Open to the Public

1. Honourable Doug Griffiths, Minister, Municipal Affairs (9 – 10 am)

2. Chair’s Opening Remarks

3. Approval of Agenda

4. Approval of Minutes of March 14, 2013

5. Representations from the Public

6. REF Applications

7. Land Use
   a. CRGIS Spatial Data Demonstration Project Report

   **Motion:** That the Capital Region Board accept the CRGIS Spatial Data Demonstration Project Report for information as recommended by the Land Use Committee.

8. Governance
   a. Policy #G005 – Board Meeting Procedures

   **Motion:** That the Capital Region Board approve the amendments to Policy #G005-Board Meeting Procedures as recommended by the Governance Committee.

9. Committee Reports
   a. Land Use Committee
   b. Transit Committee
   c. Governance Committee
   d. Advocacy & Communications Committee

10. CEO’s Update
    a. CRB Economic Roadmap update
    b. Growth Plan update

11. **Motion:** That the CRB move to in camera session
In Camera

12. **Motion:** That the CRB revert to public session.

Open to the Public

13. Adjournment
Minutes of a meeting of the Capital Region Board held at Chateau Louis, Grand Ballroom on Thursday, March 14, 2013

Delegates in Attendance:
Mayor Nolan Crouse – St. Albert/Chair
Councillor John Stewart – Beaumont
Mayor Don Rigney - Sturgeon
Mayor Barry Rasch - Thorsby
Mayor Stephen Mandel – Edmonton
Mayor Gale Katchur – Fort Saskatchewan
Mayor William Nimmo - Gibbons
Mayor William Choy – Stony Plain
Mayor Dawson Kohl - Warburg
Mayor Bill Skinner – Town of Lamont
Councillor Jocelyn MacKay – Leduc County
Mayor Lisa Magera - Legal

Mayor Linda Osinchuk – Strathcona County
Mayor Randy Boyd – Bon Accord
Mayor Greg Krischke – City of Leduc
Mayor Don Faulkner - Calmar
Councillor Bill Purdy - Wabamun
Mayor Karl Hauch - Bruderheim
Mayor Paul Krauskopf - Morinville
Mayor Anita Fisher - Devon
Mayor Rodney Shaigec - Parkland
Mayor Stuart Houston – Spruce Grove
Mayor Mel Smith - Redwater
Reeve Wayne Woldanski – Lamont County
Ivan Moore – Government of Alberta

Absent:
None.

CRB Administration:
Doug Lagore, Chief Executive Officer
Sharon Shuya, Project Manager
Neal Sarnecki, Project Manager
Kim Wieringa, Project Manager

Charlene Chauvette, Office Manager
Courtney Andrews, Executive Assistant
Allyson Jacques, Administrative Assistant
Open to Public

1. Call to Order and Chair’s opening remarks
   Called to order at 9:03 a.m.
   The Chair reminded members to submit any reimbursement claims up to March 31st to complete the CRB’s second year end audit required by the Province.
   A handout was provided to members indicating the total number of hectares each CRB municipality currently holds.
   Mr. Doug Lagore reminded Board members to register for the pre-FCM meeting of regional partnerships on May 30, 2013. He advised that the afternoon session, starting at 2:30 p.m., has limited space and is only open for Board members or alternates. The evening reception, starting at 5:00 p.m. will be open to municipal council members.

2. Approval of Agenda
   Mayor Fisher requested to add an item to the agenda – item 9.d. Waste Management Study update.
   
   **Motion:** To approve the amended agenda of March 14, 2013.
   
   **Moved by** Reeve Woldanski
   **Motion carried unanimously.**

3. Approval of Minutes of February 14, 2013
   It was noted that Councillor Joanne Hay was at the February 14, 2013 meeting as the Village of Wabamun’s representative.
   
   **Motion:** To accept the amended minutes of February 14, 2013.
   
   **Moved by** Mayor Fisher.
   23 in favour, 1 opposed. Supported by 17 or more municipalities comprising more than 75 percent of the population. **Motion carried.**

4. Representation from the Public

5. REF Applications

6. Land Use
   a. CRB Administration Capacity to Evaluate Submitted Plan – City of Edmonton
      Councillor Gibbons provided an overview of the recommendation referencing their letter of March 13, 2013 sent to the CRB highlighting the Edmonton’s concerns.
      Some comments were made regarding the intent and validity of the motion. Mr. Lagore advised that the CRB Administration’s recommendation is that the Board not support the Motion. He noted that concerns raised in Edmonton’s letter can be addressed in the CRB’s Growth Plan update.
      9:26 a.m. Mayor Mandel replaced Councillor Gibbons as Edmonton’s representative.
Mayor Mandel provided an overview of the rationale for the Motion. Mayor Fisher suggested a friendly amendment to the Motion to change “capacity” to “process”. The friendly amendment was not accepted by the City of Edmonton.

**Motion:** That the Land Use Committee evaluate the capacity of CRB Administration to evaluate submitted plans.

**Moved by** Councillor Gibbons.
7 in favour, 17 opposed. Not supported by 17 or more municipalities comprising more than 75 percent of the population. **Motion failed.**

7. **Governance**

a. **CRB 2012 Audited Financial Statements**

Mayor Osinchuk introduced the item. Mr. Mike Epp from Hawkings Epp Dumont provided an overview of the 2012 Audited Financial Statements.

**Motion:** That the Capital Region Board approves the 2012 calendar year Audited Financial Statements as approved by Governance Committee.

**Moved by** Mayor Osinchuk.
**Motion carried unanimously.**

10:00 a.m. Councillor Jones replaced Mayor Magera as Legal’s representative.

b. **CRB 2012 Annual Report (calendar year)**

Mayor Osinchuk provided an overview of the item, as recommended by the Governance Committee. Some suggested revisions were brought forward by members.

Councillor MacKay put forward a motion.

**Motion:** That the Capital Region Board defer the 2012 Annual Report until the next Board meeting following further review by CRB Administration.

**Moved by** Councillor MacKay.
4 in favour, 20 opposed. Not supported by 17 or more municipalities comprising more than 75 percent of the population. **Motion failed.**

Mr. Lagore noted that the final 2012 Annual Report has a submission deadline of May 1, 2013. Once complete two copies will be provided to each municipality and an electronic version will be available on the CRB website.

**Motion:** That the Capital Region Board approves the CRB’s 2012 Annual Report as approved by Governance Committee.

**Moved by** Mayor Osinchuk.
20 in favour, 4 opposed. Supported by 17 or more municipalities comprising more than 75 percent of the population. **Motion carried.**

c. **Review Voting Structure – Leduc County**

Councillor MacKay did not put forward the motion.
Motion: That the Capital Region Board hold a planning session of all Board members to review the current Voting Structure (Section 5 subsections (2) and (3)), of the Capital Region Regulations and bring back recommendations to the Capital Region Board, regarding the regulations functionality.

d. Procurement Policy #F002

Mayor Osinchuk provided an overview of the item.

Motion: That the Capital Region Board approves the amendments to Policy F002 – Procurement.

Moved by Mayor Osinchuk.
Motion carried unanimously.

8. Committee Reports

a. Land Use Committee

Mayor Fisher provided an overview of the recent work and future initiatives of the Land Use Committee.

b. Transit Committee

Councillor Iveson provided an overview of the work of the Transit Committee.

c. Governance Committee

Mayor Osinchuk provided an overview of the work of the Governance Committee.

9. Administrative Issues

a. Provincial Budget Implications

Mr. Lagore advised that the Province has committed $3 million dollars in funding to the CRB for 2013 and verbal support of $500,000 grant funding for the CRB Growth Plan update.

b. CCRA and Non-PGA Policy Clarification

Mr. Neal Sarnecki provided an update on the work of the Land Use committee regarding the matter. A comprehensive update will be provided once the Land Use committee has the opportunity to review its business plan.


Mr. Lagore noted that going forward the financial reporting will be brought forward to the Board on a quarterly basis.

d. Waste Management Study update

Mayor Fisher provided a progress update on the Waste Management Study. A full report will be completed by the end of April 2013 and will be distributed to all CRB municipalities by the Town of Devon.

No In-Camera Items

10. Motion: That the CRB move to in camera session.
In Camera

11. **Motion:** That the CRB revert to public.

Open to Public

12. **Adjournment**

   Meeting adjourned at 10:36 a.m.
CRGIS Spatial Data Demonstration Project Report

Motion

That the Capital Region Board accept the CRGIS Spatial Data Demonstration Project Report for information as recommended by the Land Use Committee.

Background

- On April 15, 2008, the Provincial Government established the Capital Region Board (CRB) through the Capital Region Board Regulation. The Regulation called for a plan to co-ordinate geographic information services for the Capital Region.

- On September 3, 2008, the CRB passed a motion agreeing to share all GIS Data in accordance with the Geographic Information Services for the Capital Region Board, and in accordance with the Terms and Conditions of existing License Agreements.

- On November 7, 2008, the CRB approved a business model whereby the Regional Geographic Information Services are delivered through the Capital Region Board.

- On February 5, 2009, the CRB approved the Capital Region GIS Plan. The Plan was comprised of a strategy and implementation Plan. The strategy included a vision, mission, and guiding principles; and the implementation plan included three phases: Build the foundation; Build the decision-making capacity; Build sustainable value.

- In 2010, the responsibility for the CRGIS Plan was moved to the Land Use Committee. Given the financial constraints, an incremental approach to advancing the CRGIS was adopted in 2011. That approach assumed a smaller, targeted and tangible set of activities focused on Geographic Information Services (GIS) to support the Capital Region Growth Plan Update.

- In mid-2012, the Land Use Committee approved the CRGIS Spatial Data Demonstration Project to: review the value and importance of the CRGIS; build awareness and understanding of GIS throughout the Region; build capacity and processes for regional GIS; identify and assemble spatial data that supports CRB needs including Growth Plan updates; and build an understanding of the cost and resource implications for spatial data required to support a Growth Plan update.

- During mid to late 2012, the CRGIS Spatial Data Demonstration Project Team worked with the Land Use Committee, the Planning Advisory Group, the GIS Advisory Group, and GeoDiscover to understand the challenges, identify opportunities, and build trust and support for this report and recommendations.

- On January 10, 2013, the CRGIS Spatial Data Demonstration Project Report was presented to the CRB. Following questions on the report review process, the investment implications from the report recommendations, and the need for additional time to review the report by CRB members – the
motion to approve the report failed to receive the necessary support. A motion to postpone consideration of the Report until the April 2013 CRB meeting was approved later in the meeting.

- Between the Board meetings in January and April 2013, the project team redistributed the Report to all members and sought to address any additional concerns and/or provide clarification. On March 28, 2013, a new motion was presented to the Land Use Committee recommending that the CRB receive the Report as information to address concerns by members that approval of the Report would approve implementation of the recommendations in the Report, and therefore, the costs associated with the recommendations. In this regard, costs associated with the implementation of a CRGIS would be subject to the funding available within the CRB’s Business Plan and Budget. The Land Use Committee unanimously supported the recommendation to the CRB.

Rationale

- The CRGIS Strategy and Implementation Plan was prepared in 2008. Since the plan was first prepared there has been a significant amount of technological advancement in the GIS field. However, little has occurred toward developing the capability and capacity for a regional view of the Capital Region by the CRB. Further, approaches to open data and access to information are fundamentally shifting such that the acquisition and distribution of data has become cost effective. Equally, the needs of the CRB including the Growth Plan Update and monitoring of the Growth Plan and related policies remain integral to the business of the CRB.

- The CRGIS Spatial Data Demonstration Project has provided the Board with:
  
  o A better understanding of spatial data needs for the 2015 Growth Plan update
  o Partnerships, data sources and potential collaborations for spatial data
  o Basic processes for spatial data collection
  o A subset of spatial data
  o An understanding of the resources necessary to collect spatial data from CRB members
  o A foundation for moving the GIS mandate forward

Attachments
1. CRGIS Spatial Data Demonstration Project Report
2. Project FAQ
3. Consultation Summary
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Executive Summary

Geospatial information services are essential to help the Capital Region Board (CRB) fulfill its mandate. Relevant and accurate regional spatial data supports evidence-based decision making related to the environmental, social and economic goals of the Capital Region Growth Plan. Success in these areas depends on accurate knowledge of current conditions, future trends, and the potential impacts of alternative futures.

With updates to the Growth Plan planned for 2015, there is an immediate need to enhance CRB capacity and capabilities for this planning work. The objective of the Capital Region Geographic Information Services (CRGIS) Spatial Demonstration Project is to assess the CRB’s current and future capability to carry out the spatial aspects of the update. Additionally, this work provides information about the costs and resources necessary to expand capacity in order to support future operations.

It should be noted that this project is a demonstration intended to outline the work to build the GIS capacity of the CRB. Additional projects will be required to build the necessary GIS capacity for the CRB to support the updating, implementation and on-going monitoring and management of the Growth Plan.

The review carried out in the project provides the following insights:

- **Spatial data needs.** Current, accurate spatial information is critical to support the Growth Plan update. However, costs can be considerable and the acquisition of specific information and spatial data (or geospatial data) should be rationally defined, based upon the analytical needs of the Plan and the decision-making requirements of the Board. All analytical and data needs for the Growth Plan should be detailed by the Capital Region Board, Land Use Committee and staff prior to full data collection.

- **Spatial data acquisition and maintenance.** The CRB and its members have access to a significant amount of spatial information about the region, but its on-going acquisition, management, maintenance, and use by regional partners needs to be coordinated. Processes need to be put into place to ensure that the spatial data sets needed to support CRB operations are compiled and maintained on a regular basis.

- **Regular, documented processes.** Clear, replicable processes for acquiring, licensing, and maintaining spatial data are needed to ensure valid, up-to-date, well-documented information is available to support decision-making and the Growth Plan. Proper documentation of spatial data and analyses can provide transparency, and reduce the potential for disputes over the accuracy of information.

- **Internal GIS capacity.** Internal CRB GIS capacity and capabilities are needed to deliver value, mitigate the risks related to spatial data management, and support future projects. The development of long-term GIS capacity will require additional staff and resources to maintain continuity of management and institutional knowledge.
• **Collaboration with GIS partners.** There are significant opportunities to leverage existing and potential partner collaboration to develop regional GIS capacity, as well as to support the Growth Plan update and other Board needs. There are a number of potential partners who are pursuing regional and local projects that can supplement the work of the CRB in GIS, and active collaboration can support the goals of all participants.

• **Spatial data sharing.** Spatial data sharing policies that align with trends in the industry can be effective approaches to spatial data exchange and can assist in achieving the goals of the Growth Plan. Current approaches are shifting towards more open models of spatial data exchange, which should be supported by the CRB to fulfill its obligations to its members and support regional work by area stakeholders.

This project and the following near-term recommendations are meant to support the update of the Growth Plan up to 2015. The recommendations do not replace the need for a long term, sustainable, comprehensive CRGIS program. A next stage investment will provide a substantial foundation upon which the broader program can build.

In order to address these opportunities and challenges, the following GIS capacity enhancement initiatives are recommended:

• **Business and spatial requirements for Growth Plan updates (early 2013).** The analytical and data requirements for the Growth Plan update should be clearly defined to allow for efficient collection of supporting spatial (and non-spatial) data.

• **Resources for Capital Region Geographic Information Services (2013-2015).** Steps should be taken to build the technical and human resources necessary for the CRB to manage regional spatial data. This includes development of IT infrastructure and commitment of staff resources to manage GIS operations and projects.

• **Spatial data collection for CRB needs (2013-2014).** Additional spatial data required for the Growth Plan update should be assembled, licensed/purchased (if applicable), and maintained to support Growth Plan analysis and decision-making.

• **Spatial data analysis and Growth Plan update reporting (2014-2015).** Data management, analysis, and distribution should be optimized and standardized to ensure transparency, efficiency, replicability and availability to the CRB members, and other stakeholders. The economy of region wide standardization allows for significant cost savings.

• **Long-term capacity development (ongoing).** Paralleling efforts to prepare for the Growth Plan update, the CRB should continue to assess regional GIS operational needs and optimize its regional GIS investments to build value for all members of the CRB.
Although these recommendations are directed towards supporting the updates to the Growth Plan in 2015, assembling a detailed spatial view of the Capital Region can provide a range of benefits to regional stakeholders:

- **Capital Region Board.** A regional spatial view can provide a consistent approach to analysis, visualization, and communication of regional issues and policies managed by the CRB, and can monitor relevant regional outcomes.

- **Municipal Governments.** Overall, municipal governments can participate in collaborative efforts to standardize, acquire, analyze, and share regional sources of data, which can streamline these processes and take advantage of economies of scale.

- **Smaller Communities.** For smaller communities without full internal GIS capacity, a Capital Region GIS provides a means for these communities to view and evaluate spatial data about the Growth Plan, and can provide guidance for standards and methods in cases where GIS functionality is contracted out to third-parties.

Overall, this aligns with a broader approach to informed decision-making in the region, as outlined in this 2009 CRGIS Strategy and Implementation Plan:

> “Better information makes for better decisions. Regional planning decisions require regional data and regional information. It is believed that this plan will result in a regional GIS that will enable evidence-based decisions in the Capital Region on matters of regional priority.”
Exhibit 1. Capital Region GIS Viewer: Base Mapping
Exhibit 3. Capital Region GIS Viewer: Municipal Development Plan Land Use Designations
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Project Purpose, Objectives and Approach

Geospatial information\(^1\) is essential in fulfilling the mandate of the Capital Region Board (CRB) to manage regional land use, transit, and affordable housing through the Capital Region Growth Plan. Developing effective policy and coordinating evidence-based decision-making requires accurate, transparent, and valid sources of data that can provide strong rationale for action. As the 2009 Growth Plan states:

“The business of the CRB requires information that is geographically based. Geographic information is essential for making location-based decisions about land use, transit, housing, infrastructure, economic growth, social and environmental issues.

