



Land-use Framework Regional Plans

PROGRESS REPORT

a review of our progress in 2013



Alberta
Government

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LARP



LARP



LARP

The Lower Athabasca Regional Plan (LARP) provides a blueprint for balancing the economic, social and environmental priorities we value for the region. The plan employs strategies and actions that manage the cumulative effects of a growing economy and population on the region's ecosystems and environment.

LARP came into effect on September 2012, and is the first regional plan developed under the Land-use Framework.

The plan establishes a vision for the region for the next 50 years and prescribes strategic directions for the first 10 years. To ensure the plan remains effective, relevant and connected to the activities on the landscape, the Government of Alberta is committed to monitoring the progress made towards achieving the outcomes for the region. This Annual Report reviews the progress made in 2013 towards implementing the strategies outlined in the plan, and provides a snapshot of the region through regional indicators.

LARP Regulatory Compliance Overview

LARP contains regulatory provisions to enable achievement of the strategic directions, strategies and actions for the region. These regulatory provisions are enforceable by law and are binding on the Crown, local government bodies, decision-makers and all other persons, as provided in the *Alberta Land Stewardship Act*. In compliance with LARP, the Government of Alberta has established and will maintain programs that:

- Monitor the area of conserved land in the planning region and evaluate the ratio of conserved land to total land;
- Manage ambient air quality limits and triggers, monitor and evaluate ambient air quality in the planning region, and evaluate the effectiveness of the air framework in meeting the air quality objectives stated in the regional plan;
- Manage water quality limits and triggers, monitor and evaluate water quality, and evaluate the effectiveness of the framework in meeting the water quality objectives for the Lower Athabasca River;
- Monitor and evaluate groundwater quantity and quality in the planning region;
- Evaluate the effectiveness of the public land areas for recreation and tourism as well as the provincial recreation areas in meeting the recreation and tourism objectives for the region; and
- Monitor and evaluate the status of regional indicators and strategies, and the effectiveness of each strategy in achieving regional outcomes.

Progress Summary

Regional outcomes are supported by ongoing implementation of provincial strategies, as well as new region-specific strategies implemented through LARP.

Below is a summary of the status of each LARP strategy. Detailed information describing the level of progress made on these new strategies is available in the Strategies Report section (Page 4).

Strategy	LARP Timeline	Progress
Provincial Outcome: Healthy Economy Supported by our Land and Natural Resources		
LARP Outcome: The economic potential of the oil sands resource is optimized		
Sub-regional plan using a strategic environmental assessment approach for the south Athabasca oil sands area	2013	Delayed; revised for completion by 2014
Responsible Actions: A Plan for Alberta's Oil Sands	Ongoing	Implementation of this key oil sands strategy for the responsible development of Alberta's oil sands continues.
Alberta Provincial Energy Strategy		Implementation is ongoing
Improved Regulatory Process through the Alberta Energy Regulator		
Connecting the Dots: Aboriginal Workforce and Economic Development in Alberta		
LARP Outcome: The region's economy is diversified		
Lakeland Country Destination Development Strategy and Tourism Opportunity Plan	2015	On-track for completion in 2015
Tourism development nodes	2015	On-track for completion in 2015
Tourism opportunity assessments for Quarry of the Ancestors, Bitumount and Fort Chipewyan	2014	On-track for completion in 2014
Scenic Byways Network	2015	On-track for completion in 2015
Prevent shortfalls in timber supply	Ongoing	Implementation is ongoing
Wildfire management planning initiatives		
The Alberta Forest Products Roadmap to 2020		

Strategy	LARP Timeline	Progress
Enhance and expand the supply of tourism products and infrastructure	Ongoing	Implementation is ongoing
Clarity in rules for physical access to energy, mineral and coal resources		
Promote new investment in energy mineral and coal resource development		
Provincial Outcome: Healthy Ecosystems and Environment		
LARP Outcome: Landscapes are managed to maintain ecosystem function and biodiversity		
Create new conservation areas on provincial Crown land	As soon as practicable	On-track and ongoing
Develop a biodiversity management framework	2013	Delayed; revised for completion in 2014
Develop a landscape management plan for public lands in the Green Area	2013	Delayed; revised for completion in 2014
Manage existing conserved lands	Ongoing	Implementation is ongoing
Complete a tailings management framework		
Implement the progressive reclamation strategy		
LARP Outcome: Air and water are managed to support human and ecosystem needs		
Complete and implement the Groundwater Management Framework for the Lower Athabasca Region	2014	Framework is complete; development of the monitoring network is ongoing
Complete an updated surface water quantity management framework for the Lower Athabasca River	2012	Delayed; revised for completion in 2015
Implement the Air Quality Management Framework for the Lower Athabasca Region	Ongoing	Implementation is ongoing
Implement the Surface Water Quality Management Framework for the Lower Athabasca River		

Strategy	LARP Timeline	Progress
Provincial Outcome: People-Friendly Communities with Ample Recreational and Cultural Opportunities		
LARP Outcome: Infrastructure development supports economic and population growth		
Use CRISP to augment and facilitate planning where oil sands development causes growth pressures	Ongoing	Implementation is ongoing
Ensure opportunities for future routes and siting for pipeline gateways, transmission corridors, utility and electrical transmission corridors are maintained		
Critical economic linkages to markets		
LARP Outcome: The quality of life of residents is enhanced through increased opportunities for recreation and active living		
Designate new provincial recreation areas to address growing demand for recreational opportunities	As soon as practicable	On-track and ongoing
Create public land areas for recreation and tourism that contain unique features or settings	As soon as practicable	On-track and ongoing
Develop the regional parks plan for the Lower Athabasca	2013	Delayed; revised for completion in 2014
Develop the Lower Athabasca Regional Trail System Plan	Ongoing	Implementation is ongoing
Collect regional data including completion of recreation and tourism inventory, a scenic resource assessment inventory and a regional recreational demand and satisfaction survey		
LARP Outcome: 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	Ongoing	Implementation is ongoing
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)		

Strategies Report

This Strategies Report provides detailed information describing the level of progress made towards implementing the new strategies introduced in LARP, as well as updates on ongoing strategies, where applicable.

Healthy ECONOMY

support by our land and natural resources

Alberta's oil sands represent more than 95 per cent of Canada's oil reserves and approximately 82 per cent of oil sands resources are located within the Lower Athabasca Region. The oil sands are a significant resource and a major contributor to the Albertan and Canadian economies, attracting billions of dollars in investment as well as generating employment and income for hundreds of thousands of workers in Alberta and across North America. While oil sands development is a major contributor to the region's economy, other sectors such as metallic and industrial mineral exploration and extraction, natural gas development, forestry, agriculture, and tourism service providers are also important contributors and help create a more diversified economy for the Lower Athabasca Region. Economic diversification is an important requirement for the long-term stability and sustainability of the region and the communities within it.

