

Calgary Metropolitan Region Board
 Joint Land Use & Intermunicipal Servicing Committee Meeting
 Agenda - February 6, 2020, 9:30 AM
 Mount Royal University, Roderick Mah Centre for Continuous Learning
 Room EC2010

The purpose of this meeting is to convene, discuss and make decisions regarding recommendations to be made to the Calgary Metropolitan Region Board.

- | | | | |
|---|------------------------------|--------------------------------|-----------|
| 1. Call to Order & Opening Remarks | | Sheard | |
| 2. Adoption of Agenda | | All | |
| For Decision: Motion to adopt and/or revise the agenda | | | |
| 3. Review and Approve Minutes | (Attachment) | LUC/ISC | 3 |
| For Decision: Motion that the LUC/ISC review and approve the Minutes of the January 16, 2020 joint meeting | | | |
| 4. BILD Calgary Region | (Attachment sent separately) | BILD | 7 |
| For Information: BILD Calgary Region will provide a presentation on development investment in the CMR | | | |
| 5. Calgary Real Estate Board | (Attachment sent separately) | CREB | 8 |
| For Information: CREB will provide a presentation on the housing market in the CMR | | | |
| 6. Recreation TAG | (Attachment) | Graves
RC Strategies + PERC | 9 |
| For Decision: Motion that the LUC ISC recommend to the Board for approval the recommended 'Options for Enhancing Regional Recreation' report; and Motion that the LUC ISC endorse the definition, vision and principles in the report as 'A Common Foundation' | | | |
| 7. Regional Employment Analysis | (Attachment) | Applications
Management | 45 |
| For Decision: Motion that the LUC/ISC recommend to the Board for approval the Regional Employment Analysis Report | | | |
| 8. Growth & Servicing Plan Update | (Verbal) | HDR
Calthorpe | |
| For information: HDR Calthorpe will provide a verbal update | | | |
| 9. Composting Update | (Attachment) | Graves | 88 |
| For Information: Motion that the LUC ISC accept for information two white papers on composting in the CMR | | | |

10. TAG Update (Attachment) Tipman/Graves **113**
***For Information:** Motion that LUC/ISC receive for information an update on the work of the CMRB Technical Advisory groups*

Closed Session (Pursuant to Section 21 of FOIP)

*Separate Confidential Package

11. CMRB Messaging Platform (Attachment) Strut Creative
 12. Work Plan for CMRB Vision Statement (Attachment) Strut Creative

13. Next Meeting: Thursday March 5, 2020

14. Adjournment Sheard

Land Use Committee Members:

Mayor Peter Brown (Airdrie)	Mayor Craig Snodgrass (High River)
Councillor Gian-Carlo Carra (Calgary)	Mayor Bill Robertson (Okotoks) <i>Vice Chair</i>
Mayor Marshall Chalmers (Chestermere)	Reeve Greg Boehlke (Rocky View)
Mayor Jeff Genung (Cochrane)	Councillor Tom Ikert (Wheatland)
Reeve Suzanne Oel (Foothills)	Councillor Bob Sobol (Strathmore)

Servicing Committee Members:

Mayor Peter Brown (Airdrie)	Councillor Don Moore (High River)
Councillor Gian-Carlo Carra (Calgary)	Mayor Bill Robertson (Okotoks)
Mayor Marshall Chalmers (Chestermere)	Reeve Greg Boehlke (Rocky View)
Councillor Tara McFadden (Cochrane)	Mayor Pat Fule (Strathmore)
Reeve Suzanne Oel (Foothills) Vice Chair	Deputy Reeve Scott Klassen (Wheatland)

Christopher Sheard, Committee Chair
 Dale Beesley, GOA Representative

Upcoming Meetings:

Land Use Committee	Thursday March 5 - 9:30 AM	Mount Royal University Room EC2010
Servicing Committee	Thursday March 5 – 1:00 PM	
Board Meetings	Friday Feb 21 – 9:30 AM	MRU Room EC2010
Governance Committee	Friday Feb 21 - 8:00 AM	MRU Room EC2015
Advocacy Committee	TBD	

Minutes of the meeting of the
Joint Land Use & Intermunicipal Servicing Committees
of the Calgary Metropolitan Region Board held at
Mount Royal University on Thursday January 16, 2020

Delegates in Attendance for Land Use Committee:

Mayor Peter Brown – City of Airdrie
Councillor Gian-Carlo Carra – City of Calgary
Mayor Marshall Chalmers – City of Chestermere
Mayor Jeff Genung – Town of Cochrane
Reeve Suzanne Oel – Foothills County
Mayor Bill Robertson – Town of Okotoks (Vice Chair)
Reeve Greg Boehlke – Rocky View County
Councillor Bob Sobol – Strathmore
Councillor Tom Ikert – Wheatland County

Delegates in Attendance for Intermunicipal Servicing Committee:

Mayor Peter Brown – City of Airdrie
Councillor Gian-Carlo Carra – City of Calgary
Mayor Marshall Chalmers – City of Chestermere
Reeve Suzanne Oel – Foothills County (Vice Chair)
Councillor Tara McFadden – Town of Cochrane
Mayor Bill Robertson – Town of Okotoks
Reeve Greg Boehlke – Rocky View County
Mayor Pat Fule - Strathmore
Deputy Reeve Scott Klassen – Wheatland County

CMRB Administration:

Christopher Sheard, Chair
Jordon Copping, Chief Officer
Liisa Tipman, Project Manager–Land Use
Jaime Graves, Project Manager-Intermunicipal Servicing
JP Leclair, GIS Analyst
Shelley Armeneau, Office Manager

1. Call to Order

Called to order at 9:30 AM.

2. Approval of Agenda

Moved by Mayor Robertson, **Seconded by** Mayor Brown, accepted by Chair

Motion: That the Committees approve the agenda.

Amending Motion Moved by Reeve Greg Boehlke, **Seconded by Mayor Bill Robertson**, accepted by Chair

Motion: That the Committees approve the agenda, moving the closed session into a public session.

Motion Defeated.

Vote on original motion:

Motion carried.

3. Review and Approve Joint LUC ISC Minutes

Moved by Mayor Brown, **Seconded by** Mayor Genung, accepted by Chair.

Motion: That the Committees approve the Joint Minutes of the December 5, 2019 meeting.

Motion carried unanimously.

4. Regional Employment Analysis

Darryl Howery from Applications answered questions by conference call. The City of Calgary asked for additional information on the employment numbers listed in the report. Members discussed whether there was an opportunity to provide additional input on the employment numbers.

Moved by Councillor Carra, **Seconded by** Mayor Brown, accepted by Chair.

Motion: That the Regional Employment Analysis report be deferred to the next meeting pending discussions with Applications Management, and any municipality who wishes to provide further input.

Motion carried unanimously.

5. Growth & Servicing Plan Update

Steve Power of HDR Calthorpe updated the members on the growth and servicing plan progress:

- o Currently reviewing data and developing baseline scenario.
- o Preparation for workshop #2 on January 31. Format will be very similar to last workshop, including discussions on policy direction, development of business as usual scenarios and alternative scenarios.

6. Public Engagement Plan Update

Steve Power of HDR Calthorpe reviewed the updated Public Engagement Plan and answered questions.

Moved by Mayor Brown, **Seconded by** Councillor McFadden, accepted by Chair.

Motion: That the Committees recommend to the Board for approval the HDR Calthorpe Public Engagement Plan.

Motion carried unanimously.

7. Communications & Engagement TAG

Steve Power presented on behalf of HDR Calthorpe and answered questions.

Moved by Mayor Robertson, **Seconded by** Councillor Sobol, accepted by Chair.

Motion: That the Committees approve the Terms of Reference for the Communications & Engagement Technical Advisory Group.

Motion carried unanimously.

8. External TAG Membership

Steve Power answered questions from the Committee on the membership invitees.

Moved by Mayor Genung, **Seconded by** Councillor Sobol, accepted by Chair.

Motion: That the Committees recommend to the Board for approval the proposed membership invitees for the External Technical Advisory Group, adding a bullet under the list of invitees: "*Any others as deemed appropriate by HDR Calthorpe from time to time.*"

Motion carried unanimously.

9. TAG Update

Moved by Councillor Oel, **Seconded by** Mayor Genung, accepted by Chair.

Motion: That the Committees receive for information an update on the work of the CMRB TAG groups.

Motion carried unanimously

10. Closed Session (Pursuant to Section 21 of FOIP)

The Committees moved into a closed session at 11:15 AM

The Committees returned to public session at 12:33 PM

Motion Arising:

Moved by Councillor Carra, **Seconded by** Mayor Robertson, accepted by Chair.

Motion: That the Committees direct CMRB Administration to:

1. Prepare the CMRB's Corporate Messaging Platform as a stand-alone communications package from existing materials and return to the next committee meeting; and,
2. Develop a work plan to fully develop and prepare a corporate Vision Statement and Goals to guide the ongoing work of the CMRB, in consideration of the Growth Planning process, and return to the next meeting.

Motion carried.

11. Next Meeting: Thursday February 6, 2020 @ MRU

12. Adjournment

Meeting adjourned at 12:40 PM.

CMRB Chair, Christopher Sheard

Agenda Item	4
Submitted to	Land Use Committee & Intermunicipal Servicing Committee
Purpose	For Information (Speakers Series)
Subject	Investment in the CMR
Meeting Date	February 6, 2020
<i>For Information: BILD Calgary Region will provide a presentation on development investment in the CMR</i>	
<p>Background</p> <ul style="list-style-type: none"> • CMRB Administration has organized presentations from subject matter experts to inform and educate the Land Use Committee and Servicing Committee members on topics of interest to the CMRB. • BILD Calgary Region will provide an introduction of BILD Calgary and a representative of Brookfield will provide an overview of their business model for land development. 	
<p>Attachments</p> <ul style="list-style-type: none"> • BILD Calgary, Presentation, "Development Investment in the Calgary Region" (sent by separate email) 	

Agenda Item	5
Submitted to	Land Use Committee & Intermunicipal Servicing Committee
Purpose	For Information (Speakers Series)
Subject	Housing in the CMR
Meeting Date	February 6, 2020
<i>For Information: CREB will provide a presentation on the housing market in the CMR</i>	
<p>Background</p> <ul style="list-style-type: none"> • CMRB Administration has organized presentations from subject matter experts to inform and educate the Land Use Committee and Servicing Committee members on topics of interest to the CMRB. • A representative of the Calgary Real Estate Board (CREB) will provide an overview of regional trends in the housing market and will provide information on housing for each of the member municipalities. 	
<p>Attachments</p> <ul style="list-style-type: none"> • Calgary Real Estate Board, Presentation, "CREB: Calgary and Surrounding Area" (sent by separate email) 	

Agenda Item	6
Submitted to	Land Use Committee & Intermunicipal Servicing Committee
Purpose	For Approval
Subject	Recreation Framework
Meeting Date	February 6, 2020
<p><i>Motion that the LUC/ISC recommend to the Board for approval the 'Options for Enhancing Regional Recreation' report</i></p> <p><i>Motion that the LUC/ISC endorse the recommended definition, vision and principles in the report as 'A Common Foundation'</i></p>	
<p>Summary</p> <ul style="list-style-type: none"> • On June 7, 2018, the ISC discussed regional recreation and how CMRB can support intermunicipal recreation collaboration among members through the development of a guide. Recreation Servicing TAG later recommended that the guide be renamed a framework. • On April 11, 2019, ISC directed administration to proceed with developing a non-binding framework for regional collaboration on recreation and a definition for regional recreation. • The City of Calgary and Rocky View County are working on a parallel recreation study in the northwestern area of the Region. The City of Calgary and Rocky View County identified that a portion of the scope of their study was in line with the scope approved by ISC and would benefit from input from all CMRB member municipality administrations. Consequently, RC Strategies + PERC, the successful consultant for the Calgary- Rocky View study, provided consulting services to complete the report attached here. All municipalities in the Region contributed. • A survey regarding collaboration on recreation in CMR was developed by the consultant, circulated to Recreation Servicing TAG and the responses informed a workshop held in Cochrane on June 7, 2019. • The summary report from the June 7, 2019 workshop was circulated, revised and comments were discussed at two subsequent meetings of Recreation Servicing TAG with the consultant in Strathmore and Rocky View County on October 25, 2019 and December 17, 2019, respectively. 	

- Recreation Servicing TAG recommend this report for approval as a non-binding framework for future collaboration in the CMRB. **Approval of this document does not suggest agreement to act upon the options.**
- Recreation Servicing TAG recommends ISC endorsement of the Definition, Vision and Principles as a first step in collaborating on regional recreation (A Common Foundation, Page 17).

Attachment

1. *Options for Enhancing Regional Recreation, RC Strategies + PERC*

1. Background

Following the release of the first draft of the report in September 2019, it was identified that developing a cost sharing model, benefitting areas and scoring matrices, even if non-binding, was too far too fast. Consequently, the focus of the report shifted to defining regional recreation, establishing a vision, and principles for collaboration and options for how regional recreation may proceed in the future, while documenting practices in other jurisdictions. The initial ideas on cost sharing, benefitting areas and matrices are kept in the appendices as they serve as a potential resource for future consideration.

This report, to the extent agreed to by the municipalities, echoes and builds on the document entitled *A Framework for Recreation in Canada – 2015 – Pathways to Wellbeing*¹, which the province of Alberta is a signatory to.

The report is specifically written to underscore the **non-binding** direction from ISC, have a planning focus, and document when two or more municipalities in the Region wish to explore collaboration, this may provide a framework for that to happen. The key underlying assumption is that the two (or more) municipalities are willing parties to collaboration.

The definition, vision and principles were tested between two CMRB member municipalities with previously existing formalized collaboration on regional recreation through commercial agreements. These two Recreation Servicing TAG members indicated that the definition, vision and principles developed through this process also generally apply to their current ongoing agreement.

2. Next Steps

Recreation Servicing TAG see benefit in continuing to meet and advance the concepts of establishing 'A Common Understanding' (page 22). Should additional work be required, it would not likely be complete within the timeline of the Growth and Servicing Plans.

¹ Canadian Parks and Recreation Association/Interprovincial Sport and Recreation Council (February 2015). A Framework for Recreation in Canada - 2015 - Pathways to Wellbeing. Ottawa: Canadian Recreation and Parks Association. 40 pages. www.lin.ca

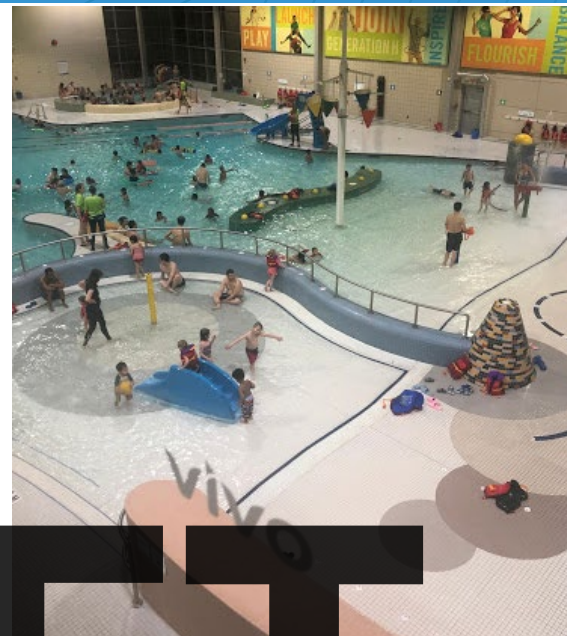
Calgary Metropolitan Regional Board
Recreation Servicing Technical Advisory Group

Options for Enhancing Regional Recreation

Final Draft
January, 2020



Ball Diamond, Okotoks



Vivo Centre, Calgary



Outdoor Field, Airdrie



Outdoor Rink, Chestermere



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Introduction and Methodology

Public recreation services provide social good in a community and the broader region in which it is situated. Public recreation not only leads to residents and visitors being more physically active and healthy; it also brings people together and positively contributes to desired outcomes in other public service areas such as education, justice and health. When people participate in recreation, they are more likely to contribute positively to their communities and less likely to participate in anti-social behaviours.

Based on the various benefits that come from it, publicly supported recreation is a service in the Province of Alberta and throughout Canada.

Municipalities throughout the Calgary Metropolitan Region Board (CMRB) all invest in recreation opportunities and do so in a variety of different ways. Recent initiatives, exploring the efficiencies and benefits that could be achieved through municipalities working together in the region have provoked discussions

around the potential for a more collaborative approach to delivering publicly supported recreation opportunities for residents and visitors. At the forefront of these discussions is the need to define regional recreation; provide guidance on how regional municipalities could work together through common goals and shared principles, developing tools to determine what should be considered “regional” in nature and what is best handled in a “local” or independent fashion, and to provide some level detail around how a more structured regional approach

Regional recreation planning involves the cooperation of communities within a given boundary in the delivery of services, whether they are facility or recreational program related services. This cooperation is considered by some to be essential to maintaining existing assets or developing new initiatives. The current situation is characterized by aging facilities, limited financial resources and an increasing demand for services. In the current study area (CMRB) the need for regional planning is a result of a changes to the Municipal Government Act requiring municipalities to discuss the potential for regional collaboration in certain service areas: recreation being one.

could look should member municipalities choose to do so. With this in mind, the CMRB Recreation Servicing Technical Advisory Group (Recreation TAG), comprised of representatives from all 10 member municipalities, embarked on a journey to attempt to define regional recreation. This work has occurred over the past year and culminated in a survey and a series of subsequent workshops facilitated in the summer and fall of 2019, and is summarized in this report.

It is important to note that defining regional recreation is inherently difficult because although it is a key element of successful population growth, it is also context-specific

as to what kinds of recreation services could or should be provided (hockey, softball, lawn bowling, walking trails, etc), to what level these recreation services should be provided, and to what degree is the member municipality able to fund recreation services in consideration of its many priorities. Due to contextual and subjective

nature of recreation servicing, there is no one standard that can be identified as a minimum or acceptable standard that each municipality must provide; however, that does not remove the advantages of working together on projects and/or initiatives that are regional in scale.

The following document is meant to provide a collective perspective and opinion as to what could be considered regional as it relates to publicly supported recreation infrastructure and opportunities, as well as a non-binding path forward for member municipalities as to how to

work together more cohesively and collaboratively so that greater benefits can be realized from publicly supported recreation. The definitions and path outlined herein are a recommendation of the Recreation TAG to political leadership at the CMRB table. It is not meant to circumvent or overrule political will; rather they are meant to provide a reference point, developed by local experts, for political decisions to be made and for administrative action going forward.

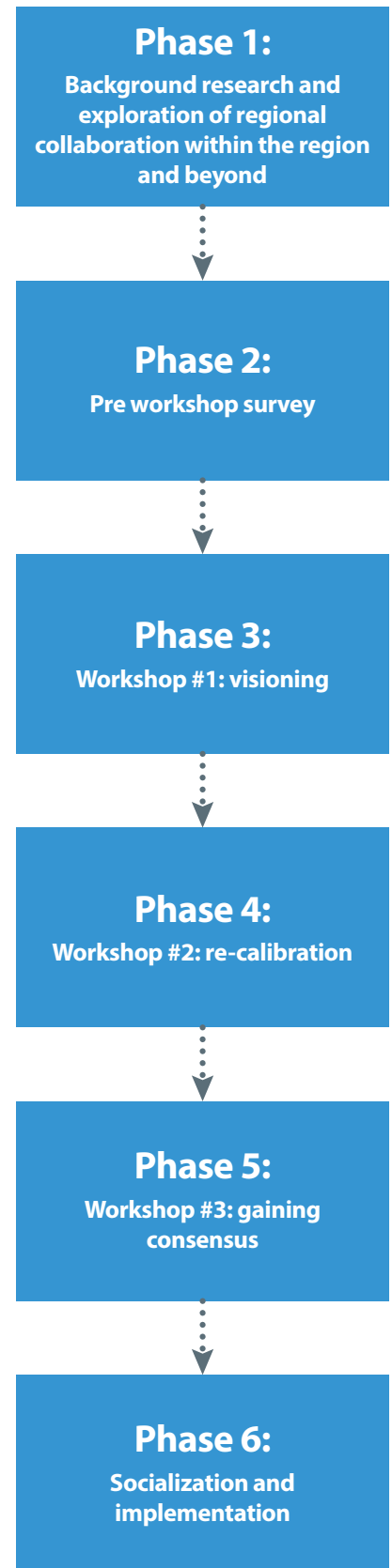
Working together throughout the region will likely be based on relationships and will be characterized by trust, accountability, and effort. Relationships take time to develop and strengthen and what is contained in this report is meant to be a foundation for regional relationships to be built upon, not necessarily a depiction of the ideal state.



Arena, Strathmore

The Report Process

The following graphic outlines the process used to develop this summary report. This process was initiated in response to direction from the Intermunicipal Servicing Committee of the CMRB to define regional recreation. This report provides a definition of regional recreation and a framework for next steps.



Other Research

In order to further inform a discussion around regional recreation, other research was conducted to understand the regional recreation market context and identify what is happening elsewhere in the province and beyond related to regional recreation collaboration.

Other forms of research conducted included: Review of trends and leading practices research across Canada and internationally. Government reports and academic papers were gathered and analyzed to provide support for findings in this report. In addition, examples of collaboration from other parts of the Province were gathered, although there is no current example that matches the size and uniqueness of the CMRB.

The Survey and Workshops

A pre-workshop survey was conducted with the Recreation Servicing TAG representing all ten (10) municipalities in the CMRB. The purpose of the survey was to understand how regional partners are currently operating and how they understand, value, and perceive regional recreation. The survey results were used as a basis for the initial workshop and drove the creation of questions and discussions conducted in person. Results from the pre-workshop survey are also used throughout this report.

The first regional workshop was held on June 7th, 2019 at the Cochrane Ranchehouse. The main purpose of the workshop was to bring all Recreation TAG partners together to discuss what regional recreation is, what it means to each partner, how regional recreation or cross boundary partnerships are currently functioning (or not), and to develop an approach to defining regional recreation within the context of the CMRB. The workshop provided an opportunity to understand current barriers, successes and processes in the region. It also helped define recreation service levels and work towards a plan in which all CMRB partners are serving community members in the best possible manner; avoiding competition or duplication where at all possible.

Within the first workshop, a presentation was given by the consulting team, discussions were facilitated, and dotmocracies were conducted based on pre-workshop survey results and input gathered. Dotmocracy is a simple method for group prioritization or decision-making, it is a method to use in processes where prioritization or decision-making is the aim. The method supports a group to quickly see which options are most popular or relevant. The results of this method are discussed in the report. Ultimately, the survey and in person workshop have informed the findings and recommendations of this report so that the CMRB may develop a common definition/understanding of regional recreation, vision for the future, and a methodology for developing regional recreation facilities, events, and programs.



Shane Homes YMCA at Rocky Ridge, Calgary

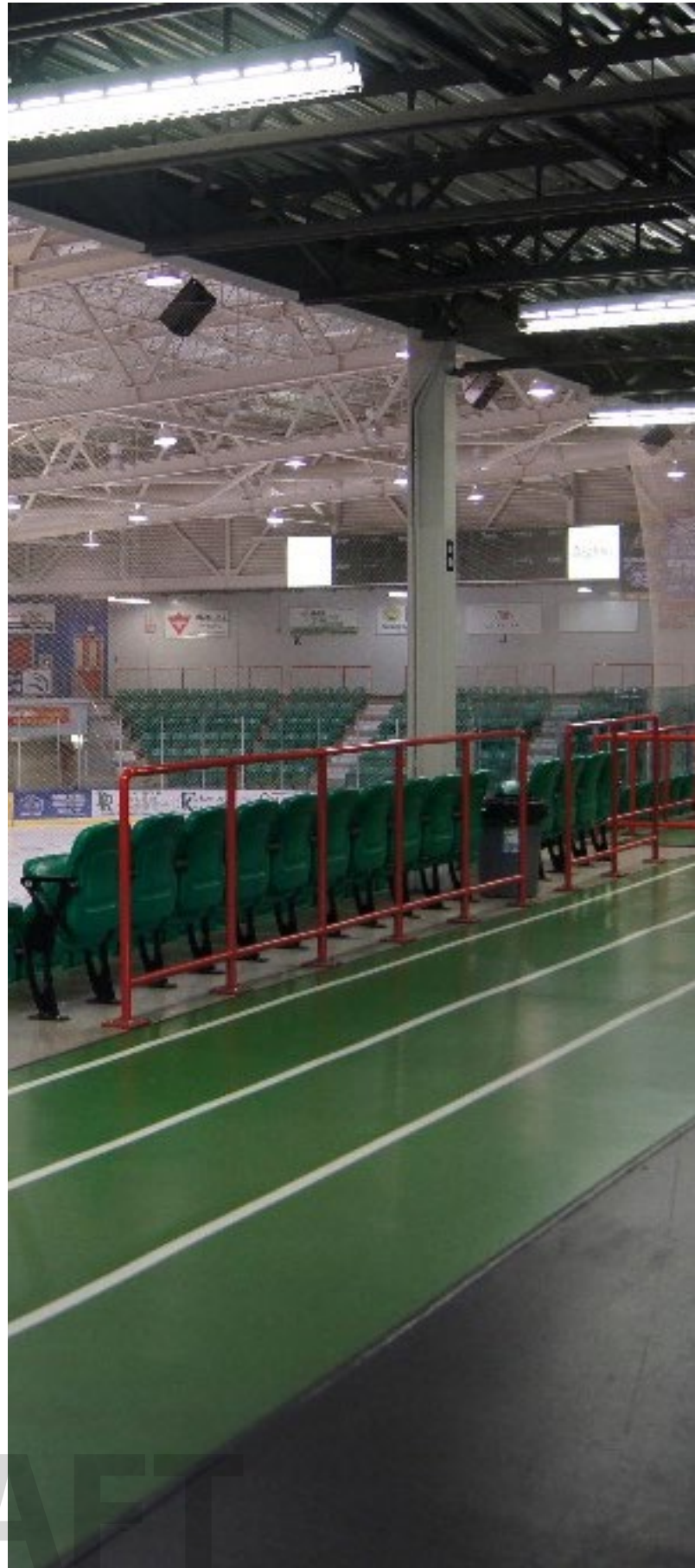
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During the second workshop, held on October 28, 2019 at the Civic Centre in Strathmore, the group shared their reactions to a draft recommendation for how to proceed with a more regional approach to recreation. The information presented to the group included a definition of regional recreation, principles for moving forward, detailed descriptions as to how to define regional recreation facilities, and programs. The report provided some early options for sharing in the responsibility and cost of regional services and facilities. The merits of a regional recreation committee or formalized group were also discussed. It was determined after the second workshop that regional events and programs could not be fully contemplated in the timing of the current mandate of creating a growth and servicing plan for the CMR. Consequently, regional events and programs are not part of the recommendations of this report. The report focuses on greenfield development and planning tools for intermunicipal collaboration going forward.

Although the information presented at the second workshop was based upon the input and insight of the Recreation TAG group, there was agreement around the table that the initial recommended course of action did not reflect what the group thought was best at that stage in time. Although there was agreement on some aspects of the initial recommendation (definition of regional recreation, principles, etc.) and also a sentiment that some of the more detailed approach to defining regional assets and cost sharing approaches may be useful at a later date.

Taking a step back, without losing the insight and input gathered, and setting the stage for a relationship to be built was seen as more important than providing a perfect model for regional collaboration to occur. Based on the feedback of the Recreation TAG group, refinements were made and a more complete, but less prescriptive path forward was developed. It was clear to Recreation TAG members that more time would be required to understand the current state of recreation in the region and build enhanced regional relationships.

