



Land-use Framework Regional Plans

PROGRESS REPORT

a review of our progress in 2014



Alberta
Government

For more information about Land-use Framework (LUF) Regional Plans Progress Report: A review of our progress in 2014 contact:

Land Use Secretariat:
9th Floor, Centre West Building
10035 – 108 st
Edmonton, Alberta
T5J 3E1
Phone: 780.644.7972
Email: LUF@gov.ab.ca

Visit the Alberta Land-use website to download a copy of the entire report: www.landuse.alberta.ca

ISBN: 978-1-4601-3040-7 (printed version)
978-1-4601-3041-4 (online version)
Printed: July 2016



Progress Report

2014

Introduction

The Land-use Framework (LUF) introduced in 2008 provides a blueprint for land-use management and decision-making to address mounting pressures on Alberta's land and resources. It also establishes a provincial vision of Albertans working together to respect and care for the land as a foundation for our environmental, economic and social well-being.

Since that time, significant strides have been made including the adoption of an integrated and co-ordinated approach to resource management designed to encourage holistic, cumulative effects management and monitoring of natural assets in order to achieve greater resource stewardship. This approach relies heavily on provincial legislation, policies and mandates to provide direction, on LUF regional plans to set a long-term vision, outcomes, strategic actions and policy direction reflecting needs for each of the seven regions in Alberta, on regulatory enhancement and the Alberta Energy Regulator to provide policy assurance of those outcomes, and finally, on monitoring, evaluation and reporting on the degree of progress made with respect to the provincial vision and desired regional outcomes.

Within this system regional plans play a key role. Regional plans, developed with the input and feedback from Albertans, establish a long-term vision for the region, set the desired economic, environmental and social outcomes and objectives for the region using a cumulative effects management approach, and align provincial policy at the regional level to balance Alberta's outcomes. Further, regional plans specifically describe the strategies, actions, approaches and tools required to achieve these desired ends. This provides guidance and clarity for land users and land-use decision-makers.

Regional plans contain regulatory provisions to enable achievement of strategic directions, strategies and actions for the region over the next few years. They are enforceable by law and binding on everyone as identified in the *Alberta Land Stewardship Act*.

LUF Progress Report 2014 meets legislative requirements described in the *Alberta Land Stewardship Act* and the regulatory requirements embedded in the plans. It also fulfills a public commitment to monitor and periodically report the progress made toward achieving objectives found in the regional plans. It is the second report in a series of reports; and it remains focused on the Lower Athabasca Regional Plan (LARP). The next report in 2015 will continue to examine changes within the Lower Athabasca Region and include an assessment of progress with respect to the second regional plan, the South Saskatchewan Regional Plan (SSRP), which came into effect in September 2014. Progress reports generated over the course of several years will be used to inform five year evaluations and 10 year reviews of regional plans.

Year in Review

This report endeavors to answer the question “was progress made toward achieving desired regional objectives expressed within the approved regional plans?” Often the answers start with the broader economic, social, and environmental context within which that change did or did not occur.

Economic Context

In light of falling oil prices and a deficit of nearly \$12 billion over the next three years, fiscal measures were introduced to ensure long-term financial stability while reducing reliance on non-renewable resource revenue. Many of Alberta’s economic indicators softened near the end of 2014. Lower oil prices may have negatively impacted activity – housing starts, drilling rig activity, manufacturing and export growth all slowed down. On the positive side, Alberta’s labour market finished strong, investment in non-residential construction rose, earnings and retail sales continued to grow, and inflation eased. Diversified economies, competition for labour and access to new markets continued to be a strategic focus.

Social Context

Alberta’s population swelled to an estimated 4,160,044 as of January 1, 2015 – a year-over-year population growth of 2.5 per cent, more than double the national average. Much of this growth was attributable to migrants from other Canadian provinces and other parts of the world. Municipal and industrial growth placed additional pressure on community services, infrastructure, agricultural lands, and on the environment.

Environmental Context

In 2014, recovery from the devastating flooding of 2013 in southern Alberta continued. Population growth and associated pressures on air quality, water quality, and biodiversity underscored the need for a cumulative effects management approach and environmental limits. Additional attention was brought to population growth and industrial development through the Auditor General’s report which made several recommendations including an improved response to climate change. Government departments and organizations worked closer together than ever before to lead the achievement of desired environmental outcomes and sustainable development of natural resources for Albertans.

Regional Planning

It has long been recognized that an integrated approach to land and resource management based on regional planning, integrated policies, regulatory assurance, and improved environmental monitoring, in which governments, industries, aboriginal groups and Albertans work together, is required to ensure responsible growth and sustainable solutions for the future. In 2014, regional planning advanced this work – the Lower Athabasca Regional Plan implementation made significant strides, the South Saskatchewan Regional Plan came into effect, and drafting of the North Saskatchewan Regional Plan began.

Lower Athabasca Regional Plan

The Lower Athabasca Regional Plan (LARP), named for the major watershed covering the northeast corner of Alberta including Fort McMurray, Cold Lake and Lac La Biche, came into effect in September 2012.

The first of seven regional plans, LARP sets regional environmental management triggers and limits for air and surface water quality, provides for six new conservation areas with the aim of conserving two million hectares or 22 percent of the region, encourages economic diversification, addresses infrastructure challenges around Fort McMurray, commits to continued consultation with aboriginal peoples, provides certainty to industry, and provides for nine new provincial recreation areas to address growing demand for recreational and tourism opportunities. It also commits to the development of a biodiversity management framework, a tailings management framework and a surface water quantity management framework.

Now that LARP is in effect, everyone is expected to comply with the plan and operate in a way that helps achieve regional planning outcomes. Compliance entails taking a hard look at the land-use decisions we make today, to changing our strategies, tools and habits, and working closely together to align with the plan. In 2014, compliance also translated into:

Compliance Declarations: decision-making bodies such as agencies, board and commissions must review and improve their regulatory instruments then submit statutory compliance declarations formally declaring they are operating in a compliant manner. While decision-making bodies were expected to complete this before the deadline of September 2014, local government bodies have until September 2017;

Requests for Variance: two requests for a variance (or exceptions) to the regional plan were filed by title-holders who felt they faced unnecessary hardship as a result of the plan. These requests were granted by the Stewardship Minister to Cenovus FCCL Ltd in 2012 and AltaLink in 2013;

Requests for Review: six First Nations formally requested a review of the regional plan as they felt directly and adversely affected by the plan. A panel, appointed by the Stewardship Minister through a public nomination process, reviewed their submissions in the latter part of 2014 and will provide their recommendations to the Stewardship Minister in June 2015.

South Saskatchewan Regional Plan

The South Saskatchewan Regional Plan (SSRP), named after the watershed encompassing the southern portion of the province and home to 44 per cent of Alberta's population, came into effect on September 1, 2014.

SSRP provides for eight new or expanded conservation area and eight new or expanded recreation areas (including 12 new areas for "no service" camping and trail access), sets environmental management triggers and limits for surface water quality and air quality, commits to developing a biodiversity management framework and a comprehensive approach to groundwater management as well as a regional parks plan and trail system, continues watershed management and headwaters protection in the eastern slopes, promotes efficient use of land to reduce human footprint on the landscape, protects against native grassland conversion, and commits to continued work on climate variability issues within the region including flood risk and drought management.

Now that SSRP is in effect, everyone is expected to comply with the plan and operate in a way that helps achieve regional planning outcomes.

North Saskatchewan Regional Plan

The North Saskatchewan Regional Plan (NSRP) spans central Alberta from Banff National Park in the west through Edmonton and the Industrial Heartland in the central part of the province to Smoky Lake County and Lloydminster in the east. In May 2014, the Terms of Reference provided guidance on specific social, economic and environmental factors that must be considered during development of a plan. A profile of the North Saskatchewan Region describing the current state of the economy, community and environment within the region was distributed along with the terms of reference.

Albertans and stakeholders were asked to provide their input or feedback on these terms of reference through a series of open house information sessions, workshops, and meetings offered in 21 locations throughout the region and through online workbooks. This public input and feedback then helped guide a North Saskatchewan Regional Advisory Council consisting of 27 publicly nominated individuals who live, work, recreate or have an interest in the North Saskatchewan Region. The Council met on eight occasions from July through November 2014 to develop their advice to government. That advice, as well as all earlier input from Albertans will be used to draft the NSRP in 2015-16.

As part of the continued commitment to a fair and transparent process, application forms, major decisions, consultation results, advice to government, draft and final regional plans are publicly available at www.landuse.alberta.ca.

Summary of Results

LUF Progress Report 2013 summarized results achieved with respect to the strategies and outcomes committed to in LARP during the first full year of its implementation. While it highlighted initiatives that were underway and on track, it reminded us that some of the initiatives such as those involving sub-regional planning of the South Athabasca Oil Sands area, developing a biodiversity management framework and landscape management plan, updating the surface water quantity management framework and developing a regional parks plan for the Lower Athabasca were delayed.

LUF Progress Report 2014 summarizes the results achieved during the second full year of LARP implementation. Strategic commitments made in LARP are found within this report and, for ease of review are colour-coded red to indicate the strategy is **delayed** or green to indicate the strategy is **on track** or implementation is **ongoing**.

Generally, of the five initiatives reported as delayed in LUF Progress Report 2013, two improved their status while three maintained their status in 2014. Additionally three strategies:

1. Lakeland Country Destination Development Plan, and
2. Tourism opportunity assessments for Quarry of the Ancestors, Bitumount and Fort Chipewyan, and
3. Complete and implement the Groundwater Management Framework for the Lower Athabasca Region,

were added to the delayed list in LUF Progress Report 2014, with commitments to complete this work by 2017. The balance of the 35 strategies remains on track or ongoing.

A summary of each supporting indicator (originally identified in Table 1 of LARP) as well as the status of each strategy (originally identified in Table 2 of LARP) is available in the following sections of this report. Copies of the report are available through the Land Use Secretariat or online at www.landuse.alberta.ca.



Provincial Outcome: Healthy economy supported by our land and natural resources

Three distinct, desired provincial outcomes will help translate the provincial vision of “Albertans working together to respect and care for the land as a foundation for our economic, environmental and social well-being” into reality. These outcomes are interrelated and of equal importance. The first is a “healthy economy supported by our land and natural resources.” Within LARP, strategic directions that help improve our ability to do this include improving integration of industrial activities and encouraging economic diversification. The following economic outcomes and strategies describe what we wish to achieve and how we are getting there.