In 2013, important milestones were achieved towards establishing a streamlined system to provide clarity of policy and process to the oil and gas industry, with the goal of making the interaction between industry and government more efficient. The Government of Alberta also continued implementation of existing provincial economic policies and worked on implementing the region-specific strategies specified in LARP.

> Lower Athabasca Regional Outcome:
The economic potential of the oil sands resource is optimized

Progress on the implementation of new strategies introduced through LARP is as follows:

Sub-regional plan using a strategic environmental assessment approach for the south Athabasca oil sands area

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.

Progress and outlook:

The regional strategic assessment uses modelling and other approaches to proactively assess the effects of in situ oil sands activities in the south Athabasca oil sands area. Stakeholder information sessions to discuss this initiative are planned for February and March 2014.

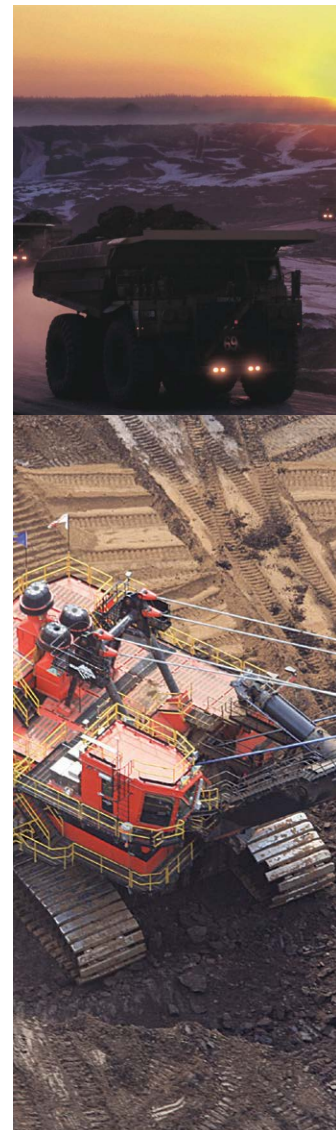
The assessment is anticipated to be completed in 2014, and will inform decision-making through a sub-regional plan. The subregional planning process is under development with completion targeted for 2014. Formal approval and implementation may extend into 2015.

Improved Regulatory Process

Building a robust and efficient regulatory system is critical to supporting continued growth and environmental management in the region and province.

Progress and outlook:

In the summer of 2013, the Alberta Responsible Energy Policy System was launched to bring together policies, regulations and pieces of legislation from the Alberta Energy Regulator (AER), Energy, and Environment and Sustainable Resource Development. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans. The AER ensures the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. Effective November 30, 2013, the AER is responsible for issuing, amending, maintaining, and inspecting all land approvals related to oil and gas activities under the *Public Lands Act*. Under Part 8 of the *Mines and Minerals Act*, the AER will approve, maintain, and inspect seismic exploration programs in Alberta, as related to oil and gas. Work on implementing this system is ongoing. In April 2014, the Government of Alberta will transfer the responsibility for components of the *Water Act* and the *Environmental Protection and Enhancement Act* to the AER, as they relate to oil and gas activities. This final transition will complete the process of creating a single regulator for upstream oil, oil sands, natural gas, and coal development in Alberta.



**> Lower Athabasca Regional Outcome:
The region's economy is diversified**

Progress on the implementation of new strategies introduced through LARP is as follows:

Lakeland Country Destination Development Strategy and Tourism Opportunity Plan

Lakeland Country has the potential to attract visitors and gain national and international recognition; the strategy will provide the framework to guide tourism industry development in the region by coordinating stakeholders in a common direction to maximize the tourism potential of the destination to achieve a balance of economic, social and environmental outcomes.

Progress and outlook:

In 2014, the destination planning process will commence. All phases of this process will include government, Aboriginal peoples, stakeholders and tourism industry organizations for engagement and consultation. The expected date of completion is 2015.

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

Tourism opportunity assessments will identify potential Aboriginal tourism development and investment opportunities.

Progress and outlook:

In 2014, assessments will be conducted to identify the feasibility and viability of Aboriginal tourism opportunities while promoting and protecting natural resources, cultural practices and heritage lifestyles.

Scenic Byways Network

Work with municipal governments and other partners to identify, establish and promote scenic byways in and around areas with high-quality attractions and recreation and tourism features. This would include routes, trails and waterways to create distinctive travel experiences and showcase the region's unique scenic resources and cultural landscapes.

Progress and outlook:

In 2013, a scenic resource assessment of LARP, as well as a Scenic Byways Pilot Study for LARP was completed. In 2014, research will be conducted to identify a scenic byways network that is both water and land-based for the region.

Enhance and expand the supply of tourism products and infrastructure

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.

Progress and outlook:

In 2013, Tourism, Parks and Recreation released A Pathway to Growth – Alberta's Tourism Framework (2013-2020), with the objective of growing the tourism industry by 32 per cent by 2020. The framework provides the common vision, goal and priorities required to grow the industry and maximize the opportunities that tourism creates in every region of the province.

Tourism development nodes

A tourism development node is an area that has unique tourism development potential, and provides an array of natural and built features and settings where the government wants to encourage tourism development and investment opportunities. 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.

Progress and outlook:

In 2013, the House River Public Land Area for Recreation and Tourism (PLART) was inventoried. A conceptual plan for recreation and tourism opportunities is in development. In 2014, priority tourism development nodes will be identified in PLARTs within LARP. For further details, refer to LARP strategy: Create public land areas for recreation and tourism that contain unique features or settings.



Healthy ECOSYSTEMS

and environment

The Lower Athabasca Region contains diverse landforms, vegetation and species that can be impacted by the cumulative effects of industrial growth and human development. LARP aims to sustain ecosystem function and biodiversity in the region through landscape management and environmental management frameworks. Specifically, LARP establishes six new conservation areas, bringing the total conserved land in the region to two million hectares, and sets regional environmental limits for air quality and surface water quality. The regional plan also commits to the completion of environmental management frameworks for biodiversity, tailings, surface water quantity, and groundwater as well as a strategy to address reclamation of industrial sites.

In 2013, legislation to create the Alberta Environmental Monitoring Evaluation and Reporting Agency (AEMERA), an arms-length agency responsible for monitoring and reporting on the condition of Alberta's environment, was passed and will be proclamation in 2014. In addition, the Canada-Alberta Oil Sands Environmental Monitoring Information Portal, a federal and provincial joint initiative, was launched. These two milestones are foundational to supporting the integrated monitoring, evaluation and reporting of air, land, water and wildlife in the oil sands area specifically, and ultimately the province as a whole. Extensive work was also undertaken in 2013 towards completion of key frameworks and strategies specified in LARP. These activities are ongoing and many will be completed in 2014.

