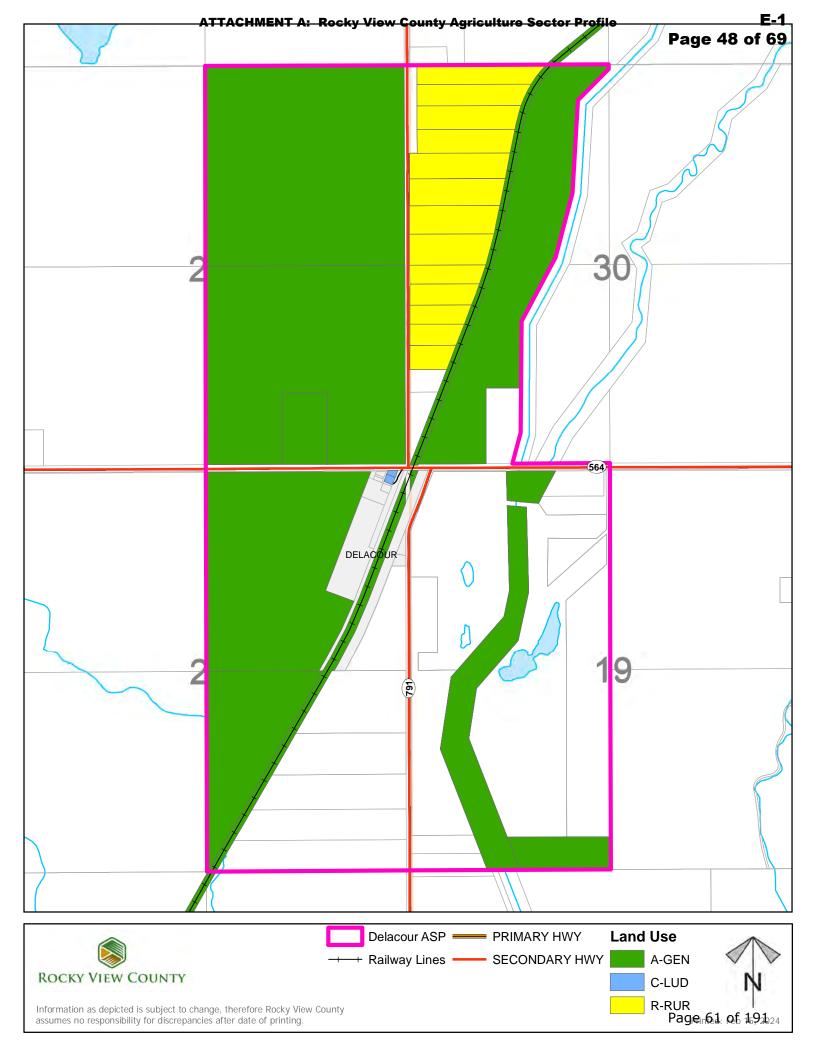


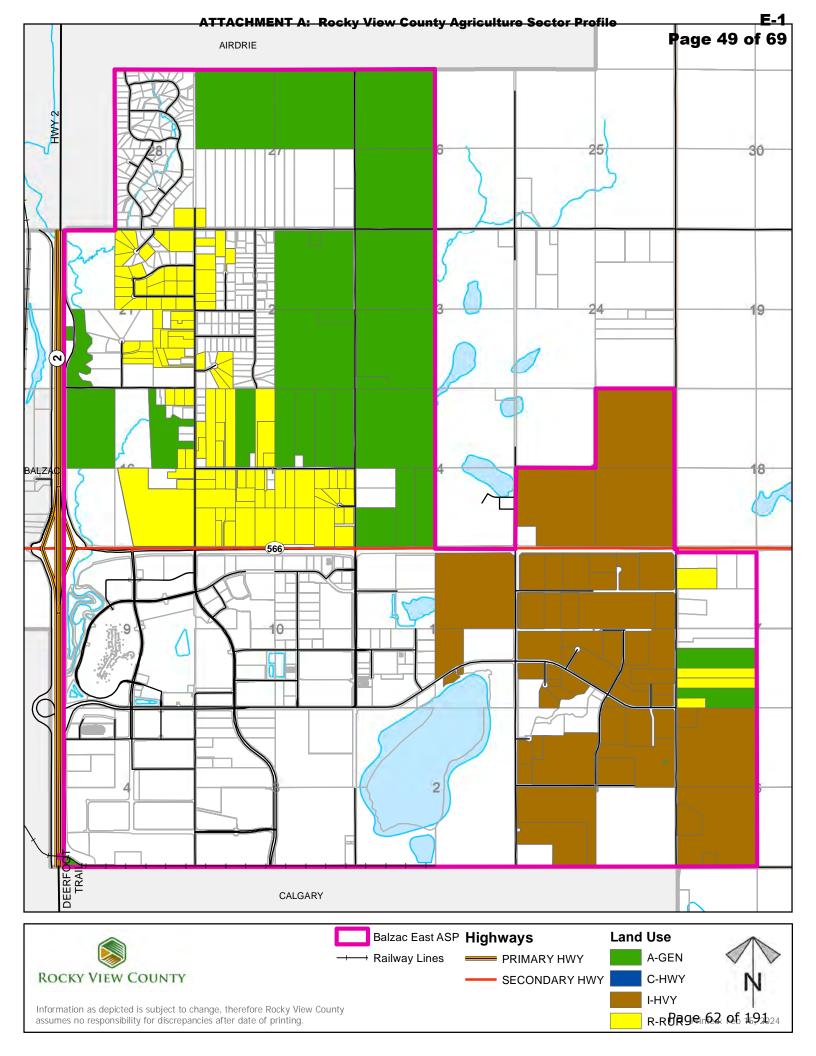


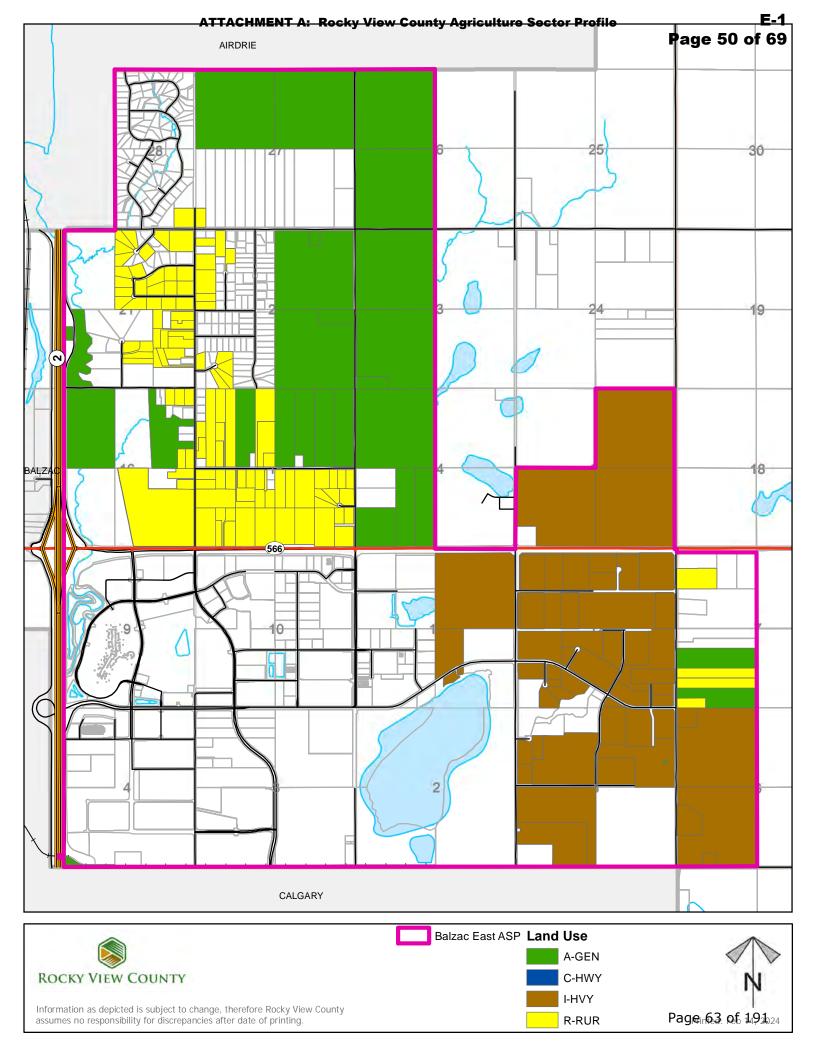


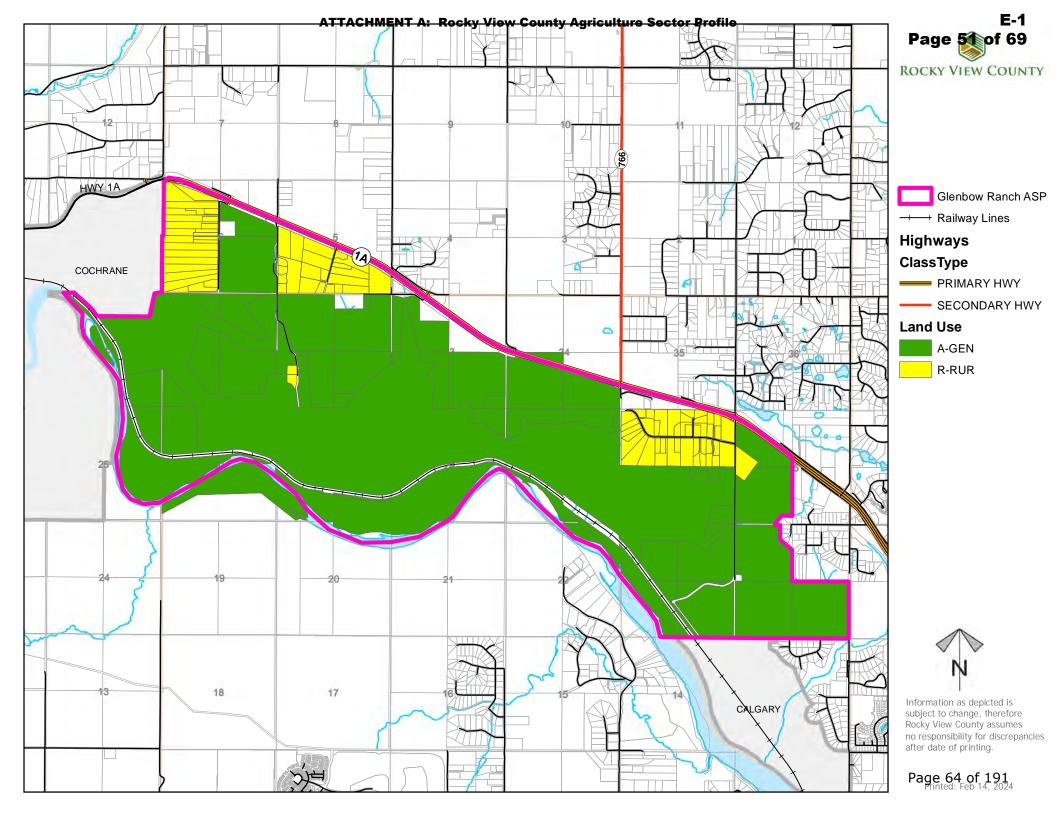


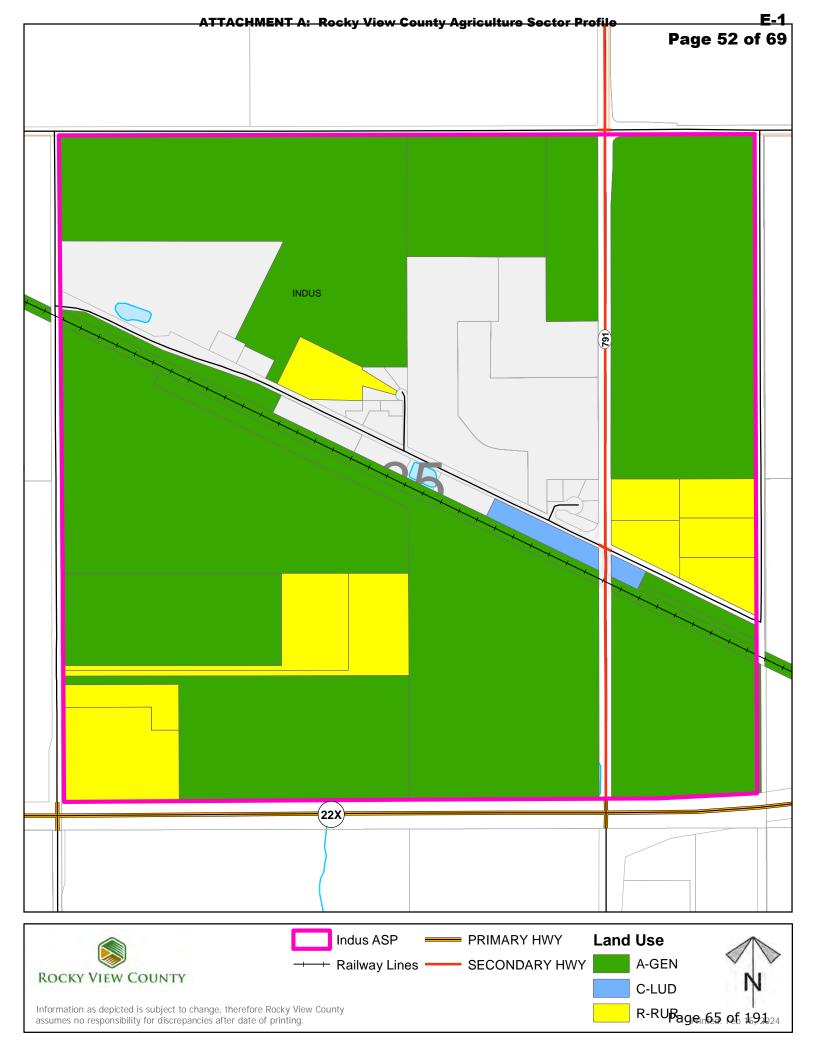


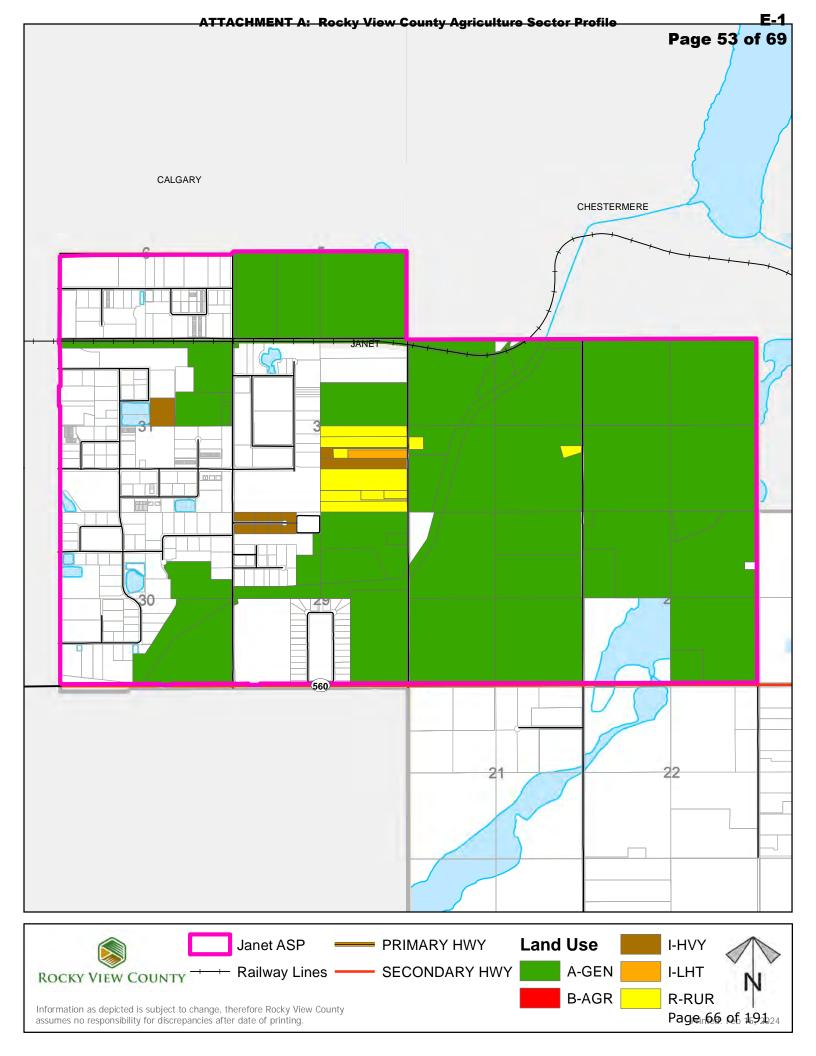


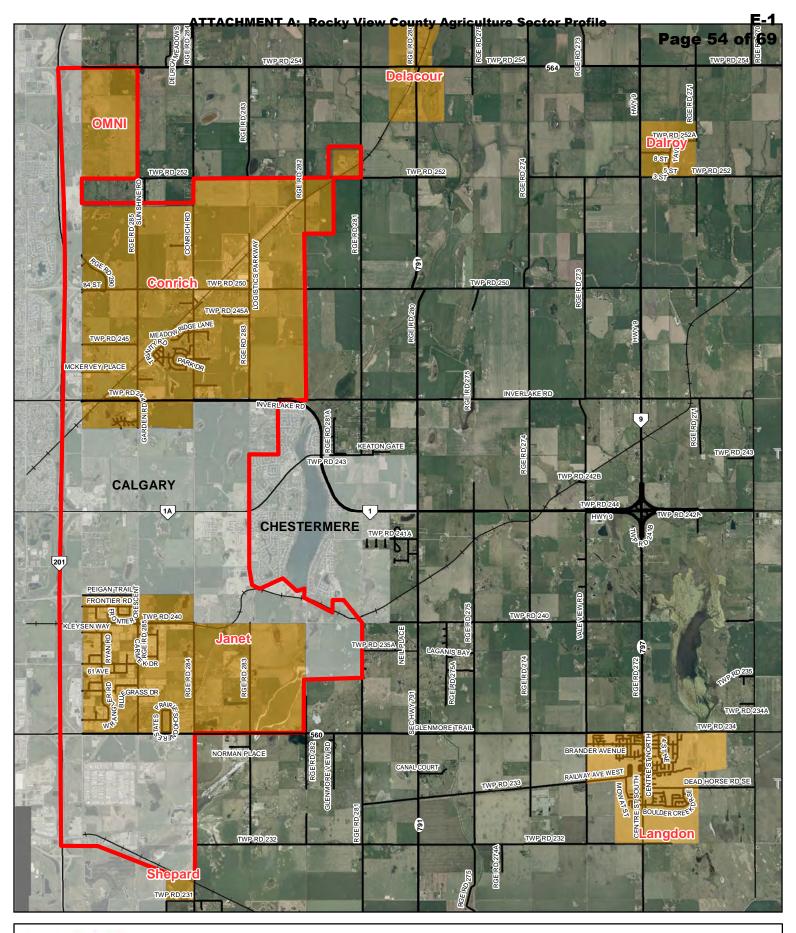




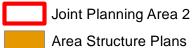


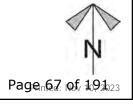


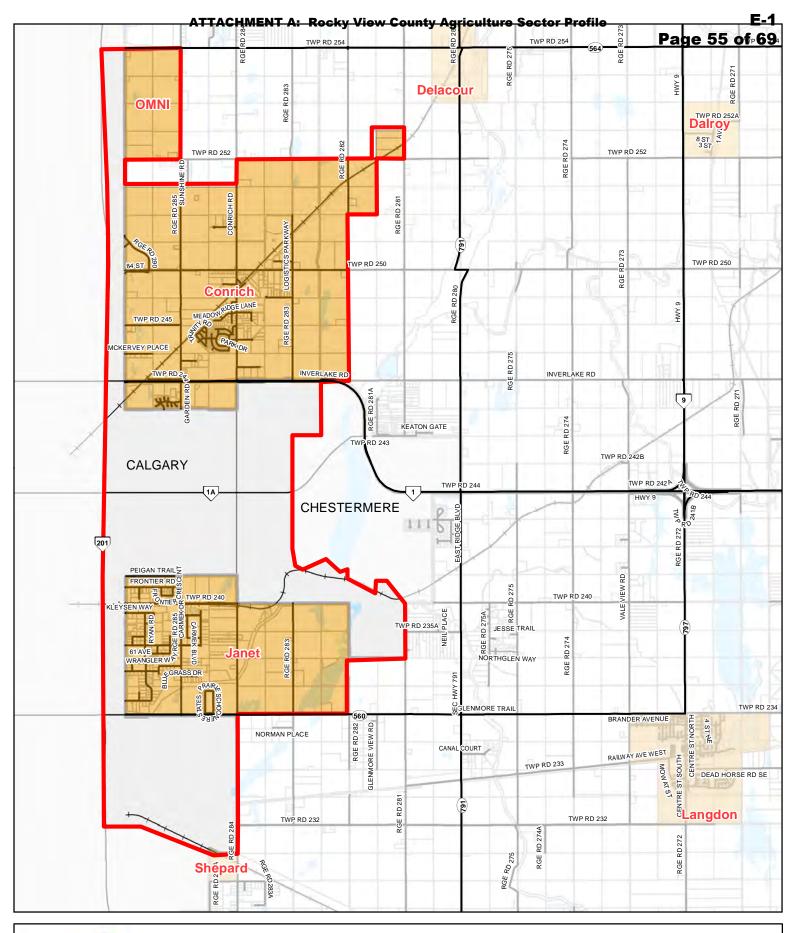




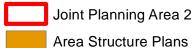


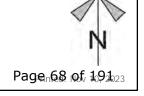


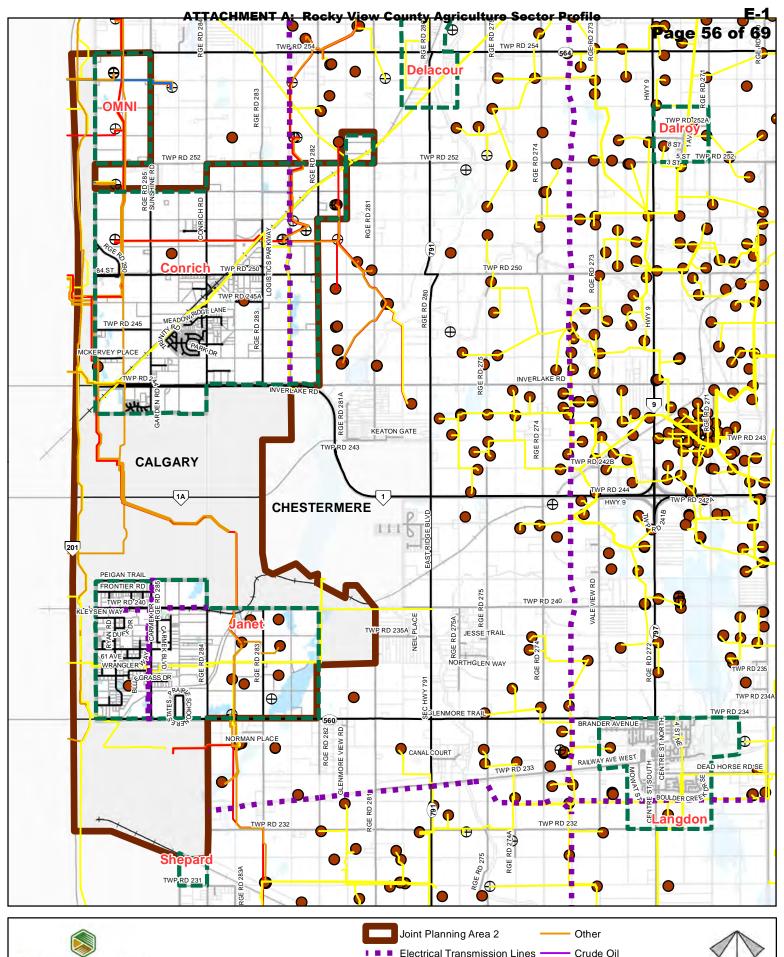




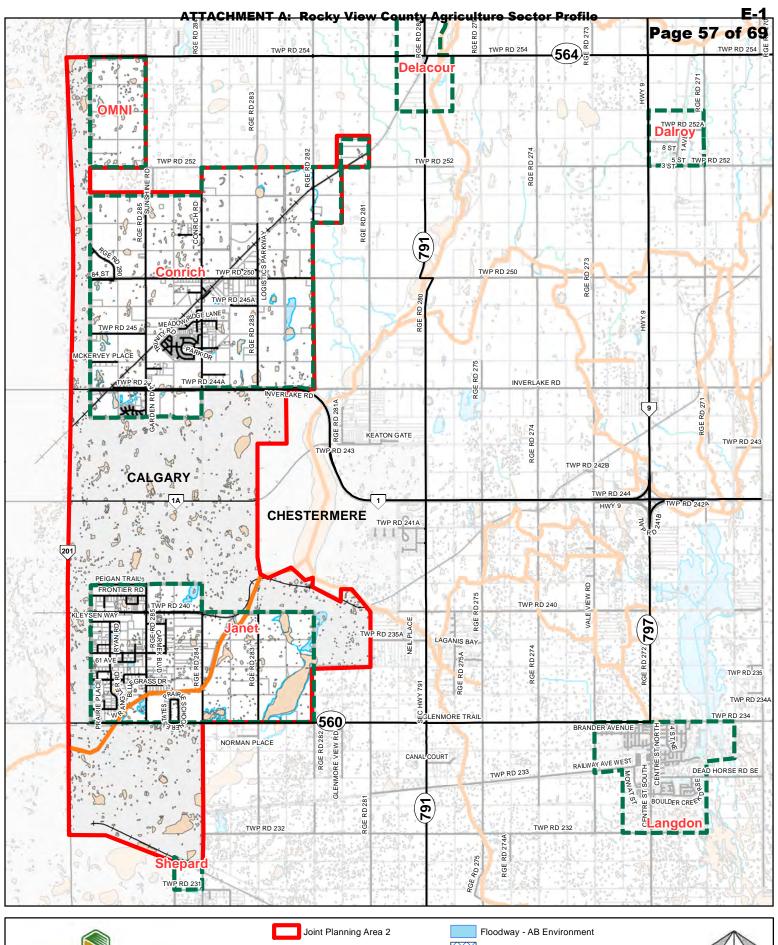


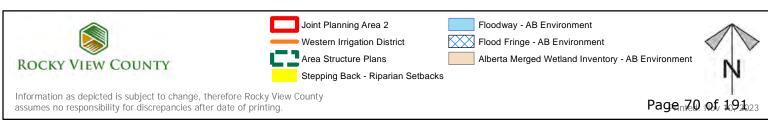


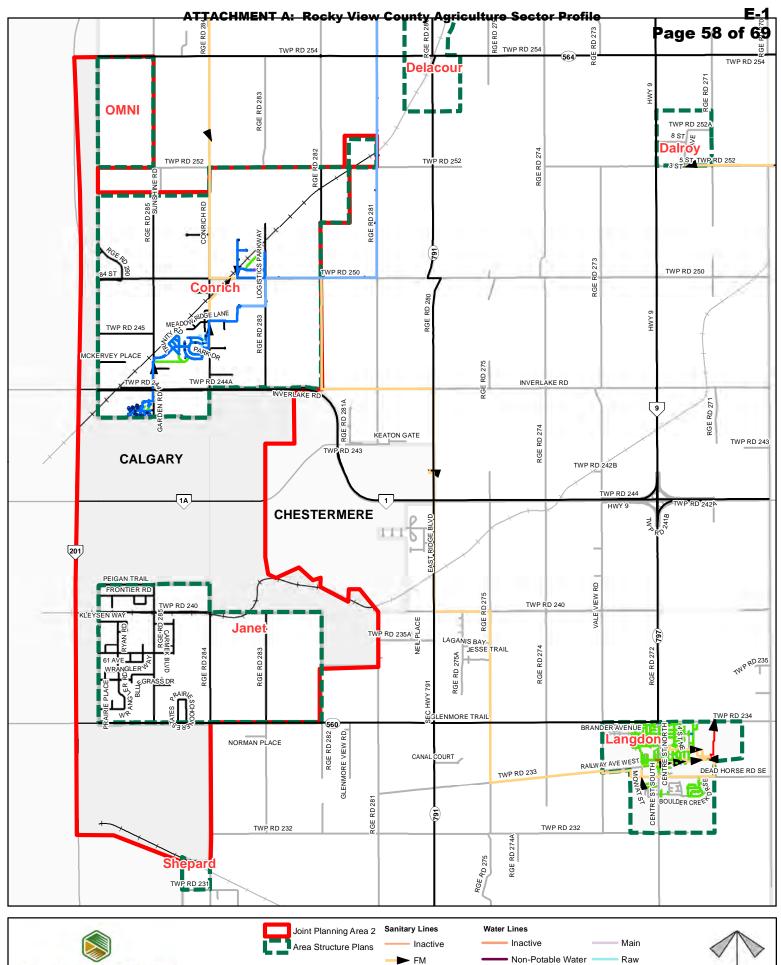




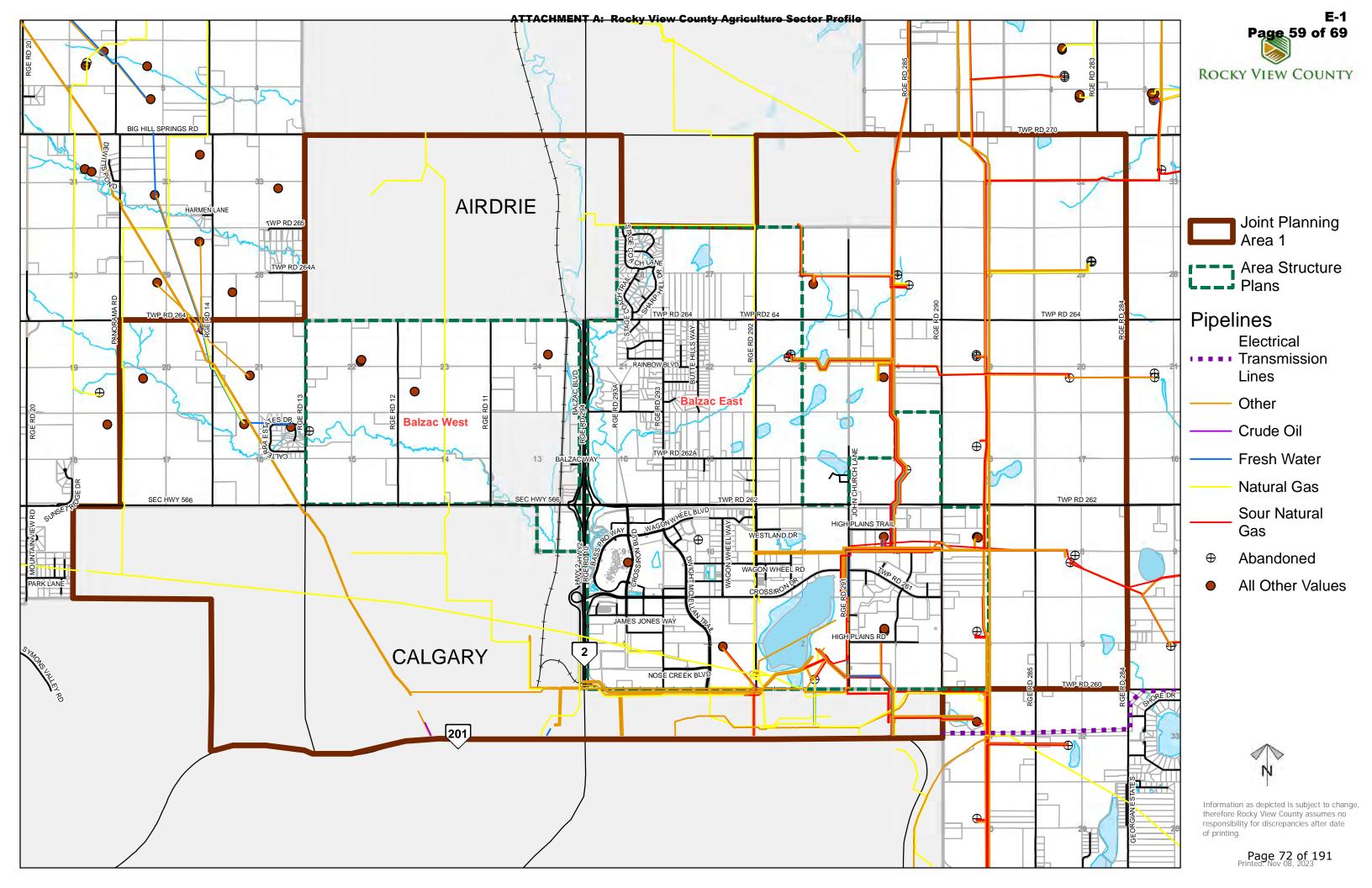


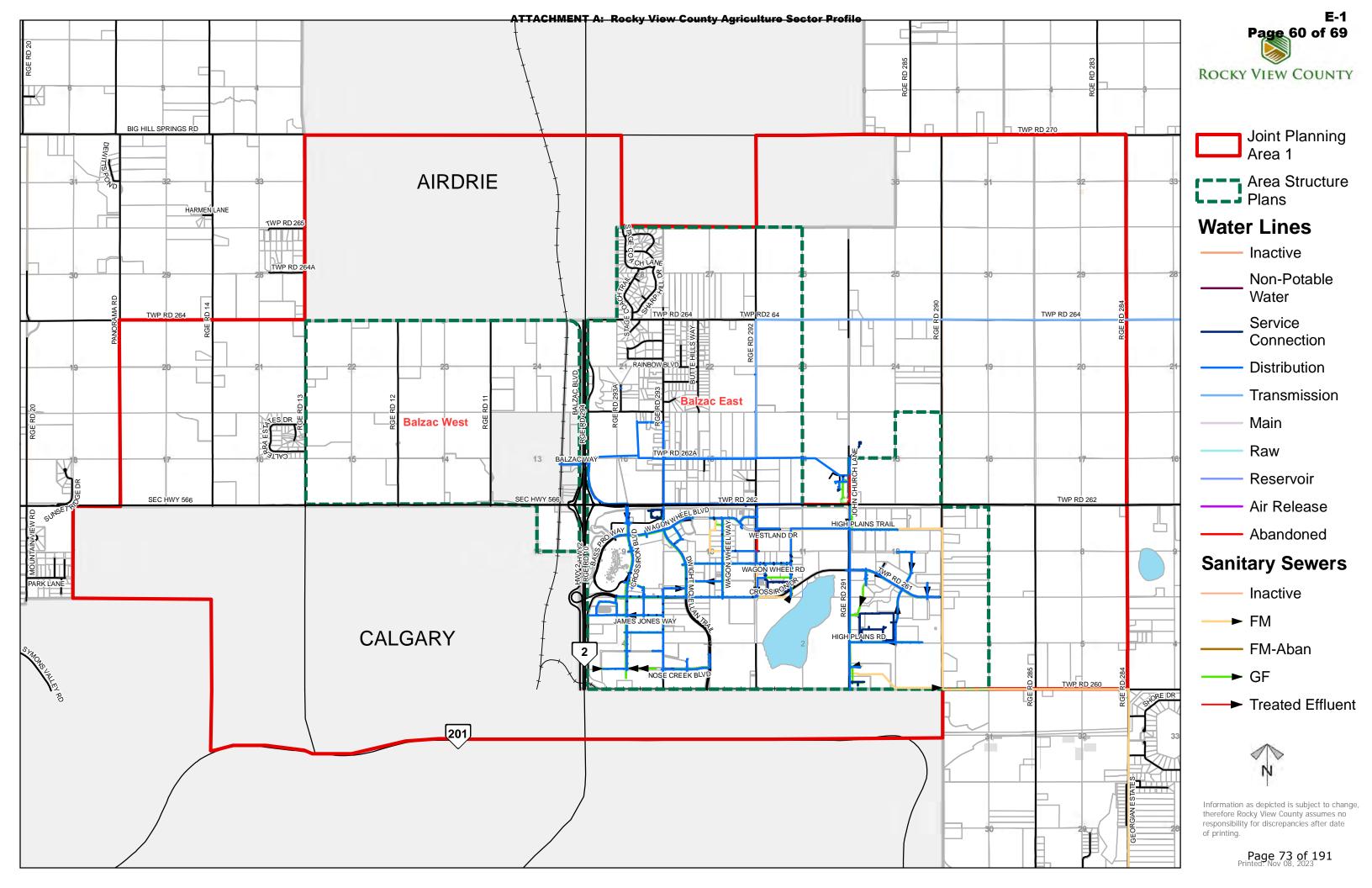


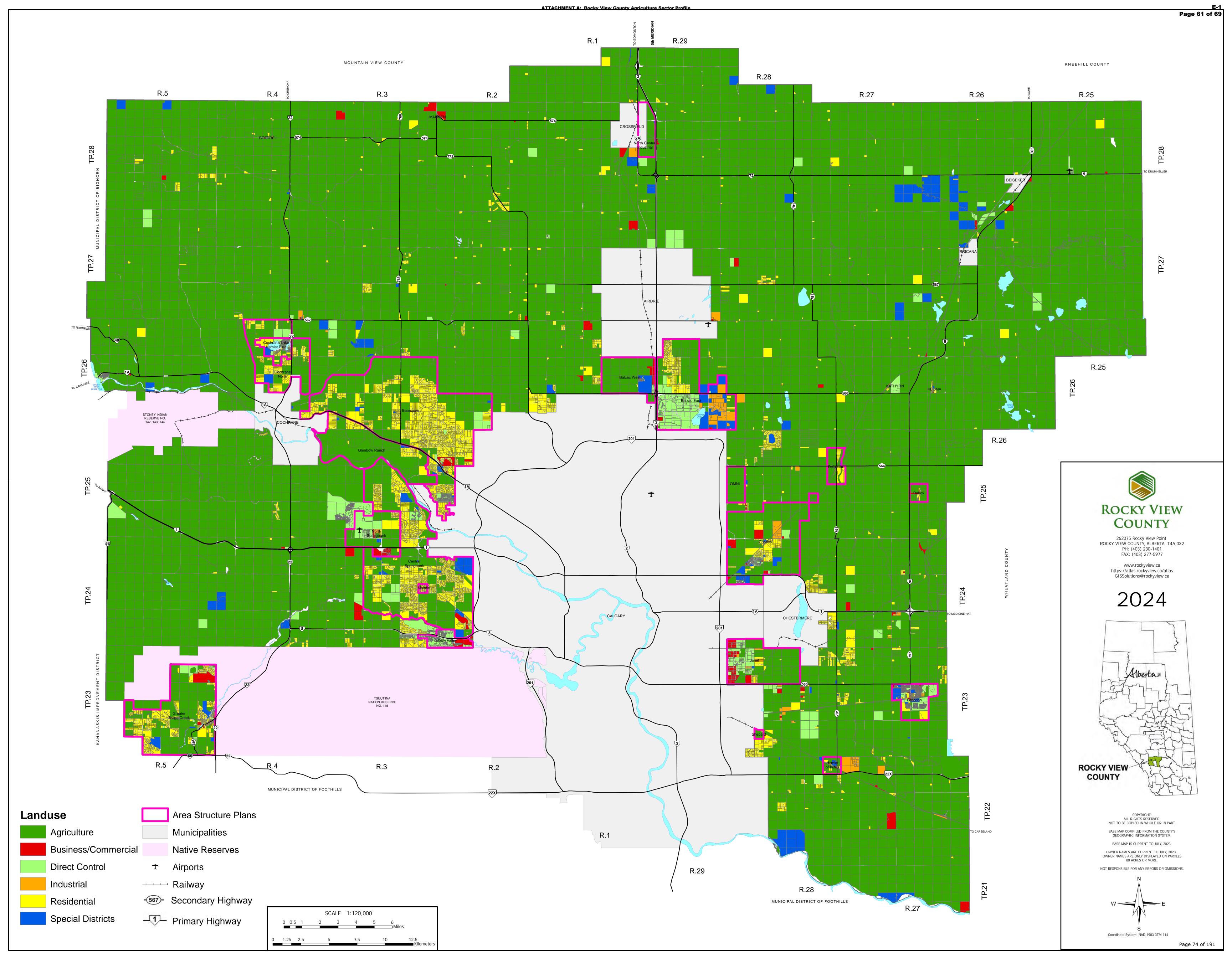


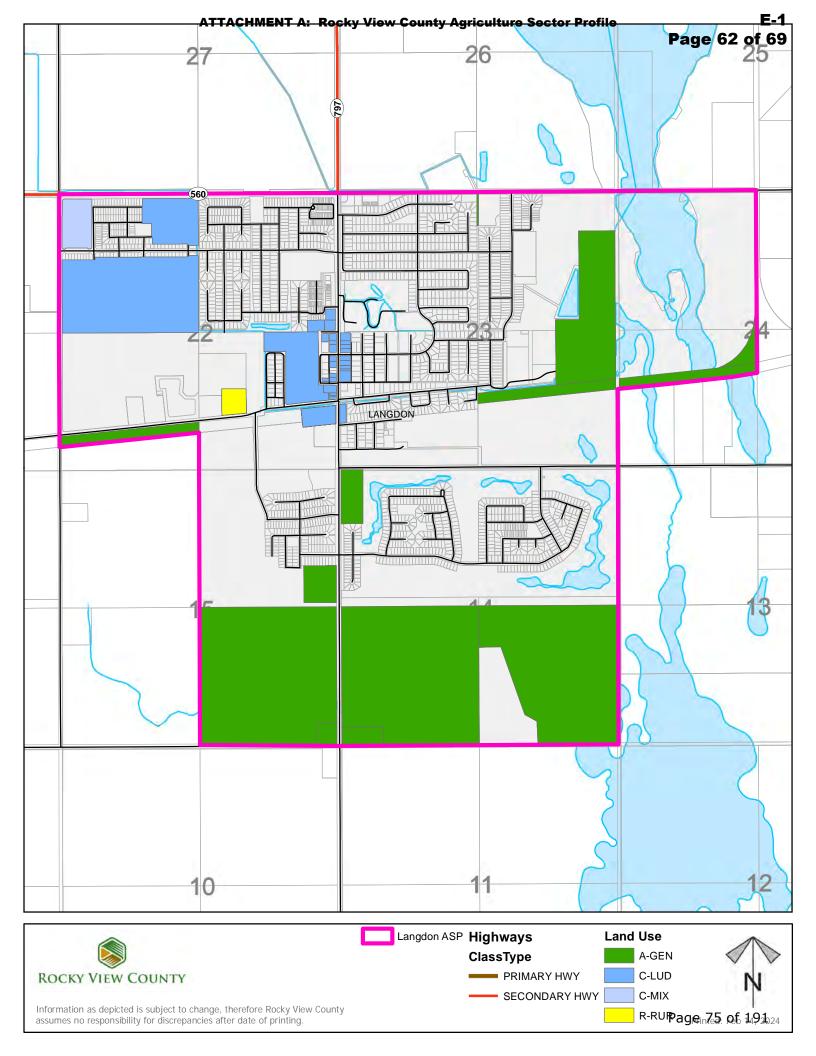


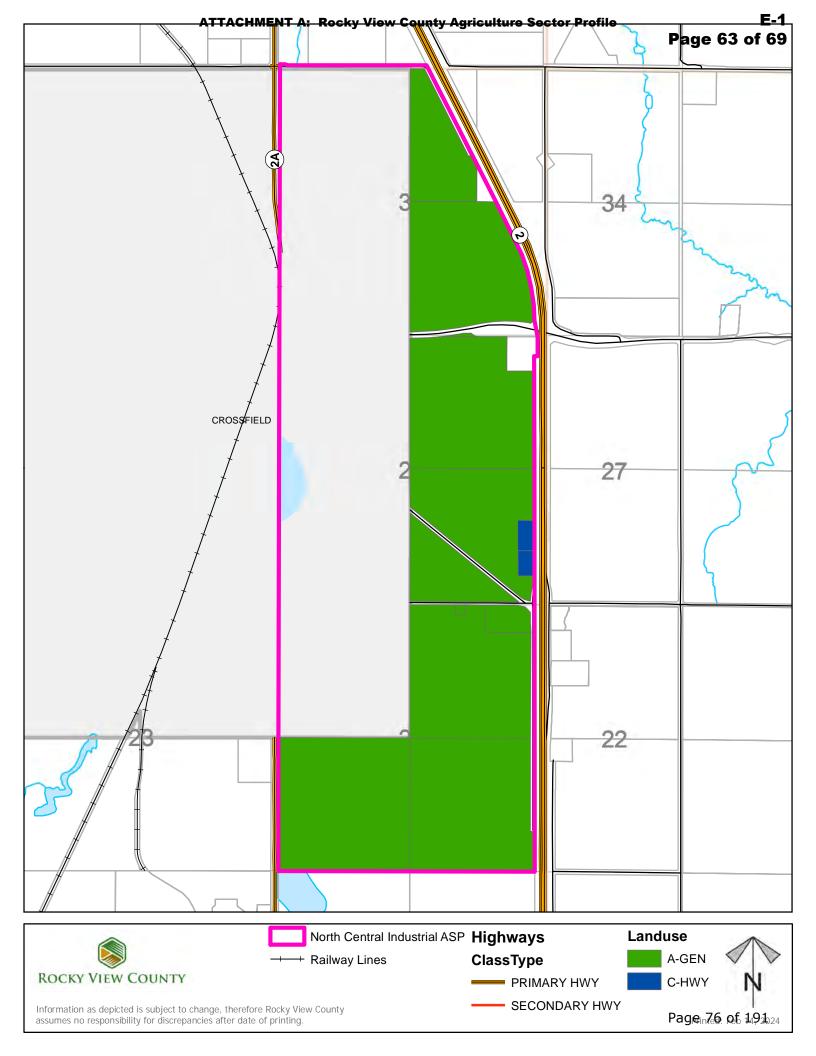


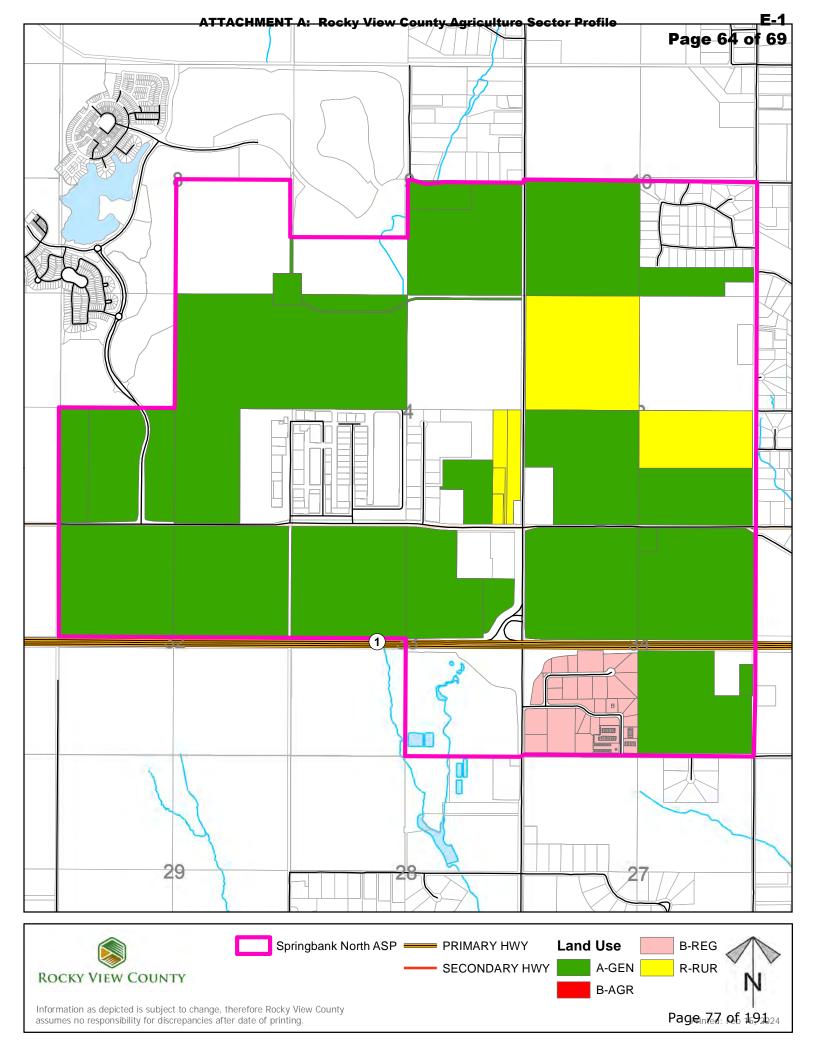






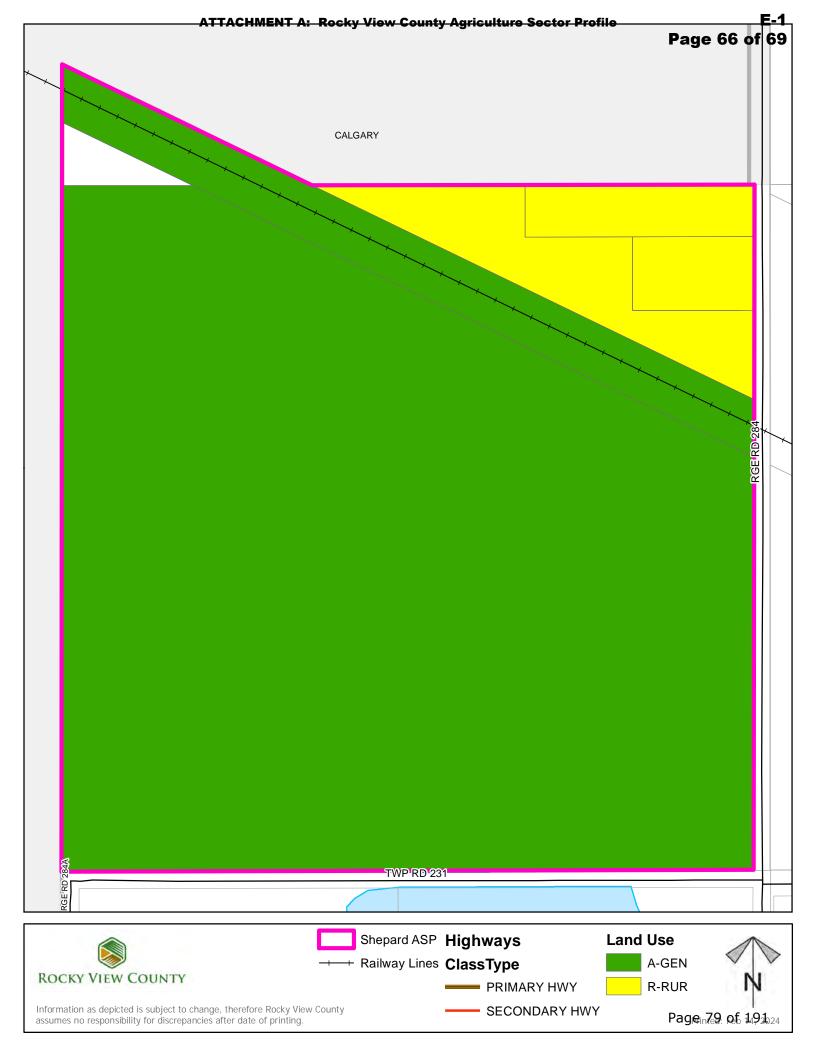


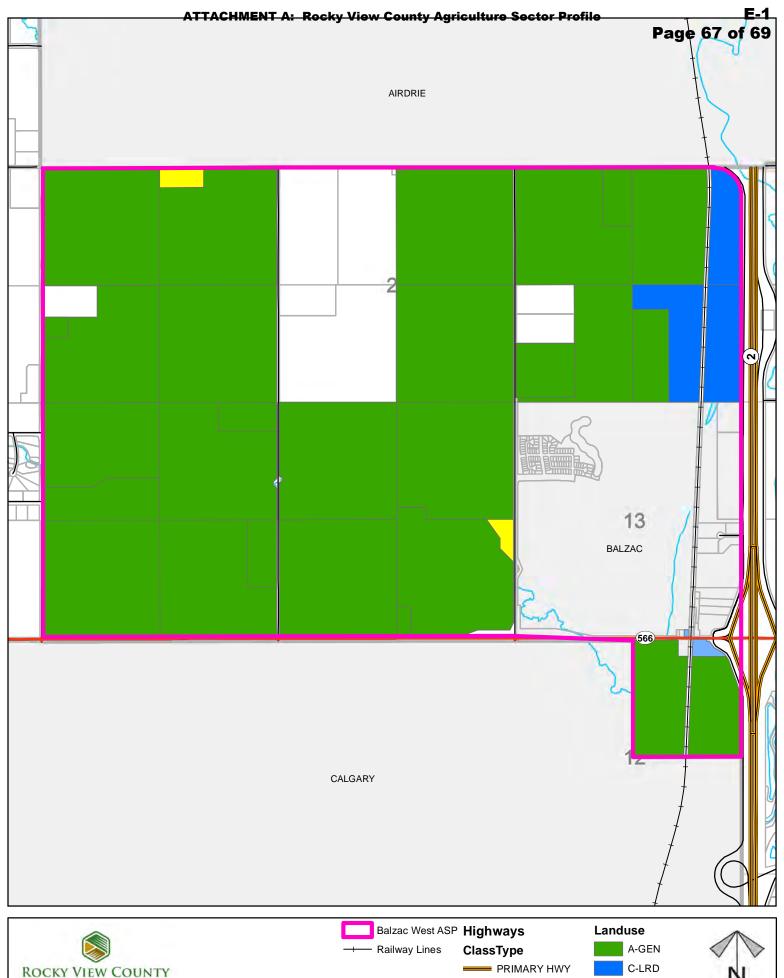


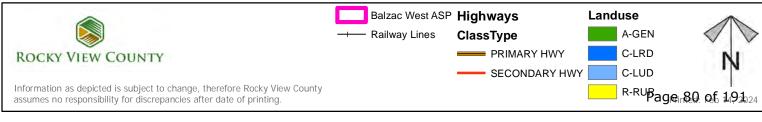








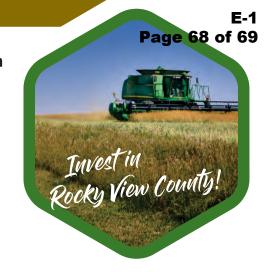




AGRICULTURE IN ROCKY VIEW COUNTY

Rocky View County's agriculture industry is flourishing through innovation and diversification.

Rocky View County is located in the southern portion of Alberta, the western portion of Canada. The County surrounds the City of Calgary, a market of 1.5 million, in a horseshoe-shape to the west, north and east.



2,405+ 1 Day 3,829 km² 90% 1.142 Of Land Base Farming Zoned for Operations Agriculture 44,568 512,091 Population Acres of Crop Land (2022)(2021)

Livestock Inventory, Census of Agriculture, 2021

Cattle	126,545
Pigs	23,190
Hens and Chickens	186,690
Sheep	4,354
Horses and Ponies	2,159

Cropland Area, Census of Agriculture, 2021

Barley	131,923 acres
Canola	134,094 acres
Wheat	123,864 acres
Alfalfa and alfalfa mixtures	56,036 acres
All other tame hay and fodder crops	34,009 acres
Dry Field Peas	13,695 acres

\$485,391,296

Rocky View County Advantages:

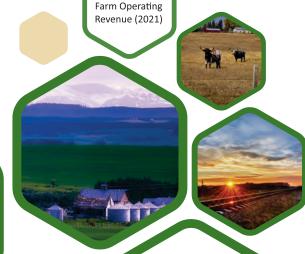
- A diverse and skilled agricultural business community.
- Varied growing season and soil types which support numerous agricultural production types.
- Access to a significant and affluent population.
- A well-developed infrastructure base including a regional transportation system and irrigation infrastructure.
- A favorable tax structure with a very competitive non-residential property tax rate and no municipal business tax.

Rocky View County's long-standing collaboration with the Western Irrigation District provides access to a dependable commercial and residential water source.

Local advantages for development in greenhouses and vertical farming operations include access to irrigation infrastructure and an overall energy advantage, which stems from competitive natural gas prices and supplies in the Calgary region.

Rocky View County is strategically located to capture some of the growing market potential in the local food sector.

Excellent access to efficient, cost-competitive movement of goods.



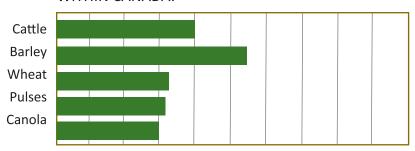
- The Trans-Canada Highway, Highway 2, and the CANAMEX corridor allow companies to reach millions of consumers within a one-day trip
- Intermodal facilities for two Class One railways
- Calgary International Airport



Invest in Rocky View County: AGRICULTURE

Alberta is a hub for sustainable food production and environmental stewardship.

> ALBERTA'S TOTAL FOOD INVENTORY CONTRIBUTION WITHIN CANADA:



10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Alberta's Agri-Processing **Investment Tax Credit** provides a 12% tax credit to companies investing at least \$10 million to build or expand agri-processing facilities

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\$16.1 Billion in agricultural exports (2022)



\$8.8 Billion in value-added products



\$7.3 Billion in primary agricultural products



22+ research & innovation facilities



21,000 Albertans hold degrees in agriculture operations and related science

Balzac Meat Processing Bison Transport Brandt Agriculture G3 Canada **Gordon Food Service** Harmony Beef Co. Ltd. **Highline Mushrooms** Parish & Heimbecker Ltd. Rocky Mountain Equipment Sobey's Distribution TK Ranch Natural Meats Viterra Walmart Distribution



LOOK WHO'S HERE!



ROCKY VIEW COUNTY

For more information contact:

Aaron Latimer, Manager, Economic Development 262075 Rocky View Point | Rocky View County | AB | T4A 0X2 Phone: 403-520-8195 | Cell: 403-835-0059 | alatimer@rockyview.ca | www.rockyview.ca

ATTACHMENT B: Rocky View County Agriculture Sector Profile - Summary









Subject:	4-H Report
Date:	April 25, 2024
Presenter:	Kristyn Lines
Department:	Agricultural & Environmental Services

REPORT SUMMARY

Ashley Morison on behalf of the Rockyview 4-H District will provide an overview of the enhancements 4-H clubs in the district have been able to achieve through sponsorship provided by Rocky View County. Amy Nielsen, 4-H member with the Airdrie Beef & Sheep club will be presenting to showcase one of the life skills 4-H provides to youth.

Administration's Recommendation

Administration recommends that the Agricultural Service Board receives the 4-H Report as information.

BACKGROUND

Implementation of recommendations from the Agriculture Master Plan resulted in financial support to 4-H clubs throughout the County. Funding was targeted to each of the eleven (11) clubs for advertising, meeting space rental, district events and for two annual scholarships in the district. In addition, workshops and judges for various events were offered, as well as links to the 4-H website.

DISCUSSION

Through the County's contribution, 4-H clubs have undertaken several enhancements. A representative of the Rockyview 4-H District will be providing an overview of how the County's funding is being utilized. As well, a Club Member will be providing the ASB with a presentation.

ALTERNATE DIRECTION

No alternate direction for the board's consideration.

ATTACHMENTS

No attachments.



Subject:	Agricultural Service Board Strategic Plan	
Date:	April 25, 2024	
Presenter:	Kristyn Lines	
Department:	Agricultural & Environmental Services	

REPORT SUMMARY

A five-year Agricultural Service Board (ASB) Strategic Plan was required by Alberta Agriculture & Irrigation to access grant funds for the 2020 – 2024 grant cycle. An annual review is encouraged to ensure that the Agricultural Service Board and Agricultural Services Section are meeting or working towards the goals outlined in the Strategic Plan.

Administration's Recommendation

Administration recommends that the Agricultural Service Board receives the Agricultural Service Board Strategic Plan Report for information.

BACKGROUND

The Agricultural Service Board initiated strategic planning in 1996 to identify the vision, mission, goals, strategies and actions of the Board and staff. Strategic planning has served as the basis for securing provincial funding and for clear understanding of what the ASB and Agricultural Services staff undertake over a three-year period.

DISCUSSION

Requirements for the Agricultural Service Board Strategic Plan include setting goals and developing strategies to deliver agri-environmental extension programming as well as basic programs supported by the on-going ASB grant funding.

The ASB Strategic Plan supports the following strategic objectives from Council:

- Create a Culture of Customer Service
- Expand Community Service Delivery
- Embrace Partnerships
- Strengthen our Financial Resiliency
- Guide the County's Growth Pattern

ALTERNATE DIRECTION

No alternate direction for the board's consideration.

ATTACHMENTS

Attachment A – 2020-2024 ASB Strategic Plan



2020 – 2024 Strategic Plan

Vision

Rocky View County is a community where agriculture is valued and respected. The agriculture industry is flourishing through innovation and diversification, and is promoted and recognized as vital to the County's social, economic and ecological integrity.