LARP Outcome 1: The economic potential of the oil sands is optimized

Continue work through the Alberta Provincial Energy Strategy *(Alberta Energy – implementation is ongoing)*

“Alberta’s Provincial Energy Strategy (2008) charts the course of Alberta’s energy future. The strategy is an action plan for Alberta to achieve clean energy production, wise energy use and sustained economic prosperity.” In 2013-14, Alberta Energy initiated the province’s first International Energy Strategy to facilitate greater access to key global markets. Additionally, Alberta “co-lead development of the Canadian Energy Strategy, a national collaborative approach to energy development that will position Canada as a recognized global leader in responsible energy development, production, supply and transportation.”

Continue work on Responsible Actions: A Plan for Alberta’s Oil Sands *(Alberta Energy – implementation is ongoing)*

Responsible Actions: A Plan for Alberta’s Oil Sands (2009) is a 20 year oil sands strategy. The Strategic Plan was developed to address current and future growth in the oil sands. It is intended to achieve the triple bottom line outcomes of optimized economic growth, reduced environmental footprint and increased quality of life for Albertans today and into the future. Currently over 50 initiatives are in various stages of development, demonstrating the government’s ongoing commitment to developing the oil sands in a responsible manner.

Continue work on an improved regulatory process

(Alberta Energy and Alberta Environment and Parks (formerly Alberta Environment and Sustainable Resource Development) – implementation is ongoing)

Building a robust and efficient regulatory system is critical to supporting continued growth and environmental management in the region and province. In 2013, the Alberta Energy Regulator (AER) became responsible for regulating the life cycle of oil, oil sands, natural gas and coal projects – from application and exploration, to construction and development, to abandonment, reclamation and remediation. In 2014, the AER's authority grew to include, for energy-related development only, the *Environmental Protection and Enhancement Act*, including reclamation and remediation activities, and the *Water Act*.

Sub-regional plan using a strategic environmental assessment approach for the South Athabasca Oil Sands area

(Alberta Environment and Parks - due 2013, delayed to 2016)

Development of a sub-regional plan using a strategic environmental assessment approach for the South Athabasca Oil Sands area will contribute to the management of cumulative effects and support efficiencies in the regulatory review process for in-situ oil sands operations. The South Athabasca Oil Sands Regional Strategic Assessment examines the potential cumulative effects of three energy development scenarios in an area between Fort McMurray and Lac La Biche that will likely see significant development of bitumen resources over several decades. Consultation was undertaken in February and March 2014 in Edmonton, Fort McMurray, and Lac La Biche to contribute to the Regional Strategic Assessment. Presentations describing methodologies used in the initiative were also made available for public review in the summer of 2014. This foundational piece is expected to be completed in spring 2015, and will inform the sub-regional planning. The sub-regional planning is underway with the establishment of a cross-ministry planning team and development of draft terms of reference. Completion of the sub-regional planning is targeted for 2016. This is intended to be integrated with development of the Landscape Management Plan for the region.

Continue work on Connecting the Dots: Aboriginal Workforce and Economic Development in Alberta

(Alberta Jobs, Skills, Training and Labour (formerly the responsibility of Alberta Human Services) – implementation is ongoing)

Connecting the Dots: Aboriginal Workforce and Economic Development in Alberta report submitted by an MLA committee in 2010 highlighted 30 recommendations to increasing participation of aboriginal peoples in Alberta's workforce and economy. In 2011, the Government of Alberta accepted 28 of these recommendations and two in principle. In the Government of Alberta's response, the first strategic priority was to develop an Aboriginal Workforce Strategy. A progress report on Connecting the Dots was released in 2013. Alberta Jobs, Skills, Training and Labour continues to lead the development of the Aboriginal Workforce Strategy.

LARP Outcome 2: The region's economy is diversified

Continue to prevent future shortfalls in timber supply

(Alberta Environment and Parks – implementation is ongoing)

Alberta forest product companies face growing challenges from mountain pine beetles, increasing wildfire size and intensity, labour competition, and climate change alongside a diminishing land base as productive timber lands make way for industrial and municipal development. In 2014, Alberta Environment and Parks committed to developing and initiating implementation of a land reclamation framework and an Alberta Forest Strategy to provide long-term provincial strategic guidance and support to the ministry's policy, resource management, and land use planning for forestry.

Continue work on wildfire management planning initiatives

(Alberta Environment and Parks – implementation is ongoing)

The amount of wildfire risk in Alberta is growing due to population growth pressures, rapid development in the wildland/urban interface, and industrial activity on the landscape. In 2013, the Government of Alberta developed the Wildfire Management Planning Standard as a guideline for wildfire risk management in Alberta. These plans are intended to guide the prevention, mitigation, preparedness, response and recovery for wildfire within a forest area for a five year period. Wildfire management strategies are aligned with regional outcomes. In August 2014, the Lac La Biche Wildfire Management Plan was completed and development of the Fort McMurray Plan continued.

Continue work on the Alberta Forest Products Roadmap to 2020

(Alberta Environment and Parks – implementation is ongoing)

Collaboration between Alberta government and the forest industry sector is focused on an approach to make Alberta's forest sector the most successful in North America, based on economic competitiveness and environmental performance. Strategies are aimed at achieving growth, progress and long-term variability in Alberta's forest products industry, enhanced contributions to rural communities and the province at large, and green solutions to environmental and economic challenges. In 2014, this collaboration continued to explore opportunities to diversify the sector through new markets and products.

Lakeland Country Destination Development Plan

(Alberta Culture and Tourism (in part, formerly known as Alberta Tourism, Parks and Recreation) – due 2015, delayed to 2017)

Lakeland Country has the potential to attract visitors and gain national and international recognition; the Destination Development Plan (formerly known as the "Lakeland Country Destination Development Strategy and Tourism Opportunity Plan") will identify strategies to develop the regional and local economy through tourism. During 2014, government, aboriginal peoples, and key tourism industry organizations and stakeholders were identified and discussions were held to assess support for undertaking the plan. A tourism task team was assembled to assess the tourism opportunities that could be identified through an *Alberta Land Stewardship Act* issue-specific plan. In 2015, a cross-ministry team will begin development of the plan. In recognition of the importance of this strategy and the complexity of developing an issue-specific plan, more time and resources have been allocated to this initiative; the projected completion date will be 2017. The plan will also provide for scenic byway and tourism node development.

Continue to enhance and expand the supply of tourism products and infrastructure

(Alberta Culture and Tourism – implementation is ongoing)

The tourism industry has great potential to diversify Alberta's economy. It is a multi-billion dollar industry that supports over 19,000 tourism businesses and employs more than 139,000 people, either directly or indirectly. Tourism revenue is a key economic driver for the province and contributes to the well-being of all Albertans. Work is on-going to identify and develop new tourism opportunities in the region, and Fort McMurray Tourism continues to be an important, collaborative partner in this initiative.

Tourism Development Nodes

(Alberta Culture and Tourism – due 2015, implementation is on track for completion in 2015)

Tourism development nodes identify areas on public, municipal or private land that comprise a cluster of natural and built features, scenery and settings that can provide unique opportunities for recreation and tourism development. An established node is a commitment by provincial and municipal agencies to ensure that tourism development is the predominant use and focus for the area. In 2014, using recently acquired data, preliminary identification of tourism development nodes began. In 2015, tourism node development policy for the region will be considered during the preparation of the issue-specific plan for Lakeland Country.

Tourism opportunity assessments for Quarry of the Ancestors, Bitumount and Fort Chipewyan

(Alberta Culture and Tourism – due 2014, delayed to 2016)

Tourism opportunity assessments will identify potential aboriginal tourism development and investment opportunities, including guided tours, educational programs, attractions, exhibits or interpretive sites. It is anticipated that tourism opportunity assessments for Quarry of the Ancestors and Bitumount will be completed in 2015, while Fort Chipewyan will be completed in 2016.

Scenic Byways Network

(Alberta Culture and Tourism – due 2015, implementation is on track for completion in 2015)

Work with municipal governments and other partners to identify, establish and promote scenic byways which include routes, trails and waterways in and around areas with high quality attractions for recreation and tourism. Creation of distinctive travel experiences will showcase the region's unique scenic resources and cultural landscapes. In 2014, routes, trails and waterways of the Lower Athabasca Region were identified. A "Live the Athabasca" recreation and tourism concept plan for the lower Athabasca River was also completed. Over the next 10 years, work will continue with local communities to address tourism development around scenic byways of the Lower Athabasca Region. Identification of scenic byways is an important component of the Lakeland Country Destination Development Plan.

Continue to clarify rules for physical access to energy, mineral and coal resources

(Alberta Environment and Parks and Alberta Energy – implementation is ongoing)

Alberta Energy and Alberta Environment and Parks continued to provide environmental stewardship direction and regulate access (during exploration, development and extraction), allocation and use of natural resources through planning, policy and policy assurance programs. By September 2014, these provincial ministries and other decision-making bodies had reviewed and aligned their regulatory instruments with the approved LARP. Local government bodies are expected to do so by September, 2017.

Continue to promote new investment in energy, mineral and coal resource development

(Alberta Energy – implementation is ongoing)

In 2014, Alberta Energy's priority initiatives included expanding Alberta's access to key global markets for energy commodities and products, evaluating profitability of major projects in Alberta compared to competing investment options given global cost inflation, identifying opportunities that may attract investment, and working with industry and stakeholders to support production of higher value energy products from raw resources.



Provincial Outcome: Healthy ecosystems and environment

The second desired provincial outcome involves “healthy ecosystems and environment.” Albertans accept the responsibility to steward our land, air, water and biodiversity on both public and private lands. Within LARP, strategic directions that help improve our ability to do this include managing air, water and biodiversity, minimizing land disturbance and creating new conservation areas. The following environmental outcomes and strategies describe what we wish to achieve and how we are getting there.

LARP Outcome 3: Landscapes are managed to maintain ecosystem function and biodiversity

Create new conservation areas on provincial Crown land

(Alberta Environment and Parks – as soon as practicable, implementation is ongoing)

In addition to the existing six per cent, LARP established an additional 16 per cent of the region as new conservation areas, bringing the total area of conserved lands to approximately 22 per cent, or approximately two million hectares. In order to establish new conservation areas in the Lower Athabasca Region, Crown oil sands and metallic and industrial minerals (MIM) agreements that fell within, or partially within, new conservation areas established under LARP were subject to cancellation in accordance with section 8 (1) (c) of the *Mines and Minerals Act*.