Lower Athabasca Regional Outcome:

> Landscapes are managed to maintain ecosystem function and biodiversity

Progress on the implementation of new strategies introduced through LARP is as follows:

Create new conservation areas on provincial Crown land

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, oil sands and metallic and industrial minerals ("MIM") Crown agreements that fell within, or partially within, new conservation areas

established under LARP were cancelled in accordance with section 8 (1) (c) of the *Mines and Minerals Act*. This decision was made by the Minister of Energy in consideration of the Government of Alberta's policy direction provided by LARP. By the end of 2013, a significant portion of affected oil sands and MIM Crown agreements were cancelled and compensation was provided by Energy under the provisions of the Mineral Rights Compensation Regulation. It is anticipated that the remaining oil sands and MIM Crown agreements falling within or partially within the new conservation areas designated in LARP will be cancelled and compensated in 2014. Imperial Oil Resources Limited voluntarily surrendered the portions of their oil sands agreements that were within the Gipsy-Gordon conservation area.

Progress and outlook:

Progress on designating new conservation areas under the Provincial Parks Act is as follows:

1. Kazan Wildland Provincial Park: To be designated as soon as practicable*
2. Richardson Wildland Provincial Park: To be designated as soon as practicable*
3. Gipsy-Gordon Wildland Provincial Park: To be designated as soon as practicable*
4. Birch Mountains Wildland Provincial Park (expansion): Anticipated to be designated in 2014
5. Dillon River Wildland Provincial Park: Anticipated to be designated in 2014

Progress on establishing new conservation areas under the *Public Lands Act* is as follows:

1. Birch River Conservation Area: To be designated as soon as practicable*

*Timing of the designation of the new conservation areas is dependent upon completion of the cancellation and compensation process for the subsurface agreements and surface dispositions.

Develop a biodiversity framework

Development of a biodiversity management framework for the region is underway and will include specific objectives and indicators. A monitoring and reporting system will be developed to support the framework and address important elements of biodiversity (including both species and habitats in terrestrial and aquatic ecosystems) that are affected by land-use activity in the Lower Athabasca Region.

Progress and outlook:

In 2013, progress was made on a draft Lower Athabasca Biodiversity Management Framework. Public, stakeholder and Aboriginal consultations will

be initiated in early 2014. The framework will be finalized for implementation in 2014.

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

Managing landscape disturbance will support the biodiversity management framework by defining specific actions to manage the 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.

Progress and outlook:

Landscape management planning for public lands in the Green Area is being developed in conjunction with development of the biodiversity management framework and is similarly targeted for finalization and implementation by the end of 2014.

Complete a tailings management framework

The tailings management framework will support the improvement of reclamation rates. It will complement the existing Alberta Energy Regulator Directive 074 to reduce the volume of fine fluid tailings present on oil sands facility sites.

Progress and outlook:

In late 2013, discussions on the development of a tailings management framework were initiated with external stakeholders. It is anticipated that consultation will be completed in mid-2014. The framework is targeted for finalization and implementation by early 2015.

Lower Athabasca Regional Outcome:
> Air and water are managed to support human and ecosystem needs

Progress on the implementation of new strategies introduced through LARP is as follows:

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

The Groundwater Management Framework is in place and includes interim triggers and provides for the future establishment of final triggers and limits. The framework recommended the development of Regional Groundwater Monitoring Networks to collect groundwater quality and quantity data and develop final triggers and limits.

Progress and outlook:

A Regional Groundwater Monitoring Evaluation and Reporting group for the north and south Athabasca oil sands areas was established under the leadership of Environment and Sustainable Resource Development. Participants include industry, consultants, academia, First Nations, and federal and provincial governments. This group reviews the annual groundwater monitoring programs and identifies the information needs to finalize triggers and limits for evaluation of the quantity and quality changes of non-saline groundwater in the Lower Athabasca Region. Activities to enhance the Regional Groundwater Monitoring Network are ongoing. Lists of new monitoring wells to be installed have been proposed, including industry wells to be incorporated into the regional monitoring networks.

Complete an updated Surface Water Quantity Management Framework for the Lower Athabasca River

The framework will establish an appropriate balance between water needs for environmental protection and industry during periods of low flow. It builds upon the original framework put forward in 2007, and will establish water withdrawal limits and triggers for the oil sands industry, both in terms of current and expected future use by existing and new development.

Progress and outlook:

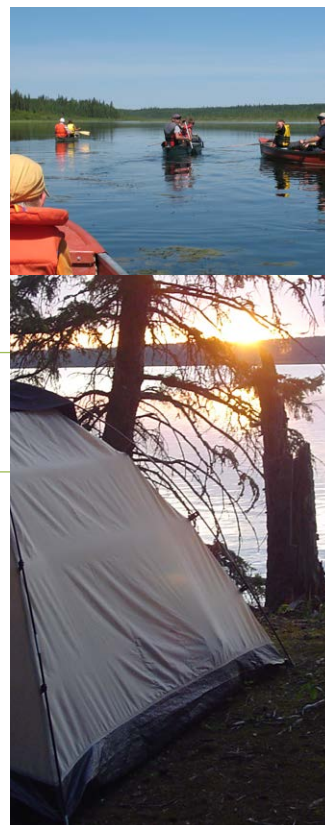
In late 2013, discussions on the surface water quantity management framework were initiated with a diverse group of external stakeholders. It is anticipated that consultation will be completed in mid-2014. The framework is targeted for finalization and implementation by early 2015.

Implement the Air Quality Management Framework and the Surface Water Quality Management Framework for the Lower Athabasca Region

Implementation of the management frameworks for air quality and surface water quality for the region was initiated with the launch of LARP in September 2012.

Progress and outlook:

The Air Quality Management Framework and the Surface Water Quality Management Framework were implemented in 2013 and first annual reports for the frameworks will be released in 2014. The reports are available on the Environment and Sustainable Resource Development website: www.environment.alberta.ca/03422.html



People-friendly **COMMUNITIES**

with ample recreational and cultural opportunities

LARP supports community growth and enhancing the quality of life of residents. In recent years, the Lower Athabasca Region has shown the fastest growing population in Alberta and this trend is expected to continue into the future. Expansion of oil sands development in the region has created substantial employment opportunities, attracting workers from across Canada and around the world. Economic opportunities have contributed to significant population growth in the region, especially in the Regional Municipality of Wood Buffalo and specifically Fort McMurray. In 2013, the Government of Alberta made significant progress on infrastructure planning for the oil sands area. Progress on recreational planning for the region was achieved, with activities ongoing for completion in 2014.