Mission

To promote and implement agricultural policies, programs and services which support a sustainable future for Rocky View residents.

Guiding Principles

- 1 Open and transparent communication,
- **2** Excellence in the provision of service,
- 3 Provide meaningful input to Council for effective, comprehensive policies,
- 4 Continuous evaluation and refocusing to achieve success, and
- 5 Support appropriate service levels outlined in County policies and budgets.

Goals

- 1 Promote and develop agricultural policies to meet Rocky View County's needs.
- 2 Provide diverse educational opportunities for the wide range of Rocky View residents.
- As mandated by legislation, prevent and control agricultural pests and diseases, weeds, reportable diseases and minimize soil degradation.
- **4** Enhance watershed health and environmental sustainability by encouraging responsible stewardship of air, land, biodiversity and water resources.
- Provide producers access to the Sustainable Canadian Agricultural Partnership (SCAP) program, the Environmental Farm Plan program, Alternative Land Use Services (ALUS) and other government initiatives, which facilitate adoption of best management practices (BMPs).
- 6 Implement Agriculture Master Plan recommendations within County processes.

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Strategies to Implement Goals

Goal 1: Promote and develop agricultural policies to meet Rocky View County's needs.

Strategies:

- 1 Provide policy input to Council to reflect agriculture's value in Rocky View.
- **2** Provide board members with appropriate training for effective input.

Goal 2: Provide diverse educational opportunities for the wide range of Rocky View County residents.

Strategies:

- Focus on agricultural producers provide leading-edge information on crop production, livestock management, range & pasture management, economic viability, environmental stewardship (soil, water, air, alternate energy, climate change, waste reduction, recycling & biodiversity), farm succession, new ventures & diversification options.
- Focus on acreage owners provide information on the value of agriculture, basic agricultural principles & practices, neighbour relations (trespass, odours, fences, roadway use), environmental stewardship on small parcels (water & drainage, septic systems, horses & other livestock, biodiversity, recycling), local food products, municipal bylaws & regulations.
- Focus on the development industry (land, energy and utilities), provide information on land management & stewardship (weeds, drainage, topsoil removal, over-grazing), ag-related provincial and municipal regulations and appropriate landscaping standards.
- 4 Provide information to the general public in the Rocky View region:
 - **a** The value and contributions of agriculture to the region including food, jobs, trade, economics, environment (soil, water, air, biodiversity, open space) and quality of life;
 - **b** The challenges and threats to agriculture in the region including loss of urban connection to agriculture, increasing food production costs, conversion of the land to other uses, restrictions on access to water and production necessities.
- Focus on Administration and Council provide information on the value of agriculture within Rocky View County, and the role, duties & programs of the Agricultural Service Board & Agricultural Services staff.
- Review the needs identified by our various types of farm clients and ensure the Agricultural Strategic Plan fills those needs.

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- 7 Target environmental programs to meet the identified client needs in the County.
- 8 Enhance the information base for the County website to support the environmental programming.
- 9 Partner with others, including but not limited to: Alberta Agriculture and Irrigation, ALUS Canada, neighbouring municipalities, Foothills Forage Association, Cows and Fish, Red-Bow Agricultural Partnership (RAP), local 4-H clubs, other County departments, the Association of Alberta Agricultural Fieldmen, and agricultural industry representatives.
- Goal 3: As mandated by legislation, prevent and control agricultural pests and diseases, weeds, reportable diseases and minimize soil degradation.

Strategies:

- 1 Maintain a strong preventative approach (early detection / rapid response EDRR), including detailed monitoring, inventories, tracking, control equipment, qualified & educated manpower and access to information.
- 2 Maintain and implement programs that support this goal.
- 3 Continuously upgrade equipment, systems, data collection, and ensure staff received the training to maintain operations.
- 4 Partner with other jurisdictions & agencies to enhance prevention and control operations.
- 5 Coordinate with other Rocky View County departments to increase efficiencies in prevention & control.
- Goal 4: Enhance watershed health and environmental sustainability by encouraging responsible stewardship of air, land, biodiversity and water resources.

Strategies:

- 1 Maintain strong educational role in rural water management.
- 2 Provide expert advice to producers on implementation of BMPs to enhance watershed health.
- Augment recycling of Ag plastics and other agricultural wastes through cooperation with the Solid Waste and Recycling department.
- 4 Partner with watershed stewardship groups, government, municipalities and NGOs to implement municipal roles under approved watershed / airshed management plans, county policies / standards and provincial initiatives.

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Goal 5: Assist Producers in the completion of EFP's and in accessing SCAP funding and other government initiatives that facilitate the adoption of BMPs.

Strategies:

- 1 Maintain trained Ag Services staff to assist producers in accessing these programs.
- 2 Host workshops and offer one-on-one consultations for producers to assist in obtaining these services.

Goal 6: Implement Agriculture Master Plan recommendations within County processes.

Strategies:

- 1 Identify BMPs to include in incentive programs on an annual basis.
- **2** Provide municipal initiatives to encourage BMP adoption.



Approval Date • November 25, 2020

Replaces • n/a

Lead Role • County Manager

Committee Classification

• Agricultural Service Board

Last Review Date

• May 26, 2022

Next Review Date



Subject:	Livestock Emergency Preparedness Plan	
Date:	April 25, 2024	
Presenter:	Kristyn Lines	
Department:	Agricultural & Environmental Services	

REPORT SUMMARY

The Livestock Emergency Preparedness Plan is to improve the ability to prepare for, detect and respond effectively to large-scale emergency situations that cause large mortalities or other significant impacts on livestock health and welfare in the agricultural sector.

ADMINISTRATION'S RECOMMENDATION

Administration recommends that the Agricultural Service Board receives the Livestock Emergency Preparedness Plan as information.

BACKGROUND

In 2017, Rocky View County Agricultural Services in partnership with Wheatland County, and in conjunction with RVC Emergency Management Agency, embarked on creating a Livestock Emergency Preparedness Plan to address the gap of livestock response and rescue within the County. Rocky View County estimates to have 126,545 cattle and calves, 4, 354 sheep and has livestock production of beef, dairy, horse (pony), hogs and poultry. In 2018, Council approved the purchase of a livestock emergency response trailer to support the Livestock Emergency Response Planning efforts.

DISCUSSION

The Rocky View County Livestock Emergency Response Guide and the Disaster Response for Livestock have been attached for your reference. Additionally, a Farm Emergency Plan as been created for producers to use that outlines the steps to take during an emergency to ensure the health and safety of farm personnel as well as the animals.

