

Taking the Wheel

Correcting the Course of Cumulative Environmental Management in the Athabasca Oil Sands



Chris Severson-Baker
Jennifer Grant • Simon Dyer

August 2008

the **PEMBINA**
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Sustainable Energy Solutions

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1st Edition, August 2008

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Editor: Roland Lines

Cover photos: David Dodge, The Pembina Institute; C. Campbell (mining trucks)

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About the Pembina Institute

The Pembina Institute creates sustainable energy solutions through research, education, consulting and advocacy. It promotes environmental, social and economic sustainability in the public interest by developing practical solutions for communities, individuals, governments and businesses. The Pembina Institute provides policy research leadership and education on climate change, energy issues, green economics, energy efficiency and conservation, renewable energy and environmental governance. More information about the Pembina Institute is available at www.pembina.org or by contacting info@pembina.org.

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Acknowledgements

The authors would like to acknowledge the contributions of Dan Woynillowicz and Steve Kennett. Dan Woynillowicz, Pembina's Director of Strategy and External Relations, was a long-standing past-participant of CEMA's Surface Water Working Group. He provided insight and constructive feedback on multiple drafts. Steve Kennett provided thoughtful feedback on drafts, and his thorough analysis of CEMA in 2007 with the Canadian Institute of Resource Law served as critical background information for this report.

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1. Summary

This report provides a proposal to reform the current Government of Alberta (GOA) and Government of Canada (GOC) approaches to environmental management in the Athabasca Boreal Region.¹ To date, their approach has failed to protect Alberta's environment from rapidly expanding oil sands development.

The Pembina Institute believes the GOA's Regional Sustainable Development Strategy (RSDS) and the GOA and GOC's reliance on the multi-stakeholder Cumulative Environmental Management Association (CEMA) have failed. For the past 15 years, the Pembina Institute has worked to actively minimize the environmental, social and economic impacts of oil sands development. The Pembina Institute has been an active member of CEMA since its inception in 2000.

Since the launch of the RSDS and the formation of CEMA the Pembina Institute's concerns about the pace and scale of oil sands development and the capacity of the GOA and GOC to manage the cumulative impacts on the boreal forest, air quality, fresh water resources and wildlife in the Athabasca Boreal region have increased steadily. In this report, the Pembina Institute provides recommendations for a new approach to environmental management and governance in the Athabasca Boreal Region.

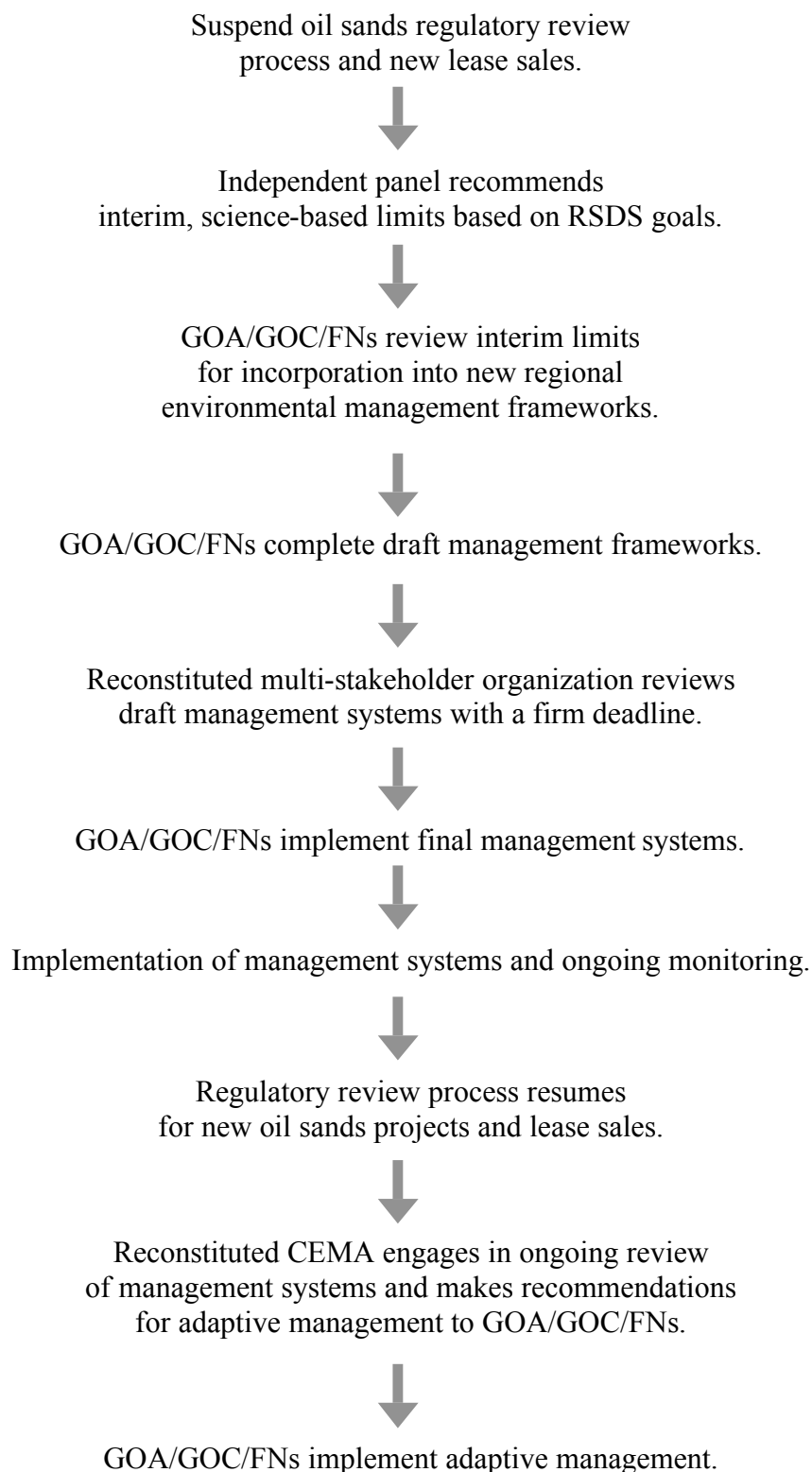
To effectively reform their approach to environmental management and re-engage all stakeholders, the GOA and GOC must suspend the regulatory review and approval of oil sands projects and the issuance of oil sands leases. This suspension period is critical to ensure adequate resources to implement environmental management systems based on protective environmental limits and to rebuild trust with and re-engage stakeholders in environmental management. The GOA and GOC must demonstrate a genuine commitment to balancing oil sands development with environmental protection before resuming the review and approval process.

This pause would not affect currently operating projects or approved projects, and projects currently in the regulatory review "queue" would have the option of maintaining their position in the queue or retracting their application and environmental assessment.

The following flow chart illustrates a new pathway for developing environmental management systems and for effectively engaging stakeholders through a new, reconstituted multi-stakeholder process.

¹ The Athabasca Boreal Region refers to the Regional Municipality of Wood Buffalo and encompasses the Athabasca oil sands deposit.

The Pathway to Develop Environmental Systems



2. Oil Sands Fever

Albertans and Canadians are growing increasingly concerned about unresolved environmental impacts from oil sands development — from drawing down the Athabasca River to the creation of toxic tailings dumps to strip-mining and drilling thousands of square kilometres of Alberta's boreal forest

Alberta-wide, projected growth in oil sands production is staggering. Between 1999 and 2007, oil sands production increased from approximately 300,000 barrels per day² to 1.4 million barrels per day. The GOC estimates that oil sands production will reach 3 million barrels per day by 2015³ and 5 million barrels per day by 2030.⁴ A recent Statistics Canada report projected that Alberta would see \$19.7 billion in oil sands investments in 2008 alone.⁵

In the Athabasca Boreal Region,⁶ operating projects currently produce 856,000 barrels per day. In ten years time, this number will more than double to nearly 2 million barrels per day, and when considering disclosed projects, this number could increase to over 3 million⁷ (Figure 1). Given the environmental impacts already being reported based on current production, the potential future impacts are sobering.