Lower Athabasca Regional Outcome:

> Infrastructure development supports economic and population growth

Progress on the implementation of new strategies introduced through LARP is as follows:

Use a Comprehensive Regional Infrastructure Sustainability Plan (CRISP) to augment and facilitate planning where oil sands development causes growth pressures

Oil sands development is a significant driver of population growth in the Lower Athabasca Region. To sustain this growth, it is critical for decision makers to build long-term collaborative approaches to planning infrastructure in Alberta's oil sands.

Progress and outlook:

In 2013, the Government continued implementation of CRISP for the Athabasca oil sands area and developed a CRISP for the Cold Lake oil sands area. These two oil sands areas overlay much of the Lower Athabasca Region and implementation of these plans will be ongoing as part of the implementation of Responsible Actions.

Urban Development Sub-region for Fort McMurray

LARP addresses the fast-paced population growth in Fort McMurray, which is attributed to oil sands development.

Progress and outlook:

In July 2013, the Government of Alberta announced an Urban Development Sub-region (UDSR) of more than 22,258 ha of Crown land for urban expansion in Fort McMurray. The UDSR is more than double the size of present-day Fort McMurray. Committing to the expansion of Fort McMurray allows the Government of Alberta to sell Crown land to the Regional Municipality of Wood Buffalo to ensure sustainable growth and coordinated long-term planning between the municipality and the province. In order to establish the UDSR, the Government of Alberta made the policy decision that all subsurface and surface dispositions incompatible with future urban development within the UDSR would be cancelled and compensated (INFORMATION LETTER 2013-27 - Fort McMurray Urban Development Sub-Region (UDSR): Policy direction on existing surface and subsurface dispositions within UDSR boundary). As of the start of 2014, Energy is assessing applications for compensation from affected oil sands companies that had Crown mineral agreements within, or partially within, the UDSR boundary.

Ensure opportunities for future routes and siting for pipeline gateways, transmission corridors, utility and electrical transmission corridors are maintained



In January 2014, the Alberta Electrical Systems Operator (AESO) publicly released the five companies that are 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). The successful company will still require full regulatory approval which includes consultation with impacted landowners and other stakeholders before construction begins.

Progress and outlook:

Through 2014, the five companies successful in the competitive process will put together proposals for the project which will be submitted for evaluation by the AESO as part of the competitive process. The AESO expects to announce the successful proponent by the end of 2014.

Lower Athabasca Regional Outcome:
> The quality of life of residents is enhanced through increased opportunities for recreation and active living

Progress on the implementation of new strategies introduced through LARP is as follows:

Designate new provincial recreation areas to address growing demand for recreational opportunities

To optimize the recreation and tourism potential for both residents and visitors, LARP established nine new provincial recreation areas.

Progress and outlook:

Progress on designating these new provincial recreation areas under the *Provincial Parks Act* is as follows:

1. Clyde Lake: Anticipated to be designated in 2014
2. Crow Lake: To be designated as soon as practicable
3. Winifred Lake: To be designated as soon as practicable
4. Slave River Rapids: To be designated as soon as practicable
5. Andrew Lake: To be designated as soon as practicable
6. Christina Crossing: Anticipated to be designated in 2014
7. Gregoire Lake: To be designated as soon as practicable
8. Goodwin Lake: To be designated as soon as practicable
9. Cowper Lake: Anticipated to be designated in 2014

Create public land areas for recreation and tourism that contain unique features or settings

To optimize the recreation and tourism potential for both residents and visitors, LARP established five new public land areas for recreation and tourism (PLARTs) development.

Progress and outlook:

Progress on designating these new PLARTs under the *Public Lands Act* is as follows:

1. Lake Athabasca: Anticipated to be designated in 2014
2. Richardson: Anticipated to be designated in 2014
3. Athabasca River: Anticipated to be designated in 2014
4. Clearwater River: Anticipated to be designated in 2014
5. House River: Anticipated to be designated in 2014

- In 2013, the House River PLART was inventoried and mapped
- In 2014, the development of a conceptual plan for recreation and tourism opportunities will occur in the House River PLART.
- The inventorying and development of conceptual plans for recreation and tourism opportunities will begin for all other PLARTs as resources allow.

* The timelines for the inventory and development of conceptual plans for the Richardson PLART will be partially dependent upon the discussions with First Nations as a result of the Richardson Initiative.

Develop the regional parks plan for the Lower Athabasca

The Regional Parks Plans (RPP) will be developed to provide broad management direction to achieve the integrated recreation and conservation mandate of the Alberta Provincial Parks program.

Progress and outlook:

The draft RPP for LARP is underway and nearing completion. The RPP will provide the public with an understanding of the significance of each site in the region along with the values they contribute to the parks program. Additional strategies will be highlighted in the RPP, as well as strategies for providing the public with opportunities to participate in the decisions affecting their parks.

Develop the Lower Athabasca Regional Trail System Plan

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. The overall intent will be to 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.

Progress and outlook:

In collaboration with the Alberta TrailNet Society, the inventory phase of existing trails in the Lower Athabasca Region is nearing completion and work is ongoing.

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

Data is foundational to informing recreation and tourism planning and this strategy ensures the ongoing collection of relevant data to inform the planning process.

Progress and outlook:

The Recreation and Tourism Features Inventory, Scenic Resource Assessment, and the Regional Recreation Demand and Satisfaction survey have been completed. In 2014, the Recreation/Tourism Opportunity Spectrum and Significant Recreation/Tourism Areas Model will be completed.

**> Lower Athabasca Regional Outcome:
Inclusion of Aboriginal peoples in land-use planning**

Aboriginal peoples have long had a close relationship with the land, and given their intimate understanding of the local environment, wildlife and aquatic ecosystems, they are able to contribute to land-use planning in a unique way through the sharing of their traditional knowledge. Information on ecosystems and the impacts of human developments on plants and animals that use these habitats can be obtained through the use of traditional knowledge and contemporary science; both of which are valuable to the regional land-use planning process. 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 their traditional knowledge to inform land and natural resource planning.

Progress on the implementation of new strategies introduced through LARP is as follows:

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

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.

Progress and outlook:

In 2013, Environment and Sustainable Resource Development continued to consult and engage with First Nations on many of the implementation pieces of LARP. Tourism, Parks and Recreation continued 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 First Nations Consultation Policy on Land Management and Resource Development, 2005.

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)

First Nations are invited to be involved in the creation of a sub-regional initiative for the area. This initiative will 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.