ALTERNATE DIRECTION

No alternate direction for the board's consideration.

ATTACHMENTS

Attachment A – Disaster Response for Livestock

Attachment B - Disaster Response for Livestock - Response Guide

Attachment C – Rocky View County Farm Emergency Plan



DISASTER RESPONSE FOR LIVESTOCK







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Publisher: Rocky View County

Author: Jennifer Woods, M.Sc., J. Woods Livestock Services, Blackie, AB

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1. Introduction and Background

Agriculture in Rocky View County

Livestock production of beef, sheep/goats, poultry and horse/pony are major industries within Rocky View County. There are over 166,000 cattle and calves in the county. A variety of purebred cattle breeders, commercial cow-calf production enterprises and a cattle feedlot adds up to a very broad and integrated beef industry.

Sheep/goat production enterprises are comprised of purebred and commercial breeders with over 7,800 sheep/goats in the county. Poultry production includes a number of different species (chickens, turkeys, and 'other' birds), there are over 352,700 birds. Horse and pony operations include approximately 6,600 animals. Other livestock types found within the county are bison, elk, alpacas and a few small hog operations.

Rocky View County recognizes that emergency plans should:

- 1. **Be localized** ensure all resources are local and easily accessible.
- 2. **Be flexible** every emergency event or disaster is different.
- 3. **Be simple to implement** don't overcomplicate or compromise the need to react quickly and efficiently.

Rocky View County has incorporated livestock into our disaster plan to ensure that our municipality is able to assist producers in an emergency event. This program is based on inventory of our livestock population, identification of the vulnerabilities, awareness of the risks and the needs of such animals and their owners during an emergency event or disaster.

2. Livestock Use Definitions

Auction Mart	A facility that sells livestock, most commonly cattle, sheep, horses, goats and / or buffalo.		
Avian	An animal of the bird/poultry group including chickens, turkeys and ducks.		
Boarding Stables	A facility that rent out stalls, paddocks or pasture space for horses.		
Bovine	An animal of the cattle group that also includes bison and buffalo.		
Broiler Barn	A facility where chickens are fed for meat production.		
Caprine	An animal of the goat group.		
Confined Feeding	A CFO is defined as a fenced or enclosed land or buildings where livestock are		
Operation (CFO)	confined for the purposes of growing, sustaining, finishing or breeding by means other than grazing.		
Cow Calf Operation	A farm that raises cattle for breeding purposes.		
Equine	Equine refers to horses, ponies, miniature horses, donkeys and mules.		
Farrow to Finish	A facility that raises pigs from birth through fattening or for breeding.		
Feedlot	A facility where cattle are fed and fattened.		
Finishing Barn A facility where pigs are fed and fattened.			
Hutterite Colony	The Hutterites are a communal people, living on hundreds of scattered bruderhöfe or colonies throughout the prairies. On average, fifteen families live and work on the typical Hutterite colony, where they farm, raise livestock and produce manufactured goods for sustenance.		
Layer Barn	A facility that raises chickens for the production of eggs.		
Liner	A commercial transport vehicle utilized to transport livestock.		
Ovine	An animal of the sheep group.		
Porcine	An animal of the pig group.		

3. Livestock and Related Agencies

AGENCY	DESCRIPTION	CONTACT
Alberta Agriculture	Responsible for the policies, legislation,	Toll-free in Alberta
and Irrigation	regulations and services necessary for	310-FARM (3276)
	Alberta's agriculture, food and forest	www.agric.gov.ab.ca
	sectors to grow, prosper and diversify;	
	inspires public confidence in wildfire and	
	forest management and the quality and	
	safety of food; supports environmentally	
	sustainable resource management	
	practices; and leads collaboration that	
	enables safe and resilient rural	
	communities.	
	Office of the Chief Provincial Veterinarian	Dr. Keith Lehman
	Provides scientific and veterinary leadership	Chief Provincial Veterinarian
	in developing animal health policy and in	780-427-3448
	working to prevent and respond to animal	
	health concerns.	0.11.11.6
	Alberta Fish and Wildlife	Call toll free in Alberta
	Protect, preserve and manage Alberta's fish	310-0000
	and wildlife and to protect the lives and	403-297-6423 (Calgary)
	property of Albertans.	403-932-2388 (Cochrane)
	Investigative Duranh	403-934-3422 (Strathmore)
	Investigative Branch	Senior Investigator Ed Turco
		403 948-3999
Alberta Beef	A provincial organization representing beef	403-275-4400
Producers	producers.	www.albertabeef.org
Alberta Bison	A provincial organization representing	780-955-1995
Producers	bison/buffalo producers.	www.bisoncentre.com
Alberta Cattle	A provincial organization representing cattle	403-250-2509
Feeders' Association	feeders (feedlot owners).	www.cattlefeeders.ca
Alberta Chicken	A provincial organization representing	780-488-2125
Producers	broiler chicken producers.	www.chicken.ab.ca
Alberta Elk	A provincial organization representing elk	780-980-7582
Producers	producers.	www.albertaelkcommission.com
Alberta Equestrian	A provincial organization representing	403-253-4411
Federation (AEF)	equine owners.	www.albertaequestrian.com
Alberta Lamb	A provincial organization representing	403-948-8533
Producers	sheep producers.	www.ablamb.ca

Alberta Milk	A provincial organization representing dairy	780-453-5942
	producers.	albertamilk.com
Alberta Pork	A provincial organization representing pig 780-474-8288	
	producers.	www.albertapork.com
Alberta SPCA	The Alberta SPCA provide animal protection	780-447-3600
	services and enforce the Animal Protection	To report an animal in distress
	Act. Peace Officers complete investigations	call 1-800-455-9003
	and inspections. They are empowered to	www.albertaspca.org
	inspect any non-residential premises where	
	animals are kept for sale, hire or exhibition	
	and any vehicle used to transport animals.	
Alberta Turkey	A provincial organization representing	780-465-5755
Producers	turkey producers.	www.albertaturkey.com
Alberta Veterinary	The provincial organization representing	780-489-5007
Medical Association	veterinarians.	www.abvma.ca
Canadian Food	CFIA is responsible for the administration	800-442-2342
Inspection Agency	and enforcement of the Health of Animals	613-773-2342
(CFIA)	Act which oversees the health and welfare	www.inspection.gc.ca
of animals in Canada, including disease		
	outbreak and the transport of animals.	
Canadian Livestock	CLT provides training to livestock	519-829-2242
Transport (CLT)	transporters across Canada. They house a	www.livestocktransport.ca
	database of over 1,500 trained livestock	
	haulers and transporters.	
Egg Farmers of	A provincial organization representing egg	403-250-1197
Alberta	farmers.	eggs.ab.ca
Livestock	Provides inspection services to livestock	403-509-2088
Identification	producers in Alberta. LIS is the delegated	Harmony Beef 587-230-2994
Services Ltd. (LIS)	authority by the AAF for the Livestock	www.lis-alberta.com
	Identification and Commerce Act and the	
	Stray Animals Act.	
Royal Canadian	Alberta has two members of the	Northern Alberta
Mounted Police	detachment assigned to the investigation of	Andrew Grainger
(RCMP)	crimes involving livestock. They work in	Office 780-509-3293
	collaboration with LIS.	Cell 780-509-3293
		Southern Alberta
		Lindsay Anderson
		Office 403-420-4972
		Cell 403-701-1462

4. Livestock Industry Hazards and Risk Identification

The following is a list of the possible hazards (natural and human caused) that could have an impact on the livestock industry in Rocky View County.