With each additional oil sands project approved and constructed in Alberta's boreal forest the environmental impacts to air quality, forests, wildlife, and fresh water resources increase significantly. It is this incremental accumulation of environmental impacts, which might appear insignificant on their own, that is leading to cumulative environmental impacts that could irreversibly damage the ecology of Alberta's boreal forest if they are not properly managed and mitigated. While the boreal forest ecosystem is resilient, it can only withstand so much degradation before it can no longer recover and species are lost and lands and waters radically transformed. This proverbial "tipping point," referred to as an ecological threshold or environmental limit, represents the extent of change that an ecosystem can endure before this change is irreversible.

² Natural Resources Canada, "1999/2000 Annual Sector Reports – Oil Sands," oee.nrcan.gc.ca/Publications/infosource/Pub/cipec/annual_report99-00/oil.cfm?text=N&printview=N.

³ National Energy Board, "Canada's Oil Sands Opportunities and Challenges to 2015: An Update," Government of Canada, 2006.

⁴ Lee Richardson, MP, *The Oil Sands: Toward Sustainable Development*, Report of the Standing Committee on Natural Resources: House of Commons Canada, 2007.

⁵ The Daily, "Private and Public Investment," Statistics Canada, February 27, 2008, www.statcan.ca/Daily/English/080227/d080227a.htm.

⁶ The Athabasca Boreal Region refers to the Regional Municipality of Wood Buffalo and encompasses the Athabasca oil sands deposit.

⁷ Bob Dunbar, "Existing and Proposed Canadian Commercial Oil Sands Projects," Strategy West Inc., www.strategywest.com/downloads/StratWest_OSProjects.pdf.

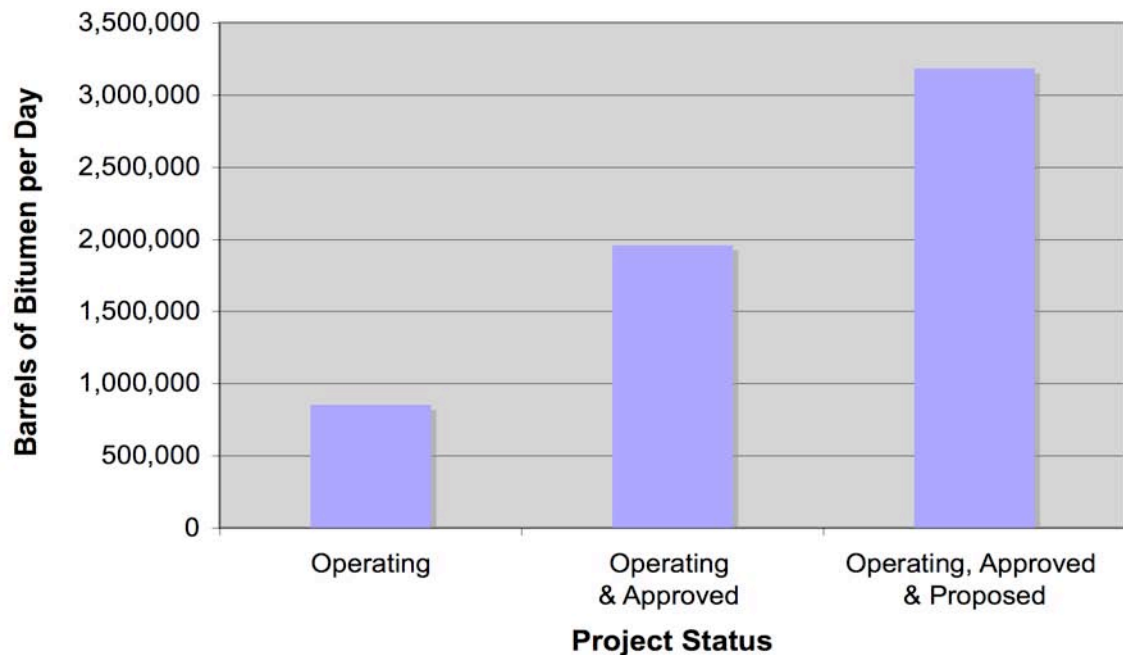
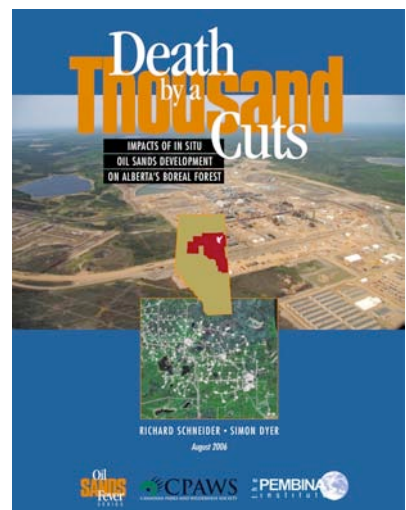
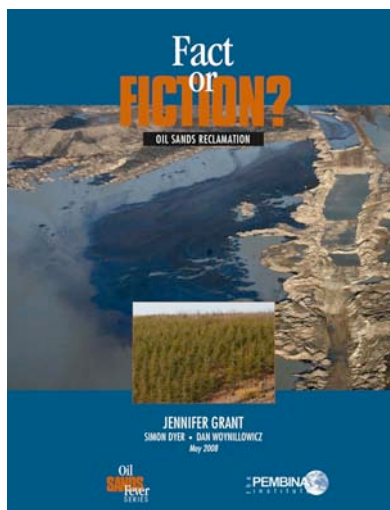
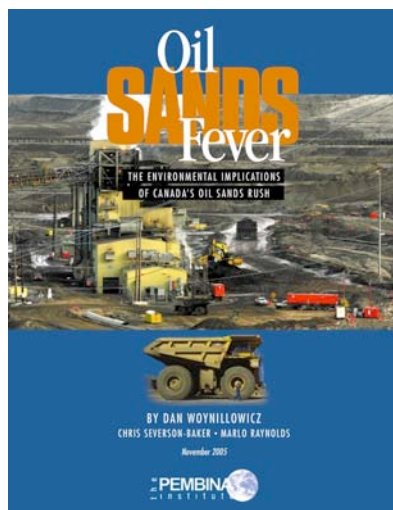


Figure 1: Projected bitumen production from current and future oil sands projects in the Athabasca Boreal region⁸

For a complete account of the magnitude of the environmental and climate change consequences of oil sands development planned and underway in Alberta please visit the Pembina Institute's web page with publications dedicated to oil sands issues: www.oilsandswatch.org.



⁸ These numbers are estimated from Strategy West's Oil Sands Projects summary table.

3. Environmental Mismanagement in the Oil Sands

The RSDS and CEMA were designed to manage the cumulative environmental impacts arising from oil sands development. Because of resource constraints, design flaws and weak statutory backing, these initiatives have failed to deliver critical air, water and land thresholds. They have perpetuated the compartmentalization of competing interests, such as energy and environmental protection.⁹ Effective environmental management requires these critical elements to ensure that oil sands development is aligned with the public interest. The RSDS and the multi-stakeholder group tasked with its implementation — CEMA — have failed to deliver a suite of critical thresholds and plans.

This section identifies some of the root causes of this failure and presents two case studies that exemplify the causes. In addition, it describes some of the perverse incentives that surfaced over the past eight years and have undermined CEMA's ability to deliver upon its mandate.

3.1 Key ingredients for effective environmental management

Effective environmental management requires comprehensive regional planning for managing and monitoring cumulative effects. Regional planning should articulate how competing demands will be addressed and acknowledge the trade-offs that may be required. Regional plans need the support of a statutory system that includes mechanisms to ensure compliance and accountability (frequent updating and reporting).

