



TOWN OF COCHRANE

# GROWTH MANAGEMENT STRATEGY

/ MAY 2013



# CONTENTS

## EXECUTIVE SUMMARY 5

## INTRODUCTION

1.0	INTRODUCTION	7
2.0	PURPOSE	7
3.0	METHODS AND PROCESS	8
4.0	COMMUNITY VISION	9
5.0	POLICY CONTEXT	10
5.1	MUNICIPAL CONTEXT	10
5.2	BACKGROUND	10
5.3	TOWN PLANS AND POLICIES	11
5.4	REGIONAL CONTEXT	12
5.5	PROVINCIAL CONTEXT	13
6.0	GROWTH PRINCIPLES AND GOALS	13

## ANALYSIS

7.0	LAND USE PROJECTIONS	15
7.1	LAND DEMAND	15
7.1.1	Residential	15
7.1.2	Industrial	15
7.1.1	Business Park Office	16
7.1.2	Employment	18
7.1.3	Commercial	18
7.1.4	Institutional	19
7.1.5	Summary of Land Requirements	19
7.2	LAND SUPPLY	20
7.2.1	Residential	20
	Existing Designated Land	20
	Future Residential Areas	20
	(Gross developable areas)	
	Residential Summary	20
7.2.2	Industrial	21
	Existing Designated Land	21
	Area Structure Plans	21
	Industrial Supply Summary	21
7.2.3	Business Park Office	22
	Existing Designated Lands	22
	Area Structure Plans	22
	Office Supply Summary	22
7.2.4	Employment	22
7.2.5	Commercial	22
	Existing Designated Lands	22
	Area Structure Plans	23
	Commercial Supply Summary	23
7.2.6	Institutional	23
7.2.7	Summary of Land Supply	23
7.3	LAND REQUIREMENTS VS LAND SUPPLY	24
8.0	INFRASTRUCTURE REVIEW	25
8.1	WATER SERVICING	25
8.1.1	Water Diversion Licenses	25
8.1.2	Water Supply Treatment	25
8.1.3	Water Storage and Distribution	26

8.2	SANITARY SERVICE	26
8.2.1	Sanitary Disposal	26
8.2.2	Sanitary Collection	26
8.3	TRANSPORTATION	27
8.4	STORM	27
8.5	SOCIAL INFRASTRUCTURE	27
9.0	IMPLICATIONS FOR GROWTH	28
9.1	50 YEAR LAND SUPPLY	28
9.2	PRIORITY LANDS TO CONVERT	29
9.3	INTENSIFICATION OF USES	30
9.4	CHALLENGES FOR ACHIEVING THE COMMUNITY VISION	31
9.5	OVERARCHING PURPOSE FOR GROWTH MANAGEMENT	31

## FRAMEWORK AND ACTION PLAN

10.0	GROWTH MANAGEMENT STRATEGIC FRAMEWORK	33
11.0	GROWTH MANAGEMENT ACTION PLAN	34
11.1	FURTHER STUDIES TO ADDRESS GROWTH ISSUES	34
11.1.1	Intensification and Infill Parameters	34
11.1.2	Employment Land Conversion Study	35
11.1.3	Regional Servicing Solutions	35
11.1.4	Economic and Environmental Resilience	35
11.3	GMS FRAMEWORK	36
11.4	ECONOMY	38
11.5	NATURAL ENVIRONMENT	38
11.6	SOCIAL/CULTURE	38
11.7	GOVERNANCE	38

A person wearing a cowboy hat and a dark jacket is riding a dark horse. They are positioned on the left side of the frame, looking out over a vast, hilly landscape. The horse is dark-colored with a white blaze on its face. The background shows a wide expanse of land with scattered trees and buildings, under a clear sky. The overall tone is sepia or aged. The text "EXECUTIVE SUMMARY" is overlaid in the center-right of the image.

# EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

The Town of Cochrane Growth Management Strategy is a non-statutory planning document that aligns other plans, policies and strategies for the orderly and appropriate growth of Cochrane, as identified in the visions and objectives of the Cochrane Sustainability Plan and Municipal Development Plan.

The Growth Management Strategy builds on the structure provided by the Cochrane Sustainability Plan and Municipal Development Plan and answers four critical questions:

1. How much land is required to accommodate growth?
2. What are the infrastructure requirements to accommodate the projected growth?
3. Does the land supply match the demand over the next 50 years?
4. What growth management initiatives are required to achieve the Town's overall goals and future vision?

Using a “shift-share” projection model for residential land demand and a combination of population and employment projections for commercial and industrial land demand, the analysis shows that there is more than enough land available to provide a 50-year supply for the growth anticipated in Cochrane. However, the analysis does show that infrastructure upgrades will need to be completed continuously to accommodate the incremental growth and that additional water licences will be needed beyond a population of approximately 35,000 to 40,000.

In order to accommodate all of the land demands, some redistribution from the residential and commercial land supply may need to be completed in order to provide adequate industrial land. However, the amount of redistribution is minimal and easily exceeded by the total land supply available.

Finally, in order to ensure the appropriate, orderly growth outlined in the visions of the Cochrane Sustainability Plan and Municipal Development Plan, all other plans and strategies prepared by the Town of Cochrane will need to reflect the smart growth principles found in this Growth Management Strategy.

# INTRODUCTION



## 1.0 / INTRODUCTION

The Town of Cochrane lies in the scenic Bow Valley, midway between Calgary and Banff National Park. Over the past 100 years, Cochrane has grown from a small hamlet of a few hundred people to a dynamic town that is home to thousands. A unique combination of scenic beauty, western heritage, and a relaxed friendly atmosphere attracts new residents from Calgary, Alberta, and beyond, boosting its population to 17,580 people in 2011. Cochrane has experienced waves of growth over the last 35 years, with peaks in the 1970s and 1990s. Between 1996 and 2001, Cochrane was the fastest growing small urban centre in Canada, having grown 59%. In 2004, the need for developable land led Cochrane to annex approximately 1,225 additional hectares from Rocky View County.

The Town is now at a critical juncture in terms of its future size, urban form and character. Situated within the fast-growing Calgary region, Cochrane's population could more than triple over the next 50 years. While demographics and economics will largely drive growth, Cochrane's high quality of life and strong sense of place enhance its potential to attract an even larger share of the region's projected growth. Future growth needs to be managed, not limited. The form, density and character of future development needs purposeful guidance to meet the community vision established through the Community Sustainability Plan (CSP) and Municipal Development Plan (MDP).

## 2.0 / PURPOSE

The Town of Cochrane's Growth Management Strategy (GMS) is a framework that provides direction for how growth will be guided in light of the community's vision for the future. Growth management is a fundamental tenet of Town planning across all disciplines. This strategy aids in aligning multiple Town priorities and initiatives that are being undertaken or are a short-term priority based on a clear understanding of the 50 year growth projections (2012 to 2062). The intent of this GMS is to reflect the community vision, provide parameters for growth and a strategy to move forward. Generally, the GMS addresses the following questions:

- **How much land is required to accommodate growth?**
- **What are the infrastructure requirements to accommodate the projected growth?**
- **Does the land supply match the demand over the next 50 years?**
- **What growth management initiatives are required to achieve the Town's overall goals and future vision?**

## 3.0 / METHODS AND PROCESS

Methods used to develop this growth management strategy include:

- conducting policy and plan review;
- mapping and analysis of natural and built environment data;
- estimating the distribution of existing land uses and jobs;
- reviewing the existing land use pattern and land use distribution relative to current population;
- recognizing Cochrane's distinctive position within the Calgary Regional Partnership and its unique position to accommodate growth in the region;
- projecting future population and household size;
- projecting future jobs;
- using precedents and prototypes to estimate land requirements for new uses;
- identifying overall development goals from existing Town plans;
- analyzing the aspects of growth that do not currently have a management approach in place; and
- identifying initiatives that the Town will need to undertake to achieve the development goals.

The GMS process started by taking the vision and goals of the CSP and the MDP; considering how much land is likely to be required to accommodate growth over the next 50 years; and developing a framework for integrating all the necessary initiatives that will result in the community vision.

Projecting land requirements is an ongoing process with refinement occurring as new data is available. Cochrane's current land projection methods are derived in part from methods used in the Growth Review (2001), the Calgary Regional Partnership's 2008 projections\*, and the most recent data available from the Federal Census (2011) wherever possible.

The development of the Strategy was carried out in ten phases as outlined below.

### Phase 1 / Current Situation

- Review current plans and policies
- Document the assets of the built and natural environments
- Examine past population growth and projections
- Review the current relationship of various land uses to population

### Phase 2 / Future Growth

- Project population to the year 2062
- Estimate land requirements using various methodologies, compare with past trends and the current situation in Cochrane
- Review of local and regional plans to understand current development trends and anticipated changes

### Phase 3 / Land Available for Future Growth

- Review existing plans to estimate land that will be suited to accommodate growth
- Estimate land that is currently being utilized for various land uses
- Identify areas within the Town that will be suitable for redevelopment
- Identify land that may not be suited for future development under the environmental reserve provisions of the *Municipal Government Act* and current Town policies

### Phase 4 / Select Methodology Best Suited to Estimate Land Use Needs

- Review results of the projections using different protocols and methodologies relative to historic trends specific to the Town
- Review past projections used by the Town in estimating the needs for services, roads, levies, etc.
- Use "best judgement" tuned to the unique position of the Town within the Calgary Region to select the appropriate methodology to estimate future land use needs of the Town to 2062

### Phase 5 / Estimate Future Land Use Needs and Areas to Accommodate Growth

- Estimate future land use needs for residential, employment (industrial/business park office), commercial and other urban land requirements
- Identify areas within the Town that will accommodate future growth to the year 2062
- Determine whether there is sufficient land within the Town to accommodate the projected growth and identify any shortfalls or surpluses

\*Called the Context for Change Management in the Calgary Regional Partnership Area: Changing People in a Changing Region Part I: Future Population, Labour Force and Employment in the Calgary Regional Partnership Area (January 2008) and herein called CCM



#### Phase 6 / Infrastructure Review

- Review existing infrastructure plans and strategies to identify generally future expansions and capacities
- Compare infrastructure strategies and plans to projected growth and determine where any shortfalls or surpluses may exist
- Identify opportunities or constraints based on infrastructure capacity

#### Phase 7 / Identify Growth-Related Principles / Goals

- Reference the CSP and the MDP to establish a series of principles / goals that clearly articulate the Town's goals as they apply to future growth

#### Phase 8 / Understand the Implications for Growth

- Conduct an analysis based on the projection data and the policy context to understand the trends, opportunities and constraints

#### Phase 9 / Determine Existing Policy / Management Gaps

- Review the Town's overarching plans, policy documents, and studies to determine if there are gaps between the community vision and growth management actions

#### Phase 10 / Establish an Action Plan to achieve Growth-Related Goals

- Review existing plans and strategies and identify their role in achieving the identified growth goals and the growth management strategy
- Identify any gaps in existing plans and strategies that need to be filled in order to achieve the identified goals
- Set out actions that need to be undertaken and are not addressed by existing plans and strategies.

