

Terms Of Reference For Developing The South Saskatchewan Region



Confluence of the Belly and Oldman rivers



**Government
of Alberta** 

The Land-use Framework



What is the Land-use Framework?

Alberta's Land-use Framework sets out the new approach for managing public and private lands and natural resources to achieve Alberta's long-term economic, environmental and social goals. It is a blueprint designed to guide us in making decisions about our land and natural resources, developed after extensive consultation with Albertans.

The Land-use Framework establishes three desired outcomes for our province:

- a healthy economy supported by our land and natural resources;
- healthy ecosystems and environment; and
- people-friendly communities with ample recreational and cultural opportunities.

These outcomes are inter-related. How we pursue one unavoidably affects the others. For example, new development in a region will create jobs, provide income to local residents and contribute to Alberta's economy. However, it may also attract new workers to the region, placing added pressure on the region's public infrastructure and social systems. Development will also have effects on the air, water, land and biodiversity.

Alberta's economic growth must therefore be balanced with our social and environmental goals. The Land-use Framework is designed to help Alberta achieve this balance through smart growth.

The Land-use Framework sets out seven key strategies for improving land-use decision-making in Alberta.

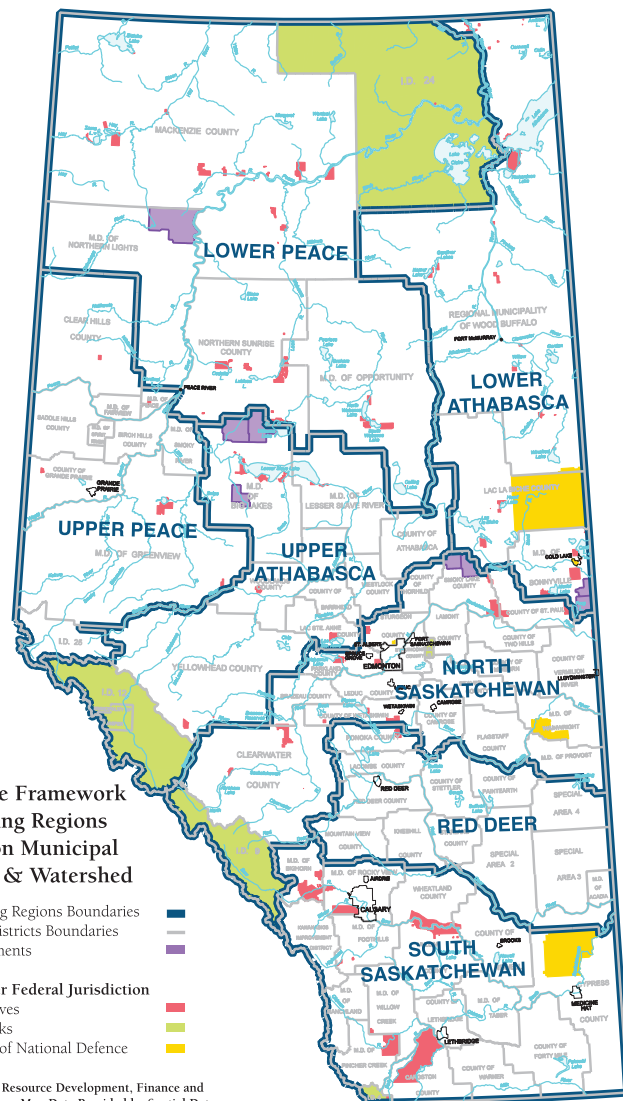
1. Develop seven regional plans based on seven new land-use regions.
2. Create a Land Use Secretariat and establish a Regional Advisory Council for each region.
3. Cumulative effects management will be used at the regional level to manage the impacts of development on land, water and air.
4. Develop a strategy for conservation and stewardship on private and public lands.

5. Promote efficient use of land to reduce the footprint of human activities on Alberta's landscape.
6. Establish an information, monitoring and knowledge system to contribute to continuous improvement of land-use planning and decision-making.
7. Inclusion of Aboriginal peoples in land-use planning.



All seven strategies must be considered in the development of regional land-use plans for our province.

This document sets out the process by which these regional plans will be developed, and provides guidance from Cabinet on specific economic, environmental and social factors that must be considered in the South Saskatchewan Region.



**Land-use Framework
Planning Regions
based on Municipal
Districts & Watershed**

- LUF Planning Regions Boundaries
- Municipal Districts Boundaries
- Metis Settlements
- Lands Under Federal Jurisdiction
- Indian Reserves
- National Parks
- Department of National Defence

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Regional Planning



What will a regional plan do?

Each regional plan will address the current conditions in a region, and will anticipate and plan for all relevant development-related activities, opportunities and challenges in that region over the long-term.

A regional plan is intended to paint a picture of how a region should look over several decades. At the broadest level, each regional plan will forecast at least 50 years into the future. The plan will be designed to be effective for a 5- to 10- year period, after which it will be reviewed and updated as needed to address the realities of the day.

As set out in the Land-use Framework, regional plans are designed to integrate and achieve—not hinder—the Government of Alberta’s economic, environmental and social objectives over the long-term.

Each regional plan will articulate desired outcomes for a region, which should reflect public preferences and integrate provincial policies and objectives that have been set by Cabinet. In effect, the plan will demonstrate how major provincial strategies will align with each other at the regional level.

Regional plans will also set thresholds to manage the cumulative effects of development at the regional level. This recognizes that a region’s airsheds, watersheds and landscapes are not limitless, nor are its economic and social foundations; this will help guide future development in the region.

Regional plans need to balance regional, provincial and national considerations. Airsheds and watersheds, for example, can cross regional, provincial and national boundaries. Man-made linear infrastructure systems (e.g. highways, pipelines, electrical transmission lines), whether developed individually or in multi-use corridors, can span multiple regions. Each regional plan must therefore consider how choices made in the region will impact other land-use regions and jurisdictions.

Lands under federal jurisdiction, such as First Nations reserve lands, national parks and military lands, also need to be considered. Although a regional plan will not ordinarily direct uses of these lands, it must consider the long-term needs of these areas and how they may impact desired outcomes in the region.

Who is responsible for regional planning?

The Government of Alberta is responsible for regional planning. Regional plans will be reviewed and approved by Cabinet; they will become official government policy and have the force of law. Municipalities and Alberta government departments will be required to comply with regional plans in their decision-making.



Regional planning also involves local input. For each land-use region, a Regional Advisory Council (RAC) is being established. Each RAC is comprised of members that bring regional economic, environmental and social expertise and experience. They will bring local insight and perspectives on present and future land-use activities and challenges in the region.

The mandate of the RAC is to provide advice to Cabinet regarding the regional plan. There will also be opportunities for public input at key stages in the process, including consideration of planning options, from stakeholders in the region and elsewhere.

What's in a regional plan?

