

May 4, 2011

Mr. Morris Seiferling  
Land Use Secretariat – Alberta Sustainable Resource Development  
9th Floor, Centre West Building  
10035 – 108 Street  
Edmonton, AB  
T5J 3E1

**Re: Pembina Institute’s input into the Phase 3 consultations on the Lower Athabasca Integrated Regional Plan**

Dear Mr. Seiferling,

Please consider this letter as feedback from the Pembina Institute on the draft Lower Athabasca Integrated Regional Plan (LAIRP). We appreciate the recent sessions hosted by Alberta Environment and Alberta Sustainable Resource Development that enabled us to discuss the draft components of the plan. Pembina has been an active participant in Alberta’s Land Use Framework process and looks forward to ongoing work with the Government of Alberta to achieve a world-class land use plan.

While the draft LAIRP represents an improvement over the status quo, including management framework development and increased proposed conservation area designation, we believe that it can be further strengthened in order to a) achieve improved environmental outcomes and b) garner broader stakeholder support for the final plan.

Last week the Pembina Institute released a new report: *Solving the puzzle: environmental responsibility in oilsands development*.<sup>1</sup> This report advances 19 recommendations on how to improve environmental management in the oilsands. Many of these recommendations are valid for the LAIRP plan. Below, we reiterate the report’s recommendations as well as make other specific suggestions to improve the LAIRP.

**Land management**

While the proposed new protected areas are an improvement over the current amount of land in the region under conservation designation, we are concerned that the draft plan limits the potential for the province to achieve the regional outcome, “Landscapes are managed to maintain ecosystem

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<sup>1</sup> <http://pubs.pembina.org/reports/solving-puzzle-oilsands.pdf>

<sup>2</sup> Dillon, Peter, George Dixon, Charles Driscoll, John Giesy, Stuart Hurlbert, and Jerome Nriagu. 2011. Water Monitoring Data Review Committee Report. <http://environment.alberta.ca/03380.html>



function and biodiversity.” With respect to the proposed conservation areas, the draft fails to meet the plan’s own Regional Advisory Council recommendations to conserve upwards of 32% of the region. In addition, it is our understanding that up to 85% of the area of new protected areas (not including areas that allow ecosystem forestry) are located in areas with no oil and gas, oilsands or commercial forestry potential. Conservation areas should be designated and informed by science not existing mineral lease maps.

There are also several gaps in the strategic plan, notably the tailings management framework, the biodiversity management framework and the setting of a regional disturbance limit. The draft LAIRP document does little to address caribou habitat needs and the proposed protected areas identified in the LAIRP plan cover only 11% of the caribou range in the Lower Athabasca Region, substantially less than would be required to stabilize caribou population declines. As proposed, development of existing oil and gas leases would be allowed in all of these areas.

The creation of a new form of conservation areas managed by SRD that will allow access to forestry in pristine forests will create unnecessary complexity and conflict. We see no evidence that there is a need for a new form of land designation and the current wood supply impacts of the current plan are extremely modest.

Furthermore, Environmentally Significant Areas (ESA’s) are largely not protected under this draft plan despite the recent effort to update the ESAs in 2009. The updated ESA analysis was specifically carried out to highlight areas that should be given closer scrutiny by land managers and stakeholders during the land-use planning process and yet there is no mention of critical sites such as McClelland Lake Fen and the Athabasca River Valley in the draft plan.

Finally, wetland protection and biodiversity offsets are absent from the draft plan despite advice from the Regional Advisory Council to the Government of Alberta that the LAIRP should “Implement Alberta’s new wetland policy once it is developed” and “Develop and implement land-use offsets for industrial development”.

The Pembina Institute submits the following recommendations to strengthen the land and biodiversity components of the draft plan:

- Consider increasing the amount of proposed conservation areas in line with the recommendations of the Regional Advisory Council;
- Consider changing the proposed Ecosystem Forestry Conservation areas into Wildland Parks managed by Alberta TPR;
- For the Boreal Forest as a whole, 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;

- 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;
- Include a regional disturbance limit that mandates that no more than 5% of the region is available to oilsands development at any time;
- 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.

## **Water Management**

We support the goals of the surface water quality framework in that it strives to identify ambient triggers and limits to protect surface water quality, address cumulative effects and support proactive management strategies. However, we believe that basing water quality triggers and limits for the entire Lower Athabasca region on one monitoring station (Old Fort) is unnecessarily risk-tolerant. More monitoring stations are required to acquire a comprehensive understanding of impacts on water quality. In addition, it is unclear how government’s “mandatory management actions” will address changes in aquatic ecosystems or elevations of concentrations of contaminants.

The framework excludes polycyclic aromatic hydrocarbons (PAH) and naphthenic acids (NA) – important indicators of concern given their toxicity and potential for natural and industrial loading to the lower Athabasca River. The exclusion of these hydrocarbon indicators is inconsistent with the advice and recommendations of the province’s own Water Monitoring Data Review Committee Report.<sup>2</sup> The Committee Report notes general agreement with the conclusion of Kelly et al. that polycyclic aromatic hydrocarbons and trace metals are being introduced into the environment by oilsands operations and that this work has been important in pointing out deficiencies in current monitoring programs in the oilsands area.