Currently, there is no consistent information available across the Capital Region to support coordinated land use planning, public transit network planning and social and market affordable housing planning or the interrelationships between all of these issues. More importantly, the region will need to prepare, gather and analyze a wide set of data and information to ensure evidence-based decisions can be made.”

With updates to the Growth Plan planned for 2015, there is an immediate need to understand and prepare the capacity and capabilities necessary to support this work, and to provide continuing support for meeting the implementation goals of the Plan and subsequent monitoring needs. Examples of potential applications of Geographic Information Services (GIS) in areas under the CRB mandate can include tasks such as:

- Plotting the locations of new country residential development, and determining whether policies to encourage this growth in Cluster Country Residential Areas (CCRAs) have been successful.

- Determining how changes in local Municipal Development Plans (MDPs) and Intermunicipal Development Plans (IDPs) have aligned with Growth Plan policy areas, and whether future adjustments will be required for alignment with the Growth Plan.

- Assessing planned expansions to regional highways to determine whether current Growth Plan policies align with the growth that could be expected from these new developments.

\(^1\) Geographic information is information relating to the location and names of features beneath, on, or above the surface of the earth. Spatial or geospatial information shows the location, shape and relationships between features on the earth’s surface. Capital Region Board, CRGIS Strategy and Implementation Plan (Edmonton: CRB, 2009), 6.
• Providing an evaluation of CRB reviews of land applications, and whether there are any patterns to requests for new development in the Region.

• Evaluating the impacts of regional corridors on the future growth and development of communities in the region.

Therefore, to fulfil these types of tasks, the capacity of the CRB must be sufficient to:

• Acquire and maintain regional spatial data

• Carry out required analyses

• Manage and distribute information as necessary

• Coordinate outside expertise when required to meet program needs

The Capital Region Geographic Information Services (CRGIS) Spatial Data Demonstration Project was carried out to provide strategic guidance in developing this level of capacity. Four goals were identified as key components to this project:

• **Outreach.** There is a need to provide an example project to the CRB administration, member municipalities, and regional stakeholders to demonstrate the value of a CRB-led approach to regional spatial data services.

• **Capacity and process development.** The development of the processes necessary to acquire, manage, and use spatial data and to create mapping products useful for the CRB will assist in building the capacity of the CRB to carry out these functions and support future regional GIS projects. This includes the development of any additional partnerships and agreements made as result of recommendations in the project report.

• **Spatial data development.** The assembly of spatial data sets from different regional sources, as well as the development of the land use layer, will help to provide spatial data resources for future regional GIS activities.

• **Cost and resource assessment.** The value provided for the costs and resources used for this project will allow the CRB to evaluate the value proposition involved with future GIS projects such as this, as well as the value to the CRB to support GIS operations in certain areas.

To accomplish these goals, the project team carried out the following tasks:

• **Preliminary needs assessment.** From a review of the 2009 Growth Plan and discussions with major stakeholders, the general spatial data needs for the CRB were identified. This included information of use for mapping, analysis, and long-term monitoring related to the Growth Plan.

• **Spatial data collection.** A specific subset of the spatial data reviewed by the project team was collected and compiled for this project. The objective of this task was not only
to compile these spatial data sets for use, but also to collect relevant information about the processes used to compile and manage this information in the long term.

- **Review of spatial data sources.** From the spatial data collection efforts, a review of the potential sources of spatial data to support the GIS needs of the CRB was conducted. This not only included subscription spatial data sources acquired through payment, but also free spatial data sources and spatial data sources requiring action to compile and process.

- **Development of preliminary spatial data management processes.** The efforts to collect spatial data also included initial work to define processes to provide ongoing management of spatial data. This included not only the processes necessary to collect and update the spatial data as needed, but also the steps necessary to collect metadata to define these spatial data sets.

- **Review of impacts of spatial data acquisition.** A key element of the spatial data collection process in this project was to assess the time and resources required to collect and maintain spatial data. This included not only the funding and staff resources required by the CRB, but also the investment required from partners to provide spatial data and other resources as required.

- **Engagement of potential partners and spatial data opportunities.** Although it is expected that the CRB will play a key role in coordinating regional data, other regional stakeholders can provide resources that can assist the CRB in this mission. This can include members of the CRB that can help to contribute to regional data sets, as well as other potential regional and provincial stakeholders that can help to develop and distribute spatial data, and assist with other key tasks. As part of this work, the project team engaged with these stakeholders to determine the potential for collaboration to meet CRB needs.

- **Display of available regional spatial data through hardcopy and web-based mapping.** Aside from the collection of existing spatial data and development of new spatial data sets, the CRB is expected to engage in distributing this information to support the goals of its mandate. To demonstrate potential work in this area, the project team provided examples of hardcopy and web-based mapping to define potential applications in these areas.

The major lessons learned from these tasks and other supporting work for this project provide the basis for the recommendations included as part of this report.
Major Findings and Recommendations

The project identified future directions for near-term regional GIS development within the CRB. The findings focused not only on improvements to the capacity and capability of the Board to support the upcoming Growth Plan update, but also on efforts to support GIS more broadly within the region.

This project and the following near-term recommendations are meant to support the update of the Growth Plan up to 2015. The recommendations do not replace the need for a long term, sustainable, comprehensive CRGIS program. A next stage investment will provide a substantial foundation upon which the broader program can build.

The following sections identify major findings and recommendations, which can be structured as shown in Figure 1:

![Figure 1. Major Project Findings and Recommendations](image)

**Figure 1. Major Project Findings and Recommendations**
1. Short- and Long-Term CRB Spatial Data Requirements

Current, accurate spatial information is critical to support the Growth Plan update. However, costs for both spatial data acquisition and maintenance are considerable. Spatial data should be acquired based on the analytical needs of the Plan and the decision-making requirements of the Board.

All spatial data requirements for the Growth Plan should be detailed by the CRB, the Land Use Committee (LUC) and staff prior to full spatial data collection. These demands will be driven primarily by the immediate needs for the Growth Plan updates, as well as the spatial data required for implementation and the monitoring of the successes of the Plan. Proper identification can help to focus spatial data collection and management activities, and ensure that resources and funding are allocated efficiently to these tasks.

What has been done?

The project team performed the following tasks to address the question of spatial data requirements:

- **Evaluate Growth Plan requirements.** The spatial data requirements for the 2009 Growth Plan were reviewed by the project team to provide a better understanding of the information inputs to that process.

- **Identify subset of spatial data for analysis.** A subset of the spatial data expected to be needed for the upcoming Growth Plan updates in 2014-2015 was identified, and further work was conducted to collect this information to evaluate spatial data collection processes.

What needs to be done?

The scope of this project was limited to identifying a subset of the total spatial data required for the Growth Plan update. In the future, the Board and supporting committee and advisory groups need to provide further direction about the expected needs for the Growth Plan update, as it is difficult to understand the full spatial data needs without this scoping.

With respect to the needs for the update, specific direction must be provided about:

- Major themes of the Growth Plan update
- Required analyses to support decision-making for the update
- Information needed to support implementation after the Growth Plan is updated
- Monitoring required for the Growth Plan after the update

Input from the CRB, supported by individual committees, advisory groups, and the members themselves, can help to identify what exactly will be required from GIS in the short- and long-term. This direction should be received by early 2013 to ensure that the proper spatial data sets are compiled for use in time for necessary review and analyses for the update to the Growth Plan.
Appendix A provides a draft list of the spatial data sets that will be required by the CRB to support the Growth Plan update, including relevant characteristics for these spatial data sets. This list should be expanded upon further consultation and scoping of the Growth Plan.

### 2. Current Spatial Data Holdings and Future Acquisitions

Well-documented processes ensure that spatial data sets supporting CRB operations are compiled and maintained on a regular basis. As part of previous projects and spatial data collection activities, the Board has an extensive foundation of spatial data available, but much of the supporting information for these spatial datasets is incomplete, including:

- The methods used to collect these spatial datasets
- Current licensing, access, and use restrictions for the spatial data
- Common regional definitions for spatial data
- Needs for regular updates and/or purchases of spatial data

Without this information, there is considerable risk to the CRB with future use of these spatial datasets. A lack of understanding about the spatial data can make confirming its validity and accuracy difficult, and can add to the time and cost required for future updates. Similarly, without clear documentation about licensing and use restrictions, there is a risk of additional costs or even a lack of availability of certain spatial data sets for needed applications.

**What Has Been Done?**

The primary tasks conducted as part of this project involved the collection and compilation of existing spatial data sources, with a specific focus on developing the necessary foundation for GIS capacity within the CRB to support the Growth Plan update. This review was intended to outline not only basic needs and current spatial data on-hand by the CRB, but also the resources that would be required to compile and manage this information for use with the Growth Plan updates.

The project team engaged in two general tasks to address coordination and acquisition issues:

- **Compilation of spatial data.** The project team conducted a comprehensive inventory of spatial data available to the CRB, secured the rights to this information as necessary, and detailed the aspects of the Growth Plan relevant to each spatial data set. This review of spatial data sets is provided in Appendix A.

- **Development of processes.** Preliminary processes were developed to collect and manage supporting information and metadata for spatial datasets collected by the CRB. Metadata processes were based on the metadata standards required by GeoDiscover Alberta. These processes are detailed in Appendix B.

The spatial data sets of interest to the CRB which are provided in Appendix A can be divided according to four distinct themes, generally organized by aspects of the CRB mandate:
• **Base spatial data for mapping.** This includes spatial data sets that may not be directly related to specific policies, but are necessary to provide reference information for published maps or to create new spatial data. This includes spatial data sets such as water bodies, political boundaries, major highways, and property boundaries.

• **Population and housing spatial data.** These spatial data sets, primarily related to Canadian Census data, indicate the location and distribution of population and housing within the Capital Region. These can not only be related to the specific mandate of the CRB to examine the affordability of housing, but can also be used more generally to define growth in the region over time.

• **Land use policy data.** Layers for land use policy include data sets for municipal-level plans and by-laws, as well as the regional Growth Plan areas defined by the CRB. These can define areas of future growth, as well as alignments between local and regional land-use strategies.

• **Infrastructure data.** Spatial data layers for regional infrastructure relevant for the CRB include information regarding regional transit, which is a specific focus of the CRB mandate. However, other types of regional infrastructure, such as regional water and wastewater lines, rail, and highways can be important to examine given that they provide support for growth in the Capital Region.

A subset of the spatial data identified as potentially required for the Growth Plan updates was reviewed and collected as part of this project. The following spatial data sets were requested from participating partners:

- **Orthophotos** for 2007 and 2011 from the Edmonton Regional Joint Orthophoto Initiative
- **Property title boundary data** from the City of Edmonton
- **MDP and IDP mapping data** from all CRB members, compiled into a single regional land policy layer (described in Appendix A)

The following spatial data sets were purchased or downloaded as part of existing subscriptions from AltaLIS (or subscriptions obtained during the project period):

- **Property title spatial data** outside of the City of Edmonton
- **Base mapping layers** (municipal and administrative boundaries)

Other spatial datasets were also reviewed as part of this work to determine their ease of collection. This includes information freely available online, such as Statistics Canada and GeoBase data, as well as other data sources that will require more comprehensive efforts at collection (e.g., regional water and wastewater infrastructure) or analysis (e.g., area development footprints).

To facilitate the collection of relevant information as part of this exercise, the project team developed two forms to be completed by data sources to provide a better understanding of the spatial data, which are provided in Appendix B:
- A data request form, which presents the rationale for the collection of the spatial data set and provides the CRB with an understanding of the time and resources required to deliver the data from partners.

- A metadata form, which provides basic information about the content of the spatial data, as well as its vintage, access and use restrictions, and other key characteristics.

The following insights were obtained from the review of data collection and the current inventory of data on hand:

- **Strong existing base of data for future development.** The CRB has access to a considerable amount of information that could be used for the Growth Plan update. However, it will need to update or confirm this information to ensure that it is valid, documentation on its development and metadata are available, and processes are in place to guide any necessary future updates to this information.

- **Management of licenses and access/use restrictions.** There has not been a comprehensive approach to date to understand and manage licenses and access and use restrictions for spatial data compiled by the CRB. This has been a significant management issue, as the CRB has relied on spatial data for mapping that it has not had the rights to use. As part of this project, the project team worked to secure the necessary rights to use all spatial data collected, and the CRB purchased additional base map spatial data to support long-term mapping functions. Records for any future spatial data collected by the CRB should include complete documentation on the licensing for this information, including any potential restrictions on the use of the spatial data.

- **Common spatial data standards to support data collection.** In developing the regional land use policy layer with MDP data from individual communities, the lack of standardization between available data from municipalities was a notable obstacle. A number of municipalities, primarily smaller municipalities relying on outside consultants, often do not have data available in a GIS format. Future efforts in CRB spatial data coordination should focus on providing recommendations about common formats and spatial data specifications to smaller municipalities that can streamline future regional spatial data collection.

- **Common regional language and definitions for spatial data.** There is also a need for a common language for land use and spatial data definitions across the region. With respect to the regional view of land use policies, for example, mapping planning information from over 20 jurisdictions will require that individual MDP designations from each jurisdiction be aggregated into broader categories (e.g., agriculture, environmental protection, resource, etc.) This common language and set of definitions should be developed on a continuing basis by the CRB, advisory committees (Planning and GIS), and staff.
- **Spatial data purchases.** Although there are some sources of freely available spatial data which can be used by the CRB, as well as spatial data which can be provided through partners, there does need to be a targeted investment in the GIS spatial data necessary to carry out core functions. At present, the base mapping information received from AltaLIS will provide a basis for future GIS work, but additional purchases such as pipeline spatial data may be required to support required functions on an as-needed basis.

- **Other spatial data investments.** Some spatial data sets will require an involved process for compilation or processing. With respect to regional wastewater infrastructure, for example, significant coordination between multiple jurisdictions and wastewater commissions will be necessary to compile necessary spatial data and ensure that it is updated into the future. Other spatial datasets such as the development of country residential development footprints may require significant consultant time and effort to develop. These spatial datasets will require significant investments in resources; as noted previously, this type of work should be supported by clear direction from the CRB about business needs for spatial data before intensive spatial data collection or processing activities are carried out.

**What Needs To Be Done?**

There are required task necessary to provide the capacity and capabilities to support the Growth Plan updates and future implementation:

- **Complete data collection activities.** Further work will need to be done to collect and compile data for the Growth Plan updates. This should be informed by the processes developed in this project for spatial data collection and management of supporting information.

- **Regional spatial data standards.** Common regional definitions for spatial data will need to be developed to allow spatial datasets from different sources in the region to be used together. Creating a regional view of land use policy, for example, will require that MDPs and IDPs use a common language for defining general types of land designations. An initial version of this is included in Appendix B, but should be reviewed and refined with further consultation.
3. Long-Term Geospatial Data Management

Effective administration of long-term GIS capacity will depend on devoting additional staff and project resources to maintain continuity of management. Although there is a short-term need to compile spatial data for the updates to the Growth Plan, the compilation of spatial data sets during this project also point to a need for a long-term structure for spatial data management and updates. At present, the CRB has little institutional memory and in-house capacity to manage these resources, leading to a number of concerns:

- **Lack of documentation.** The processes for collecting spatial data for previous projects have not been well-documented, and it is not understood whether there are any particular limitations or validity issues with the spatial data. For spatial data that has been purchased or collected from other groups, there has also not been a consistent understanding of licensing or use restrictions.

- **Lack of access to CRB spatial data.** CRB GIS spatial data sets have been held by the outside consultants responsible for their creation, which can complicate the transfer of this information to CRB members, consultants, or other groups.

- **Lack of processes for updating spatial data.** There has been no consistent approach for updating CRB spatial data, with most information created on an as-needed basis by external consultants. Without a well-documented approach, this has meant that each effort at creating spatial data has required resources to potentially recreate the same process.

The lack of long-term management of spatial data represents multiple sources of risk:

- **Dependence on outside contractors.** Remaining dependent on outside contractors for all spatial data management and distribution can incur additional costs to the CRB, and risk “locking in” individual service providers.

- **Obstacles to spatial data updates.** A lack of documented processes for spatial data maintenance can make it difficult to maintain information for short-term decision-making, and can increase costs to update this spatial data when required.

- **Challenges to Growth Plan conclusions.** Without documentation about the quality and characteristics of spatial data managed by the CRB, the conclusions of the Growth Plan or other initiatives can be open to criticism about methodologies and general data validity.

- **Licensing issues and costs.** Without a consistent understanding of licensing and use restrictions, the CRB risks unexpected costs or even a lack of access to needed spatial data.
**What has been done?**

To address these issues, the project team provided thorough documentation of the processes used to collect, create, and manage the spatial data sets as part of the project. A comprehensive review of this material is provided in Appendices A and B.

The effort and resources required to develop and manage necessary spatial data can vary. The spatial data collected as part of this project included the following types of spatial data:

- **Complete spatial data sets that can be used immediately.** Some spatial data sets, such as administrative boundary layers or population and housing counts, can be downloaded and used with little to no processing required.

- **Complete spatial data sets that require processing before use.** Although other spatial data sets can be downloaded in their entirety, certain processing steps will be required before this information can be applied and put to use. For example, the property boundary information received from AltaLIS is complete, but multiple files must be converted to shapefile format and combined before use.

- **Individual spatial data sets that must be compiled and processed before use.** The CRB may also be required to compile a number of smaller existing spatial data sets to create region-wide coverages. In the case of the local land use policy layer developed as part of this project, multiple MDP/IDP layers from individual municipal agencies were used to provide coverage over the entire region. This required the development of a preliminary “crosswalk”, which aggregated the policy areas in different jurisdictions into a smaller set of land use categories.

- **Original spatial data sets created by the CRB.** There are a number of spatial data sets that define aspects of the Growth Plan, such as the boundaries of the Cluster Country Residential Areas and Priority Growth Areas. Additionally, other layers have been developed from analyses conducted by the CRB as part of its ongoing work. These layers will require the most effort from the CRB to develop and maintain, and will likely involve support from outside consultants.