Government should ensure that a suitable government decision-making infrastructure is in place that addresses conflicting mandates (e.g., Alberta Energy vs. Alberta Environment) and ensures that government departments cooperate in the implementation of the plan. Government should ensure that sufficient human and financial resources are provided.

Effective environmental management must also be premised upon managing activities within protective environmental impact limits.

3.2 The Regional Sustainable Development Strategy: In with a bang, out with a fizzle

In an attempt to manage the cumulative environmental impacts caused by rapid oil sands development, Alberta Environment launched the RSDS in 1999. (See Appendix A for the rationale and history leading to the RSDS.) However, the RSDS which was flawed in both

⁹ For a detailed critical review of environmental governance by the Government of Alberta, see *Curing Environmental Dis-Integration*, www.pembina.org/pub/1625.

design and implementation, was not the much needed regional plan for the Athabasca Boreal Region for several reasons. First, the RSDS document is not a complete or operational strategy for ensuring sustainable development and/or managing cumulative effects, rather it simply identified and prioritized the various issues that would need to be addressed.¹⁰

Alberta Environment could not implement a truly sustainable oil sands development policy on its own because it does not set royalty rates, issue oil sands leases,¹¹ or have the final say about whether a given oil sands project is “in the public interest.”¹² This lack of integrated planning, particularly at a regional scale, remains the most significant gap in Alberta’s current framework for decision-making.¹³

The GOA’s new draft Land-Use Framework (LUF)¹⁴ is a partial response to cumulative effects mismanagement to date. Land use plans will be developed for six regions — the Athabasca Boreal Region falls within the boundaries of the North East region. The draft LUF clearly acknowledges that Alberta’s current system for land and resource management is broken. The LUF might serve as an ideal vehicle to implement regional planning for the Athabasca Boreal Region, but this use of the LUF is subject to both the temporary suspension of approvals and lease sales until the LUF is implemented and the assurance that the LUF is effectively designed and implemented, and includes stakeholder engagement.

The LUF commits to set objectives for Alberta’s landscapes and to manage cumulative impacts, but it is important that gaps existing in the draft should be filled in the final version. These gaps include: 1) a solid legal foundation and detailed governance structure for the LUF; 2) measurable land-use outcomes for the LUF to achieve; 3) a path to integrate the LUF with existing and proposed strategies for land, water and resource use; and 4) avenues for greater public input at both the provincial and regional levels and better transparency in decision-making.¹⁵

The GOA has a long history of announcing land use initiatives and then shelving them prior to implementation or failing to follow through with the changes to legislation, policy and decision-making processes that are essential to success. The RSDS for the Athabasca Oil Sands is an example of one such failed initiative. Given the timing of the LUF, its draft nature and its missing components, the GOA cannot rely on the LUF or the North East Regional Plan to mitigate the current impacts of oil sands development.

The RSDS contains general statements such as “create an environmental management framework that can adapt to the changing needs of the area to guide government environmental

¹⁰ Kennett, Steven A., “Closing the Performance Gap: The Challenge for Cumulative Effects Management in Alberta’s Athabasca Oil Sands Region,” In CIRL Occasional Paper #18, Calgary: Canadian Institute of Resources Law, 2007.

¹¹ Alberta Energy, 2006, *Our Business*, www.energy.gov.ab.ca/51.asp.

¹² Alberta Energy, 2006, *2005–2006 Annual Report*.

¹³ Kennett, Steven A., and Richard R. Schneider, 2008, *Alberta by Design: A Blueprint for an Effective Land-Use Framework*, the Pembina Institute and the Canadian Parks and Wilderness Society – Northern Alberta.

¹⁴ www.landuse.alberta.ca.

¹⁵ Kennett, Steven A., and Richard R. Schneider, 2008, *Land-Use Framework Report Card: A Checklist-Based Evaluation of Alberta’s Draft Land-Use Framework*, the Pembina Institute and the Canadian Parks and Wilderness Society – Northern Alberta, www.pembina.org/pub/1653.

and resource managers” and “involve regional stakeholders in shared environmental stewardship,”¹⁶ that lack the critical accompanying discussion about how competing demands on the landscape will be addressed, as well as the acknowledgement that trade-offs will be required.

To succeed, the RSDS needed the government to provide a statutory framework to define and support the RSDS process. It needed a government decision-making process that addressed the fact that different departments have different mandates (e.g., Alberta Energy and Alberta Environment). It needed legislation and the political will necessary to withstand challenges from the trade-offs inherent in the RSDS and to create conditions for successful implementation (e.g., the dedication of sufficient human and financial resources).

Instead, Alberta Environment adopted a collaborative, multi-stakeholder approach to develop the RSDS management objectives. Alberta Environment led the formation of a new multi-stakeholder organization that came to be known as the Cumulative Environmental Management Association (CEMA) in 2000.¹⁷ Alberta Environment did not commit sufficient internal resources or senior decision-making staff to the CEMA process from the outset, and therefore it did not drive the CEMA process forward. It maintained its focus instead on the regulatory approvals process: reviewing and approving proposed oil sands development in the ongoing absence of sufficient environmental management. Without the leadership of a well-resourced and coordinated GOA committed to truly implementing RSDS, CEMA was doomed to fail. Now, ten years later, the RSDS has become obsolete.

3.3 Best Intentions and the Cumulative Environmental Management Association

In 2000, CEMA was established to help implement the RSDS by collecting scientific information and making recommendations to the GOA and the GOC for how best to manage the cumulative environmental impacts of industrial development in the region.¹⁸

Modelled loosely on Alberta’s Clean Air Strategic Alliance (CASA),¹⁹ CEMA was established as a consensus-based, multi-stakeholder group comprised of representatives from the oil sands industry, the governments of Alberta, Canada and the Regional Municipality of Wood Buffalo, Aboriginal and Métis groups, and environmental non-governmental organizations.²⁰ CEMA adopted a five-year strategic plan that intended to deal with 37 of the original 72 issues identified in RSDS. The remaining 35 issues were to be addressed under the existing government mandate

¹⁶ Kennett and Schneider, 2008, *Land-Use Framework Report Card*, p. 5.

¹⁷ Spaling, Harry, Janelle Zwier, William Ross, and Roger Creasey. "Managing Regional Cumulative Effects of Oil Sands Development in Alberta, Canada." *Journal of Environmental Assessment Policy and Management* 2, no. 4 (2000): 501-28. p. 512.

¹⁸ Source: www3.gov.ab.ca/env/regions/neb/rsds/.

¹⁹ The Clean Air Strategic Alliance (CASA) was established in March 1994 as a new way to manage air quality issues in Alberta. CASA is a non-profit association composed of diverse stakeholders from three sectors: government, industry, and non-government organizations, such as health and environmental groups. Stakeholders are committed to developing and applying a comprehensive air-quality management system for all Albertans. www.casahome.org.

²⁰ As of March 2008, CEMA consisted of 15 government, 18 industry, 7 Aboriginal and Metis, and 5 ENGO members. Source: www.cemaonline.ca/content/view/17/51/.

or other regional initiatives. The 72 issues identified in the RSDS were prioritized, and it was anticipated that the highest priority issues (Category A) would be addressed within two years.