The third and final workshop was held on December 17th at the Rocky View County administrative office. The path forward was presented. It included much of what is found in this document and considered all of the insight and input gathered throughout the entire process. The Recreation TAG was comfortable with the information provided and that it might provide value to future regional conversations about recreation, either in whole or in part. From the process, the Recreation TAG felt that this path could lead to enhanced coordination, satisfaction with and intermunicipal collaboration on recreation in the Calgary Metropolitan Region.



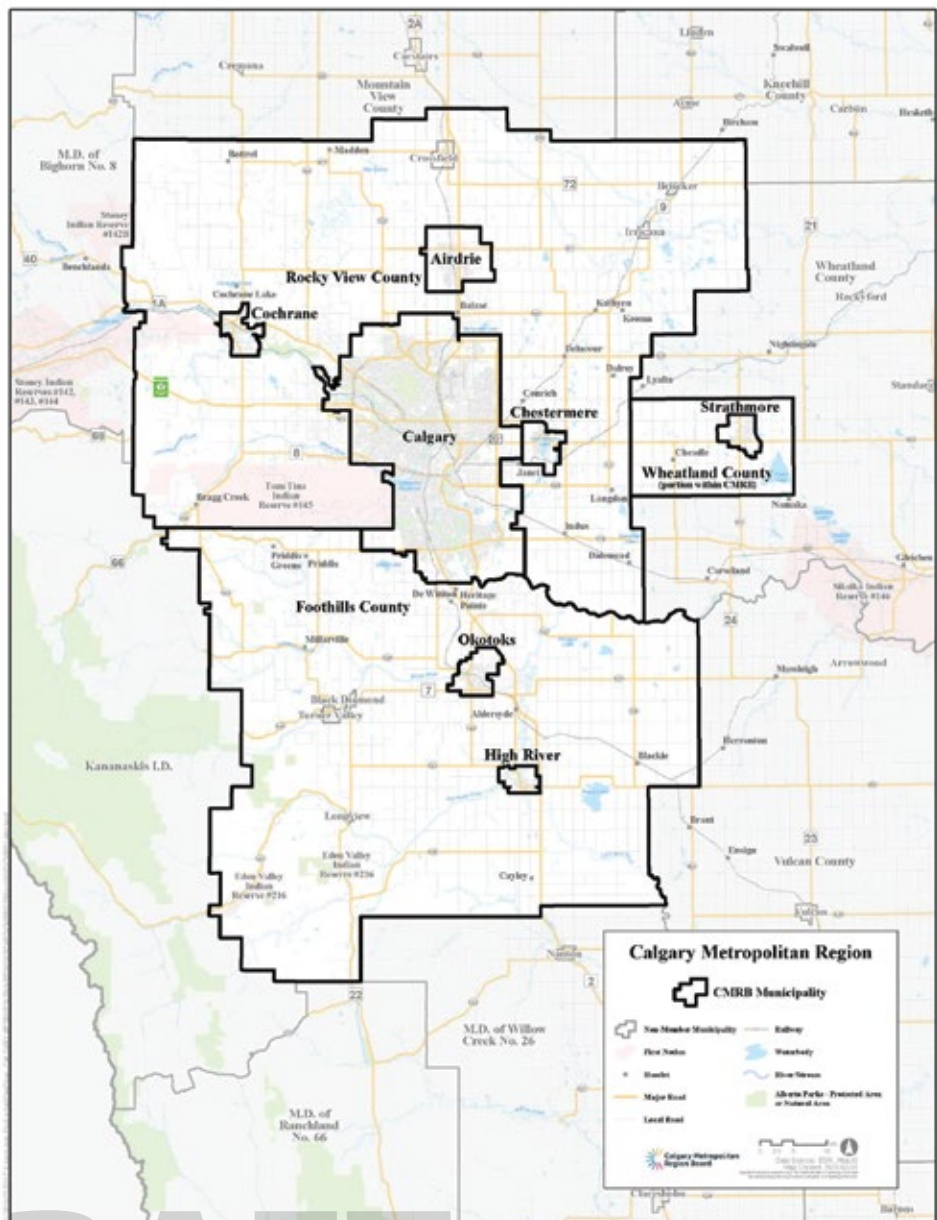
Indoor Walking Track, Okotoks
Package February 6, 2020

The Regional Planning Context

The Calgary Metropolitan Region Board (CMRB) has a mandate to complete a Growth Plan and Servicing Plan for the Calgary Metropolitan Region (CMR) by December 2020. The CMRB Regulation AR190/2017 sets out the objectives for the CMRB Servicing Plan, which includes facilitating the orderly, economical and environmentally responsible growth in the region. Once approved, the long-term Growth and Servicing Plans will guide regional land-use decision-making in the CMR. The objectives of the Servicing Plan include optimization of shared services to enhance use of ratepayer dollars in the CMR. As part of the Servicing Plan development, the CMRB has identified recreation as a key area for collaboration on service provision.

The CMRB Regional Evaluation Framework is the tool by which statutory plans and stat plan amendments are measured against the policies outlined in the Growth and Servicing Plan agreed to by the 10 member municipalities.

Historically, tension exists in some areas of the CMR with respect to new greenfield developments (Area Structure Plans) within a potential recreation service benefitting area, without consideration related to compensation for recreation services delivered by an adjacent or nearby municipality. Due to the high capital costs of recreation facilities, increasing operation and maintenance costs and the public's increasing demand for servicing, municipalities are finding it increasingly difficult to meet their budgets. Provincial and federal funding trends suggest a



decrease in capital and operations funding of recreation in the future. For these reasons, paired with a sincere interest for municipalities to provide residents a high quality of life, a more collaborative approach is being explored to ease aforementioned tensions. There are some areas of the CMR where collaboration is thriving currently, but areas where improvements can be made. The CMRB gave clear direction that the framework provided herein is entirely non-binding and may be used to facilitate collaboration, where warranted.

The Interim Growth Plan (IGP) was approved by the Minister of Municipal Affairs in December 2018. The IGP identifies 'processes' and 'instruments' (tools) in the development of ASP, MDP and IDPs and other stat plans to demonstrate collaboration on recreation services. Of note is that the IGP does not make 'consensus' the goal outcome of collaboration. As we have seen, consensus can be elusive. Region-wide Policy 3.2.2 states that:

Municipalities should collaborate to coordinate planning for land-use, infrastructure, and service provision with other member municipalities, where appropriate. As a minimum requirement, new Area Structure Plans (ASPs) or amendments to existing ASPs, within 1.6 km of a neighbouring municipal boundary or an agreed upon notification area between the member municipalities, shall demonstrate collaboration to coordinate through:

- a. processes that may include;
 - a structured engagement process,
 - circulation and review of technical studies,
 - joint planning,
 - participation in mediation or other dispute resolution protocols, and/or
- b. instruments that may include;
 - a joint Area Structure Plan,
 - a memorandum of understanding,
 - a statement of non-concern,
 - applicable statutory plan policies,
 - statutory plan amendments, or
 - applicable intermunicipal agreement(s).

Region-wide Policy 3.2.3 states that:

All statutory plans shall:

- d. provide mitigation measures and policies to address identified adverse impacts on existing or planned community services and facilities (which includes recreation facilities)

The 10 member municipalities include:

- City of Airdrie
- City of Calgary
- City of Chestermere
- Town of Cochrane
- Foothills County
- Town of High River
- Town of Okotoks
- Rocky View County
- Town of Strathmore
- Wheatland County (portion as described in the regulation)

In order to support the CMRB, a Recreation TAG was formed. The Recreation TAG consists of administration from each of the 10 member municipalities. It operates under a terms of reference (under separate cover) and meets periodically to discuss matters related to recreation and the CMRB.

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Other Regional Collaboration

In order to inform the discussion around possibilities for regional collaboration related to recreation, a review was conducted of what happens elsewhere in the Province of Alberta, in two other provinces that have entrenched regional governance and service delivery, and in other

international markets. It is important to note that these other practices are not identified as “leading” or “best”. The term “other” has been chosen as they are just that; there is no confirmed perfect approach to regional collaboration related to recreation.



Alberta: ICF, Regional Plans, specialized municipalities

The province of Alberta introduced new legislation in 2016 to the Modernized Municipal Government Act which included Inter-municipal Collaboration Frameworks (ICF). These frameworks are legislatively required to be in place for all municipalities that share a common boundary by March 31, 2020. The ICF's must focus on the following public services: transportation, water and wastewater, solid waste, emergency services, recreation, and any other services that benefit residents in more than one of the municipalities that are parties to the framework. Frameworks are intended to provide for integrated and strategic planning, delivery and funding of intermunicipal services, allocate scarce resources efficiently in the providing local services, and ensure municipalities contribute funding to services that benefit their residents. Although the CMRB including recreation in its purview means that ICF's do not have to be completed for member municipalities, the general premise of the ICF for recreation holds true for the work of the CMRB and the Recreation Servicing TAG.

Although many municipalities are currently undertaking ICF related discussions, there are no definitive examples of completed ICF arrangements that would bear any light on the CMRB situation.

Further to the ICF process, a number of regions within the province have conducted, or are currently conducting regional recreation master plans. Currently, these processes are underway in the Grande Prairie, St. Paul-Elk Point, Vegreville-Mundare-Minburn, and Camrose regions. Although funding contributions are part of the scope of these regional plans, funding is less of a focus compared to ICF discussions and negotiations. Regional recreation enables partners to define future infrastructure and service planning together with a collective goal of getting more benefit from current and future investment in recreation.

Of note is that the Edmonton Metropolitan Region Board, whose regulation mirrors that of CMRB, has not focused on recreation in their scope. Instead, those member municipalities are dealing bilaterally on recreation under ICFs.

In addition to the regional plans in Alberta there are unique examples of regional collaborations and governance structures, in that they combine both urban and rural dynamics, such as Strathcona County and the Regional Municipality of Wood Buffalo. In these examples regional recreation is a direct result of regional governance and built into the services of these specialized municipalities.

Some of the key takeaways from other practices in Alberta include:

- The creation of regional recreation advisory boards,
- The hiring of regional staff to coordinate regional recreation,
- Defining a benefitting market area for recreation services,
- Attributing cost and responsibility based on both population served and ability to pay, and
- Developing regional policies such as use allocations, fees etc. that are consistent across the region.

BC and Ontario: Regional governments

Within the Province of British Columbia 27 regional districts exist. They arose out of a need for greater regional cooperation and equitable cost-sharing between municipal areas and rural areas. Regional Districts are modeled as a federation composed of municipalities, electoral areas, and in some cases, Treaty First Nations, each of which have representation on the regional district board. The boundaries of the regional districts span nearly the entire geographic area of the province. Each regional district is divided into smaller areas called electoral areas (mostly rural). Typically, recreation is managed by a sub-regional board or commission that is comprised of elected officials from each electoral area and municipality in a given region. The tax base of the entire regional district contributes to a recreation service within their given geographic boundary and therefore some regional districts have more than one recreation department and area. In this example both rural and urban elected officials have influence over recreation services and make decisions on both operating and capital costs.

Ontario operates regional governments as a two-tier system. In a two-tier system of municipal government, there are lower-tier municipalities (local) and an upper-tier municipality (a county or region). In this type of system, some services are delivered by the upper-tier municipality. Upper-tier municipalities often coordinate service delivery between municipalities in their area or provide area-wide services. The rationale for a consolidated government is that a more unified administration will relieve financial pressure, allow for improved service delivery and offer more effective and efficient government through streamlined decision-making and clearer accountability. An example of how this structure works is as follows:



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The County of Lambton is a municipal corporation known as an “upper tier” municipality. “Lower tier” municipalities, also known as “local” municipalities within the County include:

- The Municipality of Brooke-Alvinston
- The Township of Dawn-Euphemia
- The Township of Enniskillen
- The Municipality of Lambton Shores
- The Village of Oil Springs
- The Town of Petrolia
- The Town of Plympton-Wyoming
- The Village of Point Edward
- The City of Sarnia
- The Township of St. Clair
- The Township of Warwick

The County is governed by County Council, which is made up of 17 representatives from the 11 local municipalities. The local municipalities’ Mayors, along with additional Councillor Appointees when more than one County Council seat exists, come together to represent the entire County. County Council elects a Warden and Deputy Warden from amongst the Councillors every two years in December. The Warden chairs County Council meetings and represents the County at a wide range of functions and activities. Each County Councillor sits on one of two standing committees that meet monthly, this could include recreation, cultural, social services etc. However, each municipality is responsible for delivering recreation services in their own communities and therefore also incurs the costs (but collects and keeps a portion of property taxes to do so). This is unlike the regional district government in British Columbia – who do in fact deliver some recreation services to the region.

Some of the key takeaways from other practices in B.C and Ontario include:

- **Even in a formal regional governance structure, there is no formal definitions of what is regional and what isn’t; most jurisdictions approach regional recreation differently, and**
- **There is a need for flexibility in formal regional governance structures.**

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Current State Assessment

The following current state assessment is based primarily on the input received from the ten Recreation TAG representatives. Although some other research was conducted it is important to note that the following is not meant to define the current state of recreation facilities, spaces, programs and preferences throughout the region; it is meant to provide the current state of the recreation delivery model and agreed to planning already in place as it relates to regional collaboration.

Recreation planning, partnerships, and management across the CMRB, functions slightly differently and are unique in each community. Currently, within the 10 municipalities in the CMRB, 6 municipalities have recreation master plans / strategies (City of Calgary, Town of Cochrane, City of Chestermere, Town of High River, Town of Okotoks, and Foothills County). However, two are identified as outdated and no longer reflective of the current market context. The other four partners have documents such as needs assessments and are either currently working on a master plan / strategy or would like to work on one in the future. There are no regional recreation plans within the CMRB, however, there are partnerships and collaborations such as Town of Cochrane and Rocky View County (joint facility ownership), Wheatland County and Town of Strathmore (cost sharing), and the Town of Okotoks with Foothills County (shared services and joint facility ownership).

Typically, these existing collaborations or partnerships incorporate cost sharing and depend largely on percentage of population use and/or data gathered through attendance and registration. More than 50% of CMRB Recreation TAG members felt that it would be worthwhile to collaborate on strategic planning, greenfield development, and the setting of user fees. This further highlights the need and interest in regional recreation planning.

Within the CMRB, recreation facilities are managed by either the municipality, a partnership, or third party and ownership of facilities varies. The complexity and diversity of recreation in the CMRB highlights the need for effective needs assessment, long term planning, collaboration, and teamwork. It is also clear that operational partnerships already exist in many places in the Region and therefore provide a solid foundation for development of a framework for regional recreation.

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A Framework for Recreation in Canada: Pathways to Wellbeing (2015)

A Framework for Recreation in Canada is a guiding document for publicly supported recreation providers in Canada. The Framework was developed by the Canadian Parks and Recreation Association and the Interprovincial Sport and Recreation Council with input from various stakeholders across Canada.

In 2015, it was endorsed by Federal and Provincial/Territorial Ministers. The Framework provides a philosophical foundation for the recreation sector and confirms recreation as an essential public service.

The Framework provides a vision and five goals for the delivery of recreation in Canada. While it is understood that recreation is a broad term and that local interests, priorities, and needs differ in each community, **the Framework is a great starting point for regional recreation planning as it is a common reference for all partners, regardless of the extent to which local planning is in place.** In addition, aligning the recreation sector across the country can help build a stronger case for investment from the provincial and federal levels. Furthermore the Framework outlines a renewed definition of recreation and also outlines a collective vision and has both a principle of operation (partnerships and collaboration) and a priority action item that pertain directly to regional partnerships and collaboration.

A Renewed Definition of Recreation

Recreation is the experience that results from freely chosen participation in physical, social, intellectual, creative, and spiritual pursuits that enhance individual and community wellbeing.

Vision

We envision a Canada in which everyone is engaged in meaningful, accessible recreation experiences that foster individual wellbeing, community wellbeing, and the wellbeing of our natural and built environments.

5.1 Increase collaborative efforts among provincial/territorial governments, local governments, voluntary organizations, Aboriginal communities, the private sector and recreation associations to support and nurture a vibrant recreation system that serves as the primary means for achieving the vision and goals in this Framework.

Key takeaways from the current state:

- Each municipality is unique as it relates to the complement of recreation assets and the approach to service delivery,
- Some examples of collaboration exist in the region related to recreation but none involving more than two municipalities,
- There is an administrative appetite for enhanced regional collaboration as it relates to recreation, and
- The level to which strategic planning for recreation exists in each partner municipality varies; the Framework for Recreation in Canada could act as a common reference point to begin collaborative strategic thinking.

A Foundation for Regional Recreation

Defining Regional Recreation

In order to determine relevance and responsibility of recreation assets between municipalities, it is important to first start with determine what elevates some aspects of recreation to be regional (or sub-regional). It is assumed that the definition of recreation from the Framework for Recreation in Canada 2015 holds true for the purposes of this exercise as the Province of Alberta was a signatory to the Framework for Recreation in Canada. Furthering this broader definition of recreation to relate to regional or sub regional relationships, the following definition of regional recreation is proposed based on research and input received. It is important to note that this definition is meant to act as a starting point for further deliberation and discussion amongst one or more regional municipalities. Final agreement of an existing or future recreation asset being regional will be subject to negotiation and approvals between two or more regional municipalities.

A regional recreation facility, space, program or service has a realistic potential of use by, and broader benefits to, residents from outside the municipal boundaries in which it is provided.

Once a facility, program or service is defined as regional, *areas for collaboration and coordination may include planning capital investment, operations, and maintenance or facility planning.* This general definition of regional recreation is important to contextualize more specific or detailed review of facilities and services however it is not meant to be all inclusive. Recreation assets that fall under this broader definition might warrant regional collaboration or responsibility sharing but final decision making will be based on more refined criteria as well as political and administrative will throughout the region.

A Renewed Definition of Recreation

“Recreation is the experience that results from freely chosen participation in physical, social, intellectual, creative and spiritual pursuits that enhance individual and community wellbeing.”

– A Framework for Recreation in Canada
2015: Pathways to Wellbeing

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A Rationale and Foundation for Regional Recreation

Regional recreation requires teamwork, communication, and collaboration. Ultimately, all parties have needs that must be met and regional collaboration provides an opportunity for all, or some CMRB municipalities, to do so in a more efficient and/or effective manner. Residents and visitors don't see municipal boundaries when it comes to accessing publicly supported recreation opportunities; they see leisure pools and ice arenas; or, good fries or bad fries. They will also access facilities on a complementary, as-needed basis, going to leisure pools with waterslides when they want that experience and going somewhere else to lap swim if the user experience is more appropriate. Regional collaboration can provide greater ability to provide market driven, relevant, complementary and coordinated recreation opportunities and services as opposed to independent provision by member municipalities.

In general, based on the input of the Recreation TAG group and other insights gathered from research, some aspects of publicly funded recreation can and should be delivered regionally. As a group it was discussed that recreation is in fact a service that aims to provide benefits to communities that are both direct (to those who participate in recreation) and indirect (to the wider community at large, regardless of their participation in recreation). When asked what elements of recreation could or should be considered regional the majority of Recreation TAG members felt that some recreation facilities and spaces, both indoor and outdoor, currently provided in their municipalities could be considered regional (depending on definitions and scale developed for categorizing). With this in mind, the Recreation TAG concluded that there is, and could be, value in working together regionally to provide recreation for the following reasons.

- It would provide the ability to **leverage more support and resources from each other and other sources** and therefore better meet the needs of residents and community members. More recreation opportunities contribute to happier, healthier societies.

- It would enable the **sharing of costs, risks, and also rewards**. Having impactful community spaces and/or world class recreation facilities can be better achieved by working together but infrastructure and development can be expensive and risky. By working in collaboration with regional partners, member municipalities can achieve greater success with lower risk to each independent partner.
- It would lead to **less duplication, competition and heightened coordination** of recreation service.
- It would provide a **forum for regional recreation planning that will allow all municipalities to work towards a shared vision** that would be defined collectively.

These reasons provide a strong basis for the following vision and shared principles for regional recreation.

Recommended Vision

The following vision is recommended to guide regional recreation efforts in all ten municipalities in the CMRB.

Regional recreation assets and services enhance coordination, optimize public investment, and leverage resources from within and outside the region; these regional assets and services generate benefits across municipal borders and provide enhanced opportunities for residents and visitors to be healthier and more connected to the communities and region in which they live.

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In order to achieve the highest levels of success possible, regional partners must make decisions and act in a way that benefits both local municipalities and the broader region. Regional partnerships and collaborations require a set of shared values and principles through which relationships can develop. When it comes to regional recreation planning, common principles from other jurisdictions include having a common understanding of what recreation is and the benefits that come from it, trust, respect of individuality and autonomy of municipalities within the region, and benefit to all municipalities and communities involved. Based on the results of the Recreation Servicing TAG survey and the workshop, along with our other research, the following principles are recommended to help guide regional recreation efforts (presented in order of importance):

Principles for Regional Recreation

- **Trust between partners is built by acting with integrity and honesty**
- **Respect for the individuality and autonomy of partners**
- **Evidence based decision making**
- **Common understanding of recreation and the benefits that come from it**
- **Grounded in collective, equitable regional interests**

These shared principles will serve as a reference and guide for future decision making and action as it relates to regional recreation in the CMR.

“In order for us to get the most out of a regional recreation relationship, there can be no “score keeping”.

– Recreation Servicing TAG member



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Building Upon a Common Understanding: The Evolution of Regional Collaboration on Recreation in the Calgary Metropolitan Region

Integration:
Consolidating regional recreation

Collective Action:
Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:
Tackling common areas of interest together

A Common Understanding:
Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:
Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

A common definition of, and vision for, regional recreation along with a set of principles for how to realize the vision sets a strong foundation for regional relationships and collaboration to occur. Based on the feedback from Recreation TAG members, there are a number of enhancements that regional collaboration can lead to in the CMR, some of which require stronger and more formal ties between municipalities (all 10 or subsets thereof) as well as some that can be realized through enhanced communication between parties and common approaches to common aspects of planning for recreation services.

The following section outlines a potential range of options for a regional discussion to evolve and flourish. It is presented as a series of options that the region could use as a guideline for regional relationships between all ten CMR member municipalities or sub-regional relationships between 2 or more. Each option is meant to be scalable, in that the conclusion of each option can be either an arrival at a desired state of regional collaboration or the logical point at which the next step can be taken. The graphic to the left outlines the steps; explanation of each step follows. It is understood that throughout the CMR there are various examples of sub-

regional collaboration related to recreation. The intent of the following is to strengthen existing relationships and provide a starting point for areas where no relationship currently exists.

The following options are meant to help guide regional recreation actions of all 10 member municipalities, either all together or as sub-regional arrangements involving 2 or more. There is no recommended option for the region; this is meant to be a regional playbook that all municipalities can refer to when dealing with their neighbors and others. Having a consistent vision, principles and approach will prove valuable and ensure that, although not all relationships are not expected to be the same throughout the CMR, a standardized approach to partnership will create stronger regional cohesion.

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A Common Foundation: Endorsement of the definition, vision and principles and creating a forum for regional discussion

In order for a regional recreation discussion to continue, each potential partner in the region should agree to (in principle or accept as information) the definition, vision, and principles outlined in this document.

Definition

A regional recreation facility, space, program or service has a realistic potential of use by, and broader benefits to, residents from outside the municipal boundaries in which it is provided.

Vision

Municipalities enhance coordination, optimize public investment, and leverage resources from within and outside the region to support regional recreation facilities, programs and services. These regional recreation assets and services enhance coordination, optimize public investment, and leverage resources from within and outside the region; these regional assets and services generate benefits across municipal borders and provide enhanced opportunities for residents and visitors to be healthier and more connected to the communities and region in which they live.

Principles

- Trust between partners
- Respect for the individuality and autonomy of partners
- Evidence based decision making
- Common understanding of recreation and the benefits that come from it
- Grounded in collective, equitable regional interests

Acceptance of these elements of the regional discussion will provide the platform for collaboration to occur in whatever way is desired by regional partners.

How can we build a common foundation?

CMRB Intermunicipal Servicing Committee endorsement of a regional definition, vision and principles from each municipality.

Formation of an administrative and elected official level regional body, defined through a terms of reference and meeting on a regular, scheduled basis.

Integration:

Consolidating regional recreation

Collective Action:

Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:

Tackling common areas of interest together

A Common Understanding:

Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:

Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

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Furthermore, In order to begin to realize the benefits of a more regional approach to public recreation a forum for regional discussion needs to be developed. The CMRB (at the political level) and Recreation TAG (at the administrative level) is an example of a forum for regional discussion to occur and was developed as part of the CMRB mandate. Should the CMRB mandate change, so too could this Recreation TAG. **It is important to create a forum for regional discussion that is based on the merits of collaboration and not tied to broader prevailing policies or legislation.**

It is also important to note that the Recreation TAG is comprised of administrative recreation experts from each of 10 municipalities. These members have the expertise and knowledge necessary for regional discussion to occur but they lack the decision making authority that may be required in order to achieve certain levels of collaboration. For this reason, **both an administrative and elected official forum for regional recreation discussion to occur should be considered.**

Based on the current mandate and organization of the CMRB, the CMRB and associated Committees may be an appropriate forum for elected officials to discuss, contemplate and endorse CMR. Should the mandate of the CMRB change, an alternative forum may be identified. A common foundation involves simple information sharing, where regional partners can talk about common issues, discuss projects on the horizon and share information and best practices. This will help reduce duplication of services and facilities and provide value to partners without commitment of funding or other resources to more involved regional collaboration.



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A Common Understanding: Assessing and monitoring the current state of recreation in the region

Building upon a common foundation, the next evolution of a regional relationship is to come to a common understanding of the current state of recreation in the region and ensure that how we all react to the current state independently, through prudent planning, is coordinated and informed by a regional perspective. This could entail common approaches for all partners in assessing utilization and life cycle of facilities and spaces, gathering input and insight from the general public and interest groups, and determining needs, wants and gaps in services and infrastructure an addressing challenges to recreation from a regional and independent perspective. Creating a common understanding would require region-wide data gathering, assessment, study and summary. This has been identified as an important gap by the Recreation TAG.

A common understanding lays the foundation for regional collaboration to occur and any benefits that can be realized. It can also start to help define agreed to service levels and associated catchment areas.

Creating a common, shared process and protocol for regional needs assessment and monitoring will require resources, for some municipalities this may have already been accounted for and for others it would require a commitment to understanding their own recreation market.

Once a current state of regional recreation is defined, and monitored on a regular basis, areas of mutual interest between partners may emerge. These could take the form of new or existing recreation facilities, programs and services, capacity building ventures, or related areas of policy. The regional conversation could evolve to this point and provide information for regional partnership to occur or simply to improve the coordination and effectiveness of individual municipality efforts.

How can we create a common understanding?

Formal, robust planning process undertaken by all 10 municipalities simultaneously (or periodically on an ad hoc basis) including thorough regional research, engagement and analysis and under the guidance of the regional forum (A Common Foundation).

Integration:
Consolidating regional recreation

Collective Action:
Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:
Tackling common areas of interest together

A Common Understanding:
Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:
Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

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Collaborating and Coordinating: Tackling common areas of interest together

Defining the current state of recreation in the region will likely render areas of focus such as sustaining existing service levels, enhancing levels in areas where warranted and introducing new facilities, services, and capacity building or policy initiatives. As areas of focus are identified, they may be more relevant to certain partners, due to characteristics such as size, geographic location, method of service delivery or others. Partners will start to look around the table to define common interests and strike relationships to tackle them, where proximity allows.