Progress and outlook:

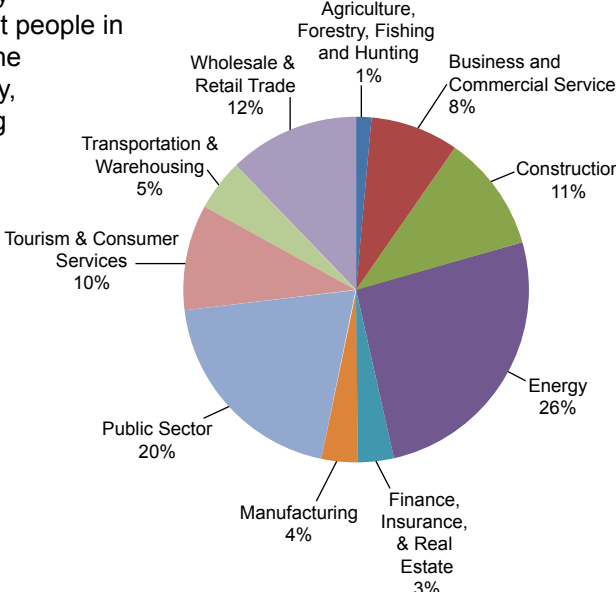
In 2013, the Alberta Government initiated pre-planning work for this initiative. Initial contact with interested First Nations is targeted to start in the spring of 2014.

Indicators Report

This report provides a snapshot of the region through regional indicators. The indicators reflect the best available data at the time of the report and represent the regional perspective wherever possible.

Healthy economy supported by our land and natural resources																							
<p>Sectoral GDP (in chained 2007 dollars)</p>	<p>\$278,795 million¹ From 2011 to 2012, Alberta GDP increased by 3.7 per cent. The energy industry was the largest contributor, making up 29 per cent of the provincial GDP.</p> <p>\$67,712 million - Oil and gas extraction in Alberta Oil and gas extraction in Alberta contributed \$67,712 million in 2012, an increase of 6.5 per cent from 2011.</p>																						
<p>GDP by Industry in Alberta (2012)</p>																							
<table border="1"> <caption>GDP by Industry in Alberta (2012)</caption> <thead> <tr> <th>Industry</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Energy</td> <td>29%</td> </tr> <tr> <td>Finance, Insurance, & Real Estate</td> <td>13%</td> </tr> <tr> <td>Public Sector</td> <td>12%</td> </tr> <tr> <td>Business and Commercial Services</td> <td>11%</td> </tr> <tr> <td>Construction</td> <td>10%</td> </tr> <tr> <td>Wholesale & Retail Trade</td> <td>9%</td> </tr> <tr> <td>Manufacturing</td> <td>6%</td> </tr> <tr> <td>Agriculture, Forestry, Fishing and Hunting</td> <td>2%</td> </tr> <tr> <td>Transportation & Warehousing</td> <td>4%</td> </tr> <tr> <td>Tourism & Consumer Services</td> <td>4%</td> </tr> </tbody> </table>		Industry	Percentage	Energy	29%	Finance, Insurance, & Real Estate	13%	Public Sector	12%	Business and Commercial Services	11%	Construction	10%	Wholesale & Retail Trade	9%	Manufacturing	6%	Agriculture, Forestry, Fishing and Hunting	2%	Transportation & Warehousing	4%	Tourism & Consumer Services	4%
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<p>Provincial royalties²</p>	<p>\$3.9 billion In the calendar year 2012, the Crown collected a total of \$3.9 billion as royalties from Alberta oil sands development.</p>																						
<p>Oil sands production rate³</p>	<p>1.9 million barrels per day (bbl/d) In the 2012 calendar year, Alberta's total crude bitumen production, which consists of mined and in-situ bitumen production reached 1.9bbl/d, a 10 per cent increase over 1.7 million bbl/d produced in 2011.</p>																						
<p>Cost of production⁴</p>	<p>\$16.9 billion In the calendar year 2012, the operating cost of production in Alberta oil sands, reported by operators, was \$16.9 billion:⁵</p> <ul style="list-style-type: none"> • Pre-payout operating cost = \$5.55 billion • Post-payout projects operating cost = \$11.31 billion 																						
<p>Total oil sands investment⁶</p>	<p>\$25,154 million⁷ In 2012, the estimated total capital expenditure in Alberta's oil sands represented an 11 per cent increase from 2011.</p>																						

<p>Business establishments</p>	<p>3,940 establishments In 2012, 3,940 establishments with employees were registered in the Lower Athabasca Region. The largest industry in the region (as measured by the number of establishments) was tourism and consumer services, which accounted for 21 per cent of all establishments, or 823 establishments. The second-largest industry was business and commercial services, which accounted for 18 per cent of all establishments, or 696 establishments. Business and commercial services is Alberta's largest industry on an establishment basis. The third-largest industry in the region was construction, which accounted for 15 per cent of all establishments, or 610 establishments.⁸</p>	<p>Establishments by Industry for the Lower Athabasca Region (2012)</p> <table border="1"> <caption>Establishments by Industry for the Lower Athabasca Region (2012)</caption> <thead> <tr> <th>Industry</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Tourism & Consumer Services</td> <td>21%</td> </tr> <tr> <td>Business and Commercial Services</td> <td>18%</td> </tr> <tr> <td>Construction</td> <td>15%</td> </tr> <tr> <td>Wholesale & Retail Trade</td> <td>15%</td> </tr> <tr> <td>Transportation & Warehousing</td> <td>7%</td> </tr> <tr> <td>Public Sector</td> <td>7%</td> </tr> <tr> <td>Finance, Insurance, & Real Estate</td> <td>8%</td> </tr> <tr> <td>Energy</td> <td>5%</td> </tr> <tr> <td>Manufacturing</td> <td>2%</td> </tr> <tr> <td>Agriculture, Forestry, Fishing and Hunting</td> <td>2%</td> </tr> </tbody> </table>	Industry	Percentage	Tourism & Consumer Services	21%	Business and Commercial Services	18%	Construction	15%	Wholesale & Retail Trade	15%	Transportation & Warehousing	7%	Public Sector	7%	Finance, Insurance, & Real Estate	8%	Energy	5%	Manufacturing	2%	Agriculture, Forestry, Fishing and Hunting	2%
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<p>Area of public land actively managed for enhanced forestry</p>	<p>1,431,878 ha At the end of 2012, the total ha of enhanced forest management was 1,431,878 hectares, with the following breakdown:</p> <ul style="list-style-type: none"> • Stand Tending: 1,778 ha • Plantings: 1,430,100 ha 																							
<p>Area of land disturbance on productive land base on public land in the region</p>	<p>272,288 ha As of 2010, the impact of land disturbance due to non-forestry related activities on the productive timber land base was 11 per cent.</p>																							
<p>Tourism visitation</p>	<p>985,930 Total person visits for 2011. Person visits encompass all people (i.e. Alberta residents, other Canadians and international visitors) who travelled within the Lower Athabasca Region.</p>																							
<p>Tourism visitor expenditures</p>	<p>\$221 million Total gross expenditures for 2011 from all visitors (Alberta residents, other Canadians, international) who travelled within the Lower Athabasca Region. Expenditures include food and beverage, accommodation, transportation, retail, recreation and entertainment.</p>																							
<p>Tourism occupancy</p>	<p>65.5 per cent This number reflects the 2012 occupancy data for all identified tourism markets in the province.⁹</p>																							