As of March 31, 2014, Alberta Energy had compensated, in accordance with the provisions of the Mineral Rights Compensation Regulation, and cancelled 76 oil sands and MIM agreements within the new conservation areas. It is anticipated that the remaining MIM agreements falling within or partially within the new conservation areas designated in LARP will be compensated and cancelled by summer 2015. Imperial Oil Resources Limited voluntarily surrendered the portions of their oil sands agreements within the Gipsy-Gordon conservation area.

The management intent of the conservation areas came into effect when LARP came into force in September 2012. Work on formal designation of the conservation areas is continuing. In some cases, designation is dependent upon completion of the cancellation and compensation process for subsurface and surface agreements. In other cases, surface dispositions incompatible with the management and intent of Wildland Provincial Parks have to be resolved. Once compensation is finalized, the new conservation areas of Kazan, Richardson, and Gipsy-Gordon Wildland Provincial Parks will be designated

under the *Provincial Parks Act* and Birch River Conservation Area will be designated under the *Public Lands Act*. The expansion of Birch Mountains and Dillon River Wildland Provincial Parks are anticipated to be designated under the *Provincial Parks Act* in 2015.

Continue to manage existing conserved lands

(Alberta Environment and Parks – implementation is ongoing)

Conservation areas are clearly defined areas that have special rules to protect ecosystems and biological diversity. Wilderness Areas, Ecological Reserves, Wildland Provincial Parks, Provincial Parks, Natural Areas, Heritage Rangelands and Public Land Use Zones are examples of the different types of conservation areas. Each of these has different goals and different rules associated with it. These rules dictate what kinds of activities – including recreation, development and industry – are prohibited in the area and which ones are allowed. LARP Schedule F identified permitted activities for existing and new conservation areas in the region. Since LARP came into effect, these areas have been managed with that intent.

Develop a biodiversity management framework

(Alberta Environment and Parks – due in 2013, formally approved to release in 2015)

Biodiversity management frameworks seek to balance anticipated development with environmental protection by defining thresholds for regional biodiversity while also supporting social and economic objectives for the region. Frameworks represent a systematic, credible approach to biodiversity management. They support continued economic and community growth in the region, drive improved practices to minimize the extent and duration of human footprint, and avoid new “species at risk.”

A draft Lower Athabasca Biodiversity Management Framework was completed in November 2014 after considerable consultation earlier in the year. The framework identifies regional objectives and a suite of regional biodiversity indicators and triggers for those indicators. Also, the framework establishes monitoring and reporting, proactive management actions to be used now, and a management response process to be used in the future. Public, stakeholder and aboriginal engagement in November and December 2014 solicited feedback on the draft framework. Based on that input, the framework will be revised and finalized for government approval and implementation in 2015.

Develop a landscape management plan for public lands in the Green Area

(Alberta Environment and Parks – due 2013, delayed to 2016)

Managing landscape disturbance will support the achievement of regional biodiversity objectives and the biodiversity management framework by defining specific actions to manage cumulative effects of human activities. The plan will include strategies to coordinate and manage linear footprint, land disturbance and motorized public access in key sub-regional land areas.

Engagement on the development of the Landscape Management Plan was started in 2014 and continues. The draft Landscape Management Plan is targeted for completion in late 2015. To that end, significant work has been completed on preliminary modelling and landscape characterization. The Landscape Management Plan will also coordinate and align direction provided in various sector and issue-specific planning initiatives such as the Moose Lake Access Management Plan, the Ecosystems Forestry Plan for Birch River Conservation Area, and the sub-regional planning in the South Athabasca Oil Sands area. This enhanced management of footprint on the landscape will support caribou range planning and management. Approval and implementation of the Landscape Management Plan is expected in 2016.

Complete a tailings management framework

(Alberta Environment and Parks – approved in 2015 – implementation is ongoing)

Under the strategic direction of encouraging timely and progressive reclamation, the Government of Alberta worked closely with stakeholders in 2014 to develop the Tailings Management Framework for the Mineable Athabasca Oil Sands. The goals of the Tailings Management Framework are to: establish triggers and limits for the management of fluid tailings accumulation and encourage technological innovation; enhance transparency and assurance through regular monitoring, evaluation and reporting on fluid tailings volumes and treatment; and establish direction for managing legacy tailings. The objective of the Tailings Management Framework is to minimize fluid tailings accumulation by ensuring the treatment and progressive reclamation of fluid tailings during the life of a project – achieving a ready to reclaim condition within ten years of the end-of-mine life. The Tailings Management Framework was approved in March 2015.

Continue to implement the progressive reclamation strategy

(Alberta Environment and Parks – implementation is ongoing)

A progressive reclamation strategy for improving clarity, security and environmental performance within the oil sands mining sector introduced the Mine Financial Security Program in 2011 and the Oil Sands Information Portal in 2012. The Cumulative Environmental Management Association's report on Criteria and Indicators Framework for Oil Sands Mine Reclamation Certification, developed by the association with input from government, industry, non-government organizations and people living in the oil sands region, was submitted to government in 2013. Implementation of the strategy continues with work on expanding the Oil Sands Information Portal to include reclamation information for in-situ operations, continuing work to complete the Criteria and Indicators Framework, and the completion of the three year review of the Mine Financial Security Program.

LARP Outcome 4: Air and water are managed to support human and ecosystem needs

Continue to implement the Air Quality Management Framework for the Lower Athabasca Region

(Alberta Environment and Parks – implementation is ongoing)

The Air Quality Management Framework for the Lower Athabasca Region supports the management of cumulative effects of emissions with triggers and limits for nitrogen dioxide (NO₂) and sulfur dioxide (SO₂). The first annual reports released in 2014 provided information on ambient conditions and progress on the management response after the Minister's Determination confirmed that some air quality triggers (not limits) were crossed at 10 monitoring stations for NO₂ and SO₂ in 2012. Reports containing the 2013 and 2014 annual assessment results as well as an update on the progress of the management response will be released in 2015.

Continue to implement the Surface Water Quality Management Framework for the Lower Athabasca River

(Alberta Environment and Parks – implementation is ongoing)

The Surface Water Quality Management Framework for the Lower Athabasca River supports the monitoring and management of long-term, cumulative changes in ambient surface water quality within the lower Athabasca River. The first annual reports released in 2014 provided information on ambient conditions and progress on the management response after the Minister's Determination confirmed that triggers (not limits) were crossed for three out of 38 indicators (i.e., total nitrogen, dissolved uranium, and dissolved lithium) at the Old Fort water quality monitoring station in 2012. Reports containing the 2013 and 2014 annual assessment results as well as an update on the progress of the management response will be released in 2015.

Complete and implement the Groundwater Management Framework for the Lower Athabasca Region

(Alberta Environment and Parks – due 2014, delayed to 2017)

The Groundwater Management Framework for the Lower Athabasca Region helps protect groundwater resources from contamination and over-use in three management areas - North Athabasca Oil Sands, South Athabasca Oil Sands, and Cold Lake – Beaver River areas. The framework is in place and includes interim triggers, however work is continuing on completion of final triggers and limits. A Regional Groundwater Monitoring Evaluation and Reporting group was established for each of the North and South Athabasca Oil Sands areas under the leadership of Alberta Environment and Parks to solicit input from industry, consultants, academia, First Nations, and federal and provincial governments. These groups advise the department regarding the expansion of the regional monitoring networks, associated monitoring programs, and subsequent threshold development in each area. These activities are ongoing in the north and South Athabasca Oil Sands areas but have experienced delays due to the scale and complexity of the groundwater systems and resources required to understand and represent these systems. Finalization of groundwater quality triggers at some wells in the North Athabasca Oil Sands area is expected in 2017.

Complete an updated surface water quantity management framework for the Lower Athabasca River

(Alberta Environment and Parks – due in 2012, delayed to 2015)

The framework focuses on the management of water use by the mineable oil sands sector and establishes an appropriate balance between water needs for environmental protection and industry during periods of low flow. Building upon the original framework put forward in 2007, it includes weekly management triggers and water withdrawal limits to enable proactive management of mineable oil sands water use from the Athabasca River. Weekly water withdrawal limits become more restrictive as flows in the river decrease. In 2014, discussions regarding development of the updated Surface Water Quantity Management Framework were held with a diverse group of external stakeholders. Workshops and meetings were completed with stakeholders and aboriginal peoples at various times during the year, culminating in a final three-day workshop in July 2014. Input received was used to draft the final updated framework, which was approved in 2015.



Provincial Outcome: People-friendly communities with ample recreational and cultural opportunities

The third desired provincial outcome is “people-friendly communities with ample recreational and cultural opportunities.” Albertans live in communities and their growth has an impact on land and future land use. Albertans should have safe and healthy communities with ready access to parks, forests and other areas to pursue outdoor recreational and cultural interests. Within LARP, strategic directions that help improve our ability to do this include strengthening infrastructure planning, providing new recreation and tourism opportunities and including aboriginal peoples in land-use planning. The following community outcomes and strategies describe what we wish to achieve and how we are getting there.

LARP Outcome 5: Infrastructure development supports economic and population growth

Continue to use CRISP to augment and facilitate planning where oil sands development causes growth pressures

(Alberta Energy – implementation is ongoing)

In 2014, government continued implementation of the Comprehensive Regional Infrastructure Sustainability Plan (CRISP), a long-term flexible and integrated approach to planning for growth in the province’s three oil sands areas. In 2013-14, work continued on the Athabasca Oil Sands Area CRISP. Road and aviation transportation priorities were identified and support was provided to several key stakeholder groups involved in the development of transportation infrastructure and planning for continued community growth. The Cold Lake Oil Sands Area CRISP was publicly released in April 2014 and is currently being implemented through the work of issue-specific teams in the areas of transportation, accommodations and aviation. In 2013-14, Alberta Energy worked with several provincial ministries and regional stakeholders to develop the initial draft of the Peace River Oil Sands Area CRISP, which is expected to be completed in 2015.