This type of interaction does not need to materialize as formal, legal agreements that the entire region or parts of it (sub-region) needs to agree to, nor do they need to even occur under a “regional banner”. They may simply be regional or sub-regional relationships that occur to address common areas of interest and, at a broad level, work to achieve the vision and principles agreed to by the CMRB. Some examples of collaborating and coordinating that currently occur in the CMR or beyond include:

- Consistent policy development related to user fees for, and allocations of, recreation facilities and spaces
- Coordinated promotions and marketing related to all regional recreation assets available to residents (not just those within municipal borders)
- Coordination of information sharing and offering capacity building supports to all recreation stakeholder groups (not just those within municipal borders)

How can collaborating and coordinating occur?

Formation of bi-lateral or multi-lateral agreements or collaborations related to a common issues or initiatives. This could include joint grant funding applications, common promotions and marketing efforts or could simply influence the planning of independent municipalities.

Integration:

Consolidating regional recreation

Collective Action:

Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:

Tackling common areas of interest together

A Common Understanding:

Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:

Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

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Collective Action: Creating a more formal regional presence and sharing responsibility for recreation together

Collective action entails a more formal arrangement between two or more municipalities that could include having staff and other supports dedicated to regional matters (either within each partner municipality or through jointly funded shared staff) and/or jointly funding recreation facilities, spaces and services. Staff and resource allocation sharing may take the regional discussion from a “corner of the desk initiative” to something more formal. Aside from the resources put into supporting a regional “office” this would not require further cost or responsibility sharing for existing or new facilities and spaces. This type of relationship between two or more regional municipalities could include public-facing “branding” of regional collaboration (i.e. this facility brought to your by the regional recreation body) to demonstrate to the public how the municipalities are working together to deliver services and would also require dedicated and ongoing funding related to recreation services delivered beyond municipal boundaries.

An example of collective action would be cost sharing agreements for facilities and services; this already occurs between some CMR member municipalities although the mechanics and structures through which cost sharing occurs throughout the region are not consistent.

How can we engage with each other in a more fulsome way?

Jointly funding staff or regional initiatives, branding them as such, and using joint resources to achieve regional priorities (as defined in A Common Understanding).

Creation of formal responsibility sharing agreements between all regional municipalities in a standardized and logical fashion (possibly related to the logic presented herein or other).

Coordinated and collaborative planning for regional, sub-regional and potentially even local recreation.

Integration:

Consolidating regional recreation

Collective Action:

Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:

Tackling common areas of interest together

A Common Understanding:

Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:

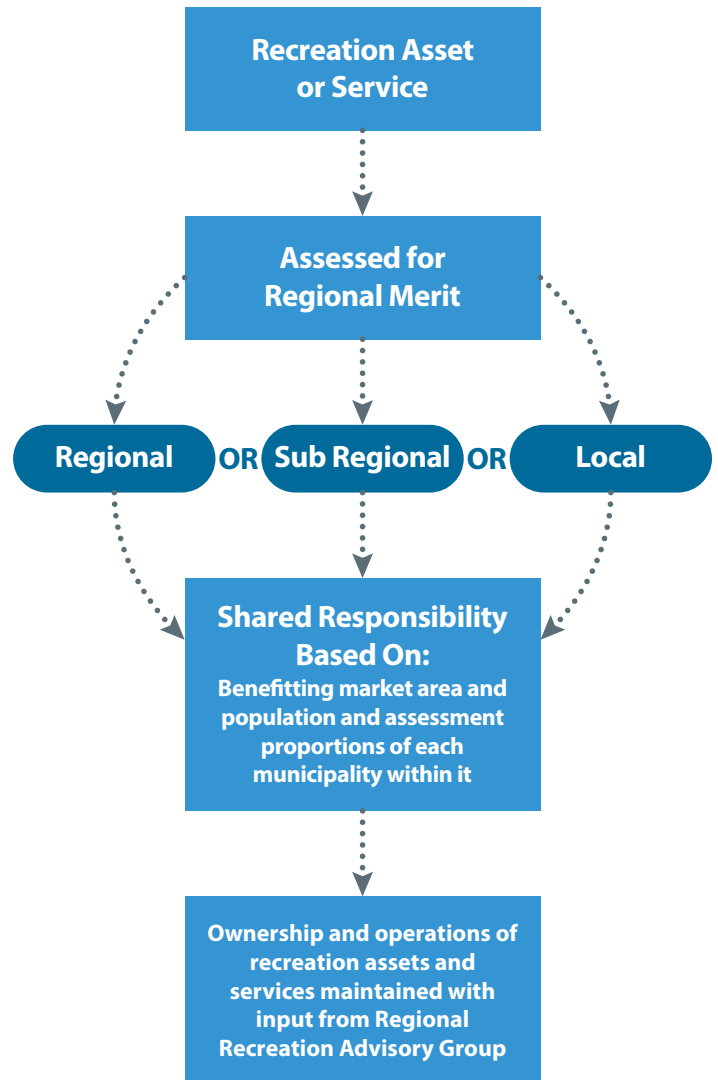
Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

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Collective action entails the creation of mechanisms for partners to agree on common definitions of regional facilities / spaces and programs / services / events and then share the responsibility and costs of regional assets in an equitable and region-wide and/or sub-regional fashion. It is important to note that this will require further analysis and negotiation.

During this process, the Recreation TAG group organized some preliminary ideas about regional asset definition and cost sharing which are included in the appendix of this study. A number of things would need to occur prior to these ideas (or variants of) coming to fruition. There are also a number of other stakeholders that would need to be consulted. Recreation TAG members value data-driven sharing agreements, and sufficient data to support asset definition and cost sharing models currently represents a gap in the current state.

Collective action would entail a regional recreation system that is defined by all partners but still owned, operated and managed independently. Although ownership and operations remains with the independent municipality, those partners who are contributing funding should also be offered a chance to influence service provision (proportionate to the amount of support they provide).



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Integration: Consolidating regional recreation

Integration is the most intense form of regional collaboration that could occur for recreation in the CMRB. It would entail some or all regional facilities / spaces and programs / services / events being owned, operated and managed by a new regional or sub-regional partnership entity. Although there are some examples of jointly owned and operated facilities in the region (Okotoks, Cochrane) this could implicate all partners from the entire region through an agreed-to model. This could also lead to individual municipalities surrendering ownership and operations of regional assets to a regional body (such as a commission or municipal corporation similar to what occurs under the regional district model in British Columbia). Deciding to take this step would necessitate significant change to the status quo and would require intense analysis prior to final decision making.

How can integration happen?

Formation of a new entity, comprised of representation from each of the regional municipalities, that owns and operates all agreed to regional facilities, spaces, programs, services, and / or events.

Integration: Consolidating regional recreation

Collective Action:
Creating a more formal regional presence and sharing responsibility for regional recreation together

Collaborating and Coordinating:
Tackling common areas of interest together

A Common Understanding:
Assessing and monitoring the current state of recreation in the region and planning together to address it

A Common Foundation:
Endorsement of the definition, vision and principles for regional recreation and creating a forum for regional discussion

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Summary and Next Steps

Recreation is an important public service in the Calgary Metropolitan Region Board (CMRB) area. The benefits of recreation are varied and significant; recreation assets and services provide direct benefit to some (users) and indirect benefit to all (the general public including users and non-users). CMRB members realize these benefits and all invest in publicly supported recreation assets and services in different yet crucial ways.

The potential to work together more collaboratively throughout the CMRB region as it relates to publicly supported recreation assets and services is apparent. Existing investment in recreation by regional partners could be leveraged and its reach extended. Opportunities for residents and visitors would be enhanced through increased coordination and the region could gain interest and investment from outside of its borders.

The Recreation Servicing TAG have demonstrated a willingness to collaborate further at this early stage and this document is meant to provide a stepping stone to be able to do so.

The document outlines a definition of and a vision and shared principles for regional recreation. It outlines a logical and to enhancing regional collaboration , developed by recreation experts from the region, with choices as to the level of integration ultimately achieved. As the discussion about regional recreation evolves, it is also expected that these experts, through the Recreation Servicing TAG, will also look to create useful tools, such as but not limited to, a Statutory Plan Toolkit or a Leading Practice Catalogue, which will formalize some of the ideas introduced in this document.

The CMRB and the Recreation Servicing Technical Advisory Group now have a potential path forward, complete with options for how much to collaborate, to react to and act upon. It is now up to the political and administrative will within the region to decide how and if to move forward together.



Outdoor Court, Chestermere
Package February 6, 2020

Appendices

It is important to note that the information contained in the following appendix is meant to provide some options as to how regional assets could be defined as well as how responsibility and cost could be shared. This information is meant to be a reference for when, or if, more focused regional recreation conversations occur.

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Optional / Potential Approach to Defining Regional Recreation Assets / Infrastructure

What defines recreation infrastructure? Is it the tax base that supports it or the people who use it, is it both? What about tourists, elite athletes, specialized populations, and other user types? Who benefits from recreation - everyone! Recreation infrastructure does much more than offer the immediate and local community a place to recreate, but rather offers a place for people to gather, enjoy, use, and improve quality of life. Recreation is truly a public good and its' benefits are seen much wider than those who might play pickleball in a school gym or skate on a local ice surface. Support for certain assets (facilities and spaces) being regional was felt by 80% of the CMRB/TAG group in the survey and during the workshop was supported by 100% of the partners represented.

The first step in defining regional recreation assets / infrastructure is the recognition that "one size does not fit all". Therefore, multiple categories are required to classify the regional merit of different types of facilities and spaces. That said, the following categories are proposed.

Regional

Regional assets are recreation facilities and or spaces that draw people from and provide benefit to residents throughout the designated region.

Sub Regional

Sub Regional assets are recreation facilities and or spaces that draw people from and provide benefit to residents beyond the neighborhood and/or municipal boundaries in which they are located but not throughout the designated region.

Local

Local assets are recreation facilities and or spaces that draw people from and provide benefit to residents within the neighborhood and/or municipal boundaries in which they are located only.

Further to understanding that one size does not fit all and the agreement that there are varying degrees to which recreation assets / infrastructure have regional merit

The specific attributes that help to define whether or not an asset is regional or not and if so, to what degree, are presented as follows. These attributes and the associated weighting were identified and agreed to by survey respondents and workshop attendees. It is important to note that although there are only ten municipalities (n=10 member municipalities) that were represented at the workshop and through the survey, the compilation of both the pre-survey results (n=9 surveys completed) and input received at the workshop (n=9 members municipalities attended workshop #1) have been compiled and accounted for (n=up to 13).

- Very important
 - » Market willingness to travel and usage patterns (4 votes pre-survey + 9 votes workshop = 13)
 - » Capital costs of the asset (5 votes pre-survey + 8 votes workshop = 13)
- Somewhat important
 - » Demonstrated regional need or identified regional priority (12 votes workshop)
 - » Benefit provided to users (8 votes pre-survey + 2 votes workshop = 10)
 - » Uniqueness of the space (9 votes pre-survey + 1 vote workshop = 10)
- Least important
 - » Context and location factors (9 votes workshop)
 - » Recreation versus elite sport usage (4 votes pre-survey + 5 votes workshop = 9)

It is also important to note that whether an asset is multi-use or not, its ability to host large scale events and the uniqueness of the asset within the region were also seen as important consideration in determining whether an asset is regional or not. It is also important to note that these attributes are meant to determine whether or not an asset is regional; they are not meant to determine whether the asset is a viable, sustainable, justified, or warranted use of public recreation resources.

Optional / Potential Regional Recreation Asset / Infrastructure Screening Tool

Step 1: Apply criteria and score to the recreation asset.

Criteria	3 points	2 points	1 point	0 points	Weight
Regional Need / Priority	Asset is an agreed to, top 10 regional priority as defined through joint planning exercises	Asset is an agreed to regional priority (not top 10) as defined through joint planning exercises	Asset is a priority in more than 1 regional municipality	Asset is not identified as a priority in more than one regional municipality	5
Capital Cost	Asset has capital costs of over \$50M	Asset has capital costs between \$25M to \$50M	Asset has capital costs between \$1M to \$25M	Asset has capital costs below \$1M	4
Regional Benefit	Asset has a significant impact on regional quality of life and competitiveness	Asset has a moderate impact on regional quality of life and competitiveness	Asset has a low impact on regional quality of life and competitiveness	Asset has no impact on regional quality of life and competitiveness	4
Uniqueness	Asset is unique to the region	There are less than 3 of assets in the region	The asset is not offered in every municipality in the region	The asset is abundant in the region	4
Location	Asset is central to the region and accessible by a number of residents	Asset may not be central to the region but is accessible to some regional residents and is an integral part of the local community and region	Asset is not central to the region and is not accessible to regional residents but is an integral part of the local community and region	Asset is not central to the region and is not accessible to regional residents and is not an integral part of the local community and region	3
Level of Specialization	Asset meets the requirements of a specific interest or skill level where critical market mass of the entire region is key to viability	Asset meets the requirements of a specific interest or skill level where critical market mass of more than two regional municipalities is key to viability	Asset meets the requirements of a specific interest or skill level where critical market mass of two regional municipalities is key to viability	Asset meets the requirements of a specific interest or skill level where critical market mass of only the host municipality is key to viability	3

If the recreation asset scores over 28, then move to Step 2 and apply Market Draw Filter

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Optional / Potential Regional Recreation Asset / Infrastructure Screening Tool

Step 2: Apply market draw filter

To be determined through known user market travel patterns (demonstrated through user point of origin statistics) and observed travel time thresholds (defined through market indications of when travel time becomes a barrier).

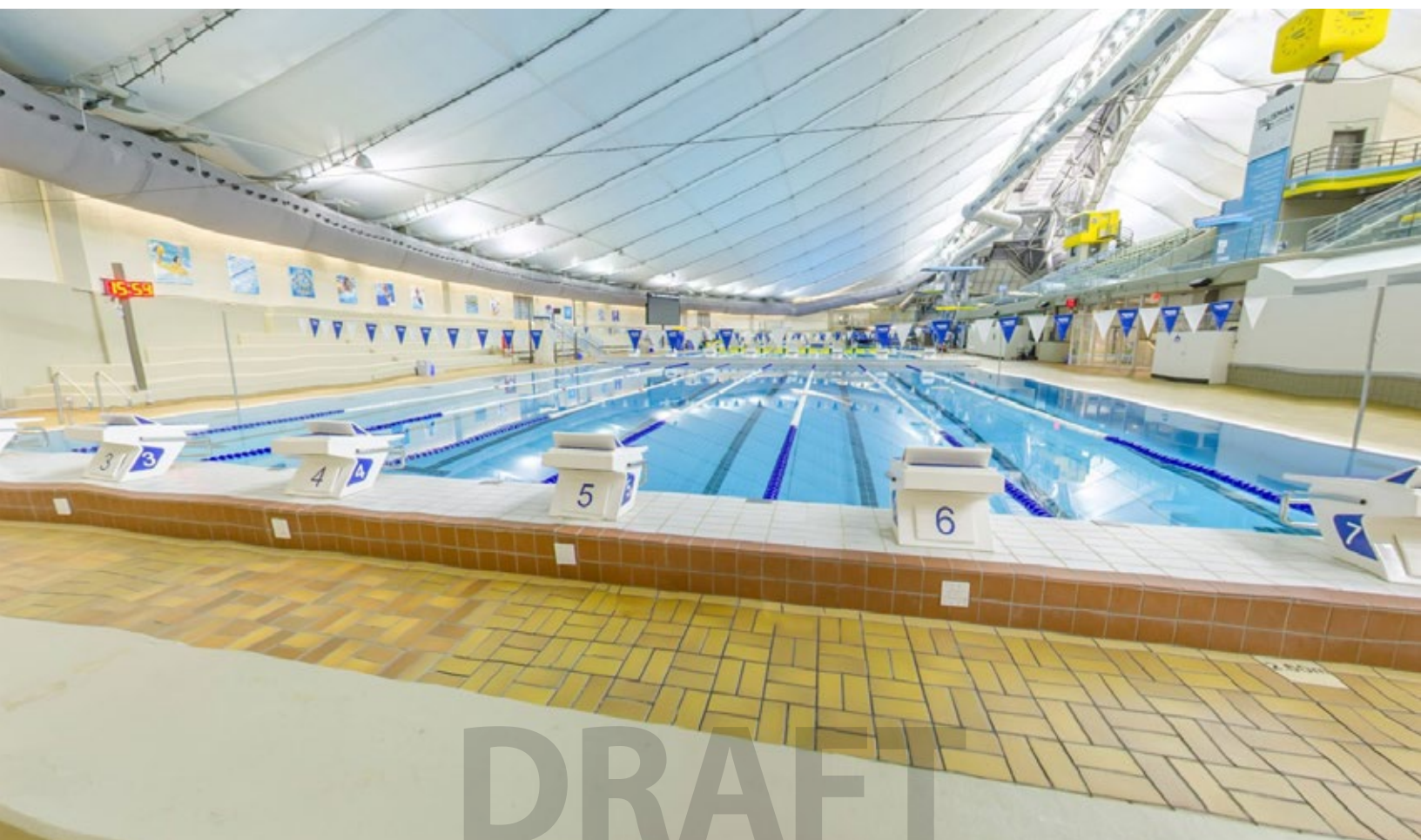
If use and benefit observed in more than 2 regional municipalities: Consider as Regional

If use and benefit confined to 2 regional municipalities: Consider as Sub Regional

If use and benefit is confined to 1 regional municipality: Consider as Local

Step 3: Recommended category

Recreation asset is **assigned category xx** to be debated and/or confirmed by regional decision makers.



Optional / Potential Approach to Sharing Responsibility for Regional Recreation

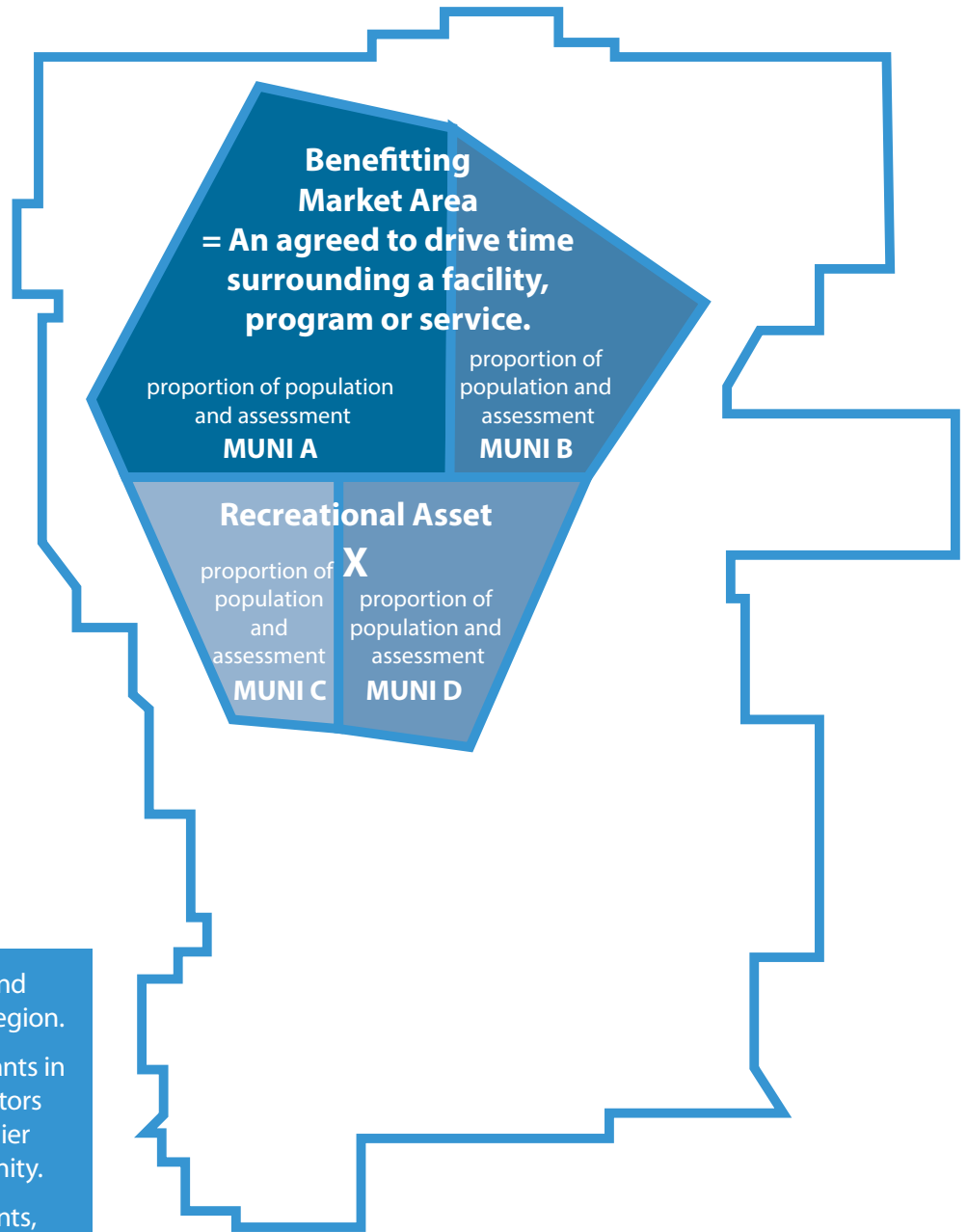
Once regional recreation assets and services have been agreed to by partners within the CMRB (all or sub regional groups), it is necessary to determine an agreed upon a way to share responsibility (financial and other) for their provision. Based on the results of the survey and workshop, **the most appropriate way to do so may be based on population served and ability to pay within a geographic benefitting market area.**

In order to determine geographic benefitting market areas for regional recreation assets and services, the Recreation Servicing TAG group and other practices suggest that **known user market travel patterns (demonstrated through user point of origin statistics) and/or observed travel time threshold (defined through market indications of when travel time becomes a barrier) may be considered.** Within a benefitting area, it is also recognized that the host community for a recreation asset or service derives more intense benefit than others with a benefitting catchment. For this reason, **a local premium may be applied for host municipalities when it comes to the sharing of responsibility and cost from a regional perspective.** For example, if recreation amenity x costs \$100,000 per year to operate, the first 50% (the local premium) should be covered by the local municipality and the remaining 50% should be shared based on an agreed to model.



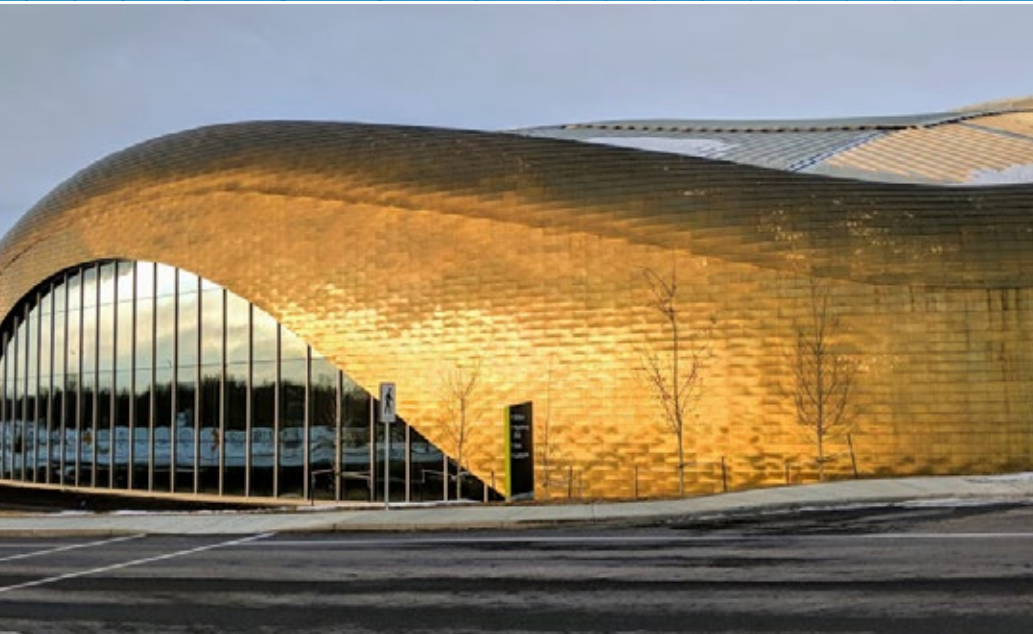
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From other practices reviewed and input from the Recreation TAG group, **the best way in which ability to pay may be measured within a geographic area is based on tax assessment (including linear).** Furthermore **the most appropriate way to represent population may be based on overall population within a benefiting area** as opposed to observed user statistics. This is because recreation provides indirect benefit to all (overall population including users and non-users) and direct benefit to some (users). If responsibility was based on users, it is based on smaller subset of the benefiting population; as well, users already pay for the direct benefit they receive through user fees. It is important to note that user statistics, future growth, and available levies and partnerships with developers were also seen as important alternative ways to share responsibility for regional assets and services.

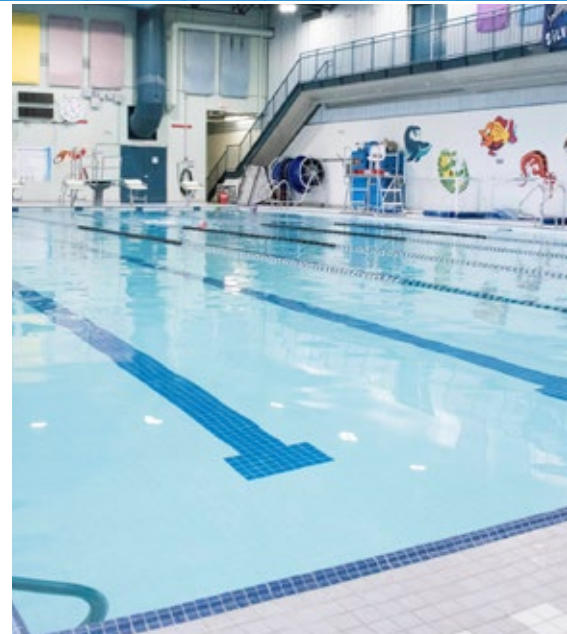


Public recreation leads to both direct and indirect benefits in a community and region. Direct benefits are realized by participants in recreation activities. Residents and visitors that participate in recreation are healthier and able to connect with their community. Beyond the direct benefits to participants, there are also indirect benefits that are realized by all residents and visitors, even if they do not directly participate. These indirect benefits “cannot be escaped” and, although harder to measure, are important to consider when contemplating investment and effort related to public recreation. Indirect benefits include, but are not limited to, enhanced reduced health care and justice costs, enhanced economic activity, increases in adjacent property values and improved regional attractiveness for both residents and businesses.

DRAFT



Shane Homes YMCA at Rocky Ridge, Calgary



Pool, Strathmore



Skating Rink, Okotoks



Vivo Centre, Calgary

Agenda Item	7
Submitted to	Land Use Committee & Intermunicipal Servicing Committee
Purpose	For Decision
Subject	Regional Employment Analysis
Meeting Date	February 6, 2020
<i>Motion that the LUC/ISC recommend to the Board for approval the Regional Employment Analysis</i>	
<p>Summary</p> <ul style="list-style-type: none"> • The purpose of the Regional Employment Analysis is to develop employment projections, build an understanding of regional employment, and provide discussion on what define regional employment areas. • Regional employment projections were approved by the Board at the November 2019 meeting and are being used as an input to the HDR Calthorpe scenario planning process. • The employment analysis report was brought to the January 16, 2020 Joint Committee. Concerns were raised by Wheatland County and City of Calgary around the “Jobs by Municipality” table in the report. • The Joint Committee directed CMRB Administration to work with Applications Management to review the concerns raised during the Committee meeting and work to amend the report as required. • CMRB Administration met with representatives of Applications Management, the City of Calgary, and Wheatland County on January 28th. Applications Management has amended the report to reflect the discussion. • Further planning for regionally significant employment will be completed as part of the HDR Calthorpe scope of work. The outcomes of the report will not be binding to the work of HDR Calthorpe but will be available to them for their information. 	
Attachment: “Regional Employment Analysis”- Applications Management Consulting	

1. Background

The employment analysis report was brought to the January 16, 2020 Joint Committee meeting. Concerns were raised by Wheatland County and City of Calgary representatives around the “Jobs by Municipality” table in the report.

