

# A Response to the Mineable Oil Sands Strategy

Canadian Parks and Wilderness  
Society, Edmonton Chapter

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## Introduction

Alberta is a resource-rich province and, without a doubt, Albertans value the economic benefits they accrue from the development of these resources. But Albertans also value their environment. Consequently, public support for industrial development comes with an expectation that the health and integrity of the environment will be maintained, for this and future generations.

The government has made various policy commitments over the years with respect to sustainable forest management and the maintenance of biodiversity (e.g., Alberta's Forest Legacy — Implementation Framework for Sustainable Forest Management, 1998; Alberta's Commitment to Sustainable Resource and Environmental Management, 1999). However, as the price of oil has increased in recent years it has become increasingly clear that a framework for balancing economic and ecological objectives does not actually exist. Higher prices for oil, accompanied by advances in recovery techniques, have simply translated into higher levels of development, pushing ecological objectives off to the margins. The Mineable Oil Sands Strategy (MOSS) represents the culmination of this trend, wherein forest health is removed from the equation entirely.

The time has come for a new vision and new approach to forest management. Now that the provincial debt has been paid off, and treasury coffers are bursting, it makes no sense to continue the blind pursuit of additional wealth at the expense of the environment (indeed if it ever did). In this paper we present recommendations for changes to MOSS that would provide a more appropriate balance between ecological and economic objectives.

## Overview

This document builds upon the *Declaration by Environmental Groups on the Canadian Oil Sands* (Appendix 1), which we are a signatory to. We focus here our specific area of interest and expertise: wildlife and wilderness. Our recommendations flow from the specific objective of maintaining biodiversity in the face of petroleum development in the mineable oil sands region.

To its credit, MOSS makes no attempt to hide the fact that mining of oil sands is fundamentally incompatible with maintaining forest health. The critical flaw in the strategy is that it contains no provisions for offsetting the ecological damage that will be done. Instead, it makes the untenable assumption that the damage will be temporary. This is unacceptable because it is patently false and effectively passes an environmental debt on to future generations (see Box 1).

The fact is that oil sands mining will produce the equivalent of a glaciation event across nearly 3,000 km<sup>2</sup> of Alberta's boreal forest. It will be several hundred years before anything resembling the existing forest ecosystem is again found in this area. If it is economically necessary for the mining to proceed, then conservation offset measures

**Box 1. Why reclamation is not a solution to oil sands mining.**

- Peatlands and other wetlands are a prominent feature of the oil sands region. However, after mining, the landscape will be predominately made up of upland areas and artificial lakes. Peatlands will largely be lost.
- Forest ecosystems are highly complex, and we have only a limited understanding of their structure and function. It is naïve to expect that such ecosystems can be recreated by reassembling a few select pieces after the mine pits are filled in. Perhaps we can get the process started, but nature will have to do most of the heavy lifting, and that will take time — hundreds of years.
- There are significant reasons to doubt whether it will even be possible to establish simple tree plantations. For example, coarse tailings may prove to be an unstable base and elevated pH levels and salt in the soil may retard growth. Tellingly, professional foresters have expressed doubt about the prospects for success.
- Various hydrological issues remain unresolved, including: finding a long-term solution to the issue of fine tailings; the leaching of toxins into water; disruption of normal water flows; and erosion.
- If reclamation will take hundreds of years to achieve, this begs the question: who will pay and who will be accountable? Experience from the mining sector elsewhere in Canada suggests that Albertans should be very concerned about the possibility that companies may refuse to honor reclamation responsibilities that carry on long after the money stops flowing in.

will need to be implemented locally and regionally to achieve the balance between ecological and economic objectives desired by Albertans. These offset measures should be formally incorporated into a new version of MOSS. Efforts should also be made to find alternative approaches to oil recovery that are less environmentally disruptive than mining (e.g., electrical heating). Finally, royalty rates should be increased to slow the rate of development (and environmental damage) while simultaneously increasing economic returns to Albertans.

## **Protected Areas**

A key component of the required conservation offset measures is the establishment of a system of protected areas. Sites should be selected to fill critical gaps in Alberta's existing system of protected areas, focusing on the Boreal Natural Region (in which the oil sands lie).

Although protection within the mineable oil sands area itself will be difficult, there are two ecological features in this area that are so ecologically valuable and irreplaceable that protection is the only option. These two sites are the Athabasca River corridor and the McClelland Lake Wetland Complex. We recommend mining operations be prohibited

within 5 km of the Athabasca river, and that the entire McClelland fen watershed be permanently protected from industrial development.