A regional plan sets out information about the state of a region today and describes a vision for the future based on desired outcomes for that region. It also articulates the strategies, actions and approaches that should be followed to ensure the region is developed in ways that achieve the vision and outcomes.



Each regional plan will have the same fundamental components.

Profile of the Region

The plan will summarize the current state of the region, discussing key economic, environmental and social considerations and trends in land use. Major issues facing the region now and in the future will be highlighted, with particular attention to the next decade.

Policy Context

This includes key policy direction and instructions provided by Cabinet that framed the plan's development.

Regional Vision Statement

The plan will set out a vision that describes the desired future of the region. This vision must support the outcomes and principles of the Land-use Framework.



Regional Outcomes

The plan will outline integrated outcomes that qualitatively describe what we want to achieve at the regional level to support the three outcomes of the Land-use Framework: a healthy economy supported by our land and natural resources; healthy ecosystems and environment; and people-friendly communities with ample recreational and cultural opportunities.

Objectives and Goals

The plan will describe what must be done to achieve the regional vision and outcomes, and it will set quantitative, measurable targets and thresholds in this regard. The plan will also identify trade-offs and choices that will be made in the region to balance economic development with environmental and social considerations, and it will provide rationale for these choices.

Strategies, Actions and Approaches

The plan will provide direction for possible regulatory and non-regulatory approaches that could be used to achieve the plan's objectives and goals.

Monitoring and Reporting

The plan will outline how the Alberta government will monitor, track and report on progress toward or achievement of the quantitative and qualitative targets and thresholds that have been established in the plan.



What process will be followed?

The development of a regional plan is a complex task, involving a significant amount of data, policy input and decision-making. It requires collaboration among the Alberta government, the RAC and those working, living and doing business in the region as well as advice from interested Albertans.

The Alberta government's Land Use Secretariat will oversee the development of each regional plan. It will provide policy analysis, research and administrative support to the RAC. A project team, representing Alberta government ministries and agencies, will work with the Land Use Secretariat to develop the regional plan.

Cabinet will provide guidance to the RAC regarding the economic, environmental and social expectations for the region in the context of the entire province. This will ensure that the regional plan is consistent with the Alberta government's vision, objectives and priorities for the province.

The government will also consider input on the draft regional plan through public, stakeholder and Aboriginal consultations.

Cabinet will approve the final regional plan, which local governments, provincial departments and other decision-makers will need to follow. Once the regional plan is approved, the Alberta government will determine what actions will be taken to implement the plan.

This overall process will ensure that development of the regional plan responds to existing and emerging issues, and meet the expectations of Albertans. There will be ongoing monitoring of achievement of outcomes that will lead to formal review of plans at 5- and 10- year intervals.



How will regional plans be developed?

The RAC will start by conceptualizing the region in broad terms. It will provide advice on **what** the region should look like over the long-term and **how** activities in the region should be planned.

As the RAC is informed by data, modelling projections and provincial policies about the region, it will refine its advice in more focused and specific terms.

Guidance from Cabinet will be provided in stages, framing the work of the RAC as it progressively narrows its focus from broad to specific questions and issues.

In turn, the RAC will feed back advice to Cabinet, which will inform the development of the regional plan.

This will be an evolving conversation between Cabinet and the RAC as the RAC addresses important and complex questions about land use in the region.

The Government of Alberta has articulated many broad policy objectives at the provincial level. But applying these at a regional level may not always be a simple exercise.

Some policy objectives may conflict with each other. Some will have greater relevance in one region than in other regions. Some policy objectives will be more achievable in certain regions and less achievable in other regions.

An important part of the RAC's work is to sort out these issues, based on the guidance it receives from Cabinet about the region. Guidance will include elements such as:

- general directions on priorities for the region;
- specific policies that should be considered by the RAC;
- qualitative and quantitative assumptions that the RAC should follow;
- possible land-use conflicts that must be reconciled; and
- key land-use questions on which Cabinet would like the RAC's advice.

What issues will Cabinet provide guidance on?

Cabinet will provide the RAC with guidance regarding three major aspects of land-use.

The Balance Between Society, Development and Environment

Economic development is important for creating jobs and prosperity for Albertans. But development must be balanced with protection of the environment and the needs of society, to ensure current and



future generations have healthy airsheds, watersheds, landscapes and ecosystems and vibrant communities. The RAC will be given guidance on how to strike this balance in the region.

Assessment and Allocation of Resources

Natural resources such as air, water and land have finite carrying capacity. Assessing and allocating these resources for different land-use activities (e.g. conservation, recreation, agriculture) will be an aspect of the work.

Policy Alignment

The RAC will be asked to identify policy gaps or conflicts that must be addressed in order to align provincial policies with the regional plan.

What will Regional Advisory Councils provide advice on?

Future Development

Each RAC will provide advice on how the region should develop over the long-term while achieving:

- a healthy economy supported by our land and natural resources;
- healthy ecosystems and environment; and
- people-friendly communities with ample recreational and cultural opportunities.

Regional Outcomes

Within the context of provincial outcomes set by Cabinet and the Land-use Framework, the RACs will provide advice on desired outcomes at the regional level.

Provincial Policies

The RACs will provide advice on how these policies should work together at the regional level.

Trade-offs

The RACs will provide advice on how competing land uses in the region should be reconciled based on economic, environmental and social priorities and how trade-offs could be addressed.

Public Input

The RACs will provide advice on public and stakeholder consultations in the region as part of the regional planning process.

Are there limits on what the RACs will do?

The following issues fall outside the scope of regional plans, and will not be considered by the RAC.

Municipal Governance

Regional plans will not consider the re-organization or restructuring of municipalities in the province, nor make recommendations concerning the dissolution, amalgamation or creation of municipalities.

Aboriginal Consultation

Alberta's First Nation Consultation Policy on Land Management and Resource Development will guide Aboriginal consultations. Regional plans will not revise the policy. The government will consult with First Nations and consider the results of the consultation.



Population Limits

Regional plans will not consider or set maximum caps on human population or settlement.

Taxation

Regional plans shall not address tax policy, tax rates or questions regarding taxation of individuals or businesses.

Provincial Royalties

Regional plans shall not address or make recommendations concerning provincial royalties.



Government Expenditures

Regional plans will not stipulate, estimate or recommend levels of capital or operating expenditures required of the Government of Alberta or cost-sharing arrangements concerning infrastructure. Budgetary decisions remain the sole responsibility of the Government of Alberta as part of the plan's implementation. The plans may recognize, as part of meeting the overall objectives that investment in infrastructure is required and may suggest efficient ways to implement.