Examples of each level of effort defined here were studied as part of this project, and recommendations for ongoing efforts to manage these categories of spatial data are provided as part of the technical documentation of the report in the Appendices.

**What Needs To Be Done?**

In the long term, the CRB must coordinate management of key spatial datasets necessary for implementing, monitoring, and updating the CRB Growth Plan. Development of a series of spatial data management processes would help the CRB to mitigate risks, reduce associated costs, and improve data quality. Areas of focus for this would include:

- **Long-term management of CRB-owned spatial data.** The CRB should be specifically tasked with holding CRB-owned spatial data for use and distribution to members,
outside consultants, and staff. Any external consultants or organizations involved with collaborative projects with the CRB should be required to transmit spatial data for archiving to CRB staff as part of project deliverables. Long-term recommendations for spatial data maintenance and updates, as required should also be submitted.

- **Spatial data maintenance.** Spatial data development should include recommendations for ongoing spatial data updates and corrections needed for spatial data sources to be maintained as long-term resources for the CRB. This should consider any resource limitations of the CRB, and the CRB should work to incorporate these identified updates into ongoing planning for spatial data management.

- **Documentation of processes.** Understanding the methodology and potential limitations to all of the spatial data sets created by or for the CRB is critical to ensure that future work is valid and accurate. Future projects managed by the CRB should ensure that documentation of spatial data development is included as a requirement for project deliverables, and that this documentation is available for reference and use by the CRB in the future. Required schedules for spatial data updates should also be included.

An overall perspective on the flow of spatial data through the CRB is provided as part of Appendix C.

### 4. Enhancement of Internal CRB GIS Capacity

There is also the need to provide in-house capacity to support this ongoing spatial data management and GIS coordination. Effective administration of long-term GIS capacity will depend on devoting additional staff and project resources to maintain continuity of management. The CRB currently has limited internal capacity and capabilities for GIS, as the primary focus of the organization has been on managing and facilitating outside contractors to provide capacity through individual projects. However, ongoing planning and decision-making by the CRB should be supported with regional analysis and data that rely on accurate, up-to-date spatial information. The CRB needs to develop its own internal capacity to deliver these services.

**What Has Been Done?**

This project has focused on building and documenting the processes necessary to provide basic capacity for managing GIS within the CRB. At key steps in the process, however, key limitations have been identified related to available resources:

- **Limited staff resources.** There has been limited staff resources allocated to developing and maintaining the CRB GIS program. There is no internal capacity to manage or use spatial data, and there has been no consistent designated contact that has had significant time allocated to the management of the GIS program. This has meant that workflows within the CRB have not been able to take advantage of GIS on a day-to-day basis.
• **Limited CRB support of GIS.** In addition to the staff limitations, the CRB itself has only provided limited guidance to date to the CRB GIS program. Tasks originally assigned to a distinct GIS Committee of the Board have been assigned to the Land Use Committee, and the GIS Advisory Committee has only recently (mid-2012) started meeting to provide guidance on technical issues related to GIS.

• **Reliance on outside contractors.** Given that the CRB has had limited capacity to manage internal GIS needs, there has been a need to rely on third-party contractors to fulfil the short- and long-term needs of the CRB. However, as internal capacity is limited, this is typically conducted on a project-by-project basis, and not managed consistently. Additionally, the CRB has not had the ability to manage the spatial data received as deliverables from these projects, and must rely on outside contractors to conduct even limited mapping and analysis tasks related to CRB spatial data.

Although improving the internal capacity of the CRB to conduct GIS tasks is outside of the direct scope of this project, the recommendations of this report should be used to guide future work in this area to develop this capacity and improve the ability of the CRB to meet regional planning needs.

**What Needs To Be Done?**

Targeted investments in staff and IT resources will be necessary to achieve efficient delivery of GIS services. The required level of investment to build necessary internal GIS capacity is, in part, dependent on the scope of future work required by the CRB. To build the necessary management capacity within the CRB, the following actions should be taken:

• **Designation of a single point of contact.** Identifying a single point of contact for GIS management within the CRB is critical to ensure consistency in communication with spatial data partners, vendors, members, and other stakeholders. Designated staff can also provide a contact for requests for CRB-owned spatial data from other groups.

• **Ongoing management of spatial data.** The CRB should be involved in short- and long-term spatial data management activities to support the needs of the Growth Plan, including required updates, reviews of licensing and use agreements, and regular spatial data collection. Many of these activities can require capacity outside of projects that involve external vendors or spatial data partners.

• **Management of GIS projects.** Internal capacity and capabilities in GIS should also be developed to provide support for external vendors involved with related projects, related to spatial data management and distribution to partners, as well as support for the development of methodologies for spatial data development and analysis.
5. Leveraging Collaboration with CRB Partners

Collaborating with partners on key regional GIS goals can be an effective means of leveraging available resources to meet the short- and long-term needs of the CRB. There are a number of spatial data partners which are pursuing regional and local projects that can supplement the work of the CRB in GIS, and active collaboration can support the goals of all participants. The CRB is well-positioned to serve a central role in coordinating the development of regional GIS capacity with members and other regional stakeholders. At present, there is no comparable organization that fills this role in the region. Collaboration can provide two distinct types of benefits for the CRB:

- **Building capacity for CRB operations.** Potential spatial data partners can provide services that would supplement the ongoing work of the CRB. This may be in the form of assistance with data collection efforts, as well as other functions such as providing hosting for spatial data or cooperating on the development of new spatial data.

- **Building networks and relationships to provide development of GIS in the region.** There is a distinct gap in support and networking for municipal GIS staff in the region, and the CRB can provide a forum for municipalities to discuss common issues associated with regional spatial data.

Leveraging these resources through cooperation can help the CRB to deliver required services for the region at lower cost, and can ensure that available sources of information in the region are properly utilized to provide accurate and valid information to support regional planning.

**What Has Been Done?**

As part of this project, several potential partners in the region were identified and engaged to identify potential benefits to future efforts with cooperation. These include:

- **CRB members.** Municipalities can be partners in efforts to collect regional spatial data sets and standardize regional spatial data definitions. Additionally, there may be cases where certain municipal services may be utilized by the CRB on a fee-for-service basis; this may include such tasks as long-term hosting of web-based mapping data. Collaboration with municipal governments that are members of the CRB must be balanced to ensure that significant demands are not placed on scarce local resources.

- **GeoDiscover Alberta.** GeoDiscover Alberta has been charged with providing one-window access to Government of Alberta spatial datasets available online and coordinating the metadata standards for the province. In the long term, GeoDiscover may be an ideal partner to assist in distributing regional spatial datasets and accessing GoA information through the GeoDiscover web mapping portal. Additionally, this service may facilitate access to web mapping services available from the provincial government for CRB mapping, which can be used for online and web-based mapping solutions.

- **Government of Alberta Departments.** There are a number of departments and units within the Government of Alberta that can provide the CRB with access to spatial
datasets to support planning and mapping activities, and may in turn request feedback from the CRB on key issues. This may include, for example, ongoing dialogue and exchange with the Land Use Secretariat regarding the North Saskatchewan Regional Plan (NSRP).

More details regarding the potential for collaborative work with spatial data partners is provided in Appendix D.

**What Needs To Be Done?**

Future efforts to build capacity within the region should focus on develop the relationships needed to enhance the capacity of the CRB in GIS and support the development and implementation of updates to the Growth Plan. The stakeholders identified above should be engaged in an ongoing basis with data development and management activities performed by the CRB.

In addition to the stakeholders engaged as part of this project, other potential stakeholders which could be engaged include:

- Regional water and wastewater commissions
- Regional utility companies, such as EPCOR
- Private companies that manage regional infrastructure, such as railway companies

**6. Geospatial Data Sharing and Open Data Policies**

Current GIS approaches are shifting towards more open models of data exchange and this approach should be supported by the CRB. In addition to encouraging collaboration with potential spatial data partners, the CRB can also take a role in facilitating wider spatial data exchange within the region. For the CRB, spatial data sharing can take place in two ways:

- **Sharing with CRB members.** Within the region, the members of the Capital Region Board have affirmed a commitment to an open exchange of spatial data with the CRB. This has been recognized as a critical aspect of information exchange for regional planning, and has been exemplified during this project through efforts to compile regional spatial data sets. Members can also be provided with data developed by the CRB, such as information about the Growth Plan.

- **Publicly-available data.** Beyond the exchange of data within the CRB, open access to data to the wider public is also a potential strategy. At present, municipal, provincial and federal government organizations are moving from a payment model for distributing spatial information towards more open models for data sharing and exchange. This approach can provide for greater public benefits through wider use of data, and can ensure equal access to information related to regional planning and development.

The strongest benefit of providing CRB spatial data in these circumstances is that it can provide an important avenue for communicating the interests and policies of the CRB. This can be with
respect to key regional strategies with regional growth and planning, housing, and transit. For example, presenting the Priority Growth Areas in a format that is readily accessible to local planning authorities, consultants, developers, and other stakeholders can help these organizations determine how existing and proposed actions might align with requirements from the CRB, and potentially adjust these plans as required.

Open access and exchange of data can involve a number of potential approaches and tools, including:

- **Spatial data in GIS formats** (which may be inaccessible for a wide range of users)
- **Online mapping tools**, which can present mapping information on a web interface similar to Google Maps
- **Web mapping services**, which can distribute mapping data to other web services and GIS software

**What Has Been Done?**

To facilitate the exchange of information to spatial data partners and stakeholders, the project team engaged in the following:

- **Prototyping of web mapping services.** The results of spatial data collection activities in this project were presented to stakeholders through an online web mapping interface, which can serve as an example of how the CRB may display and distribution information about the Growth Plan in the future.

- **Review of spatial data licensing agreements.** Through this project, examples of spatial data licensing were collected that form the basis for recommendations about what might be included in comparable licensing agreements for CRB spatial data.

- **Review of potential approaches for spatial data distribution.** Discussions with municipal data partners and GeoDiscover Alberta provided the project team with an understanding of potential options for future distribution of CRB spatial data.

Operational details related to providing for the exchange of spatial data outputs are detailed further in Appendix C.

**What needs to be done?**

To provide more support for data sharing and open data access, the CRB must address the following:

- **Spatial data access policies.** While there are attractive benefits to open access to spatial datasets, there may be practical or political concerns with wider releases of certain information, especially with publicly accessible information. Direction is needed from the Capital Region Board on policies for releasing CRB spatial data, which should be solicited from the CRB as part of the scoping for broader spatial data collection efforts.
• **Licensing agreements and metadata for all CRB spatial data.** It is critical to describe the spatial datasets released by the CRB to members, external consultants, and the public with complete metadata, and explicitly outline restrictions on the use of this information with licensing agreements. Spatial data use agreements can ensure that any released spatial data is properly used and rights to the spatial data are retained by the CRB. Providing complete metadata, comparable to the requirements outlined by GeoDiscover Alberta, can inform users about the content of the spatial dataset and any assumptions or limitations that would affect the use of the spatial data.

• **Development of spatial data distribution methods.** As mentioned, there are strong benefits for the CRB with distributing information related to ongoing initiatives, including the development and implementation of the Growth Plan and updates. Providing for spatial data distribution to members and the wider public through online mapping tools and downloadable Spatial data will require partnerships, long-term contracts, or investments in internal capacity.
Next Steps and Future Work

An overall lesson from this work at all stages has been that the CRB has a strong need for GIS to support its mandate, especially with respect to the updates to the Growth Plan. Providing a regional view of housing, land use, transit, and related information can be of great benefit to the Board in efforts to support decision-making with strong evidence.

Figure 2 places this project in the context of broader efforts to build overall capacity and meet future business needs. This project has provided initial, incremental work to build capacity, and should be followed by future efforts to address the other requirements identified in this project to support the Growth Plan.

Considering the results of this review of spatial data management and the need to build targeted capacity for GIS with an incremental, as-needed approach, the next steps for this work should be conducted as part of five interrelated projects that should commence in early 2013. A detailed description of these projects can be found in Appendix E.

These projects include:

Project 1: Business and spatial requirements for Growth Plan updates (early 2013)

The business and functional requirements for the Growth Plan should be explicitly defined by the Capital Region Board to allow for a more comprehensive effort to collect supporting spatial (and non-spatial) data for the Regional Growth Plan update. While this should not be viewed as locking the CRB into specific methodologies for the Growth Plan update, the exercise should outline major themes expected as part of the update, as well as the core information necessary to address mapping and analysis requirements.

*Intended Outcomes:*

- Comprehensive review of the preliminary objectives and intended areas of concentration for the Growth Plan updates.
- Preliminary list of spatial data required to support the Growth Plan updates.
- Review of restrictions on the distribution of CRB-produced spatial datasets.


Prior to other actions to develop spatial data and management processes, steps should be taken to build the technical and human resources necessary for the CRB to manage regional spatial data. This includes development of IT infrastructure and commitment of a regular level of staff resources to support consistent internal management for GIS operations and projects.
**Intended Outcomes:**

- Recommendations for short- and long-term internal IT resources required to support spatial data collection and analysis associated with the Growth Plan updates and future needs.

- Recommendations for short- and long-term CRB staff allocation and resources required to support spatial data collection and analysis associated with the Growth Plan updates and future needs.

- Evaluation of necessary external capacity required to support spatial data collection and analysis for the Growth Plan.

**Project 3: Spatial data collection for CRB needs (2013-2014)**

Building from existing spatial data sources, as well as the data collected in the course of this project, additional spatial data required for the Growth Plan update should be sourced, licensed/purchased (if applicable), acquired, assembled, and maintained to support assessments and decision-making during the update process. The spatial data collection processes used in this project should be used and reviewed during spatial data collection to ensure that incoming information is being properly managed.

**Intended Outcomes:**

- Acquisition of all data identified from Project 1 (Business and spatial requirements for Growth Plan updates) as necessary for the development of the Growth Plan updates.

- Compilation of all metadata and licensing agreements (if applicable) for the spatial data sets collected.

- Recommendations for changes to data collection processes suggested by obstacles during this project.


Building on the processes established in this Demonstration Project, as well as the spatial data collected in prior steps, spatial data management, analysis, and distribution should be optimized and standardized to ensure sustainability, transparency, traceability, and availability between the CRB, its members, and other stakeholders. This work should include cost-effective approaches for presenting and sharing spatial data, as well as partnerships for spatial data collection and sharing between members and other potential participants.

**Intended Outcomes:**

- Review of short-term spatial data collection and longer-term spatial data management processes, and development of recommendations for providing ongoing spatial data support and updates for Growth Plan data.
• Development of solutions with partners to share regional spatial data related to the Growth Plan with members and the public, including web-based mapping tools and web mapping services.

**Long-term capacity development (ongoing)**

Paralleling efforts to prepare for the Growth Plan update, the CRB should work to assess actual long-term operational needs for regional GIS, and optimize strategic GIS planning to ensure that regional investments will build value for all members of the CRB. This should include updates to the CRGIS Strategy and Implementation Plan, which must be amended to include:

• Commitments to GIS operations and capacity-building in the annual CRB budget

• Agreements for the cooperation of CRB members in regional GIS projects

• Leveraging of resources available from provincial, federal, non-profit, and other sources as well as recommendations from this report that may impact long-term strategies for regional GIS development.
Summary of Benefits

Although these recommendations are directed towards supporting the updates to the Growth Plan in 2015, the capacity and knowledge developed under this system can provide a range of benefits to the CRB and its members. Assembling a detailed spatial view of the Capital Region can provide a range of benefits, including:

Capital Region Board

- Providing the Board and its committees, advisory groups, and staff with the spatial information necessary to make more effective and informed regional planning decisions.
- Presenting a consistent approach to analysis, visualization, and communication of regional issues and policies by the CRB.
- Permitting the monitoring of regional outcomes related to the Growth Plan over time, allowing for continuous assessment of the successes of the Plan.

Municipal Governments

- Allowing for economies of scale and cost savings with data acquisition, analysis, and information sharing through cooperation with the CRB and municipal governments in the region.
- Encouraging the regional development of data, standards, and methods, which can streamline access to regional sources of information.
- Providing a foundation for future collaborative work in regional and local GIS capacity development, such as the creation of regional data sets.

Smaller Communities

- Presenting a means for smaller communities to view and evaluate spatial data about the Growth Plan and relevant indicators without the need for GIS infrastructure.
- Providing smaller communities that rely on outside contractors for GIS functionality with guidelines, standards, and expectations for deliverables.
- Granting the ability for smaller communities to test the application and use of GIS within their communities to assist in public outreach and operations.
Figure 2. Positioning the Demonstration Project with Longer-Term Goals
Appendix A: Regional Data Assessment

A full description of the spatial data sets reviewed as part of this project is provided in Table 1. This focuses on the subset of data obtained and reviewed as part of this project, but also includes a wider set of data identified as potentially useful for the CRB in fulfilling the objectives of its mandate in the short- and long-term. This list should serve as a basis for further work in developing the spatial data the CRB has on hand for use.

This information can be divided into a number of general categories, based on source, cost, and processing time:

- **Data purchased by the CRB for use.** A number of datasets have been purchased for use by the CRB from outside vendors. Currently, this includes information from AltaLIS, including municipal boundaries and property title boundaries. Other data sets, such as pipeline locations and other data sets, may also be purchased by the CRB in the future. These data sets may require minimal processing for use; in particular, AltaLIS cadastral data requires conversion and processing to develop a single shapefile for use.

- **Complete data sets available through partners.** There are spatial datasets potentially available from regional partners which can be of use to the CRB. This can include data sources from the Government of Alberta, for example, including watershed / airshed boundaries, Environmentally Significant Areas, and others. Minimal processing may be required prior to the use of this information.

- **Complete data sets available freely for download.** Other data sets may be freely available online, with certain restrictions associated with use and distribution. This can include data from the national GeoBase service, such as highways and hydrology data, as well as 2006 and 2011 Census data from Statistics Canada. Again, this information may require a certain level of processing prior to use.