Continue to ensure opportunities for future routes and siting for pipeline gateways, transmission corridors, utility and electrical transmission corridors are maintained
(Alberta Energy and Alberta Transportation – implementation is ongoing)

In January 2014, the Alberta Electrical Systems Operator (AESO) publicly released the names of five companies competing to build, finance, own and operate a new transmission line between the Wabamun area west of Edmonton and the Fort McMurray area. A major component of this proposal is the development of a route that runs through not only the LARP boundary, but also other regional planning areas (Upper Athabasca and Lower Peace). In 2014, the five companies submitted their proposal for evaluation by the AESO as part of the competitive process. The AESO announced the successful proponent in 2014. Full regulatory approval which includes consultation with impacted landowners and other stakeholders will be required before construction begins.

Continue work on critical economic linkages to markets
(Alberta Transportation and Alberta Economic Development and Trade – implementation is ongoing)

The Government of Alberta continued work to complete twinning of Highway 63 between Grassland and Fort McMurray to improve safety and accommodate economic activity. The construction of transportation infrastructure in the Regional Municipality of Wood Buffalo is part of the Government of Alberta's commitment to developing a transportation network that will secure the province's economic future by enhancing market access and facilitating the flow of goods and services. Highway 63 is a critical link for residents, businesses and industry in this region, which benefit from a local roadway that is both safe and efficient.

LARP Outcome 6: Quality of life of residents is enhanced through increased opportunities for recreation and active living

Designate new provincial recreation areas to address the growing demand for recreational opportunities
(Alberta Environment and Parks – as soon as practicable, implementation is ongoing)

To optimize the recreation and tourism potential for both residents and visitors, LARP provides for nine new provincial recreation areas. Progress on designating the new provincial recreation areas under the *Provincial Parks Act* was delayed in 2014. All of the areas are expected to be designated in 2015. This includes: Clyde Lake, Crow Lake, Winnifred Lake, Slave River Rapids, Andrew Lake, Christina Crossing, Gregoire Lake, Goodwin Lake, and Cowper Lake. This improved position encourages administrative efficiencies and management activities within the new recreation areas.

Create public land areas for recreation and tourism that contain unique features or settings
(Alberta Culture and Tourism and Alberta Environment and Parks – as soon as practicable, implementation is ongoing)

To optimize the recreation and tourism potential for both residents and visitors, LARP provides for five new public land areas for recreation and tourism (PLARTs) development. Progress on designating the new PLARTs under the *Public Lands Act* was paused in 2014. These are: Lake Athabasca, Richardson, Athabasca River, Clearwater River, and House River.

Develop the regional parks plan for the Lower Athabasca
(Alberta Environment and Parks – due 2013, delayed to 2015)

The Regional Parks Plans will provide broad management direction to achieve the integrated recreation and conservation mandate of the Alberta Provincial Parks program. The draft Regional Parks Plan for the Lower Athabasca Region is expected to be released in 2015. The Regional Parks Plan summarizes current recreation and conservation values on a site-by-site basis, provides broad, future-focused management direction of those values, and identifies where further planning is required with help from Albertans. It will also provide Albertans with better information about the values of each park as well as the challenges faced in managing these values for current and future generations.

Continue to develop the Lower Athabasca Regional Trail System Plan
(Alberta Culture and Tourism and Alberta Environment and Parks – implementation is ongoing)

The Lower Athabasca Regional Trail System Plan will evaluate existing trails and locate designated, sustainable land-based trails for various motorized and non-motorized trail users, water based trails and routes, and potential associated activity areas. It will link communities, tourism destinations and other park and open space features. The plan's objective is to lay a framework for an enhanced recreation and tourism based trail system that will create opportunities for greater physical activity and enjoyment of the outdoors by all Albertans. In collaboration with the Alberta TrailNet Society, an inventory of existing trails in the Lower Athabasca Region was completed in 2014. The next phase involves developing the regional trail system plan through consultation with First Nations and stakeholders, dependent upon funding.

Continue to collect regional data including completion of recreation and tourism inventory, a scenic resource assessment inventory, and a regional recreational demand and satisfaction survey

(Alberta Culture and Tourism – implementation is ongoing)

Data is foundational to informing recreation and tourism planning and this strategy ensures the ongoing collection and analysis of relevant data to inform the planning process. In 2014, the Recreation/Tourism Opportunity Spectrum (RTOS) and Significant Tourism/Recreation Areas Model (STReAM) inventories were completed. The purpose of these inventories is to spatially distribute the diversity of recreational and tourism opportunity settings and areas within the region for planning and locating future tourism development.

LARP Outcome 7: Inclusion of aboriginal peoples in land-use planning

Continue to consult with aboriginal peoples in a meaningful way when government decisions may adversely affect the continued exercise of their constitutionally protected rights

(Alberta Environment and Parks, Alberta Energy, Alberta Culture and Tourism, Alberta Aboriginal Relations – implementation is ongoing)

LARP reaffirms Alberta's commitment to honour the constitutionally protected rights of aboriginal peoples and seeks opportunities to engage with aboriginal communities by inviting them to share traditional knowledge to inform land and natural resource planning. In accordance with applicable government consultation policy, the Government of Alberta remains committed to meeting its duty to consult with First Nations on decisions related to land-use, which may adversely affect the exercise of treaty rights. In 2013 and 2014, Alberta Environment and Parks continued to consult and engage with First Nations on implementation aspects of LARP including the Regional Strategic Assessment for South Athabasca Oil Sands area, development of a Biodiversity Management Framework, development of a Landscape Management Plan, and development of the Moose Lake Access Management Plan. The Government of Alberta continues to engage with First Nations on proposed initiatives that may have the potential to adversely impact First Nation treaty rights or traditional uses, as per the Government of Alberta's Policy on Consultation with First Nations on Land and Natural Resource Management, 2013.

Continue to invite First Nations expressing an interest in the Richardson Backcountry to be involved in a sub-regional initiative called the First Nations Richardson Backcountry Stewardship Initiative (Richardson Initiative)

(Alberta Environment and Parks, Alberta Energy, Alberta Culture and Tourism, Alberta Aboriginal Relations – implementation is ongoing)

First Nations are invited to be involved in a sub-regional initiative for the area. This initiative is intended to consider the impact to treaty rights to hunt, fish, and trap for food, fish and wildlife management, access management and economic business opportunities, and management of new wildland provincial parks and public land areas for recreation and tourism. LARP recognizes the cultural and economic importance of the land for continued traditional hunting, fishing and trapping. This will be aligned with landscape management planning in the region. Meetings and discussions with First Nations were held in 2014 and are continuing in 2015.



Supporting Indicators

This section of the LUF Progress Report 2014, offers a detailed look at supporting indicators representative of the broad economic, environmental and social outcomes identified in the Lower Athabasca Regional Plan (LARP) or desired for the province.

Additional information including access to data is available by following the link provided with the indicators below. Copies of this report are available through the Land Use Secretariat or www.landuse.alberta.ca.

Economic Indicators

Labour Force by Sector

Definition: Labour force refers to the number of persons who are employed and unemployed. Employed persons have a job or business, whereas unemployed persons are without work, are available for work, and are actively seeking work. Participation rate refers to the labour force expressed as a percentage of the population 15 years of age and over.

ALBERTA: In 2014, Alberta's participation rate at 72.7 per cent and employment rate at 69.3 per cent was the highest in the country. Between 2013 and 2014, Alberta's labour force increased by 2.3 per cent or 53,100 in 2014. Wood Buffalo-Cold Lake economic region, which serves as an approximation for Lower Athabasca Region, had the highest participation rate at 78.4 per cent among all seven economic regions within Alberta in 2014. Labour force grew from 86,700 in 2013 to 89,600 in 2014 for this economic region.

Notes: The other six economic regions include: Edmonton, Red Deer, Banff/Jasper/Rocky Mountain House/Athabasca/Grande Prairie/Peace River, Calgary, Camrose/Drumheller, and Lethbridge/Medicine Hat. For sectoral information, refer to the Employment indicator in this report.

Lead Ministry: Further information is available through Alberta Jobs, Skills, Training and Labour (<http://work.alberta.ca>).

Source: Data are available from Alberta Jobs, Skills, Training and Labour (<http://work.alberta.ca> and <http://work.alberta.ca/documents/annual-alberta-regional-labour-market-review.pdf>). Provincial figures are available from the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Provincial Royalties

Definition: A royalty is a share of the product (royalty-in-kind) or profit reserved by the owner for permitting another to use the property. It is a percentage interest in the value of production from a lease that is retained and paid to the mineral rights owner, in this case, the province of Alberta.

ALBERTA: In the calendar year 2013, the Crown (or province of Alberta) collected a total of \$4.3 billion in royalties from Alberta oil sands development. This represents a 10.3 per cent increase over \$3.9 billion collected in 2012.

Notes: This indicator reports data for Alberta as a whole and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region.

Lead Ministry: Further information is available through Alberta Energy (www.energy.alberta.ca).

Source: Data are available from Alberta Energy (www.energy.gov.ab.ca/About_Us/1702.asp)

Personal Income

Definition: Based on T1 Family Files, average total income is the arithmetic mean of the total amount of income from various sources (including employment income, government transfers and investment income) among tax filers, which include themselves and their non-filing spouses.

LARP: The average total income of individuals reporting taxes in the Lower Athabasca Region was \$80,730 in 2012. This represents a small increase from \$80,599 in 2011; and is considerably higher than the provincial average of \$57,055 in 2012.

Notes: Personal income, the indicator identified in LARP, is replaced by average total income. To calculate average total income, aggregated municipal-level tax data are sorted by LUF region then aggregated to the regional level. The sum of total income is divided by the sum of individuals who reported total income to produce average total income for each region. This is available on an annual basis whereas the Census of Population is updated every five years. Due to the way average incomes are calculated, large municipalities have a stronger influence on average income than smaller municipalities.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>).

Source: Data are also available from the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>) and Alberta Wage and Salary Survey (<http://work.alberta.ca/labour/wage-and-salary-information.html>).

Oil Sands Production Rate

Definition: Total crude bitumen production consists of mined and in-situ bitumen production. Production rates are expressed in terms of the number of barrels of total crude bitumen produced either through mining or in-situ (“in place”) recovery methods each day (or bbl/d).

ALBERTA: In the 2013 calendar year, Alberta’s total crude bitumen production reached 2.1 million bbl/d, a 10.5 per cent increase over 1.9 million bbl/d produced in 2012. Unconventional (or oil sands) production constituted 76.4 per cent of all oil production in Alberta during February 2015. Production of unconventional oil was up 17.1 per cent in February on a year-over-year basis, compared with a 3.9 per cent rise in conventional production.

Notes: This indicator reports data for Alberta as a whole and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region.