Existing Laws and Regulations

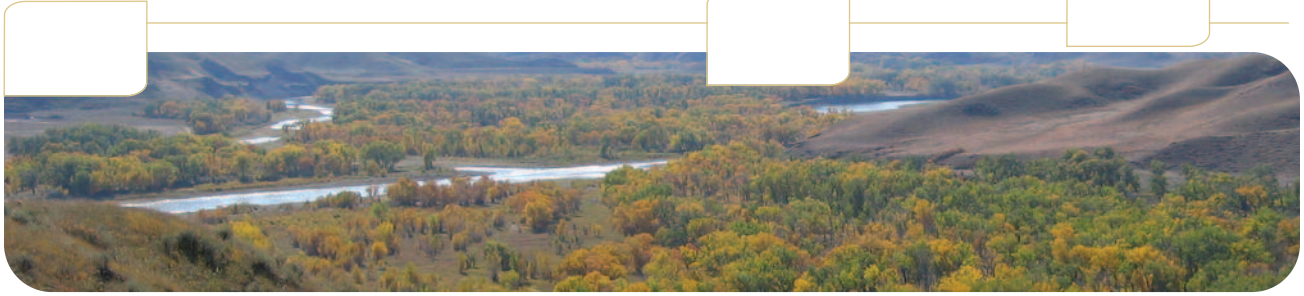
It is recognized that objectives and goals in the regional plans may require legislative and regulatory changes during implementation. The Alberta government will assess and determine the need for such changes, and make any required changes through Alberta's legislative procedures. The RACs are not being asked to advise on current laws and regulations but may pass comments to Cabinet as part of their advice should something become apparent as part of their deliberations.



Water Allocation

It is recognized that water supply and demand are key factors in development and growth for the South Saskatchewan Region. Changes to the water allocation system are not within scope of the RAC's work. The Government of Alberta has initiated a separate process to review Alberta's water allocation system.

The South Saskatchewan Region



The Land-use Framework identified the South Saskatchewan Regional Plan as an immediate priority. In May 2009, the Government of Alberta appointed a Regional Advisory Council for the South Saskatchewan.

The South Saskatchewan Region is incredibly diverse. Its landscapes include grassland, parkland, foothills and Rocky Mountains. Historic landscape change has been significant in the region, largely driven by agricultural expansion resulting from the settlement of the province in the 19th and 20th centuries. Two-thirds of the region's native grasslands have since been converted to other land covers, and much of the forested land cover has also been transformed.

The South Saskatchewan Region is also one of the most populated areas in the province. It is home to 45 per cent of Alberta's population and contains the province's largest city, Calgary. The City of Calgary has expanded geographically over time, annexing land from surrounding municipalities to facilitate growing development.

The Calgary Regional Partnership¹ is completing the Calgary Metropolitan Plan and this metropolitan plan, or sub-regional plan, will be approved by government as a plan under the *Municipal Government Act*. The Calgary Metropolitan Plan will be incorporated into the South Saskatchewan Regional Plan upon approval.

The region includes seven First Nations communities, whose reserves were established through the treaty process in 1877 under Treaty 7.

¹ Communities participating in the Calgary Regional Partnership are: Airdrie, Banff, Black Diamond, Calgary, Canmore, Chestermere, Cochrane, Crossfield, High River, M.D. of Foothills, M.D. of Rocky View, Nanton, Okotoks, Redwood Meadows, Strathmore, Tsuu T'Ina Nation, Turner Valley, and Wheatland County.

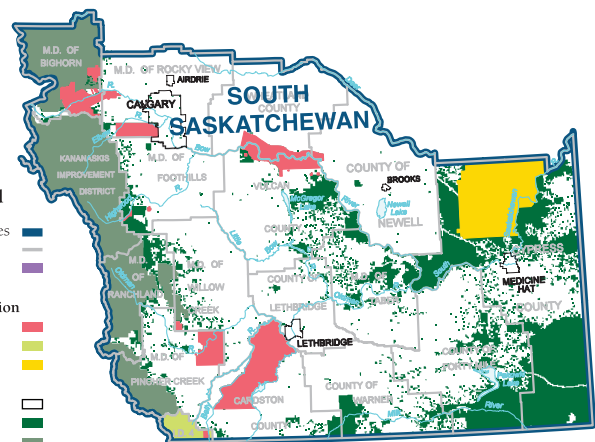


Land-use Framework Planning Regions based on Municipal Districts & Watershed

LUF Planning Regions Boundaries
Municipal Districts Boundaries
Metis Settlements

Lands Under Federal Jurisdiction
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White Area - Private Land
White Area - Public Land
Green Area - Public Land



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Water is a key challenge in the region. Although the South Saskatchewan Region is the most populated of the seven land-use regions, it has comparatively fewer water resources. The region includes the Bow, Oldman, South Saskatchewan and Milk river basins.

Much of southern Alberta depends on the ecological integrity of the Eastern Slopes for its water supply. The Eastern Slopes are currently zoned for protection, wildlife habitat and multiple uses, including oil and gas operations, grazing, and forestry. They are also important recreation and tourism areas for Albertans.



Balance Between Society, Development and Environment

Initial guidance to the RAC from government regarding the balance between society, development and environment in the South Saskatchewan Region is provided in three key areas:

- development scenarios;
- regional water and air thresholds; and
- social objectives.



Development Scenarios

The major drivers of change in the South Saskatchewan Region are population growth and water supply versus demand. The region has the largest population of the seven land-use regions, but has the least water. These two factors heavily influence land use in the region – presently and in the future.

Population growth has characterized the history of the region, reaching back to federal policies that encouraged the construction of the trans-national railroad and the settlement of Western Canada. Over time, this has dramatically changed the face of the region:

- population growth has led to increasingly intensive agricultural development and expanding resource development. While providing considerable economic benefits for the region, these have also changed the original landscape;
- an increasing population has resulted in growing residential development and expanding urban areas;
- it has also brought about greater demand for tourism and recreation development; and
- human activity has increasingly reached into previously undeveloped areas, impacting biodiversity, and has created greater demand for water.



Matching water demand with water supply is a continuing challenge, and will have an impact on the region's future:

- continued population growth and economic development in the region will depend on using the existing water allocations as efficiently and effectively as possible; and
- most of the region's water originates from the Eastern Slopes. The quality and quantity of water supplies are likely to be impacted by growing country residential and economic development along the Eastern Slopes.

Population growth and water supply and demand are not only inter-related; they also impact the region's economy and the region's landscapes. How the region is developed in the future will be influenced by all of these elements.



The RAC will consider various development scenarios for the South Saskatchewan Region. Accordingly, to inform the planning process, modelling and other assessment approaches will explore the relationships between:

- population growth;
- water supply and demand;
- conservation of valued landscapes and biodiversity;
- economic development;
- regional air and water thresholds; and
- social objectives.

There are a number of considerations accompanying each of these elements.

Population Growth

The number of residents in the region has steadily climbed over time:

- the total population in the South Saskatchewan Region in 2008 was 1,537,791, representing 45 per cent of provincial population²;
- the urban areas in the region have experienced the greatest population growth. The Calgary Metropolitan Area³ has seen the highest population increase, at 14.6 per cent from 1996 to 2006.⁴ In that same period, the populations of Medicine Hat and Lethbridge have increased 10.3 per cent and 7.9 per cent, respectively; and
- the Calgary Metropolitan Region represents approximately 80 per cent of the South Saskatchewan Region's overall population.⁵

² The population estimations are based on the Municipal Census 2008. Some of the specialized municipalities and municipal district population estimates are based on Statistics Canada data of 2006 Census.