While all stakeholders have placed significant emphasis on the success of CEMA, it has been far less effective than originally envisioned. In the one and only progress report on the RSDS, released by the GOA in 2001, it was highlighted that contrary to the intention of addressing Category A themes in the first two years, in fact no management objectives had been completed by CEMA. The reason given for the lack of progress was given as “the complexity of the environmental issues and the consultative, interactive nature of the partnership process, and the work group’s demand for a thorough approach make the strategy’s original targets unrealistic.”²¹

The report went on to note: “The effort required by the working groups is very intensive and necessitates individuals to commit their time over and above their regular work activities. ... This is compounded by the increasing pace of development and large number of projects in the oil sands area that are often drawing on the same consultants.”²² Put more simply, by continuing to allow new projects to proceed through the regulatory approvals process, the GOA was placing a greater priority on approving new developments than on establishing the environmental limits and management systems envisioned in the RSDS. With government employees, industry proponents and regional stakeholders (including Aboriginal and environmental groups) contributing significant time and effort to participating in the resource-intensive regulatory review process and public hearings — a reactive response to oil sands development — the proactive approach to management embodied in the RSDS was being fundamentally undermined. Attempting to implement the RSDS in parallel with a swelling stream of project approvals was identified as a key reason why the schedule was falling behind, and yet the GOA took no action to address this issue.

By continuing to allow new projects to proceed through the regulatory approvals process, the Government of Alberta was placing a greater priority on approving new developments than on establishing the environmental limits and management systems envisioned in the RSDS

3.3.1 CEMA’s Inability to Deliver Results

In August 2008, eight years after CEMA began its work to “develop and apply environmental management tools, thresholds, guidelines and objectives” as “the core of a proactive regional environment management system that addresses cumulative biophysical, health and resource-use impacts of regional developments,”²³ there remain large gaps in many critical areas of environmental management. Some of the key gaps include the following:

- **No land use plan that protects wildlife and regional ecosystems.**
- **No lower limit on flows of the Athabasca River below which oil sands water withdrawals would be prohibited.** In 2005, approximately 349 million cubic metres of water from the Athabasca River were licensed for oil sands mining operations.

²¹ Regional Sustainable Development Strategy for the Athabasca Oil Sands Area— Progress Report. July 2001. Alberta Environment & Sustainable Resource Development. p. 12.

²² Regional Sustainable Development Strategy for the Athabasca Oil Sands Area – Progress Report. July 2001. Alberta Environment and Sustainable Resource Development. p. 12.

²³ CEMA’s purpose is described at www.cemaonline.ca/content/view/13/46/.

- **No environmental management plan to maintain the integrity of watersheds**, and more urgently the Muskeg River watershed.
- **No reclamation guidelines for restoring ecologically important peatlands**. Currently, there is a potential loss of 1,300 square kilometres of wetlands due to oil sands mining projects. With no known means to re-establish peatlands, their loss may be irreversible.
- **No certification standards for oil sands reclamation**. Clear certification standards would assist operators in advancing reclamation in accordance with mining disturbance. Currently, only 0.2% of the land disturbed by oil sands mining has been certified. The reclamation of toxic tailings waste remains undemonstrated.

The following two examples of CEMA Working Groups illustrate many of the factors that have rendered CEMA inefficient and, as a result, ineffective in the face of rapidly increasing oil sands development and cumulative environmental impacts.

3.3.1.1 The Sustainable Ecosystems Working Group

CEMA's Sustainable Ecosystems Working Group (SEWG) was charged with recommending a management framework for the conservation of terrestrial ecosystems and wildlife in the Regional Municipality of Wood Buffalo (RMWB). An important component of land management involves the establishment of protected areas, free of industrial activity that act as reference areas to compare to disturbed landscapes and as areas where wildlife populations will be maintained at natural levels.²⁴ Protected zones are considered essential given the substantial declines in environmental indicators that are predicted by CEMA for areas subjected to in situ and mining oil sands development.

It took the SEWG eight years to recommend a management framework to protect terrestrial ecosystems. Submitted in June 2008, the completed framework requires 20–40% of the RMWB to be permanently protected from industrial development.²⁵ In the time that the SEWG took to develop the framework, much of the land proposed to be protected has been leased for oil sands development. The government continues to issue oil sands leases today.

In 2000, when SEWG began its work, there were substantial opportunities for the establishment of protected zones in the RMWB that would enable oil sands development and environmental protection to co-exist, as envisioned by the RSDS. Since 2000, a significant increase in the sales of oil sands rights, through auctions every two weeks, has greatly diminished opportunities for the establishment of protected zones (Table 1).

²⁴ Secretariat of the Convention on Biological Diversity, "Protected Areas in Today's World: Their Values and Benefits for the Welfare of the Planet," in *Technical Series no. 36, i–vii, 96 pages*, Montreal: 2008.

²⁵ *Terrestrial Ecosystem Management Framework for the Regional Municipality of Wood Buffalo*, prepared by the Sustainable Ecosystems Working Group of the Cumulative Environmental Management Association, p. 3, June 2008.

Table 1. Oil Sands Lease Sales by Calendar Year²⁶

Year	Lease Area (Hectares)
2007	1,134,481.73
2006	1,542,473.40
2005	355,307.84
2004	299,198.12
2003	64,351.20
2002	168,576.00
2001	234,525.20
2000	186,991.64

In January 2008, the SEWG members wrote a letter to the GOA requesting that additional lease sales be halted in three remaining intact areas prior to the submission of the framework. This recommendation was supported by a large majority of stakeholders from CEMA, including companies such as Conoco-Phillips, Suncor and Petro-Canada.²⁷

Table 2. CEMA members supporting or conditionally supporting suspending new resource tenures in the RMWB until 2011 in order to maintain opportunities for protected areas planning²⁸

Support or Conditional Support	Non-Support
Alberta-Pacific Forest Industries	Canadian Natural Resources Ltd.
Albian Sands Energy/Shell Canada	EnCana Corporation
Canadian Parks and Wilderness Society	OPTI/Nexen Canada
Conklin Metis Local #193	UTS Energy Corporation
ConocoPhillips Canada	
Devon Canada	
Environment Canada	
Fort Chipewyan Metis Local #125	
Fort McKay Metis Local #63	
Fort McKay First Nation	
Fort McMurray Environmental Association	
Fort McMurray Field Naturalists	
Fort McMurray Metis Local #2020	
Husky Energy Ltd.	
Imperial Oil Resources	
Japan Canada Oil Sands Ltd.	
Pembina Institute	
Petro-Canada Oil and Gas	
Suncor Energy Inc.	
Total E&P Canada	
Toxics Watch Society of Alberta	
Wood Buffalo National Park	

²⁶ Adapted from www.energy.alberta.ca/OilSands/1236.asp.

²⁷ Letter from Randall Barrett, President of CEMA, to Government of Alberta Deputy Ministers of Energy, Environment and Sustainable Resource Development, "Recommendation for maintaining conservation options in respect of an ecosystems and landscapes management framework," dated January 11, 2008, p. 8.

²⁸ Ibid.

This request to halt additional lease sales in the three remaining intact areas prior to the submission of the final product was rejected by the GOA.²⁹ While the SEWG conducted the analysis to identify the best potential conservation zones, with GOA representatives sitting at the table, the GOA also knowingly continued to lease lands in the very same areas. CEMA acknowledges that compensation may now be required in order to buy-back leases in order to meet environmental objectives.³⁰ This conflict emphasizes a central failing of CEMA. While CEMA is working to make environmental recommendations, the GOA is making tenure and land use decisions that directly conflict with this mandate. Oil sands leases now cover 65,000 km² of northern Alberta,³¹ an increase of 16,000 km² in the past year alone.³²

Despite GOA participation at the SEWG table for the past 8 years, there has been no formal response to the framework recommendations in June. A GOA representative was quoted in media reports after the framework was released in June as stating, decisions on the framework would not be made for another 18 months,³³ despite the recommendation in the CEMA framework that work on implementation must begin immediately.³⁴ While the GOA takes a go-slow approach to environmental management, oil sands lease sales are not delayed, despite a formal request from CEMA. This provides a compelling example of the failure of the GOA to ensure environmental management rules are in place prior to oil sands decision-making, and suggests any planning exercise will be doomed to failure without pausing development decisions until environmental protection rules are in place.

²⁹ Letter from Brad Pickering, Deputy Minister of Alberta Sustainable Resource Development, to Randall Barrett, CEMA President, dated March 7, 2008.