Natural Occurring Hazards - Hazards that occur without influence of people	 Flood or flash flood Drought Fire (range, wild land) Winter storm / blizzard Tornado Extreme temperatures Thunder storm – lightning strikes Disease outbreak (all federal and provincial disease outbreaks will be overseen by either federal or provincial governments. Municipalities may be asked to assist under the guidance of the governing bodies. Any suspected disease outbreaks must be immediately reported.)
Human Caused Emergencies	 Hazardous material spill or release Explosion Building fire Transportation incident Building or structure collapse Power outage Water contamination
Livestock Welfare Emergencies	Animals seized due to neglectLoose livestock

HAZARDS	ENTITIES IMPACTED	IMPACT ON ANIMAL	POTENTIAL IMPACT
		HEALTH AND WELFARE	ON ANIMAL
Tornado	All entities in	Moderate	Injury, loose animals, access to
	immediate area		feed and water, housing
Building Collapse	Livestock housed in	Catastrophic	Injury, housing, feed and
	building		water, trapped
Flooding	Livestock on flood	Catastrophic	Drowning, hypothermia
	plain		
Thunderstorm	All entities in	Moderate	Death, injury, burns
Lightning	immediate area		
Winter Storms	All entities in	Moderate to Catastrophic	Starvation, dehydration,
	immediate area		hypothermia
Fire	All entities in	Moderate to Catastrophic	Burns, smoke inhalation,
	immediate area		death, feed and water, housing
Extreme	All entities in	Moderate to Catastrophic	Heat stress, cold stress, death,
Temperatures	immediate area		feed and water
Disease Outbreak	All exposed animals	Catastrophic	Death, illness
Hazardous	All exposed animals	Moderate to Catastrophic	Death, poisoning, illness,
Material Spill			burns, housing, feed and water
Explosion	All exposed animals	Moderate to Catastrophic	Death, injury, burns, housing
Transportation	All animals involved	Mild to Catastrophic	Death, injury
Incident	in accident		
Power Outage	All entities in	Mild to Catastrophic	Death, ventilation, water
	affected area		access, heat stress, cold stress,
			inability to milk (dairy)
Water	All entities in	Catastrophic	Death, illness, dehydration,
Contamination	affected area		water access
Neglect	All effected animals	Moderate to Catastrophic	Death, starvation, illness
Loose Livestock	All animals involved	Mild to Catastrophic	Death, injury, exhaustion
	in incident		

5. Livestock Resources and Facilities

5.1 Resource Definitions

Bedding	Bedding may be required in housing facilities or for triage pens. Straw or shavings are the most common and accessible bedding. Small squares bales are most desirable as they do not require tractors to handle them. Shavings can be purchased in bags that are easy to store and protect from the elements.
Boarding Stables / Boarding stables are facilities that rent out stalls, paddocks or pasture space for horses. These facilities are very common in Alberta and most municipalities have access to at least one stable. Stables come in varying sizes, from just a few horse possibly hundreds. These facilities are often set up with the ability to segregate or isolate animals. They often have experienced handlers onsite or available. Stables come in varying sizes, from just a few horse possibly hundreds. These facilities are often set up with the ability to segregate or isolate animals. They often have experienced handlers onsite or available. Stables come in varying sizes, from just a few horse possibly hundreds. These facilities are often set up with the ability to segregate or isolate animals. They often have experienced handlers onsite or available. Stables come in varying sizes, from just a few horse possibly hundreds. These facilities are often set up with the ability to segregate or isolate animals. They often have experienced handlers onsite or available. Stables come in varying sizes, from just a few horse possibly hundreds.	
Dead Stock Removal	In events where animals perish or require euthanasia, dead stock removal and disposal will be required. Disposal options will be based on number of animals (per Alberta Disposal of Dead Animals Regulation 132/2014), method of euthanasia (i.e. barbiturate overdose) or health status (i.e. contagious disease). Possible resources include dead stock removal companies, landfills, burial or incineration. Each municipality may have specific regulations and resources. It is the responsibility of emergency preparedness committee to identify the options in their region.
Feed / Feedstuff	If animals are going to be housed for over 24 hours, they will require a source of feed. Since the diets can vary greatly, the provision of good quality grass hay is the safest and easiest feedstuff to provide. Municipalities should identify hay distributors within their region that stock hay year-round. Animals should not be fed grain or hay that is high in alfalfa due to risk of digestive upset. Small square bales are most desirable as they can be moved by hand.
Livestock Handling Equipment	Handling equipment for livestock can include portable chutes, portable panels, portable loading ramps, snow fence, rattle paddles, hog sort boards, halters and horse blankets.
Livestock Facilities	Larger livestock facilities can be utilized for evacuations, temporary housing, identification and triage. Most facilities house multiple animals in corrals, pens or stalls. Ideally, facilities will provide segregation for incompatible animals (i.e. studs or stallions) or sick / injured animals. Examples of livestock facilities would be fairgrounds, arenas, rodeo grounds, race tracks, auction markets or feedlots. Some animals may require access to indoor facilities during winter months, dependent on their hair coat, age and health status.

Portable Panels	Portable panels or gates can be set up to create a temporary holding corral or pen. These panels come in varying lengths and styles and are very common in rural, agricultural areas. Municipalities should have access to as many panels as possible located throughout the region. Possible sources include the local grazing association / community pasture, rodeo grounds, fair grounds, farm supply store or larger ranches. Other fencing options may include portable electric fencing or snow fencing. Posts may be required and consideration needs to be given to time of year and the ability to penetrate ground.
Portable Potable Water Source	Water is a necessary provision when housing livestock, even temporarily. The water must be potable and accessible. There may be cases where the temporary facility or farm does not have access to water, access to enough water or access to potable water. In such cases, water will need to be brought in from an outside source. In the case of temporary housing or evacuation sites, there may not be enough water troughs or buckets for the number of animals housed, they may need to be sourced.
Transporters and Trailers	Trailers may be required for an evacuation, animal health or welfare event, loose animals or for transport following a motor vehicle incident. Ideally, the trailers will be larger, ground load livestock trailers. In the case of horses, not all are halter broke or trained to trailer and they may not lead into trailers or tie in a traditional horse trailer. Ideally you can enlist people who do custom transport of livestock as they are normally experience with livestock, bonded and insured. Multiple resources may be needed.
Veterinary Clinics	Ideally, each municipality will have access to veterinarians who specialize in large animals.

5.2 Resource List

	NAME	LEGAL LOCATION	PHONE	NOTES
Bedding Supplier	Lonestar Tack & Feed	225120 Rge Rd 285, Rocky	403-730-9498	
		View		
	UFA Airdrie Farm &	937 Highland Park Blvd,	403-948-5913	
	Ranch Supply Store	Airdrie		
	Peavey Mart	2649 Main Street SW, Airdrie	403-948-0460	
Boarding Stables	Glen Valley Farm	261091 Glendale Road,	403-932-2794	12x12 box stalls, outdoor 26mx
	Ron Cole	(Cochrane east)		66m arena, pasture plank-
				fenced
				generator to pump water
				onsite
	Essex Equestrian	43130 Twp Rd 280 Cochrane	403-923-2410	10' x 10' stalls, heated barn, 80'
	Elise Nelson	(NW County)		x 180' indoor arena, outdoor
				grass arena
				Can assist with animal
				evacuation and transport.
	Moonlight Stables	280049 Twp Rd 235A	403-312-0442	80'x160' indoor arena, outdoor
	Myles Schriml	(Chestermere area)		sand arena, 60 ft round pen
	Sweet Talk Stables	240142 Range Road 275 &	403-207-3353	70'x230' heated indoor arena;
		Township Rd 240,		large outdoor arena, round
		Chestermere		pen; lessons
	Gem Equestrian	33038 Twp Rd 272	403-851-5198	80'x180' heated indoor arena,
	Chelsea Balcean	(Lochend Road North)		200'x200' outdoor sand arena,
				outdoor paddocks
Core Drilling	Foraco Canada Ltd.	305 10820 24 Street SE	403-279-3161	
		Calgary		
	Gerritsen Drilling Ltd.	Rockyford	403-533-3884	

	Good Earth Drilling	273159 Rge Rd 14, Airdrie	403-912-1947	
	Service Ltd.			
	Major Drilling Energy	6015 84 Street SE, Calgary	403-457-2998	
	& Environmental			
Dead Stock Removal	West Coast	7030 Ogden Dale Place SE,	403-279-4441	
	Reduction	Calgary		
Feed / Feedstuff	Irvines Tack & Feed	29322 Rge Rd 292, Crossfield	403-946-4246	
	Lonestar Tack & Feed	225120 Rge Rd 285 Rocky	403-730-9498	
		View		
	Peavey Mart	2649 Main Street SW, Airdrie	403-948-0460	
	UFA Airdrie Farm &	937 Highland Park Blvd,	403-948-5913	
	Ranch Supply Store	Airdrie		
Livestock Handling	Hi-Hog Farm & Ranch	8447 23 Ave NE, Calgary	403-280-8300	
Equipment	Equipment			
	UFA Airdrie Farm &	937 Highland Park Blvd,	403-948-5913	
	Ranch Supply Store	Airdrie		
	Peavey Mart	2649 Main Street SW, Airdrie	403-948-0460	
Livestock Haulers	Mervin Giles	RR 1 Stn Main, Airdrie	403-948-7776	
	Trucklines Inc.			
	Meston Livestock	235007 Rge Rd 284, Calgary	403)-261-4972	
	Transport Ltd.			
	Moore Horse	5615 84 St. SE, Calgary	403-236-1518	
	Transport Ltd.			
	West Land Livestock	532 Wheeler Ave. N, Acme	403-546-2403	
	Inc.			
Portable Panels	Jim Dunn	24118 Twp Rd 280	403-874-1580	
Portable Potable	Alberta Water	5572 53 Ave SE, Calgary		
Water	Services			
	Big Rock Water	41-9151 44 St SE, Calgary	403-804-5551	
	Hauling Service Ltd.			

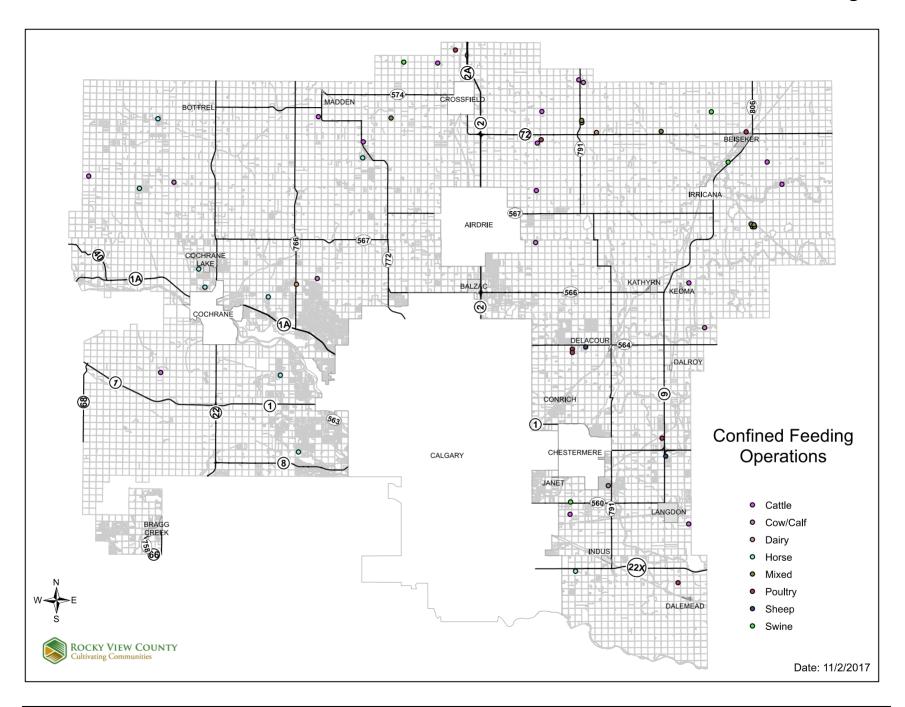
	Rocky View County	262075 Rocky View Point	403-478-8082	Jason Cormier – shop foreman
	fleet services	Rocky View County, AB		
Stockyards	Calgary Stockyards	1 mile west of Strathmore	403-934-3344	
		Hwy 1		
Veterinary Clinics	Airdrie Animal Clinic	101-117 East Lake Cres. NE,	403-948-3619	
		Airdrie		
	Banded Peak Animal	75 Burney Rd, Bragg Creek	403-949-3249	
	Hospital			
	Big Hill Veterinary	Bay 3, 124 River Ave.,	403-932-6160	
	Services	Cochrane		
	Burwash Equine	252140 Rge Rd 42 Calgary	403-242-1913	
	Services			
	Energy Equine	281005 Dickson Stevenson	403-700-0818	
		Trail, Rocky View County		
	Langdon Veterinary	110-355 Center St. Langdon	403-936-4571	
	Clinic		After hrs 403-936-4549	
	Moore Equine North	260048A Writing Creek Cres.,	403-226-2585	
		Rocky View County		
	Poultry Health	201 - 151 East Lake Ave	888-950-2252	
	Services	Airdrie		
	Veterinarian Agri-	281121 Dickson Stevenson	403-948-2253	
	Health Services	Trail, Rocky View County		
	Nagel & Co.	1626 Railway St., Crossfield	403-946-4567	
	Veterinary Services			

5.3 Confined Feeding Operations

	NAME	LEGAL LOCATION	PHONE	NOTES
Bison	Bouvry Exports Calgary	40128 Twp Rd 250,	403-253-0717	
	Ltd.	Calgary		
	Glengary Bison	24203 Twp Rd 280, Rocky	403-948-9675	
		View County	C: 403-836-5900	
Cow / Calf	Cairns Farm	283059 Symons Valley Rd,	Lawrence Cairns	
		Madden	403-946-5897	
	CL Ranches	45001 Twp Rd 244,	403-932-2966	
		Calgary		
	Hamilton Farms	274132 Rge Rd 33,	Rob & Gail Hamilton	
		Cochrane	403-932-5980	
	Havens Farm	285093 Rge Rd 25,	Raymond Havens	
		Madden	403-946-5947	
	Morison Farms Ltd.	22139 Twp Rd 272,	Rod & Cheryl Morison,	
		Airdrie	403-333-0045	
	Nora McLean & Darrell	292239 Twp Rd 262A,	403-226-3852	
	Miller	Balzac		
	Roy Copithorne	252021 Rge Rd 50,	403-371-6271	
		Calgary		
	Soderglen Ranch Ltd	280013 Rge Rd 14, Airdrie	403-948-6700	
	Wineglass Ranch	253205 Towers Trail,	Travis & Kara Eklund	
		Cochrane	403-807-3988	
	Rosebud Feeders Ltd.	B 274016 RGE RD 254	Mayson Raymond	
			587-585-2121	
	Kuntz Farms	275198 Rge Rd 255	Pat & Jodee Kuntz	
Dairy	Klaas & Elvina Ijtsma	282120 Rge Rd 280 Rocky	403-946-4960	
		View County		

Egg Barns	Richter Farms (Mike	260126 Twp Rd 282	403-947-3488	
	Richter)	Beiseker		
	Country Hills Egg Farm	253186 Rge Rd 283	403-984-5595	
		Calgary		
Elk, Bison,	Uncle Bernie's All	274256 Rge Rd 280,	403-935-4907	
Poultry	Natural Meats	Airdrie		
Equine	Becker Ranch	271217 Rge Rd 14, Airdrie	403-651-8222	Indoor heated stalls and arena, outdoor arena
	Canadiana Equestrian Centre	274188 Rge Rd 20, Airdrie	403-818-2480	Indoor arena; 2 large outdoor sand arenas (140' x 360' & 120' x 280'); 1 outdoor grass area (200'x 400'); 12x12, 12x14 box stalls
	Diamond Willow Stables	42133 Twp Rd 252, Cochrane	403-992-7433	2 heated indoor arenas; heated barn 30 12x12 stalls; 180'x300' outdoor arena
	Foxwood Farms	273120 Rge Rd 42, Cochrane	403-932-9652	Centre Box stalls, outdoor paddocks, pasture
	Glenhaven Stables	261193 Glendale Rd, Cochrane	403-932-5927	20 + indoor stalls; 20m x 40 m indoor arena; 30m x 60m outdoor arena; 17 turnout paddocks (shelter & water), pasture
	Marit Stables	41040 Big Hill Springs Road, Cochrane	403-390-8995	Indoor sand arena; outdoor sand ring; 11 heated indoor stalls; several outdoor paddocks
	Moonlight Stables Ltd.	280049 Twp Rd 235A	403-312-0442	
	Station Lane Stables	265148 Panorama Road, Airdrie	403-948-9687	20 stalls; 70'x200' indoor riding hall; 90'x250' outdoor sand ring
	Sweetgrass Stables	262234 Rge Rd 290, Balzac	403-804-8236	

	Tackaberry Farm	265110 Rge Rd 273,	403-470-9048	26 box stalls; 80'x200' indoor
		Airdrie		ring; 200'x200' outdoor ring
	Tristar Equestrian	Hwy 567 Rge Rd 20,	403-948-7472	
	Center	Airdrie		
	Twin Valley Stables	244083 Rge Rd 31,	403-771-8876	
		Calgary		
	GEM Equestrian	33038 Twp Rd 272,	403-851-5198	80'x180' heated indoor arena,
		Cochrane		200'x200' outdoor sand arena,
				outdoor paddocks
Feedlot	Thorlakson Feedyards	Rge Rd 284, Airdrie	Milt Scott	
	Inc.		403-888-0786	
Hutterite	Beiseker Colony	270244 Twp Rd 282,	403-947-2191	
Colony		Beiseker		
	Fairview Colony	283000 Rge Rd 281,	403-444-1353	
		Crossfield		
	Tschetter Colony	270252 Rge Rd 260,	403-935-4502	
		Irricana		
Poultry	Klaas & Elvina Ijtsma	281130 Rge Rd 284,	403-946-4960	
		Crossfield		
	Country Hills Egg Farm	253186 Rge Rd 283	403-984-5595	
		Calgary		
Sheep	Robert & Joyce	265041 Rge Rd 274,	403-935-4547	
	Anderson	Kathyrn		
	Alan & Liz Breakey	233133 Rge Rd 52		
	Big Hill Springs Sheep	41073 Big Hill Springs	403-932-2390	
	Howard & Jolene Airth	Road		
Sheep /	Ralph Poffenroth	253232 Rge Rd 282,	403-519-4994	
Goats		Calgary		
Turkeys	Winter's Turkeys	272021 Twp Rd 224,	403-256-1821	
		Dalemead		



5.4 Livestock Event Facilities

TYPE OF FACILITY	NAME	LOCATION	PHONE NUMBER	# LIVESTOCK DURING EVENT	HOUSING CAPACITY
Auction marts	Calgary Stockyards	1 mile west of Strathmore Hwy 1	403-934-3344		
	Innisfail Auction Market	4504 42 Street Innisfail	403-227-3166		
	Olds Auction Mart	4613 54 St, Olds	403-556-3655		
	VJV Foothills Livestock Auction Mart	4700 - 50 [,] St Stavely	403-549-2120		
Eventing facility (i.e. show jumping,	Alborak Stable Inc.	62134 Twp Rd 252, Calgary	403-932-4819		
team roping arena)	Eagle Hill Equine	Cochrane	403-921-6033		
	Griffin Valley Ranch	273019 Beaupre Creek Road, Cochrane	403-932-7433		
	High Country Equestrian Center	240020 Rg Rd 42, Calgary	403-242-9387		
	Moose Hill Ranch Equestrian Centre	42186 Twp Rd 240, Calgary	403-242-9209		
	Riqueza Riding Academy	271060 Inverlake Rd, Calgary	403-936-5477		
	Silverado Horse Centre	274254 Range Rd 40, Cochrane	403-932-1106		
	Sylvancrest Stock Farms	272051 Hwy 564, Rocky View County	403-249-8215		

	Sweet Talk Stables	240142 Rge Rd 275,	403-541-8658	
		Calgary		
	Tackaberry Farm	265110 Rge Rd 273,	403-470-9048	
		Airdrie		
	The Bull Pen	273131 Rge Rd 284,	403-948-5434 ext	
		Airdrie	223	
	Twin Valley Stables	244083 Rge Rd 31,	403-771-8876	
		Calgary		
Rodeo / exhibition /	Airdrie Rodeo	271244 Rge Rd 20,	403-948-0512	
fair grounds	Grounds	Airdrie		
	Cochrane & District	43080 Bow Valley	403-932-3250	
	Ag Society Park	Trail, Cochrane		
	Crossfield Rodeo	1112 Laut Ave,	403-946-5565	
	Grounds	Crossfield		
	Girletz Rodeo	14188 Twp Rd 264,	403-226-0757	300 to 400
	Ranch	Rocky View County		capacity; portable
				pens; 20 separate
				pens; water on site
Racetrack	Century Downs	250 Century Downs	Jackson Wittup	Power/water; 200
	Racetrack & Casino	Drive, Rocky View	403-466-4599	stalls 10 x 10; few
				portable panels;
				track with gates
				closed could be
				used should it be
				needed.
Stockyards	Calgary Stockyards-	RR 1 Stn Main,	403-934-3344	
	Strathmore	Strathmore		

5.5 Legislative Framework for Emergencies in Alberta

Legislation

www.agriculture.alberta.ca/app21/infopage?cat1=Livestock]

- Agricultural Operation Practices Acts and Regulations
- Animal Health Act and Regulations
- Animal Keepers Act
- Animal Protection Act and Regulations
- Dairy Industry Act and Regulation
- Fur Farms Act and Regulation
- <u>Livestock Identification and Commerce Act and Regulations</u>
- Livestock Industry Diversification Act and Regulations
- Livestock and Livestock Products Act and Regulations
- Stray Animals Act and Regulations

If the emergency is disease related:

- **Health of Animals Act (Canada)** giving the Canadian Food Inspection Agency (CFIA) authority for monitoring, control and eradication of certain reportable and notifiable diseases, some of which are 'foreign animal diseases' (FADs).
 - Also, measures to protect animals from undue suffering during transport and loading.
- Animal Health Act (Alberta) giving the Alberta Agriculture and Forestry authority for preparedness
 and response capabilities with regards to provincially reportable diseases and other animal health
 emergencies.

Destruction and Disposal of Dead Animals Regulation of the Animal Health Act, Appendix A

- Livestock Mortality Burial Techniques http://www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/agdex5310/\$file/400 29-2.pdf
- Emergency Farm Animal Carcass Disposal Plan Alberta July 2006
- Livestock Mortality Management (Disposal) http://www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/agdex6081

5.6 Premise Identification (PID) Program

Premises Identification (PID), one of the pillars of traceability, links livestock and poultry to land locations or premises. Alberta's PID Program was established to plan for, control, and prevent the spread of agricultural diseases. It is also used as an early warning system to notify animal owners of a natural disaster such as a flood or fire that could affect their animals or operations.

Regulations requiring premises identification became law January 1, 2009, as part of the *Animal Health Act*. Anyone who owns a livestock animal or poultry that is kept at a premises other than a commingling site (e.g. stable) needs to apply for a PID Account and obtain at least one PID Number associated to where the animal(s) are located. If a person owns an animal that is only kept at locations controlled by someone else (e.g. stable), and that animal will never be kept at a premises under their care and control (e.g. farm or acreage), are not required to register for a PID Account. However, owners will need to obtain the PID Number from the operator of the site.

Anyone who operates a commingling site (e.g. stable, community pasture, fair ground, etc.), is required to obtain a PID Account, register all commingling sites and provide the PID Number(s) to the users of the site(s). For more information on the PID Program, visit www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/trace12354.

The Alberta Emergency Management Agency liaisons have access to the PID system during an emergency.