³ Statistics Canada Census information 1996, 2006.

⁴ Statistics Canada Census Information 1996, 2001, 2006.

⁵ The distribution of 80 per cent of the Calgary Metropolitan population is based on the demographic data in the Profile of the Region report for South Saskatchewan and in the Calgary Metropolitan Plan for the Calgary Metropolitan area. The percentage is approximate and further adjustments may occur.

⁶ Urban growth has been highly suburban, in Calgary for instance, between 1996 and 2001, 80% of recent population growth has occurred in the newest suburbs (Source: Statistics Canada Census 1996, 2001).



⁷ New development in the region will occupy only 45,000 hectares compared to 125,000 new hectares of development predicted if no regional planning occurred. The CMP proposes that population growth across the region be accommodated through intensification of existing developed areas. In rural areas, new housing will be added to existing acreage developments accommodating demand for country lifestyle without further expanding into natural and agricultural areas. Population growth will be accommodated through compact urban nodes development generating compact, walkable communities connected through regional transit and transportation systems. (Source: Calgary Municipal Plan CMP)



The population of the region is expected to climb further in the future, with most of the growth concentrated around urban areas,⁶ especially the City of Calgary:

- significant growth is anticipated in the Calgary Metropolitan Region over the next 60 to 70 years. It is expected to add 1.6 million residents by 2076;
- the population in the remaining areas of the South Saskatchewan Region (i.e., outside the Calgary Metropolitan projection) is forecast to increase by 0.4 million people by 2076;
- there is a large First Nations population that is growing rapidly, averaging between 2.5 and 3 per cent annually. The area is covered by Treaty 7 and includes the Blood Tribe, the First Nation with the largest population in Alberta; and
- on a region-wide basis, the South Saskatchewan Region's population is expected to increase by approximately 2 million people by 2076.

This population growth will require a significant investment in physical infrastructure in the South Saskatchewan Region. It will also drive greater residential development and resource development activities, and increase demand for tourism and recreation opportunities.

Consequently, an increase in population will increase the consumption of land and water. Population and economic development objectives will therefore need to be balanced against available environmental resources to ensure the long-term sustainability of the region.

The Calgary Regional Partnership (CRP)⁷ has developed a metropolitan plan that prioritizes key elements: regional water management, regional waste management, regional transportation and transit system implementation, and regional economic development. The CRP and all municipalities in the South Saskatchewan Region must work cooperatively on planning.

Water Supply and Demand

The pressure on water resources in the South Saskatchewan Region is significant. There are currently more than 20,000 water allocation licences and registrations, serving approximately 1.5 million people and a mix of institutions and industries. Among the major industrial users is the agriculture industry, notably irrigation. This is supported by significant investments in water storage infrastructure.

The allocation limit of the surface water resource has now been reached or exceeded in most of the region's major water basins:

- new surface water allocations are no longer available in the Bow, Oldman and South Saskatchewan river basins;
- surface water allocations are generally no longer available from the rest of the planning area (including the Milk River Basin, and the Many Island and Pakowki terminal basins); and

- Alberta has obligations under water-sharing agreements to pass on established amounts of water to Saskatchewan and Montana.

Since new licences are generally not available, most new users in the Bow, Oldman and South Saskatchewan river basins will only be able to obtain an allocation by negotiating a water allocation transfer from an existing licence holder (water allocation transfers are presently not authorized for use in the Milk River Basin). Although support from the Government of Alberta is helping develop a market for water allocation transfers, it may be challenging for new users to locate a licence holder willing to transfer all or part of a licence.

Continued population and economic growth in the region will depend on using the existing water allocations as efficiently and effectively as possible.

Many water allocations in the South Saskatchewan River Basin were granted with a view to accommodating projections for population growth (e.g., for municipalities) or increases in production (e.g., for irrigation) with high-priority, reliable water licences. These allocations are not yet fully utilized. For example, actual municipal water use over the last five years has on average represented about 55 per cent of licensed municipal allocations; use by irrigation districts has represented on average about 66 per cent of licensed allocations for that purpose. Actual water consumption can therefore be expected to increase as existing allocations are more fully used to meet the demands of growth.

Compounding the challenge of matching water supply and demand are other factors that will limit the amount of available water in the future, such as climatic conditions. The region has historically experienced periods of drought. An increase in average temperatures associated with changing climate may lead to a decrease in surface water availability.

Water supply and demand in the region will engage a number of other land-use planning considerations as well:

- greater water use will reduce flows in the river basins, impacting the health of aquatic ecosystems;
- water shortages in the region may become more common as it becomes increasingly challenging to meet existing water allocations, fulfill Alberta's water-sharing obligations and improve river flows to maintain aquatic biodiversity. This may constrain future economic development, and negatively impact existing developments by placing lower-priority (i.e., newer) licence holders at risk; and
- activities on riparian lands and in source water areas, including agriculture, resource development and tourism and recreation, have cumulative impacts on water supplies, water quality, aquatic



ecosystems and wildlife habitat. About 60 to 70 per cent of wetlands in the White Area of Alberta have already been lost.

The future for water management in the South Saskatchewan Region lies in using the existing pool of water allocations as efficiently and effectively as possible, mitigating impacts on aquatic ecosystems when possible and in being prepared with risk management strategies for water shortages of varying degrees of severity and duration.



Alberta's *Water for Life* strategy has established a provincial target of 30 per cent improvement in water conservation, efficiency and productivity by 2015, from 2005 levels. In addition to conservation strategies, other water management tools should be considered to improve the reliability and quality of water supplies in the region. These strategies include protection of riparian areas, conservation and restoration of wetlands, and on- and off-stream storage.

It should also be noted that although the Red Deer Region is distinct from the South Saskatchewan Region for land-use purposes, water management policy for the Red Deer Region will be aligned and set within the overall planning context of the South Saskatchewan River Basin. The water needs of the Red Deer Region will therefore be considered in development of the South Saskatchewan Regional Plan.



Conservation of Valued Landscapes and Biodiversity

The South Saskatchewan Region contains some of the most diverse landscapes and ecosystems in Alberta. This diversity provides vital ecological goods and services. Ecosystems and the biodiversity contained within them provide a stream of goods and services which are essential for supporting human life. Examples of these goods and services include: crops, livestock, drinking water, erosion control, flood reduction, climate regulation, recreation opportunities, traditional land use, aesthetics and high levels of biodiversity. Therefore maintaining healthy ecosystems is essential in order to provide a high quality of life.