In the broader Athabasca oil sands region there are two candidates for protection with high ecological value and minimal conflict with petroleum resources. The first is the Gipsy-Gordon site, building on the existing Gipsy Lake Wildland Park. The second is the Athabasca Rapids site, on the Athabasca River immediately west of Fort McMurray. Neither of these sites has geological formations favourable for oil recovery, as evidenced by the absence of mineral leases. This makes them obvious candidates for protection under a petroleum sector offset strategy. Al-Pac, the major forestry company in the area, has already agreed to support legislated protection in these areas under its ecological benchmark program. If the energy sector was to add its support, protection could easily be accomplished in the near term.

The conservation offset strategy must also ensure that connectivity between protected areas in the oil sands region (new and existing) is maintained. The key issue is the barrier to animal movement resulting from mining operations within the mineable oil sands zone. Even the Athabasca River will have limited utility because the Syncrude and Suncor operations alongside the river effectively block movement. We propose that two corridors be developed that run along either side of the mineable oil sands region, connecting the proposed Athabasca Rapids and Gipsy-Gordon sites with the existing Birch Mountains and Marguerite River Wildland Parks, respectively, and on up to Wood Buffalo National Park. Industrial activities in the corridors would be permitted, but under strict guidelines that ensure habitat quality is maintained and barriers to movement do not occur.

Additional priorities for protection exist within Alberta's Boreal Natural Region that should be addressed as part of the petroleum sector offset strategy. These include Forest Management Unit P8 and adjacent lands in the Chinchaga region (most of which is already a wildlife zone where forestry is prohibited), the Cold Lake Air Weapons Range, and the Lakeland region. Consideration should also be given to long-standing candidate protected areas along the Rocky Mountain Eastern Slopes. All of these sites contain petroleum reserves; however, in contrast to the oil sands, the reserve life of these conventional deposits is very short. Following the model that was used in the Hay Zama area, protected areas could be established in which petroleum reserves continue to be recovered over a specified period of time, under very strict ecological parameters, after which no further industrial development is permitted (i.e., a sunset clause).

Maps and detailed information concerning the proposed protected areas are presented in Appendix 2.

## **Industrial Practices**

Given that the scope for establishing protected areas is quite limited, it will be necessary to also apply conservation offset measures to industrial practices. Simply put, the devastating ecological impact of mining across such a huge expanse of forest must be

offset by a substantial reduction in industrial impacts regionally and provincially. To be clear, the implementation of such offset measures does not diminish the need to undertake reclamation efforts or to meet environmental standards for the protection of air and water resources in the mineable oil sands region.

The key to reducing ecological impacts regionally is to integrate the activities of all industrial operators under the guiding framework of ecological forest management, as described in the *Alberta Forest Conservation Strategy*. The implementation of ecological forest management requires a long-term regional plan. The template for such a plan, including appropriate management objectives, indicators, and performance targets, is embodied in the new *Alberta Forest Management Planning Standard*. Al-Pac, the major forestry company in the oil sands region, recently developed a management plan that is consistent with the *Forest Management Planning Standard* and it represents a good starting point.

A critical problem is that the activities of the petroleum sector were excluded from the *Forest Management Planning Standard* and they have yet to be incorporated into any form of integrated regional planning framework. Studies at the University of Alberta suggest that the cumulative impact of overlapping industrial operations in the broader oil sands area is already causing a decline in various species, and over the longer term species will be lost unless changes are made.

We recommend that, as a conservation offset measure under MOSS, petroleum companies be required to undertake joint planning with forestry companies within the context of an integrated management plan modeled on the *Alberta Forest Management Planning Standard*. A key challenge for the petroleum sector, in the context of achieving regional ecological outcome measures, will be limiting the projected increase in its disturbance footprint. Ecological tipping points are already being reached in many parts of the oil sands region; therefore, the objective going forward must be no net increase in the cumulative disturbance footprint. This can be achieved through the application and further refinement of a suite of petroleum “best practices”, including:

- reduce the amount of new disturbance through integration with the forestry sector and reuse of existing disturbances;
- reduce the amount of new disturbance through new ultra-low impact techniques (e.g., seismic less than 1.5m, which is not ecologically perceptible, and hence does not add to the footprint);
- find alternative technologies to mining and SAG-D that are of lower environmental impact (e.g., electrical heating); and
- rapid reclamation of existing and new disturbances back to forest.