- **Data compiled from multiple input datasets from partners.** In certain cases, the CRB may be positioned to compile multiple spatial data sets to provide regional coverage for certain layers. For example, in this project, a regional land use policy layer was created using the Municipal Development Plan (MDP) data from individual municipal governments. Future data sets may include regional water and wastewater infrastructure layers developed in cooperation with multiple local commissions.

- **Data produced by or on behalf of the CRB.** In some cases, the CRB will be required to develop its own spatial data to support short- and long-term planning objectives. This can include data layers created through analyses to support the development and implementation of the Growth Plan, such as the delineation of country residential development. Additionally, data layers can also define aspects of the Growth Plan, such as Priority Growth Areas, Cluster Country Residential Areas, and Employment Nodes, and can serve as one means of distributing information about the Plan.
There are several general points to note with respect to the data collection and management conducted as part of this project:

- **Use of conceptual data.** A number of data sets the CRB has on hand at the beginning of the project were conceptual diagrams of infrastructure and land use policy. In many cases, these data sets represent mapping information used to support general mapping purposes, and not explicit analyses. However, where possible, future efforts to develop data for the CRB should focus on reducing the development of purely conceptual mapping layers.

- **Lack of metadata and methodologies.** Multiple data sources included in this list are spatial data sets created by previous consultants for the development of the Growth Plan in 2009. These data sources did not have metadata or methodologies attached as part of their development; while some work was conducted to create metadata as part of this project, more detail should be required as part of future work.

- **Processing times for free and purchased data.** As noted in the table, there are a number of free and purchased data sets that require a significant amount of processing, requiring capacity beyond what the CRB currently possesses. The most notable example of this is with AltaLIS cadastral data, which required a multi-step conversion from a DGN Microstation format to be used in ESRI GIS products. Although free and subscription data sources may reduce the work necessary by the CRB to obtain data, this will not eliminate these demands completely, and these costs of data should be recognized.

- **Development of relationships for data access.** Some data sets that were not collected will require much more extensive work and the development of long-term relationships to compile and maintain. In particular, the data layers associated with water and wastewater infrastructure were originally developed by consulting multiple regional commissions to get access to data. Long-term capacity building necessary to work with these groups to provide regular, consistent coverage.

- **Approvals from the City of Edmonton.** Receiving approvals from the City of Edmonton for the use of cadastral data and orthophotography required a considerable amount of effort. While other municipalities acknowledged the CRB member resolution to share data, the City required more extensive approvals, including confirmation from the mayor’s office to release permissions for the data. For future work in collecting and updating data, there needs to be a more consistent relationship with the City to reduce the amount of time required for these requests.

As part of the work conducted to compile spatial data for this project, requests were made to municipal GIS staff for Municipal and Intermunicipal Development Plan (MDP/IDP) layers, which were used to create an aggregated, region-wide land policy layer for all members. The results of these inquiries are provided in Table 3.
The following aggregated groups were used to provide a standard representation of land use classes across all jurisdictions. These draft categories include:

- **Agriculture.** This includes all areas designated exclusively for agriculture, as well as agricultural transition zones that may include other uses.

- **Commercial.** Commercial zones include areas specifically allocated for large-scale commercial development, primarily highway-oriented commercial and business parks.

- **Conservation.** Conservation areas are locations specifically designated for environmental protection, or for recreational uses that include some level of protection for natural environmental resources.

- **Core.** Core areas are typically areas within the centres of cities, towns, villages, and hamlets that are include a mix of residential and commercial uses.

- **Industrial.** Industrial areas are locations specifically designated for large-scale industrial development. This includes the areas designated as Alberta’s Industrial Heartland.

- **Other.** The “Other” category denotes areas which do not fall under these designations, including institutional uses and large-scale areas with a mix of uses.

- **Planned Growth.** Planned growth areas are locations which are planned to be the site of future urban growth and expansion.

- **Residential.** Residential areas designated by this category are areas dominated by residential development, typically single-family residential. Minor commercial and employment uses may be found in these areas.

- **Resource.** Resource areas are locations where the extraction of natural resources is a key economic interest, and land use designations are necessary to protect the viability of these activities.

This exercise provided the following insights regarding these data requests to municipal governments:

- **Available formats.** In this case, most municipalities with this data on hand were able to provide it to the CRB with little overall effort. However, in many cases, this information was not in an ESRI shapefile format. Some municipalities needed to convert this information from AutoCAD line drawings, which did not include attached information about the individual land use zones, or this information was only available in graphics or hardcopy formats such as PDFs.

- **Assembly of future land use policy layers.** As noted, a number of smaller municipalities did not have data available in a spatial format for use in this exercise. In the future, the CRB should work to develop suggestions for standards that these communities can provide to outside consultants working on local plans so spatial data
can be provided as a project deliverable and, in turn, provided to the CRB for regional data development.

- **Land use aggregation.** For this analysis, a preliminary aggregation of the land use zones from individual jurisdictions was developed to allow all data to be presented using a common format. This grouping is provided in Table 1. In the future, an aggregated set of land use categories should be developed by the CRB GIS and Planning Advisory Groups to provide a better representation of regional land uses. This standard classification may even be incorporated into the individual data sets maintained by municipal governments.
<table>
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<tr>
<th>Data Layer</th>
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Table 1. CRB Spatial Data (continued)

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<td>Digitized from conceptual information</td>
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<td>Source</td>
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## Table 2. MDP/IDP Data Requests

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<td>SHP</td>
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<td>PDF, DWG</td>
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<td>SHP</td>
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Table 3. Aggregation of MDP Classes.

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<td></td>
<td>IBE - Industrial Business Employment</td>
<td>Industrial</td>
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<tr>
<td></td>
<td>MC - Municipal Core</td>
<td>Core</td>
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<tr>
<td></td>
<td>PUD - Planned / Under Development</td>
<td>Planned Growth</td>
</tr>
<tr>
<td></td>
<td>RES - Residential</td>
<td>Residential</td>
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<tr>
<td></td>
<td>RV - North Sask. River Valley &amp; Ravine System Protection Overlay</td>
<td>Conservation</td>
</tr>
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<td></td>
<td>UGA - Urban Growth Area</td>
<td>Planned Growth</td>
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<td><strong>City of Fort Saskatchewan</strong></td>
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<td></td>
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<tr>
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<td>Water Bodies</td>
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Appendix B: Data Collection

As part of this project, a subset of spatial data was selected from the total data likely to be required to support CRB activities. This subset was examined to pilot methods that can be applied by the CRB to collect and manage future spatial data sets.

This examination details the following aspects of data collection and management:

- General categories of data collection
- General processes for data collection
- Data request requirements
- Metadata requirements
- Long-term management activities

Categories of Data Collection

For the purposes of data collection itself, individual data sets can be distinguished on the basis of the type and amount of effort required to collect and manage the data. This includes:

- **Complete spatial data sets that can be used immediately.** Some spatial data sets, such as administrative boundary layers or population and housing counts, can be downloaded and used with little to no processing required.

- **Complete spatial data sets that require processing before use.** Although other spatial data sets can be downloaded in their entirety, certain processing steps will be required before this information can be applied and put to use. For example, the property boundary information received from AltaLIS is complete, but multiple files must be converted to shapefile format and combined before use.

- **Individual spatial data sets that must be compiled and processed before use.** The CRB may also be required to compile a number of smaller existing spatial data sets to create region-wide coverages. In the case of the local land use policy layer developed as part of this project, multiple MDP/IPD layers from individual municipal agencies were used to provide coverage over the entire region. This required the development of a preliminary “crosswalk”, which aggregated the policy areas in different jurisdictions into a smaller set of land use categories.

- **Original spatial data sets created by the CRB.** There are a number of spatial data sets that define aspects of the Growth Plan, such as the boundaries of the Cluster Country Residential Areas and Priority Growth Areas. Additionally, other layers have been developed from analyses conducted by the CRB as part of its ongoing work. These layers will require the most effort from the CRB to develop and maintain, and will likely involve support from outside consultants.
The processes detailed in this section consider that the data required by the CRB will likely include information in all four of these categories. As such, these methods need to consider that varying levels of effort will be required to develop and maintain these spatial data layers for use by the CRB.

**General Data Collection Processes**

Across the varying levels of effort required, a consistent process is necessary to create, compile, or maintain distinct spatial data sets. This is necessary to ensure that proper steps are taken to document the spatial data received, and that an accurate spatial data inventory is accessible that defines all currently available spatial data and spatial data under development.

This process is outlined in Figure 3, and includes the following steps:

- **Determine data needs and project expected outputs.** As part of the scoping for major planning initiatives, such as the updates to the regional Growth Plan, an assessment of the data that will likely be needed for the defined work should be outlined. This can be used to plan strategies to access this data from partners and other sources, and should be completed as early as possible, potentially in cooperation with third-party consultants. Additionally, expected spatial data outputs of any project or initiative, such as boundaries of planning areas in the Growth Plan, should be identified and described.

- **Discuss the availability and coverage of spatial data.** From the spatial data sets identified in the first step, discussions should be initiated with potential providers regarding the general nature and characteristics of available spatial data. This should be pursued to ensure that the spatial data needed by the CRB is available and can be accessed. In cases where third-party consultants will be developing spatial data for the CRB, this step should consist of more specific definitions of spatial data requirements, including coverage, methodologies used, and required formats. In these cases, this work will likely take place during the start-up phases of a project.

- **Submit the forms to request necessary data.** In cases where the CRB is requesting that a data provider transfer information, a formal request should be made using a standardized data request form, outlining the reason for the request and the expected use of this spatial data. This should be accompanied by a metadata form in cases where data providers do not have consistent metadata attached to their spatial data sets. In certain cases, such as with subscription services like AltaLIS or online data available for no charge to users, a request form will not be required.

- **Receive data and completed forms from the data provider.** After a request is submitted to a data provider, the information requested should be transmitted to the CRB, including material from the metadata form and data request form. This may include provider licensing agreements for use of the data, which should be filled out and returned by the CRB. For spatial data sets created by third-party consultants, it is likely...
that this step will take place at the end of the project, with these spatial data sets as final project deliverables.

- **Process the spatial data into a standard internal format for use.** In all cases, upon receipt of the data and metadata, this information should be processed to prepare it for use by the CRB. As noted previously, data collected will require various levels of effort to develop a consistent spatial data set for CRB use, and may require significant processing. Metadata acquired through this process should be archived in an inventory, and should also be attached to shapefiles under CRB management as necessary. In cases where metadata forms are not available, this information should be input by the CRB or third-party consultants to ensure that all data is properly documented.

- **Make the spatial data on-hand available for internal use.** After spatial data sets are collected by the CRB, they should be maintained in locations that allow for access by relevant parties. Internally, this information should be made available on CRB servers to support staff tasks as necessary. These spatial data sets should also be maintained in a format that will allow transmission to third-party consultants, and any necessary agreements required by data providers for this purpose should be attached to available metadata.

- **Provide for external distribution where applicable.** Where allowed, the CRB should also ensure that there is sufficient support for external requests for CRB spatial data from members, the Government of Alberta, and other regional stakeholders. The CRB should ensure that licensing agreements for CRB-owned spatial data are available for these requests, and spatial data sources for requests are kept up-to-date.

### Data Request Requirements

Data requests made by the CRB need to be subject to consistent documentation and tracking. This ensures the following:

- There is a clear rationale for the CRB to have access to the requested information, and that rationale is clearly expressed to the data provider.
- The intended use for the data is clearly expressed to the provider.
- The resource demands of data requests, especially to CRB members, are clearly understood.
- Requests can be tracked and future requests for updates can be scheduled.
- Any reasons why data sets are not available to the CRB are clearly documented.

A sample data request form is included as Figure 4. As part of this form, CRB should provide the following information to the data source:

- Contact at the CRB for the request
- Contact at the source for the request
- Data request (title)
Details of request, including a specific description of individual layers if necessary
Rationale for why the CRB will need these data sets for its use
Intent for use, including any potential applications / processed data sets developed
Storage / distribution of the spatial data once received

In return, the data source contact is required to fill out the following in the data request form:

- Available data formats
- The resource implications of request (including time, costs, and other effort expended)
- Estimated file sizes and possible data transfer method
- Approval of the request by the data source
- The rationale for declining the request (if applicable)
- Estimated date for the data to be submitted

This information should be managed in a single spreadsheet or database to ensure that all available information regarding spatial data on-hand is available for review. Additionally, available metadata, including information about spatial data access and use constraints, should be maintained in this central location, to ensure that overall spatial data management takes these considerations into account.

**Metadata Requirements**

Metadata for spatial data includes all information and documentation that identifies the data, and defines the extent, quality, content, spatial reference, and distribution requirements for the data.\(^2\) This information is critical to maintain for spatial data, as it can be used to:

- Preserve the spatial data history so that it can be reused or adapted.
- Assess the age and quality of spatial data holdings to inform spatial data management.
- Provide accountability for spatial data.
- Limit liability by designating the known limitations of spatial data and restrictions on use.

Without this information, spatial data acquired by an organization can quickly lose its value, as there is no available knowledge about the content of the spatial data set or the limitations of the spatial data.

Within the Government of Alberta (GoA), the GeoDiscover Alberta (GDA) program instituted standards for metadata created by the province, which were approved in March 2008.\(^3\) These standards, based on the Federal Geographic Data Committee (FGDC) standard CSDGM FGDCSTD-001-1998, incorporate all potential information that would be required to be attached to GoA spatial data. Table 4 provides a comprehensive list of all metadata required through this standard.

Many of the providers of data used by the CRB do not follow these standards, however. In many cases during the data collection efforts in this project, little or no metadata information was available for spatial data sets, and much of the metadata available lacked the necessary content to comply with the GeoDiscover standards.

Requesting a full set of metadata from a data provider when none is currently available can be a time-intensive task. Given the need for proper documentation, however, a form requesting the most critical fields necessary to include as metadata was developed. This metadata form, provided in Figure 5, was attached to data requests made as part of this project, and asked data providers for the following information:

- Contact organization (primary)
- Originator / data owner
- Data set credit
- Title
- Time period of content
- Abstract / data description
- Spatial reference information, including Well Known ID (WKID) code
- Maintenance / update frequency
- Access constraints
- Use constraints
- Source information

With respect to data management tasks by the CRB, staff and external consultants (if applicable) should work to compile full metadata for all spatial data sets collected or created. This may be pursued differently according to the nature of the spatial data sets:

- If requested data includes metadata, this information should be reviewed by the CRB to ensure compliance with the GeoDiscover standard, and edited if necessary.
- When requested data includes completed metadata forms from the data provider, this information should be incorporated into a more comprehensive set of metadata, to be attached to the data set and kept on record.
- For data which does not include metadata and is not accompanied by a metadata form, the CRB should work to develop metadata using any available information.
- For data created by third-party consultants, the GeoDiscover standard should be incorporated as a specific requirement for all spatial data deliverables.
- Any spatial data created internally should comply with the GeoDiscover standard.

**Long-term management activities**

Long-term activities with spatial data management should focus on reducing overall resource requirements for maintenance and spatial data development, primarily through shared
standards and processes. This will require active consultation with stakeholders, as well as technical advice and support from the GIS Advisory Group.

Required tasks will include:

- A comprehensive review of long-term requirements for spatial data updates and maintenance.
- Development of spatial data update schedules to meet identified CRB needs over time.
- Standardization of processes for the CRB to collect and compile spatial data for initial development and updates.
- Discussion with data sources on possible approaches to adjust local spatial data processes.
- Long-term implementation of processes with CRB and data providers to reduce resource requirements.
- Providing regular requests according to a fixed schedule (1-2 times per year).

As part of this work, possible adjustments may be made to reduce the resource requirements of the CRB in spatial data management. This may include:

- Development of a common spatial language and consistent spatial data formats across the entire region.
- Source-side management of alternate spatial data formats to minimize data conversion and processing by the CRB.
- Promulgation of standards for smaller communities to use with consultants working with local data.
- Development of long-term data agreements to ensure that approvals are not required each time.

Successful management of regional spatial data by the CRB will also require the following long-term activities:

- Designation of a single contact person for spatial data.
- Development of comprehensive documentation to maintain institutional knowledge about available spatial data.
- Consistent management of licensing, access, and use requirements for available spatial data.
Figure 3. Data Collection Process
Capital Region GIS (CRGIS) Data Request Form

This data request form describes the rationale for acquiring specified data sets to support the CRGIS Spatial Data Demonstration Project. This will also provide the basis for future requests for all data needs to support the Capital Region Board (CRB) Growth Plan Update and other CRGIS needs identified by the Capital Region Board (CRB).

The intent of this pilot form is to begin to establish a process for data sharing related to the CRGIS, and to identify lessons learned from the processes and related impacts with respect to data gathering, assembly, and use/sharing.

To Be Completed by Data Requester (CRB)

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<td>Rationale for request:</td>
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<td>Intent for use:</td>
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<td>Storage / distribution:</td>
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Figure 4. Project Data Request Form
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<td>What format(s) can the data be provided in?</td>
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<tr>
<td>What are the resource implications to the data provider in responding to this request? (e.g., staff time, processing / materials costs, etc.)</td>
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<tr>
<td>What is the estimated size of the data and how can the data best be transferred?</td>
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<tr>
<td>Estimated date for the data to be submitted to the requestor:</td>
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The above completed information should be returned to the Data Requestor as soon as possible using the original data request form.

If the data request is approved, the data provider is asked to complete the Metadata Form including the limitations of use and return that form with the data.
### Table 4. GeoDiscover Alberta Metadata Standard

<table>
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Capital Region GIS (CRGIS) Metadata Form

This metadata form provides the specific description and definition for data sets used for the CRGIS Spatial Data Demonstration Project. This will also provide the basis for metadata for all data needs to support the Capital Region Board (CRB) Growth Plan Update and other CRGIS needs identified by the Capital Region Board (CRB).

The intent of this pilot form is to begin to establish a metadata framework related to the CRGIS, and to identify lessons learned from the framework and related impacts with respect to data description and definition.