## 4.0 / COMMUNITY VISION

strong relationships  
environmental stewardship respect the land  
pioneers of sustainability social well-being  
build on legacy of pioneering past community engagement  
small town atmosphere  
responsible growth rich heritage  
economic vitality

The community's vision for the future is contained in two overarching Town plans, the CSP and the MDP. The image above draws on the common themes between these two documents, and offers a summary vision for the purposes of this GMS. The CSP and the MDP provide significant direction regarding development goals and therefore implied growth management through a wide variety of policies with one specific reference outlining the general growth management approach:

**"Responsible growth management demands that the Town make every effort to meet the needs of a growing population, in an ecologically-aware and efficient manner, using limited natural, human, built, and financial resources" (MDP, p. 2).**

The importance of this vision is vital to growth management as it describes the goals for the community and provides direction for how growth should be managed to achieve this future state.

## 5.0 / POLICY CONTEXT

### 5.1 / MUNICIPAL CONTEXT

Numerous plans and studies, both statutory and non-statutory, address the physical development of the Town based on predictions of growth and change. Many of the older plans and policies are not always consistent with Cochrane's latest thinking as reflected in the CSP (2009) and the MDP (2008). These recently adopted plans are more in keeping with regional and provincial plans and policies and are consistent with Cochrane's shift to higher-density and more sustainable development.

Many forces will shape future land use in Cochrane. Fashioning a vision of tomorrow relies, to some degree, on information available today. The GMS draws from a number of resources to predict and interpret the many and varied influences. Historic growth patterns and trends provide some insights on how the Town has developed in the past and, in some instances, gives an indication of how development may happen in the future.



## 5.2 / BACKGROUND

The Town of Cochrane was a relatively small rural service centre as recently as the 1970s. During the past 40 years, the Town has grown to a population that is approaching 18,000. During the next 50 years, it is expected that equally strong growth will occur.

Over the last 40 years, Cochrane has experienced steady and at times pronounced growth. The following outlines the Town's growth since 1971 and the average annual growth rate between 1971 and 2011:

**TABLE 1**

YEAR	POPULATION	AVERAGE ANNUAL RATE
1971	1,089	
1976	1,450	6.6%
1981	3,544	29.9%
1986	4,190	3.7%
1991	5,267	5.1%
1996	7,424	8.2%
2001	11,798	11.8%
2006	13,760	2.9%
2011	17,580	5.6%

A review of recent population changes (i.e. 1996 to 2011) indicates that there has been an average annual growth rate of 9.1%.

A review of the Town's population relative to the total number of dwelling units provides insight into how the average household size in the Town is evolving.

**TABLE 2**

YEAR	POPULATION	NUMBER OF HOUSEHOLDS	AVERAGE HOUSEHOLD SIZE
1996	7,424	2,410	3.1
2001	11,798	3,880	3.1
2006	13,760	4,840	2.8
2011	17,580	6,824	2.6

Household size remained constant between 1996 and 2001 and, since then, there has been a constant drop with the average household size becoming 2.6 persons for Cochrane in 2011, a 16% reduction.

### 5.3 / TOWN PLANS AND POLICIES

The Town has produced a series of statutory plans, non-statutory plans and studies that provide a local policy context for the GMS. Higher level policy plans are very recent, while many of the more detailed development and redevelopment plans have been in effect for many years. The following plans and studies were reviewed:

- Cochrane Sustainability Plan (May 2009)
- Town of Cochrane Municipal Development Plan (October 2008)
- Downtown Area Redevelopment Plan (2005)
- Town of Cochrane Growth Review (2001)
- Griffin Road Area Redevelopment Plan (1994, Amended 2001)
- Various Area Structure Plans and Concept Plans (1990 through 2011)
- Quarry Planning and Design Framework (November 2011)

In general, the natural environment, western heritage, and small town atmosphere are consistently recognized as important community assets that need to be respected in future growth strategies. Cochrane's vision for a greener and more sustainable future is supported by recent policy plans such as the MDP and the CSP.

#### Key findings from this review include:

- Cochrane's strong desire to be a sustainability "pioneer."
- Some previously approved ASPs are not consistent with Cochrane's current MDP requirement of 19.8 units per hectare.
- Sustainable development implies a greater emphasis on intensification - growing in and up, rather than out.
- The Downtown ARP suggests building forms and uses that are not consistent with recent development. There may be a need for stronger implementation strategies (incentives, zoning, technical assistance) to achieve higher density, a stronger pedestrian network, and higher quality design of buildings and public space.
- The CSP and the MDP articulate a broad vision for growth management through goals, targets, policies and a land use concept; however, few details are included.
- Area Structure Plans have been adopted for most of the lands within Cochrane and as a result growth is occurring in all areas of town.
- Older plans and policies (i.e., ASPs and infrastructure plans) adopted prior to 2009 may not align with the smart growth goals of the CSP, MDP or the Calgary Metropolitan Plan (CMP).
- The River Heights ASP and the Sunset Ridge Stage 2 ASP, the first two ASPs adopted since the completion of the CSP and the MDP are clearly in line with the two higher level Town planning documents.

## 5.4 / REGIONAL CONTEXT

Growth and land use planning in the larger Calgary region will, to some extent, determine the degree and speed at which Cochrane will grow. A review of plans in Rocky View County and the Calgary Regional Partnership's Calgary Metropolitan Plan (CMP) provide a regional planning context for the GMS. The following plans were reviewed:

- **Calgary Metropolitan Plan (2009)**
- **Rocky View 2060 Growth Management Strategy (2009)**
- **Cochrane Lake Hamlet Plan (2010)**
- **Cochrane North Area Structure Plan (2007)**
- **Intermunicipal Development Plan (2001)**
- **Rocky View County Municipal Development Plan (1998)**
- **Cochrane Lake Conceptual Scheme (August 1995)**
- **Bearspaw Area Structure Plan (1994)**

Ideally, planning by all levels of government is closely coordinated so that plans align and support each other. Rocky View County adopted a new Growth Management Strategy in 2009 — a key, high-level policy document. The County's GMS is currently under review with an amended plan anticipated in 2012/13. The Calgary Metropolitan Plan was also adopted in 2009, and updated in 2012.

### Key findings from this review include:

- Regional attitudes regarding appropriate density of future residential development and environmental protection are changing.
- Rocky View County's growth strategy describes complete communities with a mix of land uses.
- Rocky View County's plans call for lower density housing, and therefore appeals to a different market than Cochrane's plans, which focus on higher density housing and more walkable communities.
- The CMP's policies and principles support more growth for Cochrane, compact urban node development, intensification and transit-oriented development.
- The minimum residential density recommended in the CMP (8-10 upa) has already been incorporated into Cochrane's MDP.
- The CMP also includes a target of accommodating 25% of new population growth through the intensification of the existing urban footprint. This target has been included in the CSP as a target under Pathway 11.
- The GMS plans for growth under the regional servicing model espoused by the Calgary Regional Partnership.

## 5.5 / PROVINCIAL CONTEXT

Provincial plans and policies will exert additional and increasing levels of influence over local development patterns. In addition, provincial capital investments near Cochrane will offer new opportunities. The following Provincial plans and policies were reviewed to establish a Provincial context for the GMS:

- **Alberta Land-Use Framework**
- **Municipal Government Act**
- **The Water Act**
- **The Public Lands Act**

### Key findings from this review include:

- The full impact of the Provincial Land-Use Framework is still unclear, but it is likely to support Cochrane's vision for sustainable growth, compact development and a stronger approach to environmental protection.
- Cochrane and Rocky View County will both need to align with new policies contained in the Province's South Saskatchewan Regional Plan.
- Alberta Environment's implementation of *The Water Act* could potentially constrain the development of land in Cochrane if additional water licenses cannot be obtained. The Town has two options for accessing more water licences: by either acquiring new licences, or accessing capacity through a regional servicing strategy. Additional water conservation and water re-use could also extend the viability of the Town's existing water licences.

## 6.0 / GROWTH PRINCIPLES AND GOALS

In reflecting upon the CSP and the MDP's vision for the future, there are some distinctly unique aspects of growth for the Town of Cochrane. The community values a small town atmosphere that is both respectful of the Town's heritage and is a pioneering spirit in the pursuit of sustainability. Yet, the Town has additional direction on how to achieve the "responsible growth" declared in the vision(s). Upon reviewing the MDP in particular, it is clear that Smart Growth goals are at the core of achieving responsible growth management. While the commonly understood principles of Smart Growth are not documented directly in the MDP, this GMS infers that the following principles are the basic tenets of the MDP's growth policies:

1. "Mix land uses;
2. Take advantage of compact building design;
3. Create a range of housing opportunities and choices;
4. Create walkable neighborhoods;
5. Foster distinctive, attractive communities with a strong sense of place;
6. Preserve open space, farmland, natural beauty, and critical environmental areas;
7. Strengthen and direct development towards existing communities;
8. Provide a variety of transportation choices;
9. Make development decisions predictable, fair, and cost effective;
10. Encourage community and stakeholder collaboration in development decisions"
11. Develop in an orderly (phased) fashion, and;
12. Design at a neighbourhood and community scale to provide maximum economic and environmental resilience

(Smart Growth Online. <http://www.smartgrowth.org/why.php>)

These goals are the measuring tool to determine whether Cochrane's growth is responsible and therefore are critical touch stones in developing the GMS framework.