6. Emergency Response Agencies and Resources

NAME	CONTACT	
Alberta Emergency Management Agency	Emergency Management Field Officers	
(AEMA) – South Central Region	Randy Tiller	
24 Hour: 1-866-618-2362	Phone: 403-297-6470	
	Cell: 403-815-9665	
	randy.tiller@gov.ab.ca	
	Rob Morton	
	Phone: 403-297-5600	
	Cell: 403-826-5615	
	rob.morton@gov.ab.ca	
Alberta Environment (Calgary)	403-297-7602	
Alberta One-Call Corp.	800-242-3447	
CFIA Livestock Emergency Transport Line	877-814-2342	
Livestock Response Unit Trailer	Rocky View County	
	Chief Ken Hubbard	
	Ph: 403-520-3986 Cell: 403-585-2732	
	District Chief Dax Huba	
	Ph: 403-520-5982	
	Red Deer County, Cody McIntosh	
	403-350-2165	
Royal Canadian Mounted Police (RCMP)	RCMP Livestock Investigators	
	Northern Alberta	
	Andrew Grainger	
	Office 780-509-3293	
	Cell 780-509-3293	
	Southern Alberta	
	Lindsay Anderson	
	Office 403-420-4972	
	Cell 403-701-1462	
Rocky View County	262075 Rocky View Point, Rocky View County, AB	
	403-230-1401	
	Rocky View County Fire Services – Ken Hubbard,	
	Fire Chief 403-520-3986	
	Emergency Mgt Coordinator – Pauli Kruger,	
	403-520-3991	
	Rocky View County Enforcement Services,	
	403-520-1270	
	Manager of Agricultural Services – Kristyn Lines	
	403-520-8162	
	Ag Services Officers	
	Laura Poile 403-520-7273	

Ashley Stewart 403-520-1272
Delaney McNaughton 403-520-3952
Matt Chilakos – 403-520-1190

Emergency Livestock Handling Equipment Trailers

IN THE EVENT OF AN EMERGENCY CALL 911

and request the

Emergency Livestock Handling Equipment
Trailers

In the rare event that 911 cannot connect you to the Emergency Livestock Handling Equipment Trailers, please contact our ALERT Line at

1-800-506-2273

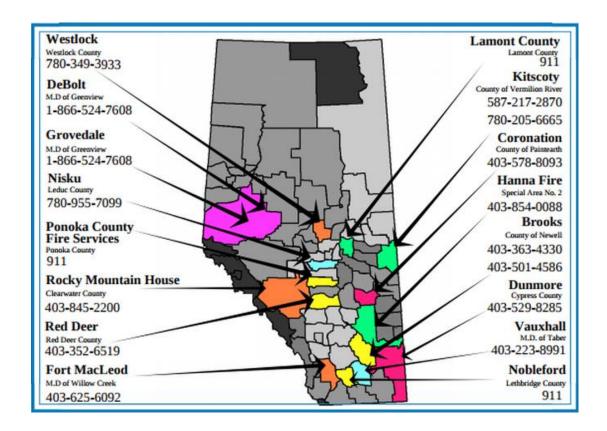
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LIVESTOCK EMERGENCY RESPONSE GUIDE



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NOV 2017

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1. INTRODUCTION

The information in this Response Guide is intended to be incorporated into a municipality's existing emergency preparedness plan. This resource focuses only on the livestock aspect of the event or response. It is highly recommended that all personnel or first responders that may be involved in any active animal handling, whether at a motor vehicle incident, manning an evacuation center or following a disaster event, should be trained in emergency livestock response and handling.

The following sections are considerations for handling livestock during a disaster or emergency event. Each section should be viewed as a general guidelines and applicability will vary with each event as each emergency event is different and will have differing aspects. This resource is intended to provide the tools to make educated decisions. The goal is to reduce danger, risk and confusion and in turn increase safety of the responders, the public and the animals.

2. RISK IDENTIFICATION AND MITIGATION

	RISK IDENTIFICATION	RISK MITIGATION	
HUMAN RISK	 Loose livestock Scared livestock are a hazard to first responders and the public Injury or death of handler by animal (i.e. struck, kicked, bit or trampled) Disease exposure Psychological stress to first responder's due to high loss of animals 	 Train first responders in livestock handling during emergencies Utilize experienced livestock handlers Use low stress safe livestock handling methods Wear appropriate footwear for livestock handling Contain all loose animals as quickly as possible 	
ANIMAL RISK	 Injury or death to animal Pain and suffering of animal Injury from facilities Feed or water source contamination Animals may be trapped in the building Mass animal casualties Animals trapped in buildings, paddocks or on flood created islands 	 Utilize experienced livestock handlers Use low stress safe livestock handling methods Site inspection to ensure all facilities are free of projectiles and areas where animals can injure themselves Provide emergency triage care Euthanize animals as required as quickly as possible Identify temporary housing for animals Evacuate or relocate animals to evacuation site with feed and water available Animals trapped in buildings, paddocks or on flood created islands Water testing during time of drought Toxic plant monitoring program 	
BIOSECURITY	 Disease exposure Spread of disease Poor health and potentially loss of life Increased veterinary costs, clean-up costs Loss of production ability of individual animals 	 Implement biosecurity procedures All animals identified upon arrival Refer to industry biosecurity guidelines Identify entry and exit points Ensure all visitors log in and out of evacuation site Limit co-mingling of animals from different properties when possible Dispose of carcasses as soon as possible 	
PROPERTY RISK	 Property damage Abandoned animals Inability to confirm ownership of animal(s) Theft of animals Soil or water contamination 	 All animals identified upon arrival Security at evacuation sites Proof of ownership for release Ensure all visitors log in and out of evacuation site 	

RISK IDENTIFICATION		RISK MITIGATION	
TRANSPORTATION	 Injury during active loading or unloading Transport of unfit animals Motor vehicle incident during evacuation Injury during transport Owner at risk, refusing to evacuate with animals Livestock owners with no trailers Animals that refuse to load Unable to evacuate all animals 	 Preferable to utilize professional transporters Ensure all vehicles are in good working condition and travel only on safe roads Ensure all transport vehicles are free of projectiles and areas where animals can injure themselves Be aware of regulations pertaining to the transport of animals. Full regulations can be found at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 296/page-16.html#h-70 Prioritize and group experienced animals Ensure all animals are identified and evacuation sites are secure and reported Have plan on management of animals left behind 	
EUTHANASIA AND DEAD STOCK REMOVAL	 Worker / volunteer injury by the animal thrashing and /or striking out Risk of gunshot ricochet when using firearm Risk of injection of barbiturates Risk of injury with captive bolt gun Spread of disease Contamination of soil or water Injury during handling of carcasses Human illness due to exposure Specified Risk Material (SRM) when handling cattle carcasses 	 Experienced handlers Only trained individuals to deliver euthanasia Proper facilities available Proper equipment available Equipment maintained and stored properly Equipment safely stored away and only accessed by authorized personnel Implementation of biosecurity Identification of proper disposal options and locations Consultation with government specialists on disposal options Proper Personal Protective Equipment (PPE) (i.e. coveralls, boot covers, gloves, masks and eye protection) Proper equipment for handling carcasses Follow all regulations as they pertain to SRM handling when disposing of carcasses 	

3. LIVESTOCK DISASTER RESPONSE GUIDELINES

3.1 General Livestock Handling

Implementation

This is intended to provide guidance to first responders until experienced handlers arrive or if handlers are not available.

- Livestock are prey animals; their natural instinct is to flee when frightened. If they become cornered and feel threatened, they will attack until they are able to flee.
- Public safety must always take priority over anything else. If an animal is a threat to the public, it must be euthanized as soon as you can safely do so.
- Always have an escape route do not get trapped by an animal. Stay alert, as you may have to move quickly. Never turn your back on an animal.
- Livestock are herd animals, isolation is one of the strongest stressors and should be avoided whenever
 possible. Livestock will calm quicker if left in a herd and may also readily play "follow the leader" when
 together. They are motivated to keep continual visual contact with each other. Animals need to be left in
 herds or flocks to keep them calm.
- Animals have a sharp sense of sight, smell and hearing. They have a wide angle of vision and are easily frightened by shadows. They will often balk, refusing to walk through a puddle, over a shadow or on a change of surface. They will also shy away from bright sunlight if they are not used to being outside. They have a tendency to move from a dimly lit area to a brighter area, granted the light is not glaring. Though they are reluctant to move into dark spaces, they will calm once inside. Lights (headlights, flashlights, floodlights) should never be shown directly into an animal's face and moving or flapping objects will spook or slow an animal.
- Never walk up behind an animal, whether it is standing up or lying down. They have very accurate aim when kicking. Horses can strike and kick with both their front and rear legs.
- When approaching livestock, try to avoid approaching them head on or directly from behind (they cannot see you) unless you must protect an injured person. Approach from the side, around the area of their hip, so you are within their line of vision.
- If an animal is somewhere unfamiliar or where it does not want to be, it will revert back to 'wild' instincts. Livestock involved in emergency events are frightened. Frightened animals are dangerous animals.
- All animals must be worked calmly. Do not shout, yell or wave arms wildly at animals. When you chase an animal, you become a predator. DO NOT chase livestock in vehicles you will not catch them.
- Allow an animal to calm down before attempting to handle them. If you spook them, it will take 20-30 minutes to calm them down.
- If the animal(s) is standing calmly in one place or grazing, do not approach. Keep everyone away from the animal until a plan is established and a containment area can be created or found.
- If the animal is standing along a fence line or corral near other animals, open the gate or find a way for the animal to get back in.
- When you move livestock, move them in a group slowly and calmly.
- Do not enlist the help of bystanders and keep all people (including the media) away from the animals –
 ideally out of the area completely. If assistance is required, bring in handlers you are familiar with.

3.2 Housing and Containment

Livestock that are evacuated, or loose during an emergency event may require temporary containment or housing. Livestock must be properly contained for both animal welfare and public safety.

Supplies

- Signage for housing (i.e. hospital pen, owner information)
- Temporary panels/fencing and gates to create extra penning
- Bedding (straw)
- Grass hay
- Water
- Water troughs and buckets
- Halters and leads (if horses present)
- Camera
- · First aid supplies

Implementation

This is intended to provide guidance to first responders until experienced handlers arrive or if handlers are not available.

- Facility must have the ability to accommodate the number of animals being evacuated or recovered.
- Assemble temporary containment if necessary (i.e. portable livestock panels, cross fencing) to accommodate or segregate animals.
- Sight or facility must be inspected for sharp or protruding objects where a limb or head can get stuck.
- Sight or facility must be accessible during an emergency event.
- There must be unloading ramps available if animals will be arriving on a commercial livestock trailer.
- Sight or facility should have the ability to segregate herds/flocks or species groups if necessary.
- The facility must have fences, gates, panels to effectively contain the animals.
- Sheep and pigs cannot be effectively contained with cattle panels and will require sheep fencing around the panels. Other options for temporary containment can include hog panels or snow fence.
- There must be access to potable water at the facility. If the pumping of water requires power to distribute water (rural well) a back-up power source must be available.
- If there is no water source available, a water truck will be needed to bring in water.
- Each pen or stall must have a water trough or buckets for water.
- Animals that are raised in climate controlled barns (i.e. pigs, dairy cows, new born animals) must be housed in indoor facilities in colder weather conditions.
- Facility must be clear of trees, power lines or structures that could collapse.
- Designate unloading area and trailer parking area.
- Check in animals upon arrival. Obtain owner information, animal information (type, number) and the location they were found if loose livestock.
- Identification system for arriving animals (i.e. paint branding, livestock markers, tags for halters, neck bands).
- Segregate animals as needed (i.e. sick animals, incompatible by nature).
- Hay must be provided for animals that are staying longer then 24 hours. Animals should only have mold free grass hay.
- A veterinarian and / or certified animal health technician (AHT) should be present if injured animals are expected.
- Label pens or stalls with owner information if available.

3.3 Transportation of Livestock

Large animals are more challenging to evacuate then smaller animals, such as dogs or cats, as large animals require trailers. There may also be owners who do not have trailers to transport their animals or have more animals than their trailers can hold.

Livestock can be difficult in times of panic or during a bad storm and be too frightened to load or this may instigate a flight instinct.

Overview of Transport Regulations

Examples of provisions that apply to evacuations that are contained in the **Health of Animals Regulations Part XII - Transportation** include:

- · Prohibition of overcrowding of animals during transport
- Prohibition of transportation of animals that are unfit to travel
- Carriers cannot load, transport or unload animals in a way that would cause injury or undue suffering
- Protection from adverse weather and adequate ventilation
- Use of proper containers and transport vehicles, segregation of incompatible animals

Full regulations can be found at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._296/page-16.html - h-70

- Large ground load trailers are preferred due to ease of loading (i.e. no loading ramp required) and ability to
 easily maneuver around. Appropriate for all species.
- Determine trailer type and number of trailers required based on number of animals that need evacuated,
 type of animals and access to loading facilities.
- Dependent on current weather conditions, protection from the elements may need to be provided in the form of bedding and/or winter boarding. This is particularly true for hogs and dairy cows.
- Animals must not be overcrowded in a trailer.
- Commercial liners / trailers number of animals determined by the size of animals and the size of trailers.
 See loading density chart on the next page to determine actual number of animals for specific trailers. You will need the available floor space of the trailer.
- For commercial livestock trailers (i.e. cattle liners):
 - Consideration must be given to road restrictions and ability to maneuver trailer around,
 - Loading ramps (permanent or portable) will be required.

Capacity: The following are average loading capacities for a 53' pot belly/drop center trailer. Actual numbers
will vary based on animal size and number of decks in a trailer. This is intended to allow for estimation of
number of trailers required. Professional drivers should be able to tell you how many animals that they can
load for each specie type.

SPECIES	TYPE OF ANIMAL	AVERAGE LOAD SIZE 53' TRAILER	
Cattle	Fat or Mature	45-52	
	Feeders	75-95	
	Replacement Heifers	60-70	
	Calves	120-200	
Goats		Up to 400 head depending on decking in trailer and size of animal	
Hogs	Market	180-220	
	Feeders	400-1,400	
	Weanlings	Up to 4,000	
Horses	Meat	Floor trailer (flat) 28	
		Pot belly 45	
Poultry	Broiler Chickens	Up to 8,000 (22/crate)	
	Turkeys	1,700	
	Poults (Feeders)	10,000-30,000	
Sheep		Up to 400 head depending on decking in trailer and size of animal	

- Notify predetermined transporters of where they need to pick up animals and where they need to be delivered.
- Ensure all transporters have livestock manifests and are aware that the form must be filled out for the transport of cattle, sheep and bison. A copy of the manifest must remain with the animals upon delivery. If the Brand Inspector is present, it must be given to him.
- Inspection of loading and unloading facilities should occur before process begins. Ensure that all facilities are
 safe with no sharp or protruding objects that can harm an animal, not gaps where heads or legs can get stuck
 or an animal can escape, sides of the loading ramp are high enough to contain the animals being loaded and
 there is solid flooring.

3.4 Evacuation

Evacuation is often a necessity during a disaster event. Evacuation of people is taxing enough on a municipality, but the evacuation of livestock adds an entirely different set of challenges and risk factors to an already volatile situation. Quite often animal owners are reluctant to leave their animals behind, putting their own safety at risk.

Large animals can be much more challenging to evacuate then smaller animals, such as dogs or cats, as they require trailers.

Evacuation and Site Selection

- Evacuation sites must remain accessible during the event
- Evacuation sites must be logistically close to the event, yet out of harm's way
- Identify the most direct and safest way out
- Alternate routes must be identified
- Stock or commercial trailers must be accessible during event
- · Identify trailers located outside of municipality for backup if local trailers are unavailable or inaccessible
- · Select larger trailers to accommodate numerous animals. Ground load trailers are the most efficient to load
- If commercial liners are to be utilized, access to loading ramp will be necessary
- Animals may need segregated so ensure trailers have divider gates

- Identification of evacuation locations by probable priority. List of evacuation destinations created.
- Identify CFO's within incident parameters.
- Determine most appropriate locations for livestock to be moved to and as determine food and water availability at these locations.
- Livestock owners/producers or facilities put on alert for possible evacuation recommendations.
- Post publicly all available evacuation destinations once established.
- Livestock owners should be provided copies of a map with the evacuation routes and temporary evacuation destinations indicated.
- Supervision and manning of evacuation routes if required.
- Identification and contact official evacuation vehicles.
- Contact Alberta LIS to man evacuation centers for identification of livestock arriving.
- Contact pre-determined livestock handlers to assist with animal movements and manning of evacuation facilities if required.
- Alert pre-determined veterinary services of evacuation sites. Request assistance if needed or just place on call.
- Assess biosecurity needs with animal movements.
- Dispatch evacuation and recovery vehicles to pre-determined areas.
- Notify receiving destinations that evacuation has begun.
- Document all animals that were unable to evacuate and their locations.
- · Work with owners on providing necessary supplies (i.e. food, water, bedding) for animals not evacuated.

3.5 Biosecurity

Biosecurity is about keeping animals healthy. It is the principles, actions, precautions and protocols that protect the health of animals by preventing the transmission of disease through physical barriers and hygiene practices.

Biosecurity Supplies

The following is a list of supplies you may need to access for biosecurity:

- Rubber boots
- Boot covers
- Scrub brush
- Disinfectant
- Bucket or pan to mix disinfectant
- Hand soap
- Disposable coveralls
- Face mask
- Safety glasses
- Latex gloves
- Sign-in sheet

- Biosecurity needs will vary depending on emergency event.
- Contact the individual identified to oversee biosecurity.
- Identify level of biosecurity required and for what species.
- Obtain necessary biosecurity supplies.
- Identify access and options for penning, segregation, isolation and/or quarantine when or if those options are advisable.
- Post biosecurity procedures at evacuation sites.
- Circulate biosecurity expectations to all effected personnel.
- Print off sign-in sheets as needed.

3.6 Identification

Proper and effective identification of each animal is critical to biosecurity, animal health, ownership and inventory.

Traceability including distinct and accurate animal identification, premises identification and movement records is fundamental to disease response and emergency preparedness protocols. Cattle, bison and sheep must be identified with an industry approved RFID tag (CCIA, CSIP) at all times.

All livestock will require a means of identification upon arrival at the evacuation centre, including those found as stray or abandoned.

Acceptable/common methods of permanent identification for equine include: microchips, hot iron brands, freeze brands, lip tattoos, registration papers and photos (both sides, from front and from back).

The Alberta Livestock Identification Services (LIS) oversee and enforce the Alberta Stray Animals Act and should be present at all receiving sites.

Supplies

Following is a list of supplies you may need to access for identification:

- RFID scanner
- Markers or nontoxic spray paint
- Camera (ideally Polaroid or similar so photos can be attached to paperwork immediately)
- Livestock marking crayon
- Elastics, duct tape and a big tab or tag braided into a horse's mane with contact information
- Necessary paperwork evacuation sheets, identification sheets, movement records

- Contact Alberta LIS (www.lis-alberta.com) or an Alberta Agricultural Fieldmen to engage for identification and owner confirmation.
- Set up check-in station for receiving.
- Have all necessary paperwork and forms available for check in and identification.
- Take photographs of equine as necessary to go with paperwork, especially equine that are brought in as strays or abandoned.
- Keep all records accessible.
- Do not release equine to individuals without proof of ownership or contracted custody.
- Temporary identification for livestock may include: paint brands, tags on halters, descriptive markings, spray paint.
- If animals are deceased, photographs should be taken of the animal along with any forms of identification and the location they were found.

3.7 Triage

Triage is a process for assessing and sorting injured or diseased animals into groups based on their need for, or likely benefit from, immediate medical treatment. Triage stations may be set up at evacuation or temporary housing sites during an emergency or implemented in other events such as barn fires, building collapses or motor vehicle incidents.

Livestock arriving at evacuation/temporary housing sites will need to be assessed upon arrival. There may be a need to have provisions to triage animals that arrive injured or ill to determine need for emergency medical care, isolation or quarantine. The Animal Health Risk Assessment table on the next page lists incident specific health impacts and the indicators.

Supplies

- First aid kit
- Camera
- Water
- Triage / treatment sheets
- Large tarps
- Signage
- Effective lighting
- Equipment for removing dead stock

- Ideally, triage is overseen by a veterinarian and certified animal health technicians (AHT).
- Biosecurity practices implemented when possible.
- Triage should be located in an area that can protect the animal from the elements (i.e. indoors).
- Set up triage area in the same general area as the check-in station so animals can be inspected before entering facility.
- Set up barriers or flow system so animals have to pass through inspection before entering general population. Animals will be examined / inspected while being identified and checked into the evacuation destination.
- Ensure there is plenty of room and assistance for animals to be safely examined by a veterinarian or a certified animal health technician.
- Establish isolation area for animals requiring treatment. Area must allow for isolation and ease of access for animals and medical practitioners. Area should be clearly marked as isolation area and be segregated from general population.
- If animals are deemed in need of treatment, move animals to isolation area for treatment.
- If animal is healthy and clears triage, check-in sheets should reflect the animal was inspected upon arrival.
- All treatment and diagnostics will be under the guidance of a veterinarian.
- All animals that receive treatment must have a treatment sheet filled out by attending veterinarian.
- Escalate care and treatment off site when required.
- In cases of motor vehicle incidents, animal will need to be assessed (triaged) at the scene. Production livestock (i.e. cattle, pigs, sheep, poultry, protein horses) will be assessed as either fit to transport or require euthanasia at the scene. Animals not fit to transport cannot be transported for euthanasia. For companion horses, a veterinarian should be called to the scene to evaluate the condition of the horse and can request the transport of an injured horse to a veterinarian clinic for further treatment under the care of the veterinarian.

ANIMAL HEALTH RISK ASSESSMENT

HAZARD	HEALTH IMPACT	INDICATORS
Fire	Smoke inhalation, burns	Nasal Discharge, coughing, swelling
Thunderstorm	Burns from lightning strike (check under halters)	Burns on skin
Floods	Drowning, hypothermia	 Indicators of hypothermia include shaking / shivering, body temperature below 37.8° C (100° F), irregular heartbeat
Tornados	Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations impalement	 Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding. Foreign objects protruding from body
Winter Storm	Hypothermia, starvation, dehydration, frost bite, freezing of feet, ears and tails	Hypothermia will see shaking / shivering, body temperature below 37.8° C (100° F), irregular heartbeat. Dehydrated equine's skin will stay up in a ridge, while healthy skin should spring smoothly back into place. Lethargy, depression, dullness in the eyes, dry skin and mouth, thick and sticky saliva
Drought - Extreme Heat	Heat stress, dehydration, starvation	 Body temperature 40° C (104° F) or above Excessive panting or difficulty breathing Collapse Increased heart and respiratory rate Salivation Depression, stupor
Motor Vehicle Incident	 Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations 	Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding
Building Collapse	Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations	Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding
Hazardous Materials	Burns, lung damage, poisoning	Visually observed burns on the body of the animal, nasal or eye discharge, difficulty breathing, coughing, open wounds, disoriented behaviour
Explosion	Burns, impaled, lacerations, internal injuries, broken bones	Visually observed burns on the body of the animal, lacerations, inability to stand up, bleeding out of the nose, anus, missing limb, excessive bleeding. Foreign objects protruding from body
Neglect Cases	Poor body condition	Extremely emaciated, bone structure visible, difficulty walking

3.8 Euthanasia

Euthanasia – Humane death that occurs without pain and distress

There may be requirement for euthanasia. In the case of mass euthanasia, the provincial or federal veterinarians will oversee the process. Municipalities may be asked to assist in the process of disposal. In other circumstances such as motor vehicle incidents, fires or weather events, individual animals may require euthanasia due to injuries.

In such events, the **Alberta Animal Protection Act** allows the euthanasia of an animal under the direction of the owner or a peace officer. Though veterinarians are the most commonly utilized professional for animal euthanasia, peace officers and other trained and experienced individuals (i.e. brand inspector) are qualified and may be utilized. Such individuals should be identified as part of the disaster response team.

Consideration

Response will be based on circumstances in the following considerations:

- Utilization of only an approved method gunshot, penetrating captive bolt, barbiturate overdose for livestock.
- Means and location of disposal.
- Number of animals requiring euthanasia.
- Disease concerns.
- Safe accessibility to animal.
- Availability of methods.
- Restraint requirements (cloth, tarp or material to cover the animal's head / eyes).
- Condition of animals (i.e. barbiturates may not be effective on an animal with internal bleeding).

Application of Euthanasia

By law, only veterinarians can administer barbiturates.

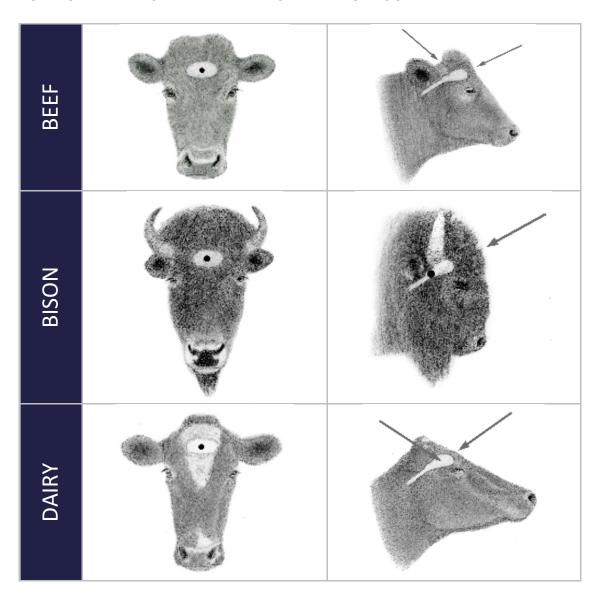
Euthanasia by firearms or captive bolt guns can be performed by veterinarians, peace officers, brand inspectors or the owner of the animals.