The metadata framework aligns with the metadata standards adopted by the CRGIS via the Alberta GeoDiscover initiative found at: http://xnet.env.gov.ab.ca/portal_pub/ptk.

To be completed by data provider or creator for each data set

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<tr>
<th>Item</th>
<th>Details</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Originator / data owner:</td>
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</tr>
<tr>
<td>Data set credit:</td>
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<td>Use constraints:</td>
<td></td>
</tr>
<tr>
<td>Source information:</td>
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</table>

Figure 5. Project Metadata Form
Definitions

**Contact Organization (Primary):** The identity of, and means to communicate with, person(s) or organization(s) that are knowledgeable about the data set. This should include the name of the organization and any contact person(s) involved with data management.

**Originator / Data Owner:** The name of the person(s) or organization(s) that control the access, use, and licensing of the data, with contact information provided. Note that this may be the same as the Contact Organization.

**Data Set Credit:** Any contributors to the development of the data set, including organizations that have created new data or updated or revised the original data, with contact information provided.

**Title:** The title of the data set as used by the Contact Organization.

**Time Period of Content:** The time period(s) for which the data set corresponds.

**Abstract / Data Description:** A brief narrative summary of the data set.

**Spatial Reference Information:** The description of the reference frame for, and the means to encode, coordinates in the data set (i.e., projection / coordinate system)

**Maintenance / Update Frequency:** The frequency with which changes and additions are made to the data set after the initial data set has been completed.

**Access Constraints:** A description of parties allowed to access the data set from the provider. This includes any required licensing agreements, fees, and restrictions to third-party access.

**Use Constraints:** A description of any data restrictions and legal requirements for using the data set after it is received. These include any intellectual property protections associated with the data.

**Source Information:** A description of any source data used to create the data set. Note that original data will have no source information.


---

**Figure 5. Project Metadata Form**

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Appendix C: Data Acquisition, Management and Distribution

Figure 6 provides an overview of the ideal flow of data in a CRB-managed spatial data system:

**Data Inputs**
- Free Data Sources
- Data Vendors
- Data Partners

**Data Processing**

**Data Outputs**
- Finished Mapping Products
  - Hardcopy maps
  - Online mapping tools
- Internal Data Distribution / Use
  - Internal data access
  - Internal tools for analysis / support
  - Use by contractors
- External Data Distribution / Use
  - Downloadable data
  - Web mapping services
  - Exchange of data with regional partners

**Data Storage / Warehousing**

**Creation of new data (analysis, collection)**

**Maintenance of existing data**

Note that this process as defined includes the collection of multiple spatial data sets defined according to the methods defined in Appendix A, Figure 3. From the receipt of the data inputs to the distribution of final outputs, there are four primary groups of tasks that would be expected to be performed by the CRB or associated contractors and partners:

- **Data processing** to convert the data inputs received into data sets ready for use and distribution. This may involve extensive processing, such as the work required to compile the individual land use policy layers in this project, as well as management of associated metadata.
- **Data storage / warehousing** in central repositories to allow for internal or external access to data sets. This would involve standard approaches to store data on a central server, and may include approaches to allow outside users to download the data or access mapping services.

- **Ongoing maintenance of data** to ensure that stored information is current and accurate. These processes would likely be run on a regular basis, and may involve requesting additional data from sources.

- **Creation of new sources of data** through either the collection of new information or processing and analysis of existing data sets. This would incorporate, for example, all of the data sets created to support the development of the Growth Plan and updates.

As noted in the previous Figure, information collected according to the previous methods is likely to be distributed in three distinct ways:

- Certain information may be released as **finished mapping products**. This may include hardcopy maps included in reports and plans, as well as online mapping tools available to stakeholders that can access specific spatial data layers.

- A number of spatial data layers should be designated as for **internal CRB use only**. These data sets would include intermediate data sets, as well as data that the CRB does not have licensed rights to redistribute to other parties, but would be of use for internal mapping and analysis. Note that these data sets may be distributed to outside consultants supporting CRB work.

- Other spatial data sets will be provided for wider **external distribution**. This includes data sets made available to CRB data partners only, as well as information provided for download to any interested parties.

Spatial data storage and distribution will likely require an assessment of a number of management issues:

- **Data access policies.** Where possible, the CRB should establish a policy of open access to final data, within the requirements established by the licensing agreements for source data. This would mean that data created and owned by the CRB should not have any restrictions placed on use, and would be available for free to interested parties. Discussions would be necessary to determine whether data should be restricted to CRB members and data partners, or should be available to the public.

- **Licensing.** Although CRB data may be provided to members or even the public as a whole, it is important to ensure that the data is properly managed once distributed, and that all rights are retained by the CRB. All releases of data to external stakeholders should require a license agreement, even in cases where data is open and freely available to the public.
• **Data formats.** Data available for download should be made available in a consistent, interchangeable format that will permit the widest range of users to access and utilize this information. Therefore, where possible, all data sets should be made available in the ESRI shapefile format. These data sets may also be provided in other formats, such as the Keyhole Markup Language (KML) format, for use with a wider range of applications.

• **Point of contact and data request protocols.** Providing data access to external stakeholders can be facilitated by ensuring that there is a single point of contact within the CRB for data requests, and that requirements for data requests are clearly defined for potential users.

• **IT and staff infrastructure.** IT infrastructure and staff capacity will be necessary to ensure that the management steps defined in Figure 6 are conducted as required. Although outside consultant support may meet short-term capacity needs for processing input data, creating some new data sets, and potentially running regular maintenance on existing data, some internal capacity is required. In particular, consistent management of these tasks and long-term storage and distribution of data will require capacity in-house, or long-term contracts for data management.

• **Online mapping services.** In addition to questions about general storage and distribution of CRB data, providing online mapping services would present an enhanced approach for potential users to review data. This would require more extensive IT infrastructure (either in-house or contracted out) to store and distribute this information through Web Map Services.

Future projects should work to provide more structure to CRB processes and protocols regarding long-term data management. Specific requirements should be incorporated in follow up work conducted by outside consultants to help to build this capacity.
Appendix D: Data Partners

Table 5 provides a list of regional stakeholders that would be key partners for the Capital Region Board to cooperate with in the development of GIS capacity. This not only includes potential providers of data, but also organizations that could be collaborative partners in data development, distribution, and use.

This table provides the following information:

- **Name.** The name of the organization or group reviewed in the analysis.

- **Engaged during project.** This denotes whether this organization or group was contacted during the project, or if an attempt was made to engage with this group.

- **Description.** A brief description of the organization or group, including a review of their relevance to the development of a regional GIS framework.

- **CRB data layers.** A list of the data layers of interest to the CRB which can be received from these organizations, including data which is created by the organizations as well as information redistributed from other sources.

- **Notes.** In addition to providing data, some of these groups may provide additional functions that can be of use to the CRB in pursuing regional GIS capacity. Additionally, other considerations related to these groups may be important to note in long-term strategic planning for GIS management.
### Table 5. Regional Data Partners

<table>
<thead>
<tr>
<th>Name</th>
<th>Engaged during project</th>
<th>Description</th>
<th>CRB Data Layers</th>
<th>Notes</th>
</tr>
</thead>
</table>
| AltaLIS / Spatial Data Warehouse, Ltd. | ✔️ | AltaLIS is the agent for Spatial Data Warehouse, Ltd., and serves as the custodian and seller of Alberta base mapping infrastructure and other mapping products. | · Cadastral / title mapping  
· Alberta Township System  
· Admin. boundaries  
· Base features  
· Digital elevation data  
· Orthophotography / imagery | AltaLIS has expressed interest in ongoing efforts to develop GIS frameworks across the province, and may be a useful partner in data development and distribution. |
| Other data vendors | | In addition to AltaLIS, there are other companies and organizations that work to provide data to clients through subscriptions or fees. Examples of this include Abacus Datagraphics Ltd., commonly used to access pipeline and well information, as well as private orthophotography providers. | · Pipelines  
· Wells | |
| GeoDiscover Alberta | ✔️ | GeoDiscover Alberta is a Government of Alberta (GoA) initiative designed to facilitate access to provincial spatial data sources, and promote standards to enable information sharing and improve data quality. | (GeoDiscover does not host data layers, but does provide one-window access to multiple GoA data sources.) | GeoDiscover can help to work to facilitate access to GoA datasets. Additionally, GeoDiscover may be one approach for the CRB to advertise CRB-created data sets to potential users, as GeoDiscover can point towards active web mapping services and download locations. |
| Other GoA departments | | A broad range of spatial data may be accessible at a regional level from GoA departments, detailing a variety of topics of interest for regional planning. This can be received from multiple departments, including Energy; Environment and Sustainable Resource Development (ESRD); Tourism, Parks, and Recreation (TPR); and Transportation. | Varies, but may include:  
· Recreational resources  
· Environmentally Sensitive Areas  
· Watersheds  
· Airsheds  
· Wells  
· Pipelines | Note that the GoA will be engaging in the development of a North Saskatchewan Regional Plan (NSRP), which will include the Capital Region within its scope. The NSRP process will likely require input and data from the Capital Region, and there may be means to leverage this work to develop spatial data for the region. |
<table>
<thead>
<tr>
<th>Name</th>
<th>Engaged during project</th>
<th>Description</th>
<th>CRB Data Layers</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipalities</td>
<td>✓</td>
<td>Municipal GIS, public works, and planning departments may be a potential source of local data that can be assembled to create regional views of land use, open space, and other key regional systems. Note as well that municipalities will likely be one of the major consumers of data from the CRB.</td>
<td>- Land use policy (MDP/IDP)</td>
<td>Municipalities may also be engaged by the CRB to provide limited services, likely on a fee-for-service basis. This could include: - Hosting of web mapping services - Hosting of data for download - Data warehousing / management - Limited analysis / data development</td>
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<tr>
<td>Edmonton Regional Joint Orthophoto Initiative (ERJOI)</td>
<td>✓</td>
<td>The Edmonton Regional Joint Orthophoto Initiative is an effort by a consortium of municipal governments in the Edmonton area to develop high-quality orthophotography. Through pooling of resources and collaboration with project management, costs to participants are reduced from what would be required from individual purchases of data.</td>
<td>- Orthophotography</td>
<td>The CRB has worked with the ERJOI in the past to help source funding to support the project; this can be a key role for the CRB with the Initiative in the future.</td>
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<tr>
<td>Regional Commissions</td>
<td>✓</td>
<td>Regional services commissions are organizations formed under the Municipal Government Act which can provide services to municipalities that are members of the commission. These services can include the development and provision of water and wastewater to multiple jurisdictions, and as such, may be potential sources of information about regional infrastructure, both current and future planned.</td>
<td>- Water infrastructure</td>
<td>Engagement with commissions and private companies (see below) will be critical in developing and maintaining accurate, up-to-date regional infrastructure data. These partnerships should be sustained in the long-term to ensure that data exchange occurs on a regular basis, and does not require significant resources or effort to meet short-term needs.</td>
</tr>
<tr>
<td>Name</td>
<td>Engaged during project</td>
<td>Description</td>
<td>CRB Data Layers</td>
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| Utility / infrastructure companies |                        | Private companies currently maintain and develop different infrastructure systems in the Capital Region. In particular, rail infrastructure is largely maintained and developed by the private sector, and private companies have significant involvement with water, wastewater, and electricity infrastructure. Developing an understanding of current and future infrastructure capacity to guide growth and development may require engaging these private interests to access this information. | • Water infrastructure  
  • Wastewater infrastructure  
  • Power corridors  
  • Rail facilities | (see above)                                                                |
| Federal agencies          |                        | Although the application of federal-level data to regional issues may be limited, certain data sets may be useful in providing important information about the region. In particular, Statistics Canada geospatial data from the Canadian Census can provide detailed information about population and housing distribution. | • 2006/2011 Canadian Census                                                                 | The application of Census data is limited by the 5-year cycles of these data sets. Similarly, future changes to the Census may limit the ability of the CRB to use this information to guide regional planning. |
| GeoBase                   | ✓                      | GeoBase is an interjurisdictional initiative in Canada overseen by the Canadian Council on Geomatics that provides common, up-to-date sets of spatial base data for use by the public. | • Digital elevation data  
  • Hydrography (NHN)  
  • Highways and roads (NRN)  
  • Power lines (future)  
  • Satellite imagery (broad-scale) | GeoBase provides mapping layers both as downloadable files and as Web Mapping Services, which can be incorporated into online mapping products. |
| Outside consultants       | ✓                      | Activities requiring significant efforts for data collection, processing, and analysis will likely exceed the available short-term capacity of the CRB. Third-party consultants will be required to conduct these operations. | Varies; will depend on CRB needs. Previous layers developed have included:  
  • Land absorption (rural)  
  • Growth Plan policy areas | Outside consultants can provide a number of alternate functions useful for long-term GIS capacity:  
  • Long-term data management  
  • Web hosting  
  • Development of online tools  
  • GIS analysis and data development |
Appendix E: Next Steps and Potential Costs

Five main projects will be required to focus on developing the capacity necessary for the Capital Region Board to conduct the upcoming Growth Plan updates, as well as to provide support for subsequent implementation:

- **Project 1:** Business and spatial requirements for Growth Plan updates
- **Project 2:** Resources for Capital Region Geographic Information Services
- **Project 3:** Spatial data collection for CRB needs
- **Project 4:** Spatial data analysis and Growth Plan update reporting
- **Ongoing:** Long-term capacity development

A suggested timeline for these projects is provided in Figure 7.

Cost estimates are provided within the following project descriptions. These estimates are an order of magnitude. The estimates require scope clarification and subsequent validation against existing or planned CRB initiatives and business plans.
These projects are proposed to be carried out as follows:

**Project 1: Business and spatial requirements for Growth Plan updates (2013)**

To allow for a more comprehensive and efficient effort to collect spatial data for the Growth Plan update, the business and functional requirements for the Growth Plan should be explicitly defined by the Capital Region Board. This should work to outline the major themes expected to be included as part of the update, and identify the data sets required to complete the mapping and analysis requirements.

This should not be viewed as fixing the methods or content for the Growth Plan and updates; additional requirements may be presented during the process which may require further data collection. However, where possible, this exercise should attempt to be as complete as possible to ensure that data collection is managed up front, prior to subsequent analysis activities.

*Project tasks*

- Review the analyses conducted to support the 2009 Growth Plan.
- Outline all input and output data sets used as part of the development of the Plan.
- Assess the need for updates to previous analyses conducted.
- Discuss potential updates to existing analyses with CRB staff, committees.
- Review new analyses that may be required for the updates with CRB staff, committees.
- Identify all data sets likely to be required for the Growth Plan update.
- Determine the current status of all required data sets
- Provide recommendations regarding the purchasing, development, or acquisition of data sets not currently retained by the CRB.

*Deliverables*

A report to the CRB providing:

- A comprehensive review of the preliminary objectives and intended areas of concentration for the Growth Plan updates, as defined by CRB staff and committees.
- A preliminary list of data required to support the Growth Plan updates, based on new and updated analyses expected for this work.
- A review of the potential restrictions on the distribution of CRB-produced datasets.
Estimated budget and timeline

This project is estimated in the range of $20,000 to $30,000, representing approximately 10 to 15 person-days of contractor and staff time. This work would be expected to extend over approximately 3-4 months.

No major disbursements would be expected from this project, as data purchases would be expected to be managed in subsequent projects.

Project 2: Resources for Capital Region Geographic Information Services (2013-14)

Prior to other actions to develop spatial data and management processes, steps should be taken to build the technical and human resources necessary for the CRB to manage regional spatial data. This includes development of IT infrastructure and commitment of a regular level of staff resources to support consistent internal management for GIS operations and projects.

Project tasks

- Outline the need for short- and long-term IT resources required to support spatial data management and analysis associated with the Growth Plan update and future implementation needs.
- Outline the needs for short- and long-term CRB staff allocation and associated resources to support spatial data management and analysis associated with the Growth Plan update and future implementation needs.
- Allocate additional staff resources (approximately 0.5-1 FTE) to GIS leadership and management activities.
- Allocate additional IT resources as required to support spatial data management and analysis.
- Acquire necessary short- and long-term external capacity to supplement internal staff and IT resources.
- Conduct basic data collection, maintenance, and management functions to support subsequent projects and ongoing activities within the CRB.
- Provide overall management of the CRGIS program.

Deliverables

The primary deliverable for this project would be the long-term development of the internal capacity of the CRB to lead regional GIS activities and conduct basic management and regional analysis functions internally. This capacity would be used to support subsequent project work identified.
Estimated budget

This project is estimated in the range of $150,000 to $200,000 over approximately a 21-24 month period. Major expense areas would include:

- **Staff time** focusing on leadership for GIS activities.
- **Data maintenance activities** (internal and external), including regular updates to key data sets needed for the Region.
- **Data distribution activities** (internal and external), with a focus on foundational work to provide information to members, stakeholders.
- **Limited investment in IT infrastructure** to support this work, likely including a single GIS workstation and any outsourced website management as necessary.

These expenses would include not only targeted involvement by outside consultants, but also a long-term allocation of staff resources to these activities, amounting to approximately 0.5-1 FTE staff time over the identified period.

Project 3: Spatial data collection for CRB needs (2013-14)

Building from existing spatial data sources, as well as the data collected in the course of this Demonstration Project, additional spatial data required for the Growth Plan update should be sourced, licensed/purchased (if applicable), acquired, and assembled to support analysis and decision-making tasks by the Board during the update process. The data collection processes used in this Demonstration Project should be used and reviewed during data collection to ensure that incoming information is being properly managed.