# ANALYSIS



## 7.0 / LAND USE PROJECTIONS

The anticipated growth in various land use categories is outlined in the sections below. Projections have been prepared for the future population which, in turn, sets the stage for the projected land requirements that will be needed to accommodate residential growth to the year 2062. Projections are also provided for industrial, commercial and institutional land uses. The methodologies, assumptions, and recommended projections used for each are stated relative to each land use category.

### 7.1 LAND DEMAND

#### 7.1.1 / Residential

##### Population

The Town of Cochrane has projected future population for various studies in recent years such as the MDP and various infrastructure plans. In summary, annual growth rates anticipated for years beyond 2008 ranged from 4% to 12% per year. While such high rates of growth may be reasonable for short-term projections, they are aggressive for a 50 year projection. This GMS considered a variety of methods and rates of growth to project how Cochrane's population might grow over the next 50 years: geometric growth, linear growth, shift share, and ratio of growth.

The method selected for the GMS is the "Shift Share" projection. This method assumes that the growth of a community is directly related to the growth of the larger region. It was chosen because a reliable regional projection was available, in this case the population projection from CCM. The CCM projections identified three levels of growth for the region — good times, baseline and hard times. The GMS projection is based on the "baseline" population for the Calgary Regional Partnership area for 2062 of 2,669,567. The CCM did not project population for individual communities.

The GMS shift share projection assumes that Cochrane's high quality of life will attract a larger share of the regional population (2.6%) by 2062, approximately 66,000 people. Table 3 outlines the projected Town population in five year increments from 2011 to 2062 along with the assumed population growth rate.

TABLE 3

YEAR	ANNUAL GROWTH RATE	PROJECTED POPULATION (YEAR)
2011-2015	5.0%	21,369 (2015)
2016-2020	4.0%	26,248 (2020)
2021-2025	3.0%	30,724 (2025)
2026-2030	3.0%	35,618 (2030)
2031-2035	2.0%	39,710 (2035)
2036-2040	2.0%	43,844 (2040)
2041-2045	2.0%	48,407 (2045)
2046-2050	2.0%	53,445 (2050)
2051-2055	2.0%	59,008 (2055)
2056-2060	1.5%	63,881 (2060)
2061-2062	1.5%	65,812 (2062)

The estimate of Cochrane's increasing share of the regional population is based on past trends in Cochrane, Airdrie and Okotoks. Cochrane increased its share of the regional population from 0.8% to 1.1% between 1996 and 2006. It is projected that Cochrane's share of the regional population will increase by 0.3% each decade, reaching a 2.6% share of the regional population by 2062.

This greater share of the regional population means that the GMS projections indicate a greater amount of land will be required. This is considered to be a conservative approach because it errs on the side of having enough land to accommodate a higher population than may ultimately result in this timeframe. The conservative projection terminology is used in other portions of the GMS.

Cochrane's larger share of the regional population is assumed because the Town offers a bundle of amenities that are not found in other towns and small cities within the region:

- **A small town atmosphere with an urban vitality and amenity;**
- **Strong commitment to sustainable development;**
- **Mountain views and proximity to recreational pursuits of Canmore, Kananaskis and Banff; and**
- **A 40- to 45-minute commute to downtown Calgary via multiple modes of transportation.**

### Average Household Size

Average household size in Cochrane as reported by Statistics Canada has declined 16% from 3.1 people per unit in 1996 to 2.6 people per unit in 2011. According to projections in the CCM, household sizes in the region will decline 5% between 2006 and 2062, from 2.6 to 2.47 people per unit; therefore, the GMS projections for Cochrane will also use 2.47 people per unit based on a current household size of 2.6 accounting for the anticipated 5% decline.

### Residential Units

Statistics Canada reports the 2011 population of the Town to be 17,580 people. The projected population in the year 2062 using the shift share methodology is approximately 66,000, an increase of 48,420 people. Using the adjusted household size of 2.47 people per unit based on the assumptions contained in the CCM, there will be a need for 19,603 additional residential units (i.e.  $48,420/2.47$ ).

### Land Requirements

The Calgary Metropolitan Plan indicates that all member municipalities aim to achieve an intensification target of 25% of all new residential growth occurring within the existing development footprint. Of the 48,420 new residents, 12,105 (5,263 dwelling units) will need to be accommodated within the existing footprint. The remaining 36,315 new residents (14,702 dwelling units) will be accommodated under the Town's MDP minimum density requirements of 19.8 units per hectare (uph) (8 upa). That being the case, there will be a need for approximately 743 hectares (1,835 acres) of land needed to accommodate the projected residential growth to the year 2062.

In terms of total residential lands required to accommodate the projected population, at 66,000 people and 2.47 people per unit there will be a need for 26,721 units. Currently the Town's density is 11.7 uph and accounts for 578ha (1,428ac) of land. Therefore, the total residential lands required would be 578ha plus 743ha, for a total of 1,321ha (3,263ac).

## 7.1.2 / Industrial

Projecting land requirements for industrial land is one of the more difficult types of land use projections because of the wide range of industrial businesses and the land requirements that are associated with them. In preparing the projections for Cochrane's future industrial needs, two methods have been used. Each method results in an anticipated land requirement and these projections are then compared to the land the Town currently has designated to accommodate industrial uses. Using these methods, an estimate is then provided that projects the amount of industrial land needed to accommodate growth to the year 2062.



## Industrial // Population-Based Projection

This method relies on population projections and applies a constant ratio of industrial lands that will be required per 1000 people. Historically in Cochrane, a rule of thumb for industrial land has been 5.0 hectares/1000 people (Growth Review, 2001). Within the Calgary Regional Partnership area the current ratio is 4.25 hectares/1000 people (CCM, 2008). Reviewing the Land Use Bylaw there are approximately 87 hectares (215 acres) currently designated for industrial use (Land use districts M-1 and M-BP). That being the case, the current ratio in the Town is 4.9 hectares/1000 (i.e. 87/17,580), the same as the rule of thumb that has historically been used in Cochrane. However this ratio may be skewed somewhat by the presence of Spray Lakes Sawmill which occupies 40 hectares (99 acres) of industrial zoned land. While the Spray Lakes Sawmill is an important and historic part of town, it is unlikely that a similar extensive industrial land use would locate in the Town in the future. That being the case, if it were removed from the current inventory, there would be 47 hectares of industrial land in Cochrane or a ratio of 2.7 hectares/1000, which is less than both the CRP estimation and the rule of thumb.

Therefore, to project industrial land demand, the analysis takes into account the existing industrial lands that relate to the current population (87 hectares for 17,580 people) which is relatively high regionally and combine this with the projection for growth which is based on Cochrane's current industrial/population ratio if Spray Lakes Sawmill is excluded. The result is:

- **Existing industrial lands: 87 ha**
- **48,420 additional people at 2.7 ha/1000 people: 131ha**
- **Total lands required for the 50 year projection (66,000 people): 218 ha**

## Industrial // Employment-Based Projection

This method relies on employment projections and applies an associated building space and floor area ratio for the land use to determine how much land will be needed. The data utilized in this method stems from Statistics Canada and Calgary Regional Partnership projections. The most recent census data on employment in Cochrane is from the 2006 Federal Census' Release Topic: Place of Work. This data was projected to 2012 and 2062 using a ratio of population growth to jobs growth drawn from CCM. The estimated number of jobs in Cochrane as of 2012 was 6,473 and the jobs projected in 2062 are 18,570 or an increase of 12,097. CCM suggests industrial jobs would account for 32% of the jobs or 3,871 new jobs.

Each employee will occupy the equivalent of 60.4sqm (650sqft) with the total area required being  $(60.4 \times 3,871) = 233,758\text{sqm}$ . Using a Floor Area Ratio of 0.23 the area required would be 102 hectares (251 acres).

For the total industrial requirements in 2062, there will be 18,570 jobs of which 5,942 will be industrial (32%) and using 60.4sqm per employee and Floor Area Ratio of 0.23, there will be a need for 156 hectares (385 acres) of industrial land.

Comparing the population-based projection versus the employment-based projection; there is a range for projected demand for industrial land between 156 hectares to 218 hectares for the total industrial requirements. This range is indicative of the difficulty in predicting industrial land needs and how one industrial business that requires a large land base can influence the ultimate need for industrial land. To identify a specific projection for industrial land, the population-based projection uses a combination of an existing high ratio of land to people, with a projected lower rate for future population growth. The result is a projected land demand of 218 hectares that is higher than the employment-based projection and will be utilized to ensure a conservative approach.

### 7.1.3 / Business Park Office

#### Business Park Office // Population-Based Projection

Similar to the projections for industrial land requirements, the existing business park office situation in Cochrane has been reviewed relative to the rule of thumb methodology outlined above. Presently there are 3.6ha (8.9acres) designated as business park (M-BP) in Cochrane, all of which is undeveloped. With a 2011 population of 17,580, this equates to 0.20 hectares of office land per 1,000 people. The projection is that in 2062 the population will be 66,000. This being the case the total land required for business park office space would be 13 hectares (32.6 acres). The growth result would be based on the 48,420 population increase and would result in 10 hectares (23.9 acres).

#### Business Park Office // Employment-Based Projection

The CCM methodology suggests that of the 18,570 jobs in Cochrane in 2062, 20% or 3,714 will be office-related. For each employee 19.5sqm (210sqft) will be required with a total square footage of 779,940sqft required to accommodate office-related employment in 2062. With a suggested Floor Area Ratio of 1.0, based on Cochrane's existing context, this would be equal to 7 hectares (18 acres) of land for office related employment. For growth, there would be 2,472 jobs and 5 hectares (12 acres) of land required.