## Appendix 1. Managing oil sands development for the long term: A declaration by Canada's environmental community

November 29, 2005

Given that:

- the pace of oil sands development has far exceeded all original expectations, has exceeded one million barrels per day and is projected to continue to grow to five–six million barrels per day by 2030;<sup>1,2</sup>
- the production of synthetic crude oil from the oil sands is being driven by demand for transportation fuels that are being used by an inefficient fleet of North American vehicles;<sup>3</sup>
- the oil sands industry is linked to both upstream (e.g., increased demand for new natural gas production) and downstream (e.g., refineries and air pollution from end-use) environmental impacts;
- the oil sands industry has successfully attracted international investment attention, is profitable at oil prices above US\$25 per barrel and also receives significant federal and provincial subsidies including a favourable royalty and tax regime;<sup>4</sup>
- the pace and scale of oil sands development is outstripping the ability of the federal and provincial governments to protect the regional, national and global environment and climate; and
- the federal and provincial governments have made various commitments to sustainable development, maintenance of biodiversity and taking action to combat climate change, and have the opportunity to become leaders in sustainable energy.

The undersigned environmental organizations, on behalf of the environment and future generations, agree that the “license to operate” in the oil sands should be conditional, with any further development of the oil sands resource satisfying the following three conditions:

First, that a regulatory and policy regime be implemented for making the **transition to a sustainable energy economy** in Canada through the implementation of a long-term national energy framework that positions Canada at the vanguard of a new climate-friendly energy system. A significant first step to addressing the demand for synthetic crude oil, which is predominantly used for transportation fuel in both Canada and the United States, can be achieved through legally binding **automobile fuel efficiency standards** that ensure more responsible and efficient consumption of this valuable and non-renewable energy resource.

Second, that this transition be underwritten by a fiscal regime that ensures **genuine and sustainable prosperity** beyond the exploitation of the oil sands. Central to achieving this condition is the **elimination of subsidies to the oil sands industry**, implementation of tax and royalty regimes that **maximize the wealth of citizens**, and utilization of this resource wealth to **rapidly increase the Canadian economy's energy efficiency and the deployment of low-impact renewable energy**. Further, current and future generations must be **protected from potential future liabilities** by requiring full-cost bonding of oil sands operations.

Third, that a regulatory and policy regime be implemented that **assures the maintenance of environmental integrity**. This will require that existing and new oil sands operations are **carbon neutral (zero net greenhouse gas emissions) by 2020** through a combination of on-site emission reductions and genuine emissions offsets. In addition, this will require the legal establishment of an ecologically representative **interconnected network of protected areas and corridors**, prescribed **precautionary limits** for water use and release, criteria air contaminants, watershed integrity and wildlife habitat, and a **binding regional integrated management plan** that maintains biodiversity and ensures the resilience of endangered species populations. Additionally a fundamental principle must be to prevent exposing current and future generations to potential catastrophic **environmental or human health risks**.

These conditions can be implemented without significant macroeconomic impacts through innovation and strong leadership. Only through the satisfaction of these conditions do we believe that Canada will be in a position to develop this energy resource in a responsible manner that will create a positive legacy for current and future generations.

As signatories to this declaration, we will work together and with proactive companies and governments to help ensure these minimum conditions are met for the responsible development of Canada's oil sands.

**Additional Context:**

- In 1995, the federal and provincial governments and the oil sands industry laid out a 25-year strategy that envisioned tar sands production doubling or tripling to reach between 800,000 and 1.2 million barrels per day by 2020. Between 1995 and 2004 oil sands production more than doubled to approximately 1.1 million barrels per day— 16 years ahead of the anticipated timeline.<sup>5,6</sup>
- The average fleet fuel efficiency of North America's personal vehicles in 2005 is 11.2 liters per 100 km. The peak average fuel efficiency in North America, 10.7 litres per 100 km, occurred in 1986 before automakers began selling large volumes of sport utility vehicles (SUVs). Today, the average fleet fuel efficiency is the same as it was in 1981.<sup>7</sup>
- The oil sand resource is located in the Canada's boreal forest ecosystem, one of the largest remaining intact forests in the world, underlying 149,000 square kilometres of forest and wetlands.<sup>8</sup>
- Atmospheric greenhouse gas concentrations need to be limited to 400 parts per million by volume (ppmv) carbon dioxide equivalent, requiring emission reductions by industrialized countries of at least 80 percent below 1990 levels by 2050 to prevent dangerous climate change.<sup>9</sup>
- Greenhouse gas emissions from oil sands development will be growing rapidly over a period of time in which significant reductions in global emissions of greenhouse gases are necessary.<sup>10</sup>

### **Detailed Conditions and Recommendations:**

1. Implementation of strategies and laws outlining a “transition to a sustainable energy economy” that include:
  - a) The development and implementation of a national energy framework with a focus on energy efficiency, energy conservation, renewable energy and conventional energy in collaboration with the provinces, First Nations and Métis, industry and non-governmental organizations (NGOs).
  - b) A Sustainable Energy Heritage Fund to advance the development and deployment of energy conservation, efficiency and low impact renewable energy technologies.
  - c) The phase-in of legally binding, Canada-wide fleet fuel efficiency standard with targets to 2020 that are aligned with national targets for reducing greenhouse gas emissions.
  - d) An international role in advocating for the responsible and efficient consumption of Canada’s energy exports.
  