**Project tasks**

- Review of data sets identified as required for the Growth Plan updates (see Project 1).
- Review of the data request process developed in the GIS Demonstration Project.
- Identification of all data sources for required data sets.
- Discussion with identified data partners regarding data needs.
- Discussion with data vendors and other sources regarding data needs.
- Submission of data request forms to data partners.
- Coordination of data purchases necessary to address data gaps.
- Coordination of data received from data partners.
• Review of remaining data gaps and discussions with CRB regarding potential alternative approaches.
• Compilation and processing of all received data, as necessary.
• Development of central, internal repository for CRB spatial data warehousing.
• Creation of a data management report, outlining the tasks conducted as part of this project.
• Final transmission of all data sets to the CRB for storage.

Deliverables

The deliverables from this project should include:

• All spatial data sets necessary for future analysis and mapping tasks by the CRB for the Growth Plan update. These data sets should be processed to ensure that CRB staff and external consultants can use this information without additional processing steps required.

• A data management report, detailing all of the steps required to collect and process the spatial data collected in this project. This report should also include a discussion of potential changes to the collection processes to improve efficiency and long-term sustainability of these activities, as well as recommended steps for updating the data as required.

Estimated budget

This project is estimated in the range of $200,000 to $250,000 over a 15- to 18-month period. These expenses are expected to be allocated to:

• Contractor time for the assessment of data sources and compilation of results.
• Staff time to support data collection, the review of results, and coordination with data partners.
• Any required data purchases to support Growth Plan update needs.

Estimates of final expenditures for this project are strongly dependent on the final data needs expressed by the Capital Region Board during Project 1, however. Extensive updates to existing data sets, or numerous new data requirements may increase the costs of data collection in this phase.

Project 4: Spatial data analysis and Growth Plan update reporting (2014-15)

Building on the processes established in this Demonstration Project, as well as the spatial data collected in prior steps, data management, analysis, and distribution should be optimized and
standardized to ensure sustainability, transparency, traceability, and availability between the CRB, its members, and other stakeholders. This work should include cost-effective approaches for presenting and sharing data, as well as partnerships for spatial data collection and sharing between members and other potential participants.

**Project tasks**

- Evaluation of spatial data sets available for analysis that are currently managed by the CRB.
- Review of all data analysis needs and required formats for deliverables to the CRB.
- Development of methodologies for data processing and analysis.
- Review of methods with CRB staff and committees.
- Analysis of data as outlined in presented methods.
- Development of approaches for presenting and sharing data, such as through web-based mapping platforms.
- Presentation of analysis results to CRB staff and committees.
- Refinement of analysis results based on comments received.
- Development of a comprehensive data report, including a revised version of the outlined methodologies, a review of the major analyses conducted as part of this project, and an assessment of data management processes.
- Packaging and transmission of created data sets.
- Continuing support for data distribution and presentation tools.

**Deliverables**

The primary deliverables from this project would include:

- **Spatial data sets** developed from the analyses conducted for the Growth Plan updates.
- A **comprehensive data report**, detailing the methodologies used in data development.
- An **assessment of key issues** related to the Growth Plan related to the spatial analyses conducted in this project.
- An **evaluation of data management processes** involved with this project, with recommendations for improving the sustainability, transparency, and effectiveness of long-term data management.
• **Tools for presenting and sharing data** related to the analyses for the Growth Plan updates. This should focus on web-based mapping tools as a means of distributing information about the Growth Plan updates and receiving comments from stakeholders.

**Estimated budget**

This project is estimated in the range of $150,000 to $200,000, with a 9-12 month timeframe. Major allocations in this project would be expected to include:

• **Contractor time** to provide the analysis of data to meet expressed needs for the Growth Plan updates, and present an assessment of processes at the end of the project.

• **Staff time** required for ongoing project support and review of results.

Note that data costs are not included in this project, as data collection activities would be expected to be included in Project 3. Overall, the final project costs are heavily dependent on the requested analyses; extensive assessment and data development activities, including new analyses not incorporated into the original Plan development process, would require more contractor and staff time and increase project costs.

**Ongoing: Long-term capacity development**

Paralleling efforts to prepare for the Growth Plan update, the CRB should work to assess actual long-term operational needs for regional GIS, and optimize strategic GIS planning to ensure that regional investments will build value for all members of the CRB. This should include updates to the CRGIS Strategy and Implementation Plan, which must be amended to include:

• **Commitments to GIS operations and capacity-building** in the annual CRB budget.

• **Agreements** for the cooperation of CRB members in regional GIS projects.

• **Leveraging of resources** available from provincial, federal, non-profit, and other sources as well as recommendations from this report that may impact long-term strategies for regional GIS development.

These types of ongoing investments should be an extension to the allocations of resources outlined in Project 2, with internal GIS capacity allocated to efforts in long-term capacity building. However, this work should also be integrated in the long term to all internal and external projects managed by the Capital Region Board, and should also involve efforts by the GIS and Planning Advisory Boards to support GIS capacity development in the Capital Region.
Appendix F: Bibliography


Appendix G: Acknowledgements

CRB Land Use Committee
City of Edmonton  Councillor Ed Gibbons
City of Fort Saskatchewan  Mayor Gale Katchur
City of Leduc  Alderman David MacKenzie
City of Spruce Grove  Alderman Jeff Acker
City of St. Albert  Councillor Malcolm Parker
Lamont County  Reeve Wayne Woldanski
Leduc County  Councillor Jocelyn Mackay
Parkland County  Mayor Rodney Shaigec
Strathcona County  Mayor Linda Osinchuk
Sturgeon County  Mayor Don Rigney
Town of Beaumont  Councillor Larry Goodhope
Town of Devon  Mayor Anita Fisher
Town of Morinville  Councillor Lisa Holmes
Town of Stony Plain  Councillor Dwight Ganske
Town of Redwater  Mayor Mel Smith
Government of Alberta  Ivan Moore, Assistant Deputy Minister

CRB Planning Advisory Group

CRB GIS Advisory Group

Contributing Consultant
Barry Huybens, iStrategic Advisors

CRB Staff
Neal Sarnecki
Stephanie Chai
Sharon Shuya
CRGIS Spatial Data Demonstration Project Report FAQ

Introduction
This document is intended to supplement the Capital Region Geographic Information Services (CRGIS) Spatial Data Demonstration Project (“Project”) final report. Following is a brief background, next steps and some key questions and answers about the report and the “Project”.

Background
- The “Project” began in July 2012 and was completed in January 2013.
- The objective of the “Project” was to provide the Board with:
  - A better understanding of spatial data needs for the 2015 Growth Plan update
  - Partnerships, data sources and potential collaborations for spatial data
  - Basic processes for spatial data collection
  - A subset of spatial data
  - An understanding of the resources necessary to collect spatial data from CRB members
  - A foundation for moving the GIS mandate forward
- The Project Team worked with the Land Use Committee (LUC), the Planning Advisory Group (PAG), the GIS Advisory Group (GISAG) and GeoDiscover Alberta to understand and identify the spatial data requirements for the Growth Plan Update, and build trust and support for CRGIS amongst member municipalities.
- The LUC reviewed and approved the executive summary portion (representing all of the substantive aspects) of the draft final report on December 19, 2012.
- A draft final report was presented to the Capital Region Board (CRB or Board) on January 10, 2013. Following questions on the report review process, the investment implications from the report recommendations, and the need for additional CRB consideration – the motion to accept the report was postponed until the April 2013 CRB meeting.

Next Steps
In order to ensure a clear understanding of the implications of the report recommendations and to allow the CRB Administration an opportunity to further vet the report content with stakeholders, the following actions will be carried out before returning to the Board in April 2013:

- February 4, 2013 - Distribute the final report to the members of the LUC, PAG and GISAG.
- By February 22, 2013 – CRB Administration to receive input, questions or other areas of clarification on the report from members.
- During February, the CRB Administration will review current and planned GIS related activities, and determine available budgets and funding opportunities.
- March 4, 2013 - At a meeting of the GISAG, discuss the members input, answer additional questions and seek consensus support for the report.
- March 11, 2013 - At a meeting of the PAG, discuss the members input, answer additional questions and seek consensus support for the report.
- March 28, 2013 - At a meeting of the LUC, discuss all input from GISAG, PAG and the LUC, answer additional questions and obtain approval for the motion for the final report, subject to agreed changes.
- April 11, 2013 - Present the final report to the CRB for approval.
Frequently asked Questions

Prior to and during the project frequently asked questions have arisen about CRGIS. To assist stakeholders a few of the key questions and answers have been prepared:

- **Q1: What is the CRGIS Spatial Data Demonstration Project (“Project”)?**

  - **A1:** Geographic Information Services are “a set of tools for collecting, storing, retrieving at will, transforming, and displaying spatial data from the real world for a particular set of purposes” (Source: P.A. Burrough, 1986).

  Understanding the spatial data licensing and sharing requirements, data maintenance processes, options for presentation and/or access of data and costs/resource implications are all important.

  The “Project” was specifically designed to further define and understand these factors based on a demonstration or pilot approach. The “Project” was focused on a subset of spatial data needed to support the 2015 Growth Plan Update with an emphasis on land use aspects of the Growth Plan.

- **Q2: How does the “Project” relate to the CRGIS Strategy and Implementation Plan (“Plan”) approved in January 2009 as part of the Growth Plan?**

  - **A2:** The “Plan” was developed during 2008. The “Plan” provides a longer term comprehensive approach toward the development of regional GIS capacity and capabilities; while, the “Project” focuses on a smaller incremental set of activities focused on the spatial data and analysis in anticipation of the Growth Plan Update.

  The goals of the “Plan” are to expand the regional capacity to deliver geographically-based information and services that support sustainable land use, public transit and housing decisions through collaboration of the Board and its member municipalities. CRGIS will provide the information that allows the region to make more effective evidence-based decisions that balance quality of life with economic prosperity, social and environmental responsibility, and that enable the CRB to measure the cumulative impact of decisions on the region.

  The Board has approved the sharing of data between member municipalities and a business model whereby the CRB is responsible for the coordination and delivery of the services and the quality assurance necessary for access and use of regional information.

  The “Plan” recognizes that in order to implement a regional GIS there is a need to build a foundation including funding initial data gathering, identifying data stewards and ensuring the sustainability or maintenance of quality regional data.

  The “Project” was a first incremental step in implementing the “Plan”.

- **Q3: Why is spatial data and analysis required for the 2015 Growth Plan Update?**

  - **A3:** Evidence-based decision-making requires accurate, transparent, and reliable sources of data that can provide a strong rationale for action.
The 2009 Growth Plan directed significant effort and investment toward the identification, gathering, assembly and analysis of spatial data. Current, up-to-date spatial data and analyses are required for the 2015 Growth Plan Update in order to ensure the Growth Plan is responsive to changing circumstances in the Capital Region. Example data sets:

- Population – Compare the distribution of population over time to identify trends in the region.
- Transportation – Use various future transportation scenarios to understand growth patterns.
- Development Footprint – Map developing areas over time to determine if land absorption is decreasing pursuant to densification policies in the Growth Plan.

Q4: Why are the “Project” recommendations focused primarily on the Growth Plan Update?

A4: Advice and direction from the LUC and PAG in 2011 and 2012 identified the need for CRGIS to prioritize key regional issues - the Growth Plan Update is a primary example. The Growth Plan needs to be responsive to changing circumstances in the Capital Region. The CRB’s mandate to keep the Growth Plan “evergreen”, requires that a full review of all aspects of the Growth Plan be conducted at least every five years to ensure that the Growth Plan reflects changes in economic, environmental and other significant trends. The Growth Plan Update should be completed in 2015.

Q5: The “Project” has 5 recommendations to support the update to the Growth Plan at an estimated cost of $700,000. What is the Board getting for $700K versus the original Plan of $11M?

A5: The “Project” is one set of activities contemplated within the “Plan”. The scope, services or activities and outputs are not the same. The “Project” aims to advance the most immediate and priority regional needs for spatial information for the Growth Plan Update. However, the results of the “Project” provide significant learning’s towards the recommendations identified within the “Plan”.

The “Plan” estimated that implementation would cost $11 million. Implementation was divided into three phases:

- Phase 1 - Build the Foundation
- Phase 2 - Build the Decision Making Capacity
- Phase 3 - Build Sustainable Value

The “Plan” assumed the establishment of a CRGIS office that included a staff complement, administrative support, investments in hardware, software and networking. The “Project” and its recommendations are steps towards building the foundation (Phase 1).

Q6: If the CRB is unable to fund the “Project” recommendations are there alternative funding or implementation options?

A6: Viable options, although not necessarily desirable, include seeking additional Provincial funding or funding by CRB member municipalities. However, accessing provincial funding would likely involve a prolonged application process, with no guarantees, which would delay implementation.
Member municipalities already provide significant support to the CRB through in-kind contributions, the sharing of data, and GIS expertise, such that additional financial and resource requests are not an attractive option.

- **Q7. What is the impact of the “Project” recommendations on the CRB and the CRB Administration in approving the final report?**

  **A7:** Approval of the final report with the recommendations confirms ongoing support for CRGIS by the CRB and provides direction to continue to build the foundation and capacity through the work undertaken as part of the Growth Plan Update.

- **Q8. What is the impact of the “Project” recommendations to CRB member municipalities?**

  **A8.** As with the 2009 Growth Plan, the ability for all CRB member municipalities to provide municipal data of regional importance (e.g., municipal development plans) is desired. For many municipalities that data is only in the form of non-spatial data or other policies, plans and documents. Converting the non-spatial data needed for the Growth Plan update into a spatial format would be required and will be addressed on a project specific basis under the Growth Plan update.

  For those municipalities which have spatial data, the impact of providing it for the Growth Plan Update is negligible. These municipalities typically already have in place processes and procedures for distributing their spatial data.

  Ultimately, there should be a positive benefit for all municipalities – those with GIS capabilities and those without. Benefits would include, at a minimum, access to a Capital Region view of spatial data, current Growth Plan data, any spatial data resulting from the Growth Plan Update, and, where appropriate, (subject to licensing) data sharing among the CRB member municipalities.

- **Q9. What is the role of GeoDiscover and how will it support the CRGIS Plan and the “Project” recommendations?**

  **A9.** GeoDiscover Alberta (GDA) is a gateway to web-based Alberta geospatial information and information services. The objective of GDA is to further the sharing of geospatial information across the Government of Alberta (GoA) and between the GoA and its stakeholders, such as the CRB.

  Subsequent to the Minister’s review of the Growth Plan, in June of 2009, the Minister of Municipal Affairs requested the CRB undertake further work to “coordinate with current Provincial initiatives and define standardized data-sharing access and analysis protocols related to Geographic Information Services.” In this regard a commitment was made to utilize and coordinate with GeoDiscover Alberta and align, where possible, with Provincial initiatives to share resources and minimize duplication.

  The CRGIS Spatial Data Demonstration Project adopted a framework of standards and protocols used by GDA to define the management of spatial data collection.
The CRGIS Spatial Data Demonstration Project team met several times with GDA staff over the past year and discussed opportunities for sharing data and using the GeoDiscover portal to display and distribute CRB spatial data. GDA has been very receptive to partnering with the CRB.

- **Q10. What are the implications to the 2015 Growth Plan Update if the Board does not approve (and/or support the recommendations) the final report for the “Project”?**

- **A10. The absence of current, reliable, quality spatial data will impact the ability of the CRB to make responsible, evidence based decisions for the Growth Plan Update. Further, it will constrain the ability of the CRB to monitor and report on the implementation of the existing Growth Plan now and in the future and to understand the effects of the policy framework on the goal of the Capital Region Growth Plan.**
CRGIS Spatial Data Demonstration Project Report
February 2013 Consultation Summary

Introduction

CRGIS Spatial Data Demonstration Project Report was presented to the Capital Region Board on January 10, 2013. Following questions on the report review process, the investment implications from the report recommendations, and the need for additional time to review the report by CRB members – a motion to postpone consideration of the Report until the April 2013 CRB meeting was approved by the Board.

The Report and a FAQ were distributed to the members of the Land Use Committee (LUC), Planning Advisory Group (PAG), and GIS Advisory Group (GISAG) on February 4, 2013 to provide for additional review and feedback on the Report. Members were requested to respond with comments and concerns by February 22, 2013. The comments and concerns received have been complied and presented below with clarification provided by CRB Administration where applicable. At the LUC, PAG and GISAG meetings in March the subject comments will be reviewed, additional input gathered, and consensus support sought before returning with the Report to the Board in April 2013.

Comments

CRB Administration comments and clarifications provided in green italics where applicable.

Town of Morinville – Debbie Oyarzun, CAO:

- The 2 new pages (iii and 21) added to the document present a simple yet concise summary of the benefits.
- Morinville currently has infrastructure in place to support GIS.
- Morinville is currently setting up our system to support planning and development, asset management, decision making, enhance internal and external communication and availability of providing electronic services. We have added or in the process of adding a number of layers such as traffic and pedestrian signage, speed zones, manholes, tree program etc.
- Need to consider the capacity at the municipality level to respond to CRB requests.
  o Those that have a system use it on an almost daily basis for operational decisions and depending on resources may not have dedicated staff to support anything more than operational.

  Some CRB member municipalities have GIS information and capabilities and others do not. Thus, what is needed is a level of capacity and coordination by the CRB Administration (see 2009 Business Model motion) to take the available information related to the region and integrate it into a single region wide view to support regional decision-making. The CRGIS is not about replacing local municipal GIS efforts, resources nor infrastructure … rather the focus is on preparing and using regional level information.

- Support regional standardization of terminology, etc.
- As indicated, a lot of the information is already available and we have accessed some of it ourselves.
• Unclear if direct cooperation with GOA has been explored as an option rather than reinventing the wheel by adding infrastructure and additional (at this time unknown) resources to CRB Administration when the capacity and infrastructure may already be accessible/available. *The project team met several times with the GOA GeoDiscover team and they are very interested in partnering with the CRB to distribute regional spatial data through their web portal. However, GeoDiscover does not provide data collection, validation, maintenance, or analysis services.*

• Unclear as to what it means to approve this project and what it will cost municipalities, not just the project but the cost of implementation.

• However it is set up, need to ensure that existing systems can feed into or access a common platform. For example, define the expected lowest common denominator to allow for municipalities to plan and budget for their upgrades.