There is little correlation between the existing population and lands designated for business park office use; therefore, the employment-based methodology will be used and results in the need for 7 hectares of business park office use.

### 7.1.4 Employment

In Cochrane, areas dedicated to office uses such as business parks are limited, and as a result general office spaces are typically found as a use in many land use districts. There is little distinction between industrial and business park office uses in Cochrane, and increasingly the two uses are developed so that both are integrated into overall employment areas. This trend is recognized in the summary below where industrial and business park office requirements are combined under the employment heading. This combined approach is used throughout the GMS.

Therefore, the recommended projections for employment lands are 225ha (556ac).

### 7.1.5 / Commercial

Similarly to employment projections, there are different methods available to project future commercial land demands: population-based and employment-based. Examining the results of each method and comparing the results to the historic situation in Cochrane gives an indication of which method is most appropriate to the Town.

#### Commercial // Population-Based Projection

Presently there are approximately 712,000 square feet of total commercial building space in the Town based on the Town's assessment database. With a 2011 population of 17,580 this equates to 3.8sqm (40.5sqft) per capita. This ratio is consistent with CCM's projected commercial floor space to population ratio that commercial space is developed at a rate of 3.8sqm (40.5sqft) per capita. It is assumed that 1.0m<sup>2</sup> (10.8sqft) of the 3.8m<sup>2</sup> is developed as local commercial businesses servicing individual neighbourhoods and 2.8sqm (30.1sqft) is intended to service the community at large with a Floor Area Ratio of 0.25. The Floor Area Ratio assumption is based on three factors:

1. the 2001 Cochrane Growth Review anticipated a commercial Floor Area Ratio of 0.22;
2. the current commercial developments are developing at 0.25 Floor Area Ratio; and
3. the CCM projects commercial Floor Area Ratio at 0.35 for the region.

As noted above, the data indicates that general commercial uses (not including neighbourhood commercial) will require 2.8sqm (30.1 sqft) per capita. With a projected population of 66,000 to the year 2062, there would be a need for a total of 184,800sqm (1,989,171sqft) of commercial space. At an Floor Area Ratio of 0.25, the total commercial land requirement would be 74 hectares (183 acres).

Addressing the growth in population of 48,420, there would be a need for 135,576sqm (1,459,328sqft) of commercial space or 54 hectares (134 acres) of land to accommodate the projected population growth.

## Commercial // Employment-Based Projection

Using an employment-based methodology and the CCM data, the following assumptions are used:

- a ratio of 275 square feet per employee;
- a Floor Area Ratio of 0.25 (adjusted from the CCM to be consistent with development patterns specific to Cochrane); and
- 31% of future jobs will be commercial.

Total jobs projected to 2062 are 18,570 of which 5,757 will be commercial. Using the assumptions stated above this would equate to 147,082sqm (1,583,093sqft) of total commercial space. With a Floor Area Ratio of 0.25 this would equal a total of 59 hectares (145 acres) needed to accommodate a population of 66,000.

The growth requirements would be 12,361 jobs of which 3,832 would be commercial resulting in 391,605sqm (4,215,200sqft) and 39 hectares (97 acres).

Using the two methods there is a range of 59 hectares (145 acres) to 74 hectares (183 acres) required to accommodate a population of 66,000 by the year 2062. Based on the current situation in Cochrane, the population-based projection (74 hectares of land required) best emulates the historic and current situation in Cochrane and this methodology will be used for the GMS to determine commercial land requirements in Cochrane.

## 7.1.6 / Institutional

Institutional land requirements are tied to community growth and include such uses as high schools, churches, government administration offices, health facilities, and public works yards. There are various methods used to determine land requirements associated with institutional uses ranging from a percentage of all other jobs (translated into land requirements); an allowance of land based on a percentage of all the requirements for other uses; and an employment-based projection. For consistency with the other land uses, the employment-based projection method was utilized.

It is projected that there will be 3,157 institutional related jobs (i.e. 17% of the 18,570) in 2062. The CCM suggests that there will be 47.4sqm (510sqft) per institutional-related job resulting in a total of 151,049sqm (1,625,880sqft). In converting the building area to land requirements and using a 0.5 FAR, the total institutional land requirement in 2062 will be 30 hectares (75 acres). For growth, there will be 2,101 institutional jobs which will require 20 hectares (49 acres).

## 7.1.7 / Summary of Land Requirements

The following summarizes the land requirements in the Town to the year 2062:

**TABLE 4**

LAND USE	LAND REQUIREMENTS to Accommodate Growth Only Hectares (acres)	TOTAL LAND REQUIREMENTS Hectares (acres)
Residential	743 (1,835)	1,321 (3,263)
Employment (Industrial & Business Park Office)	136 (336)	225 (556)
Commercial	54 (134)	74 (183)
Institutional	20 (49)	30 (74)
<b>TOTAL</b>	<b>953 (2,353)</b>	<b>1,650 (3,978)</b>

## 7.2 LAND SUPPLY

In order to determine whether the Town has a sufficient supply of land in its current boundary to meet the anticipated growth to 2062 a review of the land currently designated under the Land Use Bylaw was undertaken. In addition, existing plans (e.g. ASPs, approved site/concept plans) that have been approved but are awaiting more detailed plans prepared in conjunction with a redesignation application were reviewed. All areas with detailed planning in place are anticipated to be developed in an orderly fashion, according to their approved phasing plans and the Smart Growth principles listed in Section 6.0. It is further understood that areas which are presently without detailed planning (i.e. Rolling Range Estates and Towers Trail) can be developed concurrent to other growth areas, provided that detailed plans for these areas have been supported and adopted by Council.

The following reviews the current land inventory in Cochrane and the lands that are available to accommodate future development.

### 7.2.1 / Residential

In reviewing the analysis of the land in Cochrane that is earmarked for residential use, which includes both the land currently designated via the Town's Land Use Bylaw and the land identified as future residential, were examined in Area Structure Plans and the MDP. The following provides a summary of that review:

#### Existing Designated Land

Single Family (R-1)	395 ha (976 ac)
Single and Two Family (R-2)	58 ha (143 ac)
Medium Density (R-2X)	6 ha (15 ac)
Multifamily (R-3)	55 ha (136 ac)
High Density (R-M)	64 ha (158 ac)
<b>TOTAL</b>	<b>578 ha (1,428 ac)</b>

#### Future Residential Areas (Gross Developable Areas)

##### a) Area Structure Plans (ASP) / Concept Plans

Cochrane West ASP	103 ha (255 ac)
Sunset Ridge ASP	213 ha (526 ac)
West Ridge ASP	112 ha (277 ac)
South Ridge ASP	179 ha (422 ac)
River Heights ASP	197 ha (487 ac)
Heritage Hills CP Stage 1	38 ha (94 ac)
<b>TOTAL</b>	<b>842 ha (2,081 ac)</b>

The various ASPs prescribe different densities in order to determine the number of units each area will be able to accommodate. However, the Towns' MDP directs that all future development achieve a minimum density of 19.8 units per hectare (8 units per acre) per gross developable hectare. Using this density as the minimum that will be achieved, the total number of units that could be located in the areas currently addressed by an ASP is 16,731. This would equate to a population of 41,179 assuming a household size of 2.47 as set out in Section 7.1.1.

It is important to note that local commercial and institutional uses are included in the residential supply calculations because they are developed within these communities and the residential projections are based upon a density target per gross developable area.

##### b) Redevelopment

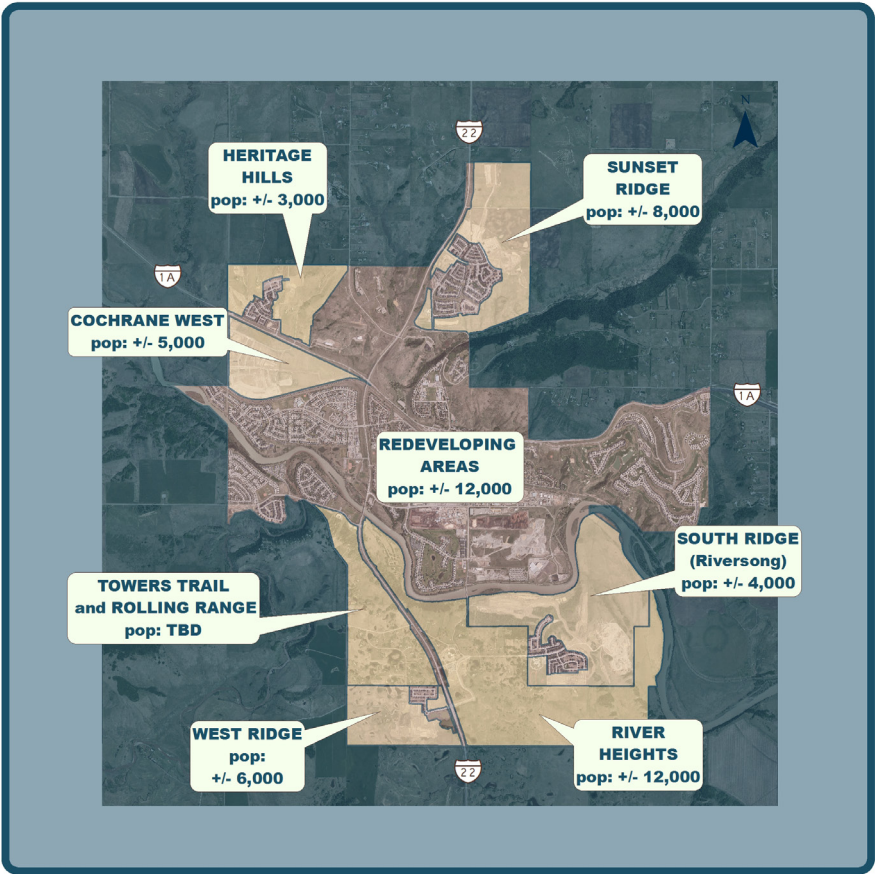
The regional development targets of the Calgary Metropolitan Plan state that member municipalities will strive to achieve at least 25% of population growth within the existing development footprint through intensification strategies. Therefore, of the 48,420 additional people projected, 12,105 of them should be accounted for through intensification of existing developed areas (i.e., transitioning gravel extraction sites; redeveloping the downtown and low density country residential areas; and general densification of existing residential areas through secondary suites and intensification strategies).