CMRB Administration met with representatives of Applications Management, the City of Calgary, and Wheatland County on January 28th to discuss a path forward to document finalization. Applications Management amended the report in consideration of the feedback provided during the meeting.

The report now includes additional information around how the employment forecasts were produced and what they are intended to be used for in the regional planning process. These projections are long-term estimates that were developed using the Rennie population forecasts approved by the Board in 2018. CMRB Administration has consulted HDR Calthorpe and they agree that the employment projections must be consistent with the Rennie population forecasts. They will not be used to plan utility or transportation servicing or infrastructure.

2. Study Outcomes

The purpose of the Regional Employment Analysis is to develop employment projections, build an understanding of regional employment, and provide discussion on what defines regional employment areas. The results of this analysis will form a background technical report for consideration in the development of the scenarios to be created by HDR Calthorpe as part of their planning process.

The main outcomes of the study include:

- A “status quo” (business as usual) regional employment forecast
- Characteristics for identifying regionally significant employment areas for the consideration of the HDR Calthorpe team (non-binding recommendations).

As part of the analysis, Applications Management completed some alternative scenario forecasts to identify ways that structural changes in employment might affect employment in the Calgary Metropolitan Region (CMR). These have been included as an appendix to the final report for information.

2.1. Status quo employment projections

The status quo employment projection is a vital part of the data needed by HDR Calthorpe. The status quo regional employment projection was approved by the Board at its November meeting and is being incorporated into HDR Calthorpe’s planning process. This projection was thoroughly reviewed as part of this background study and is consistent with the expectations of municipal administrations.

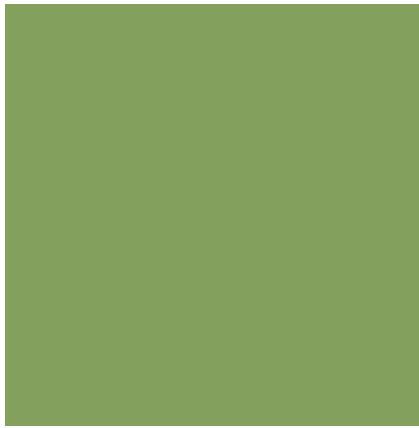
2.2. Defining Regionally Significant Employment

The report provides a list of characteristics to inform the identification of regionally significant employment areas. Mapping the location of regionally significant employment areas has been removed from the scope of this project. Planning for

regionally significant employment will be completed as part of the HDR Calthorpe scope of work. The outcomes of the report will not be binding to the work of HDR Calthorpe but will be available to them for their information.

3. Recommendation

That the LUC/ISC recommend to the Board for approval the Regional Employment Analysis



**Calgary Metropolitan
Region Board**

**Final
DRAFT**

**Regional
Employment Forecasts**



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Final Report

January 30, 2020

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Introduction

The Calgary Metropolitan Region Board (CMRB) was officially established in January 2018 when the Calgary Metropolitan Region Board Regulation (“CMRB Regulation”, Alberta Regulation 190/2017) came into effect, creating the first provincially-mandated growth management board for the Calgary region. The CMRB has been mandated to prepare a regional Growth Plan and Servicing Plan that will guide the future growth of the region.

PURPOSE OF THE ANALYSIS

The purpose of this study is to evaluate the potential for non-residential growth within the Calgary region. This involves the projection of the employment growth in the region by major industry group over a long range timeframe, from 2018 to 2054. Additionally it involves consideration of the types of economic activity and employment growth that may be considered ‘regional’ in nature, as compared to activity that is considered to be local or sub-regional in nature. This distinction is important as the development of a regional plan should incorporate measures to ensure that the economic development potential of the region is not constrained by either planning or servicing impediments.

Further to this analysis a more in depth geographic analysis should be undertaken during the development of the Growth Plan to gain an understanding of the regionally significant employment areas within the region including where they are located, opportunities for growth, barriers to development, and approaches to planning these areas.

STUDY AREA

The CMRB consists of representatives from 10 municipalities mandated to develop a long term plan for managed, sustainable growth in the Calgary Metropolitan Region.

- ▶ City of Airdrie
- ▶ City of Calgary
- ▶ City of Chestermere
- ▶ Town of Cochrane
- ▶ Foothills County
- ▶ Town of High River
- ▶ Town of Okotoks
- ▶ Rocky View County
- ▶ Town of Strathmore
- ▶ Wheatland County (portion included in the CMRB)

ANALYSIS COMPONENTS

The consulting team participated in substantial engagement with member municipalities through several meetings with the CMRB’s Land Use Committee and Technical Advisory Group. In addition, discussions were held with representatives of member municipalities planning and economic development staff to develop a comprehensive list of economic opportunities that should be considered in the analysis.

BACKGROUND ON REGIONAL ECONOMY

The Calgary region economy has experienced significant economic expansion over the past decade, at times leading the nation in growth. This growth has been driven in large part by the energy sector. The swings in energy prices have also resulted in downturns in the regional economy. While other sectors in the economy have also grown, the predominance of the energy sector has been both the strength and achilles heel of regional economy.

Calgary is second to Toronto as the host of the most head offices in Canada. Many of these head offices are in the energy sector. However Calgary has been successful in attracting head offices in the financial, construction, transportation and engineering sectors. The most recent downturn has had a significant affect on the demand for office space in the downtown area. This decline in demand for office space combined with a significant increase in supply has resulted in high vacancy rates. These peaked around 25% are and now beginning to moderate.

Strides have been made in diversifying the regional economy. For example, over the past 30 years, the finance, insurance and real estate and transportation and warehousing sectors have doubled their share of total activity in the regional economy. Manufacturing, construction and professional scientific and technical services sectors have also experienced significant growth in their share of activity in the regional economy.

EMPLOYMENT FORECASTS

The employment forecasts presented in this report have been developed to support the regional Growth Plan and Servicing Plan that will guide the future growth of the region. These forecasts provide guidance on the long term trends of growth for the Calgary Region. In a metropolitan geography such as the Calgary Region, long term projections of growth can help to gain an understanding of opportunities for growth, barriers to development, and approaches to planning areas within the Region.

This analysis presents employment forecasts from 2018 to 2054. In the development of the forecasts, 2018 base year employment was estimated, as there is no public source for 2018 employment for the Calgary Metropolitan Region. The CMRB approved population projections¹ for the Calgary Metropolitan Region were used to develop an estimate of the 2018 employment. This estimate uses the labour force participation rates and unemployment rate as published for 2018². Employment estimates were calculated annually, by applying labour force participation rates and unemployment rates - consistent with the rates used in the baseyear, to the annual population by age projections. This approach to estimating employment ensures internal consistency between the population and employment projections that are being used to inform the Growth Plan. In addition, CMRB provided employment data from the City of Calgary's Regional Transportation Model. This data included employment by aggregate 2 digit NAICS³ by transportation zone for the entire Calgary Metropolitan Region. This dataset, along with the 2018 employment estimate derived from the population projections was used to develop the 2018 employment by industry group and municipality. During the

¹ Population Projections. Produced for the Calgary Metropolitan Region Board & Its Member Municipalities. December 2018, Rennie Intelligence.

² Statistics Canada Labour Force Characteristics by census metropolitan area.

³ The aggregate 2 digit NAICS data was converted to 2 Digit NAICS for the purposes of this analysis to be able to make detailed industry growth assumptions.

process, the consulting team reviewed the 2018 employment data and made some revisions⁴ to the data based on feedback provided by members of the Technical Advisory Group (Spring 2018).

It is intended that the employment forecasts prepared for this analysis are used to inform the regional planning process. It is not intended that this data will be used to determine specific utility or transportation servicing requirements.

⁴ It is noted that the base year employment figures estimated for the purposes of this report vary from other estimates for employment for the City of Calgary and the Calgary Region. For example, using Statistics Canada Place of Work the City of Calgary would yield an employment estimate which is below that which is used for the purposes of this report. This difference while acknowledged is reflective of the variance in the estimated employment by location depending on the source of the information used.

Current Employment

Employment for 2018 has been estimated for the region using data from various sources⁵. This includes the CMRB approved population projections and the City of Calgary's Regional Transportation analysis that was originally prepared in 2009 and updated in 2015.

EMPLOYMENT BY INDUSTRY

Total employment in 2018 is estimated to total over 840,000 jobs. This employment has been broken down by industry in the table below. The North American Industrial Classification System (NAICS) has been used to describe the industry sectors. The two digit NAICS industry sector descriptions are provided in Appendix D.

The largest industry sector is Professional, scientific and technical services, with approximately 100,000 jobs representing almost 12% of total employment. Retail trade is the second largest industry group at 92,000 jobs (10.9% of the total), followed by Construction with approximately 83,000 jobs representing 9.8% of the total.

Calgary Metropolitan Region Employment by Industry (2018)⁶

NAICS Code	Industry	Employment	% of Emp
11	Agriculture, forestry, fishing and hunting	2,398	0.3%
21	Mining and oil and gas extraction	50,506	6.0%
22	Utilities	10,772	1.3%
23	Construction	82,833	9.8%
31-33	Manufacturing	46,436	5.5%
41	Wholesale trade	19,723	2.3%
44-45	Retail trade	92,020	10.9%
48-49	Transportation and warehousing	67,000	7.9%
51	Information and cultural industries	16,770	2.0%
52	Finance and insurance	30,917	3.7%
53	Real estate and rental and leasing	12,966	1.5%
54	Professional, scientific and technical services	99,569	11.8%
55	Management of companies and enterprises	2,729	0.3%
56	Administrative and support, waste management and remediation services	36,872	4.4%

⁵ See Appendix C for more information on the data sources used to inform the 2018 employment estimate.

⁶ 2 digit NAICS - see Appendix C for a description of each industry category.

NAICS Code	Industry	Employment	% of Emp
61	Educational services	48,655	5.8%
62	Health care and social assistance	77,198	9.2%
71	Arts, entertainment and recreation	20,995	2.5%
72	Accommodation and food services	53,963	6.4%
81	Other services (except public administration)	47,377	5.6%
91	Public administration	23,395	2.8%
Total		843,094	100%

EMPLOYMENT BY MUNICIPALITY

The majority of employment in the Region is located in the City of Calgary. Rocky View County has the second largest employment total. It has been estimated that each of the other municipalities have less than 2% of the regions employment.

Calgary Metropolitan Region Employment by Municipality (2018)

Municipality	Employment	% of Employment
Airdrie	15,360	1.8%
Calgary	755,146	89.6%
Chestermere	2,759	0.3%
Cochrane	8,146	1.0%
High River	9,492	1.1%
Foothills County	13,963	1.7%
Okotoks	9,164	1.1%
Rocky View County	20,574	2.4%
Strathmore	6,898	0.8%
Wheatland County*	1,594	0.2%
Total	843,096	100%

* Portion of Wheatland County included in the CMRB

Status Quo Scenario

For the purposes of this analysis a Status Quo scenario has been developed. The following section outlines the Status Quo scenario.⁷

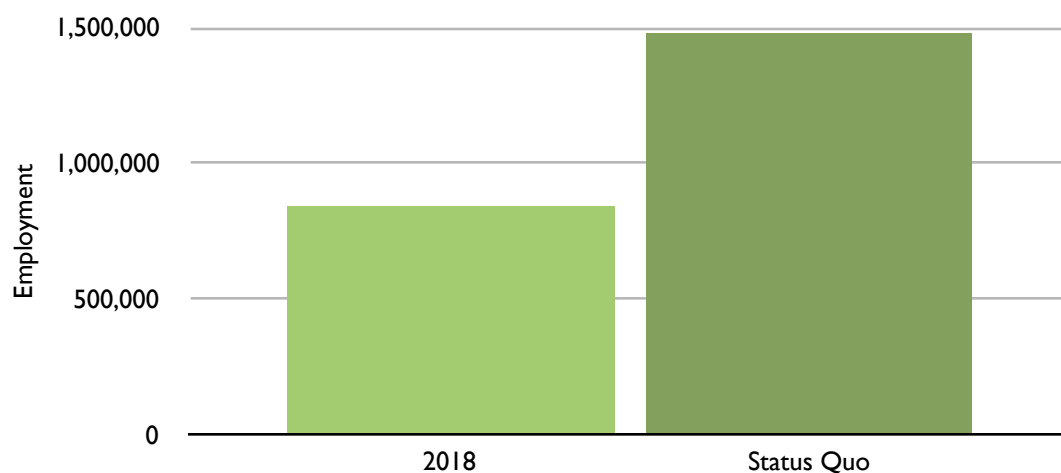
STATUS QUO

Employment growth in the Status Quo scenario was aligned to CMRB population forecasts⁸ prepared by Rennie Intelligence.

The Status Quo scenario analysis results are summarized as follows:

- ▶ **Population:** Total population increases from 1,589,218 in 2018 to 2,647,657 by 2054, an increase of 1,058,438 representing a 1.4% average annual growth rate.
- ▶ **Employment:** Total employment is projected to increase from 843,094 to 1,485,069 across the same period, an increase of 641,974 representing an average annual growth rate of 1.6%.
- ▶ **Labour Force:** The labour force increases consistently through the forecast period at an average annual rate of 1.5%.
- ▶ **Participation Rate:** The aggregate participation rate dips slightly from its 2018 rate of 70.4% to 66.4% by 2036, followed by a gradual increase to 69.6% by 2054.
- ▶ **Unemployment Rate:** The unemployment rate is projected to decline gradually from its 2018 rate of 7.9%, but remains above the 7.0% level through 2036. The unemployment rate is expected to settle at around 5.5% nearing the end of the forecast period.

Employment for 2018 and Status Quo Scenario

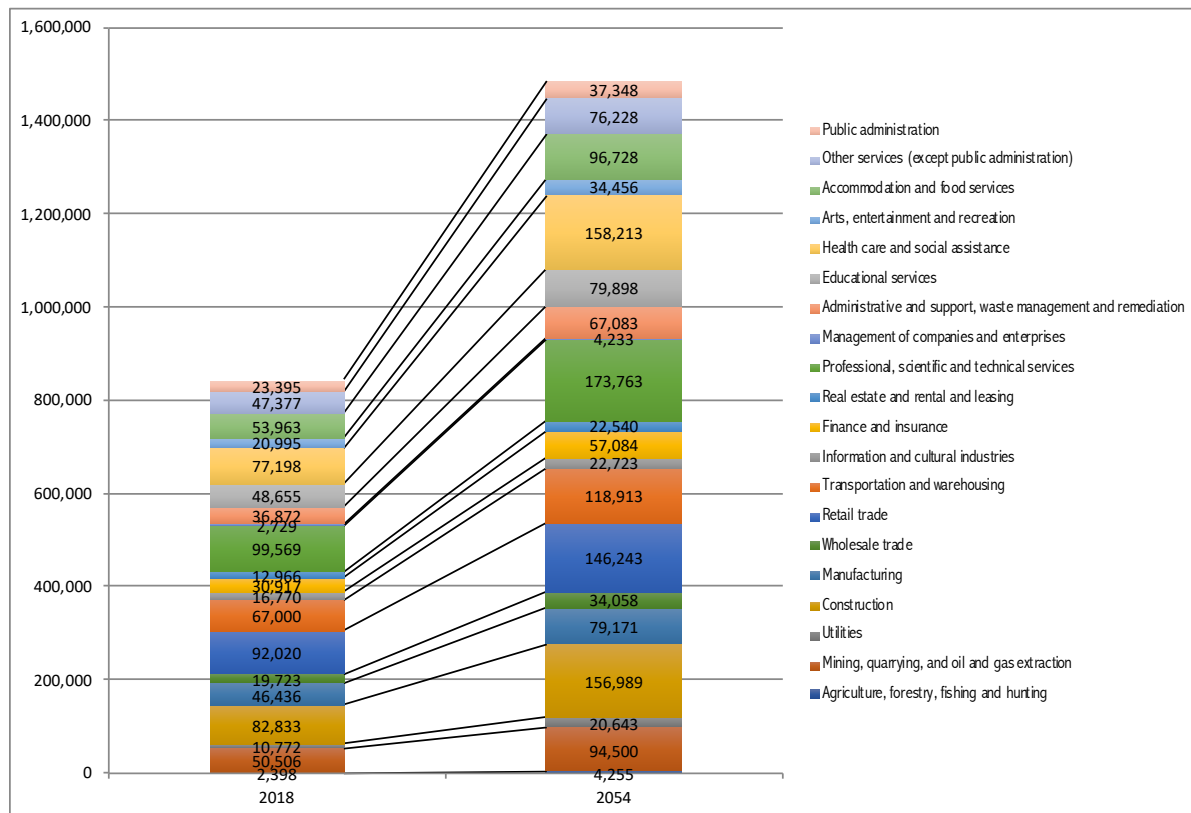


Between 2018 and 2054 there is job growth of 641,974. Relative to 2018, the industries with the largest job growth include: Healthcare and Social Assistance, Professional, scientific and technical services, Construction, Retail trade, and Transportation and warehousing. These industries comprise approximately 50% (+300,000 jobs) of total job growth over this period.

⁷The Status Quo scenario employment projections were approved by the Board at the November Board meeting.

⁸The age-specific population forecast target for 2054 was interpolated using the 2051 and 2056 data provided by Rennie Intelligence.

Employment by Industry - 2018 and Status Quo Scenario



Additional Scenario Discussion

As part of this process, the consulting team had further discussion with the Technical Advisory Group on different assumptions regarding six growth parameters and the respective employment impacts attributable to these parameters.⁹ The variation in these assumptions was explored to understand how employment will evolve based on structural changes to the economy. The details regarding these additional scenarios are presented in Appendix A.

These additional scenarios are not intended to be used as official regional projections. They are collectively intended to be used as a high-level reference tool that reflects the future directions of change envisioned for the region, recognizing that over a long term projection horizon there is uncertainty.

⁹ Growth parameters are defined as the fundamental components of the economy that can be used to define what direction economic growth can be expected to occur. These are described in detail in Appendix A.

Regionally Significant Employment Areas

Defining employment areas that have regional significance is important to ensure that sufficient lands are available for development, in the right locations, to maximize the potential for future economic and employment growth in the region. The definition of what comprises a 'regionally significant employment area' is subjective. As a result, an attempt has been made to attach some rigour to the process of defining "Regionally Significant Employment Areas". This has taken the form of some characteristics that may be considered in defining what areas rise to be of regional significance.

WHY ARE SOME EMPLOYMENT AREAS REGIONALLY SIGNIFICANT?

Some employment in every community and neighbourhood is tied to a specific location because it primarily services the community or neighbourhood around it. This would include a neighbourhood mall with a convenience store, gas station, health clinic and other retail and non-commercial services. This type of employment would not likely be considered 'regionally significant' because of its ties to the local community or neighbourhood. Contrast this with the Calgary International Airport, which provides a range of transportation and non-transportation services to the City of Calgary, residents and businesses in the Calgary metropolitan region and beyond. Employment of this type would clearly be 'regionally significant' as it services a broad range of users within the region and beyond the region. The purpose of identifying characteristics is to help define where an employment area transitions from primarily serving a local geographic base, to one that provides a regional function.

Further, it is noted that a 'regionally significant employment area' does not need to only accommodate development that is truly regional in nature, but would likely be predominately of this character. Similarly, it is possible that an area is not considered to have regional significance, but to have some development that provides goods or services beyond, or well beyond, what would be considered local within which it is located.

CHARACTERISTICS FOR DETERMINING REGIONALLY SIGNIFICANT EMPLOYMENT AREAS

It is recognized that determining 'regional significance' is not a precise science, but rather one that involves judgement. The following characteristics have been identified as a tool to assist in arriving at a consensus as to the factors important in determining 'regional significance' in the Calgary Metropolitan Region.

- ▶ Areas with approved land use plans.
- ▶ Areas with a critical mass of existing development. This could consider total employment, number of businesses or other metrics that help define critical mass.
- ▶ Areas with existing servicing and infrastructure 'in-place'.
- ▶ Connections to the regional, national and international transportation network including for both access to markets and supply of inputs to production:¹⁰
 - ▶ Rail

¹⁰ Consideration of the services and level of services for each transportation mode could be considered. For example, airport infrastructure with schedule air services could be considered more important than those without scheduled air service. Similarly, road infrastructure may consider the the level of service (i.e. highway, major arterials arterials, etc.).

- ▶ Road
- ▶ Air
- ▶ Connections to the regional transportation network to provide efficient access to required labour:
 - ▶ Road network
 - ▶ Transit
 - ▶ LRT / higher order transit
- ▶ Strategic considerations that areas may have potential for expanding in size and scale to provide regional benefit.

Appendix A: Scenario Development and Additional Scenario Results

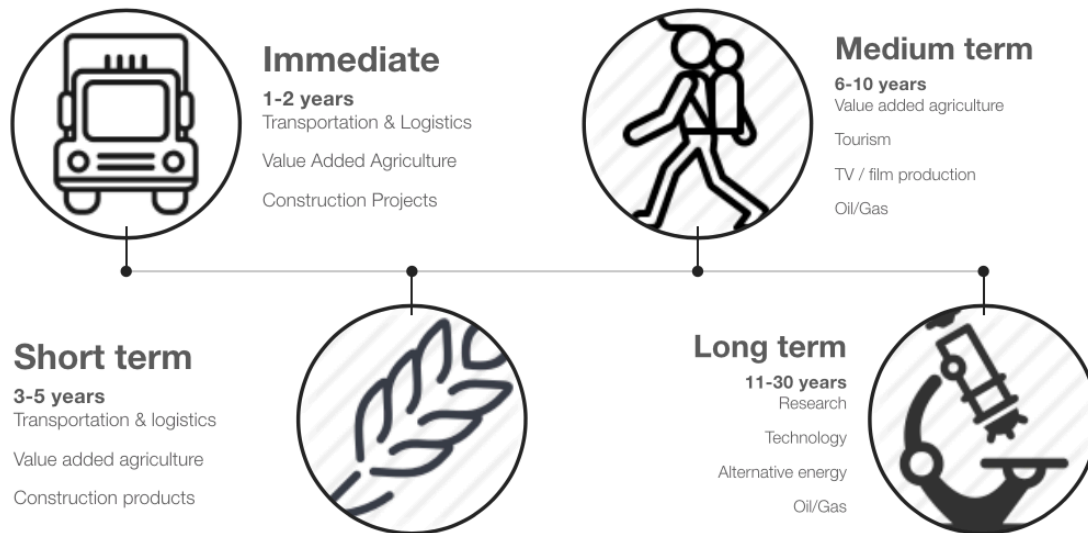
In developing the projections of future growth, the consulting team conducted a workshop with the Technical Advisory Group. Subsequent to this, discussions were held with representatives of each CMRB member municipality to discuss which industries were expected to hold the greatest potential for the municipality and for the region. This information was combined with published economic development initiatives and strategies as available for the member municipalities. The result was the definition of key industries that can be expected to drive growth in the future.

DRIVER INDUSTRIES




Based on research and input from the member municipalities, a road map of future growth by industry was prepared. This included consideration of not only which industries can be expected to lead growth – ‘driver industries’ – but also the general timeframe over which these industries might be expected to grow most significantly.

The specific driver industries identified and expected timeframe for growth are detailed below.




Driver Industries






IMMEDIATE TERM (1-2 YEARS)

<p>Transportation & logistics specialized cargo and logistic facilities</p>	 <p>Transportation</p>
<p>Value added agriculture: specialized food and beverage manufacturing.</p>	 <p>Value Added Agriculture</p>
<p>Non-residential construction: projects currently under construction is estimated at \$12.9 Billion.</p>	 <p>Construction Projects</p>




SHORT TERM (3-5 YEARS)

<p>Transportation and logistics: Large scale warehousing and storage facilities Transportation (air, rail, truck)</p>	 <p>Transportation</p>
<p>Value added agriculture: speciality food manufacturing, seed cleaning, cannabis production</p>	 <p>Value Added Agriculture</p>
<p>Manufacturing: growth in residential construction, building products/specialized home products, Industrial machinery/specialized machine shops, reinforced plastics.</p>	 <p>Manufacturing</p>

MEDIUM TERM (6-10 YEARS)

<p>Value added agriculture: plant proteins, micro-breweries/wineries</p>	 <p>Value Added Agriculture</p>
<p>Tourism: food accommodation sector; outdoor adventures, equestrian.</p>	 <p>Tourism</p>
<p>TV/Film Production: growth in residential construction, building products/specialized home products, Industrial machinery/specialized machine shops, reinforced plastics.</p>	 <p>T V / Film Production</p>

LONG TERM (11-20 YEARS)

<p>Research: pharmaceuticals, bio-technology, environmental sciences, growth food</p>	 <p>Research</p>
<p>Technology: oil/gas/geomatics, software, big data, architecture, agriculture technology</p>	 <p>Technology</p>
<p>Alternative Energy: solar farms, natural gas, bio-solids</p>	 <p>Alternative Energy</p>

BASELINE GROWTH & STRUCTURAL CHANGE

The employment forecast includes two components: a Baseline projection that assumes there are no changes in economic 'structural' components of the regional economy. This Baseline employment forecast estimates total employment to increase to 1,341,460 for 2054. The Status Quo employment scenario includes a Baseline employment component, as well as a 'structural' employment component that results from assumptions regarding the degree to which each of six dimensions of the regional economy can change in the forecast. These 'structural' components of the forecast include the following dimensions: Economic Diversity; Technological Change; Trade Liberalization; Environmental Stewardship; Social Development; and Development Density. Each of these parameters are discussed below.

COMPONENTS OF STRUCTURAL CHANGE

Six key parameters of growth have been defined for the purpose of scenario development. These growth parameters have been used in the development of the employment scenario for this analysis. These growth parameters reflect consideration of the evolution of the Calgary regional economy over the long term forecast period

Structural Growth Parameters



It is recognized that each of these dimensions of structural growth often do not act independently. Rather they are related and to develop consistent projections of future economic and employment

growth, these interactions need to be defined. Below each of the components of structure growth are defined and how they are related is presented below.

ECONOMIC DIVERSITY

Diversification of the economy is a key initiative for the region and provincially. This refers to the variety of business and employment activities in the economy being spread across more industries as opposed to be concentrated in a few industries. In the context of the Calgary region, this refers to more of future economic growth being in non-energy related sectors than has historically been the case.

In measuring progress in diversifying the economy, the range for this parameter is defined as follows:

- ▶ **High:** The energy sector grows but at a lower rate than other selected driver industries.
- ▶ **Low:** The energy sector continues to dominate the regional economy.

Economic diversity is deemed to be strongly related to advancement of technological change, environmental stewardship and development density. The relationship of each structural parameter to economic diversity is provided below.