• Figure 1 in the report refers to the development of CRB GIS capacity and capabilities. Is this CRB as in the member municipalities or CRB Administration? We understand the desire for GIS spatial data to influence and support the decision making under the growth plan, but does that mean we have a new branch in CRB to manage and distribute this information to ourselves. Because we are not clear on really what the ask is (see below) we hesitate to continue to add further responsibilities and resources to the CRB Administration. *The immediate need to support regional decision-making requires some level of capacity or coordination of information within the CRB Administration; whether that be in-sourced or out-sourced, the need remains.*

• Report is too black and white – we either support the report and therefore the enhancement of CRB capacity in GIS or we don’t. What other options could be explored? Perhaps it is a combination of contracting out, cooperation with the GOA, virtualization or hosted, and an administrative role of standardization and distribution. What is the most cost effective? We are in favor of a regional / standardized approach to GIS, but not comfortable that only one option is presented – all or none.

• If the GOA will be developing a North Saskatchewan Regional Plan (NSRP) which will include the CR within its scope and the CRB is mandated by the GOA has cooperating and/or leveraging this project been considered rather. It appears it would be more cost-effective with the expertise and infrastructure already in place. Can we take any advantage of this project to minimize the impact on CRB resources? *The above comments will be explored with the various stakeholders and partners in order that the most cost effective and efficient method of implementation is achieved.*

Project 1: Business and spatial requirements for Growth Plan updates

• Required, however, the project that produced the report itself should have provided some of this information.

Project 2: Resources for CR GIS

• Not sure if this is required – if the original report of January 2013 didn’t go into enough detail to address project 1 above how can it determine that this is what is needed and that it is the most cost effective way to achieve what is needed.

• Not comfortable supporting this which as it is currently packaged puts the entire report in jeopardy. If CRB is asked to approve the report, does that mean that all projects are also approved? That is what it appears to say. *The original motion to “approve” the Report was not supported by the Board. To address the subject concern the new motion to be presented in April will be to “accept the Report for*
information”. The Report reflects the results of a demonstration project, and provides recommendations for future considerations in implementing a CRGIS. The Report was not meant to be approved as a GIS implementation plan. Implementation of the CRGIS will be undertaken as supported by funding and resources within the Capital Region Board Business Plan. The 2013 Land Use Committee Business Plan allocates $100,000 to CRGIS and the Provincial Government recently committed $500,000 to the update of the Growth Plan, of which a portion may be allocated to GIS.

Project 3: Spatial data collection for CRB

- Collection of data as presented may or may not make sense depending on which approach is the most cost-effective. But without exploring any other approach how can we make that determination.
- Contingent on #2 and exploration of other approaches.

Project 4: Spatial data analysis

- Contingent on #2 and exploration of other approaches.

City of St. Albert - Councillor Malcolm Parker:

- This report was a very intense and not easy report to read. It certainly could not be digested in one sitting and I found a great amount of repetition.
- One of the key impressions I got was the Land Use Committee will not have the capacity, expertise and resources to complete this work. A third party most likely will be needed and this begs the question - do we have funding? The Land Use Committee Business Plan and Budget includes $100,000 towards GIS in 2013. Further, the Provincial Government has committed $500,000 to the update of the Growth Plan. Since this report suggests regional collaboration so will rural areas participate and will there be a willingness to share information?
  The Board passed a Spatial Data Sharing motion passed on September 3, 2008 wherein all members agreed to share their spatial data (subject to licensing requirements).
- The Big Picture view is essential versus each municipality completing their own mapping.
- For the most part, I agree with the process outlined and what needs to be done.
- How committed will Alberta Government Departments be in providing access to data? Today in Alberta and nationally, there is a strong movement toward open information sharing; in some cases reasonable investments in licensed information will be appropriate. Alberta’s GeoDiscover is one important source for accessing data. However, information (e.g., municipal development plans, see p.56 of 2009 Growth Plan) will be needed from CRB member municipalities to support regional planning and decision-making.
- While the Q / A's provided a basic overview it would be helpful if the larger report was summarized in 5 pages or less to highlight the recommendations, methodology, process, observations, challenges and next steps.

Strathcona County – Daren Sears, Manager GIS, Information Technology Services:

I generally support and agree with the information presented in the CRGIS spatial data demonstration project report. I think that the report was well done and I believe that the demonstration project was a good investment for the CRB and its member communities. I agree
with the list of requirements to update the Growth Plan as well as the recommended actions to complete it. I also think that the list of next steps are logical and practical, however, I plan on asking questions regarding the time and cost estimates when the GISAG meet in March. Overall I was quite impressed by the company, O2 Planning & Design, who completed the work - I would recommend them.

City of Leduc – Sylvain Losier, Manager, Long Range Planning, Planning & Development

I have circulated the documents within our organization, and there are no comments.

Sturgeon County – Peter Tarnawsky, CAO

Council Feedback:

- Sharing GIS data for the benefit of positive regional planning efforts that would see each municipality provided the opportunity to grow would appear to be the reasonable and right thing to do.
- The current environment and the loss of trust that has occurred as a result of recent REF and other decisions makes agreeing to provide information difficult at this time
- Perhaps once the CRB as a public body with a tone of Trust and Mutual Respect and Benefit
- Any sharing would have to be reciprocal and access would have to be within certain defined parameters
- As far as responsibility to pay... The decision of the CRB has in the past been and should remain “that the Province should pay” either directly or through the North Saskatchewan RAC.
- Another options could be a private enterprise that undertakes this on a profit basis.
- No appetite to fund this on a Regional Cost Sharing basis with the cost to Sturgeon of >$20,000 for the $680K
- Concern regarding the indirect cost and impact on municipal staff
- The $11M full cost is another story
- This is a matter of achieving regional sustainability that cannot adversely affect local sustainability

This is provided in addition to the earlier perspectives.

Motion to approve was originally defeated at the CRB, owing in part to:
(i) the desire of CRB members to better understand the project - some issue that Executive Summary was reviewed at Committee and full report came to CRB;
(ii) some questions as to whether the proposal impacted the autonomy of CRB municipalities (ie: providing access to otherwise proprietary data); and
(iii) questions whether CRGIS investment would duplicate the RAC (Regional Advisory Council) tools under development for North Saskatchewan Land Use Framework Plan.

Mayor Rigney posed the following perspectives:
- It would seem odd that the current ca. 2010 CRGP could be developed in absence of GIS data;
- The perspective of CRB on GIS implementation in 2010 was that it would only proceed where funded by the Province.
Policy #G005-Board Meeting Procedures

Motion
That the Capital Region Board approve the amendments to Policy #G005-Board Meeting Procedures as recommended by the Governance Committee.

Background

- CRB Administration has revised the existing Board Meeting Procedures Policy #G005 to account for changes in the Tabling and Postponing Motions. These changes are summarized below:
  - Section 5.1 of the Framework state: At the meeting at which the Capital Region Board administration report and recommendation are presented at the Capital Region Board must, by consensus, approve or reject the statutory plan or statutory plan amendment.
  - Section 5.2 In the event that consensus is not achieved a formal vote of the Capital Region Board must be conducted, in accordance with the voting and notification provisions of the Capital Region Board Regulation and the Board’s procedural bylaw.

Rationale

- The language used in section 5.1 of the Framework, specifically the use of the word “must”, details a mandatory action. Accordingly, a motion to table or postpone refer such determination to another meeting is not permitted.

- Section 5.2 of the Framework does not specifically state that such formal vote must occur at the same meeting as mentioned in section 5.1 of the Framework, the intention of these sections is that the formal vote takes place at the same meeting that consensus was unable to be achieved and that lead to the requirement of the formal vote.

- Notwithstanding the language in the Regulation and the Framework that indicates a mandatory direction, if the Capital Region Board felt unable to make a decision as additional information would be necessary in order to properly make the decision on the particular matter before the Board, it would be implicit in the Regulation that the Board has the capacity to refer the matter to Administration to bring forward the additional information that would assist with making the decision.
PURPOSE
To regulate the proceedings of the Capital Region Board meetings.

POLICY
The Capital Region Board shall conduct Board Meetings efficiently, effectively and in an orderly manner in accordance with approved guidelines.

GUIDELINES
1. DEFINITIONS IN THIS POLICY:
   a. “Act” means the Municipal Government Act, R.S.A. 2000, c.M-26, any regulations thereunder, and any amendments or successor legislation thereto;
   b. “adjourn” used in relation to any meeting means to terminate the meeting;
   c. "amend a motion previously adopted" means to bring forward to a later meeting an amendment to a previously successful motion;
   d. “Board Member” means a representative of a municipality on the Capital Region Board;
   e. “Chief Executive Officer” means the Chief Executive Officer of the Capital Region Board or the designate of the Chief Executive Officer;
   f. “CRB” means the Capital Region Board;
   g. “in camera” means the portion of a meeting at which only Board Members and other persons specified by the Board may attend;
   h. ”orders of the day” means a requirement that the Chair or Interim Chair return to the pre-determined agenda, including adjourning at the pre-determined time, unless a motion to extend the discussion occurring at that time or a motion to extend the meeting is adopted;
   i. “participating municipality” means a municipality listed in the schedule of the Capital Region Board Regulation.
   j. “point of order” means a demand by a Board Member that the Chair or Interim Chair enforce the rules of procedure;
   k. “point of privilege” means a request made to the Chair or Interim Chair by a Board Member on any matter related to the rights and privileges of Board Members and includes:
      i. the comfort of Board Members
      ii. the conduct of CRB Employees or members of the public in attendance at the meeting;
      iii. the accuracy of the reports of the Board’s proceedings; and
      iv. the reputation of the Board and the Board Members;
   l. “postpone” means to delay the consideration of any matter, either:
      i. to later in the meeting;
      ii. to a specified time and/or date;
      iii. until the occurrence of an event;
      iv. or indefinitely
m. “public meeting” means a meeting of the Board at which members of the public may attend and may be invited to make verbal and/or written submissions to the Board;

n. “recess” means to take a short break in the order of business or an agenda item of a meeting with the intent of returning to that order of business or agenda item at the same meeting;

o. "reconsider" means to bring forward for consideration of the Board a motion that has already been brought before, and voted upon by the Board, earlier in the same meeting.

p. “refer” means to send a pending motion or agenda item to a Board committee or the CRB administration for investigation and report;

q. "renew" means to bring forward to a later meeting a previously defeated motion;

r. "table" means to lay the impending question aside temporarily when something else of immediate urgency has arisen.

2. APPLICATION AND INTERPRETATION
   a. This policy shall apply to all meetings of the Capital Region Board.
   b. To the extent that a matter is not dealt with in this policy, the Board shall have regard to Robert’s Rules of Order Newly Revised.
   c. The precedence of the rules governing the procedures of the Board is:
      i. the Municipal Government Act (Divisions 3 and 4, Part 15.1);
      ii. Capital Region Board Regulation;
      iii. this policy; and
   d. The Board may waive all or part of the provisions of this policy for a meeting if the Board Members approve by motion.

3. REGULAR AND SPECIAL MEETINGS
   a. Date and time for meetings of the Capital Region Board will be determined by the Chair or Interim Chair and the Chief Executive Officer.
   b. All meetings will be open to members of the public except for the in camera portion of the meeting.
   c. The Board has the authority to move in camera if a matter to be discussed is within one of the exceptions to disclosure in Division 2 of Part 1 of the Freedom of Information and Protection of Privacy Act.
   d. During the in camera portion of a meeting, the Board may not pass a motion, except to revert to a meeting held in public.

4. BOARD SEATING
   a. The Chair or Interim Chair shall occupy the seat at the head of the board table.
   b. The seats of the Board Members shall be chosen by Capital Region Board administration.

5. QUORUM
   a. No quorum is required.
6. DUTIES OF OFFICIALS
   a. Duties of the Chair or Interim Chair
      i. The Chair or Interim Chair shall:
         1. open and adjourn Board meetings;
         2. chair Board meetings;
         3. preserve order and decorum in Board meetings;
         4. rule on all questions of procedure;
         5. ensure that each member of the Board who wishes to speak on a debatable motion is granted the opportunity to do so;
         6. determine the speaking order when two or more members of the Board or others wish to speak; and
         7. decides who, aside from members of the Board, may address the Board.
      ii. The Interim Chair does not have voting rights.
      iii. The Chair does have voting rights as a member on the Board representing their municipality.
   b. Duties of the Vice Chair or Vice Interim Chair
      a. The Vice Chair or Vice Interim Chair shall chair Board meetings when the Chair or Interim Chair is absent or unable to act as Chair or Interim Chair and shall have all the powers and responsibilities of the Chair or Interim Chair under this policy during the absence or incapacity of the Chair or Interim Chair.
      b. The Vice Chair/Vice Interim Chair does have voting rights as a member on the Board representing their municipality.
   c. Duties of the Chief Executive Officer
      i. The Chief Executive Officer shall, subject to Division 3 and 4, Part 15.1 of the Municipal Government Act and the Capital Region Board Regulation:
         1. provide the Board with information and advice with respect to the operation of the CRB;
         2. when requested, provide information and advice to the Chair or Interim Chair and Board on procedural matters in Board Meetings;
         3. ensure all minutes of the meetings of the Board are recorded and provide secretariat functions for Board Meetings;
         4. receive recommendations for resolutions and make them available to each Board Member; and
         5. review proposed policies to ensure compliance with this policy and to advise the proponent and the Board of the existence of complementary and conflicting provisions in other policies.

7. THE CONDUCT OF A BOARD MEETING
   a. Agenda
      i. The proposed agenda for each Board Meeting shall be established by the Chair or Interim Chair and the Chief Executive Officer.
      ii. The proposed agenda shall include:
          1. all recommendations for resolutions received in accordance with 9.a.i; 9.a.ii; and 9.a.iii;
          2. all matters scheduled to that Board Meeting by prior resolution of the Board; and
          3. such other items of business as determined by the Chair or Interim Chair and Chief Executive Officer.
      iii. In establishing the agenda, the Chair or Interim Chair and Chief Executive Officer may establish a specific time for the introduction of and debate on any agenda item.
      iv. The first order of business at any Board Meeting shall be consideration of the proposed agenda and adoption of it, subject to any amendment that the Board may approve.
v. The order of business at a Board Meeting shall be the order of the items on the adopted agenda.

vi. After adoption of the agenda, the Board may alter the order of the items on the agenda, by vote, for convenience of the meeting.

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b. **Rules Governing Debate**

i. A motion must be made by a Board Member before the Board can debate an item before the Board.

ii. A seconder to a motion is not required.

iii. All discussion at a meeting of the Board shall be directed through the Chair or Interim Chair.

iv. A Board Member who has made a motion may speak either in favour of, or in opposition to, the motion.

v. Notwithstanding 7.b.iv:

   1. a Board Member may ask questions of the CRB administration or other Board Members on any motion or amendment to a motion;
   2. a Board Member may speak to answer questions put by other Board Members; and
   3. a Board Member who has made a motion may speak last to close the debate.

vi. The Chair may participate in debate on any matter before the Board by relinquishing the chair.

vii. The Chair may make a motion on any matter on the agenda but before doing so the Chair must relinquish the chair to the Vice Chair until the vote on the motion has been taken.

viii. A member of the Board who is speaking may be interrupted by the Chair or Interim Chair if:

   1. the member speaking is out of order; or
   2. the matter being addressed by the Board Member speaking is outside the jurisdiction of the Board.

ix. A Member of the Board who is speaking may only be interrupted by another Board Member on:

   1. a point of privilege; or
   2. a point of order.

x. The Board Member who is speaking when a point of order or privilege is raised shall cease speaking immediately.

xi. The Chair or Interim Chair may grant permission:

   1. to the Board Member raising the point to explain the point briefly; and
   2. to the Board Member who was speaking to respond briefly; but otherwise a point of order or privilege is not debatable or amendable.

xii. The Chair or Interim Chair must rule on a point of order or privilege and no vote will be taken unless there is a challenge by a member of the Board to the ruling.

xiii. The Chair or Interim Chair may seek advice from the Chief Executive Officer on a point of order or privilege or to determine whether a matter is within the jurisdiction of the Board.

xiv. Items that are on the agenda and do not have a recommended motion may be discussed by the Board at the discretion of the Chair/Interim Chair.

c. **Challenging the Ruling of the Chair or Interim Chair**

i. Any member of the Board may challenge the ruling of the Chair or Interim Chair on a point of order or privilege and state the terms of the challenge.

ii. When there is a challenge to the ruling of the Chair or Interim Chair, all further debate shall cease until the challenge has been dealt with by the Board.

iii. If a ruling of the Chair or Interim Chair is challenged, the Chair or Interim Chair shall briefly state the reasons for the Chair’s or Interim Chair’s ruling and then put the question to the Board.
iv. The Board shall decide the challenge, by vote, without debate.
v. The decision of the Board on the challenge is final.
vi. If the Chair or Interim Chair refuses to put the challenge to the Board, the Board may request the Vice Chair or Vice Interim Chair to assume the chair in order that the challenge to the Chair's or Interim Chair’s ruling can be put to the Board in accordance with the provisions of 7.c.iii to 7.c.v. The result of the vote is as binding as if conducted under the Chair or Interim Chair and the Chair or Interim Chair shall abide by the result.