Residential Summary

The following sets out the ability of the Town to accommodate future residential development with the existing land supply:

	Area	Population
Existing Designated Land	578 ha (1,428 ac)	17,580
Area Structure Plans	842 ha (2,081 ac)	38,345
Redevelopment	existing footprint	12,105
<b>TOTAL</b>	<b>1,423 ha (3,516 ac)</b>	<b>68,030</b>



7.2.2 / Industrial

Cochrane has benefitted from a wide range of industrial uses in the past. Currently the Town has three major industrial users/areas: Spray Lakes Sawmill; the two gravel extraction areas; and the general industrial area in the vicinity of River Avenue and Griffin Road. Combined these three areas account for over 300 hectares of land and represent:

- 1. existing land uses with the likelihood of long-term locations;
- 2. existing land uses with potential for redevelopment and intensification over time;; and;
- 3. redevelopment opportunities as the where gravel resources are depleted and the sites restored.

The following sets out the existing supply of industrial land in Cochrane:

Spray Lakes Sawmill	(M-1)	41 ha (102 ac)
General Industrial	(M-1)	42 ha (103 ac)
Burnco Gravel Pit	(GE)	70 ha (173 ac)
Robinson Gravel Pit	(GE)	151 ha (373 ac)
<b>TOTAL</b>		<b>304 ha (751 ac)</b>

For the purposes of this GMS, the majority of the gravel extraction operations have not been included in the calculation of the industrial land demand or supply. The gravel extraction operations are land extensive uses which would skew the land demand projections especially considering these lands have redevelopment opportunities once the gravel resource has been mined. The Robinson Gravel pit is included in the Southridge ASP and earmarked for future residential land uses. While the future use of the Burnco gravel pit has not been addressed in any Town planning documents, an assumption has been made that a portion of this land will be utilized for industrial purposes.

Area Structure Plans

The only land designated for future industrial use in any of the existing Area Structure Plans is an Employment Area of 42 hectares (104 acres) in the River Heights ASP.

Industrial Supply Summary

There are a total of 165 hectares of industrial land supply in Cochrane that is likely to continue as industrial use over the 50 year time frame:

	Area
Existing Industrial	83 ha (205 ac)
Area Structure Plans	42 ha (104 ac)
Redevelopment Potential	40 ha (99 ac)
<b>TOTAL</b>	<b>165 ha (408 ac)</b>

### 7.2.3 / Business Park Office

#### Existing Designated Lands

There is presently one area in Cochrane consisting of approximately four hectares that has business park zoning. It has yet to be developed for business park purposes. However, there will likely be significant opportunities to make uses of the business park zoning in River Heights and redeveloping industrial areas to accommodate employment growth over the next 50 years.

#### Area Structure Plans

There are no areas specifically designated to accommodate future office uses within the existing ASPs. There are areas, however, that are designated as commercial or employment areas throughout the Town (i.e. downtown, shopping centre, general industrial, mixed use) that could accommodate offices in the future. Since offices are included in the more general categories it is not possible to provide area specific calculations for office uses.

#### Office Supply Summary

The Town has only four hectares of land dedicated to business parks at this time; however, offices can occur in many of the land use districts and so business park offices should be considered a component of employment land uses.

### 7.2.4 / Employment

As discussed in the Land Demand section, industrial and business park office uses tend to exist in the same areas of the Town. Accounting for employment lands is a more accurate way of addressing these uses.

The total supply of employment lands is 169 hectares (418ac).

### 7.2.5 / Commercial

#### Existing Designated Lands

Commercial development is located within four general areas of town:

- The first is within the Historic Downtown (south of Highway 1A, north of the CP Rail mainline, west of River Avenue and east of 6th Avenue) which contains many of the Town's historic buildings.
- The second area is located south of the CP Rail mainline, north of Griffin Road, east of 5th Avenue and west of Grande Avenue. This area is composed of commercial uses in a number of shopping centres.
- The third is west of Highway 22 and contains highway-oriented uses (e.g. restaurants, hotels/motels and a gas station).
- The fourth is located adjacent to Highway 22 in the River Heights area. Currently there is an auto sales lot with the balance of the area vacant.

The following sets out the land area included the existing designated lands:

Historic Downtown	(CBD & C-HMU)	16 ha (40 ac)
Commercial/Residential	(C-R)	18 ha (44 ac)
Shopping Centres	(C-SC)	41 ha (101 ac)
Highway	(C-HWY)	16 ha (40 ac)
Service Commercial	(C-S)	2 ha (5 ac)
<b>TOTAL</b>		<b>93 ha (230 ac)</b>

There are two areas within the Town that are designated as Commercial/Residential Mixed Use. They are located in the Westridge and West Cochrane Area Structure Plans and account for 18 hectares (45 acres). These two areas are to be developed to accommodate a mix of residential and commercial uses. Neither plan specifies what portions of the areas are to be commercial but for the purposes of the GMS, it is assumed that 30% of the mixed use area will be developed for commercial uses. That being the case, there would be 5 hectares (12 acres) of the mixed use areas developed to commercial uses.

Recreational Commercial (C-REC) lands have not been included in the supply assessment because of their extensive nature. While many communities have recreational commercial land uses, Cochrane has a significant amount of land dedicated to recreational commercial uses. The C-REC land designation accounts for 116ha (287ac) of land, and it is likely that these lands will not accommodate other types of commercial uses in the projection timeframe.

**Area Structure Plans**

Some existing ASPs designate areas as being suited for local commercial development. For the purposes of the GMS, these local commercial uses are deemed to be part of the overall residential areas and are not considered to be part of the overall commercial inventory of the Town nor are they included in the demand calculations.

**Commercial Supply Summary**

There are a total of 80 hectares of land currently available or planned for commercial uses in the future.

**7.2.6 / Institutional**

As noted earlier, institutional uses include such land uses as high schools, churches, government administration offices, health facilities, and public works yards. The need for these types of public facilities are tied to an increasing population and included in land allocations such as residential, industrial, commercial, office, etc. They rarely have their own specific designation within an ASP or Land Use Bylaw and as such it is difficult to determine availability of land to accommodate them. For the purposes of the GMS, it is assumed that the supply of land for institutional uses has been included in the land use categories outline above and/or is included in the existing 568 hectares (1,404ac) of Public Service (PS) designated lands.

**7.2.7 / Summary of Land Supply**

The following outlines the land supply for the various land use categories:

Residential	1,423 ha (3,516 ac) 68,396 people
Employment (Industrial and Business Park Office)	165 ha (418 ac)
Commercial	80 ha (198 ac)
Institutional	N/A





### 7.3 / LAND REQUIREMENTS VERSUS LAND SUPPLY

The following sets out the projected land requirements to accommodate growth to the year 2062 compared with the Town's ability to accommodate the anticipated growth with its current land supply.

As noted under Section 7.2.6, while it is possible to project land requirements for institutional uses, these public facilities are usually developed in conjunction with other developments where, for example, schools are included in residential areas and accounted for in density objectives, government administrative offices and public works yards are recognized in the employment area (i.e. office and industrial). Thus, the summary below compares residential, employment, and commercial area projections and supply, while summarizing the demand for institutional.

Land Use	Required	Supply	Excess (Shortfall)
Residential	66,000 people 1,320 ha	68,030 people 1,423 ha	2,030 people 103 ha
Employment	225 ha	169 ha	(56 ha)
Commercial	74 ha	80 ha	6 ha
Institutional	30 ha	exist within other areas	
<b>TOTAL</b>	<b>1,619 ha</b>	<b>1,672ha</b>	<b>53 ha</b>

The GMS projections do not include some existing land uses including:

Land Use	Area	Reason for Exclusion
Public Service	568 ha	Institutional uses are typically accommodated within other land use areas and the Town has a high amount of public service lands.
Recreational Commercial	116 ha	The Town has a non-typical amount of recreational commercial lands and these uses are land extensive.
Unplanned, undeveloped Urban Reserve – Residential	62 ha	Lands currently unplanned but indicated to become residential lands. If these lands are included in the projections, then there is an excessive supply of 165 ha of residential land.
Environmental Reserve	135 ha	Environmental reserve lands are not included in the gross developable area used for the projection calculations. These lands are not available for development.
<b>TOTAL Unaccounted Lands</b>		<b>881 ha</b>
<b>TOTAL Lands Accounted for:</b>		<b>2553 ha*</b>

\*0.2% error from total lands within the Town (2,548ha) due to rounding and numerous data sources

## 8.0 INFRASTRUCTURE REVIEW

The Town is well positioned to provide the infrastructure necessary to support future development. Cochrane has well defined plans that identify the servicing needs for water, sanitary and transportation for the Town to reach 35,000 to 40,000 people including the associated industrial, commercial and institutional demands that will support this population. Growth beyond a population of 35,000 to 40,000 people represents a timeframe beyond 20 years and therefore extends past the timeframe of most infrastructure planning documents to date. However, the Town regularly assesses its infrastructure needs through major Infrastructure master planning exercises that are generally updated on a three to five year cycle. In addition to these major system reviews, the Town routinely assesses and re-evaluates infrastructure needs as a part of its various financial planning processes. This ensures that the most up to date information is being used for budgeting and financial planning. Infrastructure needs are determined and updated to reflect current realities with respect to the rate and form of development and the resulting impact on each type of infrastructure (i.e. water, wastewater, or roads). The best available growth forecasts and key assumptions about where growth will happen are used in analysis under a variety of possible conditions to generate information about potential needs and timing for infrastructure renewal or upgrade. By undertaking this exercise key assumptions can be updated and the analysis used to provide information to infrastructure capital programming and planning.