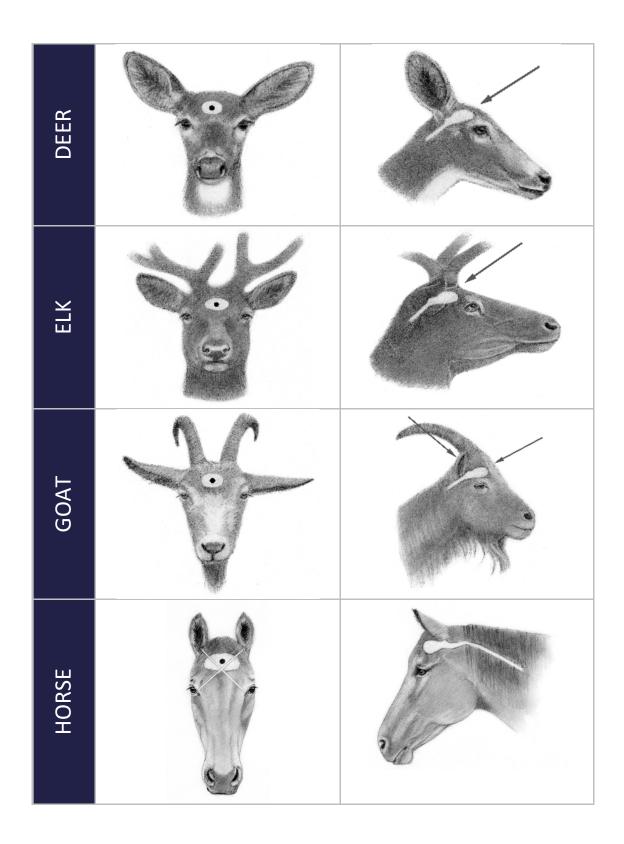
Proper procedure for euthanasia with a captive bolt gun or firearm:

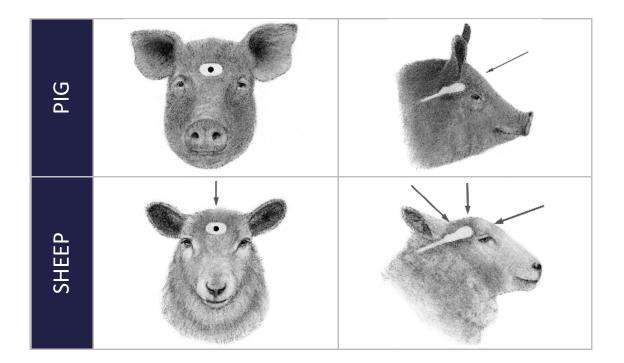
- Allow animal to calm down if necessary.
- When shooting an animal with a firearm:
 - o Ensure a weapon is powerful enough to get the job done.
 - For firearms, the muzzle cannot be held flush to the animal's head. Rifles should be held approximately 2 inches away from the point of entry. Shotguns 10 - 12" away.
 - o Do not shoot without a clear background.
 - o Do not shoot over long distances or into a group of animals.
 - Do not shoot while driving down the road.
 - O Do not shoot where a missed shot can ricochet off a hard surface.
- When shooting an animal with a captive bolt gun:
 - o Ensure the type and strength of the captive bolt gun is appropriate to the species.
 - o The animal must be restrained when circumstances require (i.e. mobile, combative).
 - The gun must be held firmly and flush to the animal's head.

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- o A secondary procedure may be required such as a second shot, exsanguination or pithing.
- Make sure the animal is dead before walking away from it. Check for vital signs pulse, breathing,
 etc. An animal will "wiggle" for 2-3 minutes following death, but it should not raise its head.
- The point of entry is in the following diagrams the point between the eyes is not the appropriate point of entry. It is very important to learn the point of entrance in order to ensure euthanasia is performed properly.

POINT OF ENTRY FOR FIREARM AND CAPTIVE BOLT GUN







3.9 Dead Stock

Disposing of dead stock can be quite challenging based on several factors including accessibility to disposal locations, number of animals and climatic conditions.

The disposal of dead animals in Alberta is regulated under the **Animal Health Act - Disposal of Dead Animals Regulation 132/2014** (www.qp.alberta.ca/documents/Regs/2014 132.pdf). This regulation is applicable to the disposal of individual animals, diseased animals and disaster or emergency situations.

Acceptable Methods of Dead Stock Disposal

Dead stock can be disposed of pursuant to the government of Alberta (www1.agric.gov.ab.ca/\$Department/deptdocs.nsf/all/agdex6081/\$FILE/400 29-1.pdf) and municipal regulations through:

- Burial bury animals per the Animal Health Act Disposal of Dead Animals Regulation.
- Composting the biological breakdown of organic materials in an aerobic (presence of oxygen) environment.
 www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/agdex13509/\$file/400 29-4.pdf
- Landfills dead stock can be disposed of at landfills where allowed. Disposal of Dead Animals Regulation still
 apply.
- Incineration the destruction of carcasses by burning.
- Scavenging allow dead stock to be disposed of via scavengers (i.e. coyotes, birds, etc.).
- Rendering a company that collects dead stock to render them into inedible products or dispose of them. This is a user pay service.

Implementation

Contact officials at Alberta Agriculture and Forestry for guidance and approval of mass disposal as per the **Alberta Disposal of Dead Animal Regulation**.

The following are considerations when disposing of dead animals (see table on following page):

- Disease or health conditions
- Cause of death
- Number of animals
- Biosecurity

Identify disposal method and disposal site.

- Take photos of all dead animals to allow for identification by owners.
- Heavy equipment (i.e. backhoe) will be required if animals are to be buried.
- Carcasses must be covered with either:
 - o A minimum of 1 m (3.3 ft) of compacted soil
 - 0.15 m (6 in) of soil, 0.5 kg (1 lb) of quicklime for every 10 kg (22 lbs) of mortality and a lid.
- Secure a front-end loader and truck if needed for transport of dead stock.
- All trucks must be leak proof and carcasses should be covered.
- Ensure all handlers wear the proper PPE's during handling of dead stock.
- In winter months, carcasses can be stored frozen until the ground thaws to allow for burial.
- Arrange for direct delivery to renderer or pick up of carcasses if rendering is selected as the disposal method.
- If an animal is suspected of being diseased, they must be reported to authorities. They cannot be disposed of naturally or through rendering.

• Specified Risk Material (SRM) regulations must be followed when disposing of cattle. A permit is required to receive, remove from any premises, use, convey (other than from one area to another on the same premises), treat, store, export, sell, distribute, confine or destroy SRM in any form, including bovine dead stock from which SRM has not been removed. The location receiving the SRM must have a separate permit. The SRM permit application form is available online at: www.inspection.gc.ca/bse

CONSIDERATIONS WHEN DISPOSING OF DEAD ANIMALS

DEATH	OPTIONS BASED ON MUNICIPAL / GOVERNMENT REGULATIONS	RESTRICTIONS
Injury including euthanasia by firearm or captive bolt gun	 Rendering Burial (within weight restrictions) Composting Incineration Landfill 	 Carcasses in excess of 2500 kg will require special permits for burial, composting and landfill disposal Carcasses must stay intact during handling for rendering
Fire	Burial (within weight restrictions)CompostingIncineration	 No rendering Carcasses in excess of 2,500 kg will require special permits for burial, composting and landfill disposal
Barbituate overdose by veterinarian	IncinerationDisposal where no animals can be scavenging	No renderingNo burialNo scavenging
Disease	Per governing regulations or guidance only	Cannot be disposed of through rendering, burial, composting or at a landfill

4. LIVESTOCK INCIDENT RESPONSE

4.1 Tornado or High Winds

Alberta averages 15 tornadoes per year and numerous severe thunderstorms. Tornado season extends from April to September with peak months in June and July. Tornadoes usually hit in the afternoon and early evening, but they have been known to strike at night.

Livestock are often victims of these weather events.

Definitions

- Wind Warning: A sustained wind of 60 km/h or greater is expected to last for 1 hour or more, or a wind gust of 90 km/h or greater is expected.
- **Tornado Watch**: Conditions are favorable for the development of severe thunderstorms with the potential to produce tornados.
- **Tornado Warning**: There is a confirmed sighting of a tornado on the ground, when weather spotters report funnel clouds with a rotating thunderstorm, or a tornado signature is detected on Doppler radar.

Entities Impacted

- All animals in immediate area or path of tornado activity.
- Moderate to catastrophic Impact on animal health and welfare may include pain and suffering, loss of housing/containment, loss feed and water source.

Response

Tornado warning or watch issued

Watch for tornado danger signs:

- Dark, often greenish sky.
- Wall cloud, an isolated lowering of the base of a thunderstorm.
- Large hail.
- Cloud of debris.
- Funnel cloud.
- Roaring noise.
- Tornadoes may occur near the trailing edge of a thunderstorm and be quite visible.
- Livestock sense tornadoes in advance. Be aware: animal behavior may change before, during and even after a disaster.
- Identify CFO's in the path of the tornado.
- Issue standby notice to veterinary response team, Alberta LIS and livestock response team.

After a tornado has passed:

- Dispatch veterinary response team for site triage at impact area (Section 3.7 Triage).
- Request brand inspectors respond to loose livestock in impact area and owner identification at site of temporary housing and containment (Section 3.2 Housing and Containment).
- Dispatch livestock handlers to impact area if needed.
- If determined that temporary housing is required, implement the housing and containment aspect of this plan (Section 3.2 Housing and Containment).

- Dispatch trailers to transport loose animals to temporary housing (Section 3.2 Housing and Containment and Section 3.3 Transportation of Livestock).
- Ensure access to euthanasia tools and personnel to euthanize animals are available at the facility and at temporary housing area (Section 3.8 Euthanasia).
- Dead stock disposal site to be identified (Section 3.9 Dead Stock).
- Watch out for fallen power lines or broken gas lines and report them to the utility company immediately. Livestock are very curious and will be drawn to downed powerlines. Herd them away from all power lines.
- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area.
- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety.
- When entering damaged barns or farm structures, use extreme caution. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals closely. Injuries may include impalements and lacerations from flying debris. Notify veterinary response team of location of injured animals.
- Animals that are loose or unable to be contained at the impact site will need to be relocated to the designated temporary housing facility.
- Animals that require euthanasia must be euthanized as soon as it is safe to do so. Animals cannot be transported for euthanasia, they must be euthanized where they are located.
- Injured animals that meet standards for transport can to be moved to designated triage site.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Long term temporary housing and feed supplies may need to be established until animals can return home.
- Animals may need to be sold if the provision for temporary housing is unable to be secured.
- Feedstuff may need to accessed for producers who lost source of feed source during the event.
- Dead stock will need to be disposed of as soon as possible to prevent disease spread, public health and environmental issues.
- All housing areas in the impact area will need to be thoroughly cleaned and cleared of debris. Fencing and facilities repaired or replaced before animals can return to farm.

4.2 Building Collapse

It is not uncommon for farm structures to collapse. This can occur due to heavy snowfall or due to adverse weather such as tornados or high winds. Livestock that are commonly housed inside a farm building structure include hogs, poultry, dairy cattle and stabled horses. Livestock event centres that may also be at risk of collapse are riding or livestock show arenas.

Long term temporary housing and feed supplies may need to be established until animals can safely return. Animals may need to be sold if the provision for temporary housing is unable to be secured.

Entities Impacted

- All animals in the effected building and any animals that required access to it.
- Possible catastrophic impact on health and welfare including pain and suffering, loss of housing/containment, loss of feed and water source.

- Identify facility affected by building collapse.
- Locate facility on municipal and determine type and number of animals housed in facility.
- If event facility, confirm if animals are currently present and if so type and number.
- Issue standby notice to veterinary response team, Alberta LIS and livestock response team.
- Dispatch veterinary response team for site triage (Section 3.7 Triage).
- Dispatch livestock handlers to impact area if needed.
- If determined that temporary housing is required, implement the section 3.2 Housing and Containment of this plan.
- Dispatch trailers to transport loose animals to temporary housing (Section 3.2 Housing and Containment and Section 3.3 Transportation of Livestock).
- Ensure access to euthanasia tools and personnel to euthanize animals are available at the facility and at temporary housing area (Section 3.8 Euthanasia).
- Determine requirement for disposal of dead stock and means.
- Upon arrival, obtain information on whether there are people inside the building. As an example, was the collapse during the milking process at a dairy? How many competitors were present at competition?
- Never enter an unstable structure to rescue animals. Human safety always takes precedent over that of an animal.
- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area.
- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety.
- For partial collapses, only evacuate animals from areas where animals are accessible and building is stable.
- When entering the structure, use extreme caution. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals for injuries. Only mobile animals can be removed from the facility. Non-ambulatory animals must be euthanized where they are found. Animals that require euthanasia must be euthanized as soon as it can safely be done. Animals cannot be transported for euthanasia but must be euthanized where they are
- Injured animals are to be moved to designated triage site. If triage has been established away from the incident site, only animals that meet standards for transport are to be moved to designated triage area.

- Remove dead stock to designated disposal site (Section 3.9 Dead Stock).
- All animals that are loose or unable to be contained at the farm or facility will need to be relocated to the designated temporary housing facility.
- Means and methods of dead stock will need to be determined and animals removed to designated disposal site (Section 3.9 Dead Stock).
- Long term temporary housing and feed supplies may need to be established until animals can return home.
- Animals may need to be sold if the provision for temporary housing is unable to be secured.

4.3 Flooding

Floods are the most frequent natural hazard in Canada. They can occur at any time of the year and are most often caused by heavy rainfall, rapid melting of a thick snow pack, ice jams, or the failure of a natural or man-made dam.

Entities Impacted

- All animals in impacted area.
- Moderate to catastrophic impact on animal health and welfare may include pain and suffering, hypothermia, loss of housing / containment, feed and water.

Response

Flood Warning/Watch Issued

- Identify all livestock facilities on floodplain. Determine animal type and the number of animals in impact area.
- Identify and confirm livestock evacuation facilities in unaffected area of the municipality (Section 3.4 Evacuation).
- Issue livestock evacuation alert to all producers as soon as risk of flood risk identified.
- Initiate municipal evacuation response if need to assist producers.
- If deemed necessary implement the Housing and Containment aspect of this plan (Section 3.2 Housing and Containment).
- Issue standby notice to veterinary response team, Alberta LIS and the response team.

Active Flooding

- Dispatch livestock handlers to impact area if required.
- Continue evacuation alert or elevate to evacuation order of livestock from all accessible flood areas.
- Determine requirement for disposal of dead stock and means.
- If animals are unable to be evacuated, ensure that they are able to get to higher ground on their own. Do not lock them up in barns or paddocks. Never release animals on roads unless the roads are closed to traffic.
- All animals have the ability to swim except for chickens.
- Horses are able to withstand water up to their bellies from 48 72 hours.
- Livestock have a natural instinct to move away from flood waters. They generally seek higher ground if possible.
- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- All animals that are loose or unable to be contained at the farm or facility will need to be relocated to the
 designated temporary housing facility.
- Any animals that become stranded will have to be provided feed until rescue can occur or water subsides.
- Water rescue is the most dangerous of all technical rescues. If animals require rescue from water there must be a risk assessment performed and only performed by individuals trained in water rescue.
- Dead stock to be moved to designated disposal site (Section 3.9 Dead Stock).
- Allow animal owners back in when deemed safe.
- Facilities (barns, pastures and paddocks) will need to be inspected and repaired before animals return.
- Feed may need to be sourced if feed supplies and pasture were lost in flood.
- Water quality will should be tested before animals resume consumption in flood affected areas.
- Alternative power sources may need to be provided if farms are without power in order to access water, fans, ventilation or milking equipment.

4.4 Thunderstorm / Lightning Strikes

Thunderstorms are a very common weather event in Alberta. These storms are often accompanied by lightning strikes, heavy rains, strong winds and hail. Livestock are killed by lightning strikes every year and it is not uncommon for multiple animals huddled together to be killed by one strike. The high winds that may accompany the storm can also impact livestock in the vicinity.

Thunderstorms can be extremely dangerous when they occur during an outdoor livestock event (i.e 4-H show, jumping event, rodeo). Animals will react and may act up or try to flee during a storm injuring handlers and spectators.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic impact on animal health and welfare may include pain and suffering, loss of housing/containment, risk of injury, loss of feed and water sources.

- Identify CFO's or livestock events in the path of the thunderstorm.
- Issue thunderstorm alert of possible to affected areas.
- Livestock sense weather changes and it does impact their behaviour. Be aware animal behaviour may change before, during and even after a storm.
- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area. Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals closely. Common injuries may include impalements and lacerations from flying debris or burns from lightning strikes. Request veterinary care if required.
- Animals that require euthanasia must be euthanized as soon as can safely be done. Animals cannot be transported for euthanasia but must be euthanized where they are located.
- Ensure access to euthanasia tools and personnel to euthanize animals are available within the impact area and at temporary housing area (Section 3.8 Euthanasia).
- If determined that temporary housing is required, implement the Housing and Containment aspect of this plan (Section 3.2 Housing and Containment).
- Dead stock will need to be disposed of as soon as possible to prevent disease spread, public health and
 environmental issues. Producers may need assistance if animals exceed the 2,500 kg limitations or they do
 not have access to a burial site.
- Dead stock disposal method and means to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Temporary housing may need to be identified if structural damage prevents animals from being housed in their existing facities.

4.5 Winter Storm / Blizzard

Winter weather condition in Canada create many challenges for livestock producers. Blizzards can easily reach disaster status if conditions are right.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic Impact on animal health and welfare may include starvation, dehydration, death, hypothermia, power loss, suffocation and loss of housing.

- Monitor weather conditions snowfall amounts, winds, drifting.
- Possible municipal assistance provided to producers:
 - o Provide heavy equipment to assist producers in accessing animals.
 - Rescue/recovery of stranded animals.
 - Airdrop feed.
 - Disposal of dead stock.
- Livestock will often move away from the force of an oncoming storm, unless they are moving toward shelter that is known to them.
- Extreme conditions during blizzards can cause both livestock and humans to become panicked or confused.
- Livestock may avoid traveling directly into the force of an oncoming storm.
- Livestock may resist or be hesitant to leave even limited shelter behind during storm conditions.
- Dead stock disposal site or method to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Dead stock may not be identified or accessible until snow melts.

4.6 Grass Fires

Grass land or prairie fires are very common in Alberta. These fires can happen year-round and are often fueled by drought conditions and high winds. Common causes of grass fires are burn barrels, tractors and cigarette butts. These fires can move very quickly across open lands and farms and ranches are often the most vulnerable facilities.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic Impact on animal health and welfare may include pain and suffering, loss of housing/containment and access to feed and water.

- Issue alert identifying affected areas.
- Grass fires normally happen with no warning and will travel very quickly due to high winds. In many instances, there is no time for evacuation of livestock.
- If there is time to issue evacuation alert to producers in the fire path, assistance will most likely be needed for transport and loading due to the time restraints. Producers will most likely be able to transport one trailer load of animals, unable to return for the balance of the animals.
- Evacuation site will need to be identified if owners are able to evacuate animals in fire path.
- Municipality will need to provide safest route out and notify evacuees of any closed roads.
- Open gates or cut fences to allow animals to escape if necessary but only do so if safe and not onto a road. If able to so, spray some indication of ownership on animals such as horses. This will allow for easier identification when animals are captured.
- Remove nylon halters or blankets from horses, if possible, as they will melt to the animal if the animal is near the fire.
- Livestock do not begin to fear fire until it comes within their sensory range. Once smoke and heat enter this sensory range it can invoke varying reactions from nervousness, to panic, to aggressive and resistive escape attempts.
- Horses, llamas and alpacas in particular will panic at approaching fire. Their instinct will be to flee. They are often not easily handled or managed. This elevated fear level can last for several days after the fire.
- Animals are often injured fleeing from the fire and from the first responders.
- If animals are burned or exposed to excessive smoke, veterinary care will be required. Veterinarian response team will need to be dispatched to site of fire, evacuation location or animals transported to veterinary clinic.
- If a grass fire destroys barn and fencing, temporary housing may be necessary (Section 3.2 Housing and Containment).
- Feed sources may be destroyed by fire. This can include hay, grain and pasture. Emergency sources may need to be identified and provided.
- Dead stock method and means need to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Loose animals will need to be rounded up and either returned to owner, if known, or taken to evacuation / temporary holding facility.

4.7 Barn Fires

It only takes 3 to 4 minutes for a barn to be filled with smoke and only 6 minutes for it to be completely engulfed. Combined with the facts that barn fires often start at night, are not immediately detected and the response time of the fire department is longer due to distance to farms, barn fires normally will result in total loss of structure.

Dependent on number of animals and type of production, loss of animal life is often high. Animals kept in individual stalls are challenging and time consuming to remove from the facility (i.e. pigs, horses). Other animals are impossible to get out of housing style they utilize (i.e. layers).

Entities Impacted

- All animals in impact area.
- Catastrophic impact on animal health and welfare may include pain and suffering from burns and smoke inhalation, loss of housing/containment and access to feed and water.

- Instruct dispatch to ask if any stock persons are in the barn and to direct the owners and staff to stay out of the barn and wait for fire responders to arrive.
- If possible, have dispatch obtain extra information, such as type of animal involved and number of animals.
- Be on the lookout on the way to the fire for animals that may have gotten loose or have been released from the site of the fire.
- Upon arrival ask about, or look for, other hazards, such as gas or diesel tanks, stored fertilizers, hay or dangerous animals.
- If owner present, find out how many animals are still in the barn.
- Ask where the closest water source is, including a pond or dug out.
- If there is a chance of the structure fire spreading to a nearby field, request the farmer begin plowing a dirt fire barrier around the barn area, without getting too close to the barn.
- AT NO TIME SHOULD A FIRE FIGHTER OR ANYONE ELSE PUT THEIR OWN PERSONAL SAFETY IN JEOPARDY TO SAVE AN ANIMAL FROM A BARN FIRE.
- If a barn has exterior stall doors, whenever possible use these for evacuating animals instead of going inside the barn.
- Once barn roof is on fire, animals should only be accessed from outer walls. This can be done by using
 existing doors or possibly cutting a large hole in the side of the barn. DO NOT GO INSIDE THE BARN THE
 ROOF MAY COLLAPSE!
- Animals become quickly frightened and disoriented in a fire. They will not run out of the barn on their own. Rescuers need to use extreme caution and judgement when attempting to vacate a burning barn. You must never put your own life in danger for the animals.
- If there is a series of connected barns or other barns in close proximity, it may be more effective and safer to evacuate the animals in those barns versus the barn that is on fire.
- The animals closest to the doors should be the first ones evacuated as they are the easiest to get to.
- It takes at least 1 minute per horse to catch, halter and lead a minimum of 100 feet. A horse will be easier to move if it is blindfolded. Using a towel under a halter works very well if the horse is halter broke and not panicking.
- Pig barn fires are the most difficult to deal with. Due to the design of the barns, the high number of pigs in the barn and the difficulty moving pigs, these barns are almost impossible to evacuate.
- One of the most difficult parts of barn fires for owners and first responders is the smells and sounds that occur when animals are involved, especially pig barn fires. Barn fires have the potential for loss of thousands of animals. Prepare yourself and your team.

- Livestock will run back into a burning barn. When removing animals from a barn they should be taken clear of the incident scene. Preferably to corrals or trailers where they can be locked up and kept out of harm's way.
- If there is a chance any of the animals have embers under their hair, they must be hosed off. Embers can smolder under their hair for several hours leading to burns. Hose all animals off as they are removed from the structure.
- Pigs in confinement are especially afraid of light, which makes them difficult to move out of a barn into the sunlight or bright lights of a truck.
- In the case of a poultry barn fires, the birds are almost impossible to evacuate. Virtually all poultry barn fires result in a 100% loss. Laying hens are commonly housed in cages. Chickens raised for meat, turkeys and ducks are usually loose in the barn.
- Pigs, poultry and dairy cows from a heated barn must be protected from the cold if they are evacuated in the winter.
- The leading cause of death in barn fires is smoke inhalation. Horses can experience a delayed reaction to smoke inhalation. For this reason, all horses involved in a barn fire should be directed to veterinary care, even if they look healthy.
- An evacuation location for surviving animals will need to be determined and temporary housing established
 for all animals involved in the fire as they will be unable to be housed in the facility that was loss. Rarely do
 producers have empty barns or enough space in remaining facilities to house the animals on their own farm
 (Section 3.4 Evaluation).
- Feed sources may be destroyed by fire. This can include hay, grain and pasture. Emergency sources may need to be identified and provided.
- Dead stock disposal method and means need to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Loose animals will need to rounded up and either returned to owner if known or taken to evacuation / temporary holding facility.