Inventory of major projects	<p>\$100,996 million¹⁰</p> <p>The total value for the projects in the Lower Athabasca Region was estimated at approximately \$101 billion as of September 2013. Nearly all (i.e.96 per cent) of the value of these projects is attributable to the oil sands. The Lower Athabasca Region accounts for about one-half of the total value of all Alberta projects. The Inventory of Major Projects (IMAP) lists projects, valued at \$5 million or greater, recently completed, are currently under construction, or are proposed to start construction within two years.¹¹</p>																						
Building permits	<p>\$1,727 million¹²</p> <p>The total value of building permits for the region increased by 34 per cent from 2011 to 2012.</p>																						
Labour force by sector	<p>68,640 people</p> <p>For the total labour force in the Lower Athabasca Region, the 2011 NHS reports a total of 68,640 people (excludes any persons not assignable to a sector).</p>																						
Employment	<p>65,570 total employment¹³</p> <p>The total number of persons employed in 2011 for the region represents approximately 3.3 per cent of the provincial total, which was 1,993,225 in 2011.</p>																						
Sectoral employment	<p>3,070 total unemployment</p> <p>The total unemployment in the region, as of the 2011 National Household Survey, is estimated as 3,070 persons. This implies an unemployment rate (defined as the total unemployment divided by the total labour force) of 4.5 per cent. For comparison, the Alberta unemployment rate as of June 2011, as reported in Statistics Canada table 282-0087, was 5.4 per cent.</p> <p>According to the 2011 National Household Survey, the energy industry employed the most people in the region, while the agriculture, forestry, fishing and hunting industry employed the least amount of people at 26 per cent and 1 per cent respectively.</p> <p>Employment by Sector for the Lower Athabasca Region (2011)</p>  <table border="1"> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Energy</td> <td>26%</td> </tr> <tr> <td>Public Sector</td> <td>20%</td> </tr> <tr> <td>Wholesale & Retail Trade</td> <td>12%</td> </tr> <tr> <td>Construction</td> <td>11%</td> </tr> <tr> <td>Tourism & Consumer Services</td> <td>10%</td> </tr> <tr> <td>Business and Commercial Services</td> <td>8%</td> </tr> <tr> <td>Agriculture, Forestry, Fishing and Hunting</td> <td>1%</td> </tr> <tr> <td>Transportation & Warehousing</td> <td>5%</td> </tr> <tr> <td>Manufacturing</td> <td>4%</td> </tr> <tr> <td>Finance, Insurance, & Real Estate</td> <td>3%</td> </tr> </tbody> </table>	Sector	Percentage	Energy	26%	Public Sector	20%	Wholesale & Retail Trade	12%	Construction	11%	Tourism & Consumer Services	10%	Business and Commercial Services	8%	Agriculture, Forestry, Fishing and Hunting	1%	Transportation & Warehousing	5%	Manufacturing	4%	Finance, Insurance, & Real Estate	3%
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Personal income (This indicator is defined as average total income, which is the average total income per person reporting income)	\$80,599 In 2011, the region represented the highest average total income in Alberta; the provincial average in 2011 was \$54,666.
Agricultural land fragmentation:	This indicator is currently in development. ¹⁴
Agricultural land conversion	This indicator is currently in development. ¹⁵
Healthy ecosystems and environment	
Biodiversity and the status of biodiversity indicators	This indicator is currently in development and will be available as a part of the Biodiversity Management Framework for the Lower Athabasca Region.
Status of Alberta species, including species at risk	Eight species at risk As of 2013, eight species were legally designated under Alberta's <i>Wildlife Act</i> as threatened or endangered. ¹⁶
Area of land disturbance on public land	4.4 per cent At the end of 2010, 4.4 per cent of the green area in the region was disturbed. This is an increase from 3.9 per cent measured at the end of 2007.
Area of land retained in native vegetation	92.7 per cent At the end of 2010, the total amount of native land cover in the region was 92.7 per cent. This represents a 0.5 per cent decrease from 2007 when the native land cover was 93.2 per cent.
Area of oil sands reclamation	145,299 hectares Oil sands reclamation is measured based on the <i>Environmental Protection and Enhancement Act</i> (EPEA) approved footprint, which is the total project area approved under the EPEA approval issued to the company by Environment and Sustainable Resource Development The EPEA approved footprint at the end of 2012 was 145,299 hectares, of which 80,308 hectares was attributable to mine site footprint. For the purposes of annual conservation and reclamation reporting, mine site footprint includes tailings ponds and tailings related structures. ¹⁷
Volume of fluid fine tailings	This indicator is in development and will be available as a part of the Tailings Management Framework for the Lower Athabasca Region.
Area of conserved land	2,089,491 hectares LARP established six new conservation areas, bringing the total conserved land in the region to over two million hectares, or 22 per cent of the region.

<p>Air quality</p>	<p>In 2012, two air quality indicators, nitrogen dioxide (NO₂) and sulphur dioxide (SO₂) were continuously measured at air monitoring stations. The Minister of Environment and Sustainable Resource Development's determination for the triggers and limits (under Section 23(1) (b) of the LARP) for the indicators used to manage ambient air quality were as follows:</p> <ul style="list-style-type: none"> • No limits were exceeded for air quality indicators. • Triggers were exceeded at 10 air monitoring stations for NO₂ and/or SO₂. <p>Triggers are established to allow for proactive management. The finding of trigger exceedances in 2012 does not signal that environmental conditions have placed human health or the environment at risk. However, because triggers were exceeded, the department is committed to undertaking proactive management responses that will ensure air quality is maintained at acceptable levels.¹⁸</p>
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<p>Water quality</p>	<p>In 2012, 38 water quality indicators were measured monthly at the Old Fort monitoring station on the lower Athabasca River. The Minister of Environment and Sustainable Resource Development's determination for the triggers and limits (under Section 30(1) (b) of the LARP) for the indicators used to manage ambient surface water quality were as follows:</p> <ul style="list-style-type: none"> • No limits were exceeded • Triggers were exceeded at the Old Fort water quality station for three of 38 indicators (total nitrogen, dissolved uranium and dissolved lithium). <p>Triggers are established to allow for proactive management. The finding of trigger exceedances in 2012 does not signal that environmental conditions have placed human health or the environment at risk. However, because triggers were exceeded, the department is committed to undertaking proactive management responses that will ensure surface water quality is maintained at acceptable levels.¹⁹</p>
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People-friendly communities with ample recreational and cultural opportunities