Economic Diversity

Economic Diversity	Technological Change	Trade Liberalization	Environmental Stewardship	Social Progress	Development Density
Relationship What is the relationship between Economic Diversity and the other Growth Parameters. + Positive ≈ Neutral - Negative	+++ Positive Faster adoption of new technologies will help to promote 'economic diversity'.	≈ Neutral Reduced barriers to trade will expose businesses to increased competition as well as provide greater opportunities to export for other businesses.	+ Positive Greater environmental stewardship will encourage evolution of enterprises to meet demand for new products and services increasing diversity.	≈ Neutral Social progress is largely independent of economic diversity.	++ Positive Newly emerging enterprises will likely benefit from the connectivities of increased densities and proximity to other businesses, services and workforce.
Dependency	Strong dependency: Moves in same direction	Mixed dependency: Industry specific	Minor dependency: Moves in same direction	Not dependent: Moves independently	Minor dependency: Moves in same direction

TECHNOLOGICAL CHANGE

Technological change is inevitable in today's economy and can affect each sector of the economy, albeit differentially. The effects of technological change depends on both the rate of technological change as it happens in the global economy and how quickly it is adopted within the local regional economy.

The range for this parameter is defined as follows:

- ▶ **High:** The rate of technological advancement and adoption of this technology is fast. As an example, autonomous vehicles and AI are developed and adopted quickly.
- ▶ **Low:** The rate of technological advancement is slow and costly to implement.

Technological change is deemed to be strongly related to economic diversity, trade liberalization, environmental stewardship and development density. The relationship of each structural parameter to technological change is provided below.



Technological Change

Technological Change	Economic Diversity	Trade Liberalization	Environmental Stewardship	Social Progress	Development Density
Relationship What is the relationship between Technological Change and the other Growth Parameters. + Positive ≈ Neutral - Negative	+++ Positive Adoption of productivity enhancing technology is likely to lead to increased competitiveness of local businesses and new opportunities across a range of industries.	+ Positive Improved trade liberalization is likely to result in better access to more efficient methods of production (through technology) due to comparative advantage.	++ Positive Environmental challenges will advance the adoption of technological change as businesses will evolve using new practices and processes.	≈ Neutral Social progress is largely independent of technological change.	+ Positive Increased density of development will enhance the adoption of technological advancements that take advantage of smaller business footprints.
Dependency	Minor dependency: Moves in same direction	Average dependency: Moves in same direction	Average dependency: Moves in same direction	Not dependent: Moves independently	Minor dependency: Moves in same direction

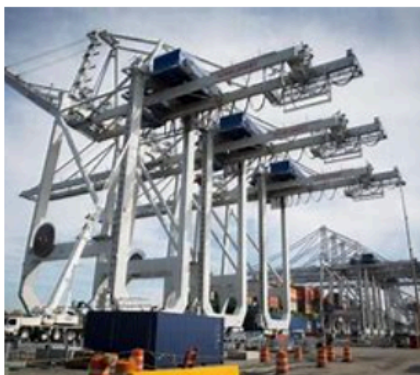
TRADE LIBERALIZATION

There are numerous international and inter-provincial barriers to trade that inhibit the movement of goods and services to and from Alberta and the Calgary region. The broad trend over past decades has been to reduce barriers to trade. Recently however, protectionist policies have been implemented, most notably by the United States.

The range for this parameter is defined as follows:

- ▶ **High:** Inter-provincial and international trade barriers are lowered through international trade agreements and inter-provincially through harmonization of specific industry requirements that removes or reduces the advantage of local suppliers.
- ▶ **Low:** Barriers to trade may be raised, including the implementation of tariffs or other policies that disadvantage non-local suppliers.

Trade liberalization is deemed to be strongly related to economic diversity, technological change, environmental stewardship and development density. The relationship of each structural parameter to technological change is provided below.



Trade Liberalization

Trade Liberalization	Economic Diversity	Technological Change	Environmental Stewardship	Social Progress	Development Density
Relationship What is the relationship between Trade Liberalization and the other Growth Parameters. + Positive ≈ Neutral - Negative	≈ Neutral Trade liberalization will likely affect some businesses positively (with export potential) and some negatively (where they compete with imports).	+ Positive Trade liberalization will increase the advancement and adoption of technological change.	++ Positive Trade agreements often include environmental measures and standards forcing the adoption of higher environmental standards.	≈ Neutral Trade liberalization is relatively independent of Social Progress for Canada. This may not be the case of some of Canada's trading partners.	+ Positive Businesses that rely on trade (imports/exports) will likely prefer to locate near major transportation hubs, encouraging density (where possible) in these locations.
Dependency	Mixed dependency: Industry specific	Minor dependency: Moves in same direction	Average dependency: Moves in same direction	Not dependent: Moves independently	Minor dependency: Moves in same direction

ENVIRONMENTAL STEWARDSHIP

Environmental stewardship is manifest in policies and practices that protect environmental assets. This has possible implications for many sectors of the economy, from energy production to consumer products.

The range for this parameter is defined as follows:

- ▶ **High:** Significant progress in advancing recycling, reducing air and water emissions and slowing/reversing climate change.
- ▶ **Low:** Slow progress in advancing recycling, reducing air and water emissions and slowing climate change.

Environmental stewardship is deemed to be strongly related to economic diversity, technological change, trade liberalization and development density. The relationship of each structural parameter to technological change is provided below.



Environmental Stewardship

Environmental Stewardship	Economic Diversity	Technological Change	Trade Liberalization	Social Progress	Development Density
Relationship What is the relationship between Environmental Stewardship and the other Growth Parameters. + Positive ≈ Neutral - Negative	+ Positive An emphasis on Environmental Stewardship will encourage economic diversification by creating demand for new and emerging businesses.	+ Positive Environmental challenges will advance the adoption of technological change as businesses will evolve using new practices and processes.	++ Positive Trade agreements often include environmental measures and standards forcing the adoption of higher environmental standards.	≈ Neutral Environmental Stewardship is relatively independent of Social Progress.	+ Positive Intensification of development will help reduce the demand for land resources.
Dependency	Minor dependency: Moves in same direction	Minor dependency: Industry specific	Average dependency: Moves in same direction	Not dependent: Moves independently	Minor dependency: Moves in same direction

SOCIAL DEVELOPMENT

Social development is defined as progress toward improving the well-being of citizens. This includes improving levels of education, health and well-being, and reducing poverty and income inequality. A healthy and educated population have lower social costs associated with health care, criminal justice and social services. Lower poverty and income balance tends to grow the local economy by creating more purchasing power in the hands of more people.

The range for this parameter is defined as follows:

- ▶ **High:** Major advances in reducing poverty and income disparity. Increases in general levels of education and well-being.
- ▶ **Low:** Little or no progress in reducing poverty and moderating income inequality. Similarly, no advancement in general levels of education and citizen well-being.

Social development is largely independent of the other structural change components. It is expected however, that increased density of development would help to promote social development by creating opportunities for living and working in the same community.



Social Progress

Social Progress	Economic Diversity	Technological Change	Trade Liberalization	Environmental Stewardship	Development Density
Relationship What is the relationship between Social Progress and the other Growth Parameters. + Positive ≈ Neutral - Negative	≈ Neutral Social progress is largely independent of economic diversity.	≈ Neutral Social progress is largely independent of technological change.	≈ Neutral Trade liberalization is relatively independent of Social Progress for Canada.	≈ Neutral Environmental Stewardship is relatively independent of Social Progress.	+ Positive Productivity-enhancing technology could result in better use of land resources for industries. Produce the same (or greater) amount using less space.
Dependency	Not dependent: Moves independently	Not dependent: Moves independently	Not dependent: Moves independently	Not dependent: Moves independently	Minor dependency: Moves in same direction

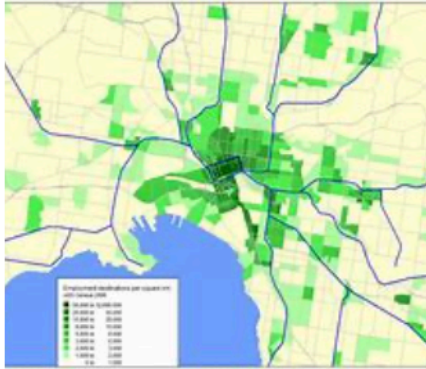
DEVELOPMENT DENSITY

Development density isn't as much an economic parameter, but rather a planning/development dimension that can affect the nature and magnitude of growth. For the purposes of this analysis, development density has been defined as putting more development in less space. This has implications for municipal servicing, community development and business efficiency. As well, reducing the footprint of development creates opportunities for alternate land uses and can reduce environmental impacts associated with development.

The range for this parameter is defined as follows:

- ▶ **High:** Higher density employment based activities are increased and intensified for businesses that have an opportunity to do so. It is noted not all business activities are able to operate effectively and efficiently in less space.
- ▶ **Low:** A continuation of historical development patterns where compact development is not typically considered.

Development density is seen to have a positive relationship with each of the other structural components.



Development Density

Development Density	Economic Diversity	Technological Change	Trade Liberalization	Environmental Stewardship	Social Progress
<p>Relationship</p> <p>What is the relationship between Development Density and the other Growth Parameters.</p> <p>+ Positive ≈ Neutral - Negative</p>	<p>++ Positive</p> <p>Newly emerging enterprises will likely benefit from the connectivities of increased densities and proximity to other businesses, services and workforce.</p>	<p>+ Positive</p> <p>Increased density of development will enhance the adoption of technological advancements that take advantage of smaller business footprints.</p>	<p>+ Positive</p> <p>Businesses that rely on trade (imports/exports) will likely prefer to locate near major transportation hubs, encouraging density (where possible) in these locations.</p>	<p>++ Positive</p> <p>Technological change is relatively independent of Social Progress.</p>	<p>+ Positive</p> <p>Productivity-enhancing technology could result in better use of land resources for industries. Produce the same (or greater) amount using less space.</p>
<p>Dependency</p>	<p>Average dependency: Moves in same direction</p>	<p>Minor dependency: Moves in same direction</p>	<p>Minor dependency: Moves in same direction</p>	<p>Average dependency: Moves in same direction</p>	<p>Minor dependency: Moves in same direction</p>

STATUS QUO SCENARIO

The Status Quo scenario incorporates some structural change, but this has been assumed to be minimal. The specific assumptions regarding structural change are summarized below.

Status Quo - Structural Change

Status Quo

Economic Diversity: The energy sector remains dominant (1.5).

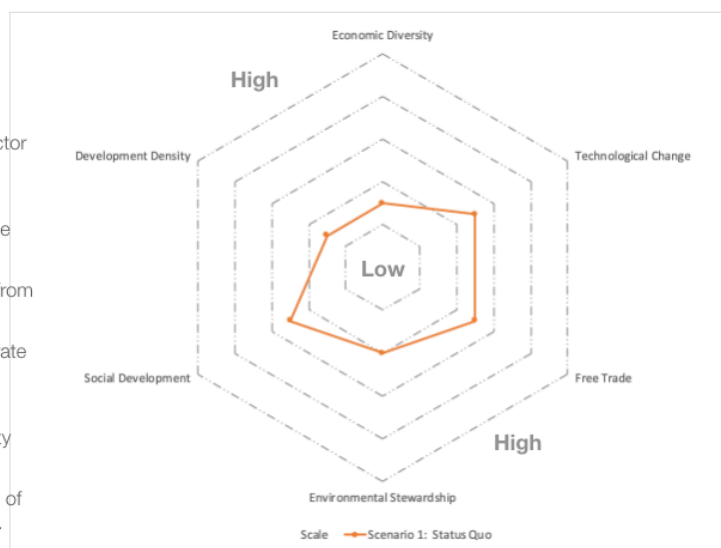
Technological Change: Moderate advancement of technological change (2.5).

Free Trade: Few gains in free trade from current situation (2.5).

Environmental Stewardship: Moderate advancement of this parameter (2.0).

Social Development: Some gain in poverty reduction and income equality (2.5).

Development Density: Continuation of existing pattern of development (1.5).



5 point scale: 1 = Low , 5 = High

Over the forecast period to 2054, structural change is projected to add an additional 144,000 jobs to the regional economy – 10.7% over and above the Baseline projection.¹¹ The resulting total employment for this scenario is 1.485 million jobs.

Status Quo Employment Scenario - Forecast Results for 2054

SCENARIO	BASELINE 2054	BASELINE + STRUCTURAL CHANGE 2054	STRUCTURAL CHANGE IN EMPLOYMENT	% CHANGE RELATIVE TO BASELINE
Status Quo	1,341,460	1,485,069	143,609	10.7%

In the Status Quo scenario employment in the Calgary region grows from 843,094 in 2018 to 1,485,069 by 2054, an average annual increase of 1.6% over the 35 year forecast period.

As part of this process, there was additional discussion on the variation of the six key parameters which were used for developing the Status Quo Scenario. Variation of the parameters reflect consideration of the evolution of the regional economy over the long term forecast period. The additional scenarios that were discussed include:

¹¹ The Baseline forecast is projected to increase employment in the region from 846,000 to 1.341 million between 2018 and 2054. This represents a total increase of 59% over the forecast period.

- ▶ **Economic Diversification Scenario:** This scenario focuses on maximizing the potential for diversification opportunities in the regional economy.
- ▶ **Technological Change Scenario:** This scenario focuses on maximizing the advancement of technological change and its adoption in the regional economy.
- ▶ **Development Density Scenario:** This scenario focuses on maximizing the potential for intensifying development in the regional economy.

The following section provides details regarding each of these additional scenarios. It is important to note that these scenarios are intended for discussion purposes only.

ECONOMIC DIVERSIFICATION SCENARIO

Population growth in the Economic Diversification scenario was projected using fertility, mortality and migration profiles identical to those outlined in the preceding Status Quo scenario section of this report.

The Economic Diversification scenario analysis results are summarized as follows:

- ▶ **Population:** Total population increases from 1,589,218 in 2018 to 2,854,016 by 2054, an increase of 1,264,016 representing a 1.6% average annual growth rate.
- ▶ **Employment:** Total employment is projected to increase from 843,094 to 1,602,069 across the same period, an increase of 758,975 representing an average annual growth rate of 1.8%.
- ▶ **Labour Force:** The labour force increases consistently through the forecast period at an average annual rate of 1.7%.
- ▶ **Participation Rate:** The aggregate participation rate dips slightly from its 2018 rate of 70.4% to 66.8% by 2036, followed by a gradual increase to 69.6% by 2054.
- ▶ **Unemployment Rate:** The unemployment rate is projected to decline relatively quickly from its 2018 rate of 7.9% to an average of about 6.0% by the 2026 to 2041 period, followed by further decline to 5.5% by the end of the forecast period.

The Economic Diversification scenario incorporates significant structural change. The specific assumptions regarding structural change are summarized below.

Economic Diversification - Structural Change

Economic Diversification

Economic Diversity: Maximize diversification opportunities (5.0).

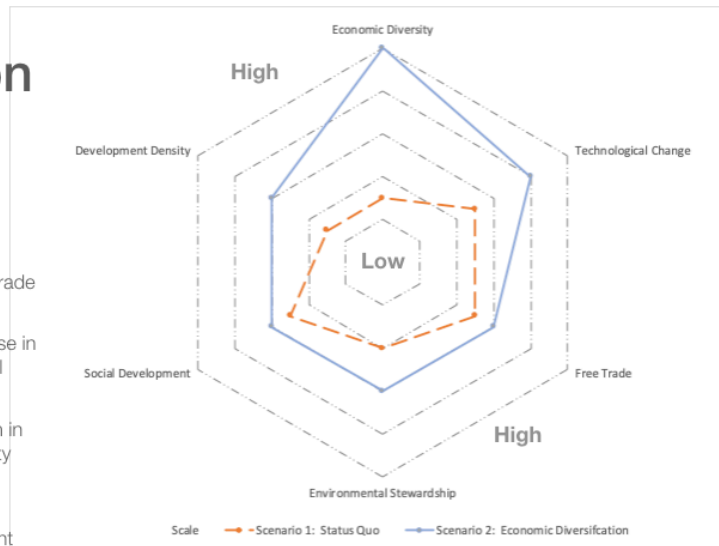
Technological Change: Fast advancement and adoption of technological change (4.0).

Free Trade: Moderate gains in free trade from current situation (3.0).

Environmental Stewardship: Increase in concern and action on environmental issues (3.0).

Social Development: Moderate gain in poverty reduction and income equality (3.0).

Development Density: Moderate increase in the density of development (3.0).



5 point scale: 1 = Low , 5 = High

Over the forecast period to 2054, structural change is projected to add an additional 260,000 jobs to the regional economy – 19.4% over and above the Baseline projection.¹² The resulting total employment for this scenario is 1.6 million jobs.

Economic Diversification Employment Scenario - Forecast Results for 2054

SCENARIO	BASELINE 2054	BASELINE + STRUCTURAL CHANGE 2054	STRUCTURAL CHANGE IN EMPLOYMENT	% CHANGE RELATIVE TO BASELINE
Status Quo	1,341,460	1,485,069	143,609	10.7%
Economic Diversification	1,341,460	1,602,069	260,609	19.4%

TECHNOLOGICAL CHANGE SCENARIO

Population growth in the Technological Change scenario was projected using fertility, mortality and migration profiles identical to those outlined in the preceding Status Quo scenario section of this report.

The Technological Change scenario analysis results are summarized as follows:

- **Population:** Total population increases from 1,589,218 in 2018 to 2,840,880 by 2054, an increase of 1,251,662 representing a 1.6% average annual growth rate.
- **Employment:** Total employment is projected to increase from 843,094 to 1,594,900 across the same period, an increase of 751,806 representing an average annual growth rate of 1.8%.

¹²The Baseline forecast is projected to increase employment in the region from 846,000 to 1.341 million between 2018 and 2054. This represents a total increase of 59% over the forecast period.

- ▶ **Labour Force:** The labour force increases consistently through the forecast period at an average annual rate of 1.7%.
- ▶ **Participation Rate:** The aggregate participation rate dips slightly from its 2018 rate of 70.4% to 66.8% by 2036, followed by a gradual increase to 69.6% by 2054.
- ▶ **Unemployment Rate:** The unemployment rate is projected to decline relatively quickly from its 2018 rate of 7.9% to an average of about 6.0% by the 2026 to 2041 period, followed by further decline to 5.5% by the end of the forecast period.

The Technological Change scenario incorporates significant structural change. The specific assumptions regarding structural change are summarized below.

Technological Change - Structural Change

Technological Change

Economic Diversity: Moderate diversification of the economy (3.0).

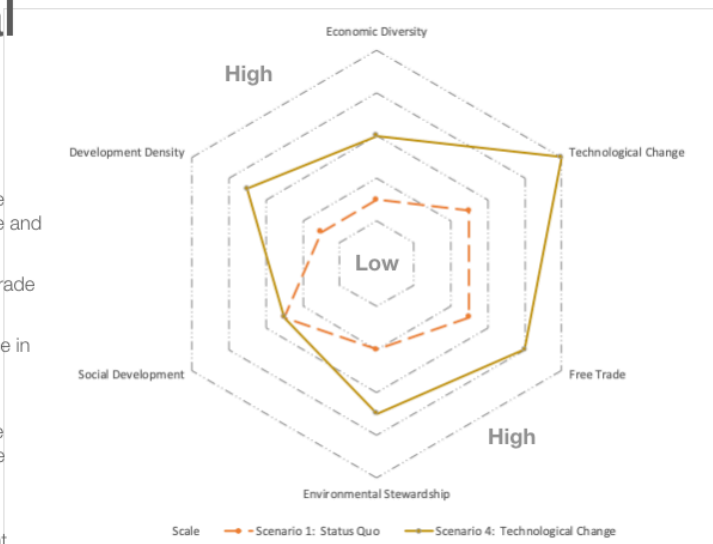
Technological Change: Maximize the advancement of technological change and its adoption (5.0).

Free Trade: Significant gains in free trade from current situation (4.0).

Environmental Stewardship: Increase in concern and action on environmental issues (3.5).

Social Development: No appreciable gains in poverty reduction and income equality (2.0).

Development Density: Moderate increase in the density of development (3.5).



Over the forecast period to 2054, structural change is projected to add an additional 253,000 jobs to the regional economy – 18.9% over and above the Baseline projection.¹³ The resulting total employment for this scenario is 1.6 million jobs.

Technological Change Scenario - Employment Forecast Results for 2054

SCENARIO	BASELINE 2054	BASELINE + STRUCTURAL CHANGE 2054	STRUCTURAL CHANGE IN EMPLOYMENT	% CHANGE RELATIVE TO BASELINE
Status Quo	1,341,460	1,485,069	143,609	10.7%
Technological Change	1,341,460	1,594,900	253,440	18.9%

¹³The Baseline forecast is projected to increase employment in the region from 846,000 to 1.341 million between 2018 and 2054. This represents a total increase of 59% over the forecast period.

DEVELOPMENT DENSITY SCENARIO

Population growth in the Development Density scenario was projected using fertility, mortality and migration profiles identical to those outlined in the preceding Status Quo scenario section of this report.

The Development Density scenario analysis results are summarized as follows:

- ▶ **Population:** Total population increases from 1,589,218 in 2018 to 2,821,975 by 2054, an increase of 1,232,756 representing a 1.6% average annual growth rate.
- ▶ **Employment:** Total employment is projected to increase from 843,094 to 1,584,410 across the same period, an increase of 741,316 representing an average annual growth rate of 1.8%.
- ▶ **Labour Force:** The labour force increases consistently through the forecast period at an average annual rate of 1.7%.
- ▶ **Participation Rate:** The aggregate participation rate dips slightly from its 2018 rate of 70.4% to 66.8% by 2036, followed by a gradual increase to 69.6% by 2054.
- ▶ **Unemployment Rate:** The unemployment rate is projected to decline relatively quickly from its 2018 rate of 7.9% to an average of about 6.0% by the 2026 to 2041 period, followed by further decline to 5.5% by the end of the forecast period.

The Development Density scenario incorporates significant structural change. The specific assumptions regarding structural change are summarized below.

Development Density - Structural Change

Density of Development

Economic Diversity: Moderate diversification of the economy (3.0).

Technological Change: Fast advancement and adoption of technological change (4.0).

Free Trade: Moderate gains in free trade from current situation (3.0).

Environmental Stewardship: Increase in concern and action on environmental issues (4.0).

Social Development: Moderate gain in poverty reduction and income equality (3.5).

Development Density: Maximize the potential for intensifying development (5.0).



Over the forecast period to 2054, structural change is projected to add an additional 243,000 jobs to the regional economy – 18.1% over and above the Baseline projection.¹⁴ The resulting total employment for this scenario is 1.58 million jobs.

¹⁴The Baseline forecast is projected to increase employment in the region from 846,000 to 1.341 million between 2018 and 2054. This represents a total increase of 59% over the forecast period.

Development Density Employment Scenario - Forecast Results for 2054

SCENARIO	BASELINE 2054	BASELINE + STRUCTURAL CHANGE 2054	STRUCTURAL CHANGE IN EMPLOYMENT	% CHANGE RELATIVE TO BASELINE
Status Quo	1,341,460	1,485,069	143,609	10.7%
Density of Development	1,341,460	1,584,410	242,950	18.1%

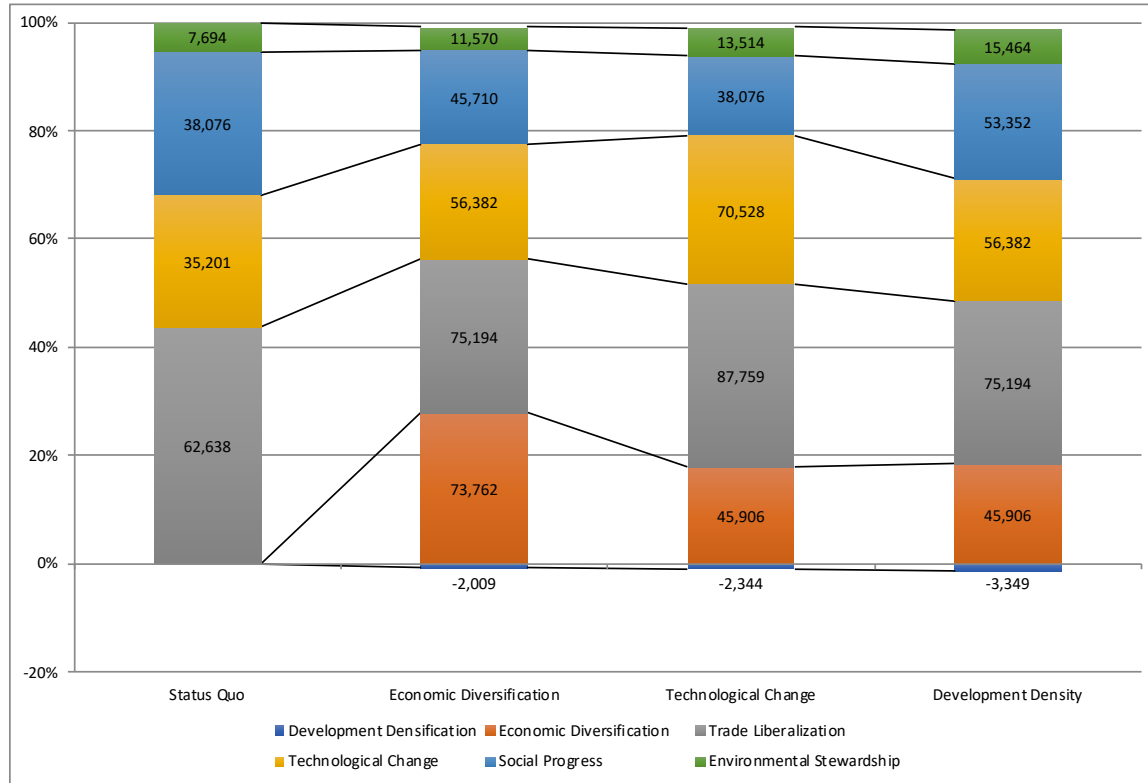
ASSOCIATED WITH STRUCTURAL CHANGE

This section describes the structural parameters that contribute to employment growth through the forecast period (relative to the Baseline scenario).

- ▶ **Status Quo:** Of the 143,609 additional jobs attributable to structural change in the Status Quo scenario, a majority are related to the liberalization of trade conditions (62,638). Significant job growth is also driven by improvements in social development (38,076) and technological change (35,201). Environmental stewardship efforts also contribute a meaningful amount of jobs (7,694) through 2054.
- ▶ **Economic Diversification:** Of the 260,609 additional jobs attributable to structural change in the Economic Diversification scenario, a majority again are related to the liberalization of trade conditions (75,194), though economic diversification efforts contribute nearly as many new positions (73,762). Significant job growth is also driven by improvements in technological change (56,382) and social progress (45,710). Environmental stewardship efforts also contribute a meaningful amount of jobs (11,570) through 2054. Development densification improvements have a net impact of subtracting a relatively small number of jobs (-2,009) through the forecast period.
- ▶ **Technological Change:** Of the 253,440 additional jobs attributable to structural change in the Technological Change scenario, a majority again are related to the liberalization of trade conditions (87,759), though adoption of new technology contributes nearly as many new positions (70,528). Significant job growth is also driven by economic diversification (45,906) and social progress (38,076). Environmental stewardship efforts also contribute a meaningful amount of jobs (13,514) through 2054. Development densification improvements have a net impact of subtracting a relatively small number of jobs (-2,344) through the forecast period.
- ▶ **Development Density:** Of the 242,950 additional jobs attributable to structural change in the Development Density scenario, a majority again are related to the liberalization of trade conditions (75,194). Significant job growth is also driven by the adoption of new technology (56,382), social progress (53,352), and efforts to improve economic diversification (45,906). Environmental stewardship efforts also contribute a meaningful amount of jobs (15,464) through 2054. Development densification improvements have a net impact of subtracting a relatively small number of jobs (-3,349) through the forecast period.

