



## SOLVING the Puzzle

# Lower Athabasca Regional Plan (LARP) performance backgrounder

August 2012

## Are we moving toward responsible oilsands development?

Through the Land-use Framework process and the Lower Athabasca Regional Plan (LARP), the Government of Alberta has committed to setting cumulative environmental limits to inform oilsands development. In August 2012, the province released its final plan which recognizes that a cumulative effects management approach is required and that objectives must be set for environmental, social and economic outcomes.

In this backgrounder, the Pembina Institute assesses how the plan delivers on key issues of concern relating to water, air and land impacts. We've evaluated the final LARP against the solutions presented in our *Solving the Puzzle* report (released in 2011) noting three categories:

Substantial progress, Work in progress and Lack of progress.

## Substantial progress

### *Solving the Puzzle* recommendation

### Progress in Lower Athabasca Plan or other Government of Alberta initiatives

#### Protected areas

The Alberta Government should legislatively protect at least 50% of its public forest lands from industrial development. Protected areas should be developed and co-managed with Aboriginal peoples.

The Lower Athabasca Plan includes over 1.2 million hectares of new conservation areas and increases the percentage of the land in the Lower Athabasca area that is protected from industrial activity to over 20% of the region. Progress is needed to ensure that conservation areas continue to be established and co-managed in partnership with aboriginal communities.

#### Biodiversity Monitoring

Ensure full funding of the Alberta Biodiversity Monitoring Institute, either directly from government or through an equitable funding model that requires all natural resource developers who impact biodiversity to contribute as a mandatory component of the regulatory approval process.

The Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring was announced in 2012. This high-level plan outlines an ambitious monitoring and research initiative to be developed and deployed starting in 2012. The Oil Sands Monitoring Plan identifies the Alberta Biodiversity Monitoring Institute (ABMI) as the major delivery agent for wildlife and biodiversity monitoring. Industry has supported full funding of ABMI monitoring in the Athabasca region and the plan proposes full deployment of ABMI monitoring across the oilsands management region by 2015.

# Work in progress

## Solving the Puzzle recommendation

## Progress in Lower Athabasca Plan or other Government of Alberta initiatives

### Disturbance limits

Land use plans should mandate that no more than 5% of any Alberta planning region is available to oilsands development at any time.

A land disturbance plan has not been developed for the LARP. The LARP plan states that: "A regional landscape management plan will also be developed for the public land in the Green Area by the end of 2013 to support achieving the economic outcomes and objectives defined in the plan, while addressing biodiversity through a well co-ordinated, planned and managed land disturbance footprint. Essential to this approach is the use of ILM by industrial operators, and introduction of land disturbance standards (such as limits and triggers)."

### Low Flow Limit for the Athabasca River

Alberta Environment should complete a water management plan that identifies a science-based Ecosystem Base Flow (EBF) for the lower Athabasca River, as a low-flow threshold below which all water withdrawals would cease. The EBF should be legally enforceable and all water permits issued by the Alberta Government at any one time should be accountable to meet that EBF. In the interim, the low-flow threshold for the lower Athabasca River should be at least 100 m<sup>3</sup>/s.

The LARP states that "The Government of Alberta is committed to completing an update of the phase 1 Water Management Framework for the Lower Athabasca River."

Stakeholders expect that when the water management framework is updated it will include a legally binding Ecological Base Flow (EBF), below which water withdrawals will be prohibited.

### Groundwater protection

Ensure enforceable regulations are in place to protect non-saline groundwater resources by updating and implementing existing guidelines and definitions. To protect more of our finite water resources, the Alberta government should expand its definition of regulated groundwater from the current level of water containing less than 4,000 mg/l of total dissolved solids (or TDS, a measurement of mineral, salt and metal content) to include water with up to 10,000 mg/l TDS.

Interim regional groundwater quality limits have been identified in the Lower Athabasca Regional Plan. LARP states that:

"...a management response will not be a mandatory requirement of the regional plan until there is better understanding of the current state of groundwater in the region and final triggers and limits have been established."

The definition of regulated groundwater has not been expanded to include water with up to 10,000 mg/l of total dissolved solids.

### Tailings

New mines should not be approved until the operation adopts a proven technology that eliminates the creation of wet tailings. In the interim, all current mines must be required to conform to the new tailings rules.

While a new tailings management framework for mineable oilsands operations is ongoing (formerly promised for the end of 2012), it is uncertain if new mines will continue to be approved using traditional wet tailings technologies. The framework "could include a regional limit for fluid fine tailings and will focus on the development and implementation of new technologies over the next 10 years." This limit should be binding and enforceable. Directive 074 should be enforced to ensure it is delivering on its intent to reduce future tailings production.

### Air pollution limits

Establish air emission limits to achieve the World Health Organization's Air Quality Guidelines to protect air quality and human health. Implement a progressive, multi-tiered system that requires varying degrees of action to prevent degradation of ambient air.

The Alberta Government strengthened the Ambient Air Quality Objective for nitrogen dioxide, bringing the new limit much closer to the World Health Organization's guideline.

In addition, the LARP includes new management actions triggered at levels below the Alberta limit for nitrogen dioxide and sulphur dioxide. The management actions should help reduce emissions and avoid situations where the limit is exceeded in the LARP region.