<p>Regional population</p>	<p>125,569 As of July 1, 2013, population in the region represented approximately 3.1 per cent of the provincial total²⁰.</p>
<p>Cost of construction</p>	<p>50.6 per cent Lower Athabasca accounts for 50.6 per cent of the total of all projects in Alberta that were proposed, planned, under construction or recently completed as of September 30, 2013.</p>

<p>Cost of living</p>	<p>109.1 Using Edmonton as the base, the cost of living index in the region for 2010 was 109.1 and represents the highest cost of living in the province when compared with the other Land-use Framework regions.</p>																																																					
<p>Traffic counts</p>	<p>Increasing In 2012, daily average two-way traffic volume on the major highways in the region increased by approximately 4.6 per cent from 2011.</p>																																																					
<p>Oil sands projects²¹</p>	<p>As of July 2013, the status of reported oil sands projects in Alberta is as follows:</p> <ul style="list-style-type: none"> • 127 operating (i.e., projects that are producing bitumen and/or oil sands product) • 16 construction (i.e., on-site construction has commenced for these projects) • 12 approved (i.e., regulatory approvals required for these projects to operate have been received) • 27 application (i.e., project application is being reviewed by the Alberta Energy Regulator and/or Environment and Sustainable Resource Development). 																																																					
<p>Rental affordability²²</p>	<p>Below are the average two-bedroom rental and vacancy rates for communities in the Lower Athabasca Region from 2010 - 2013. For Bonnyville and Lac La Biche, the rental and vacancy rates are taken between May and July of each year and for Cold Lake and Wood Buffalo, the rates are taken every year in April and October.²³</p> <table border="1" data-bbox="591 1024 1421 1360"> <thead> <tr> <th rowspan="2">Community</th> <th colspan="4">Average Two-Bedroom Rent in \$</th> <th colspan="4">Average Vacancy Rates in %</th> </tr> <tr> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>Bonnyville</td> <td>947</td> <td>991</td> <td>1,121</td> <td>1,242</td> <td>17.5</td> <td>17</td> <td>9.1</td> <td>0</td> </tr> <tr> <td>Lac La Biche</td> <td>978</td> <td>1,000</td> <td>1,020</td> <td>1,054</td> <td>21.2</td> <td>11.3</td> <td>16.3</td> <td>6.7</td> </tr> <tr> <td>Cold Lake</td> <td>1,094</td> <td>1,162</td> <td>1,278</td> <td>1,475</td> <td>5.7</td> <td>0</td> <td>0.6</td> <td>3</td> </tr> <tr> <td>Wood Buffalo</td> <td>2,210</td> <td>2,049</td> <td>2,002</td> <td>2,162</td> <td>6.2</td> <td>8.3</td> <td>5.9</td> <td>6.7</td> </tr> </tbody> </table> <p>Since 2010, rental rates have been increasing in each community with the exception of Wood Buffalo, which has fluctuated somewhat. In 2013, sharp decreases in vacancy rates were seen in Bonnyville and Lac La Biche, compared to 2010, while vacancy rates in Cold Lake and Wood Buffalo have been fluctuating.</p>	Community	Average Two-Bedroom Rent in \$				Average Vacancy Rates in %				2010	2011	2012	2013	2010	2011	2012	2013	Bonnyville	947	991	1,121	1,242	17.5	17	9.1	0	Lac La Biche	978	1,000	1,020	1,054	21.2	11.3	16.3	6.7	Cold Lake	1,094	1,162	1,278	1,475	5.7	0	0.6	3	Wood Buffalo	2,210	2,049	2,002	2,162	6.2	8.3	5.9	6.7
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<p>Parks per capita²⁴</p>	<p>5.04 hectares/person As at the end of 2013, total land area of parks was 632,497 hectares represented by 34 parks, based on a 2013 population of 125,569.</p>																																																					

<p>Recreation infrastructure</p>	<p>1,212 campsites Campsite numbers are based on 2013 assessment of facilities within designated parks and provincial recreation areas only.</p> <p>1,910 km of trails Trail data acquired from Alberta TrailNet and the Recreation Tourism Features Inventory conducted by Alberta Tourism, Parks and Recreation.²⁵</p>
<p>Satisfaction with recreational opportunities within the region</p>	<p>80.6 per cent satisfied In 2013, approximately 80.6 per cent of residents surveyed in the region were satisfied with the outdoor recreation opportunities available within 300 km of their residence.</p>
<p>Historic resources</p>	<p>13 sites In 2013, the Lower Athabasca Region contained 13 designated historic resources.</p>
<p>Participation rate of First Nations in the Richardson Initiative</p>	<p>On-track It is anticipated that interested First Nations will be invited to meet with GoA in the spring of 2014 to begin laying the framework for how the initiative will move forward. The intent of the Richardson Initiative is to create a unique and collaborative approach to managing land-use in the Richardson area.</p>
<p>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 consultation continues to be reviewed prior to the decision</p>	<p>On-track (in accordance with current government policy) In 2013, Environment and Sustainable Resource Development moved forward with the development of several environmental management frameworks. Consultation with interested First Nations took place as part of Phase 3 of the Surface Water Quality and Tailings Managements Frameworks (SWQMF/TMF) in early 2014. Phase 1 engagement with First Nations and Métis on the Biodiversity Management Framework, Landscape Management Plan and Regional Strategic Assessment is scheduled for spring 2014. Environment and Sustainable Resource Development will continue to work with interested First Nations through the development of the various frameworks and sub-regional plans.</p> <p>As outlined in the Plan for Parks (2009 -- Strategy #1: Involve Albertans: Engage Aboriginal communities; Tourism, Parks and Recreation continues to consult with Aboriginal communities where decisions may adversely impact their constitutionally protected rights.</p>

¹ Data sourced from Statistics Canada table 379-0030.

² 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 region. Data for this indicator is reported on the following website: www.energy.gov.ab.ca/About_Us/1702.asp#PSR (Retrieved on January 17, 2014).

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⁵ Operating cost of production, measured by this indicator, include the costs directly attributable to the operations of the project, excluding the cost of diluent. Pre and post payout project phases can be described as follows:

- 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.)
 - o Cumulative revenues are defined as the sum of project revenue and other net proceeds received or receivable from the project's effective date onwards; and
 - o 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.
 - o 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.

⁶ 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 region.