The surface water quality framework references the Regional Aquatics Monitoring Program (RAMP). It is Pembina’s understanding that RAMP data will be used as supporting information despite considerable criticism about the quality and integrity of the program’s data. While we understand that a new monitoring system is being developed under the purview the Alberta Environmental Monitoring Panel, reference to RAMP puts the LAIRP’s integrity and credibility into

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<sup>2</sup> Dillon, Peter, George Dixon, Charles Driscoll, John Giesy, Stuart Hurlbert, and Jerome Nriagu. 2011. Water Monitoring Data Review Committee Report. <http://environment.alberta.ca/03380.html>

question. Pembina has recommended that RAMP be disbanded and replaced with a comprehensive, scientifically robust monitoring system that is adequately resourced and free of industry influence.

The draft plan notes “the Alberta government is committed to updating the surface water quantity management framework for the Lower Athabasca River by 2012.” It does not commit to the setting of an Ecosystem Base Flow (EBF), a flow target below which no withdrawals are permitted. An EBF needs to be in place to ensure that there are no increases in the frequency and duration of very low flows that can affect habitat availability, food production and water quality.

The Pembina Institute submits the following recommendations to strengthen the water quantity and quality components of the plan:

- Include a placeholder for PAHs and NAs to ensure that management responses are in place as more information on these compounds is gathered;
- Omit references to RAMP; Alberta Environment should not use RAMP data as supporting information;
- Alberta Environment should complete a water management plan that identifies a science-based 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.

Pembina supports the objective of the Groundwater Management Framework for the Lower Athabasca Region: “Groundwater quality is protected from contamination by maintaining conditions within the range of natural variability and not exceeding established limits.” However, we are concerned that fulfillment of this objective will be limited by the draft LAIRP’s exclusion of groundwater having a mineralization of 4,000 mg/l of total dissolved solids (TDS) or greater.

We make the following recommendation to strengthen the Groundwater Management Framework:

- 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 TDS to include water with up to 10,000 mg/l TDS.

## **Air Management**

The Pembina Institute would like to acknowledge that the LAIRP air quality management framework introduces some improvements to the current management of air quality in the region. The framework specifies that exceedances of AAAQOs will continue to be managed in the same way, externally and independent from the LAIRP process. New triggers for short-term air quality management are presented in the draft LAIRP that would serve as an additional tool to the existing air quality objectives.

In addition, the LAIRP air quality management framework states that it intends to incorporate any changes to the AAAQOs, using any improved air quality objectives as the limit for the annual triggers. The draft plan includes limits based on proposed updates to the AAAQO for NO<sub>2</sub> annual and hourly averages. This update to the AAAQO represents a considerable improvement compared with the current values and a positive step towards the health guidelines recommended by the World Health Organization.

The Pembina Institute is encouraged that the draft air quality management framework identifies potential limits for NO<sub>2</sub> and SO<sub>2</sub> and proposes strengthening the current ambient air quality objectives for these pollutants. However, the draft LAIRP does not propose new management frameworks for other pollutants such as VOCs, PAHs and particulate matter. While the air quality management framework identifies four “trigger” levels for managing air emissions, the management actions proposed are relatively weak until Level 4 is reached.

While the framework acknowledges a Provincial Policy Intent that includes principles of “pollution prevention, emission minimization through best management and control practices, continuous improvement and keeping clean areas clean,” the regional objective as stated is merely to avoid “unacceptable air quality.” The criteria “unacceptable air quality” is highly subjective and could have a significantly different meaning for different stakeholders; it appears that the framework does not strive for good, healthy, or improving air quality.

The Pembina Institute makes the following recommendations to strengthen the draft LAIRP:

- Establish air emission limits to achieve the World Health Organization’s Air Quality Guidelines to protect air quality and human health;
- Redefine the regional objective to maintain and improve air quality in the Lower Athabasca Region to levels below WHO health guidelines;
- Incorporate all management actions from level 4 (Table 7) in level 3 as possible actions that can be used if necessary to prevent air quality from reaching a level 4.

In conclusion, thank you for providing the opportunity to provide input on the draft LAIRP. We look forward to ongoing discussions on this topic. The Pembina Institute strongly urges the Government of Alberta to commission an independent science panel to publicly review the draft Lower Athabasca Integrated Regional Plan prior to its finalization. The draft plan would greatly benefit from an independent science panel to peer review how the plan's thresholds were developed and to ensure the limits and land use zones identified in the plan will achieve their stated outcomes.

As the government has done with regards to oilsands environmental monitoring, the establishment of such a panel would bring increased credibility and public confidence to the plan, both amongst Albertans and other interested observers in Canada and abroad. We recommend the panel should be constituted of international science experts in the fields of air and water management, conservation biology and land management, and Traditional Ecological Knowledge experts from impacted First Nations. No industry or ENGO participants should be included on the panel. Should you require further information on our perspectives, please feel free to contact me.

Yours sincerely,

A handwritten signature in grey ink that reads "Jennifer Grant". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

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