³⁰ *Terrestrial Ecosystem Management Framework for the Regional Municipality of Wood Buffalo*, prepared by the Sustainable Ecosystems Working Group of the Cumulative Environmental Management Association, p. 25, June 2008.

³¹ Alberta Energy Oil Sands Frequently Asked Questions, www.energy.gov.ab.ca/OilSands/792.asp, accessed March 3, 2008.

³² *In Haste Makes Waste: The need for a new oil sands tenure regime*, published in April 2007, the Pembina Institute reported that oil sands leases covered 49,000 km² in Alberta.

³³ “Oil Sands VPs seeing Green,” Sheila Pratt, *Edmonton Journal*, June 15, 2008.

³⁴ *Terrestrial Ecosystem Management Framework for the Regional Municipality of Wood Buffalo*, prepared by the Sustainable Ecosystems Working Group of the Cumulative Environmental Management Association, p. 42, June 2008.

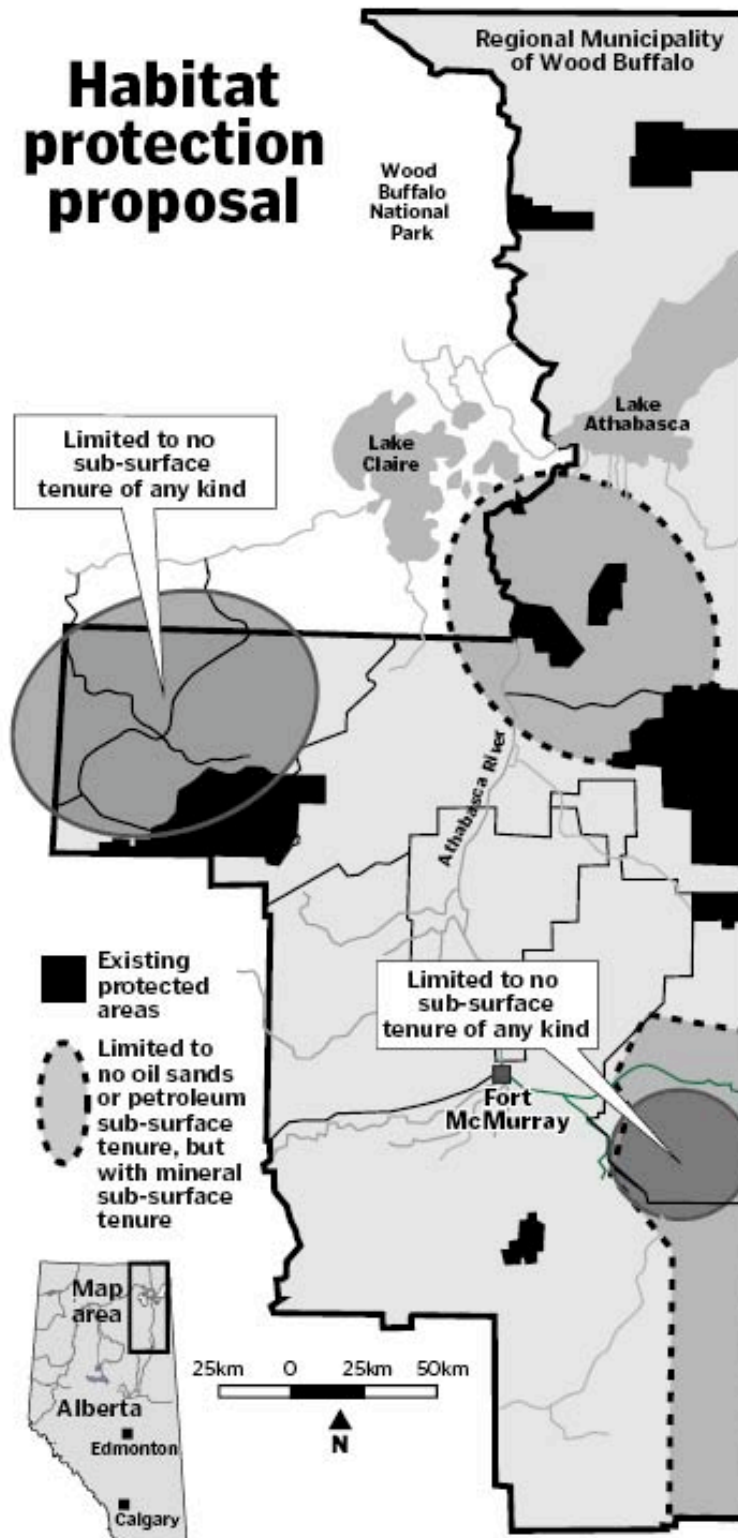


Figure 2. Areas recommended by CEMA for suspension of oil sands lease sales in order to enable protected areas establishment.

Reprinted with permission from the Calgary Herald.

3.3.1.2 The Watershed Integrity Task Group

Approximately 60% of the Muskeg River watershed, a sub-basin of the Athabasca River watershed, is underlain by surface mineable oil sands deposits, and much of the remainder are underlain by deeper deposits accessible using in situ technologies. As a result, significant interest in developing the watershed exists. Despite the Muskeg River Watershed's economic potential, its important ecological values were recognized in the 1999 RSDS.³⁵

- Theme 10 of the RSDS states: "Actions under this theme support the goal of protecting the water quality and hydrological integrity of regional watersheds (Athabasca, Muskeg River and Kearl Lake) from the cumulative impact of increased development."³⁶
- Theme 12 of the RSDS states: "Actions under this theme support the goal of conserving surface water quantity and flow regimes in the Athabasca River and its tributaries (Muskeg River) from the impact of development."

In 2000, the CEMA board acknowledged the high level of oil sands development planned for the Muskeg River Watershed and endorsed the establishment of a Watershed Integrity Task Group (WITG)³⁷ within the Surface Water Working Group. The objectives of the WITG were to "establish environmental criteria and management systems to define and maintain watershed integrity in the Muskeg River drainage basin."³⁸

The WITG was expected to complete its work in 2002–2003, but this timeframe was not enforced and several other expansions and new projects were approved or disclosed in the ensuing seven years.³⁹ Specifically, four major oil sands mining projects are likely to proceed without any management plan in place for the Muskeg River Watershed. All of these projects directly affect the Muskeg River watershed.

Watersheds are fundamentally altered by oil sands development because mines require the diversion or drainage of surface waters and alter natural flows. To access the oil sands deposits that are close enough to the surface to be strip-mined, large operations must clear many square kilometres of the boreal landscape. Rivers are diverted, wetlands are drained, and the forest is clear-cut before mining can even begin. Toxic tailings management is an additional challenge that presents long-term risks. It has been noted that precipitation or weather extremes in a region can jeopardize tailings or other containment structures creating the potential for a large, uncontrolled release of toxic materials into a watershed.⁴⁰

³⁵ *Terrestrial Ecosystem Management Framework for the Regional Municipality of Wood Buffalo*, p. 34.

³⁶ Alberta Environment, *Regional Sustainable Development Strategy for the Athabasca Oil Sands Area*, 1999, p. 32.

³⁷ In 2000, the group was formerly called the Muskeg River Watershed Integrity Subgroup. The name was changed to the Watershed Integrity Task Group in 2004.

³⁸ See p. 15 of 2000/2001 CEMA Annual Report.

³⁹ In 2005, 2006 and 2007, Husky's Sunrise in-situ thermal project, Albion's Muskeg River Mine Expansion, and Imperial's Kearl Mine were all approved. Expansions include Syncrude's Aurora South Mine and Shell's Jackpine Phase 2 projects. Petro-Canada's Fort Hills Project recently submitted an amendment for its existing approval to consolidate overburden and tailings into a single, larger tailings area to the south of the proposed location and within the Muskeg River Watershed.