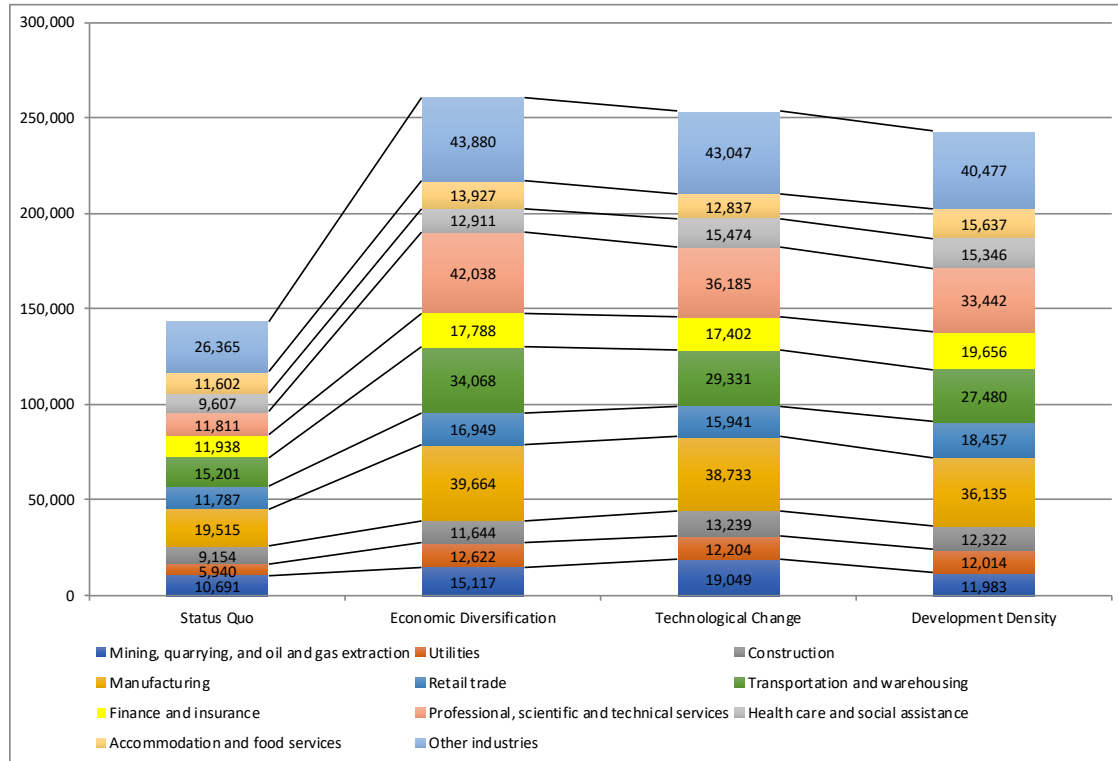
The chart below displays the structural component impacts on employment growth in each scenario, by type, through the forecast period relative to the Baseline.

Structural Parameter Impacts on Scenario-Specific Employment Growth (2054)



Differences in assumptions regarding the magnitude of structural component change across scenarios also results in different rates of job growth across industries. The chart on the following page disaggregates parameter-specific employment impacts in each scenario, according to industry group.

Scenario-Specific Structural Employment Growth (2054)



Appendix B: Employment Scenarios by 2 Digit NAICS

Status Quo Scenario - Employment by 2 Digit NAICS

2 DIGIT NAICS INDUSTRY	2018 EMPLOYMENT	2054 EMPLOYMENT	CHANGE IN EMPLOYMENT	AVERAGE ANNUAL % CHANGE
11 Agriculture, forestry, fishing and hunting	2,398	4,255	1,857	1.1%
21 Mining and oil and gas extraction	50,506	94,500	43,994	1.7%
22 Utilities	10,772	20,643	9,871	1.8%
23 Construction	82,833	156,989	74,156	1.8%
31-33 Manufacturing	46,436	79,171	32,735	1.5%
41 Wholesale trade	19,723	34,058	14,335	1.5%
44-45 Retail trade	92,020	146,243	54,223	1.3%
48-49 Transportation and warehousing	67,000	118,913	51,913	1.6%
51 Information and cultural industries	16,770	22,723	5,953	0.8%
52 Finance and insurance	30,917	57,084	26,167	1.7%
53 Real estate and rental and leasing	12,966	22,540	9,574	1.5%
54 Professional, scientific and technical services	99,569	173,763	74,194	1.6%
55 Management of companies and enterprises	2,729	4,233	1,504	1.2%
56 Administrative and support, waste management and remediation services	36,872	67,083	30,211	1.7%
61 Educational services	48,655	79,898	31,243	1.4%
62 Health care and social assistance	77,198	158,213	81,015	2.0%
71 Arts, entertainment and recreation	20,995	34,456	13,461	1.4%
72 Accommodation and food services	53,963	96,728	42,765	1.6%
81 Other services (except public administration)	47,377	76,228	28,851	1.3%
91 Public administration	23,395	37,348	13,953	1.3%
Total Employment	843,094	1,485,069	641,975	1.6%

*Highlighted shading represents the NAICS industries with average annual growth rates above the aggregate employment growth rate.

Economic Diversification Scenario - Employment by 2 Digit NAICS

2 DIGIT NAICS INDUSTRY	2018 EMPLOYMENT	2054 EMPLOYMENT	CHANGE IN EMPLOYMENT	AVERAGE ANNUAL % CHANGE
11 Agriculture, forestry, fishing and hunting	2,398	4,341	1,943	1.1%
21 Mining and oil and gas extraction	50,506	98,926	48,420	1.9%
22 Utilities	10,772	27,326	16,554	2.6%
23 Construction	82,833	159,479	76,646	1.8%
31-33 Manufacturing	46,436	99,320	52,884	2.1%
41 Wholesale trade	19,723	38,833	19,110	1.9%
44-45 Retail trade	92,020	151,405	59,385	1.4%
48-49 Transportation and warehousing	67,000	137,780	70,780	2.0%
51 Information and cultural industries	16,770	29,712	12,942	1.6%
52 Finance and insurance	30,917	62,934	32,017	2.0%
53 Real estate and rental and leasing	12,966	22,691	9,725	1.6%
54 Professional, scientific and technical services	99,569	203,990	104,421	2.0%
55 Management of companies and enterprises	2,729	4,338	1,609	1.3%
56 Administrative and support, waste management and remediation services	36,872	69,949	33,077	1.8%
61 Educational services	48,655	81,308	32,653	1.4%
62 Health care and social assistance	77,198	161,517	84,319	2.1%
71 Arts, entertainment and recreation	20,995	35,231	14,236	1.4%
72 Accommodation and food services	53,963	99,054	45,091	1.7%
81 Other services (except public administration)	47,377	77,232	29,855	1.4%
91 Public administration	23,395	36,703	13,308	1.2%
Total Employment	843,094	1,602,069	758,975	1.8%

*Highlighted shading represents the NAICS industries with average annual growth rates above the aggregate employment growth rate.

Technological Change Scenario - Employment by 2 Digit NAICS

2 DIGIT NAICS INDUSTRY	2018 EMPLOYMENT	2054 EMPLOYMENT	CHANGE IN EMPLOYMENT	AVERAGE ANNUAL % CHANGE
11 Agriculture, forestry, fishing and hunting	2,398	4,424	2,026	1.2%
21 Mining and oil and gas extraction	50,506	102,858	52,352	2.0%
22 Utilities	10,772	26,907	16,135	2.6%
23 Construction	82,833	161,074	78,241	1.9%
31-33 Manufacturing	46,436	98,389	51,953	2.1%
41 Wholesale trade	19,723	37,708	17,985	1.8%
44-45 Retail trade	92,020	150,397	58,377	1.4%
48-49 Transportation and warehousing	67,000	133,043	66,043	1.9%
51 Information and cultural industries	16,770	27,779	11,009	1.4%
52 Finance and insurance	30,917	62,548	31,631	2.0%
53 Real estate and rental and leasing	12,966	22,777	9,811	1.6%
54 Professional, scientific and technical services	99,569	198,136	98,567	1.9%
55 Management of companies and enterprises	2,729	4,419	1,690	1.3%
56 Administrative and support, waste management and remediation services	36,872	70,306	33,434	1.8%
61 Educational services	48,655	82,004	33,349	1.5%
62 Health care and social assistance	77,198	164,080	86,882	2.1%
71 Arts, entertainment and recreation	20,995	35,054	14,059	1.4%
72 Accommodation and food services	53,963	97,963	44,000	1.7%
81 Other services (except public administration)	47,377	78,504	31,127	1.4%
91 Public administration	23,395	36,531	13,136	1.2%
Total Employment	843,094	1,594,900	751,806	1.8%

*Highlighted shading represents the NAICS industries with average annual growth rates above the aggregate employment growth rate.

Density of Development Scenario - Employment by 2 Digit NAICS

2 DIGIT NAICS INDUSTRY	2018 EMPLOYMENT	2054 EMPLOYMENT	CHANGE IN EMPLOYMENT	AVERAGE ANNUAL % CHANGE
11 Agriculture, forestry, fishing and hunting	2,398	4,343	1,945	1.1%
21 Mining and oil and gas extraction	50,506	95,792	45,286	1.8%
22 Utilities	10,772	26,717	15,945	2.5%
23 Construction	82,833	160,157	77,324	1.8%
31-33 Manufacturing	46,436	95,791	49,355	2.0%
41 Wholesale trade	19,723	37,035	17,312	1.8%
44-45 Retail trade	92,020	152,913	60,893	1.4%
48-49 Transportation and warehousing	67,000	131,192	64,192	1.9%
51 Information and cultural industries	16,770	27,318	10,548	1.4%
52 Finance and insurance	30,917	64,802	33,885	2.1%
53 Real estate and rental and leasing	12,966	22,724	9,758	1.6%
54 Professional, scientific and technical services	99,569	195,393	95,824	1.9%
55 Management of companies and enterprises	2,729	4,338	1,609	1.3%
56 Administrative and support, waste management and remediation services	36,872	69,454	32,582	1.8%
61 Educational services	48,655	81,524	32,869	1.4%
62 Health care and social assistance	77,198	163,953	86,755	2.1%
71 Arts, entertainment and recreation	20,995	35,766	14,771	1.5%
72 Accommodation and food services	53,963	100,764	46,801	1.7%
81 Other services (except public administration)	47,377	78,148	30,771	1.4%
91 Public administration	23,395	36,285	12,890	1.2%
Total Employment	843,094	1,584,410	741,316	1.8%

*Highlighted shading represents the NAICS industries with average annual growth rates above the aggregate employment growth rate.

Appendix C: 2018 Employment Estimate

In the development of the forecasts, 2018 base year employment was estimated, as there is no public source for 2018 employment for the Calgary Metropolitan Region. The CMRB approved population projections¹⁵ for the Calgary Metropolitan Region were used to develop an estimate of the 2018 employment. Employment estimates were calculated annually, by applying labour force participation rates and unemployment rates to the annual population by age projections. The age-specific population forecast target for 2054 (forecast end year) was interpolated using the 2051 and 2056 data provided by Rennie Intelligence.

This approach to estimating employment helps to align the population and employment projections that are being used to inform the Growth Plan. In addition, CMRB provided employment data from the City of Calgary's Regional Transportation Model. This data included employment by aggregate 2 digit NAICS¹⁶ by transportation zone for the entire Calgary Metropolitan Region. This dataset, along with the 2018 employment estimate derived from the population projections was used to develop the 2018 employment for the Region. During the process, the consulting team reviewed the 2018 employment data and made some revisions to the data based on feedback provided by members of the Technical Advisory Group.

In addition, other data sources were reviewed in the development of the 2018 employment estimate. These data sources include:

- ▶ Rennie Population Projections (CMRB);
- ▶ Federal and Municipal Census data;
- ▶ Alberta Regional Dashboard;
- ▶ Conference Board of Canada;
- ▶ Statistics Canada CANSIM Database (Labour Force Survey)

As the CMR is a unique geography, publicly available data sources do not exactly align with this geography. For each of the data sources reviewed, the geographies were unique, and as part of our analysis adjustments were necessary in order to compare estimates.

¹⁵ Population Projections. Produced for the Calgary Metropolitan Region Board & Its Member Municipalities. December 2018, Rennie Intelligence.

¹⁶ The aggregate 2 digit NAICS data was converted to 2 Digit NAICS for the purposes of this analysis to be able to make detailed industry growth assumptions.

Appendix D: NAICS Industry Definition

Please refer to NAICS Industry Classification Table (below) for the industry names corresponding to the industry codes presented in the tables in this report.

NAICS Industry Classification¹⁷

2-DIGIT NAICS CODE	INDUSTRY NAME
11	Agriculture, Forestry, Fishing and Hunting
21	Mining and Oil and Gas Extraction
22	Utilities
23	Construction
31-33	Manufacturing
41	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information and Cultural Industries
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support, Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment and Recreation
72	Accommodation and Food Services
81	Other Services (except Public Administration)
91	Public Administration

The following section describes the methodology for describing the employment activities captured or excluded from the 2-digit North American Industry Classification System (NAICS) industry categories.

11 Agriculture, forestry, fishing and hunting

This sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, harvesting fish and other animals from their natural habitats and providing related support activities. The establishments that are primarily engaged in agricultural research or that supply veterinary services are not included in this sector.

¹⁷ Description of 2-digit NAICS from [Industry Canada](#)

21 Mining and oil and gas extraction

This sector comprises establishments primarily engaged in extracting naturally occurring minerals. These can be solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. It also includes establishments engaged in exploration, support activities for mineral, oil and gas extraction as well as those operating on a contract or fee basis.

22 Utilities

This sector comprises establishments primarily engaged in operating electric, gas and water utilities. These establishments generate, transmit, control and distribute electric power; distribute natural gas; treat and distribute water; operate sewer systems and sewage treatment facilities; and provide related services, generally through a permanent infrastructure of lines, pipes and treatment and processing facilities.

23 Construction

This sector comprises establishments primarily engaged in constructing, repairing and renovating buildings and engineering works, and in subdividing and developing land. These establishments may operate on their own account or under contract to other establishments or property owners. These establishments may be involved from the project start till its completion or be involved in joint ventures. Activities include: construction of buildings; land subdivision and land development; engineering construction; construction management; site preparation work; building interior finishing work; building equipment installation, other specialty contractors. Establishments that are excluded from this category are those which are primarily engaged in manufacturing and installing building equipment, such as power boilers; manufacturing pre-fabricated buildings (31-33, Manufacturing); operating highways, streets and bridges (48-49, Transportation and Warehousing); projects management services, when it is a primary activity (54133, Engineering Services); maintenance of rights of way for power, communication and pipe lines; and cleaning building exteriors after construction (56, Administrative and Support, Waste Management and Remediation Services).

31-33 Manufacturing

This sector comprises establishments primarily engaged in the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed, or semi-finished, in the sense of becoming a raw material for an establishment to use in further manufacturing. Related activities, such as the assembly of the component parts of manufactured goods; the blending of materials; and the finishing of manufactured products by dyeing, heat-treating, plating and similar operations are also treated as manufacturing activities.

Certain activities involving the transformation of goods are classified in other sectors. Some examples are post-harvest activities of agricultural establishments, such as crop drying; logging; the beneficiating of mineral ores; the production of structures by construction establishments; and various activities conducted by retailers, such as meat cutting and the assembly of products such as bicycles and computers.

41 Wholesale trade

This sector comprises establishments primarily engaged in wholesaling merchandise and providing related logistics, marketing and support services. The wholesaling process is generally an intermediate step in the distribution of merchandise; many wholesalers are therefore organized to sell merchandise in large quantities to retailers, and business and institutional clients. However, some wholesalers, in particular those that supply non-consumer capital goods, sell merchandise in single units to final users.

This sector recognizes two main types of wholesalers, that is, wholesale merchants and wholesale agents and brokers.

Wholesale merchants buy and sell merchandise on their own account, that is, they take title to the goods they sell. They generally operate from warehouse or office locations and they may ship from their own inventory or arrange for the shipment of goods directly from the supplier to the client. Dealers of machinery and equipment, such as dealers of farm machinery and heavy-duty trucks, also fall within this category.

Wholesale Agents and Brokers

Wholesale agents and brokers buy and sell merchandise owned by others on a fee or commission basis. They do not take title to the goods they buy or sell, and they generally operate at or from an office location.

44-45 Retail trade

The retail trade sector comprises establishments primarily engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

The retailing process is the final step in the distribution of merchandise; retailers are therefore organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers, that is, store and non-store retailers.

Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. Catalogue sales showrooms, gasoline service stations, and mobile home dealers are treated as store retailers.

Non-store retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this sub-sector reach customers and market merchandise with methods such as the broadcasting of infomercials, the broadcasting and publishing of direct-response advertising, the publishing of traditional and electronic catalogues, door-to-door solicitation, in-home demonstration, temporary displaying of merchandise (stalls) and distribution by vending machines. The non-store retailers sub-sector also includes establishments engaged in the home delivery of products. This includes home heating oil dealers and newspaper delivery companies.

48-49 Transportation and warehousing

This sector comprises establishments primarily engaged in transporting passengers and goods, warehousing and storing goods, and providing services to these establishments. The modes of transportation are road (trucking, transit and ground passenger), rail, water, air and pipeline. National post office and courier establishments, which also transport goods, are included in this sector. Many of the establishments in this sector are structured as networks, with activities, workers, and physical facilities distributed over an extensive geographic area.

The establishments excluded from this category are those which are primarily engaged in the renting and leasing of transportation equipment without operator (532, Rental and Leasing Services).

51 Information and cultural industries

This sector comprises establishments primarily engaged in producing and distributing (except by wholesale and retail methods) information and cultural products. Establishments providing the means to transmit or

distribute these products or providing access to equipment and expertise for processing data are also included.

The unique characteristics of information and cultural products, and of the processes involved in their production and distribution, distinguish this sector from the goods-producing and services-producing sectors.

Most of these products are protected from unlawful reproduction by copyright laws. Only those possessing the rights to these works are authorized to reproduce, alter, improve and distribute them. Acquiring and using these rights often involves significant costs.

The main components of this sector are the publishing industries (except exclusively on Internet), including software publishing, the motion picture and sound recording industries, the broadcasting industries (except exclusively on Internet), the telecommunications and related services industries (i.e., telephony, including VoIP; cable and satellite television distribution services; Internet access; telecommunications reselling services), data processing industries, and the other information services industries, including Internet publishing and broadcasting and web search portals.

52 Finance and insurance

This sector comprises establishments primarily engaged in financial transactions or in facilitating financial transactions. Included are: Establishments that are primarily engaged in financial intermediation. Establishments that are primarily engaged in the pooling of risk by underwriting annuities and insurance. Establishments that are primarily engaged in providing specialized services that facilitate or support financial intermediation, insurance and employee benefit programs. In addition, establishments charged with monetary control - the monetary authorities - are included in this sector.

53 Real estate and rental and leasing

This sector comprises establishments primarily engaged in renting, leasing or otherwise allowing the use of tangible or intangible assets. Establishments primarily engaged in managing real estate for others; selling, renting and/or buying of real estate for others; and appraising real estate, are also included.

54 Professional, scientific and technical services

This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider.

The main components of this sector are legal services industries, accounting and related services industries, architectural, engineering and related services industries, surveying and mapping services industries, design services industries, management, scientific and technical consulting services industries, scientific research and development services industries, and advertising services industries.

Much of the expertise requires a university or college education, though not in every case.

Establishments that have been excluded are those primarily engaged in providing instruction and training in a wide variety of subjects and those primarily engaged in providing health care by diagnosis and treatment are not included in this sector.

55 Management of companies and enterprises

This sector comprises establishments primarily engaged in managing companies and enterprises and/or holding the securities or financial assets of companies and enterprises, for the purpose of owning a controlling interest in them and/or influencing their management decisions. They may undertake the function of management, or they may entrust the function of financial management to portfolio managers.

56 Administrative and support, waste management and remediation services

This sector comprises two different types of establishments: those primarily engaged in activities that support the day-to-day operations of other organizations; and those primarily engaged in waste management activities.

The first type of establishment is engaged in activities such as administration, hiring and placing personnel, preparing documents, taking orders from clients, collecting payments for claims, arranging travel, providing security and surveillance, cleaning buildings, and packaging and labelling products. These activities are often undertaken, in-house, by establishments found in many sectors of the economy. The establishments classified to this sector specialize in one or more of these activities and can therefore provide services to clients in a variety of industries and, in some cases, to households.

Waste management establishments are engaged in the collection, treatment and disposal of waste material, the operation of material recovery facilities, the remediation of polluted sites and the cleaning of septic tanks.

61 Educational services

This sector comprises establishments primarily engaged in providing instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities and training centres. These establishments may be privately owned and operated, either for profit or not, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

62 Health care and social assistance

This sector comprises establishments primarily engaged in providing health care by diagnosis and treatment, providing residential care for medical and social reasons, and providing social assistance, such as counselling, welfare, child protection, community housing and food services, vocational rehabilitation and child care, to those requiring such assistance.

71 Arts, entertainment and recreation

This sector comprises establishments primarily engaged in operating facilities or providing services to meet the cultural, entertainment and recreational interests of their patrons. These establishments produce, promote or participate in live performances, events or exhibits intended for public viewing; provide the artistic, creative and technical skills necessary for the production of artistic products and live performances; preserve and exhibit objects and sites of historical, cultural or educational interest; and operate facilities or provide services that enable patrons to participate in sports or recreational activities or pursue amusement, hobbies and leisure-time interests.

Establishments that are excluded for the reason that they fall into other related NAICS categories are follows. Establishments primarily engaged in transportation providing sightseeing and pleasure cruises (48-49, Transportation and Warehousing),

motion picture theatres, libraries and archives, and publishers of newspapers, magazines, books, periodicals and computer software (51, Information and Cultural Industries), establishments that provide both accommodation and recreational facilities, such as hunting and fishing camps, resorts and casino hotels (721, Accommodation Services), restaurants and night clubs that provide live entertainment in addition to the sale of food and beverages (722, Food Services and Drinking Places).

72 Accommodation and food services

This sector comprises establishments primarily engaged in providing short-term lodging and complementary services to travellers, vacationers and others, in facilities such as hotels, motor hotels, resorts, motels, casino hotels, bed and breakfast accommodation, housekeeping cottages and cabins, recreational vehicle parks and campgrounds, hunting and fishing camps, and various types of recreational and adventure camps. This sector also comprises establishments primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises.

81 Other services (except public administration)

This sector comprises establishments, not classified to any other sector, primarily engaged in repairing, or performing general or routine maintenance, on motor vehicles, machinery, equipment and other products to ensure that they work efficiently; providing personal care services, funeral services, laundry services and other services to individuals, such as pet care services and photo finishing services; organizing and promoting religious activities; supporting various causes through grant-making, advocating (promoting) various social and political causes, and promoting and defending the interests of their members. Private households are also included.

91 Public administration

This sector comprises establishments primarily engaged in activities of a governmental nature, that is, the enactment and judicial interpretation of laws and their pursuant regulations, and the administration of programs based on them. Legislative activities, taxation, national defence, public order and safety, immigration services, foreign affairs and international assistance, and the administration of government programs are activities that are purely governmental in nature.

Ownership is not a criterion for classification. Government owned establishments engaged in activities that are not governmental in nature are classified to the same industry as privately owned establishments engaged in similar activities.

Government establishments may engage in a combination of governmental and non-governmental activities. When separate records are not available to separate the activities that are not governmental in nature from those that are, the establishment is classified to this sector.

Agenda Item	9
Submitted to	Land Use Committee & Intermunicipal Servicing Committee
Purpose	For Information
Subject	Composting Challenges in CMR
Meeting Date	February 6, 2020
<i>Motion that the LUC/ISC receive for information two white papers on composting in the CMR</i>	
<p>Summary</p> <ul style="list-style-type: none"> In the Board meeting on December 5, 2019, following a discussion related to challenges Wheatland County is experiencing with a composting facility located within the County, a motion was made to: <ul style="list-style-type: none"> work with City of Calgary staff, and any other municipality that is interested, with the objective of bringing a background report on organic composting in the Region to the Intermunicipal Servicing Committee CMRB administration hosted a call with Wheatland County, City of Calgary, Rocky View County and Foothills County administrations to discuss the municipalities' experiences with composting facilities across the Calgary Metropolitan Region (CMR). Much work has been done in this area and administrations are aware of the challenges related to the regulatory environment as well as the lack of sustainable processing sites for compost generated in the CMR. Two white papers have been written recently and are attached here for review. The municipal administrations recommended that this subject be brought forward to the Advocacy Committee in support of the White Paper prepared by Wheatland County administration for the Government of Alberta Minister of Environment and Parks. Further, the administrations expressed support in collaborating on increased capacity for food and yard waste processing in the CMR that would create stability for organics generators and haulers all within a regulatory framework that supports the municipalities and facility neighbors in which these facilities operate. 	

Attachments

1. *White Paper - Alberta Composting Framework, Wheatland County*
2. *Municipal Concerns relating to Organics Processing in Southern Alberta, Southern Municipal Waste Managers Advisory Committee*

1. Wheatland County

- Wheatland County has experienced issues with a composting site located in the county for over 10 years. Recent legal actions have been taken by the county against the current operator. The site has been operated contrary to its original land use registration, and on the order of \$500,000 of public funds has been spent in litigation to enforce remedial and stop orders issued against the operator. The Court of Queen's Bench is upholding those orders. Issues include public nuisance and odours, a consequence of operation of the site below the industry's standard practice.
- AEP is the provincial authority on the registration/approval of the site. The Honourable Minister Nixon is aware of the issues and continues to be in dialogue with the County on the issue. AEP staff encouraged Wheatland to utilize/enforce municipal bylaws which the County has done. Updates to the Government of Alberta code of practice and standard for composting are needed.
- Wheatland County council and administration identified additional gaps in the current Alberta composting framework which are summarized in the attached white paper.

2. City of Calgary

- As of November 1, 2017, all Businesses and Organizations and Multi-family properties in Calgary are required to separate food and yard waste from the garbage, for composting or other means of diversion.
- Business owners and property managers have the flexibility and choice to seek out a food and yard waste collection company and decide the best way to offer and manage the service.
- There are an estimated twenty private food and yard waste collection companies operating in Calgary. These private companies either own/operate or have relationships with food and yard waste processing facilities to which they haul the collected materials.
- At the time of bylaw implementation there were at least ten facilities in the Calgary region capable of processing food and yard waste from these private collection companies.
- The bylaw provisions are one component of The City's Waste Diversion Strategies for Businesses and Organizations and Multi-family properties.
- Prior to bylaw implementation The City of Calgary completed an extensive stakeholder engagement process in an effort to ensure that the Waste Diversion Strategies for these sectors reflected the needs of the stakeholders. As part of this engagement process, The City completed an "organics capacity study" to

understand the ability for processing facilities to handle the incoming food and yard waste tonnage.

- The City has been monitoring processing capacity and recognizes that with the closure of the GFL Wheatland County facility and the Thorlakson's/Nature's Call facility there is increasing pressure on the already limited processing capabilities in the region.
- The City estimates that Businesses and Organizations and Multi-family properties in Calgary generate a total of 230,000 tonnes of food and yard waste annually. Approximately 48,000 tonnes of this material is currently diverted through existing food and yard waste programs, the remainder can be found in the garbage but could potentially be diverted in the future.
- The City would like to see increased capacity for food and yard waste processing in the Calgary region that will create stability for the generators and haulers all within a regulatory framework that supports the municipalities in which these facilities operate and the facility neighbors. The City believes there is opportunity for increased business development and innovation to meet the regional processing needs for food and yard waste.