## Work in progress

### *Solving the Puzzle* recommendation

### Progress in Lower Athabasca Plan or other Government of Alberta initiatives

#### **Technology to prevent air pollution**

Require oilsands operations to use equipment with the lowest achievable emissions or to deploy best-available technology for air emissions reductions.

The Air Quality Management Framework includes four levels of management actions. Only Level 4 (the highest level approaching the limit) requires such options as “more stringent performance standards” and “approval conditions or restrictions”.

Opportunities exist for the deployment of best available emissions technologies as a standard practice.

#### **Air monitoring**

Expand air monitoring to meet scientific needs. Monitoring design should be developed through a consensus-based approach with full stakeholder input, and with government implementing final decisions.

Environment Canada and the Government of Alberta have jointly begun to implement an improved air monitoring system. To date this has included some expansion of monitoring activities and satellite analysis of air emissions.

At this time, it remains unclear how the existing network of continuous air monitoring stations will be evaluated and fully expanded. Appropriate governance of air monitoring programs has also not been established.

#### **Groundwater monitoring**

Make a long-term commitment to fund a regional monitoring network to monitor and assess trends in groundwater levels and groundwater quality indicators.

Some limited progress on new groundwater monitoring stations for tailings lakes and the establishment of a regional groundwater monitoring network is proposed in the plan. However, a long-term commitment to fund a regional monitoring network has not yet been made.

## Lack of progress

### *Solving the Puzzle* recommendation

### Progress in Lower Athabasca Plan or other Government of Alberta initiatives

#### **Wetland policy and conservation/biodiversity offsets**

Require establishment of biodiversity offsets for all oilsands development to offset impacts to all habitat types. To ensure a net positive environmental benefit and address existing cumulative effects, offsets should be established with a 3:1 offset ratio — three hectares of land should be conserved or restored for every hectare of new disturbance that occurs within the Boreal Forest Natural Region.

While the LARP’s Regional Advisory Council recommended the Lower Athabasca Regional Plan include offsets and market-based instruments to conserve biodiversity, these elements do not appear in the Lower Athabasca Regional Plan. The plan notes that a Biodiversity Management Framework will be complete by the end of 2013 and only notes that conservation offsets are one possible policy instrument to consider in the management of public lands in the region’s Green Area.

*Responsible Actions*, Alberta’s previous oilsands plan, had the objective of implementing a conservation offset strategy in the oilsands by 2012.

Alberta is many years overdue in implementing a wetland policy to compensate for loss of wetland habitats from oilsands development.

#### **Reclamation liability**

Develop a new, transparent and risk-averse mine security program that ensures the Alberta government collects financial security equivalent to the total liabilities created by oilsands extraction.

The LARP reiterates commitment to the problematic asset-to-liability approach to collecting reclamation security from oilsands mining companies. This approach is not appropriate and places taxpayers at undue risk should the oilsands industry cease to be competitive.

# Lack of progress

## *Solving the Puzzle* recommendation

## Progress in Lower Athabasca Plan or other Government of Alberta initiatives

### Woodland caribou

Follow the recommendations of the Alberta Caribou Committee and demonstrate that all caribou ranges in Alberta meet science-based objectives to maintain caribou populations through a combination of establishing protected areas, setting thresholds on maximum levels of development in caribou habitat, and establishing biodiversity offsets in caribou habitat.

Although the establishment of new conservation areas is a step forward, the LARP has not adequately addressed caribou conservation needs in the Lower Athabasca Region. Woodland caribou continue to decline in northeastern Alberta and emergency measures have not been identified to conserve and manage remaining critical habitat.

### Groundwater withdrawals

Measure and map the quantity and quality of groundwater and surface/groundwater interactions, to determine both the short and long-term sustainable yield of non-saline groundwater in the Lower Athabasca's groundwater management areas. Set legal requirements to implement and enforce the sustainable yield of groundwater.

The Lower Athabasca Regional Plan Groundwater Management Framework will not be completed and implemented until 2014. The plan does not identify a limit on licensing for regional withdrawals of groundwater. LARP does identify an indicator for groundwater withdrawals (change in groundwater surface elevation) but notes that it is "not yet established." While data may be deficient, no interim regional limits or triggers are identified in the LARP.

### End pit lakes

Mine applications that propose the storage of tailings under end pit lakes as their reclamation strategy should not be approved. Existing operations with approved end pit lake plans should be modified to eliminate the need for end pit lakes as long-term storage sites for toxic tailings waste.

No mention of end pit lakes – also referred to as the water capping of fine tails – in the LARP. Mine operators continue to submit reclamation plans that include covering toxic tailings waste with water even though the use of oilsands end pit lakes has never been proven successful as a reclamation approach for tailings.

### Surface water monitoring

Disband the Regional Aquatics Monitoring Program and replace it with a comprehensive, scientifically robust monitoring system that is adequately resourced and free of industry influence.

The Government of Alberta has introduced the Oil Sands Information Portal, a web-based tool that provides public access to oilsands water data and other key environmental indicators. This tool has increased the public transparency and oilsands data accessibility. However, LARP still relies on RAMP, and governance of the water monitoring system remains unaddressed.

## Want More Information?

Read the Pembina Institute's report *Solving the Puzzle: Environmental responsibility in oilsands development* to learn more about our recommendations. Download the report at: [www.pembina.org](http://www.pembina.org)