The region has been hallmarked by significant landscape change due to settlement, ongoing population growth and economic development. This has had consequences for the region's biodiversity and ecosystem health:



- sixty-one per cent of native prairie in Alberta's Grassland Natural Region and over 75 per cent of the native grassland in the Foothills, Parkland and Rocky Mountain natural regions has been lost. Of the remaining native vegetation areas in these regions, approximately 80 per cent has been fragmented;
- grasslands are among the most threatened natural habitats and are important for several of Alberta's endangered species;
- eighty per cent of the province's species at risk are in the region. In total, the South Saskatchewan Region is home to 20 of the 24 species listed as threatened or endangered under the *Wildlife Act*, 15 of which do not exist elsewhere in Alberta; and

- many of the endangered and threatened species listed in the federal *Species at Risk Act* are located in the South Saskatchewan Region.

Landscapes of particular importance in the region are the Eastern Slopes of the Rocky Mountains. In addition to providing natural beauty and wildlife habitat, the Eastern Slopes also provide more than 75 per cent of the South Saskatchewan Region's water supplies. The quality and quantity of these water resources are important for the region's future economic, environmental and social health.

Key planning considerations for valued landscapes and the maintenance of biodiversity in the region include the following:

- valued landscapes that provide important goods and services are conserved or restored;
- valued landscapes and resources are efficiently and responsibly used to provide a sustainable stream of goods and services; and
- the quality and diversity of the land base and biodiversity are maintained.

Key criteria for identifying, conserving and restoring the network of valued landscapes and elements in the South Saskatchewan Region include:

- areas that permit the function of ecological processes in the production of goods and services (e.g., riparian zones, prairies, forests, agricultural lands);
- areas that support the desired biological diversity in the region (e.g., landforms, species, vegetation) including important wildlife habitat and areas that enable movement of wildlife populations;
- landscapes that provide visual and cultural value;
- areas of sufficient size;
- areas providing landscape connectivity;
- areas providing recreation and tourism opportunities;
- areas with little or no industrial activity; and
- areas that support Aboriginal traditional land uses.

The identification, conservation and restoration of valued landscapes in the South Saskatchewan Region engage other land-use considerations:

- highly productive agriculture landscapes are prime candidates for providing food and other ecological goods and services (e.g., clean water);
- using information on goods and services will enable decisions on where valued landscapes are, what to conserve and to what degree;



- regional planning should strive to maintain a baseline level of ecological goods and services. Since a significant amount of land in the South Saskatchewan Region is private land, policies should be developed that enable opportunities for landowners to provide ecological goods and services. A range of policy tools and approaches may be required to facilitate a balance on these lands between development and landscape conservation and restoration.



Economic Growth

The economy of the South Saskatchewan Region is diverse, and economic development varies across the region. The region's major economic activities are agriculture, energy production, forestry, and tourism and recreation.

Economic growth in the region is important for sustaining local employment and the strength of local communities. Resource development in the region also contributes significant revenues to the province, helping fund important programs and services for Albertans.

Agriculture and Rural Development

The agriculture industry remains one of the renewable industries in Alberta, and agriculture in the South Saskatchewan Region will be an important, long-term economic driver in the future because:

- nearly half of Alberta's agricultural production occurs in this region. Cultivation occupies about 43 per cent of the land area (3.6 million hectares or 9 million acres) with about 15 per cent irrigated and the balance in dryland crop or seeded pasture production;
- the majority of Alberta's value-added agricultural processing is located in this region and much of the processing is associated with irrigation;
- irrigation is the region's biggest water user. While limits for the water resource are being reached, irrigation districts still have limited room for expansion within existing allocations. Water saved through additional efficiencies will enhance future diversification and economic growth opportunities;
- the region currently has about 37 per cent of Alberta's cattle herd, and the majority of Alberta's feedlot capacity. Dairy, poultry and hogs are also significant livestock industries in the area. Global meat demand is expected to double between 2000 and 2050. Alberta is working to reposition the industry to capture local and export market opportunities; the industry is expected to return to stable growth, with increased income from higher value markets and cost reductions through scale and technology;
- achieving the renewable fuel standard in Alberta will encourage expansion of bioenergy processing, thus increasing local feedstock demand from agricultural sources; and



- to meet growing market demands, primary production as measured by gross farm receipts is expected to increase by 86 per cent from 2006 levels, to \$8 billion by 2036. Food processing revenues are anticipated to climb to \$7 billion, an increase of 84 per cent.

Future agriculture and rural development will engage other land-use considerations:

- further increases in water use efficiency within existing water allocations could enable the irrigated area to expand. The region is expected to experience growth in value-added products, attended by a shift to higher-value crops on irrigated lands;
- it is important to maintain or restore the integrity of agricultural lands that have high value for food production. Within the region, about 2.5 million hectares or 6.2 million acres of agricultural lands (30 per cent of the region's total land area) have high capability for food production;
- cropland developed for irrigation is also highly valued because of the high production potential and significant private and public investment in infrastructure that has occurred on these lands;
- native rangeland health is maintained to protect wildlife habitat, species at risk, biodiversity, watershed integrity and to support recreation and the livestock/ranching industry;
- maintaining intact native grazing lands is important for supporting livestock production, and also provides valuable landscape services related to biodiversity, water and air. Only 16 per cent of the original foothills fescue grasslands remain. Of those, 74 per cent are privately owned and under increasing development pressure;
- the use of public lands for grazing is a historic practice in the region, which provides significant support to the agriculture industry. However, these public lands are also used for recreational purposes. Significant population growth in the region is generating greater demand for recreational spaces. Agricultural and recreational uses of public land must therefore be reconciled; and
- vibrant rural communities are essential to provide the necessary services to grow the agriculture industry and the region.



Energy

For many decades the oil and gas sector has been an economic force in the region. Energy production occurs throughout the region, and will continue to be a key activity in the future:

- forty per cent of the region is underlain by freehold minerals, with the remaining 60 per cent of the region underlain by Crown minerals;



- preliminary projections indicate that production of both natural gas and conventional oil will decrease steadily. Conventional oil is projected to decline gradually at about six to seven per cent per year, as it has done since 1996, with oil production possibly reduced to approximately 60,000 barrels per day by 2020. Natural gas production appears to have peaked in 2005 and production in 2025 could be only half of today's levels, which was three billion cubic feet per day in 2007;
- while the bulk of the natural gas activity is anticipated to be in the north-central and northeastern part of the region, the Eastern Slopes area also holds strong potential. Industry continues to be attracted to the promise of highly productive gas and also oil wells from the deep formations in the foothills;
- the Canadian Energy Research Institute's *Economic Impacts of the Petroleum Industry* (July 2009) reports that coalbed methane (CBM) activity has increased dramatically from a few test wells in 2001 to more than 10,000 producing wells in 2008, a substantial number of which are in the South Saskatchewan Region. Although CBM production currently forms only five per cent of total regional gas production, large growth in CBM production is anticipated. Shale gas is gaining some interest in adjacent regions and may become a future source of unconventional gas in the South Saskatchewan Region. Current and future CBM activity will predominantly occur in the Airdrie-Drumheller-Brooks area of shallow Horseshoe Canyon formation coal. CBM recovery from the deep coal of the foothills is still experimental;
 - alternative and renewable energy sources will play a growing role in the energy future of the region. The region currently produces all of Alberta's wind-generated electricity and this is expected to increase. The region's broad agriculture base is also likely to foster further biofuels production; and
 - a preliminary estimate of government revenue from royalties and mineral taxes for the region is about \$1.5 billion per year. Oil and gas industry employment across the region will continue for many years.