Calgary Composting Facility

- The Calgary Composting Facility accepts food and yard waste collected by The City of Calgary Waste & Recycling Services as well as dewatered biosolids, a nutrient-rich by-product of the wastewater treatment process.
- The Calgary Composting Facility was constructed to process residential Green Cart materials
- In 2019, the Calgary Composting Facility processed 148,000 tonnes of material from Calgary's residential Green Cart program and dewatered biosolids from the Bonnybrook Wastewater Treatment plant.
- Calgary's have enthusiastically embraced the Green Cart program; as a result, the facility is operating over-capacity and we are exploring our expansion options sooner than we had anticipated.

3. Rocky View County

Facility/Operator experience:

- No major organics processing facilities currently operate within RVC boundaries.
- Thorlaksons Nature's Call (TNC) facility was in operation until approximately six months ago. Operations ceased when the development permit was refused due to public concerns with operations, odor emissions, and environmental impacts

Gaps in processing capacity:

- Yard waste captured in RVC programs are handled differently depending on location. Treatment ranges from chipping branches for use on pathways to shipping leaves, grass, branches to an available composting facility.
- Materials collected in our green cart organics program (from 1,750 homes) are shipped to sites in Calgary for consolidation and transfer to compost facilities

elsewhere in the province for processing. No local facilities exist in RVC to run truly efficient food waste organics programs.

Sustainability concerns:

- The lack of geographically close, suitable, reliable processing capacity hinders the County from expanding organics collection programs and impacts the ICI organic waste generators in our municipality.
- Diverting organic materials from landfill disposal is a key component in integrated waste management programs. RVC is concerned that poor performance by some has tainted the composting industry making it harder to site and approve new facilities locally.
- Similar to food waste organics, options for biosolids (wastewater treatment bi-products) processing and treatment in the region are extremely limited causing risks to the sustainability of those programs.

Plans for expansion/sites:

- The 2006 regional organics study prepared for Calgary Regional Partnership recommended one large organics processing facility in Calgary and smaller sites in the region (Canmore/Banff, Foothills, and/or Airdrie area)
- RVC is a member of the Southern Municipal Waste Manager's Advisory Committee which continues to explore these recommendations.
- The Recycling Council of Alberta and Olds College are working on co-creating case study(s) for on-farm composting based on successful models in Alberta.

4. Foothills County

- Foothills County has not had issues with the small-scale composting operators in the County.
- Foothills County and the Foothills Regional Services Commission (FRSC) has developed a recent Regional Waste Management Plan. The plan indicates that a compost facility is needed to serve growing demand for compost processing. FRSC's board is likely to move forward with associated next steps and studies for a future composting facility in Foothills County.

5. Administration Recommendation

- a) Administration recommends that the regulatory complications experienced by Wheatland County be referred to the Advocacy Committee for consideration in supporting modifications to the Government of Alberta regulation in line with those identified by Wheatland County's white paper entitled *Alberta Composting Framework*, attached.
- b) Administration recommends that municipalities in the CMR prepare for a request by Foothills County staff in 2020 for projected compost volumes for a siting and design study for a potential future composting facility in the CMR.



WHEATLAND COUNTY

Where There's Room to Grow



OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER

December 20, 2019

Pam Livingston
Chief of Staff
Officer of the Minister
Environment and Parks
323 Legislature Building
10800 – 97 Avenue
Edmonton, AB
T5K 2B6

Dear Pam,

On behalf of Wheatland County Council and Administration, thank you for arranging a meeting between Council and the Honourable Minister Jason Nixon. Wheatland County Council appreciates the time and commitment that Minister Nixon has for improving Albertan's lives and Alberta's landscapes.

As requested, attached is a White Paper for the Minister to consider, which highlights the current composting framework within Alberta, Wheatland County's current experience with a composting operator, and suggestions made to move forward in a productive and economically friendly way for all parties (residents of Alberta, operators, and all levels of government).

Please do not hesitate to contact me directly with any questions you, or your team, may have.

Kindest regards,

Brian Henderson
Interim Chief Administrative Officer
Wheatland County

I. Executive Summary

A. Issue

Composting has potential to aid plant growth, to stabilize and fertilize soils, and to divert waste streams otherwise intended for landfill. Alberta's environmental legislation regulating composting facilities is addressed to, among other things, minimizing the generation of odours.¹ Alberta Environment and Parks ("AEP") regulates all composting facilities other than on-farm facilities that compost only livestock manures.² The purposes of municipalities include, without limitation, to provide conditions that are, in the opinion of council, necessary or desirable for all or a part of the municipality, and to foster the well-being of the environment.³ Because of the Legislature's broad municipal law enforcement provisions in the *Municipal Government Act* [*MGA*] and bylaws enacted pursuant to it, there is inevitable overlap between the regulatory mandates of AEP and of municipalities, despite the fact that neither attempts to encroach on the jurisdiction of the other.⁴

Recent disputes have arisen in the Province that certain composting facilities within the regulatory mandate of AEP failed to minimize odours,⁵ which led to widespread public complaints. In the case of some complaints, municipalities exercised public powers granted to them under the *MGA* to enforce compliance with provincial municipal laws. This was done where AEP appeared not to enforce compliance with provincial environmental laws. No criticism is made of AEP in this report, and it is acknowledged that AEP has the authority to interpret and enforce compliance with environmental law in its discretion. Nevertheless, an apparent lack of enforcement action by AEP was concurrent with municipalities issuing administrative orders within their mandate to prevent and remedy nuisance conditions, and to prevent unauthorized land use or intensified land use.⁶ In these cases, municipal administrative orders resulted in related administrative appeals⁷ and reviews,⁸ and legal proceedings extant in the Court of Queen's Bench of Alberta⁹ and the Alberta Court of Appeal.¹⁰

In the case of the GFL Environmental Inc. ("GFL") compost facility in Wheatland County, public complaints dominantly concerned the operator's failure to minimize odours, but also concerned litter or drift materials (including asbestos) landing in fields surrounding the facility.¹¹ Particularly foul odours were testified to arise from a leachate pond and materials on site that did not compost and became an anaerobic "legacy pile" that emitted foul odours whenever its soil is disturbed.¹² In 2019, public complaints against GFL's operation of its compost facility did not lead to enforcement action by AEP,

¹ *Waste Control Regulation*, Alta. Reg. 192/1996, s. 38 [*Waste Control Regulation*].

² Agricultural composting facilities are on-farm facilities that compost only livestock manures. These are regulated through Alberta Agriculture and Forestry or the Natural Resources Conservation Board.

³ *Municipal Government Act*, R.S.A. 2000, c. M-26, s. 3 [*MGA*].

⁴ Wheatland County Subdivision and Development Appeal Board Orders No. SDAB S0209-01 and S0219-02 issued on November 8, 2019 at paras. 115-121.

⁵ See e.g.: Class I compost facility at the [Thorlakson Feedyards](#) operation situated in Rocky View County; and Class I compost facility at the GFL Environmental Inc. ("GFL") operation situated in Wheatland County.

⁶ See e.g.: Wheatland County Stop Orders issued to GFL on July 3 and July 5, 2019; Wheatland County Remedial Orders issued to GFL on July 3 and July 5, 2019; Wheatland County Notice of Variation of Remedial Order issued November 23, 2019.

⁷ See e.g.: Wheatland County Subdivision and Development Appeal Board Orders No. SDAB S0209-01 and S0219-02 issued on November 8, 2019.

⁸ See e.g.: Wheatland County review decision GFL Remedial Order [Appeal Decision](#) issued September 3, 2019.

⁹ See e.g.: Court of Queen's Bench of Alberta Action Nos. 1901-09980 and 1901-13026.

¹⁰ See e.g.: Alberta Court of Appeal No. 1901-0395AC, being an application by GFL filed December 9, 2019 for permission to appeal from to Wheatland County Subdivision and Development Appeal Board Orders No. SDAB S0209-01 and S0219-02 issued on November 8, 2019.

¹¹ Wheatland County Subdivision and Development Appeal Board Orders No. SDAB S0209-01 and S0219-02 issued on November 8, 2019, at para. 24.

¹² *Ibid*, at para. 58.

but did lead to enforcement action by Wheatland County, which issued remedial orders and stop orders under the County's bylaws enacted pursuant to the *MGA*. GFL commenced multiple legal proceedings against the County alleging, among other things, that only AEP could exercise public powers concerning GFL's operation of its compost facility. These submissions by GFL raise the question whether there is a gap in the regulatory mandate of AEP in the sense that AEP is unable to enforce compliance with environmental law in circumstances where municipalities are able to enforce compliance with municipal law. In turn, this raises the question whether such perceived gap should be remedied by giving legal force to long-proposed environmental law amendments that were proposed to apply to compost facilities as early as 2007.¹³

Public complaints concerning odours emitted from compost facilities have been increasing since 1996, when Alberta began regulating facilities and the Canadian Council of Ministers of the Environment ("**CCME**") first developed CCME Compost Quality Guidelines. This trend of increasing public complaints is likely to continue if no action is taken to fill a perceived gap in Alberta's regulatory framework and to empower AEP to enforce compliance with express legal requirements that are currently, at best, only implied.

The Government of Alberta is committed to prevent, control, and eliminate the emission of offensive odours¹⁴ within its mandate to promote the protection, enhancement and wise use of the environment.¹⁵ This report informs about the issues raised by the intersection or overlap of Alberta's environmental and municipal laws as they concern compost facilities. This report proposes to resolve or avoid any perceived gap in AEP's regulatory mandate by (1) enacting AEP's proposed "Standards for Composting Facilities in Alberta" ("**Standards**") first proposed in 2007, and (2) enacting further provisions that:

- local nuisance laws are applicable to compost facilities;
- a facility's annual report shall report all feedstock accepted at the facility in a manner that lists in detail any substances that would be potentially harmful to human health (e.g., asbestos), regardless of feedstock origin or the amount of potentially harmful substance;
- feedstock accepted at a compost facility must be initially processed quickly and completely processed into finished compost within a reasonable period of time (less than one year);
- prohibit the existence of organic material in anaerobic state;
- any anaerobic conditions that arise must be appropriately corrected and such correction must be done with input from municipalities;
- registration holders must engage a neutral third party to investigate complaints of offensive odours if complaints persist but cannot be confirmed by the facility's personnel prohibit processing or including inorganic materials in compost;
- prohibit processing or the inclusion inorganic materials in compost other than for the purpose of soil stabilization; and
- mandate that operators comply with operations plans,

(altogether, the "**proposed Amendments**")

¹³ AEP, "Standards for Composting Facilities in Alberta" (July 2007) [**Standards**].

¹⁴ *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12, s. 116 [**EPEA**].

¹⁵ *EPEA*, s. 2.

The legal amendments proposed in this report would enable the Government of Alberta to more efficiently achieve the intent of the Legislature to prevent, control, and eliminate the emission of offensive odours from compost facilities.

B. Cost-benefit statement

Although it is difficult to quantify and monetize the full range of benefits attributable to the amendments proposed in this report, overall benefits would include:

- for Alberta, a reduction in the emission of offensive odours and a reduction in the social and economic cost arising from decreased use of lands subjected to offensive odours;
- for compost facility operators that act in accordance with industry standards, a reduction in the reputational harm occasioned by the *status quo*, where AEP appears to take little enforcement action against any operator, whether because of a perceived gap in regulatory mandate or otherwise. In other words, under the proposed Amendments, good actors would benefit from AEP enforcing compliance by bad actors;
- for compost facility operators, an increase in profitability and increase in number of compost facilities province wide. A reduction in the emission of offensive odours would have an attendant reduction in public complaints regarding non-compliant facilities. The proposed Amendments are expected to increase foreign and domestic investment in Alberta as a jurisdiction that accommodates profit-making waste management facilities;
- for consumers, a reduction in the cost of compost, arising from an increase in the number and capacity of compost facilities province wide;
- for private sector employees, an increase in employment is expected from an increase in the number and capacity of compost facilities province wide; and
- for municipalities, a reduction in the cost of legal proceedings arising from legal challenges brought by compost facility operators. Because operators more readily recognize the regulatory mandate of AEP to enforce compliance with environmental law, the proposed amendments would avoid the cost of legal challenges to municipal enforcement of nuisance and land use bylaws.

C. Business and consumer impacts

As there is no net cost associated with the proposed Amendments, there is no distribution of impacts on industry or consumers.

D. Performance measurement and evaluation plan

The evaluation of the proposed Amendments will be focused on (1) a reduction in the number and frequency of public complaints relating to the emission of offensive odours, and (2) an increase in profitability and increase in number of private sector compost facilities province wide.

II. The Business-as-usual (“BAU”) Scenario

The BAU Scenario is based on AEP’s environmental regulatory mandate in place as of December 10, 2019.

In the BAU Scenario, compost operations in Alberta are regulated pursuant to the *Environmental Protection and Enhancement Act* [**EPEA**] on the basis of thresholds for the acceptance of feedstock. The *EPEA Activities Designation Regulation* [**Activities Regulation**] governs different classes of compost facilities depending on the amount of waste accepted annually as feedstock.

A. **The Activities Regulation**

Section 2(a.1) of the *Activities Regulation* defines a “**Class I compost facility**” as:

...a waste management facility where waste, not including hazardous waste is decomposed through a controlled bio-oxidation process, including a thermophilic phase, that results in a stable humus-like material but does not include

- (i) a residential composter,
- (ii) a compost facility that receives only sludge as defined in the *Wastewater and Storm Drainage Regulation* (AR 119/93),
- (iii) a Class II compost facility, or
- (iv) a manure storage facility as defined in the *Agricultural Operation Practices Act*,

Class I compost facilities may accept any type of organic waste as feedstock that is not hazardous waste. This includes source separated organics (i.e. from curbside collection), food waste, biosolids, and agri-food processing waste.¹⁶

A “**Class II compost facility**” as set out in section 2(a.2) of the *Activities Regulation* means:

....a waste management facility where only vegetative matter or manure is decomposed through a controlled bio-oxidation process, including a thermophilic phase, that results in a stable humus-like material, but does not include

- (i) a residential composter, or
- (ii) a manure storage facility as defined in the *Agricultural Operation Practices Act*.

Class II facilities are only able to accept manure or vegetative matter such as leaf and yard waste, brush and wood waste. The majority of compost facility operations in Alberta are Class II facilities.¹⁷

Those activities listed in Schedule 1 of the *Activities Regulation* require an “**approval**” under *EPEA* while those activities set out in Schedule 2 of the *Activities Regulation* only require a “**registration**” under *EPEA*. The requirement of an approval engages a greater degree of oversight by AEP than does a registration, requires public consultation, and may put additional conditions on the facility operator

¹⁶ <https://www.alberta.ca/composting-facilities.aspx#toc-2>

¹⁷ <https://www.alberta.ca/composting-facilities.aspx#toc-2>

beyond any guidelines as set out in the Code of Practice or the Standards, which are discussed in detail below.

Under Schedule 1(l) of the *Activities Regulation*, an *EPEA* approval is required for “the construction, operation or reclamation of a Class I and Class II compost facility that accepts more than 20 000 tonnes of waste per year for composting”. Whereas only registration is required for “the construction, operation or reclamation of a Class I or Class II compost facility that accepts not more than 20 000 tonnes of waste per year for composting”.

B. The Waste Control Regulation

Pursuant to section 38 of the *Waste Control Regulation* under *EPEA*, dealing with standards for compost facilities it states as follows:

All compost facilities shall be constructed and operated so that

- (a) the generation of odours is minimized,
- (b) run-on and run-off water is controlled so that surface water and groundwater are not contaminated, and
- (c) animals and vectors of disease are controlled.

C. The Code of Practice

Section 24 of the *Waste Regulation* provides that a person responsible for a Class I or Class II Compost facility must ensure that a compost facility is sited, designed, constructed, operated and reclaimed to meet the requirements of the *Waste Regulation* as well as the standards and requirements set out in the Code of Practice for Compost Facilities (the “**Code of Practice**” or “**The Code**”).

The Code of Practice simply provides that an Operator must “develop, maintain and implement” an operating plan that addresses various matters that may arise at a Facility, such as feedstock acceptance procedures or an odour minimization plan. In this regard while the Code of Practice does outline minimum standards, it offers little in terms of mechanisms for enforcement.

It is noteworthy that the Code, as currently drafted is only in reference to Class I Compost Facilities, however in practice its application has been to both Class I and Class II facilities that require a registration.

Typically compost facility registrations are a single page document issued to facility operators that merely incorporate the Code by reference without any further condition.

D. The “Standards for Composting Facilities in Alberta”

In 2007, AEP published the Standards for Composting Facilities (the “**Standards**”) in anticipation of updating relevant regulations that pertain to compost facilities. To date, however, the regulations have not yet been updated and therefore, unlike the Code, the Standards are not specifically incorporated into the regulatory framework for the operation of compost facilities and do not have the force of law.

Notwithstanding that legal incorporation of the Standards remains in limbo Alberta Environment’s position has been to informally incorporate Standards in the regulation of composting in Alberta.

As noted above, New Class I and II Compost facilities that are subject only to registration are required to follow requirements set out in the Code of Practice, however all compost facilities are encouraged to show due diligence by following the more stringent requirements set out in the Standards.¹⁸

The Standards outline the minimum requirement for development, operation, monitoring closure and reclamation of composting facilities regulated (i.e. those Class I and Class II¹⁹ compost facilities that accept more than 20,000 tonnes of waste per year and are subject to an approval) by AEP. They are intended to provide public assurance in respect of the protection of groundwater and surface water as well as the management of potential nuisances that are often associated with composting facilities.²⁰ Until updates to the current regulatory framework are legislated, the Standards only apply to new composting facilities accepting greater than 20,000 tonnes of waste per year or lateral expansions of existing facilities that similarly surpass the 20,000 tonnes of waste per year threshold.²¹

The Standards set out more detailed and specific requirements that address issues that are often of concern for communities that surround compost facilities. The Standards address issues such as the development of an operations plan, an odour management program, how odour complaints are to be dealt with, protocol for dealing with offensive odours, facility capacity, and nuisance management. Furthermore, the Standards also outline more detailed environmental monitoring requirements.

E. The Regulation of Nuisance Connected to Compost Facilities

Finally, the *Agricultural Operation Practices Act* [**AOPA**]²² has some bearing on the regulation of compost facilities and specifically the handling of nuisance claims that may arise from such operations in so far as the operation meets the definition of an “agricultural operation”.

Pursuant to the *AOPA* an “agricultural operation” means “an agricultural activity conducted on agricultural land for gain or reward or in the hope of expectation of gain or reward, and includes....[inter alia] the collection transportation, storage, application, use, transfer and disposal of manure, composting materials²³ and compost²⁴”.

Section 2 of the *AOPA*, which deals with nuisance, provides special protections under the law and restricts the liability of agricultural operations. It states:

2(1) A person who carried on an agricultural operation and who, in respect of that operation, does not contravene

(a) the land use bylaw of the municipality or Metis settlement in which the agricultural operation is carried on

(b) the regulation or approval, registration or authorization

¹⁸<https://www.alberta.ca/composting-facilities.aspx#toc-2>

¹⁹ The Standards also set out guidelines in respect of Class III compost facilities (i.e. facilities that accept 100 to 500 tonnes of leaf and yard waste a year, however discussion of Class III facilities is beyond the scope of this White Paper.

²⁰ <https://www.alberta.ca/composting-facilities.aspx#toc-2>

²¹ Standards page ii

²² *Agricultural Operation Practices Act*, R.S.A. 2000, c. A-7 [*AOPA*].

²³ “Composting materials” is defined in *AOPA* as “organic material generated by an agricultural operation described in clause (b) (ii), (iv), (v) or (vi), other than carcasses or parts of carcasses, and includes other substances permitted by the regulations;

²⁴ “Compost” is defined in *AOPA* as “solid mature product resulting from composting but does not include compost to which the *Fertilizers Act* (Canada) applies”

(c) the generally accepted agricultural practice

is not liable to any person in an action in nuisance resulting from the agricultural operation and is not to be prevented by injunction or other order of a court from carrying on the agricultural operation because it causes or creates a nuisance.

(1.1.) If section (1)(a) is contravened but the contravention is authorized by an approval, authorization or registration; the approval, authorization or registration prevails over the land use by law with which it conflicts.

(2) Subsection (1) continues to apply notwithstanding that one or the following more of the following occur:

(a) the land use bylaw of the municipality or Metis settlement in which the agricultural operation is carried on changes;

(b) the ownership of the agricultural land on which the agricultural operation is carried on changes;

(c) the agricultural operation is carried on by other persons;

(d) the land use adjacent to the land on which the agricultural operation is carried on changes

(3) Where a plaintiff or claimant in a proceeding against a person who carried on an agricultural operation, or

(a) claims damages in nuisance resulting from the agricultural operation, or

(b) applies for an injunction or other order of a court preventing or restricting the carrying on of the agricultural operation because it causes or creates a nuisance.

The onus of proving that the defendant contravened the land use bylaw, regulation, approval, registration, authorization or practice referred to in subsection (1) is on the plaintiff or claimant, as the case may be.

(4) In an action in nuisance against a person who carried on an agricultural operation, a court may

(a) order the party that commended the action to furnish security for costs in any amount the court considers proper;

(b) award costs in the action.

The implication of the *AOPA* is that it makes it very challenging to seek recourse against the registration holder for a compost facility for nuisance such as odour, provided that the operation of the compost facility meets the definition of "agricultural operation". It is noteworthy that the definition in *AOPA* does not specifically contemplate the processing or manufacture of compost, but it may be open to some commercial compost manufacturers situated on agricultural land to argue their operations may fall within the meaning of "use" of compost or the collection, transportation, storage, transfer and disposal of composting materials or compost.

The nuisance provision of the *AOPA* also has implications for the ability for AEP to regulate nuisance odours that may arise from a compost facility. Specifically, section 116 of *EPEA* provides as follows:

116(1) Where the Director is of the opinion that a substance or thing is causing or has caused an offensive odour, the Director may issue an environmental protection order to the person responsible for the substance or thing.

(2) Subsection (1) does not apply in respect of an offensive odour that results from an agricultural operation that is carried out in accordance with generally accepted practices for such an operation on in respect of which recommendations under Part 1 of the Agricultural Operation Practices Act indicate that the agricultural operation follows a generally accepted agricultural practice.

As such, where a compost facility is on agricultural land and falls under the definition of “agricultural operation” in connection with the activities that may be the source of odour, the recourse available to AEP is quite limited. In effect AEP would need to demonstrate that the practices of the compost operator are not generally accepted by following the process of such an assessment which is detailed in the AOPA.

III. The Need for Proposed Amendments (the “Regulatory Scenario”)

The BAU Scenario has resulted in municipalities enforcing municipal laws against compost facility operators that fail to minimize offensive odours. In these cases, operators may have failed to implement or update operations plans in accordance with the requirements of the Code of Practice. However, AEP has not appeared in these cases to enforce compliance with the requirement of environmental law to minimize offensive odours. The BAU Scenario has thus given rise to a perceived gap in AEP’s regulatory mandate.

As described in this section, the BAU Scenario suffers from several inadequacies which would and should be addressed by the proposed Amendments in the Regulatory Scenario (section IV, below).

A. The BAU Scenario does not express how long waste can be stored or prohibit anaerobic processing conditions

Class 1 compost facilities are governed by the Code of Practice and the *Waste Control Regulation*. As noted above, the Code simply provides that a registration holder must “develop, maintain and implement” an operating plan that addresses various matters that may arise at a compost facility, such as feedstock acceptance procedures or an odour minimization plan. Neither the Code nor any other binding legislation or policy document set out appropriate standards for such matters. As a result, Operators are able to set their own practices and procedures with little regulatory oversight.

While the Standards (which have not been incorporated into law and are therefore not binding on registration holders) provide a more granular description of the proper plans and specifications that ought to be in place at a Facility, they do not address specific procedures or strategies that should be employed in order to reduce the release of pathogens or offensive odours. Rather, the Standards contemplate that these procedures should be designed and implemented, but each registration holder may do so in a manner that it sees fit.

This has been particularly problematic for Wheatland County and GFL due to the improper storage of feedstock at the GFL’s facility that resulted in the Legacy Piles. Neither the Code nor the Standards set out acceptable timelines for the storage of feedstock upon acceptance, nor do either address the appropriate procedures to be followed to remove or mitigate an odour source, such as the Legacy Piles, once it exists. These procedures are determined by the registration holder, and no input from the local municipality is required. Naturally, it is necessary that feedstock be stored at a compost facility for some period of time; however, the Code does not set a timeline for the processing and removal of feedstock

and other organic materials. As a result, a registration holder may permit large piles of old organic material, such as the Legacy Piles, to build up without contravening the Code.

Further, neither the Code nor the Standards contemplate how a registration holder should address problems related to offensive odours once they arise. The Code requires that registration holders develop a plan for the management, detection and mitigation of offensive odours; however, little additional guidance is provided for appropriate standards and responses when offensive odours occur. Rather, the registration holder may determine its own odour management program and odour contingency response plan; however, as discussed further below, these programs and plans may impose few obligations on the registration holder, resulting in ineffective mitigation of offensive odours.

The BAU Scenario has led to the accumulation of waste at a compost facility that has endured for years and which a registered holder stored under anaerobic conditions. Thus the BAU Scenario has led to a failure of compost facility operators to minimize offensive odours. This suggests the need for a Regulatory Scenario in which written laws:

- express that feedstock accepted at a compost facility must be initially processed quickly and completely processed into finished compost within a reasonable period of time (less than one year);
- prohibit processing any materials into compost under anaerobic conditions; and
- require that any anaerobic conditions that may arise be appropriately corrected (e.g., by use of negative-pressure enclosures, frequent aeration of materials, etc.).

B. Reporting is not adequate in the BAU Scenario

Source and content of feedstock

Registration holders must develop and maintain an annual report for the operations at the Facility that are included in the facility's operating record. The operating record is a document that is maintained by a registration holder that includes (a) a copy of the registration for the facility, (b) current versions of the design and operations plan for the facility, and (c) annual reports for the facility. Upon request, registration holders must provide the operating record to AEP.²⁵

The Code specifies that an operations plan must set out the "source and types of feedstock to be composted" at a Facility²⁶; however, because the operations plan sets out the *planned* operations and procedures for the subject facility, it does not report on the *actual* source of feedstock accepted at the subject facility. In other words, because the operations plan is a forward-looking document, it does not provide for a look-back at the activities that took place over the preceding year. Rather, this information is set out in a registration holder's annual report. The annual report must include information relating to the type and volume of feedstock received and processed in the calendar year; however, there is no requirement to report the source of any of the feedstock. The Standards, similarly, do not stipulate that a registration holder must, or even should, report the source of feedstock accepted at a facility each year. As a result, a registration holder may accept and process feedstock from sources other than those listed in the operation plan, without the knowledge of AEP or any other interested party. Further, the BAU Scenario does not require any operator to report the receipt of waste other than feedstock, at all.

²⁵ Code at s. 11(1) & (3)

²⁶ Code at s. 7(1)(a).

The BAU Scenario therefore allows for feedstock to be reported in a manner that does not list in any detail substances received that would be potentially harmful to human health, such as asbestos-containing drywall. This suggests the need for a Regulatory Scenario in which written laws express that all feedstock and other waste be reported in a manner that lists in detail any substances that would be potentially harmful to human health, regardless of feedstock origin or the amount of potentially harmful substance.