Lead Ministry: Further information is available through Alberta Energy (www.energy.alberta.ca).

Source: Data are available from Alberta Energy (www.energy.alberta.ca), Alberta Energy Regulator (www.aer.ca/data-and-publications/statistical-reports) and from the Government of Alberta’s Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Total Oil Sands Investment

Definition: Investment refers to total private and public capital expenditures in any given year. This includes expenditures on construction, machinery and equipment.

ALBERTA: In 2013, capital investment in Alberta increased by 8.6 per cent from 2012, to \$111.2 billion. Conventional oil and gas extraction investment decreased 16.3 per cent to \$20.7 billion and oil sands (unconventional) investment rose 20.3 per cent to a record \$32.7 billion.

Notes: This indicator reports data for Alberta as a whole and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region. Refer to the Cost of Production or Oil Sands Production indicators for more information.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>) and Alberta Economic Development and Trade (www.economic.alberta.ca).

Source: Data are available from the Government of Alberta’s Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Cost of Production

Definition: Operating cost of production includes costs directly attributable to the operations of the project, excluding the cost of diluent.

ALBERTA: In 2013, the operating cost of production in Alberta oil sands, reported by operators, was \$19.1 billion. Of this, pre-payout operating costs were \$6.84 billion; post-payout projects operating costs were \$12.30 billion. Operating costs increased 13 per cent over the previous year of \$16.9 billion.

Notes: This indicator reports data for Alberta as a whole, and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region.

Payout is reached once a project's cumulative revenues exceed cumulative costs. (The actual payout date for a pre-payout project is the first date at which the cumulative revenue of a project first equals the cumulative cost of the project.) Cumulative revenues are defined as the sum of project revenue and other net proceeds received or receivable from the project's effective date onwards. Cumulative costs are defined as the sum of (1) the project's prior net cumulative balance, (2) the project's allowed costs and (3) royalty paid to the Crown during the project's pre-payout period. The costs, covered in the definition above, are reported for royalty calculation purposes only. Costs that are not considered for the purpose of royalty calculations are not included in this indicator.

Lead Ministry: Further information is available through Alberta Energy (<http://energy.alberta.ca>).

Source: Data are available from Alberta Energy (www.energy.alberta.ca) and Alberta Energy Regulator (www.aer.ca/data-and-publications/statistical-reports).

Gross Domestic Product by Industry

Definition: Also referred to as value-added, gross domestic product (GDP) by industry equals output by the industry minus the value of intermediate inputs that were purchased from other industries, domestic or foreign.

LARP: In 2013, Lower Athabasca Region's GDP was \$15,755 million – a change of 3.7 per cent over the previous year. Approximately \$9,052 million was attributed to mining, quarrying and oil and gas extraction followed by engineering construction at \$1,228 million. The largest year-over-year change was experienced in crop and animal production at 18.6 per cent. Alberta led all provinces in economic growth in 2014 with a 4.4 per cent increase in real gross domestic product (at basic prices) over the previous year. Much of Alberta's strong economic performance was either directly or indirectly tied to its oil and gas sector.

Notes: LUF GDP estimates are in constant 2010 dollars. These estimates are preliminary and will be revised in 2015.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>).

Source: Preliminary LUF estimates were developed by Alberta Treasury Board and Finance (<http://finance.alberta.ca>) the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Employment by Sector

Definition: Employment refers to the number of people who worked for pay or profit, performed unpaid domestic work, or had a job but were not able to work due to legitimate absence. Employment rate refers to the number of people employed expressed as a percentage of the total population 15 years of age and over. Unemployment rate refers to the number of people who are unemployed expressed as a percentage of the labour force (i.e., employed and unemployed).

ALBERTA: Between 2013 and 2014, employment rose by 48,400 to 2,274,600 in Alberta while during the same period unemployment increased by 4,800. The province's unemployment rate at 4.7 per cent was lower than the national average while the employment rate was 69.3 per cent, the highest in the country. Wood Buffalo-Cold Lake economic region, which serves as an approximation for Lower Athabasca Region, experienced a 16.7 per cent increase in unemployment between 2013 and 2014. Employment in the region grew by 2.9 per cent to 85,500 in 2014. In fact, this region had the highest employment rate at 74.8 per cent among all seven economic regions within Alberta.

Employment rose in the goods-producing industries by 3,000 while employment in the services-producing industries decreased by 700 between 2013 and 2014. The three industries with the largest employment increase during this period were: forestry, fishing, mining, quarrying, and oil and gas, up by 2,400; accommodation and food services, up by 900; and educational services, up by 700.

Notes: Refer to the Labour Force indicator in this report for more information.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>).

Source: Data are available from Alberta Jobs, Skills, Training and Labour (<http://work.alberta.ca> and <http://work.alberta.ca/documents/annual-alberta-regional-labour-market-review.pdf>). Provincial figures are available from the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com> and www.albertacanada.com/business/statistics-and-publications.aspx).

Area of Public Land Actively Managed for Enhanced Forestry

Definition: Public land is land owned by the provincial government, which makes decisions about how it is used and managed, including for agriculture, forestry, resource development, habitat conservation and protection of watersheds and biodiversity. Enhanced forestry focuses on collaborative opportunities for innovative forestry practices which link genetics, silviculture, protection, growth and yield, and management for enhancing wood production and other values.

LARP: At the end of 2013, the total hectares of public land used for enhanced forestry management was 3,225 hectares, an increase of 343 hectares (almost 12 per cent) from 2,882 hectares in 2012. This reflects an increase in stand tending to 2,430 hectares and a decrease in plantings to 795 hectares.

Notes: Stand Tending includes a variety of forest treatments, including pre-commercial thinning, fertilizing, pruning, and commercial thinning, which are carried out to maintain a healthy forest and to increase the quality and quantity of timber produced. Crown land differs from public land as it includes all provincial and federal government lands.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Environment and Parks (<http://aep.alberta.ca/lands-forests/forest-management/default.aspx>) and Alberta Agricultural and Forestry (www.agric.gov.ab.ca).

Area of Land Disturbance on Productive Land Base on Public Land in the Region

Definition: Land disturbance happens when human activity causes changes on the landscape from natural conditions, with associated impacts on related natural resources. Productive land base on public land refers to land owned by the provincial government that is used and managed for forestry.

LARP: In 2013, approximately 337,702 hectares or 12.58 per cent were disturbed due to non-forestry related activities on the productive timber land base. This is a 0.44 percentage point increase over the previous year when 325,850 hectares or 12.14 per cent were disturbed. Within LARP, there are a total of 9,321,180 hectares of land. About 84 per cent of this is considered public, provincially owned land.

Notes: Comparisons should not be made to those figures reported in the LUF Progress Report 2013 as the methodology has changed. Refer to the Area of Land Disturbance on Public Land indicator in this report for more information.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Environment and Parks (<http://aep.alberta.ca/lands-forests/forest-management/default.aspx>) and Alberta Agriculture and Forestry (www.agric.gov.ab.ca).

Fragmentation of Agricultural Land to Non-agricultural Land Uses

Definition: Fragmentation of agricultural land occurs when once contiguous agricultural areas become divided into separate fragments isolated from each other by other, non-agricultural land uses. Fragmentation can also occur within a given agricultural parcel of land by access roads, oil and gas developments or linear infrastructure.

Notes: This indicator is currently under development and nearing completion.

Lead Ministry: Further information is available through Alberta Agriculture and Forestry (www.agric.gov.ab.ca).

Conversion of Agricultural Land to Non-agricultural Land Uses

Definition: Conversion is an actual, observable land-use change from an agricultural use to a non-agricultural use, such as residential housing. Conversion may be temporary (e.g., upstream oil and gas development) or permanent (e.g., country residential development), positive (i.e., a gain in agricultural land area) or negative (i.e., a loss of agricultural land area).

LARP: Over the period 2011 through 2014, the Lower Athabasca Region experienced a permanent net loss of 1,940 hectares of agricultural land; constituting roughly 0.4 percent of the total agricultural land base of the region (approximately 544,000 hectares). Land of higher quality (class 2- 4) has been lost while land of lower quality (class 5-7) has been gained.

Notes: Using a geographic information system, Alberta Agriculture and Forestry assigned every parcel of land in Alberta to a discrete land-use class (e.g., urban, country residential, agricultural, other) according to a defined rule set. The total area of each land class in each LUF region was then calculated. Using these totals, the area of each land use class in one year was subtracted from the area in the next year to calculate change in area. A similar method was used to calculate Land Suitability Rating System classes. Universally, class 1, 2 and 3 lands are considered suitable for crop production, while class 4 lands are considered marginal.

Lead Ministry: Further information is available through Alberta Agriculture and Forestry (www.agric.gov.ab.ca).

Source: Data are available from Alberta Agriculture and Forestry (www.agric.gov.ab.ca).

Tourism Visitation

Definition: Total person-visits encompass all people (i.e., Alberta residents, other Canadians, and international visitors) who travelled within the Lower Athabasca Region.

LARP: In 2012, there were 696,453 person-visits in the Lower Athabasca Region. This represents 2.1 per cent of the 33 million person-visits to or within Alberta in 2012.

Notes: Visitors may or may not have spent a night in the region. Comparisons between 2011 and 2012 survey results cannot be made due to methodological changes. 2012 data represents a return to a more realistic assessment of same-day travel volumes and expenditures.

Lead Ministry: Further information is available through Alberta Culture and Tourism (www.culture.alberta.ca).

Source: Data are available from Alberta Culture and Tourism (www.culture.alberta.ca/tourism/research-and-statistics/statistics).

Tourism Visitor Expenditures

Definition: Total gross expenditures from all visitors (i.e., Alberta residents, other Canadians, and international visitors) who travelled within the Lower Athabasca Region.

LARP: Total gross expenditures from all visitors who travelled within Lower Athabasca Region in 2012 was \$352 million while tourism expenditures in Alberta in the same year were \$7.4 billion. Albertans accounted for about 62 per cent of total tourism expenditures in the province.

Notes: Expenditures include food and beverage, accommodation, transportation, retail, recreation and entertainment. Comparisons between 2011 and 2012 survey results cannot be made due to methodological changes. 2012 data represents a return to a more realistic assessment of same-day travel volumes and expenditures.

Lead Ministry: Further information is available through Alberta Culture and Tourism (www.culture.alberta.ca).

Source: Data are available from Alberta Culture and Tourism (www.culture.alberta.ca/tourism/research-and-statistics/statistics).