Key considerations relating to future energy development include the following:



- modestly increasing oil and gas activity focused on shallow plains gas and foothills deep gas for the short- and medium-terms;
- strong growth of coalbed methane activity and production;
- expansion of electricity infrastructure and wind development;
- maintenance of energy sector employment opportunities, both direct and indirect;
- steady or reducing trend in the current volumes of water consumed for oilfield injection and oil and gas processing; and

- the physical footprint of the energy sector infrastructure is unlikely to be reduced in the short- or medium-term. Declining conventional oil and gas production will require greater effort to extract and is expected to create a larger footprint per unit of production.

Forestry

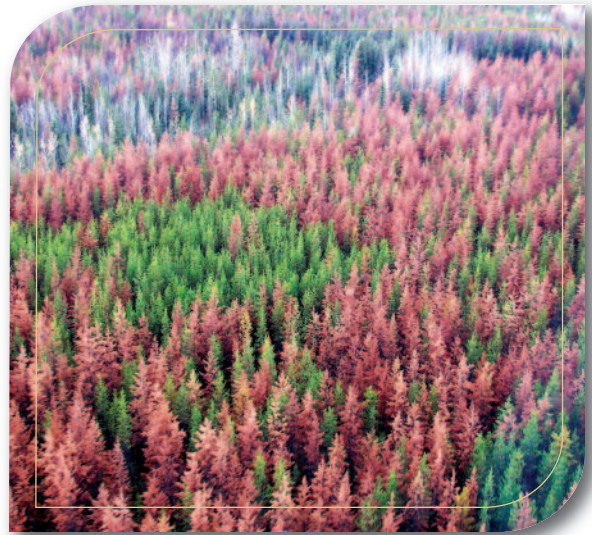
A relatively small proportion (16 per cent) of the region's landscape is forested, and of that, only 48 per cent is actively managed for timber. Though it continues to generate economic activity and provide employment for local residents, the forest industry is facing challenges:

- employment in southern Alberta related to forestry includes 10,200 jobs, approximately 6,000 of which are from secondary manufacturing industry in the Calgary area. Forest industry revenue (not including taxes) from sales totals \$1.8 billion annually, \$1 billion of this is from the secondary manufacturing industry; and
- the sector will be challenged to improve global competitiveness, increase value-added opportunities and establish innovative products from the evolving bio-industry. This diversification will help improve both the industry and community sustainability.

Ever-increasing human demands and uses of the forest and native rangelands have created a need for a long-term vision to guide our actions today and far into the future. The forests in the region must continue to provide a sustainable flow of goods (e.g., timber, forage, recreation and tourism opportunities) and services (e.g., providing clean air, clean water, fish and wildlife habitat) for many generations to come. Activities in forested areas must be managed in ways that conserve ecological integrity, biological diversity, long-term forest productivity and the forest land base. One of the key aspects of forest management planning is respecting watershed integrity.

Key forestry considerations for the region include the following:

- population growth in the region is driving greater residential development and greater demand for recreational spaces. These competing uses must be reconciled with the needs of the forest industry and the need to maintain ecosystem health;
- forest areas along the Eastern Slopes are at risk from mountain pine beetle infestations. Current populations are on the increase in the Bow Corridor area, Spray Valley, Upper Oldman River and Crowsnest Pass areas. Large-scale infestations could result in increased wildfire intensity, which could have consequences for some communities, since an increasing number of housing developments are being built within forest environments;



- economically, increased levels of mountain pine beetle infestation threaten the viability of the region's forest sector, with the potential of causing significant negative impacts on employment and community stability; and
- mountain pine beetle infestations may also affect watersheds. Infestations that kill large amounts of trees can alter natural water flows, resulting in stream destabilization, sedimentation, reduction of fish habitat quality and making it more costly to treat drinking water.



Recreation and Tourism

The South Saskatchewan Region is one of the most popular recreation and tourism destinations in Alberta. Sustainable recreation and tourism activities within the region contribute significantly to the desired economic, environmental and social outcomes of the province. The region's unique natural diversity, rich culture, variable climate and many facilities make the area highly attractive for many year-round recreation and tourism activities and developments.

Maintaining the integrity of recreation and tourism features is of importance in this region:

- the South Saskatchewan Region is an international-calibre destination and is critical to ensuring the ongoing growth of the provincial and national tourism industries;
- in 2007, direct tourism visitor expenditures were estimated to be \$2.2 billion which sustained a province-wide economic impact of \$2.5 billion; of this, \$1.6 billion was retained in the region;
- approximately \$942 million in total taxation revenues was accrued to all three levels of government. These expenditures supported 45,300 jobs province-wide and 36,404 jobs within the region; and
- provincially, Alberta is targeting a \$6.3 billion tourism industry by 2011-12. The region's tourism industry is expected to play a key role in achieving this target.



Hunting activities also contribute to the rural economy in incidental purchases such as accommodation, meals and gas. The outfitting and guiding industry is a large part of this, with Alberta being a destination point for many out-of-country hunters. In 2008, about 112,000 people hunted in Alberta. The economic value was estimated at \$296 million, plus up to \$36 million was made by outfitters and conservation organizations.



Tourism and recreation will continue to be a significant economic driver within the region and the province. Enhancement of existing and development of new tourism and recreation opportunities, including Aboriginal tourism and hunting tourism, are required, particularly as the population within the region grows and diversifies. Cypress Hills, Badlands and the Eastern Slopes are important future tourism development destinations. Currently, many recreation and tourism opportunities fail to meet current demands; those that do

may be approaching or exceeding capacity (e.g., campgrounds). Meanwhile, other recreation and tourism activities and destinations are lacking the necessary infrastructure to capitalize on economic opportunities, ensure beneficial experiences and manage the environmental and social impacts of the activity (e.g., designated trails).

Key land-use considerations relating to tourism and recreation include the following:

- new tourism and recreational developments can be expected to place added demands on existing water supplies. As the region's population grows, new tourism and recreational developments will compete with other users for limited supplies;
- the unique biophysical characteristics on which many recreation and tourism sectors depend will need to be maintained, as will continued opportunities for Aboriginal traditional land use. This may have consequences for residential and industrial development;
- the supply of recreation and tourism amenities and opportunities should reflect the demands of Albertans and visitors. However, these will need to be reconciled with other land uses, including residential and industrial development;
- the priority use of the Eastern Slopes will be watershed protection and the provision of appropriate and sustainable recreation and tourism opportunities; and
- tourism and recreation development should be balanced with other economic, environmental and social goals within the region.