⁴⁰ Peachey, Bruce, "Strategic Needs for Energy Related Water Use Technologies: Water and the Energyinert," New Paradigm Engineering Ltd., 2005.

This example clearly demonstrates CEMA's repeated inability to meet deadlines, the GOA's unwillingness to provide leadership at CEMA or to fulfill "backstop" commitments where CEMA is unsuccessful, and the Joint Panel's complicity in accepting these delays and a lack of government accountability while nevertheless approving new oil sands development.

3.3.2 Perverse Incentives

The Alberta Energy and Utilities Board, Alberta's chief oil and gas regulator, has expressly bemoaned these delays, but the Board's continued willingness to approve major oil sands projects in the meanwhile provides an inherent incentive for further delay.⁴¹

Perverse incentives are an important factor contributing to CEMA's poor performance to date.⁴² The Pembina Institute's experience as a founding member of CEMA has led it to believe that preserving the status quo — proceeding with oil sands development rapidly and without proper environmental impact assessment, mitigation and management — is favoured by those who benefit from it. These beneficiaries are the oil sands companies and a government that has clearly placed rapid oil sands development before environmental protection through responsible development. This task is easily accomplished through several tactics, including delaying consensus agreements and controlling the amount of financial resources available to CEMA.

The priority for oil sands operators and proponents of new projects is to receive regulatory approvals in advance of any additional environmental assessment or mitigation requirements. It is not in the industry's collective interest to spur on the development of management frameworks that could constrain development, increase costs or make it more difficult to get approval for new projects or project expansions.⁴³ Once it has issued approvals it is more difficult — both procedurally and politically — for the GOA to implement more stringent environmental performance measures in the future.

By granting approvals knowing that they may need to be modified or even retracted in the future to meet environmental objectives, the GOA is placing itself, and Albertans, at both environmental and economic risk. As such there is a perverse incentive for oil sands companies participating in CEMA to delay progress on the development of environmental management systems.

3.3.3 Misuse of CEMA in Regulatory Hearings

In spite of CEMA's persistent lack of success, both industry proponents and Government agencies have argued in regulatory proceedings that CEMA's work on cumulative environmental issues represents a legitimate form of mitigation. In this way CEMA has been used as a "green" shield to deflect uncomfortable questions about management of cumulative environmental impacts in the oil sands region.

⁴¹ Wenig, Michael M., "Federal Policy and Alberta's Oil and Gas: The Challenge of Biodiversity Conservation," in G. Bruce Doern, ed., *How Ottawa Spends 2004–2005: Mandate Change in the Martin Era*, McGill–Queens Univ. Press, 2004, pp. 222–44.

⁴² Kennett, Steven A., "Closing the Performance Gap: The Challenge for Cumulative Effects Management in Alberta's Athabasca Oil Sands Region," in *CIRL Occasional Paper #18*, Calgary: Canadian Institute of Resources Law, 2007.

⁴³ *Ibid.*, p. 40.

Proponents Using CEMA as Mitigation:

In its EIA, CNRL relies upon participation in CEMA to mitigate certain project specific effects:

- In its Surface Water Hydrology Assessment, CNRL indicated that it “will continue its active participation in the Cumulative Environmental Management Association as well as its working groups. Through participation in these regional initiatives, CNRL will participate in development of management systems and management objectives, where needed, for surface water hydrology.”⁴⁴
- Similarly, CNRL stated that in addition to site-specific mitigation plans, “Regional initiatives may provide mitigation of cumulative effects in the Oil Sands Region by ensuring that reclamation goals are being reached and by encouraging cooperation between developers to reach environmental goals.”⁴⁵
- In its Vegetation, Wetlands and Forest Resources Assessment CNRL stated that it “will also continue its involvement in the development of regional management systems for terrestrial vegetation, wetlands and forest resources through the Sustainable Ecosystem Working Group (SEWG) of the Cumulative Environmental Management Association (CEMA).”⁴⁶
- In its Wildlife Assessment, CNRL stated, “A wildlife monitoring program will be developed in consultation with regulators and will include regional wildlife initiatives (e.g., CEMA).”⁴⁷
- In its Biodiversity Assessment, CNRL indicated, “the landscape and biodiversity subgroup of SEWG is developing a management system to address regional effects of development and resource use on ecosystems,”⁴⁸ and that “the Landscape and Biodiversity subgroups of CEMA are developing a regional management system to address biodiversity issues. The Reclamation Working Group of CEMA will help implement this management system through the recommendations of reclamation objectives and monitoring protocols.”

Regulatory decision makers such as the ERCB have acknowledged that CEMA has not been keeping pace with the rate of oil sands development in the region.⁴⁹ While the ERCB has made recommendations to various provincial and federal government agencies regarding their role in ensuring that CEMA is effective and the RSDS is implemented, these agencies have done little in response.

In another two years, the Board will no doubt have approved additional oilsands projects while still wondering why there are further delays. This scenario resembles parents who cannot understand why their children consistently ignore their repeated but, never-enforced threats.⁵⁰

⁴⁴ Canadian Natural Resources Ltd., *EPEA Application No. 001-149968; Water Act File No. 001 – 86921; EUB Application No. 1273113 - HORIZON PROJECT – Submission of the Oil Sands Environmental Coalition*, Volume 5, Section 3.7.3.1, Management, September 17, 2003.

⁴⁵ Ibid., Volume 6, Section 3.6.1.2, Planned Case Mitigation.

⁴⁶ Ibid., Volume 6, Section 4.5.4.5, Monitoring and Residual Mitigation.

⁴⁷ Ibid., Volume 6, Section 5.7.5 Monitoring and Residual Mitigation.

⁴⁸ Ibid., Volume 6, Section 6.6.2.1 Planned Case Mitigation.

⁴⁹ For example, in its Decision Report regarding the Shell Jackpine Mine-Phase 1 project, the EUB stated “The [Joint Federal-Provincial Review] Panel understands that there is good support in general for CEMA but widespread concern about delays in delivery of environmental management objectives and plans. ... The Panel has serious concerns about delays in the issuance of recommendations and the ability of CEMA to meet the proposed timelines.” Alberta Energy and Utilities Board, 2004, EUB Decision 2004-009, p. 77.

⁵⁰ Wenig, Michael M., “Federal Policy and Alberta’s Oil and Gas: The Challenge of Biodiversity Conservation,” in G. Bruce Doern, ed., *How Ottawa Spends 2004–2005: Mandate Change in the Martin Era*, McGill–Queens Univ. Press, 2004, pp. 222–44.

The failure of CEMA to deliver recommendations has been noted at AEUB and Joint Panel hearings since 1999. Despite this, regulatory panels continue to approve oil sands projects:

- 1999: "...well over a year has transpired since the announcement of several new development projects, yet the Cumulative Environmental Effects Management initiative is just now beginning to address certain aspects of its structure and operating process. The [Alberta Energy and Utilities] Board is becoming increasingly concerned that these processes may not be moving forward at a speed sufficient to meet the Board's regulatory requirements ..."⁵¹
- 2000: "The Board has placed significant emphasis on the success of these processes for ensuring that both existing and future oil sands development remains in the public interest. ... [S]ignificant delays in the process or the failure of the process to begin to establish environmental objectives and guidelines for the management of cumulative effects within the oil sands region in a timely manner could eventually force the Board to revisit its previous decisions"⁵²
- 2002: "In a series of decision in this area, the Board has placed significant reliance on the success of the CEMA process to verify that both existing and future oil sands developments remain in the public interest. The Board believes that CEMA's work is important and that the results will assist the Board in meeting its regulatory mandate to ensure that energy developments are carried out in an orderly and efficient manner that protects the public interest. The Board understands that CEMA is dealing with complex and difficult issues within a multistakeholder forum. Nonetheless, it is concerned with delays in the issuance of recommendations."⁵³
- 2004: "The [Joint Federal-Provincial Review] Panel has concerns that CEMA's effectiveness may also be influenced by the volume and complexity of its work, multiple priorities of stakeholders, and funding mechanisms that may not keep pace with CEMA's increased workload from oil sands expansions, new oil sands mining and in situ projects, and other contributors of regional cumulative effects"⁵⁴
- 2004: "The [Joint Federal-Provincial Review] Panel understands that there is good support in general for CEMA but widespread concern about delays in delivery of environmental management objectives and plans. ... The Panel has serious concerns about delays in the issuance of recommendations and the ability of CEMA to meet the proposed timelines."⁵⁵
- 2007: "The Joint Panel is deeply concerned by the inability to establish and maintain priority for critical items such as the Water Management Framework for the Athabasca River, the

⁵¹ EUB, *Shell Canada Ltd. Muskeg River Mine Project*, EUB Decision 99-2, February 12, 1999, p. 39 (emphasis added).