Tourism Occupancy

Definition: Occupancy rates and average daily room rates are based on monthly averages of all reporting hotels, motels and motor hotels in each designated region. This data refers to total occupancy rates, excluding resorts.

ALBERTA: The occupancy rate for Alberta (excluding resorts) increased 2.4 percentage points from 65.8 per cent in 2012 to 68.2 per cent in 2013. The average daily room rate in 2013 was \$138 per night - an increase of 4.5 per cent over the 2012 average daily rate of \$132 per night. Approximately half of all visits to northern Alberta involved an overnight stay. Overnight visits to northern Alberta totalled 861,000 in 2012. More than half of the nights spent in northern Alberta were at the homes of friends and relatives; 13 per cent were spent in hotels or motels.

Notes: "Northern Alberta" includes Lower Athabasca, Lower Peace, Upper Athabasca and Upper Peace regions. Data are not available at the regional level.

Lead Ministry: Further information is available through Alberta Culture and Tourism (www.culture.alberta.ca).

Source: Data are available from Alberta Culture and Tourism (www.culture.alberta.ca/tourism/research-and-statistics/statistics). Occupational rates and average daily room rates are also available from Trends in the Canadian Hotel Industry produced by PKF Consulting Inc.

Inventory of Major Projects

Definition: Inventory of major projects lists private and public sector projects in Alberta valued at \$5 million or greater that are currently under construction or are proposed to start construction within two years.

LARP: Of the 108 projects proposed, planned, under construction or recently completed in the Lower Athabasca Region, 49 were oil sands and 38 were infrastructure projects in 2013. The total value for the projects in the region was \$101 billion. 96 per cent this value was attributable to oil sands projects while pipelines projects accounted for an additional 2 per cent. Lower Athabasca accounts for about one-half of the total value of all Alberta projects.

Notes: This indicator, not currently found in LARP Table 1, acts as a future reference point. For more information, refer to Oil Sands Projects, Oil Sands Investment and Cost of Construction indicators in this report.

Lead Ministry: Further information is available through Alberta Economic Development and Trade (www.economic.alberta.ca).

Source: Data are available from Alberta Economic Development and Trade's Major Projects Map (<http://majorprojects.alberta.ca>) and Alberta Economic Development and Trade (www.economic.alberta.ca).

Building Permits

Definition: The value of construction intentions for buildings in the non-residential and residential sectors.

LARP: In 2012, the total value of building permits in the Lower Athabasca Region was \$1.7 billion, making up 11.8 per cent of the provincial total. The building permit value for the Lower Athabasca Region increased by 33.7 per cent from 2011, and was 105 per cent higher than the 2007 level. Total number of dwelling units for which building permits were taken out in the Lower Athabasca Region in 2012 was 1,512. This was a 20 per cent increase from the previous year, but a 23 per cent decline from the 2007 level.

Notes: This indicator, not currently found in LARP Table 1, acts as a future reference point. Data was sourced from Statistics Canada's Building Permits database.

Lead Ministry: Further information is available through Alberta Economic Development and Trade (www.economic.alberta.ca).

Source: Data are available from Alberta Economic Development and Trade (www.albertacanada.com/business/statistics/land-use.aspx) and the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Business Establishments

Definition: The number of businesses with employees on record at a particular point in time.

LARP: In 2012, 3,940 establishments with employees were registered in the Lower Athabasca Region. The largest industry in the region was Tourism and Consumer Services, accounting for 21 per cent of all establishments. Between 2007 and 2012, there was an increase of 11.0 per cent (or 391) in the total number of establishments in the region. The industry within the region that experienced the largest five-year gain in terms of the number of businesses was Business and Commercial Services at 19 per cent.

Notes: This indicator, not currently found in LARP Table 1, acts as a future reference point. This indicator is based on data from Statistics Canada, Canadian Business Patterns.

Lead Ministry: Further information is available through Alberta Economic Development and Trade (www.economic.alberta.ca).

Source: Data are available from Alberta Economic Development and Trade (www.albertacanada.com/business/statistics/land-use.aspx) and the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Environmental Indicators

Status of Alberta Species, including Species at Risk

Definition: Species at risk refers to wild vertebrate (i.e., mammals, birds, amphibians, reptiles, and fish) species that are legally designated as endangered or threatened under Alberta's *Wildlife Act*. Endangered species are facing imminent extinction or elimination from Alberta; threatened species are likely to become endangered if limiting factors are not reversed. This indicator tracks the number of species at risk in the region.

LARP: At the beginning of 2014, 9 of 32 Alberta species legally designated under Alberta's *Wildlife Act* as threatened or endangered were found in the Lower Athabasca Region: Piping Plover, Wood Bison, Whooping Crane, Peregrine Falcon, Shortjaw Cisco, Northern Leopard Frog, Woodland Caribou, Grizzly Bear, and Western Grebe. Western Grebe was listed as threatened under the *Wildlife Act* and at the same time Trumpeter Swan was down listed from threatened to species of special concern.

Notes: In 2010 it was determined 21 of 584 vertebrate species (or 3.6 per cent) are at risk of disappearing from the province. Every five years Alberta Environment and Parks reports on the General Status of Wild Species in Alberta as well as the percentage of vertebrate species at risk (i.e., endangered and threatened versus all others). The next reporting period is fall 2015.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Environment and Parks and Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Area of Land Disturbance on Public Land

Definition: Public land is land owned by the provincial government, which makes decisions about how it is used and managed, including for agriculture, forestry, resource development, habitat conservation and protection of watersheds and biodiversity. This indicator tracks the amount of land disturbance by human activity, and changes in the landscape away from natural conditions.

LARP: At the end of 2012, 5.1 per cent of the Green Area in the region was disturbed. This is a 0.7 percentage point increase in disturbance from 4.4 per cent measured at the end of 2010 and from 3.9 per cent measured at the end of 2007.

Notes: The Green Area is the unsettled portion of the province, primarily forested lands and not available for agricultural development other than grazing. It acts as a proxy for public lands in the region. Alberta Biodiversity Monitoring Institute (ABMI) monitors changes in land disturbance or human footprint annually. Refer to the Area of Land Disturbance on Productive Land Base on Public Land indicator within this report for more information.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Biodiversity Monitoring Institute (www.abmi.ca/home.html) and Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Status of Biodiversity Indicators

Definition: Biodiversity is the assortment of life on earth. The most commonly referenced types of biodiversity include: genetic diversity (i.e., the sum of genetic information contained in individuals and in populations); species diversity (i.e., the number of biological organisms and their relative abundance) and ecosystem diversity (i.e., the variety of habitats, biotic communities, landscapes and ecological processes).

Notes: Biodiversity indicators are under development and will be available as a part of the final Biodiversity Management Framework for the Lower Athabasca Region, anticipated in 2015. The draft Biodiversity Management Framework proposes 12 indicators of regional scale biodiversity including key species and habitats from terrestrial and aquatic systems. These indicators will be monitored, evaluated and reported against trigger values to help inform whether biodiversity objectives are achieved.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data for the framework indicators are not available yet, however, biodiversity data are available from the Alberta Biodiversity Monitoring Institute (www.abmi.ca/home.html) and Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Area of Conserved Land

Definition: Conserved land refers to parks designated under the *Provincial Parks Act*; wilderness areas, ecological reserves, and natural areas designated under the *Wilderness Areas, Ecological Reserves, Natural Areas* and *Heritage Rangelands Act*; and public land use zones managed for one or more conservation purposes and declared under the *Public Lands Act*.

LARP: LARP provided for six new conservation areas in 2012, bringing the total conserved land in the region to 2,089,491 hectares, or 22 per cent of the region. This has not changed since that time.

Notes: This indicator, not currently found in LARP Table 1, acts as a future reference point. The designation of the Dillon River Wildland Provincial Park and the Birch Mountains Wildland Provincial Park Expansion is moving forward and is undergoing final administrative review prior to being approved. The remaining Kazan, Richardson and Gipsy-Gordon Wildland Provincial Parks and the Birch River Conservation Area are undergoing compensation review.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Environment and Parks (www.albertaparks.ca/albertaparksca/management-land-use.aspx) and Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Area of Land Retained in Native Vegetation

Definition: Native vegetation refers to vegetative land cover (e.g., grasslands, riparian areas, forests) that has not been disturbed or re-established by humans. It is calculated as 100 per cent minus the amount of human footprint (or land disturbance) for each year of interest.

LARP: At the end of 2012, the total amount of native land cover in the Green Area of the region was 92.0 per cent. This represents a 0.7 percentage point decrease from 2010 when the native land cover was 92.7 per cent and a greater decrease from 2007 when native land cover was 93.2 per cent.

Notes: Human footprint is determined by Alberta Biodiversity Monitoring Institute (ABMI). At present, human footprint types that are in a successional condition (e.g., cutlines and cutblocks) are included as human footprint. Future assessments will use ecological data to determine the amount of human footprint or native vegetation that each polygon contains. For more information refer to Area of Land Disturbance on Public Land indicator in this report.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Biodiversity Monitoring Institute (www.abmi.ca/home.html) and Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Area of Oil Sands Reclamation

Definition: Oil sands reclamation is based on the *Environmental Protection and Enhancement Act*, 2014. The objective of reclamation is to return the land to an equivalent capability. Due to the nature and extent of oil sands mining, reclamation on lands disturbed by oil sands mining takes place in stages (i.e., progressive reclamation).

LARP: As of December 2014, 5,901 hectares of land in Alberta met the definition of permanent reclamation, representing close to a 25 per cent increase since 2009. In addition, 104 hectares of land have been certified as reclaimed.

Notes: When a reclamation certificate is issued, the parcel of land covered by the certificate is subsequently returned to the Crown, absolving an approval holder of any liability. For this reason, it can take many years, even decades, before a reclamation certificate is issued, as care is taken to ensure that a desired land use has been achieved and a developing ecosystem is fully functional before a reclamation certificate for a parcel of land is issued. This indicator reports data for Alberta as a whole, and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from the Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>).

Volume of Fluid Tailings

Definition: Fluid tailings refers to any fluid discard from bitumen extraction facilities containing more than 5 mass per cent suspended solids and having less than an un-drained shear strength of 5 kilopascals. The term “fluid tailings” is used synonymously with “fluid fine tailings.”