Opportunities exist for government to enable landowners to maintain or enhance habitat that supports wildlife, fisheries and related tourism.

Guidance

The RAC will examine potential development scenarios in the South Saskatchewan Region, within the context of environmental thresholds and social objectives.

The RAC's work will explore the relationships between population growth, water supply, economic growth and land conservation. This modelling will incorporate the following expectations:

- a population increase in the region of 2 million people by 2076; and
- improvements of water-use conservation, efficiency and productivity by a minimum of 30 per cent (variation may be needed to account for changing climate, increased demand, effluent levels, etc.).



The RAC's advice regarding future development of the region should be consistent with the following guidelines:



- evaluate development scenarios for the South Saskatchewan Region, with development objectives for various sectors. These objectives should be evaluated with regard to water and land-use efficiency objectives, along with other desired economic, environmental and social objectives for the region. Agriculture, energy, forestry and the recreation and tourism sectors should be included in the evaluation, which should aim for all industries to be successful;
- use a cumulative effects management approach to evaluate varying combinations of sector development to determine growth opportunities, including the benefits, trade-offs and choices to balance economic development with environmental and social considerations in the region; and provide rationale for these choices;
- if the economic growth and development, environmental and social objectives cannot all be met, options should be assessed and recommended, with the potential impacts specified;
- develop options for improving source water protection (e.g., environmental setbacks, wetland protection or restoration, and rehabilitation of degraded sources) and other management means to protect watershed integrity;
- develop options for best management practices to reduce the human footprint and reduce fragmentation of valued landscapes in the region (e.g., prairie, forests, riparian zones, wetlands and agricultural lands);
- observe the key criteria for conservation lands as outlined above, and assess and advise which lands in the region could meet these criteria, considering development implications;
- identify options for the location of high-value recreation and tourism lands in the region, and advise on approaches to maintain the recreational and tourism integrity of these lands; and
- examine the suitability of recreational activities and tourism developments in the region. Identify necessary recreation and tourism infrastructure enhancements, including a particular focus on trails and campgrounds, as a way of meeting growing and changing demands. Provide advice on approaches to manage recreational use of public lands effectively.

Regional Water and Air Thresholds

The Government of Alberta is committed to ensuring a healthy environment for current and future generations.

The Alberta government is shifting from a project-by-project approach to a regional approach for managing cumulative effects of development. This approach recognizes that airsheds and watersheds have limited carrying capacity, and that development has incremental effects on Alberta's air, land and water.

The government will establish regional environmental thresholds and frameworks to sustain watershed and airshed integrity, and to meet economic, community and ecosystem needs. Development will need to be managed so that these thresholds are not exceeded.

Surface Water Quantity Thresholds

The South Saskatchewan Region includes the Bow, Oldman and South Saskatchewan sub-basins, which along with the Red Deer Sub-basin form the South Saskatchewan River Basin. The Milk River Basin is also contained in the region.

A well-developed water management framework exists in the South Saskatchewan River Basin for surface water quantity. It comprises the following:

Approved Water Management Plan for the South Saskatchewan River Basin establishes the limit of the water resource for the Bow, Oldman and South Saskatchewan River Basins; recommends an interim limit of the water resource for the Red Deer River Basin; and establishes water conservation objectives for instream flows;

Master Agreement on Apportionment establishes the terms and conditions regarding water sharing with Saskatchewan;

Boundary Waters Treaty establishes the terms and conditions regarding water sharing with Montana; and

Eastern Slopes Policy gives highest priority to watershed management.

The water management framework in the rest of the region is less developed. In the Milk River Basin, the framework comprises the ***Master Agreement on Apportionment*** and the ***Boundary Waters Treaty***.

The Government of Alberta is reviewing the water allocation system in Alberta. The water allocation system project will initiate the review and renewal of Alberta's current water allocation system and develop recommendations on changes and improvements to meet present and future needs. The project will examine the processes and structures for the allocation of water to the environment and other protected uses, and water diverted to support the population, economic growth and other uses. The project will deliver: policy options for water allocation in Alberta; a policy implementation plan which will include the enabling policy and legislation for the framework; and an operational implementation plan which will include the strategy for actualizing the framework "on the ground" throughout the province over the next several years.

The project aims to ensure Alberta's approach to water allocation is relevant and effective in providing the quantity and quality of water it needs to support Alberta's environment, economy and society. It aims



to provide a robust yet flexible water allocation system that can effectively enable place-based outcomes and support cumulative effects management in different regions across the province. It aims to advance the outcomes of the Water for Life Strategy, the Provincial Energy Strategy and the Land-use Framework by managing and allocating Alberta's water in an effort to sustain a growing economy that is balanced with Albertans' environmental and social needs.



The project includes four key phases:

- **Conceptual Framework** describing the drivers for change and articulating the need for action as well as policy options, implications and considerations (target delivery in summer 2009). This framework will amalgamate the work being undertaken by the Minister's Advisory Group on renewing Alberta's Water Allocation System; Alberta Water Council's Water Allocation Transfer System Upgrade Project (WATSUP): developing recommendations to better utilize and enhance Alberta's water allocation transfer system; and Alberta Water Research Institute: Water Allocation Jurisdictional Review;
- **Public Consultation** (target delivery in Fall 2009) with various stakeholders, including groups like the Regional Advisory Council for the South Saskatchewan Regional Plan;
- **Design of Operational and Policy Implementation Plans** which will include the enabling policy and legislation for the framework that defines policy changes and implementation considerations, and reflects advice from stakeholders (target delivery in late 2009 or early 2010); and
- **Policy Implementation Plan** for policy and legislation changes that will include a strategy for actualizing the framework "on the ground" throughout the province (target delivery in late 2010).



Surface Water Quality Thresholds

Currently, water quality in most of the region is managed based on provincial ambient water quality guidelines and meeting the *Master Agreement on Apportionment* (Schedule E water quality requirements for water entering Saskatchewan). More stringent ambient guidelines have been developed for portions of the Bow River under the Bow River Basin Council's *Phase 1 Bow River Watershed Management Plan*.



Alberta Environment is beginning the process of developing a comprehensive water quality management framework for all of the mainstem rivers in the region. The framework will be developed with the input of regional stakeholders including the various Watershed Planning and Advisory councils. The framework development will examine the current state of knowledge of water quality in the mainstream rivers and identify the appropriate triggers and thresholds for particular water quality parameters. Draft triggers and thresholds for key mainstem locations will be provided in Fall 2009.

Groundwater Thresholds

On a local scale groundwater is important; however it is not presently a major source of water for the South Saskatchewan Region. The setting of thresholds for groundwater requires substantially improved knowledge about the location and extent of groundwater aquifers and, most importantly, the sustainable yield of these aquifers.