4.8 Drought

Drought is a recurrent feature of climate involving a deficiency of precipitation over an extended period of time, resulting in a water shortage. Drought may be caused by combinations of insufficient snow accumulation, hot and dry weather, or a delay in rainfall. Drought can impact crop production (feedstuff such as hay), pasture availability and water availability and water quality.

Entities Impacted

- All animals in impact area.
- Moderate to Catastrophic impact on animal health and welfare may occur due to starvation, dehydration, toxic plants and water toxicity.

- Monitoring of drought conditions around the municipality.
- Signs of dehydration in livestock:
 - o rapid, shallow breathing.
 - o reluctance to move.
 - weight loss.
 - o drying of mucous membranes (e.g., eyes, nose, mouth).
 - o decreased skin flexibility.
- Signs of heat stress in livestock:
 - o increased respiration rate or panting.
 - excessive salivation.
 - o elevation of the head to make it easier to breathe.
 - open mouth breathing.
- Signs of water toxicity: Salivation, increased thirst, vomiting (regurgitation), abdominal pain, diarrhea, ataxia, circling, blindness, seizures, wandering aimlessly, bumping into things and partial paralysis.
- Lack of rain and evaporation due to hot weather can cause high concentrations of sulphate in water. Sulphate concentrations over 1,000 milligrams per litre can cause neurological trauma in cattle and can kill at levels over 7,000 milligrams. Toxic algae can also grow in low water situations.
- Monitor toxic plants in the area and notify producers of livestock risk plants.
- Municipality may be asked to assist in accessing emergency feed supplies or emergency water resources.
- Request for assistance with an animal seizure in the case of neglect.

4.9 Hazardous Material Spill

Livestock can be exposed to hazardous material through train derailments, motor vehicle incidents, chemical spills, failure of containment, equipment failure. Hazardous material can be in the form of flammable and combustible materials, toxic materials, corrosive material, oxidizers, aerosols or compressed gases.

Entities Impacted

- All animals in impact area.
- Moderate to Catastrophic impact on animal health and welfare may occur due to chemical burns, exposure to noxious gases and water toxicity.

Response

- Immediate notification of all producers in immediate vicinity of incident.
- Determining if evacuation or shelter-in-place is required for livestock producers.
- Facilitating evacuation orders or shelter-in-place protocols for livestock producers.
- If evacuation of producers is required, the municipality may need to coordinate with other agencies the feed and checking of livestock left to shelter in or develop plan to allow producers in for daily care.
- Arrangement for transportation for evacuation may be required.
- Monitoring of water and air quality in affected areas may be required. Communication of results will need to producers.
- Decontamination of animals may be required.
- Testing of dead stock before disposal to ensure they are not contaminated.
- Long term contamination will need to be monitored. Testing of water, soil and feed sources may be required after the event has ended.

4.10 Motor Vehicle Incidents

Motor vehicle incidents involving livestock is the most common livestock emergency event to occur in Alberta. Every day Alberta highways have hundreds of vehicles transporting thousands of animals. Motor vehicle incidents can range from a pickup truck transporting one animal in a stock rack to a commercial livestock trailer transporting thousands of chickens. These events are also unique in that first responders are directly involved in all incidents and are incident command.

Entities Impacted

- All animals involved the incident.
- Minimal to catastrophic impact on animal health and welfare may include pain and suffering due to injury, death and fear based stress.

Response

- These are general guidelines for response to motor vehicle incident. Details for extrication techniques and trailer specifics can be obtained through livestock emergency response training.
- See Section 3.1 General Livestock Handling.
- Be alert for loose livestock on way to the incident. Animals that escaped the vehicle may have traveled away from the scene.
- Before exiting the vehicle, evaluate the scene for loose and dangerous animals or any other hazards.
- If there are loose animals on the roadway, move them off the roadway and gather them in one place.
- Request the assistance of Alberta LIS for all livestock related incidents.
- Once the necessary resources are identified, request the assistance of dispatch to notify the pre-established livestock resources and request their assistance.
- Keep all bystanders and media away from the scene and the animals.
- Set up containment before releasing any animals from the trailer.
- If the animal(s) cannot be removed through a door, the trailer must be examined to determine the best way to dismantle the trailer and remove the animal.
- When removing animals from a trailer never allow people to become trapped with no way out. Animals, gates, walls, etc. must never block an escape route of a handler.
- When unloading animals try to keep people and other distractions out of their line of vision. Tarping panels can be beneficial to animal movements.
- Following a motor vehicle incident that involves livestock dead animals may need to be removed from the scene and the area cleaned.

4.11 Animal Neglect / Seizures

Though not a common part of most disaster plans, there are instances where cases of animal neglect or seizure of flocks or herds have required the assistance of municipalities and communities. There have been several cases in Alberta where numerous animals, at times in excess of 100, have been seized and removed from a premises. In such cases the producers themselves cannot or will not assist with the handling or care of the animals. Enforcement agencies have required local assistance for transport of seized animals, temporary housing, access to feedstuff and disposal of dead stock.

Entities Impacted

- All animals involved in neglect or seizure event.
- Moderate to catastrophic impact on animal health and welfare may occur due to starvation, dehydration and poor body condition.

Response

- Assist in securing temporary housing facilities and transporters identified through disaster plan.
- Assist in accessing a local feedstuff source.
- Assist with identifying method and means of dead stock removal.
- Assist with the identifying producers to assist with removal and handling of animals.

Appendix A: Livestock Evacuation Documentation Form

Date:								
	OWNER INFORMATION							
Owner's i	name:							
Address:								
Premises	Identific	ation	Number	(PID):				
Telephon	e numbe	er:			·			
Owner sig	gnature:							
					TF	RANSPOR	TER INFORMATION	
Transport	ter's nam	ne:						
Telephon	e numbe	er:						
Type of li	vestock:						Number of livestock transported:	
Identifica	tion (bra	nd, ta	ttoo, etc	.)				
Location	livestock	picke	d up fror	n:				
Transport	ter signat	ture:						
Was own	er preser	nt for	transpor	t? Yes	s/No			
						RECEIVE	R INFORMATION	
Receiving	; name:							
Receiver location:								
Premises Identification Number (PI		(PID):						
Telephone number:				·				
Receiver	signature	e:						
Was own	Was owner present for delivery? Yes/No							

Appendix B: Biosecurity

Biosecurity is about keeping animals healthy. It is the principles, actions, precautions and protocols that protect the health of animals by preventing the transmission of disease through physical barriers and hygiene practices. Use this form to record personnel movement on and off the premises during an emergency. Visit www.albertaanimalhealthsource.ca/category/biosecurity for biosecurity information and resources.

PERSONNEL CHECK IN SHEET											
DATE	NAME	COMPANY / ORGANIZATION	LICENSE PLATE NUMBER	PURPOSE OF VISIT	HAVE YOU BEEN IN CONTACT WITH INJURED OR DISEASES LIVESTOCK?						

Livestock Emergency Response Guide

Appendix C: Mental Health

Emergency events can significantly impact the social well-being of equine owners, custodians and other personnel involved. Equine owners or custodians may face many different stresses during an emergency that can personally impact their mental well-being. As well, the mental well-being of associated staff may also be affected. It is important that organizations provide resources to staff and members of the industry to help them identify symptoms and cope properly with the situation. These resources might come in different forms.

Many people often neglect to confide their internal struggles to others, it is important that others around them observe potential symptoms of inability to cope. The checklist below is provided to act as a resource for persons to assess their own, as well as others state-of-mind and determine whether they should seek help.

People react in different ways to trauma, experiencing a wide range of physical and emotional reactions. Some reactions or symptoms endured as a result of a traumatic event are:

EMOTIONAL & PSYCHOLOGICAL SYMPTOMS	PHYSICAL SYMPTOMS
Shock, denial, or disbelief	Insomnia or nightmares
Confusion, difficulty concentrating	Fatigue
Anger, irritability, mood swings	Being startled easily
Anxiety and fear	Difficulty concentrating
Guilt, shame, self-blame	Racing heartbeat
Withdrawing from others	Edginess and agitation
Feeling sad or hopeless	Aches and pains
Feeling disconnected or numb	Muscle tension
	Loss of appetite

Source: https://www.helpguide.org/articles/ptsd-trauma/emotional-and-psychological-trauma.htm

If you notice yourself or someone else experiencing these symptoms, it might be time to talk with them and discuss qualified medical attention.

Alberta Health Services provides a 24/4 Mental Health Help Line for those who are looking for further direction in dealing with their mental well-being. The Mental Health Help Line provides:

- Confidential, anonymous service
- Crisis intervention
- Information about mental health programs and services
- Referral to other agencies if needed

They can be reached by calling 1-877-303-2642 (www.albertahealthservices.ca/info/service.aspx?id=6810)





FARM EMERGENCY PLAN

EGAL LAND DESCRIPTION:							
RURAL ADDRESS (Blue Sign):							

PLAN LAST REVISED:

Disclaimer

This Farm Emergency Plan Template has been prepared to serve as an aid for developing plans to avoid or reduce adverse consequences that might otherwise occur for farmers in the event of a disaster.

The information contained in this template was compiled from information found in the following documents:

Canada FarmSafe Plan

https://www.casa-acsa.ca/en/resources/canada-farmsafe-plan

Cowichan Valley Regional District Farm Emergency Plan

https://www.cvrd.ca/DocumentCenter/View/81159/Farm-Emergency-Planning-Template-May2

Farmsafe Australia

https://www.farmsafe.org.au/content/product/Emergency%20Planning%20%26%20Info/#list

Government of Canada – Emergency Preparedness for Farm Animals https://www.getprepared.gc.ca/cnt/rsrcs/pblctns/frm-nmls/index-eng.aspx

Rocky View County cannot ensure that by following this template a farmer can avoid bodily injury or property damage. Therefore, we make no warranty, expressed or implied, nor assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information, product or process disclosed and assume no liability for any injury, death or property damage which may occur in connection with any disaster.

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Attachment C - Rocky View County Farm Emergency Plan

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PURPOSE

Good animal management includes ensuring the welfare of our animals before, during and after emergencies.

Events such as fire, storms and flooding can result in separation between the animals and their owners, and possibly injury or death.

This *Farm Emergency Plan* has been developed to outline the steps to take during an emergency, in order to ensure the health and safety of farm personnel as well as the animals.

KEY CONSIDERATIONS

- Will the animals be safer left where they are or will they need to be moved to a safer place if time allows?
- What items are required in order to support the animals?
- If there is a power failure, will a back-up generator be required for watering, feeding, milking or ventilation of livestock?
- What temporary accommodation or feeding options are available if my property is damaged?
- What management strategies can be implemented for the disposal of carcasses?

BEFORE AN EMERGENCY

Practice this Farm Emergency Plan and discuss with neighbours, friends, and family!

List of Hazards

□ Animal Disease

T	he event	s that	are n	nost I	ikel	y to	threat	ten t	he 1	farm l	ivest	ock	and	asset	s inc	ud	e:

_	7 ti iii Tiai Biocacc
	Flooding
	Hazardous Material Spill
	Forest/Wildland Fire
	Prolonged Power Interruption
	Severe Windstorm
	Structure Fire
	Tornado
	Barn Collapse
	Extreme Temperatures Hot/Cold
	Traffic Collisions involving Livestock
	Shortage of Water/Feed
	Pipeline Oil/Gas Well Incident
	Other
П	Other

Farm Information

Key information about the farm includes the following:

Farm Name:			
Land classification on Property Assessment Notice:			
Premises Identification (PID) Number			
Legal Land Description:			
Civic Address (Blue Sign):			
Directions (nearest crossroad)			
Owner name(s):			
Mailing Address:			
Phone – Home:			
Phone – Cell:			
Email Address:			
Number of individuals normally on the farm:	Family	Staff	Tenants
Other information:			

Owner Name:	Phone Number:
LOCATION 2 - Legal Land Description:	
Premises Identification (PID) Number	
Civic Address (Blue Sign):	
LOCATION 3 - Legal Land Description:	
Premises Identification (PID) Number:	
Civic Address (Blue Sign):	
LOCATION 4 - Legal Land Description:	
Premises Identification (PID) Number:	
Civic Address (Blue Sign):	
LOCATION 5 Legal Land Description:	
Premises Identification (PID) Number:	
Civic Address (Blue Sign):	

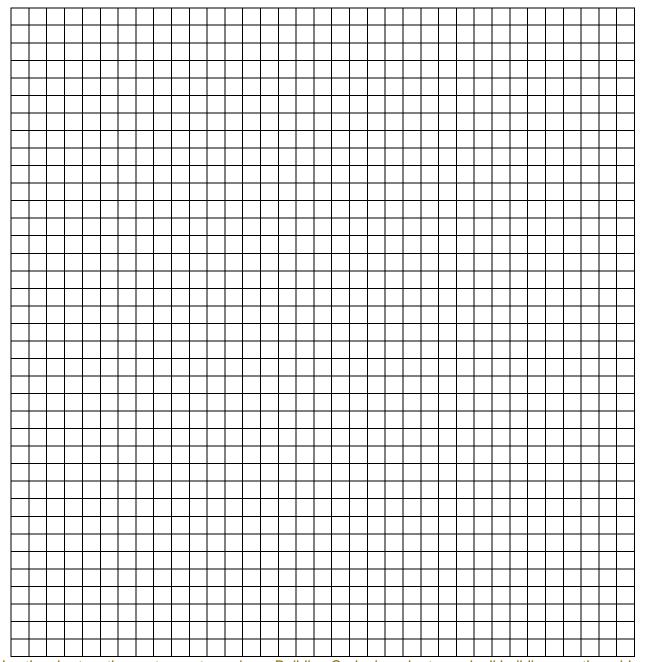
Emergency Contacts

Name / Organization	Telephone	Email / Website
Farm Personnel		
Farm Manager (other than		
owner)		
Farm Staff		
Tenant on the Farm		
Off-Site Contact		
Local Resources		<u> </u>
Electrician		
Feed Supplier		
Fuel Dealer		
Plumber		
Veterinarian		
Other (i.e. Equipment systems		
help number)		
Relocation Resources		
Trucker / Hauler		
Agriculture Association		
Farm that may receive relocated livestock		
Friend / Neighbour		
Friend / Neighboui		
Support Resources		
Alberta Ministry of Agriculture	403.340.5322	https://www.alberta.ca/agriculture-and-
and Forestry		forestry.aspx
Rocky View County	403.230.1401	https://www.rockyview.ca/agriculture
Agricultural Services		
Faith Based Organization		
Diale Management		
Risk Management Insurance Agent (Detailed		
Insurance Information captured		
in After an Emergency Section)		

Farm Maps

The following maps support the emergency plan for the farm

FARM SITE MAP



Use the chart on the next page to assign a Building Code, in order to mark all buildings on the grid map – Notable items, dangerous goods and livestock numbers at each location are noted on the chart.

FARM SITE MAP BUILDING INFORMATION

Building Code	Building Description	Notable Items	Dangerous Goods (Y/N)	# of Livestock (if applicable)
H1	House			
G1	Garage / Shop			
B-ME1	Machine / Equipment Shed			
B-PB1	Poultry Barn			
B-HB1	Hog Barn			
B-MP1	Milking Parlour			
B-LB1	Livestock / Calving Barn			
B-PS1	Processing Shed			
B-LS1	Open-faced Livestock Shelter			
B-FB1	Fertilizer Bin			
B-GB1	Grain Bin			
B-CS1	Chemical Storage			
B-SIL1	Silage Pit			
B-MAN1	Manure Pit / Storage			
B-	Other / Miscellaneous			
MISC1				

^{*}If there is more than one building of the same type, use the letters with additional numbers

(Example: Main House = H1, Second House = H2, Third House = H3)

FARM SITE MAP LEGEND

P – Poison **E** – Explosive **MES** – Main Electrical Shutoff

C – Corrosive **H2O** – Water **FT** – Fuel Tanks (above/below

ground)

F – Flammable **MGS** – Main Gas Shutoff **MP** – Muster/Meeting Place

XF – Fire **SE** – Safety Equipment

Extinguishers

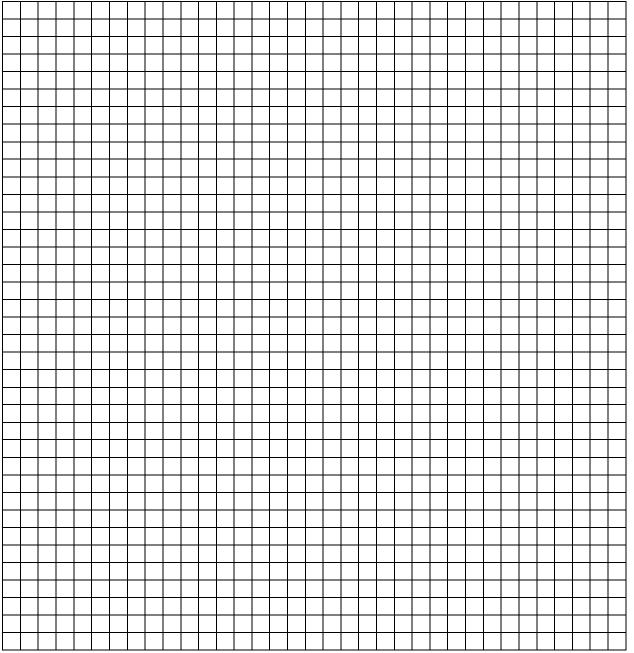
DID YOU KNOW?

Aerial maps of your property can be downloaded from the Rocky View County website for use in your *Farm Emergency Plan*

www.rockyview.ca

Click on COUNTYSERVICES then click on MAPS & ADDRESSING

Field Site Map



Use the chart on the next page to assign Field Codes on the grid map – Notable items, dangerous goods and livestock numbers at each location are noted on the chart.

Field Code	Legal Land Description (Identifier)	Notable Areas	Dangerous Goods (Y/N)	# of Livestock (if applicable)
F1	—			
F2				
F3				
F4				
F5				
F6				
F7				
F8				
F9				

LEGEND

P – Poison	E – Explosive	ES – Electrical Source
C – Corrosive	H2O – Water	FT – Fuel Tanks (above/below ground)
F - Flammable	XF – Fire Extinguishers	SE – Safety Equipment
≠ - Gate	≈ - Stream/Creek/Ditch	→ - Drain (Surface, Underground, Culvert)
Õ – Dugouts/Ponds/Water bodies	Dike or Berm	— - Fence
= - Road	- Railroad	B - Buildings

Livestock Inventory

Farm operations currently include the following animal types and numbers, with a range shown for livestock numbers that vary throughout the year.

Livestock Type	Number on Farm (range)
Dairy, Lactating	
Dairy, Non-lactating	
Young Dairy stock	
Bulls	
Cattle	
Bison	
Elk	
Horses, Donkeys	
Sheep	
Goats	
Swine	
Llamas and Alpacas	
Poultry	
Pets	

Refer to the attached list of animals by name, gender, and registration number.

Livestock Identification - Brands

Livestock Identification Services Ltd. Toll Free 1.866.509.2088 109, 264 Midpark Way SE Calgary, AB T2X 1J6

Livestock Identification Services has the legislated responsibility to provide livestock inspection services. The brand registry and the inspection system offer protection to all livestock owners against strayed or stolen livestock. Use the space below to insert pictures of your registered brands.

Premises Identification (PID)

The Premises Identification was established to plan for, control, and prevent the spread of animal diseases. Regulation requiring premises identification became law January 1, 2009 as part of the *Alberta Animal Health Act*. The PID program is also used as an early warning system to notify animal owners of a natural disaster such as a flood or wildfire that could affect their animals. https://www.alberta.ca/register-with-the-animal-premises-identification-program.aspx

Farm Vehicles and Response Equipment

The following vehicles and equipment are available for use during an emergency.

Vehicle / Equipment Type	Number on Farm (location)	Size / HP / Capacity	Number Available Nearby (location)	Location of Vehicle/Equipment keys
Tractor or Front- end Loader				
Plow or other Implements				
Livestock Trailer				
Passenger Car				
Pickup Truck				
Fire Hose (m or ft)				
Irrigation Sprinkler Gun				
Generator				
Safety Equipment (e.g., fire extinguishers, first aid kits)				
Livestock Fencing				
Portable Panels				
Heavy Trucks				
Construction Equipment				

Risk Reduction

Animal Disease

3.

Develop a Farm Biosecurity Plan

In order to develop a Farm Biosecurity Plan visit

The following includes actions that should be taken before animal disease threatens the farm.

	inspection.gc.ca/animal-health/terrestrial-animals/biosecurity/standards-and-
<u>princip</u>	les/proactive-management/eng/1374175296768/1374176128059?chap=0
	Identify potential concerns/problems Evaluate who and what enters and exits your farm
	Determine the risk level for specific diseases of concern
	Evaluate how diseases could enter and spread within and off the farm
	Target dieses against which the biosecurity plan will operate
	Identify preventative biosecurity measures that will manage or minimize the risk factors for a disease entry or spread
	Consult federal, provincial, regional, and municipal regulations
	Set limits and standards for the farm
	Establish uptake of the plan
	Implement the Biosecurity Plan
	s the Risks on the Farm
	Complete the Biosecurity Checklist located at:
	https://www.inspection.gc.ca/animal-health/terrestrial-
	animals/biosecurity/tools/checklist/eng/1362944949857/13629451116512
Livest	ock Traceability Systems
	Registered with the Premises Identification (PID) Program
	Animal Identification
	Animal Movement
Flood	ding
	tion Strategy 1
_	lowing list includes actions that should be taken before flooding threatens the farm.
	1.
	2
	2.

Mitigation Strategy 2 The following list includes actions that should be taken before flooding threatens the farm.		
	1.	
	2.	
<u> </u>	3.	
_	gation Strategy 3 following list includes actions that should be taken before flooding threatens the farm.	
	1.	
	2.	
	3.	
The f	cardous Material Spill following list includes actions that should be taken before a hazardous material spill atens the farm - https://www.ccohs.ca//oshanswers/prevention/toxic_safe.html#:	
Subs	stitute With A Less Hazardous Material Where Possible	
	Avoid using a toxic material either by eliminating its use (changing the method or process for example) or by substituting the toxic material with a less hazardous material. Obtain Safety Data Sheets (SDSs) for all possible substitute materials and find out abou all the hazards (health, fire, chemical reactivity) of these materials before making any changes. Choose the least hazardous materials that can do the job effectively and safely	
Use □	Good Ventilation Whenever Working with Toxic Materials Well-designed and well-maintained ventilation systems remove toxic vapours, fumes, mists, or airborne dusts from the workplace before workers are exposed. Removing the contaminated air reduces the hazard of toxic materials.	
Stora	age Containers Ensure storage area is clearly identified with warning signs, is clear of obstructions, and is accessible only to trained and authorized personnel. Inspect all incoming containers to ensure that the containers are undamaged and are properly labelled. Do not accept delivery of defective containers	

	Store toxic materials in the type of containers recommended by the manufacturer or supplier
_ _	Keep the amount of toxic material in storage as small as possible Inspect storage areas and containers regularly for any deficiencies, including leaking or damaged containers, expired shelf-life, or poor housekeeping – correct all deficiencies as soon as possible.
	Ensure that containers are tightly closed when not in use and when empty. Keep empty containers in a separate storage area and keep them closed, as they may contain hazardous toxic residue.
	Store containers at a convenient height for handling, below eye level if possible. Store material within the temperature range recommended by the chemical manufacturer/supplier.
	To contain spills or leaks, the toxic material containers should be stored in trays made of compatible materials. For larger containers such as drums or barrels, provide dikes around the storage area and sills or ramps at door openings. Storage tanks are above ground and surrounded with a dike capable of holding entire contents.
_	ge Location
Storag	e area for toxic materials should have the following characteristics:
	Well-ventilated and out of direct sunlight Store away from processing and handling areas, eating areas and protective equipment storage. This will reduce the amount of damage and/or injury caused in case of fires, spills, or leaks. If totally separate storage is not possible, use physical separation to keep toxics away from incompatible materials.
	Fire-resistant and constructed from non-combustible materials Emergency eyewash/shower stations are readily available nearby and are tested regularly.
	Suitable fire extinguishers and spill clean-up equipment are readily available.
It is vita	Handling of Toxic Materials al that people working with hazardous materials such as toxics are properly trained ing the potential hazards.
	Use only the smallest amount necessary to do the job. Prevent the release of toxic vapours, dusts, mists, or gases into the workplace air. Wear appropriate personal protective equipment to avoid exposure (eye, respiratory or skin) or contact with contaminated equipment/surfaces.
	Be aware of the typical symptoms of poisoning and first aid procedures. Do not return contaminated or unused material to the original container. Ensure containers are clearly labeled and inspect containers for leaks or damage before handling.
	Keep containers tightly closed when not in use.
	To prevent spillage, use proper tools to open containers and to transfer material.
	Pour toxic liquids carefully from the container to avoid splashing and spurting. Avoid any welding, cutting, soldering or other hot work on an empty container or piping until all toxic liquid and vapours have been cleared
	Maintain good housekeeping (e.g. clean surfaces, no accumulation of dust).