It should also be noted that the proposed intensification of development within the existing developed areas of Cochrane will come with site specific challenges that result from limited infrastructure capacity in some areas. Generally, intensification within the downtown core will likely strain capacity within the sanitary and storm sewer systems. Plans can be prepared to address these capacity issues to facilitate the desired intensification goals.

## 8.1 WATER SERVICING

### 8.1.1 / Water Diversion Licenses

The availability of water supply to a community can be one of the key limitations to growth especially in the South Saskatchewan River basin region where there are no new water licenses being issued. At the present, Cochrane has enough water licence capacity at current water use rates to supply water to a population of 35,000 to 40,000 people along with the associated non-residential development that this study contemplates. Achievement in water conservation and water demand management could help to extend this capacity. For water supply beyond a population of 35,000 to 40,000 people, the Town would need to acquire or have access to additional water license capacity. The potential options are for the Town to purchase a licence from another licence holder or to be assigned a portion of another licence. Through regional discussions, it has been discussed that the City of Calgary may in the future be able to provide or allocate a portion of its licence to other members of the Calgary Regional Partnership under certain conditions.

### 8.1.2 / Water Supply Treatment

The Town recently upgraded its water treatment plant to expand and improve the treatment process to provide additional capacity for growth. The upgraded plant is designed to ultimately serve a population of 40,000 people. A filtration upgrade is required once the demand is equivalent to 28,000 people. A plan for expansion of the water treatment plant beyond a population of 40,000 has not been considered in depth. Some expansion options could include:

- **Further treatment capacity upgrade in its current location;**
- **Construction of a new treatment facility in another location;**
- **Connection to a regional water supply; and/or**
- **Extended capacity resulting from water conservation and water demand management.**

Although the latter option will help to extend the capacity and postpone the need for a treatment upgrade, it is unlikely that the water demand management efforts could result in the existing plant serving the full build-out the current Town boundaries. Significant water re-use and the patterns of water use within the Town would need to change significantly occur in order to manage with the current water supply capacity.

### 8.1.3 / Water Storage and Distribution

Water distribution network improvements and storage volume increases will be required as growth and development in the Town of Cochrane continues. Generally, these infrastructure improvements have been identified to service the Town to a population of 35,000 to 40,000 people. Distribution improvements have been identified and the recommended ultimate size of these improvements is designed to service the ultimate build-out of the Town.

## 8.2 / SANITARY SERVICE

### 8.2.1 / Sanitary Disposal

The Town sanitary collection system currently drains to one major pump station that delivers the Town's effluent to the City of Calgary sanitary system. Upgrades to this pump station are currently underway which will see the capacity of the pumping system and pipeline to the Calgary system have an available capacity to serve a population of 30,000 people along with the associated commercial and industrial development described in this study. Beyond a population of 30,000, the Town has considered some options to expand its sanitary disposal capacity. The preferred option is to expand the disposal capacity of the current system by twinning the existing pump station and pipeline to Calgary. There are also other possible methods for extending the capacity of the current system through the construction of peaking storage to attenuate the peak flows to meet the capacity of the existing disposal system. In addition, the Town could also extend the service capacity of the existing system through water conservation or water re-use that reduces the amount of effluent reaching the disposal system.

### 8.2.2 / Sanitary Collection

The Town analyzes the capacity in the sanitary sewer collection system to accommodate growth in the various development areas of Town. In general, there is a plan in place to upgrade the trunk mains to accommodate the greenfield development areas to full build-out. Intensification via redevelopment of the inner-town areas of the community could create some capacity limitations depending on the location and intensity of redevelopment. The impacts of redevelopment should be investigated to determine the capacity of the existing system to accommodate more intensive land-use on a site specific or area basis.



### 8.3 / TRANSPORTATION

Cochrane's transportation network is faced with some unique challenges. The Bow River and the CP Rail line bisect the community and can result in costly transportation connections required to maintain community connectivity. Along with this, the Town has two Provincial highways, Highway 22 and Highway 1A that run through the Town and function as key transportation corridors for the community and for regional traffic, but are under Provincial jurisdiction.

The Town has invested significantly over the years to understand the vehicular-based transportation needs for its growing community. Major transportation projects including railway and river crossings have been identified to be required within the next 20 years in Cochrane. In addition, a significant arterial roadway is planned to form an alternate route from the provincial highway system.

Facilitating other modes of transportation has become a priority of the Town to help lessen the reliance on vehicles over time. Plans and standards for providing a transportation network that better accommodates for other modes of transportation are being prepared and implemented within the Town.

### 8.4 / STORM

In Cochrane, developers are required to provide the necessary stormwater infrastructure to service growth areas in accordance with Cochrane and Alberta Environment standards. The stormwater infrastructure will continue to be implemented in this manner to support sustainable development.

Intensification via redevelopment of some of the inner areas of Town could face challenges with an already over capacity existing stormwater system servicing the downtown area. Site specific redevelopment areas will need to be assessed and solutions to the capacity issues addressed.

### 8.5 / SOCIAL INFRASTRUCTURE

Like most communities, the Town of Cochrane requires the placement of schools and health facilities (i.e. clinics and hospitals) to meet the education and health needs of its residents. Council and Administration equally work with officials of the Government of Alberta to ensure that the correct facilities are put in the best places at the right population/development thresholds to meet these needs. Presently, the lands contained within Area Structure Plans in Cochrane show a total of ten new school sites. As of the adoption of this document, an urgent care centre had been placed by the Government of Alberta in the downtown of Cochrane. Further conversations will continue to take place between all levels of government to ensure that the community needs remain adequately met.



## 9.0 / IMPLICATIONS FOR GROWTH

### 9.1 / 50 YEAR LAND SUPPLY

#### The Town has an excess land supply for the 50 year projection:

- There is enough residential land designated and planned within the current Town boundary to satisfy the requirements for more than 50 years. Some of the 103ha of excess lands should be considered for conversion into employment uses.
- Based on the current designated and planned employment lands, there is enough land for 30 years and there is enough land in the Town overall to accommodate more than 50 years of employment land if lands are converted.
- The Town has enough commercial land for the 50 year projection with a surplus of six hectares.
- If the excess residential lands (103 hectares) and the unplanned, undeveloped Urban Reserve - Residential lands (62 hectares) are taken into consideration, the Town has significantly more land available (165 hectares) within the existing boundary than is required for the 50 year horizon. This excess land could accommodate approximately 8,000 more people and is equivalent to a 58 year supply based on 19.8 uph and 2.47 people per unit.
- Lands are expected to be developed within approved planning areas in an orderly fashion, according to their approved phasing plans and

Smart Growth principles. Developing in a phased way will provide more opportunities for the Town and the market to convert appropriate lands for employment purposes, as the demand for such uses increases.

- The Town's current infrastructure planning will accommodate the land projections for approximately 20 years, which is a standard infrastructure planning horizon. It is anticipated that plans will be developed to address the following 30 years at the appropriate time. The one key potential limitation to growth beyond 20 years or a population of 35,000 to 40,000 is the current water supply licence limitation that will need to be addressed to allow full build-out of the Town.
- It is important to recognize that the projections for employment lands are conservative with some of the projection methods indicating that 163 hectares will be required in the 50 year horizon compared to the 225 hectares that are the recommended approach for this GMS.
- The MDP indicates that the Town will endeavour to expand its limits to ensure a 30- year land supply. The current projections indicate that the 30- year land supply is readily achieved. Considering the smart growth principles/goals contained in the GMS, the Town may wish to consider reducing the land supply timeframe to 20 years to encourage greater efficiency of land uses and infrastructure resources in the future. This is a practice utilized by other Calgary Metropolitan Region municipalities with Calgary providing only 15 years of land supply with approved policy plans in place.





## 9.2 PRIORITY LANDS TO CONVERT

- Considering these projections, the Town may wish to prioritize planning for employment lands when discussing land use transitions or changes over time.
- As new commercial developments occur in the downtown, it is likely that development proponents will encourage transitioning the industrial lands on the eastern fringe to commercial uses. It is possible that some of these industrial lands will naturally transition to commercial uses over time and so this should be addressed to ensure enough employment lands are available.
- The results of the projections indicate that the GMS requires implementation tools to consider both the most responsible growth management approaches, and to ensure that if employment lands become scarce, strategies are put in place early enough to make additional employment lands available.
- During the course of this GMS, discussions have begun with one of the large industrial landowners, with the indication that their location may need to change as the downtown area develops. The Town has the opportunity to work with this landowner to identify an appropriate future location and appropriate transitioning of lands.



### 9.3 INTENSIFICATION OF USES

- Redevelopment of 25% of growth within the footprint should be readily attainable considering the significant amounts of redevelopment opportunities (i.e., downtown redevelopment, gravel extraction lands, Tower Trails and Rolling Ranges).
- There may be some site-specific infrastructure challenges in redevelopment areas because of capacity constraints. These will need to be addressed through resource conservation methods, and alternate servicing design or implementation depending on the site.
- Greenfield development will continue to account for the majority of Cochrane's future residential growth, but will occur in a more compact form with distinct neighbourhood centres based on the growth principles; the MDP's density target; and the CRP's intensification target.
- The Town has enough land to meet its growth needs for the next 50 years, at a minimum, based on conservative projection methods that are partially based upon historical trends. To achieve the community vision, it will be necessary to develop in an urban fashion at the densities prescribed by the MDP and the CSP to achieve Smart Growth.
- The GMS projections used a density of 19.8 units per hectare (8 units per acre) because this is the minimum density target required by the MDP; however, the CRP target is to achieve a density of between 8upa and 10 upa, and recent development proposals in the Town have indicated that densities greater than 19.8 uph are marketable.

The impact of these potential changes in density assumptions could result in an excess supply of residential lands in the range of 250 hectares without accounting for the unplanned, undeveloped Urban Reserve – Residential lands.