LARP: As of December 2013, there were approximately 976 million cubic metres (Mm³) of fluid tailings contained within oil sands tailings ponds in the Lower Athabasca Region. The net cumulative footprint of oil sands tailings ponds and associated structures, such as dykes, berms, and beaches at that time was about 220 km².

Notes: The Tailings Management Framework for the mineable Athabasca Oil Sands area was approved by the Government of Alberta in early 2015. Alberta Environment and Parks are currently working with the Alberta Energy Regulator to implement the framework. As part of the implementation process, a new directive is being developed to guide the setting of fluid tailings volume profiles and management thresholds. This new directive is anticipated to be completed in late 2015, with initial reporting beginning in 2016.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>). The management framework is available at (<http://aep.alberta.ca/focus/cumulative-effects/cumulative-effects-management/management-frameworks/lower-athabasca-regional-plan.aspx>).

Air Quality Management Framework Limits and Triggers

Definition: Ambient air quality triggers and limits for nitrogen dioxide (NO₂) and sulphur dioxide (SO₂), two substances of concern within the region (refer to LARP Schedule A), are based on Alberta Ambient Air Quality Objectives. These are provincial objectives designed to protect human health and the environment. The limits represent levels beyond which ambient air quality concentrations are unacceptable. The triggers are signals in advance of the limits that allow for evaluation, adjustment and innovation on an ongoing basis.

LARP: In 2014, two air quality indicators, NO₂ and SO₂ were continuously measured at air monitoring stations. The Minister of Environment and Parks, determined, relative to the triggers and limits (under section 23(1) (b) of the LARP) for the indicators used to manage ambient air quality, that:

- No limits were exceeded for air quality indicators;
- Triggers were crossed at 10 air monitoring stations for NO₂ and/or SO₂.

In 2013, no limits were exceeded for air quality indicators; however, triggers were crossed at 11 air monitoring stations for NO₂ and/or SO₂. No limits were exceeded in 2012, while triggers were crossed at 10 stations.

Notes: Triggers are established to allow for proactive management. The finding of trigger exceedances in 2013 does not signal that environmental conditions have placed human health or the environment at risk. However, because triggers were crossed, Alberta Environment and Parks is committed to undertaking proactive management responses that will ensure air quality is managed at acceptable levels.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Air quality data are available from the Clean Air Strategic Alliance Data Warehouse (www.casadata.org). The management framework and reports are also available (<http://aep.alberta.ca/focus/cumulative-effects/cumulative-effects-management/management-frameworks>).

Surface Water Quantity Management Framework Limits and Triggers

Definition: The Surface Water Quantity Management Framework for the Lower Athabasca River applies to the lower section of the Athabasca River, from just downstream of the Grand Rapids (approximately 135 kilometres upstream of Fort McMurray) to the Athabasca River Delta. The framework focuses on the management of water use by the mineable oil sands sector, based on current and anticipated water demands that contribute to reductions in the flow of the Athabasca River. The mineable oil sands sector is currently the largest consumptive users of water in the Lower Athabasca River and is predicted to comprise the largest increase in future water demand.

Notes: This indicator is currently under development. The Surface Water Quantity Management Framework for the Lower Athabasca River focuses on the management of water use by the mineable oil sands sector, based on current and anticipated water demands that contribute to reductions in the flow of the Athabasca River. The mineable oil sands sector is currently the largest consumptive user of water in the Lower Athabasca River and is predicted to comprise the largest increase in future water demand.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data for the framework indicators are not available yet; however, water quantity data and information are available from Alberta Environmental Monitoring, Evaluating and Reporting Information Service (<http://aemeris.aemera.org/map>). The management framework is available at <http://aep.alberta.ca/focus/cumulative-effects/cumulative-effects-management/management-frameworks>.

Surface Water Quality Management Framework Limits and Triggers

Definition: Ambient surface water quality limits and triggers are designed to protect surface water quality from unacceptable impacts and protect it for current and future water uses. Water quality triggers are intended to be conservative early warning signals. They are based on change from historical ambient concentrations of indicators. Water quality limits in the framework are based on existing Alberta, Canadian Council of Ministers of the Environment, Health Canada, and United States Environmental Protection Agency guidelines. The limits were chosen to protect existing and future water uses (industrial, agricultural, recreational and aesthetics, drinking water, and protection of aquatic life). The triggers and limits are monitored and evaluated at the Old Fort monitoring station (as per LARP Schedule B).

LARP: In 2014, 38 water quality indicators were measured monthly at the Old Fort monitoring station on the lower Athabasca River. The Minister of Environment and Parks determined, relative to the triggers and limits (under section 30(1) (b) of the LARP) for the indicators used to manage ambient surface water quality, that:

- No limits were exceeded;
- Triggers were crossed at the Old Fort water quality station for 4 of 38 indicators (i.e., dissolved uranium, dissolved cobalt, sulphate and potassium).

In 2013, no limits were exceeded however triggers were crossed at the Old Fort water quality station for 5 of 38 water quality indicators (i.e., dissolved uranium, total nitrogen, dissolved iron, dissolved aluminum, and total lithium). No limits were exceeded in 2012, while triggers were crossed for 3 indicators (i.e., dissolved lithium, total nitrogen and dissolved uranium).

Notes: Triggers are established to allow for proactive management. The finding of trigger exceedances does not signal that environmental conditions have placed human health or the environment at risk. However, because triggers were crossed, Alberta Environment and Parks is committed to undertaking proactive management responses that will ensure surface water quality is maintained at acceptable levels.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Surface water quality data are available from the Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>). The management framework and annual reports are available at (<http://aep.alberta.ca/focus/cumulative-effects/cumulative-effects-management/management-frameworks>).

Groundwater Management Framework Interim Quality Triggers

Definition: The Groundwater Management Framework is intended to provide a system, involving triggers and limits, to manage non-saline groundwater resources in the North Athabasca Oil Sands (NAOS) Area, South Athabasca Oil Sands (SAOS) Areas, and Cold-Lake-Beaver River (CLBR) Area (as per LARP Schedule C).

Notes: These indicators and associated triggers continue to be under development. The Groundwater Management Framework requires the completion of regional monitoring networks and finalization of triggers for the NAOS, SAOS, and CLBR areas. The Alberta Environmental Monitoring, Evaluation and Reporting Agency has responsibility for these monitoring networks. The NAOS regional groundwater monitoring network was sampled in 2014, and work began in 2015 to finalize triggers for most of the groundwater wells in this network. Additional sampling will be needed to finalize triggers for the remaining wells. The SAOS regional groundwater monitoring network was sampled in 2014. Additional work is needed to expand this network and to complete sufficient sampling of new and existing wells such that triggers can be finalized. Site-specific monitoring in the CLBR area is considered to provide adequate protection of groundwater resources until such time that a regional monitoring network and associated triggers can be established. An inventory and assessment of industry wells in the NAOS and SAOS was also completed in 2014, for potential inclusion in the respective regional network.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data for the framework indicators are not available yet; however, groundwater quantity and quality data and information are available from the Alberta Environmental Monitoring, Evaluation and Reporting Information Service (<http://aemeris.aemera.org/map>). The management framework is available at <http://aep.alberta.ca/focus/cumulative-effects/cumulative-effects-management/management-frameworks>.

Social Indicators

Oil Sands Projects – Current/Approved/Pending

Definition: An oil sands project is defined in the Oil Sands Royalty Regulation, 2009.

ALBERTA: As of July 2014, the status of reported oil sands projects in Alberta is as follows:

- 132 operating - producing bitumen and/or oil sands product
- 13 construction - on-site construction has commenced for these projects
- 15 approved - regulatory approvals required for these projects to operate have been received
- 29 application - project application is being reviewed by Alberta Energy Regulator and/or Alberta Environment and Parks.

In 2013, there were 127 operating, 16 construction, and 12 approved projects plus 27 project applications.

Notes: This indicator reports data for Alberta as a whole, and is not specific to the Athabasca Oil Sands region; however, the Athabasca Oil Sands region accounts for a significant majority of the total oil sands production in Alberta. Therefore, activity in the province as a whole is used as a proxy for activity in the Athabasca Oil Sands region.

Lead Ministry: Further information is available through Alberta Energy (www.energy.alberta.ca).

Source: Data are available from Alberta Energy (www.energy.alberta.ca/LandAccess/pdfs/OilSands_Projects.pdf) and the Oil Sands Information Portal (<http://osip.alberta.ca/map>).

Regional Population

Definition: Statistics Canada Census of Population counts Canadian citizens, immigrants, and non-permanent residents with a usual place of residence of Alberta, every five years. Postcensal estimates and projections are based on the last (in this case, 2011) census counts adjusted for census net under-coverage and in completely enumerated Indian reserves, and demographic growth that occurred since that census.

LARP: Approximately 131,340 people were projected to be residing within the Lower Athabasca Region in 2014 – this is 3.2 per cent of the 4.1 million projected to be living within Alberta in the same year. Lower Athabasca population grew by an estimated 4.6 per cent since 2013 (at 125,570 people) and it is projected to grow to about 166,635 in the next 20 years.

Notes: Annual municipal census figures produced by Alberta Municipal Affairs and often used to examine inter-regional differences, suggest a larger population (or 166,356 people) lived in Lower Athabasca Region in 2014 and accounted for 4.2 per cent of the 3,966,875 people found in the province. Despite their differences, both the national and municipal census figures confirm that less than 5 per cent of Alberta population is found in Lower Athabasca Region and the population is growing faster than the Alberta rate of 2.9 per cent estimated by Statistics Canada.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>).

Source: Data are available from Alberta Treasury Board and Finance reports (www.finance.alberta.ca/aboutalberta/demographics) and the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Traffic Counts

Definition: The average daily two-way traffic volume at a point on the highway expressed as vehicles per day for the period of January 1 to December 31 (365 or 366 days).

LARP: In 2013, daily average two-way traffic volume on the major highways in the Lower Athabasca Region increased by approximately 3.9 per cent from 2012. Volumes increased 3.4 per cent for the entire province during this same period. In the Lower Athabasca Region, 222,574 vehicles passed traffic recorders in 2012 while 231,362 vehicles did the same in 2013. Traffic volumes only increased 0.2 per cent between 2013 and 2014.

Notes: Percentages are based on automated traffic recorders for the region using the same methodology as the previous reporting year. Automated traffic recorders are present at 21 locations in the region.

Lead Ministry: Further information is available through Alberta Transportation (www.transportation.alberta.ca).