2. Implementation of a fiscal regime (tax and royalty structure) that ensures “genuine prosperity beyond the life of oil sands” by:
  - a) Phasing out all current subsidies to the oil sands that provide an advantage relative to a neutral tax system.
  - b) Putting in place a royalty structure that maximizes the wealth of the citizens who own this non-renewable resource.
  - c) Implementing a fiscal regime that utilizes the financial wealth and engineering knowledge generated by the oil sands to drive the transition to a sustainable energy economy. The goals of this fiscal regime are to rapidly increase the Canadian economy’s energy efficiency and the deployment of low-impact renewable energy.
  - d) Ensuring that all potential future liabilities are borne by the oil sands industry. Central to this, but not limited to, are oil sands reclamation bonds that realistically reflect the full costs of reclaiming the landscape back to original wildlands and wetlands, to ensure future generations and taxpayers don’t bear the costs.
  
3. Implementation of an “environmental integrity assurance” regulatory and policy regime that:
  - a) Achieves carbon neutral (no net greenhouse gas emissions) oil sands operations by 2020 for all existing and new operations through a combination of on-site reductions and genuine emission offsets, backed by legislated requirements. Beginning immediately, this commitment should be a legally binding condition of any approvals for new or expanded operations and renewal of operating licences for existing facilities.
  - b) Legally establishes an interconnected network of protected areas and corridors by protecting areas of intact, high conservation value boreal

forest that is representative of the region and sustains ecological integrity.

- c) Prescribes precautionary standards for water use and release, criteria air contaminants, watershed integrity and wildlife habitat.
- d) Requires a binding regional integrated management plan that maintains biodiversity, restricts cumulative effects, and ensures resilience of endangered species populations.
- e) Clearly defines environmental performance standards for use in regulatory decisions, with a review and update every three years.
- f) Does not expose current and/or future generations to potential catastrophic environmental or human health risks.

### Signatories:

Canadian Parks and Wilderness Society  
David Suzuki Foundation  
Greenpeace Canada  
Pembina Institute  
Prairie Acid Rain Coalition  
Sierra Club of Canada  
West Coast Environmental Law  
World Wildlife Fund Canada

### References:

<sup>1</sup>National Oil Sands Task Force, *The Oil Sands: A New Energy Vision for Canada* (1995), p.33.

<sup>2</sup>Alberta Energy and Utilities Board., “ST98-2004 – Graphs and Data – Section 2 Crude Bitumen”(2004), <http://www.eub.gov.ab.ca/bbs/products/STs/st98-2004-data-2-bitumen.ppt>; Source of 2004 data: Alberta Energy and Utilities Board, Alberta’s

Reserves 2004 and Supply/Demand Outlook/Overview (2005), Statistical Series (ST) 2005-98, p.2-2.

<sup>3</sup>The average fleet fuel efficiency of North America’s personal vehicles in 2005 is 11.2 liters per 100km. The peak average fuel efficiency in North America, 10.7 litres per 100 km, occurred in 1986 before automakers began selling large volumes of sport utility vehicles. Today, the average fleet fuel efficiency is the same as it was in 1981. Source: Richard Heavenrich , *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2005* (U.S. Environmental Protection Agency, 2005), <http://www.epa.gov/otaq/fetrends.htm>. Average specific consumption of vehicles in the European Union in 2003: ODYSSEE Energy Efficiency Indicators in Europe, <http://www.odyssee-indicators.org/>.

<sup>4</sup>Foster Natural Gas Report, Outlook for oil sands production in Canada factors in significant demand for natural gas (March 11, 2004) citing a study released March 3, 2004 by the Canadian Energy Research Institute entitled *Oil Sands Supply Outlook: Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada, 2003-2017*.

<sup>5</sup>National Oil Sands Task Force. 1995. *The Oil Sands: A New Energy Vision for Canada*. p.33.

<sup>6</sup>Alberta Energy and Utilities Board. 2004. ST98-2004 – Graphs and Data – Section 2 Crude Bitumen. <http://www.eub.gov.ab.ca/bbs/products/STs/st98-2004-data-2-bitumen.ppt>; Source of 2004 data: Alberta Energy and Utilities Board. 2005. *Alberta’s Reserves 2004 and Supply/Demand Outlook/Overview*. Statistical Series (ST) 2005-98, p.2-2.