The following outlines the impact of using the full range of density targets:

	Total Residential Land Demand	Total Residential Land Supply	Excess (Shortfall)
19.8uph (8upa)	1,320 ha	1,423 ha	103 ha
22.2uph (9upa)	1,239 ha	1,423 ha	184 ha
24.7uph 10 (upa)	1,173 ha	1,423 ha	250 ha

- Declining household sizes are a reflection of changing demographics and will impact demand for different types of housing, particularly those that use less land per dwelling unit.
- The Town may wish to encourage greater intensification of land for employment and commercial lands than was anticipated in the projection methods. Many of the Town's policies state that the community vision includes new employment opportunities in "the knowledge sector, including technology research and development; building products; health services; and "green" businesses, including the production and marketing of local food products" (Economic Development Strategy, Winter 2013). Development of new employment lands may occur at a higher intensity of use than the existing industrial lands, and as such less land may be required over time.

## 9.4 CHALLENGES FOR ACHIEVING THE COMMUNITY VISION

- The community vision and the smart growth principles/goals focus on mixed use, compact, attractive, and highly accessible development. While the Town has more than sufficient land available for development, this in itself can be a challenge for achieving the overall vision. However, much of the land supply exists in approved Area Structure Plans and so options are limited for identifying phasing strategies. The GMS implementation section focuses on developing strategies to encourage intensification and ensuring that redevelopment lands are attractive for potential residents.
- While the MDP indicates that 19.8uph (8upa) is the density target for new development, in order to achieve the community vision, implementation strategies should encourage 24.7uph (10upa) or greater. In this way, intensity of land use will be less divergent between greenfield sites and redevelopment sites.
- Previously adopted plans may need to be revised in accordance with the community vision and smart growth principles (i.e., updating ASPs to reflect the MDP's 19.8uph policy).
- The GMS makes the key assumptions that there will be continued growth over 50 years, and that regional solutions to accommodate this growth can be found. However, the last 50 years have been robust in terms of net population migration, as well as total precipitation, for Southern Alberta. It is recognized that this may not always be the case and so the Town of Cochrane would do well to have a plan in place for economic and environmental resilience in the face of potential future challenges on these fronts.

## 9.5 OVERARCHING PURPOSE FOR GROWTH MANAGEMENT

- The MDP's land use concept provides the Town's guiding policy on location of growth, with the caveat that the Town will ensure "orderly and cost-efficient expansion" (MDP, Section 13.2.4).
- Considering that ASPs have been adopted in most areas of town, and these areas are undergoing development, this GMS is focused on how development occurs rather than if it will occur, or in what order.
- Within the 50 year time horizon, the most important growth management question then is not, whether or not we should grow, but "how should we grow to achieve the vision?"
- As long-term growth is a complex issue, this growth management strategy focuses on creating awareness of the linkages between the myriad of Town initiatives that will shape this growth. It is the value of interconnections and the integration required to successfully plan for growth that is recognized by this approach.



# FRAMEWORK ACTION PLAN



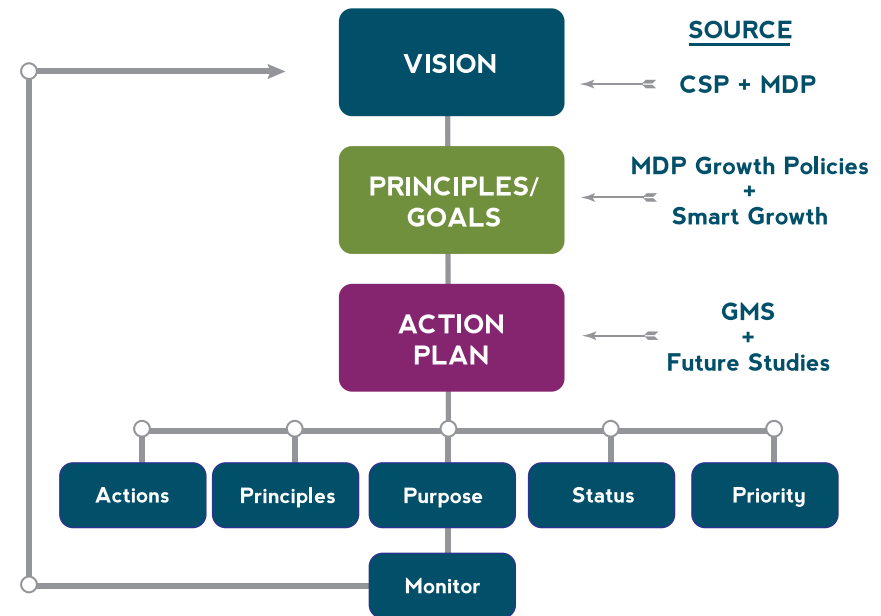
## 10.0 / GROWTH MANAGEMENT STRATEGIC FRAMEWORK

Growth will be a significant factor in Cochrane's next 50 years and beyond; however, all of the required land is already provided within the Town boundaries and so the question for growth management is not centred on whether to grow, but on "how to grow well". Additionally, the CSP and MDP provide a strong vision for the future with policy direction and targets that are forward-thinking and offer support for growth management that is in keeping with smart growth principles / goals.

Yet gaps do exist. The major gap between the CSP and the MDP's vision/policy directions and seeing "smart growth" occurring on the ground is the lack of implementation strategies currently in place. While there will likely be policy changes to both the CSP and the MDP over time to enable the community vision to be achieved to its fullest potential, the progressive nature of the current CSP and the MDP require many of the Town's other strategies to be reconsidered or realigned with these new approaches.

One of the purposes of this GMS is to offer a strategic framework aligning the community vision; principles / goals with the implementation actions.

The GMS is not a simple, linear process; rather, it is an iterative process that includes multiple feedback loops over time. The intent of this framework is to offer an actionable approach to growth management that can be monitored and reassessed in the future





## 11.0 / GROWTH MANAGEMENT ACTION PLAN

To achieve the community vision, this GMS offers a framework to align existing Town strategies and policies.

### Section 11.1 / Further Studies to Address Growth Issues

As stated throughout the Analysis section of this document, the Town of Cochrane is in a relatively good position to accommodate the population and employment increases expected over the next 50 years. Enough total land is available within the current municipal boundaries to accommodate the growth and sufficient infrastructure (i.e. water licences and sanitary capacity) is available to provide the required services.

However, certain challenges to meet all of the growth needs exist and these challenges require further study in order to be appropriately addressed. To this end, it is recommended that certain studies and strategies be developed, as outlined in the sub-sections that follow, to define these issues and create viable solutions. It is further recommended that this Growth Management Study be reviewed within three years of its adoption and not less than once every five years thereafter to confirm the actual growth rates against the projections and the actual land use absorptions against the projected needs.

#### Section 11.1.1 / Intensification and Infill Parameters

Both the Calgary Metropolitan Plan and this Growth Management Strategy operate on the premise that 25% of all of the new growth in Cochrane will be located within the existing development areas. This leads to certain questions, that include, but are not limited to, the following:

- i) How do we accommodate 25% of the growth within the existing footprint?
- ii) How do we maintain the quality of life that we enjoy in Cochrane if we do have 25% of all new growth (12,000 people) within the existing footprint?
- iii) Which areas are best able to accommodate redevelopment and how might they best be redeveloped?

### Section 11.1.2 / Employment Land Conversion Study

Using some projection methods, it is possible that the Town of Cochrane will have enough employment lands to accommodate the projected number of businesses and jobs within its boundaries over the next 50 years. However, to be conservative, it has been assumed that 225ha of employment lands will be required and this exceeds the amount of employment lands that are likely to be made available in the absence of strategic redistribution (re-designation). This leads to certain questions, that include, but are not limited to, the following:

- i) What is the likelihood that additional employment lands will be required to accommodate the job growth over the next 50 years?
- ii) If redistribution (re-designation) of lands is required, how then can the Town best decide what lands to convert for employment purposes?
- iii) What incentives, if any, will be required to make the conversion for employment purposes a reality?

### Section 11.1.3 / Regional Servicing Solutions

From the analyses conducted to date, the Town of Cochrane controls its own destiny for provision of water and sanitary services for a population of approximately 35,000 to 40,000 people and associated commercial/employment uses for that population threshold. However, it is expected that growth rates will take Cochrane to a population greater than this number in just over 20 years. Fortunately, several viable options appear to exist in order to provide the services necessary to service a population greater than 40,000 people. What has not yet been provided is an analysis of the costs and benefits for various regional servicing options in the fields of water service, sanitary service, solid waste service and transportation service(s). Accordingly, this leads to certain questions, that include, but are not limited to, the following:

- i) What are the preferred options, from a cost-benefit perspective, for the following regional services:
  - a. Water Service
  - b. Waste Water (Sanitary) Service
  - c. Solid Waste Services
  - d. Transportation/Transit Services