The Alberta Groundwater Mapping and Inventory Program was initiated in 2008 to enhance groundwater knowledge across the province. Currently, the focus of the program is within the densely populated Edmonton-Calgary corridor where groundwater diversion and use is heavily exploited. Once work in the Edmonton-Calgary corridor is completed in 2011, it is expected that focus will shift to other priority areas within the South Saskatchewan Region.

Based on that enhanced understanding, a groundwater management framework will be developed. The framework will identify the priority areas for groundwater management within the region. It will include processes to: identify the current state of knowledge for both groundwater quality and quantity; address the knowledge gaps; and develop threshold values within the priority areas first and for the region.

Air Quality Thresholds

There are three airsheds currently within the South Saskatchewan Region: the Calgary Region Airshed Zone (CRAZ), Palliser Airshed Society and a small part of the Parkland Airshed Management Zone. All have ambient air monitoring programs.

Air quality is determined by emissions of pollutants, local meteorological conditions and topography and is currently managed to meet provincial ambient air quality parameter objectives.

CRAZ has developed a draft Particulate Matter and Ozone Management Plan for the Calgary area. A revised version that incorporates stakeholder input is to be completed by December 2009. This plan identifies specific actions for maintaining or improving current ambient ozone levels for the future, given present growth projections of an additional 1.6 million people for the Calgary area by 2076. The present draft plan includes the provision for sector-specific emission thresholds to be developed.

An Air Quality Scoping Study for the South Saskatchewan Region has been commenced and will be used to identify if and where additional air quality management thresholds and planning trigger limits may be needed in the region.



Guidance

The RAC will use the established watershed and airshed thresholds in developing the regional plan, and will provide advice consistent with the following guidelines:

- development scenarios that are explored should be assessed with reference to the specified regional cumulative environmental thresholds for air and water; and
- if economic, environmental and social objectives can not all be satisfied in each scenario, then options should be assessed and recommended.



Social Objectives

Development opportunities in the region engage a number of land-use considerations that relate to human development.

Regional social considerations, the traditional land use activities of First Nations, and the location of future corridors that include linear infrastructure (e.g. pipelines, electrical transmission lines) in separate facilities or combined multi-use corridors, are all aspects of human development that need to be considered by the RAC.



Social Considerations

In order for social issues to be considered for discussion, social issues must have a direct link to land use. Land-use planning involves economic, environmental and social considerations. Social considerations relate to society and its organization, including community living patterns integrated with culture, education, health, well-being and safety.

In building the region's vision and objectives, it will be important to have regard for social considerations that attend a growing population. These include social aspects of development such as: business and trade; municipal services; travel; leisure and recreation; institutions and infrastructure.

Aboriginal

It will be important that continued opportunities exist for Aboriginal traditional land use in reasonable proximity to Aboriginal communities. There are seven First Nations communities in the region, and traditional land uses occur in the region. The Traditional Use Studies Program, initiated in 2003, supports First Nations in the collection of data that aids government in decision-making for land management and resource development applications.

First Nations reserve lands are administered by the federal government. The Government of Alberta will continue to meet Alberta's legal duty to consult First Nations communities whose constitutionally protected rights under Section 35 of the *Constitution*



Act, 1982 (CANADA) are potentially adversely impacted by development. Aboriginal peoples will be encouraged to participate in the development of regional plans and share their knowledge of traditional land uses.

Major Multi-Use Corridors

Establishing corridors for transportation facilities and other linear infrastructure related to utilities offers the opportunity to consolidate much of the critical infrastructure within pre-defined areas, thereby reducing land fragmentation and environmental impact.

A robust, reliable and efficient multi-use corridor system is required in Alberta that will include links within the region and between the region and the rest of the province. In the vicinity of large urban areas like the cities of Calgary and Edmonton, transportation and utility corridors (TUCs), including ring roads and regional ring roads, would be required to address future mobility and utility needs.

Guidance

In developing the regional plan, the RAC should:

- provide advice on the general location of major multi-use corridors including transportation and utility infrastructure in the region and the considerations that must be addressed by the Alberta government in planning their specific locations;
- consider impacts to Aboriginal communities as well as constitutionally-protected rights exercised by members of those communities; and
- provide advice regarding new development needs and healthy community objectives in the region. This will involve examining the alignment of sustainable community policies, including the effective use of water and land.

Additional Guidance

A considerable amount of prior consultation, policy setting and decision-making concerning the South Saskatchewan Region has already occurred. The RAC will use this input as it develops an overall vision for the region.

Integration of Provincial Policies

The RAC will recommend outcomes and strategies for the South Saskatchewan Region that reflect and integrate provincial policies and objectives. Specifically, the RAC will consider the following policies:

- *Aboriginal Policy Framework: Strengthening Relationships*
- *Alberta's Forest Management Planning Standard*
- *Alberta's Clean Air Strategy*
- *Alberta's Plan for Parks*
- *Alberta's Strategy for the Management of Species at Risk*



- *A Place to Grow: Alberta's Rural Development Strategy*
- *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order*
- *Building and Educating Tomorrow's Workforce*
- *Climate Change Strategy 2008*
- *Fish Conservation Strategy for Alberta 2006-2010*
- *Launching Alberta's Energy Future: Provincial Energy Strategy*
- *Oldman River Basin Water Allocation Order*
- *The Spirit of Alberta: Alberta's Cultural Policy*
- *Vision 2020: The Future of Health Care in Alberta*
- *Water Conservation Objectives: Bow, Oldman, South Saskatchewan and Red Deer Sub-basins*
- *Water for Life: Alberta's Plan for Sustainability (Renewal 2008)*
- *Water Management Plan for the South Saskatchewan River Basin*
- *Water Management Plan for the Upper Highwood and Upper Little Bow Rivers*

In addition to these policies, other works may need to be considered in the development of the regional plan, including those from partner organizations.



Approximate Timelines for Regional Plan Completion

The South Saskatchewan Regional Plan will be developed in the following stages:

Summer 2009 - Winter 2010

- Cabinet guidance provided through the Terms of Reference for the South Saskatchewan Regional Plan.
- Vision, outcomes and objectives for the South Saskatchewan Regional Plan to be developed.
- RAC provides advice based on Cabinet guidance, informing the development of the regional plan.
- Public, stakeholder and Aboriginal consultations on the draft Vision, Outcomes and Objectives will be held, using the Alberta government's consultation processes.



Spring 2010

- Draft South Saskatchewan Regional Plan to be developed.
- Public, stakeholder and Aboriginal consultations on the draft regional plan will be held, using the Alberta government's consultation processes.
- Feedback from the consultation process will inform further work on the regional plan.
- Final, comprehensive draft of the South Saskatchewan Regional Plan submitted to Cabinet for final review and approval.

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ISBN: 978-0-7785-8700-2 (Printed Edition)
978-0-7785-8707-9 (Online Edition)
Pub No. I/388
Printed November 2009