<sup>7</sup>Source: Heavenrich , Richard. 2005. *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2005*. U.S. Environmental Protection Agency. <http://www.epa.gov/otaq/fetrends.htm>. Average specific consumption of vehicles in the European Union in 2003: ODYSSEE Energy Efficiency Indicators in Europe. <http://www.odyssee-indicators.org/>

<sup>8</sup>Data was taken from Table 2.3 and converted from hectares to square kilometres. Source: Alberta Energy and Utilities Board. 2005. *Alberta’s Reserves 2004 and Supply/Demand Outlook/Overview*. Statistical Series (ST) 2005-98, p.2-7.

<sup>9</sup>Source: Bramley, Matthew. 2005. *The case for deep reductions: Canada’s role in preventing dangerous climate change*. The David Suzuki Foundation and the Pembina Institute [http://www.pembina.org/pdf/publications/Case\\_Deep\\_R\\_E.pdf](http://www.pembina.org/pdf/publications/Case_Deep_R_E.pdf)

<sup>10</sup>Source: Woynillowicz, Dan, Severson-Baker, Chris, Reynolds, Marlo. 2005. *Oil Sands Fever: The environmental implications of Canada’s oil sands rush*. The Pembina Institute. <http://www.oilsandswatch.org/pubs-osf-book.php>

**Appendix 2. Description of candidate protected areas proposed as conservation offsets to proposed oil sands development.**