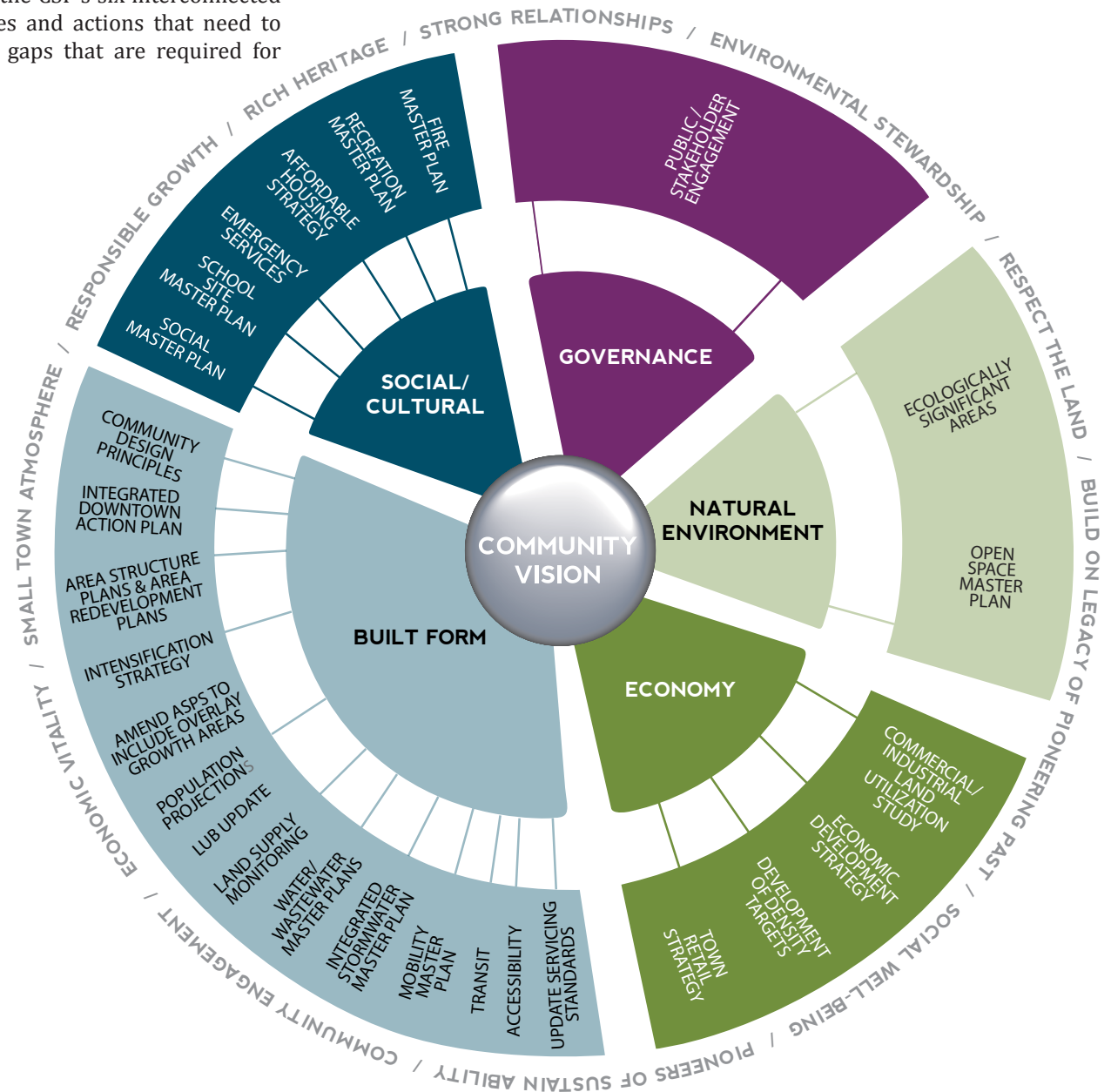
### Section 11.1.4 / Economic and Environmental Resilience

Over the past 50 years, Southern Alberta has enjoyed the benefits of a robust economy and a significant net migration as a result. The area has also benefitted from precipitation levels that are generally above the normal historical levels that have made abundant population and industrial growth possible. Prudent growth planning should consider the possibility that this confluence of factors, while likely to continue, is not guaranteed. Accordingly, the CCM did provide low, baseline and high population growth projections and this GMS has selected the baseline projections on which to render its analysis, which provides the greatest margin of error. That being said, it would be beneficial for the Town of Cochrane to consider scenarios in which economic growth may not occur or in which the ability to service growth may not be possible. A specific study designed to answer the following questions may prove desirable:

- i) How should the Town of Cochrane best address scenarios in which economic and/or population growth does not arrive?
- ii) How can Cochrane best defend against scenarios in which it might lose its competitive economic advantages to other areas?
- iii) What implications might expansions of moratoriums on water licences from the Bow River due to inadequate precipitation have on the Town of Cochrane and its anticipated plans for growth?

## Section 11.2 / GMS Framework

The GMS framework is composed of building blocks towards growth management. The Town has been working on many of these building blocks over the years, but they have not been previously considered as part of a complete strategy. The framework builds upon the CSP's six interconnected community systems, and recommends strategies and actions that need to be undertaken to address the implementation gaps that are required for Cochrane to achieve its vision.



## 11.3 / Built Environment

Existing plans include:

- **Community Sustainability Plan**
- **Municipal Development Plan**
- **Intermunicipal Development Plan with Rocky View County**
- **Area Structure Plans**
- **Area Redevelopment Plans**
- **Neighbourhood Plans**
- **Concept Plan**
- **Land Use Bylaw**
- **Western Heritage Design Guidelines**
- **Heritage Management Plan**
- **The Quarry: Planning & Design Framework**
- **Subdivision Servicing Guidelines**
- **Transportation Plan**
- **Water Conservation Strategy**
- **Off-Site Levy Bylaw**

Initiative	Growth Principles	Purpose	Status
<b>Integrated Neighbourhood Design Principles</b>	<b>1-6, 8-9</b>	Develop design guidelines (downtown, greenfield, industrial, and corridors) that honour the small town atmosphere, desire for pedestrian mobility, western heritage and that integrate sustainable built form.	<b>In Progress</b>
<b>Integrated Downtown Action Plan</b>	<b>1-5, 7-10</b>	Redevelopment of the downtown to support the vision of a mixed-use, sustainable, walkable, vibrant core.	<b>In Progress</b>
<b>Intensification Strategy</b>	<b>1-3, 7, 9</b>	Provide guidance on how best to achieve the CMP's goal of 25% of population growth to be accommodated within the existing development area including opportunities such as redevelopment of underutilized lands, secondary suites, and intensification associated with transit-oriented development.	<b>Future</b>
<b>Water/Wastewater Master Plans</b>	<b>2, 7</b>	To efficiently plan and deliver water and wastewater infrastructure in a proactive, and environmentally and fiscally responsible manner.	<b>Complete</b>
<b>Integrated Stormwater Master Plan</b>	<b>2, 7</b>	To evaluate the quality and quantity of existing stormwater servicing capacity and to direct future guidelines and infrastructure needs.	<b>In Progress Early 2013</b>
<b>Mobility Master Plan</b>	<b>1, 2, 4, 8</b>	To create a new Master Transportation Plan to reflect multi-modal uses and the 2008 MDP's objectives.	<b>2013</b>
<b>Transit</b>	<b>2, 4, 8</b>	To offer a comprehensive transit strategy for both local and regional transit for the future including identification of future transit hubs.	<b>Future</b>
<b>Accessibility</b>	<b>4, 8</b>	To provide design standards that will create a universally-accessible built environment	<b>Future</b>
<b>Update Servicing Standards</b>	<b>2, 4, 5, 7-9</b>	To ensure that infrastructure servicing standards consider best practices in the respective disciplines and to reduce demands on resources.	<b>Future</b>
<b>LUB Update</b>	<b>1-6, 9</b>	Revise the LUB regulations to reflect the intent of the MDP and CSP.	<b>Future</b>
<b>Population Projections</b>	<b>9</b>	Utilize consistent population projection methods for all municipal initiatives.	<b>In Progress</b>
<b>Land Supply Monitoring</b>	<b>2, 7, 9</b>	Amend the MDP to expand the scope of land supply monitoring to account for redevelopment opportunities on vacant and underutilized lands, and establish the "existing development footprint" area as required by CMP.	<b>Future</b>



## 11.4 / Economy

Existing plans include:

- **Business Visitation Program 2009 & 2010**
- **Economic Development Strategic Framework, 2009 - 2011**

Initiative	Growth Principles	Purpose	Status
<b>Economic Development Strategy</b>	5	To foster economic diversity and vitality through business retention and expansion, business attraction, understanding the business community's needs, reduce barriers, facilitating collaboration and continuous learning among business owners, and facilitate appropriate land, infrastructure and amenity requirements (i.e., identifying appropriate business park needs, locations, timing and associated public amenities).	Early 2013
<b>Commercial/Industrial Land Utilization Study</b>	5	To understand the current usage of lands for commercial and industrial purposes, and determine barriers to utilization of existing vacant or underutilized lands.	Future
<b>Development of density targets</b>	1, 5	To create a density target based on both population and jobs projections instead of the traditional approach that only considers growth in people. The intent is to base growth management decisions on a people/jobs target in support of creating a complete community.	Future

## 11.5 / Natural Environment

Existing plans include:

- **Wetland Inventory**
- **Water Conservation Policy**

Initiative	Growth Principles	Purpose	Status
<b>Wetland and Riparian Review</b>	6	To establish a set of guidelines for development in wetland areas.	Future
<b>Open Space Master Plan</b>	1, 5, 6	To ensure that residents have access to active and passive recreation throughout the community and can effectively negotiate future ER and MR dedications in keeping with environmental features.	Completed November 2012

## 11.6 / Social/Cultural

Existing plans include:

- **Cochrane Social Master Plan**
- **Parks, Recreation and Culture Facilities Master Plan**

Initiative	Growth Principles	Purpose	Status
<b>Fire Master Plan</b>	5	To efficiently plan and deliver fire services fundamental to community growth/redevelopment.	Timing To Be Determined
<b>Recreation Master Plan</b>	5	Provide recreation services that appropriately respond to the Town's residents' desired activities.	Complete
<b>Affordable Housing Strategy</b>	3	To understand the most effective approach to providing, implementing and managing affordable housing in Cochrane.	Completed with Ongoing Implementation
<b>School Site Master Plan</b>	5	To facilitate land dedications required for future school needs and to integrate school planning with the development of neighbourhood nodes.	Ongoing
<b>Social Master Plan</b>	3, 5, 8	To address the social needs of Cochrane and to assist the community in planning and decision making.	Complete

## 11.7 / Governance

Existing plans include:

- **Ten Year Financial Strategy**
- **Community Consultation Policy**

Initiative	Growth Principles	Purpose	Status
<b>Public / Stakeholder Engagement</b>	9 + 10	To engage the public on the principle of community first	Ongoing



TOWN OF COCHRANE

# GROWTH MANAGEMENT STRATEGY

/ MAY 2013