8. MAINTAINING ORDER IN BOARD MEETINGS
   a. Order in Board Meetings – Board Members
      i. The Chair or Interim Chair may call to order any member of the Board who is out of order.
      ii. A member of the Board who is called to order must cease talking or otherwise engaging in the activity specified by the Chair or Interim Chair in the call to order.
      iii. When a Board Member has been called to order but persists in breaching the order of the Board, the Chair or Interim Chair may name the member and declare the offence.
      iv. The Chief Executive Officer shall ensure the offence is noted in the minutes.
      v. If a member of the Board who has been named apologizes to the Board and withdraws the offensive statement or action, then the Chair or Interim Chair may direct that the notation of the offence be removed from the minutes.
      vi. A Board Member who is called to order or named may immediately thereafter challenge the ruling of the Chair or Interim Chair and state the terms of the challenge.
      vii. When there is a challenge to the ruling of the Chair or Interim Chair, all further debate shall cease until the challenge has been dealt with by the Board.
      viii. A challenge of the Chair’s or Interim Chair’s ruling shall follow those procedures outlined in 7.c.iii to 7.c.v.
   b. Order in Board Meetings – The Public
      i. Only Board Members, the Chief Executive Officer, and those individuals authorized by the Chief Executive Officer may be present on the floor of the Board Meeting.
      ii. A person not listed in section 8.b.i may be present on the floor of the Board Meeting if that person has first received the approval of the Chair or Interim Chair.
      iii. The Chief Executive Officer, an employee or consultant authorized by the Chief Executive Officer may address the Board from the floor of the Board Meeting, if recognized by the Chair or Interim Chair.
      iv. A person not listed in 8.b.i may address the Board from the public gallery with permission of the Chair or Interim Chair. A Board Member may, through the Chair or Interim Chair, request permission for an employee of that municipality to address the Board.
      v. No person present in the public gallery or on the floor of the Board Meeting shall cause any disturbance, interrupt any speaker or interfere with the action of the Board.
      vi. The Chair or Interim Chair may call to order any person on the floor or in the public gallery who has created a disturbance and may expel that person from the Board Meeting.

9. RULES FOR MOTIONS
   a. Motions
      i. Unless the Board agrees otherwise by vote or the motion is a recommendation from a Board Committee, a motion to be made at a Board Meeting must be given to the Chief Executive Officer in writing at least seven days before the Board Meeting at which the motion is to be considered.
      ii. The Chief Executive Officer shall make all motions filed under 9.a.i available to the Board Members at the earliest possible time.
iii. 9.a.i does not apply to any of the motions set out in 9.a.ix.
iv. A motion must be made prior to a vote occurring.
v. A recommendation in a report is not a motion until a Board Member moves it.
vi. The Board shall consider only one motion at a time.
vii. After a motion has been moved, it may not be withdrawn without the consent of the Board.
viii. The following motions are not debatable by the Board:
1. to raise a point of privilege;
2. to call for orders of the day;
3. to raise a point of order;
4. to withdraw a motion;
5. to recess or adjourn the meeting;
6. to challenge a ruling of the chair; or
7. to table a motion.
ix. When a motion has been made and is being considered, no Board Member may make any other motion except:
1. as set out in 9.a.viii;
2. to amend the motion;
3. to refer the main motion to the CRB administration, a Board Committee or some other person or group for consideration; or
4. to postpone consideration of the motion.
x. Motions shall have precedence in accordance with the order that they are listed in 9.a.viii and then in 9.a.ix(2), 9.a.ix(3) and 9.a.ix(4).
xii. If a motion is voted on by the Board, a Board Member who voted on the prevailing side may move, at the same meeting or continuation thereof, that the vote be reconsidered, provided that the vote has not caused an irrevocable action.
xiii. If a motion fails, the same motion shall not be renewed unless one year has passed since the date that the motion was defeated.
xiv. Notwithstanding 9.a.xi, if a motion is defeated, a Board Member may introduce a motion calling on the Board to renew the motion if:
1. the Board Member who wishes to have the Board renew a motion provides previous notice by setting out in writing what special or exceptional circumstances warrant further debate; and
2. the Board grants leave to a Board Member to introduce a motion calling on the Board to renew the motion.
xv. If a motion succeeds, a Board Member may introduce a motion calling on the Board to rescind the motion or amend a motion previously adopted provided that the Board Member sets out in writing what special or exceptional circumstances warrant further debate.
xv. A motion to rescind, renew or amend a motion previously adopted may not be introduced where the vote on the original motion has caused an irrevocable action.
xvi. The Board may consider in camera only matters outlined in 3.c of this policy.
xvii. The Board may not vote on motions in camera except a motion to revert to a meeting held in public.

b. Amendments to Motions
i. A Board Member who moved a motion may not move an amendment to it.
ii. Any Board Member, other than the Board Member who moved the main motion, may move to amend a motion.
iii. The Board Member who moved the main motion may move an amendment to the amendment.
iv. The Chair or Interim Chair shall allow only:
1. one amendment to the main motion; and
2. one amendment to the amendment to be advanced and considered at a time.

v. The Board must vote:
   1. on an amendment to the amendment, if any, before voting on the amendment; and
   2. on any amendment before voting on the main motion.

vi. When an amendment is on the floor, the Board may debate only the merits of the amendment and shall not debate the merits of the motion to which it is applied.

vii. The Chair or Interim Chair shall not put the main motion under debate to a vote until all amendments to it have been put to a vote of the Board.

viii. Once all amendments to the main motion have been voted on, the Chair or Interim Chair shall put forth the main motion under debate to the Board for a vote, incorporating the amendments that have been passed by the Board.

ix. Notwithstanding anything in this section, a Board Member who has moved a motion may restate the motion to include a proposed amendment if no other Board Member objects.

c. Motions to Refer
   i. Any Board Member may move to refer any main motion, and any pending amendments, to a Board Committee or the CRB administration for investigation and report.
   ii. A motion to refer:
       1. is debatable;
       2. precludes any further amendment to the main motion, until the motion to refer has been addressed by the Board; and
       3. shall include instructions indicating, who the receiving body is, what the receiving body is to do and the date by which the Board requires a response.
   iii. The Chair or Interim Chair shall refuse to accept a motion to refer that would have the effect of defeating the motion to which it applies.
   iv. Once the receiving body commences its deliberations, the receiving body may recommend for adoption any amendment to the resolution so referred without regard to any amendments considered by the Board prior to the referral. The resolution proposed by the receiving body shall be as if introduced to the Board for the first time and the Board shall be free to consider any amendment to it.

d. Splitting a Motion
   i. When a motion is lengthy, complicated or contains a series of independent issues dealing with different subjects, a Board Member may request that the motion be split into parts so that each part may be voted upon individually.
   ii. A Board Member who requests that a motion be split into parts may reword the parts so that the syntactical integrity of each part is maintained, but in doing so shall not change the intent of each part.
   iii. The Chief Executive Officer may, on the request of the Chair or Interim Chair, assist with phrasing the motions that would result from a motion being split so that the motions may be dealt with most effectively by the Board.

e. Tabling Motions
   i. A motion may be tabled by a vote of the Board, with the exception of a Regional Evaluation Framework (REF) application.
   ii. A motion to table:
       1. includes all other motions; and
       2. takes precedence over any other motion connected with the motion being tabled.
   iii. A motion that has been tabled may be raised from the table at any time by a vote of the Board.
iv. If a motion to raise a motion from the table is defeated, it may only be made again after the Board has addressed some other matter or business.

v. When a tabled motion is raised from the table, it is brought back with all motions connected with it, exactly as it was when laid on the table.

vi. A motion fails if it is not raised from the table within one year of being tabled.

vii. Section 5.1 of the Framework, a motion to table such determination to another meeting is not permitted. If the Board is unable to make a determination and additional information is necessary to duly make the decision, the Board has the capacity to refer the matter to Administration to bring forward additional information to assist with making the decision.

f. Postponing Motions
i. A motion may be postponed, with the exception of a Regional Evaluation Framework (REF) application:
   1. to later in the meeting to enable the Board to deal with other more pressing matters; or
   2. to a specified time and/or date; or
   3. until the occurrence of an event; or
   4. indefinitely.

ii. A motion to postpone:
   1. includes the motion being postponed and all connected amendments; and
   2. takes precedence over any other motion connected with the motion being postponed.

viii. A motion that has been postponed under 9.f.i(1) or 9.f.i(4) may be considered at any time by a vote of the Board.

ix. If a motion to consider a postponed motion is defeated, it may only be made again after the Board has addressed some other matter or business.

x. When a motion that has been postponed is brought back to the Board, it is brought back with all motions connected with it, exactly as it was when postponed.

xi. If a motion has been postponed to a specified time and/or date or until the occurrence of an event, the motion is automatically placed on an agenda for consideration at that time and date or upon the occurrence of the event.

xii. Section 5.1 of the Framework, a motion to postpone such determination to another meeting is not permitted. If the Board is unable to make a determination and additional information is necessary to duly make the decision, the Board has the capacity to refer the matter to Administration to bring forward additional information to assist with making the decision.

g. Notice of Motion
i. Prior to the Board adjourning a regular Board Meeting, Board Members will be given an opportunity to bring a notice of motion by reading into the minutes the notice of motion and by providing the Chief Executive Officer with a written copy of the notice.

ii. A notice of motion given at one regular Board Meeting will automatically appear on the agenda of the next regular Board Meeting unless otherwise directed or agreed upon by the Chair/Interim Chair or Chief Executive Officer or the Notice Provider.

iii. A notice of motion cannot be made at a special Board Meeting.

iv. A motion on notice is not debatable until a Board Member moves the motion.

10. RECORDED VOTES
a. Any time before a vote is taken by the Board, a Board Member may request that the vote be recorded.
b. When a vote is recorded, the minutes must indicate which Board Member requested the recorded vote and list the municipalities voting for or against the motion. Additionally, those municipalities that are absent will be recorded in the minutes even though their vote is recorded in favour as per 11.d.

11. VOTING
   a. Subject to 6.a.ii each Board Member has one vote.
   b. A motion will be carried when a motion is supported by not fewer than 17 Board Members from participating municipalities that collectively have at least 75% of the population of the Capital Region.
   c. If the representative of a participating municipality that is a town or village is unable to attend a meeting of the Capital Region Board, the Capital Region Board, on request of the participating municipality, shall provide for an alternative method of representation for the participating municipality at that meeting.
   d. Subject to 11.c, if a Board Member is not present when a vote of the Capital Region Board is taken, or abstains from voting, the Board Member is deemed to have voted in the affirmative.

12. INFORMATION REQUESTS
   a. A Board Member wishing to make an information request of CRB administration shall present it to the Board at the appropriate time on the agenda of a regular Board Meeting.
   b. If the Chief Executive Officer is unable to answer the information request at the meeting, the Chief Executive Officer will forward the request to the appropriate entity for a response.
   c. Unless the information request specifies that the Board Member wishes the information to appear on a subsequent agenda, the information will be forwarded directly to all Board Members.
   d. If the Chief Executive Officer determines that the requested information should not be supplied, as the corporation has an obligation to keep it private under the provisions of the Freedom of Information and Protection of Privacy Act, the Chief Executive Officer shall file a response with the Board stating the reasons for withholding the information.
   e. If the Chief Executive Officer determines that the time and cost of compiling the information will be considerable, the Chief Executive Officer shall request a resolution of the Board to approve the request either at the same meeting or a future meeting.
   f. If a Board Member who has made an information request wishes to withdraw the request at the appropriate time on the agenda, that Board Member shall so inform the Board.

13. ADJOURNING THE MEETING
   a. When the Chair or Interim Chair is satisfied that all the business and purposes of a meeting have been addressed, the Chair or Interim Chair may adjourn the meeting or request a motion to adjourn the meeting.
   b. Any Board Member may move to adjourn the meeting at any time.

____________________________
Chief Executive Officer
LAND USE COMMITTEE

Committee Report #45
April 11, 2013

1. **Committee Meeting — March 28, 2013**
   - **Next Meeting:** April 25, 2013, Kings College Rm N101

2. **Advisory Group Reports**

   The Committee was updated on recent work being undertaken by the Planning Advisory Group (PAG) and GIS Advisory Group (GISAG). In addition to reviewing the CRGIS Spatial Data Demonstration Report, PAG continues to work on the interpretation of the Cluster Country Residential Area and Non-PGA policies in the Growth Plan, and the use of the Population and Employment Forecast in the implementation of REF. The GISAG met to review and provide their support for the CRGIS Spatial Data Demonstration Report.

3. **2012 Land Use Committee Business Plan**

**CRGIS Spatial Data Demonstration Project:**

Following a presentation outlining the additional review and input since the Board postponed a decision on the Report in January 2013 the Committee unanimously supported a motion to recommend to the Capital Region Board that the CRGIS Spatial Data Demonstration Project be received as information. Receiving the Report as information addresses concerns raised by Board members that approval of the Report would commit the Board to implementation of the recommendations in the Report, and therefore, the costs associated with the recommendations. In this regard, the extent of CRGIS implementation would be subject to the funding approved in the CRB’s Business Plan and Budget.

4. **2013 Land Use Committee Business Plan**

Pursuant to the Committee’s direction the Chair and CRB Administration reviewed the 2013 Interim Land Use Committee Business Plan and Budget following the Provincial Budget announcement. The announcement confirmed that CRB funding for 2013 would remain at $3,000,000 as originally planned for in the 2013 Interim Business Plan and Budget. In this regard, the Chair and CRB Administration recommended that the Committee’s budget not be revised, however, the Business Plan be amended to focus on promoting and developing regional cooperation and collaboration with the addition of an Integrated Regional Intermunicipal Planning Framework project and the deferral of a number of corridor studies. The Committee approved a motion that recommended the Governance Committee approve the revised 2013 Land Use Committee Business Plan and Budget.

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1. Last Committee Meeting – March 22nd, 2013
   - Next Committee Meeting: May 24th, 2013

2. Transit Committee Project Updates

   Regional Transit Governance Study – Business Case
   The purpose of this project is to understand the merits and feasibility of establishing a Regional Transit Commission for the Alberta Capital Region. Included in the project is a communication strategy and plan to support the engagement of the Province and other key stakeholders in understanding the intent of this work and their involvement. The AECOM Consulting team provided the committee with an overview of the skills and experience of the project team and provided a comprehensive overview of the work plan and deliverables. The Transit Committee is very pleased with the breadth of knowledge and experience of the AECOM team and feel very confident about the proposed work plan, timelines and proposed deliverables. The first phase of the project will involve interviews and data collections from a broad base of stakeholders to begin to prepare a conceptual organization structure to use as a basis for the analysis of different scenarios. The estimated completion date for this project is March 2014.

   Regional Fare System Study & Implementation Plan
   The committee received an update from the working committee on the progress towards the procurement of the Smart Card Technology. The intent is to apply for Green TRIP funding once the three Councils (Edmonton, St. Albert, and Strathcona) have passed council resolutions to secure the municipal portion of the capital dollars for this project. The next steps will involve identifying the business requirement and technical specifications for an RFP to select a vendor. The working committee is targeting to issue the RFP early in 2014.

   The implementation of a common smart card system for the region will allow the current operators to continue to set their own fares and will provide operating efficiencies and a more convenient experience for riders.

   Green Trip
   The Green TRIP program is still in the Provincial Budget. The Transit Committee plans to revisit the regional priorities once Round 2 funding is announced.

   Bus Modernization
   The City of Edmonton has written a letter to the Province asking for confirmation of the Province’s regarding its intention to proceed with the Bus Modernization Policy. The operators are looking for clarification as to whether or not the Province still sees this as an issue.

______________________________  Don Iveson, Chair Regional Transit Committee
GOVERNANCE COMMITTEE

Committee Report #37

April 11, 2013

1. Committee Meeting – March 18, 2013
   - Next Meeting: April 15, 2013

2. 2013 Governance Committee Priorities

   Policy #G005 – Board Meeting Procedures
   The Committee passed a motion to present to the Board to amended Policy # G005 – Board Meeting Procedures as follows:
   - Section 5.1 of the Framework states: At the meeting at which the Capital Region Board administration report and recommendation are presented at the Capital Region Board must, by consensus, approve or reject the statutory plan or statutory plan amendment.
   - Section 5.2 In the event that consensus is not achieved a formal vote of the Capital Region Board must be conducted, in accordance with the voting and notification provisions of the Capital Region Board Regulation and the Board’s procedural bylaw.

3. Other Business

   Update to CRB Growth Plan
   CRB administration updated the Committee on the role of the CAO Advisory Committee.

   2013 Business Plan
   CRB administration advised the Committee that they will be reviewing the 2013 Business Plan.

_____________________________________________________
Camille Berube, Chair, Governance Committee
1. **Committee Meetings—March 28, 2013**
   - Next Meeting: May 23, 2013

2. **May 30th Regional Organizations Gathering – FCM Vancouver**
   Mr. Lagore provided an update to the Committee. The afternoon session is limited to Board members and their Alternates only. The afternoon agenda will have a workshop format and include a speaker. Following the workshop, there will be a reception that is open to all elected officials from participating organizations. Mr. Lagore encouraged those who plan to intend to attend to register as soon as possible as the room maximum is 65 attendees and is filling up quickly.

3. **Business Plan**
   With the interim Business Plan for 2013 approved with a $3 million dollar budget and the Provincial budget confirmation in March confirming that amount, Chair Mayor Krischke suggested that the Committee should assume that the Committee’s interim business plan and budget will remain as is.

   Ms. Wieringa updated the Committee with the results of the RFP that closed in February. Mr. Godfrey Huybregts from Marcomm Works has been awarded the contract to support the Committee’s efforts associated with media, issue management and strategy development. This firm offers very competitive rates. Mr. Huybregts is a seasoned senior resource with experience in reporting, provincial public affairs, communications & media. He has an equally competent partner who will be able to provide support when Mr. Huybregts is away. Going forward, we have asked Mr. Huybregts to attend the Board meetings only when we believe there will be a strong &/or controversial media presence. Media advisory procedures have been also been streamlined to reduce the amount of effort needed for regular Board meetings.

   With the Provincial priorities and the Board’s 2013 funding now known, Administration will draft a Committee strategy that integrates the Committee’s scope of media, communications, education and advocacy for the Committee to review and refine.

   A motion to move into in-camera was carried by the Committee.

   - **Advocacy Update**
   - **Advocacy and Communications Requirements of the CRB Committees**
   - **Advocacy Activity Round Table**

   A motion to revert back to the public meeting was carried by the Committee.

   Mayor Greg Krischke, Chair Advocacy and Communications Committee