Source: Data are available from Alberta Transportation (www.transportation.alberta.ca/3459.htm).

Cost of Construction

Definition: Investment associated with major private and public sector infrastructure projects in Alberta valued at \$5 million or greater that are currently under construction or are proposed to start construction within two years.

LARP: In 2013, 38 of 108 projects that were proposed, planned, under construction or recently completed in the Lower Athabasca Region were related to infrastructure. The total cost for infrastructure projects in the Lower Athabasca Region was \$1,178.4 million or about 1.2 per cent of all major construction projects (valued at \$100,995.6 million) in the region. Seven pipeline projects accounted for \$2,127.0 million while oil sands construction projects accounted for \$97,126 million. Lower Athabasca accounted for about one-half of the total value of Alberta projects.

In 2013, capital investment in Alberta increased by 8.6 per cent to \$111.2 billion over the previous year. This estimate includes \$16.2 billion in housing investment, a 9.0 per cent increase from 2012. Construction spending rose 9.9 per cent, and spending on machinery and equipment 4.0 per cent. The major sectors with the highest investment growth in 2013 were utilities (up 53.2 per cent), transportation and warehousing (up 37.3 per cent), manufacturing (up 14.7 per cent), construction (up 9.8 per cent), and finance, insurance and real estate (up 9.4 per cent).

Notes: Refer to Building Permits, Inventory of Major Projects, Oil Sands Investment and Cost of Living indicators for more information.

Lead Ministry: Further information is available through Alberta Infrastructure (<http://infrastructure.alberta.ca>).

Source: Data are available from Alberta Economic Development and Trade (<http://majorprojects.alberta.ca>), (www.albertacanada.com/business/statistics-and-publications.aspx) and Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Cost of Living

Definition: The Consumer Price Index (CPI) is an indicator of changes in consumer prices experienced. It is obtained by comparing, over time, the cost of a fixed basket of goods and services purchased by consumers. CPI is related to the Cost of Living.

ALBERTA: The CPI rose from 128.9 in 2013 to 132.2 in 2014, indicating that consumer prices increased 2.6 per cent overall, year-over-year. The rise in CPI was led by higher prices for shelter (up 3.9 per cent) and food (up 2.9 per cent).

Notes: This indicator is not available at the LUF regional level. The Alberta government last conducted a spatial price survey in 2010, through which several price indices were developed for various Alberta communities. Based on the 2010 survey results, the Lower Athabasca Region posted the highest relative consumer prices among the seven LUF regions. For related information, refer to the Average Income and Rental Affordability indicators.

Lead Ministry: Further information is available through Alberta Treasury Board and Finance (<http://finance.alberta.ca>).

Source: Data are available from Alberta Treasury Board and Finance (<http://finance.alberta.ca>) or the Government of Alberta's Economic Dashboard (<http://economicdashboard.albertacanada.com>).

Rental Affordability

Definition: Average two-bedroom rental and vacancy rates for communities within the Lower Athabasca Region taken in the spring and fall of each year, depending on the community.

LARP: In 2014, the average two-bedroom rental rate for Bonnyville was \$1,357, Lac La Biche was \$1,097, and Cold Lake was \$1,703 - higher than the rates in 2013 of \$1,242, \$1,054 and \$1,475, respectively. Wood Buffalo's rental rate of \$2,118 in 2014 was lower than the \$2,162 rate in 2013. Since 2010, rental rates have been increasing in each community with the exception of Wood Buffalo, which has fluctuated somewhat.

In 2014, the average two-bedroom vacancy rates were 4.7 percent in Bonnyville, 5.5 per cent in Lac La Biche, 3.9 per cent in Cold Lake and 10.6 per cent in Wood Buffalo. Since 2010, vacancy rates have declined in all of the communities except in Wood Buffalo.

Notes: Data for communities of Bonnyville and Lac La Biche were sourced from Alberta Government's annual Apartment Vacancy and Rental Cost Survey while data for Cold Lake and Wood Buffalo were sourced from the Canada Mortgage and Housing Corporation's Rental Market Survey.

Lead Ministry: Further information is available through Alberta Municipal Affairs (<http://municipalaffairs.alberta.ca>).

Source: Data are available through Alberta Seniors (www.seniors.alberta.ca/housing/1740.html) and Canada Mortgage and Housing Corporation (www03.cmhc-schl.gc.ca/catalog).

Satisfaction with Recreational Opportunities within the Region

Definition: Percentage of survey respondents living in the region who were satisfied or very satisfied with outdoor recreation opportunities available within 300 km of their residence.

LARP: In 2013, approximately 80.6 per cent of residents surveyed in the Lower Athabasca Region were satisfied with the outdoor recreational opportunities available within 300 km of their residence. Camping, fishing and quadding were the most favourite outdoor activities in which survey respondents participated. In 2013-2014, 85.5 per cent of adult Albertans participated in recreational activities and sport (up from 81.6 per cent in 2012-2013).

Notes: Satisfaction with recreational opportunities information in the region comes from the Regional Recreation Demand and Satisfaction Survey for the Lower Athabasca Region conducted in March 2013. The balance of the information is from Alberta Culture and Tourism's Annual Report for 2014-15.

Lead Ministry: Further information is available through Alberta Culture and Tourism (<http://culture.alberta.ca>).

Source: Data are available from Alberta Culture and Tourism, (<http://culture.alberta.ca>).

Area per Capita of Parks or Designated Open Space for Recreation

Definition: Total land area of provincial parks per person. Number of people is based on Treasury Board and Finance population projections for the region.

LARP: In Lower Athabasca Region, there were 4.82 hectares of parks for each person as of December 2014. The total land area of parks is 632,497 hectares represented by 34 parks and inhabited by a projected 2014 population of 131,340. This represents a reduction from 2013 of 5.04 hectares per person (or -4.4 per cent) because no new provincial parks were created while the population grew.

Notes: Wood Buffalo National Park is not included in the Lower Athabasca Region. Municipal parks have not been included at this time. Refer to the Population indicator for more information.

Lead Ministry: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>).

Source: Data are available from Alberta Parks (www.albertaparks.ca/albertaparksca/management-land-use.aspx).

Recreation Infrastructure

Definition: Campsite numbers are based on 2014 assessment of facilities within designated parks and provincial recreation areas only. Trails can be designated as single use (for a single user type) or multi-use (for multiple user types) in either the non-motorized or motorized classifications.

LARP: In 2012 and 2013, there were 1,212 campsites and 1,910 kilometres of designated trails in the Lower Athabasca Region.

Notes: Trail data are acquired from Alberta TrailNet Society and the Recreation Tourism Features Inventory conducted by Alberta Culture and Tourism. The trail inventory was completed in 2014.

Lead Ministry: Further information is available through Alberta Culture and Tourism (<http://culture.alberta.ca>).

Source: Trail data are available from Alberta TrailNet Society (www.albertatrailnet.com). Campground data are available from Alberta Parks (www.albertaparks.ca/albertaparksca/visit-our-parks/camping/online-reservations or <https://reserve.albertaparks.ca>).

Historic Resources

Definition: Under the *Historical Resources Act*, the Minister of Culture and Tourism may designate and protect a provincial historic resource that is associated with an important aspect of Alberta's natural or human history, is of outstanding provincial significance, is situated in their original location, and retains the physical site features necessary to convey their significance.

LARP: In 2013, the Lower Athabasca Region contained 13 provincially designated historic resources. This figure did not change in 2014.

Notes: This indicator, not currently found in LARP Table 1, acts as a future reference point. Figures exclude nationally and municipally designated historic sites.

Lead Ministry: Further information is available through Alberta Culture and Tourism (<http://culture.alberta.ca>).

Source: Data are available from the Heritage Resources Management Information System (<https://hermis.alberta.ca>).

Participation Rate of First Nations in the Richardson Initiative

Definition: Involvement of First Nations in the Richardson Backcountry Stewardship Initiative is intended to consider impact to treaty rights to hunt, fish and trap for food, fish and wildlife management, access management and economic/business opportunities, and management of new wildland provincial parks and public land areas for recreation and tourism.

LARP: On track. Invitation letters sent to First Nations in the spring of 2014 marked the kick-off of the Richardson Initiative. Preliminary meetings and communications with First Nations took place from July through October 2014. Additional engagement is anticipated to continue in 2015.

Notes: This indicator is not expressed as a rate. The Government of Alberta invites all First Nations who have an expressed interest in the Richardson Backcountry to be involved in this sub-regional initiative.

Ministries: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>), Alberta Energy (www.energy.alberta.ca), Alberta Culture and Tourism (<http://culture.alberta.ca>) and Alberta Aboriginal Relations (www.aboriginal.alberta.ca).

Source: Data about aboriginal peoples are available from Alberta Aboriginal Relations (<http://aboriginal.alberta.ca/index.cfm> and <http://aboriginal.alberta.ca/InteractiveMap.cfm>).

Aboriginal Peoples Continue to be Consulted When Government of Alberta Decisions May Adversely Affect their Continued Exercise of their Constitutionally Protected Rights, and the Input from such Consultations Continues to be Reviewed Prior to the Decision

Definition: Aboriginal peoples of Alberta include those First Nations and Métis communities of Alberta that hold constitutionally protected rights within the meaning of section 35 of the Constitution Act of 1982.

LARP: On-track in accordance with current government policy. Aboriginal peoples continue to be consulted when Government of Alberta decisions may adversely affect their continued exercise of their constitutionally protected rights, and the input from such consultations continues to be reviewed prior to the decision.

In 2014, Alberta Environment and Parks continued to develop environmental management frameworks. Consultation sessions, workshops and meetings were held with First Nations and Métis organizations in January, February, March, July, August, November and December at various locations to discuss the Lower Athabasca Surface Water Quantity, Tailings, and Biodiversity Management Frameworks, Landscape Management Plan, South Athabasca Oil Sands Sub-regional Plan and Regional Strategic Assessment. Alberta Environment and Parks continues to work with interested First Nations and Métis organizations through the development of the various frameworks and plans.

Lead Ministries: Further information is available through Alberta Environment and Parks (<http://aep.alberta.ca>), Alberta Culture and Tourism (<http://culture.alberta.ca>) and Alberta Aboriginal Relations (www.aboriginal.alberta.ca).

Source: Data about aboriginal peoples are available from Alberta Aboriginal Relations (<http://aboriginal.alberta.ca/index.cfm> and <http://aboriginal.alberta.ca/InteractiveMap.cfm>).