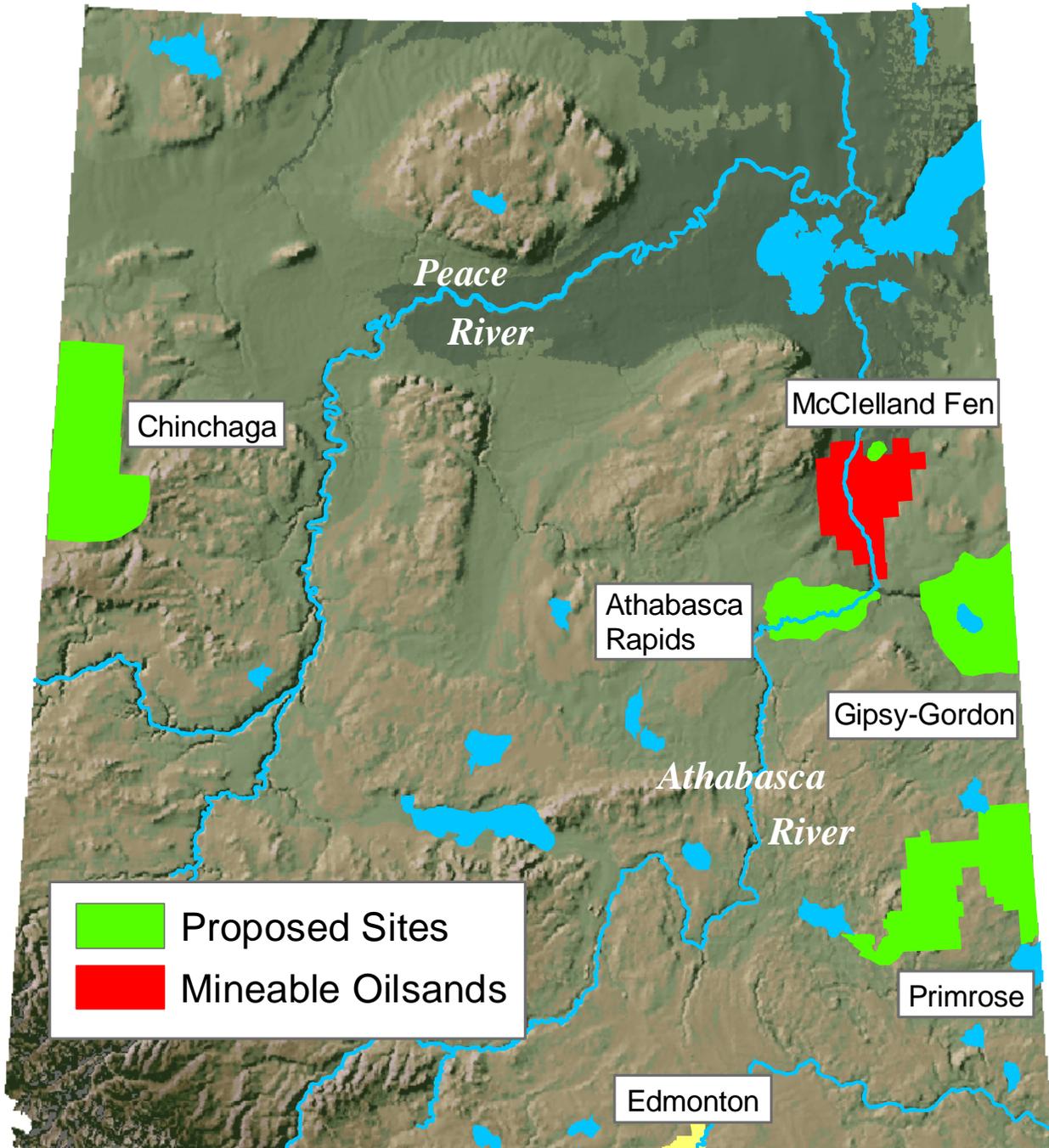


Fig. 1. Location of candidate protected areas in northern Alberta in relation to the mineable oil sands region.

### 1. Gipsy-Gordon

The Gipsy-Gordon area includes two small Wildland Parks, and the intact forests surrounding the Gipsy, Gordon, and Birch Lakes near the Saskatchewan border. Gordon Lake is considered one of the most important waterfowl breeding, moulting, and staging areas in the Mixedwood Region of Alberta. Gipsy Lake provides provincially significant American white pelican non-breeding habitat, while Birch Lake is an important white pelican and double-crested cormorant nesting area with diverse wetland habitat. The Gipsy-Gordon area also features the Clearwater and lower Christina Rivers, which are the first rivers on provincial lands in Alberta to be recognized under the Canadian Heritage River System in consideration of their outstanding

natural and cultural values and recreational opportunities. These rivers have high landform and plant diversity and include the Whitemud Falls and many springs. They provide prime moose habitat and an important sport fishery with over 20 species recorded. Along both rivers there are extensive stands of older forests, which have been identified as high conservation value areas in the Central Mixedwood of Alberta because of their relative rarity and importance to many species of plants and animals. The Heritage River designation does not automatically confer protected status; therefore, logging of the old forests adjacent to these rivers is ongoing.

A key feature of this area is that it provides good representation of all forest types found in the oil sands region. There are pure and mixed stands of white spruce and aspen in association with the river valleys and lakes, black spruce in extensive lowland regions, and pine forests on sandy soils. There is also good variability in forest age, ranging from new growth within several burns, to old forests along the river corridors. Because of these factors the area presents the best opportunity for capturing the full diversity of natural features of the region in a single large protected area.

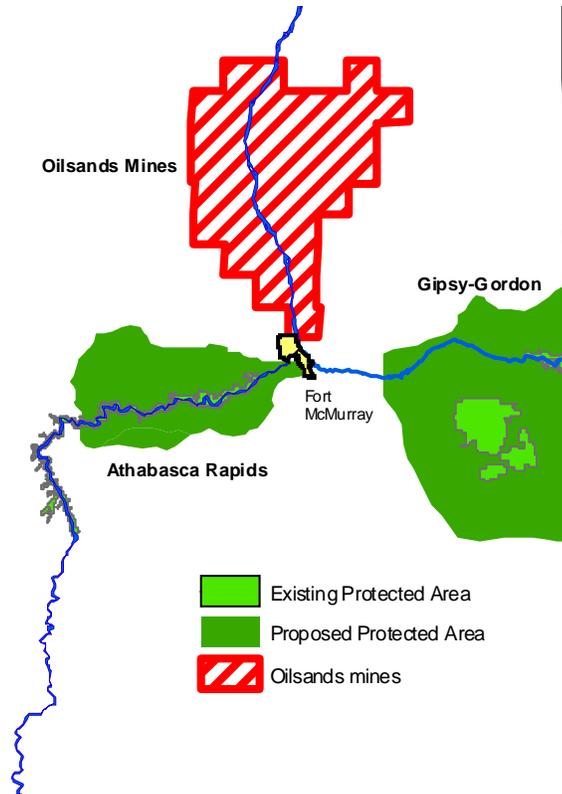


Fig. 2. Location of the proposed Gipsy-Gordon and Athabasca Rapids protected areas in relation to the mineable oil sands region.