Disposing of Waste Toxic Materials

Careless disposal of any hazardous waste presents a potential hazard to many individuals who may not be trained or equipped to deal with unexpected hazardous materials and can also cause significant damage to the environment.

	Always review federal, provincial and local government requirements prior to disposal of toxic materials.
	Toxic chemical waste must NOT be flushed down sewer or sanitary drains as a method of disposal – this practice is illegal and unsafe.
	Do not mix hazardous waste materials with regular garbage destined for a landfill.
	Ensure that the waste container used is compatible with the waste material.
	Always ensure that the waste container is properly and accurately labelled.
	To avoid potential explosions, fires, or spills, do not mix incompatible mixtures in a single waste container.
	Do not overfill liquid waste containers. Only fill to about three-quarters capacity to allow for vapour expansion and to reduce the potential for spills occurring from moving overfilled containers.
	Store waste material in the same manner as the non-waste material. Always consult the MSDS for any specific storage and disposal recommendations from the manufacturer/supplier.
	Empty containers may contain toxic residues. Do not reuse the containers.
Good	Housekeeping
	housekeeping is a very important way to prevent exposure to toxic materials – A clean derly workplace is safer for everyone
	Have appropriate spill control equipment and procedures. Clean up any spills and build- ups of toxic materials promptly and safely using this equipment and procedures. Additional guidance may be available on the SDS or from the supplier/manufacturer.
	Avoid dry sweeping of solid materials. Use a pre-wetting technique or vacuum equipped with high efficiency filter(s) instead.
	Properly dispose of unlabelled or contaminated chemicals.
П	Ensure that all waste containers are compatible with toxic material and that the

containers are properly labeled and stored.

Forest/Wildland Fire

Complete a FireSmart Assessment of the Property at https://firesmartcanada.ca

	e Combustible Materials owing list includes actions that should be taken before a forest/wildland fire threatens the
	1
	2
	3
	re Resistant Materials ions listed below should be taken to increase fire resistant construction for farm sheds and
	1
	2
	3
Contact sprinkle	or Sprinkler Protection t Rocky View County Fire at 403.230.1401 to arrange for a site visit for assistance in er protection planning and layout design kler system can be used to protect the farm and should be established by taking the
-	g steps.
	Priority farm structures to protect with sprinklers are as follows:
	Sprinkler equipment that is available for prepositioning includes:
	Gather the equipment and set the sprinkler system in place to test the coverage and identify problems.

	Mount the sprinklers in appropriate locations and connect to a water source. If the roof is made of combustible material, such as wood, direct the sprinkler spray onto the roof. If the roof is metal, mount the sprinklers on a high point (such as the ridge) to create a high humidity zone around the building. When sprinklers remain on the ground, position them so their reach just wets the sides of the structure. Test the system for 2-3 hours, if possible. The sprinklers should create a humid		
	environment around the structure without allowing water to enter buildings. Secure the water source, protect it against radiant heat, and remove nearby combustible		
	materials.		
	Create simple instruction on how to set up and activate the sprinkler system (see "Checklist to Deploy Sprinklers") Prepare a simple map showing how to lay out the sprinkler equipment and water delivery system in an emergency. Attach the map to the <i>Farm Emergency Plan</i> . The instructions and map will allow others to help with farm protection.		
Prol	onged Power Interruption		
https:	//www.fortisalberta.com/outages/prepare-for-an-outage		
https:	//www.equs.ca/outages/what-to-do-during-an-outage/		
	Check breaker at transformer pole or breaker box to determine if the cause of the outage is a tripped breaker – look for lights at neighbour's homes to see if they are impacted. If it's not a breaker or fuse box, call power company to report the outage Turn off all electrical equipment to prevent overloading the circuits at your home – and the electrical system – when power is restored. Turn off all lights, except one inside and one outside, so that you and the power utility crews outside know that power has been restored. If lights are very dim or are unusually bright when power returns, turn of the power at the breaker or fuse box and call the power company again – there may still be a problem. Outage Use surge protectors for valuable electronics Use a wood burning or gas fireplace to stay warm - Keep a supply of wood on hand if you have a wood-burning fireplace. Know how to manually open or close your garage door or bypass your garage door opener. Consider installing a generator to provide power for must-run operations, especially on a farm.		
<i>Prep</i> . □	are for Power Outage for Livestock Create a warming area for younger livestock using straw bales and a plastic tarp.		
	Build a water reservoir with tanks or barrels covered by straw bales.		
	Be sure to keep extra feed and water on hand.		
	Keep barn doors closed to maintain heat, and window slightly open for air exchange.		
Othe	r Power Outage Tips		
	Head to the warmest point; your basement		
	Keep doors and blinds closed to keep heat in Keep flashlights, batteries, candles and matches on hand		

	Gather extra blankets and warm clothes
	Prevent carbon monoxide poisoning by not using outdoor appliances indoors
	Keep a supply of water and non-perishable food for you and your livestock Keep the fridge and freezer door closed
_	Neep the mage and neezer door closed
Seve	ere Windstorm/Tornado
_	ation Strategy 1
	ollowing list includes actions that should be taken before a severe windstorm/tornado ens the farm.
	1
	2
	3
The fo	ation Strategy 2 bllowing list includes actions that should be taken before a severe windstorm/tornado ens the farm.
	1
	1
	2
□ □ <i>Mitiga</i>	2 3 ation Strategy 3
□ Mitigatine for	2 3 ation Strategy 3 ollowing list includes actions that should be taken before a severe windstorm/tornado
☐ ☐ Mitigate The forthereat	2
□ Mitigatine for	2 3 ation Strategy 3 ollowing list includes actions that should be taken before a severe windstorm/tornado
☐ ☐ Mitigate The forthereat	2

Structure Fire

_	•	ng list includes actions that should be taken before a structure fire threatens the farm.
	1.	
	2.	
	3.	
_	•	Strategy 2 ng list includes actions that should be taken before a structure fire threatens the farm.
	2.	
	3.	
		Strategy 3 ng list includes actions that should be taken before a structure fire threatens the farm.
	1.	
	2.	
	3.	

Barn Collapse

2.

3.

Mitiga	ation Strategy 1 ollowing list includes actions that should be taken before a barn collapse threatens the
	1.
	2.
	3.
_	ation Strategy 2 ollowing list includes actions that should be taken before a barn collapse threatens the
	1.
	2.
	3.
_	ation Strategy 3 ollowing list includes actions that should be taken before a barn collapse threatens the
	1.

Extreme Temperatures (Hot/Cold)

The	Mitigation Strategy 1 The following list includes actions that should be taken before extreme temperatures threatens the farm.				
	1.				
	2.				
	3.				
	gation Strategy 2 following list includes actions that should be taken before extreme temperatures threatens arm.				
	1.				
	2.				
	3.				
	gation Strategy 3 following list includes actions that should be taken before extreme temperatures threatens arm.				
	1.				
	2.				
	3.				

Traffic Collisions involving Livestock

2.

3.

_	following list includes actions that should be taken before traffic collisions threaten tock.
	1.
	2.
	3.
•	following list includes actions that should be taken before traffic collisions threaten tock. 1.
	2.
	3.
•	gation Strategy 3 following list includes actions that should be taken before traffic collisions threaten tock.
	1.

Shortage of Water/Feed

Mitigation	Strategy	1
------------	----------	---

2.

The fol	llowing list includes actions that should be taken before a shortage of water/feed
threate	ens the farm.
	1.

□ 3. ______

Mitigation Strategy 2

The following list includes actions that should be taken before a shortage of water/feed threatens the farm.

1.	
2.	
3.	

Mitigation Strategy 3

The following list includes actions that should be taken before a shortage of water/feed threatens the farm.

1.			
2.			
3.			

Pipeline Oil/Gas Well Incident

Mitigat	tion	Stra	teav	1

The following list in	ncludes actio	ns that shou	ld be taker	n before a	a pipeline	oil/gas	well	incident
threatens the farm	١.							

	1.
	2.
	3.
The	gation Strategy 2 following list includes actions that should be taken before a pipeline oil/gas well inciden atens the farm.
	1.
	2.
	3.
The	gation Strategy 3 following list includes actions that should be taken before a pipeline oil/gas well incidenatens the farm.
	1.
	2.
	3.

Commercial Insurance

Farm Emergency Plan.

Insurance coverage is an important step in managing risk before an emergency. Producers should ensure that they have appropriate coverage for their assets, such as livestock, buildings, equipment, fences, and crops. In general, federal, and provincial disaster recovery programs will only cover perils for which private coverage cannot be obtained.

Offig CC	ver penis for which private coverage carnot be obtained.
	I meet with my insurance agent or broker at least annually to review my coverage
	I understand my policy and am aware of what is included and what is excluded
Some	Cup Power actions may be required before an emergency to ensure backup power supply can keep equipment working in a prolonged power outage.
	Identify the critical farm operations that depend on electrical power by priority. a)
	b)
	c)
	d)
	Gather or acquire the power equipment needed to provide backup power, including electrical cords, fuel, lubrication, and filters for generators.
	Set the backup generators in place and connect to the critical equipment that requires power. Confirm that the generator is disconnected from the power grid, to avoid backfeed.
	Start the generator(s) to test the system for at least 1 hour, if possible. Confirm that the power loads are sufficient to operate the priority equipment. Note that fuel use rate and estimate how long system can provide power without service or refueling.
	Create instructions on how to set up the backup power system (see "Checklist for Operating Backup Generator"). Prepare a diagram to show how and where the equipment should be laid out and connected in an emergency. Attach the map to the

Emergency Kits

Assemble emergency kits containing necessities and important information for you and your animals. The kits should include information and items you can use at home or take with you in case you must evacuate.

Suggested Personal Grab 'n Go Kit (personalize for your needs & keep with you at all times)

Water and Food for each person for at least three days	Flashlight/radio
Nutritious foods (dried fruits, granola bars, nuts, beef	Whistle
jerky)	
Personal medications	Emergency blanket and garbage
	bags
Personal toiletries	Extra pair of eyeglasses
Dust masks and gloves	Extra money, coins, phone cards
Family photos (recent)	Book and/or games
Personal papers (copies of insurance, emergency	
contacts, prescriptions and identification)	

Suggested Car Kit (keep up car maintenance and fuel so you don't run out)

Bottled water (4 litres/person x 3 days)	First aid kit
Nutritious foods (dried fruits, granola bars, nuts, beef	Fire extinguisher
jerky)	-
Comfortable, sturdy walking shoes	Flashlight (extra batteries)
Warm blanket	Flares, candles with matches & jar
Heavy-duty work gloves (leather)	Ziploc bags, toilet tissue
Dust mask and gloves	Hardhat
Change of clothing	Large, sturdy backpack
Road map and compass	Deck of cards, book
Shovel and sand, kitty litter or other traction aids	Ice scraper and brush
Duct tape and garbage bags	Booster cables

Suggested Farm Emergency Kit

Current list of all animals, including their location and records of feeding, vaccinations, and tests.
Supplies for temporary identification of animals such as plastic neckbands and permanent markers to label animals with farm name, address, and telephone number
Basic First Aid Kit
Handling equipment such as halters, cages, blankets, and appropriate tools for each kind of animal. Include bolt-cutters to quickly free animals in an emergency
Water, feed, and buckets
Tools and supplies needed for sanitation

DURING AN EMERGENCY

When enacting the Farm Emergency Plan remember that the safety of people is the priority!

Information Sources in an Emergency

☐ Learn about the hazardous situation

Local Radio News Media	
Alberta Emergency Alert	https://emergencyalert.alberta.ca/
Rocky View County website	https://www.rockyview.ca/
Rocky View County Facebook	https://www.facebook.com/RockyViewCounty
Rocky View County Twitter	@RockyViewCounty
Rocky View County Main Office Line	403.230.1401
(24/7)	
Power Utility	
Gas Utility	
Alberta Environment & Parks (rivers)	https://rivers.alberta.ca
Alberta Fire Bans	www.albertafirebans.ca
Alberta Transportation	https://511.alberta.ca
Alberta Wildfire	310.FIRE (3473) https://wildfire.alberta.ca/
Environment Canada	https://weather.gc.ca/warnings
RCMP Livestock Investigator	403.701.1462 - Cpl. Lindsey Anderson
Livestock Identification Services Ltd.	1.866.509.2088
(Brand Inspector)	587.230.2994 – Strathmore – Harmony Beef
	www.lis-ab.com
Rocky View County Livestock	Dial 9-1-1 and ask for the Livestock
Response Trailer	Response Trailer

☐ Learn about the evacuation status. There are three phases of an evacuation:

Evacuation Alert – Moving livestock to safety is encouraged during the Evacuation Alert phase when time is available. This is also a good time to move children and the elderly to safety.

Evacuation Order – During an Evacuation Order, residents must evacuate and the local police may strictly enforce traffic flows to help move residents and livestock to safety.

Evacuation Rescind – An Evacuation Order is rescinded when it is determined to be safe for residents and livestock to return home.

Rocky View County or Provincial response agencies (depending on the nature of the emergency) will develop and implement a livestock feeding and property protection plan for evacuated landowners for long duration (>1 day) evacuations.

Decision Guide for Livestock Protection

The farm is prepared for the following response actions. Different animals may require unique response actions, depending on the situation, to achieve the lowest overall risk. It is possible that multiple options may be chosen based on the situation and livestock involved.

CHECK THE APPROPRIATE OPTIONS AT THE TIME OF EMERGENCY

Option 1: Shelter livestock in barn
Shelter-in-place is best for animals because:
- There is a barn on the farm where the animals will be safely removed from the
danger (i.e., barn is protected by sprinklers, out of the flood plain, etc.)
- Livestock is used to the barn and comfortable in it
- It would require the least amount of time
Option 2: Move livestock to on-farm outdoor location
Moving animals to an outdoor location is best for animals
because:
 There is a pasture on the farm where the animals will be safely removed from the danger (i.e. large field with food and water)
 We have sufficient time, personnel, and equipment to round up and move our animals to this area
Option 3: Relocate livestock off the farm
Relocating the is the best option because:
- We have located and prearranged an off-farm relocation site
- We can gather the animals into a safe location to be evacuated
 We cannot protect the livestock from hazards by keeping them on the farm
- We have or can arrange for trucks, trailers, drivers, and handlers, if necessary
- We can arrange for feed, water, and veterinary care at the relocation site
Option 4: Open gates and/or cut fences to free the animals IF SAFE TO DO SO
Freeing the animals is only considered if:
- Livestock cannot be moved to a safer area and leaving them in place would put them directly in the path of the hazard
- There is no danger to people or vehicular traffic from freeing the animals
- We have the time and personnel to open gates and/or cut fences to allow the
animals to avoid the hazard

We will inform emergency responders of our decision to free the livestock

Checklist f	for She	Itering	Livesto	ck in	Barn

	wing steps should be taken if sheltering livestock in barn is selected.
pr □ M ar	nsure there is sufficient time, personnel, and equipment to move livestock to a rotected barn. Ask family members, neighbours, and others for help love animals to one or more protected barns or other structures on the farm where the nimals will be safe. A protected barn is one where: Combustible materials have been removed around the structure Fire resistant materials have been used in its construction Sprinklers can offer protection from fire hazards Water pumps for the sprinkler system have backup power The structure is strong enough to withstand severe weather The structure is located out of the flood plain nsure animals have access to food sources, clean water, and ample living space, and
	at support systems are connected to backup power
	list for Moving Livestock to On-Farm Outdoor Location wing steps should be taken if moving animals to an outdoor location is selected.
ou □ M av	nsure there is sufficient time, personnel, and equipment to move livestock to a safe atdoor location on-farm pasture or other irrigated or heavily grazed open area. love livestock to one or more open areas on the farm where the animals will be safely way from the hazard. A safe outdoor area is one where: The field has been recently irrigated and/or fire breaks have been constructed the field has been heavily grazed / there is no dry fuel for fires The field is located above the high-water level / out of the flood plain trees are native species only; exotic trees uproot easily Appropriate fencing is in place No overhead power lines or poles are in the field No debris or sources of blowing debris insure animals have access to food sources, clean water, and ample living space.
Consider restriction	the actions below for relocating livestock during an emergency. There may be as on moving livestock during an Evacuation Order to keep roads clear for people. time is short, the priority animals for livestock relocation off-farm are:
	O
	0
□ N	otify the primary site selected for receiving relocated livestock Name:
	o Physical Address:

0	Phone Number:
0	Email:
just-in- microo Ensure Accom Milk "p Consu	e all relocated animals have farm/owner identification, including permanent and time methods (e.g., paint on hooves/hides, collars, ear tags, brands, tattoos, chips, etc.) e that sufficient feed and medical supplies are available at the destination amodation will need to include milking equipment for dairy cows (as applicable). Sickup" companies should be notified where to pick up the milk. If the Evacuation Notification Team or Rocky View County to determine routes the safe to use. Record primary and alternate routes below Livestock pick-up location on the farm:
0	Primary route:
0	Alternate route:
Identif o	y livestock haulers Hauler name:
0	Hauler phone number:
0	Hauler email:
Identif	y any special challenges with assembling and loading your animals
	for Opening Gates, Cutting Fences to Free Animals to be freed, consider the steps outline below.
be har away to cuts/or Protect	ally consider the risk to motorists on nearby roadways and other persons who may med by freeing animals. Is it possible to open fences in a way that directs animals from roadways and populated areas. Provincial laws make a person who pens a fence responsible for damage or injury caused by loose livestock. Sting livestock is important, but public safety takes precedence. No animal is worth an life.

Ensure all relocated animals have farm/owner identification, including permanent and just-in-time methods.
Open the gates indicated on the Farm Maps, especially noting:
a)
b)
c)
Cut or open fences at the following locations to allow animals to avoid hazards:
a)
b)
c)
Notify the Evacuation Notification Team and Rocky View County (403.230.1401) of the
decision to free the farm livestock when evacuating

If time allows creation of a fire break to protect farm structures, follow the instructions below

Checklist to Create a Fire Break

	The priorities for plowed or wetted fire breaks to protect farm structures are:
_	a)
	b)
	a)
	Consult the map showing which areas should be plowed or wetted down to create fire breaks
	cklist to Deploy Sprinklers klers are to be used to protect farm structures, follow the instructions below
	The priorities for deploying sprinklers to protect farm structures are:
	a) b) c)
	Consult the map showing how to lay out the sprinkler equipment and water delivery system
	Secure the water source, protect it against radiant heat, and remove nearby combustible materials
	Activate pre-positioned irrigation systems and sprinklers on the farm to help protect structures
Che	cklist for Operating Backup Generator
	electrical equipment needs backup support, follow the steps below
	The priorities for providing equipment with backup generator are: a) b) c) d)
	Consult the instructions and map showing how to set out the generator and connections Ensure there is enough fuel to operate the generator for 3 days Secure the generator and fuel; protect them from radiant heat from possible fire sources. Remove nearby combustible materials Ensure backup generator systems are on automatic switch that turns off regular electric power when the generator system is on

			11 - 4	C			_			4.5	
('	naci	Z	IICT	TOT	-	ersona	⊢۱	/acı	121		ın
		N	ΠOL	101		CISULIA	┕╵	v act	Ja:	uv	/I I

In addition to a Grab in Go Kit (a collection of essential personal items (see below), take
the following items when evacuating
- Identification that includes a photo and address, such as a driver's licence. This
will help farmers obtain a permit if they are allowed to temporarily return to the
farm to care for livestock
A copy of the Farm Emergency Plan, including the livestock inventory
Evacuate all personnel
- If an Evacuation Order is issued, ensure all personnel move to safety
- Family and farm staff can check with others by texting or emailing:
Cell
Email
I have assembled Emergency Kits and know where they are located

AFTER AN EMERGENCY

Checklist for Damage Assessment

Once the evacuation order has been lifted and if damage is observed on the farm, consider these steps to limit further damage

Check livestock that sheltered-in-place at the earliest possible opportunity, and provide
for their needs with water, feed, and safety
Inspect farm for hazards and damage. Take care to avoid hazards, such as smoldering
tree roots underground
Contact insurance agent (refer to section <i>Insurance information</i>)
Document any loss of livestock, farm buildings, fences, or equipment in writing, using the
inventory list to verify losses. Document salvaged items.
Take photos and video of any damage following a disaster to document the loss (ideally
before and after taking any recovery action)
Secure the site

Insurance Information

Record the essential information on commercial farm insurance in the spaces below

Policy Number	
Date of Purchase / Last Renewal	
Insurance Provider	
Agent Name, Organization	
24/7 Claims Number	
Key Coverage and Exclusions	• •

Checklist for Recovery

The following steps should be taken to continue the disaster recovery process

Ш	work with neighbours to locate and identity loose animals in the area, and to return
	livestock that escaped or were freed
	Seek assistance from agricultural associations
	Work with neighbours to get the farm and the community operational as soon as
	possible
	Attend community recovery information sessions to find out about provincial measures
	that may assist the farm with disaster recovery

Disposal of Dead Animals

Every livestock producer must face the reality of carcass disposal, regulated by the Destruction and Disposal of Dead Animals Regulation of the *Animal Health Act*, Appendix A. Dead animals must be disposed of in an acceptable manner within 7 days of death. Mortalities can be composted, incinerated, buried, rendered, or naturally disposed.

Proper disposal of carcasses is important for both the prevention of livestock disease transmission and the protection of air and water quality. Access to carcasses by scavengers is only permitted under the guidelines for natural disposal.

https://open.alberta.ca/publications/livestock-mortality-management-disposal

When dealing with a large number of livestock deaths due to a natural disaster or livestock disease contact the following for assistance:

Inspection and Investigation Section:

Hours: 8:15 AM to 4:30 PM (open Monday to Friday and closed statutory holidays)

Phone: <u>403.755.1474</u>
Toll free: <u>1.866.252.6403</u>
Email: af.iisadmin@gov.ab.ca

Mail:

Inspection and Investigation Section Alberta Agriculture and Forestry #201, 5030 50 Street Olds, Alberta T4H 1S1

Connect with the Ag-Info Centre:

Hours: 8:00 AM to 5:00 PM (open Monday to Friday and closed statutory holidays)

Toll free: <u>310.FARM</u> (3276) Email: <u>aginfocentre@gov.ab.ca</u>

POST BY ALL PHONES AND IN FARM VEHICLES AND MACHINERY

Emergency Contact Numbers

9-1-1 - Fire - Police - Ambulance

Farm Name:
Phone:
Rural Address (Blue Sign):
Legal Land Description:
Municipality/County:
Directions to this location:

Poison Centre: 1.800.332.1414

Spills: 1.800.222.6514



Agricultural Service Board

Subject:	Upcoming Events Report
Date:	April 25, 2024
Presenter:	Laura Poile, Agricultural Services Officer
Department:	Agricultural & Environmental Services

REPORT SUMMARY

This report is an itemized list of upcoming events that relate to production, marketing, sustainability, and community.

ADMINISTRATION'S RECOMMENDATION

Administration recommends that the Upcoming Events Report be received as information.

BACKGROUND

One of the recommendations within the Agriculture Master Plan is to foster capacity building for the agriculture community in areas of enhanced educational services and programs. The intent is to provide support and information resources to producers for specialized opportunities and diversification within the ag industry. ASB meetings provide the opportunity to learn of local and regional conferences and training sessions of interest.

DISCUSSION

The events below are identified for the Board's information.

- 1. Nominations for 2024 Alberta Agriculture Hall of Fame deadline is May 3, 2024. Nomination form.
- 2. Manage the Damage (elk), May 1 virtual click here to register.
- 3. Foothills Forage & Grazing Soil Builders School July 2 Vulcan, AB more details to come.
- 4. Southern Alberta Grazing School for Women Foothills Forage & Grazing July 24 & 25, Seven Persons, AB
- 5. Agricultural & Environmental Services Workshop List.

ALTERNATE DIRECTION

No alternate direction for the board's consideration.

ATTACHMENTS

Attachment A - Agricultural & Environmental Services Workshop List

262075 Rocky View Point Rocky View County, AB, T4A 0X2



403-230-1401 questions@rockyview.ca www.rockyview.ca

Agricultural & Environmental Services Workshops - 2024

1. Human Wildlife Co-Existence (Bears/Coyotes/Moose etc)

Saturday, April 27th 1:00pm to 5:00pm Cochrane RancheHouse

2. Tree Planting & Pruning

Thursday, May 16th 6:30pm to 8:30pm Rocky View County Hall

3. Green Acreages

Wednesday, May 22nd 6:30pm to 8:30pm Rocky View County Hall

4. Horse Health & Maintenance

Wednesday, May 29th 6:30pm to 8:30pm Rocky View County Hall

5. Ecology of Invasive Plants

May (tent) 6:30pm to 8:30pm Virtual

Other workshops we are planning stay tuned!

Nature Walk, Agri-Environmental Programming

AgVenture Tour - July 25, 2024

For more details, registration and more upcoming events visit www.rockyview.ca/AgEvents