⁷ Source: Statistics Canada, Private and Public Investment in Canada, Catalogue #61-205. For further information, refer to Innovation and Advanced Education Economic Commentary at: www.albertacanada.com/business/statistics/economic-commentaries.aspx.

⁸ For further information, refer to Innovation and Advanced Education Economic Commentary at: www.albertacanada.com/files/albertacanada/RD-LUREI-Lower-Athabasca-Business-Register.pdf.

⁹ From Tourism, Parks and Recreation 2013, Alberta Accommodation: www.tpr.alberta.ca/tourism/statistics/accommodation.aspx. Data is not currently available at the regional level.

¹⁰ Data sourced from Innovation and Advanced Education, Inventory of Major Alberta Projects: <http://albertacanada.com/business/statistics/inventory-of-major-projects.aspx>.

¹¹ Not all projects over this threshold are listed due to reasons of confidentiality and/or due to information not being available at the time of this report. The cost of a project is the value of expenditures expected over all phases of project construction, which may span over two or more years. Project costs listed in IMAP are estimated values. For further information, refer to Innovation and Advanced Education Economic Commentary at: www.albertacanada.com/business/statistics/lower-athabasca.aspx.

¹² Data sourced from Statistics Canada building permits database. For further information, refer to Innovation and Advanced Education Economic Commentary at: www.albertacanada.com/business/statistics/lower-athabasca.aspx.

¹³ Data sourced from Innovation and Advanced Education, Statistics Canada's National Household Survey.

¹⁴ Fragmentation of agricultural land occurs when once contiguous agricultural areas become divided into separate parcels isolated from each other by non-agricultural land uses. This results in a larger total parcel perimeter length (meters) per defined area (square meters), and is reported as a unit-less "perimeter to area ratio." As total area generally remains constant, the smaller the relative value, the less fragmented the agricultural landscape in a given year. Land fragmentation is reported as "actual" and "potential" fragmentation of agricultural land to non-agricultural land uses.

Actual fragmentation is correlated to land conversion in that it measures observable fragmentation of agricultural land resulting from a measureable change in land-use.

Potential fragmentation refers to when a given agricultural area may be legally fragmented, but the fragmentation is not observable on the landscape, as there is no measureable change in land use. With time, it is expected that all potential fragmentation will become actualized as a result of land use conversion.

¹⁵ Conversion of agricultural land refers to an observable land-use change from an agricultural use to a non-agricultural land-use, such as urban development. Conversion may be temporary, even if long-term (e.g., energy development) or permanent (e.g. residential and/or industrial development). This indicator reflects the net conversion of agricultural land to non-agricultural land-uses, and may be positive (i.e., a gain in agricultural land area) or negative (i.e., a loss of agricultural land area).

¹⁶ Piping plover: Observed in Cold Lake area. Recovery efforts are focusing on improving the quality and security of breeding habitat for piping plover in Alberta.

Wood bison: Hunting and changes in the distribution of habitat nearly caused the extinction of wood bison at the end of the 19th century, with the population dropping from an estimated 168,000 down to 250 animals. Bison numbers have since increased due to various conservation efforts. As of 2012, there were over 10,000 free-ranging wood bison in Canada. Provincially, Alberta's free-ranging, disease-free population numbered at 587 individuals in 2012. Wood bison that occur in the Lower Athabasca Region are not listed as threatened provincially; however, they are the focus of management activities investigating population, genetics and disease status.

Whooping crane: This species migrates through the Lower Athabasca Region. Environment Canada is the lead management agency for recovery and monitoring activities.

Trumpeter swan: A review of the species status in Alberta is targeted for early 2014

Peregrine falcon: The provincial recovery plan is currently undergoing an update to incorporate new scientific findings, data and actions. Efforts in habitat management and population augmentation are ongoing.

Shortjaw cisco: The provincial recovery plan for this species has been updated and was approved for implementation in January 2014.

Northern leopard frog: Northern leopard frogs are known to occur north of Lake Athabasca. Provincially, efforts in habitat management and population augmentation are ongoing, and the success of the reintroduction program is currently being assessed.

Woodland caribou: Caribou conservation efforts are guided by The Alberta Woodland Caribou Recovery Plan 2004/05 - 2013/14, A Woodland Caribou Policy for Alberta, and Environment Canada's Recovery Strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada, 2012. The province has instituted a multi-faceted approach to improve conditions for caribou in Alberta, and the federal recovery strategy also sets out additional recovery requirements under the *Species at Risk Act* such as the development of action plans and range plans. Significant work on many of these requirements is currently underway through Alberta's existing policies and programs including habitat maintenance, habitat reclamation and restoration, mitigation of new developments, and wildlife management.

Grizzly bear are occasionally observed in the Lower Athabasca Region. An update to the 2008 recovery plan is currently underway and efforts in human-bear conflict, research, and public education will continue.

Information on general and detailed species status can be found at: <http://esrd.alberta.ca/fish-wildlife/default.aspx>.

¹⁷ For further information, refer to the Oil Sands Mine Regional Totals for Reclamation and Disturbance Tracking by Year Report: <http://environment.alberta.ca/apps/OSIPDL/Dataset/Details/27>.

¹⁸ Further information on air quality is available on the Alberta Environment and Sustainable Resources website: <http://environment.alberta.ca/03422.html>.

¹⁹ Further information on water quality is available on the Alberta Environment and Sustainable Resources website: <http://environment.alberta.ca/03422.html>.

²⁰ Source: Statistics Canada, Treasury Board and Finance. Prepared by: Demography Unit, Treasury Board and Finance. Date Prepared: February 26, 2014. Population Estimates based on adjusted 2011 Census

²¹ 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 region.

Further information on Alberta's oil sands projects and upgraders is available on the Alberta Energy website at: www.energy.alberta.ca/LandAccess/pdfs/OilSands_Projects.pdf.

²² Reflected as average two-bedroom rental and vacancy rates.

²³ Data for Bonnyville and Lac La Biche were sourced from the Government of Alberta's annual Apartment Vacancy and Rental Cost Survey (AVS). More information on the AVS can be found on the Government of Alberta Municipal Affairs website: www.municipalaffairs.alberta.ca/1740.cfm.

Data for Cold Lake and Wood Buffalo were sourced from the Canada Mortgage and Housing Corporation's (CMHC) Rental Market Survey (RMS). More information on the CMHC's RMS can be found on the CMHC website: www03.cmhc-schl.gc.ca/catalog/productDetail.cfm?lang=en&cat=59&itm=17&fr=1390841542835.

²⁴ This indicator reflects the area per capita of parks or designated open space for recreation (provincial).

²⁵ More information on the Alberta TrailNet Society can be found at: www.albertatrailnet.com/.