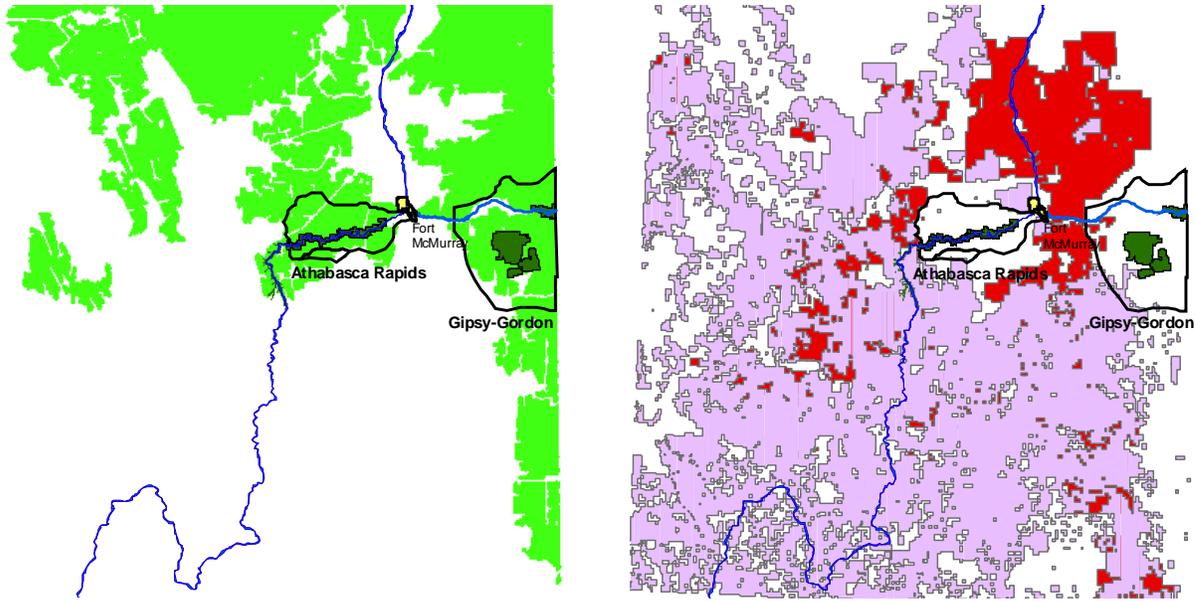


Fig. 3. Distribution of intact forest (left), and distribution of petroleum leases (right; red = oilsands and purple = conventional oil and gas) in relation to the Gipsy-Gordon and Athabasca Rapids sites.

Several other features of the area contributed to its selection as a core area. First, the area is still largely intact, with no significant road development and only a small amount of seismic disturbance (Fig. 3). A second and related factor is that the area has no petroleum potential except along its western margin (Fig. 3). Third, the area has significant recreational potential. Finally, the area contains a small amount of caribou habitat and is contiguous with a protected area in Saskatchewan (Clearwater River Wilderness Provincial Park).

## 2. Athabasca Rapids

The Athabasca River is one of the largest and longest rivers in the Boreal Mixedwood Region of Canada and serves as a major wildlife and recreational travel corridor. The Athabasca River valley scored highest in a High Conservation Value Forest assessment of the oil sands region. Therefore, it is important to identify at least one large protected area centered on the river. The Athabasca Rapids site fills that objective. The area builds on an existing protected area, the Grand Rapids Wildland, which follows the breaks of the Athabasca River west of Fort McMurray.

The upland portion of the Athabasca Rapids site contains high landform and forest diversity featuring old coniferous forests, dune fields, and one of the most diverse wetland complexes in the Central Mixedwood Region. The area also contains substantial woodland caribou habitat.

The Athabasca Rapids site is intended to provide representation of old-growth at the regional scale. One of the few places where old-growth tends to be aggregated and relatively permanent is along major river valleys, where landform features tend to limit

the spread of fires. The Athabasca River valley is a prime example of this, which contributed to our decision to select it as a core protected area and guided our boundary delineation process.

Our identification of this site was also influenced by the fact that it was the only section of the river not underlain by valuable petroleum deposits. Within the Athabasca Rapids site oil sands deposits are considered to be unrecoverable with current technologies due to unfavourable geology and consequently no petroleum leases are present. Furthermore, because of the lack of petroleum potential the area remains largely intact, with only a small amount of seismic disturbance present.

### 3. *Primrose*

The Primrose is comprised of the Lakeland region and parts of the Cold Lake Air Weapons range. Lakeland plays host to a tremendous diversity of bird life, including many neotropical species. More than 150 species of birds were identified in the area in 1994, including 20 species of warblers. Two of those species, the Cape May and the Blackburnian warblers, are at risk. Many of the bird species that breed in the Lakeland area do not breed north of Fort McMurray.