Reporting of complaints

Section 7(1)(e) of the Code provides that a operations plan must include a “plan for the management, detection and mitigation of offensive odours.” There is no requirement to report complaints relating to offensive odours being generated from a Facility, although the Standards (which are not binding) provide that a summary of complaints are to be provided in each facility’s annual report.²⁷

C. “Other applicable laws” are not expressed in the BAU Scenario

Municipal Laws

In addition to the obligations set out in the Code, registration holders must comply with all obligations set out under *EPEA*, the *Subdivision and Development Regulation* and all other applicable laws.²⁸ While this appears to create a broad set of obligations for registration holders, it is not expressed in the BAU Scenario which laws are applicable to the operation of compost facilities.

In particular with respect to nuisance, section 2 of *AOPA* provides that a person who carries on an agricultural operation, such as a composting at a compost facility, is not liable to any person in an action in nuisance resulting from the agricultural operation so long as the operations at the facility do not contravene (a) the municipality’s land use by-law, (b) the regulations or an approval, registration or authorization, or (c) the generally accepted agricultural practice.

The BAU Scenario is problematic because of the Code is silent with respect to accepted practices for most of the operations at a compost facility. As a result, it may be unclear under which circumstances a municipal nuisance bylaw would be applicable, and therefore, when a municipality is able to validly enforce its own bylaws.

In any event, registration holders have argued in legal proceedings that municipalities cannot enforce “other applicable law” in respect of compost facility where such would, in the view of registration holders, intrude upon a regulatory mandate reserved for AEP.²⁹ The BAU Scenario has thus led to a multiplicity of legal proceedings challenging the regulatory mandates of other branches of government simply because they exercise public law powers other than those of AEP.

The BAU Scenario includes clear authority for municipalities to regulate land use, including use to operate compost facilities. Among other things, municipalities may require that existing or proposed compost facilities be approved by means of development permits issued pursuant to land use bylaws. Development permits may approve facilities with conditions governing the acts or omissions of operators, all aimed at averting the nuisance conditions that have in the past harmed the reputation of industry operators.

The BAU Scenario does not expressly provide that municipalities also have authority under provincial law to regulate nuisance conditions. The BAU Scenario’s failure to expressly provide that operators

²⁷ Standards at s. 6.5(c)(xi).

²⁸ Code at s. 1(1).

²⁹ Court of Queen’s Bench of Alberta Action Nos. 1901-09980 and 1901-13026.

must comply with municipal nuisance bylaws incentivize municipalities to impose the requirement of development permits. Where municipalities must resort to land use regulation, a regulatory burden inevitably arises that would be avoided by the proposed Amendments in the Regulatory Scenario set out below.

The BAU scenario has resulted in municipal enforcement action being taken in the perceived absence of environmental enforcement action by AEP. The optics that compost facility operators are subject to regulation by more than one regulator raises the question whether the BAU Scenario imposes too great a regulatory burden which may deter investment in Alberta's waste management sector. The proposed Amendments in the Regulatory Scenario reported below would provide AEP a lead regulatory mandate to avoid nuisance conditions that have resulted in enforcement action by municipalities in 2019. Optically, the Regulatory Scenario should appropriately be perceived as a lesser regulatory burden than the BAU Scenario.

The BAU Scenario suggests that, without the proposed Amendments, further and expensive legal proceedings will likely be brought by operators to challenge administrative actions by municipalities to avoid nuisance conditions at or arising from compost facilities. The BAU Scenario is thus likely to lead all stakeholders, and primarily operators and municipalities, to incur greater legal expense required to advance legal proceedings to hear and judgment in Alberta Courts to resolve disputes arising regarding facility conditions. This BAU Scenario thus includes an economic burden that is expected to be lessened or avoided altogether under the Regulatory Scenario reported below.

The foregoing suggests the need for a Regulatory Scenario in which written laws express that municipal nuisance bylaws are applicable to compost facilities, and that AEP has express authority to regulate nuisance conditions arising at facilities that would otherwise give rise to enforcement action by municipalities.

D. Inorganic waste permitted in the BAU Scenario can fail to minimize odours

The Code permits registration holders to accept up to 20,000 tonnes of waste per year at a Class 1 compost facility. "Waste" is defined in the *Waste Control Regulation* as

any solid or liquid material or product or combination of them that is intended to be treated or disposed of or that is intended to be stored and then treated or disposed of, but does not include recyclables.³⁰

In contrast, "feedstock" is defined in the Code as "waste that contains organic materials which decompose biologically".³¹ Feedstock is therefore a subset of waste.

In the BAU Scenario, registration holders appear to have accepted inorganic waste (i.e. waste that is not feedstock) at a compost facility, and ostensibly remain compliant with the Code. Inorganic materials, including sulphur-containing compounds, have been observed to emit offensive odours.³² Some forms of waste, however, are subject to regulation by other regulators. For example, the addition of sulphur to feedstock results in the production of fertilizer rather than compost, since compost is defined as "a stable humus-like materials that (i) results from the biological decomposition and stabilization of organic materials under aerobic and thermophilic conditions...". Since sulphur is not an organic material, it cannot

³⁰ *Waste Control Regulation* at s. 1(II).

³¹ Code at s. 3(f).

³² Daryl McCartney, P.Eng. "GFL Composting Facility Assessment" prepared for Wheatland County (June 2018) at 15, s. 5(d).

become compost; rather, the product derived from mixing compost with sulphur is a fertilizer³³ and is regulated federally by the Canadian Food Inspection Agency.

It is not clear how AEP interprets its regulatory mandate where inorganic waste is processed together with organic waste at compost facilities that fail to minimize offensive odours. It is also not clear how AEP interprets its regulatory mandate when operators of compost facilities appear to violate applicable laws other than the plain wording of the Code of Practice.

The BAU Scenario has thus led to operators accepting waste at compost facilities other than feedstock, namely organic waste. Such operators have in fact acted outside the scope of the activities contemplated by the registration issued by AEP. This suggests the need for a Regulatory Scenario in which written laws prohibit processing or the inclusion inorganic materials in compost other than for the purpose of soil stabilization, subject to other legal authority to do so.

E. Enforcement problems:

Responding to complaints

The skeletal legislative framework for composting in Alberta results in composting practices being relatively self-regulated. The hazards of this approach are evident in GFL's 2018 operating plan in which GFL set less exacting standards for itself in respect of mitigating offensive odours. GFL's 2018 operating plan provides that "in order to minimize impacts from objectionable odours, the following operating procedures should be to be [sic] adhered to..." (underline added). The structure of this provision suggests that GFL should, but does not have to, adhere to the procedures set out in the operating plan. This contrasts with other portions of GFL's operating plan, such as the sections relating to compost pad maintenance, which provides that "regular maintenance will include..." (underline added).

Exacerbating this issue, neither the *Waste Control Regulation* nor the Code set out a consequence or penalty if a registration holder fails to adhere to its own operating plan. As a result, registration holders face few consequences in the event of such failure. Further, and specifically in GFL's case, it's likely that its failure to adhere to the procedures set out in its operating plan for odour mitigation would not even constitute a contravention of the operating plan, since those provisions are permissive, but not obligatory.

With respect to odour management, the Code provides that a registration holder must have an odour management program, and the Standards state that it must include a method to detect odours and that a registration holder shall investigate any odour complaints it receives. GFL's 2018 operating plan provides that site personnel should conduct perimeter inspections of its facility for odours, and in practice, GFL's site personnel have responded to investigate odour complaints from local residents. The draw-back of this approach, however, is that site personnel may be poorly equipped to detect offensive odours as a result of being "nose-blind" to offensive odours because of frequent exposure to such odours over the course of working at the facility. Further, odours that are offensive but not harmful are difficult to measure objectively, and as a result, subjective observations must be relied upon. If facility personnel are less able to subjectively detect offensive odours emanating from a compost facility, the effectiveness of any response plan that relies on their observations will be mitigated.

An example of this problem arose on July 11, 2019, when members of Wheatland County's administration attended GFL's facility to conduct an inspection. Two of Wheatland County's officers

³³ "fertilizer" is defined in the *Fertilizer Act*, RSC 1985, c F-10 as "any substance or mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient".

stated that they experienced nausea and headaches due to the offensive odours at the facility. Conversely, an employee from the Facility stated that no offensive odours existed at all at the time.

As a result, it is possible that site personnel would not be able to confirm the presence of any offensive odour giving rise to a complaint from a local resident, because they are unable to detect such odours in many cases. If site personnel fail to detect or identify offensive odours, the registration holder will be unlikely to implement effective mitigation of the odours, since, from the registration holder's perspective, no offensive odours are being generated by the facility. For Wheatland County residents, this has led to great frustration, and as a result residents stopped reporting the offensive odours to GFL since no actions were being taken to address the problem. As a result, GFL recorded in its annual report that it received no complaints relating to offensive odours in previous year.

Offensive odours at compost facilities are often generated by organic material that has been improperly processed and has entered an anaerobic state. Although the *Waste Control Regulations* provide that compost facilities must be operated so that the generation of odours is minimized,³⁴ there is no express provision under the Code requiring that aerobic conditions be maintained at a compost facility. Organic materials that have progressed towards an anaerobic state fall into a legislative gap, since their existence is not expressly prohibited under the Code or the *Waste Control Regulation*. Consequently, when such conditions materialize, AEP must rely on laws of general application, rather than an express provision of the Code, to enforce remedial steps, failing which, affected municipalities must commence separate proceedings pursuant to their authority granted under MGA in order to advance the public interest.

As discussed in the legislative framework section above, the ability of AEP to issue environmental protection orders (“**EPOs**”) in respect of odours as contemplated by section 116 of *EPEA* is curtailed by the application of the AOPA. Because the precise source of odours can be difficult to detect, compost facility operators that operate on agricultural land may argue that the smells generated by the compost facility relate to the collection, transportation, storage, application, use, transfer and disposal of manure, composting materials or compost, each which fall within AOPA's definition of an agricultural operation. Once captured by the carve-out provided for under AOPA, AEP is prevented from issuing an EPO unless it can demonstrate that the activities causing the offensive odours do not arise from a generally accepted agricultural practice and would require AEP to follow the review process outlined in AOPA.

While it is notable that processing waste into compost is not expressed in AOPA's definition of “agricultural operation”, the definition of the latter is sufficiently broad to provide non-compliant operators an arguable case that AOPA precludes the enforcement action sought to be taken. This may contribute to a “regulatory chill” or reluctance by AEP to issue EPOs regarding odours emanating from compost facilities.

The BAU Scenario has thus led to an inadequate legal framework to enforce compliance with the goals of the Code, given its skeletal structure. This suggests the need for a Regulatory Scenario in which written laws express that registration holders must engage a neutral third party to investigate complaints of offensive odours if complaints persist but cannot be confirmed by the facility's personnel. This also suggests the need for a Regulatory Scenario that allows AEP to issue remedial orders or penalties to registration holders for failing to adhere to its own operating plan.

³⁴ *Waste Control Regulation* at para 38(a).

IV. The Regulatory Scenario: Proposed Amendments

The shortcomings of the BAU Scenario reported above suggest the need for a Regulatory Scenario to amend Alberta's legislation governing the operation of compost facilities in the Province.

A. Enact the Standards into law

Enacting the Standards into law will enhance regulatory certainty for all stakeholders, from registration holders, to the public, to municipalities, with respect to the obligations of registration holders when operating compost facilities. The Standards address in part the shortcomings of the Code by expressing with greater clarity the minimum requirements for development, operation, monitoring, and closure of compost facilities.

Enacting the Standards is also consistent with assuring the public assurance that groundwater and surface water will be protected at all stages of the compost facility life cycle.

Finally, enacting the Standards is also consistent with attempting to avoid nuisances and unauthorized land use and intensification of land use, that would otherwise contravene municipal laws and lead to enforcement thereof.

However, enacting the Standards would not alone address all shortcomings of the BAU Scenario reported above that resulted in the failure to minimize offensive odours in compost facilities.

B. Enact further provisions into law

The fact that the Standards would not avoid all reported failures of the BAU Scenario suggests the need for a Regulatory Scenario to enact the Standards together with the following provisions:

1. An express provision that local nuisance laws are applicable to compost facilities. The Code and the Standards each provide that registration holders must comply with other applicable laws. However, since compost facilities fall under the jurisdiction of the Province, some operators have submitted in legal proceedings that it is unclear at what point other laws, such as nuisance bylaws, become applicable.³⁵ By expressly providing that nuisance bylaws apply to composting facilities, amended legislation can enhance regulatory certainty and reduce legal expense for all stakeholders arising from unnecessary legal challenges to actions by municipalities. Increasing regulatory certainty is a clear and present objective of the Government of Alberta.
2. A facility's annual report shall report all feedstock accepted at the facility in a manner that lists in detail any substances that would be potentially harmful to human health (e.g., asbestos), regardless of feedstock origin or the amount of potentially harmful substance. The BAU Scenario's reporting obligations do not require a registration holder to report the source of feedstock or any specific hazardous substance that may be contained therein. This amendment will ensure that local communities are not at risk of exposure to hazardous substances that are included in feedstock or amendments accepted at a compost facility, and currently may be unreported.
3. Feedstock accepted at a compost facility must be initially processed quickly and completely processed into finished compost within a reasonable period of time. This amendment will protect against the accumulation of anaerobic organic material at a compost facility, and thereby reduce the risk of offensive odours being generated from composting operations. It will also mitigate the

³⁵ Court of Queen's Bench of Alberta Action Nos. 1901-09980 and 1901-13026; Wheatland County Subdivision and Development Appeal Board Orders No. SDAB S0209-01 and S0219-02 issued on November 8, 2019.

risk that a compost facility is informally used as a landfill for organic waste by mandating the production of finished compost within a reasonable period of time.

4. An express prohibition on the existence of organic material in anaerobic state. Organic material that has progressed toward an anaerobic state is frequently a source of offensive odours at compost facilities. By prohibiting the existence of anaerobic material, AEP will be able to issue penalties and mandate the treatment or removal of sources of offensive odours without resort to EPOs. AEP's regulatory mandate would result in facilities that minimize offensive odours and avoid stakeholder opposition to new or existing facilities. This is expected to increase the profitability and number of facilities province-wide. This is further expected to increase investment in Alberta as a jurisdiction that accommodates profit-making waste management facilities.
5. Any anaerobic conditions that arise must be appropriately corrected (e.g., by use of negative-pressure enclosures, frequent aeration of materials, removal of anaerobic material to a landfill, etc.), and such correction must be done with input from municipalities. As discussed, organic materials create offensive odours when they exist under anaerobic conditions. Offensive odours are released when anaerobic soils are disturbed. As a result, treatment or removal of anaerobic soils have potential to create nuisance conditions for nearby land users. Any treatment or removal of anaerobic materials should be conducted in consultation with municipalities whose residents stand to be adversely impacted by such treatment or removal.
6. Registration holders must engage a neutral third party to investigate complaints of offensive odours if complaints persist but cannot be confirmed by the facility's personnel. Since personnel at a compost facility may be unable or less able to identify offensive odours generated from the compost facility, it may be necessary to employ a neutral third party to investigate complaints. This approach achieves a reasonable balance between responding to complaints from local residents and ensuring that complaints regarding offensive odours are attributed to the appropriate source.
7. An express prohibition against processing or including inorganic materials in compost other than for the purpose of soil stabilization. Composting is, by definition, the decomposition of organic materials. If a registration holder augments its finished compost through the addition of other inorganic materials, such as sulphur, the registration holder is no longer making compost. Rather, it is manufacturing a fertilizer, which is an activity that falls under federal jurisdiction. Unless a registration holder can demonstrate that it has received the appropriate approvals for such activities from the relevant federal authorities, the registration holder should be suspended from operating its compost facility for failing to comply with other applicable laws, as required under section 1(1) of the Code. Although this requirement is currently implied, and express prohibition on the inclusion of inorganic materials in compost would provide additional regulatory certainty for compost facility operators.

C. Enforcement of Code and Standards

Currently, a registration holder's regulatory obligations are largely set out in its operating plan; however, neither the Waste Control Regulation nor the Code expressly provide for any consequence for failing to adhere to one's own operating plan. Section 116 of EPEA provides AEP with the authority to issue an EPO if a compost facility is found to be generating an offensive odour; however, it does not provide AEP with the authority to issue an EPO if a registration holder otherwise fails to adhere to its operating plan. While AEP should be given broad discretion in setting appropriate penalties for any such failures, an express provision in the Code or the Waste Control Regulation permitting AEP to issue remedial orders or penalties to registration holders for failing to adhere to its own operating plan would bridge a

substantial enforcement gap that currently exists in the legislation governing the operation of composting facilities in Alberta.

V. Conclusions:

An examination of the BAU Scenario that is currently in place in Alberta for the regulation of compost facilities demonstrates an arguable regulatory gap that may account for recent disputes between compost facility operators and the municipalities that have occasioned the economic burden of legal proceedings which may be avoided by the proposed Amendments of the Regulatory Scenario. In particular, the BAU Scenario includes the following burdens:

- it fails to address the storage of waste or annual throughput capacity (as opposed to acceptance capacity) leading to the accumulation of waste that may become anaerobic causing odours and other nuisances;
- it fails to impose adequate reporting requirements on the actual source of feedstock, as operations plans required by the Code currently require only prospective reporting;
- it has no mandatory reporting requirements with respect to complaints associated with compost facility operations;
- it fails to express all circumstances under which municipalities may enforce municipal law in connection with nuisance conditions and land use associated with compost facilities;
- it led to some compost facility operators accepting inorganic waste (i.e. waste that is not feedstock, and therefore not a part of composting), notwithstanding that the Code does not contemplate the acceptance of inorganic waste. Further, inorganic waste has been shown to be a primary contributor to offensive odors at compost facilities;
- it is a largely self-regulated approach by compost facility operators that has lacked accountability and which does not include sufficient punitive action or other sanction to incentivize operators to adhere to their own operations plans. Further, the BAU Scenario has been unable to avoid disputes from arising between operators and other stakeholders, including municipalities. It has further failed to resolve disputes outside of legal proceedings before courts and tribunals.
- it has failed to avoid nuisance conditions at compost facilities, such as offensive odors; and
- the authority of AEP to issue EPOs under *EPEA* in connection with odor problems may have been curtailed or subject to “regulatory chill” by the operation of *AOPA*. This has allowed compost facility operators to avoid responsibility for nuisance odors. This has also allowed legal uncertainty to persist whether a given compost facility may constitute an “agricultural operation” in context of whether an offensive odor constitutes a nuisance.

The BAU Scenario is thus a regulatory framework that has not efficiently given effect to the Legislature’s intent to prevent, control, and eliminate the emission of offensive odors from compost facilities,³⁶ within the Government of Alberta’s mandate to promote the protection, enhancement and wise use of the environment.³⁷

³⁶ *EPEA*, s. 116.

³⁷ *EPEA*, s. 2.

The proposed Amendments of the Regulatory Scenario would address the shortcomings of the regulatory scheme under the BAU Scenario. In particular, the Regulatory Scenario would enact the Standards into law and enact new provisions that:

1. expressly provide that local nuisance laws are applicable to compost facilities;
2. require reporting of the actual contents of all feedstock accepted at compost facilities that transparently allows for understanding of potential implications for human health and the environment;
3. legislate reasonable timelines for how long waste feedstock can remain on site before it is processed to compost and removed;
4. expressly prohibit compost facility operators from allowing organic material that is in an anaerobic state to be on site and allows for AEP to issue penalties and mandate treatment or removal of sources of offensive odours without resort to EPOs;
5. legislate corrective actions, with input from local municipalities, to address anaerobic conditions;
6. require registration holders to engage third parties to investigate complaints of offensive odours if complaints persist but cannot be confirmed by compost facility personnel; and
7. expressly prohibit the processing or inclusion of inorganic material at compost facilities other than for the purpose of soil stabilization.

Absent meaningful regulatory reform such as that proposed in the Regulatory Scenario reported here, municipalities that face on-going problems with the operation of compost facilities will be incentivized to avoid nuisance conditions by resorting to municipal regulatory powers, such as issuing remedial orders or requiring development permits imposing strict conditions on any new or expanded compost facility operation. That result is proper and legal, but likely impose a greater regulatory burden under the BAU Scenario than under the proposed Amendments of the Regulatory Scenario. In the alternative, the shortcomings of the BAU Scenario will likely result in increased litigation of disputes by industry concerning the imposition of development permits. This economic burden would likely be avoided by the enhanced regulatory certainty provided by the Regulatory Scenario.

MUNICIPAL CONCERNS
Relating to
ORGANICS PROCESSING IN SOUTHERN ALBERTA
Southern Municipal Waste Managers Advisory Committee
July 2019

Many municipal waste managers in Southern Alberta are working to ensure that organic waste, primarily food-based materials and biosolids, are diverted from landfill disposal. These waste managers recognize that the success of their programs and policies relies on the availability viable processing facilities, currently dominated by composting technologies, that have access to markets for their products. These managers are increasingly aware that organics processing facilities associated with their programs can impact residents and businesses within their own or neighbouring municipalities. Other factors such as dispersed collection routes, siting new facilities, haul distances and economies of scale can affect whether composting or other technologies are the correct fit for any given municipality.

In the face of rapidly growing organics processing demand in Southern Alberta municipal waste managers recognize the following needs must be met in establishing new or expanding existing organics processing facilities.

a) Security and Resilience

The flow of waste and recyclables is continuous. Municipalities require security in having locations to manage this constant flow and in knowing that there are reliable markets for the processed material. There must be resilience in the organic waste processing opportunities in order to mitigate risks such as existing facilities experiencing operational or regulatory upsets that interrupt the flow.

Problem: Recent events, such as two major facilities being asked to stop receiving municipal food-based organics within the last month, have municipal waste managers concerned that there is not enough capacity to address major upsets at existing facilities. A robust regional network of properly managed organic processing opportunities is required.

b) Trust

Municipalities need to be able to trust that facility operators and haulers are handling and managing material responsibly and in compliance with regulatory requirements and accepted industry practices.

Problem: Recent events have given municipal waste managers cause for concern that facilities they rely on have challenges in operating according to accepted industry best practices.

d) Industrial, Commercial and Institutional (ICI) Generators

ICI generators and haulers of ICI material must have access to sufficient processing capacity to comply with and complement municipal organics diversion programs.

Problem: As municipal policies shift towards addressing the need to divert ICI organics from landfills, in addition to municipal collection programs, municipal waste managers need to have confidence that there this capacity to process this additional material.

e) Haul Distance

A significant cost of organics programs can be those associated with transporting diverted material to processing locations and from there to finished product markets. Hauling organic waste long distances may be one of the concerns that erodes public confidence with respect to fossil fuel consumption and associated emissions such as greenhouse gases.

Problem: The current geographic distribution of organics processing facilities and product markets leads to long haul distances for some municipalities.

f) Economies of Scale

Hauling smaller volumes of material long distances to processing facilities erodes the economic and environmental viability for medium to small municipalities to divert organics from the municipal solid waste stream.

Problem: Medium to small municipalities need organics processing technologies that are scaled to suit their local waste management business models.

g) Siting New Facilities

Municipal waste managers recognize that criteria for siting organics facilities can be complex. These criteria may vary depending on the technology used. Long term landuse planning must be carried out in advance to ensure a suitable site and to be able to plan for the viability of processing sites during its expected life span.

Problem: Organics processing is a relatively new activity in the landscape that is not well integrated into municipal and regional land use planning.

h) Addressing Issues with Existing Processing Facilities

Existing facilities are subject to challenges relating to changes in feedstock and other input quality and quantities, conflicts with surrounding land uses, market variability and changing material storage needs.

Problem: If existing facilities are to be economically viable and have the social licence to operate municipalities must address the attendant land use planning complications.

i) Business plan

It is recognized that in order to develop a business plan for an organic process facility there must be long term confidence in the feedstock characteristics such as amount, quality and flow variability.

Problem: New facility planners, whether private sector, municipal or a combination, may not have long term confidence in feedstock volumes and land use permits in order to develop new processing opportunities.

j) Public Perception

The public needs to have confidence in municipal programs if municipal diversion goals are to be achieved and cost recovery programs are to be successful. Public perceptions of organics processing and impacts on public interests need to be managed by provincial regulatory authorities, municipalities and facility operators on an ongoing basis.

Problem: Recent events associated with processing facilities in Alberta have created negative public experiences related to diverting organics materials from landfill disposal. These changing experiences include a perceptions of creating new problems and spreading problems associated with waste management. There is a need to build, maintain and restore public confidence in organics processing, especially composting though proper design, management and oversight.

DRAFT

Agenda Item	10
Submitted to	Land Use Committee and Intermunicipal Servicing Committee
Purpose	For Information
Subject	Technical Advisory Group Updates
Meeting Date	February 6, 2020
<i>Motion that the LUC/ISC receive for information an update on the work of the CMRB Technical Advisory Groups</i>	
<p>Summary</p> <p>The Land Use TAG and Servicing TAGs are currently focusing on the following areas:</p> <ul style="list-style-type: none"> • Regional Employment Analysis • Agriculture Subcommittee • Transit Subcommittee • Transportation Study • CMRB Water Table • Policing Subcommittee <p>Updates on the Regional Employment Analysis and Recreation Servicing TAG are available in other agenda items in this package.</p>	

1. HDR Calthorpe Planning Process

- HDR Calthorpe held workshop #2 on January 31, 2020.
- The first meeting of the C&E TAG has been scheduled for February 28, 2020.

2. Regional Employment Analysis

- CMRB Administration was directed by the Committees to work with Applications Management to review the jobs by municipality table on page 4 of the Analysis.
- The table was reviewed with staff from the City of Calgary and Wheatland County on January 28th.
- The report was modified to reflect the discussions.

3. Agriculture Subcommittee

- A draft report was circulated to the Land Use TAG and Agriculture Subcommittee for their review and input. Comments were received.
- The draft report will be presented to the LUC at the March meeting.

4. Transit Subcommittee

- Interim findings as approved by the ISC are being used to support the HDR Calthorpe planning process, including the need to focus on key themes of “integration,” “connection” and “efficiency” in transit.
- Municipal transit specialists are being incorporated into the HDR Calthorpe planning process as approved by ISC.
- Reporting of the Subcommittee findings are ongoing. The draft will be reviewed by the Transit Subcommittee prior to ISC for approval.

5. South and East Calgary Regional Transportation Study (S&ECRTS)

- The S&ECRTS was initiated by the CMRB in October 2018. The successful consultant, ISL Engineering and Land Services, began in their work in January 2019.
- The S&ECRTS will build upon the study process, analyses, evaluation and results of the NCRTS. The expected outcome is a scenario for the 2028 (10 year) and 2039 (20 year) planning horizons that can be used in the future.
- The next phase of work is project evaluation and prioritization in February 2020.

6. CMRB Water Table

- The Water Roadmap continues to be revised to include an approach to integrated policy direction on development in flood-prone areas. A workshop to kick off the work on flood-prone areas occurred on October 10, 2019 in High River. Summary report preparation is ongoing.
- CMRB administration continue to participate at meetings of AEP projects including Bow River Phosphorus Management Plan Implementation Committee and the Bow Basin Water Management Options Conceptual Assessment.

7. Policing Subcommittee

- The first meeting of the subcommittee was held on October 9, 2019. The Committee determined to do a current state report and is exploring the possibility of Mount Royal University students conducting the work free of charge.

8. Recommendation

That the LUC/ISC receive for information an update on the work of the CMRB Technical Advisory Groups