⁵² EUB, *Petro-Canada Oil and Gas Steam-Assisted Gravity Drainage Project, Mackay River Project, Athabasca Oil Sands Area*, EUB Decision 2000-50, July 14, 2000, p. 14.

⁵³ EUB Decision Report 2002-089, p. 55.

⁵⁴ Alberta Energy and Utilities Board, *CNRL Horizon Mine*, EUB Decision 2004-005, p. 76.

⁵⁵ Alberta Energy and Utilities Board and the Government of Canada, *Decision 2004-009: Shell Canada Limited, Applications for an Oil Sands Mine, Bitumen Extraction Plant, Cogeneration Plant, and Water Pipeline in the Fort McMurray Area*, February 5, 2004, p. 77.

Muskeg River Watershed Integrated Management Plan, and the Regional Terrestrial and Wildlife Management Framework. ...

The Joint Panel is concerned about the capacity of CEMA to complete the management frameworks that have been assigned to it and notes that CEMA struggles to meet its deadlines.⁵⁶

The ERCB has also suggested on several occasions that the Government of Alberta and the Government of Canada should do more to ensure CEMA's success:

- 2002: "The Board understands that CEMA is dealing with complex and difficult issues within a multistakeholder forum. Nonetheless, it is concerned with delays in the issuance of recommendations. As a result, it will be discussing options with both the Alberta and federal governments by which the CEMA process can be encouraged to produce more meaningful results in an earlier timeframe ..."⁵⁷
- 2004: "The Panel has serious concerns about delays in the issuance of recommendations and the ability of CEMA to meet the proposed timelines. The Panel heard evidence that [Alberta Environment] is prepared to take action should CEMA not meet deadlines for delivery of recommendations for environmental management systems to regulators for approval. The Panel believes this step is necessary to increase regulatory certainty. Therefore, ... the Panel recommends that [Alberta Environment] and [Alberta Sustainable Resource Development] consider developing management plans or objectives respecting other environmental issues if CEMA timelines are not met."⁵⁸
- 2006: "The Board does recognize stakeholder frustration with the pace of developing targets and timelines for IFN [instream flow needs for the Athabasca River], water quality, watershed integrity, wildlife, reclamation performance, ozone management, and acid deposition. ... The Board believes it would be appropriate for Alberta to initiate a review of CEMA's purpose, priorities, and timelines. ... The Board would also support a review by Alberta of the outstanding issues arising from the RSDS [Regional Sustainable Development Strategy for the Athabasca Oil Sands Region] with a view to determining whether financial and other human resources are available in the timeframe required to address those issues within their set timelines."⁵⁹

⁵⁶ Alberta Energy And Utilities Board, Report of the Joint Review Panel Established by the Alberta Energy and Utilities Board and the Government of Canada, *EUB Decision 2007-013: Imperial Oil Resources Ventures Limited, Application for an Oil Sands Mine and Bitumen Processing Facility (Kearl Oil Sands Project) in the Fort McMurray Area*, 2007.

⁵⁷ EUB, *TrueNorth Energy Corporation Application to Construct and Operate an Oil Sands Mine and Cogeneration Plant in the Fort McMurray Area*, *EUB Decision 2002-089*, October 22, 2002, p. 55 (emphasis added).

⁵⁸ EUB and Government of Canada, *Shell Canada Ltd. Applications for an Oil Sands Mine, Bitumen Extraction Plant, Cogeneration Plant and Water Pipeline, Fort McMurray Area*, *EUB Decision 2004-009*, February 5, 2004, p. 78.

⁵⁹ EUB, *Suncor Energy Inc. Application for Expansion of an Oil Sands Mine (North Steepbank Mine Extension) and a Bitumen Upgrading Facility (Voyageur Upgrader) in the Fort McMurray Area*, *EUB Decision 2006-112*, November 14, 2006, p. 68.

2006: “The Joint Panel observes, however, that oil sands development is proceeding, not waiting for the environmental management frameworks that CEMA is charged with developing.”

“It is the Joint Panel’s view that CEMA has the potential to be much more effective in developing regional environmental protection and sustainable development recommendations. The Joint Panel believes that the ultimate responsibility for regulating the cumulative effects from oil sands development lies with government. The Joint Panel therefore recommends that all government agencies place a greater priority on their roles within CEMA. The Joint Panel recommends that all CEMA stakeholders take steps to prioritize their effective participation in, contributions to, and leadership of CEMA and its working groups.”

“If fully researched recommendations cannot be delivered within target timelines, CEMA groups need to make interim recommendations on appropriate environmentally precautionary measures that can be used until recommendations from CEMA are completed. Failing that, the Joint Panel recommends that Alberta implement an interim policy, framework or regulatory control as appropriate.”⁶⁰

This system failure is only becoming more apparent and more urgent. As noted by the joint panel in the 2007 Imperial Kearl Mine Project decision report, “[w]ith each additional oil sands project, the growing demands and the *absence of sustainable long-term solutions* weigh more heavily in the determination of the public interest.”⁶¹

The Joint Panel also noted Environment Canada’s submissions that cumulative development in the oil sands region was potentially exceeding CEMA’s capacity to effectively develop management frameworks:

[Environment Canada] indicated that it was a full member of CEMA and continued to support the CEMA initiative. However, [Environment Canada] also stated that it remained concerned that the rate of industrial development in the Athabasca Oil Sands Area was potentially exceeding the capacity of CEMA to effectively develop management frameworks.⁶²

CEMA’s performance and the governments’ failure to backstop and support CEMA projects are not only evident in ERCB and joint panel decision reports, but are also shared by representatives from a range of CEMA member organizations who are frustrated with the slow pace of their work relative to the rapid rate of new mineral leases, project approvals and development in the oil sands region.

⁶⁰ EUB and Government of Canada, *Albian Sands Energy Inc. Application to Expand the Oil Sands Mining and Processing Plant Facilities at the Muskeg River Mine, Joint Panel Report and EUB Decision 2006-128*, December 17, 2006, p. 78.

⁶¹ Alberta Energy And Utilities Board. Report of the Joint Review Panel Established by the Alberta Energy and Utilities Board and the Government of Canada, *EUB Decision 2007-013: Imperial Oil Resources Ventures Limited, Application for an Oil Sands Mine and Bitumen Processing Facility (Kearl Oil Sands Project) in the Fort McMurray Area*, 2007, p. 10.

⁶² *Ibid.*, p. 100.