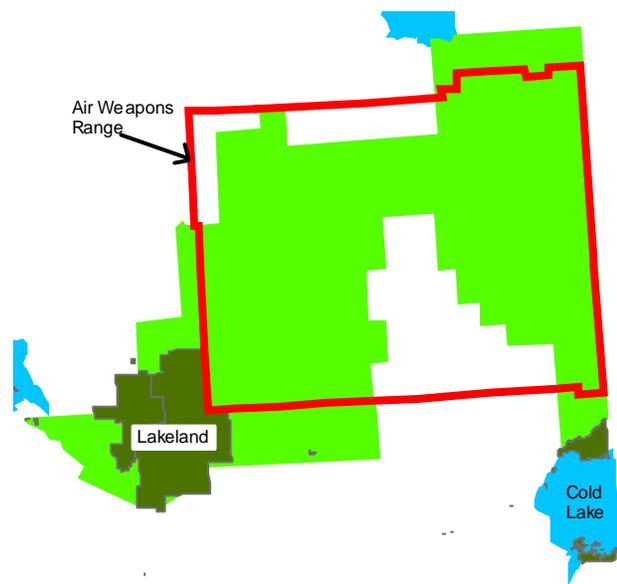


Fig. 4. Location of the Primrose site, relative to the Weapons Range and existing Lakeland Park and Recreation Area.

The area between the northern boundary of Lakeland Park/Provincial Recreation Area and Heart Lake hosts the highest concentration of remaining old-growth forests of white spruce, deciduous, and mixedwood in the southern portion of the oil sands region. Areas north of Lakeland Provincial Park and west of the park also contain Provincially Significant Environmentally Significant Areas. Lakeland is also home to eighteen species of orchids and rare plant species such as the pitcher plant.

The existing Lakeland Provincial Park (147 km<sup>2</sup>) is too small to maintain the ecological values of the area. If the adjacent provincial recreation area and a candidate site north of the park were fully protected, the ecological integrity of this region could be ensured.

The Air Weapons Range, roughly the size of Prince Edward Island, sprawls across 1.3 million acres of the Central Mixedwood Subregion of the boreal forest. A study conducted by ecological consultant Kevin Timoney concluded that many rare, at risk, or sensitive species and ecosystems likely occur on the Range. Minister of National Defence Graham has indicated that his department "will be pleased to participate in discussions

with the Province of Alberta to establish any type of environmentally protected area," if areas can be identified that do not diminish military capabilities.

The status of the boreal population of woodland caribou is another reason why the Department of National Defence should pursue conservation goals on the range. Caribou are an endangered species in Alberta and the Weapons Range is home to one herd. Ottawa is required to develop a recovery strategy for the woodland caribou found on the leased lands.

#### **4. Chinchaga.**

The Chinchaga Wilderness area in northwest Alberta (Fig. 5) contains a wonderful diversity of boreal ecosystems including old-growth forests, marshes, lakes, and peatlands. Woodland caribou, grizzly bear, and wolverine still roam widely in the Chinchaga Wilderness, and many birds depend on the Chinchaga to nest and raise their young.

An Alberta government report describes the Chinchaga Wilderness as the best opportunity to set aside an area capable of maintaining the ecological diversity of the Foothills Region. However, less than 2% of the total Foothills Natural Region area has been protected from industrial use.

Alberta conservation groups have long sought the protection of the Chinchaga Wilderness. The existing park in the region (Fig. 5) is small and primarily comprised of peatlands. It does not represent all the ecosystems of the northern Foothills Natural Region and is too small to maintain natural processes or meet the habitat requirements of wide-ranging species such as grizzly bear and the endangered woodland caribou. It is lacking in old-growth forest and intact areas essential for the protection of species and wilderness. We propose establishing additional protection in the region, sufficient to achieve all of these objectives.

We had partial success in achieving a large representative protected area in the Chinchaga in December 2003, when the Alberta government announced it would set aside FMU P8 from future logging (Fig. 5). The next step is to confer full park status to the expanded area, using the innovative “sunset” approach that was successfully used in the Hay Zama region to deal with existing petroleum dispositions.

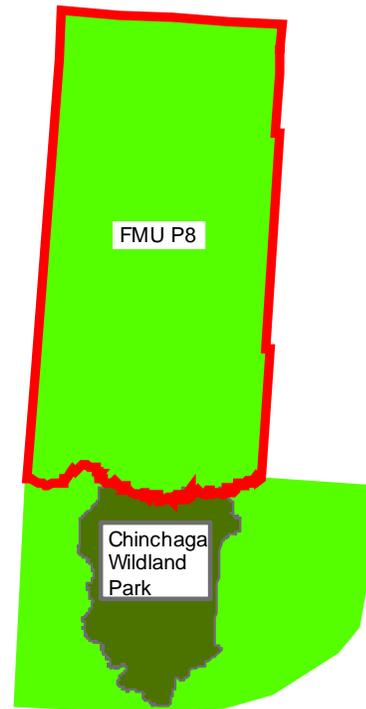


Fig. 5. Proposed Chinchaga protected area, in relation to FMU P8 and the existing Chinchaga Wildland Park.