...even when the Board acknowledges a cumulative effects problem in an area for a proposed project, the Board typically licences the project on the ground that its individual impacts are so low that it will make only a relatively minor contribution to the cumulative effects problem. This approach promotes the *death by a thousand cuts* syndrome and hinders any meaningful effort to account for and properly manage the cumulative effects of *all* activities, many of which are individually minor...The EUB's own umbrella legislation, the *Energy Resources Conservation Act*, gives the Board ample authority, if not an implied duty, to consider cumulative effects in deciding whether the "public interest" warrants licensing energy resource projects.⁶³

3.4 Losing Confidence & Leaving CEMA

Two key Aboriginal stakeholders — the Athabasca Chipewyan First Nation (ACFN) and the Mikisew Cree First Nation (MCFN), both of whose traditional territories are directly affected and whose primary communities are downstream of the oil sands — left CEMA in 2006 and 2007, respectively. The ACFN provided a suite of reasons to justify their withdrawal from CEMA, including

- concerns that members of CEMA are participating for the interest of their organization versus for the health and sustainability of the environment
- the lack of results compared to what was envisioned by the RSDS
- perceived power inequities amongst member groups (e.g., government and industry control the agenda)
- its belief that industry funding of CEMA drives the work that is being done⁶⁴

MCFN noted in their withdrawal letter that "[w]hile we are encouraged by the [Management Committee's] resolve to improve CEMA (i.e., internal CEMA review, letter from membership of non-consultation), we are not convinced that our long-standing concerns can be addressed by CEMA at this time."⁶⁵

The Chipewyan Prairie First Nation is also no longer listed as a CEMA member.

⁶³ Wenig, M. M., 2002, Cumulative Effects: Oil, Gas, and Biodiversity, *LawNow*, 27: 27–29.

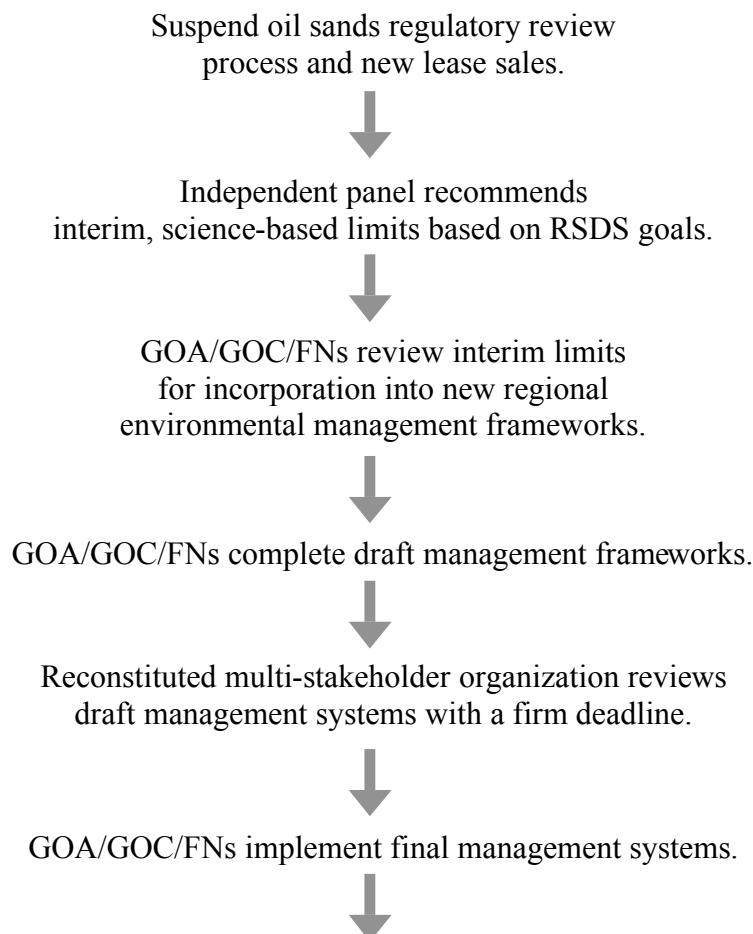
⁶⁴ Letter to Sue Lowell, Former CEMA President, from Blair Whenham, Director of the ACFN, dated November 6, 2006.

⁶⁵ Letter to Sue Lowell, Former CEMA President, from Chief Roxanne Marcel of the MCFN, dated February 2, 2007.

4. A Proposed Path Forward

After more than eight years of trying to make the current approach to environmental management in the Athabasca Boreal region work, it is clear that it has failed. As a result, the regional environment remains threatened by the cumulative environmental impacts of industrial development. This section proposes a path forward to help make up for lost time and past failures. A temporary suspension in new approvals and lease sales is warranted given that key pieces for environmental management need to be developed and implemented. Interim limits set by an independent panel are required during the suspension to safeguard the environment. The temporary suspension would allow for environmental limits to be developed, the re-constitution of a new stakeholder engagement group that not only builds on past lessons learned, but that is compatible to regional planning initiatives such as the North East Regional Plan and the Land Use Framework.

The Pathway to Develop Environmental Systems



Implementation of management systems and ongoing monitoring.



Regulatory review process resumes
for new oil sands projects and lease sales.



Reconstituted CEMA engages in ongoing review
of management systems and makes recommendations
for adaptive management to GOA/GOC/FNs.



GOA/GOC/FNs implement adaptive management.

4.1 Suspending approvals until environmental management is implemented

We believe that the GOC and GOA can no longer delay establishing protective interim limits for the full range of air pollutants and toxics, water use, water pollution, land disturbance, tailings, and reclamation. Precautionary interim limits can and should be set immediately based on current knowledge and information. Ongoing multi-stakeholder engagement in the absence of protective interim limits has proven to be ineffective.

A temporary suspension on new approvals is in the best interest of Albertans until there is an environmental management system that includes protective limits. Key aboriginal stakeholders (Treaties 6, 7 and 8), prominent academic professionals and numerous environmental organizations have all called for a moratorium on oil sands development.⁶⁶

The current oil sands tenure regime is a major contributor to the environmental and social problems facing oil sands development. It contributes to the failure of CEMA to develop effective and timely management recommendations that will protect the environment. A temporary suspension on new oil sands lease sales until environmental limits are established in the Athabasca Boreal Region is essential.

Prior to resuming project approvals and lease sales, the Ministers of Energy, Environment and Sustainable Resource Development should ensure that land use planning for the oil sands region is completed and integrated so that it can inform rights-issuance decisions.⁶⁷ This step would include a strong regional plan with established ecological thresholds and environmental management systems. These efforts must be complemented by the integrated and coordinated implementation of a land use plan for the oil sands region and also by the establishment of a network of protected areas in northeastern Alberta.

⁶⁶ *No New Approvals for Tar Sands Development*, 2008, www.nonewapprovals.ca.

⁶⁷ See: Holroyd, Peggy, Simon Dyer and Dan Woynillowicz, *Haste Makes Waste: The Need for a New Oil Sands Tenure Regime*. Oil Sands Issue Paper No. 4. Calgary, Alberta: Pembina Institute, 2007.

Implementing a suspension on lease sales and approvals until a management system and plan is in place is not beyond the scope or the experience of the ERCB. The ERCB has exercised its ability to deny projects in the past if proper policies/systems are not in place to ensure development is in the public interest. For example, the ERCB executed a gas over bitumen moratorium coming out of 1998 ERCB inquiry.⁶⁸ Gas wells that were denied recovery received a “gas over bitumen” royalty adjustment.⁶⁹

“... the *Energy Resources Conservation Act*, gives the Board ample authority, if not an implied duty, to consider cumulative effects in deciding whether the “public interest” warrants licensing energy resource projects. Besides its project by project licensing authority, the Board has broad powers to conduct public hearings — known as “inquiries” — into matters that relate to its licensing function.”⁷⁰

The Board should also consider imposing phased or complete moratoria on new oil and gas developments in those regions of concern, pending the Province’s development of regional plans that set limits on unacceptable cumulative effects. This kind of remedy is nothing new.

The Board has long been willing to halt drilling of one kind of hydrocarbon when necessary to conserve future production of another hydrocarbon in the same area. This non-renewable resource conservation tool provides a solid precedent for considering moratoria, when needed, to conserve renewable resources, like biodiversity.⁷¹

The ERCB should also exercise its responsibility to routinely consider whether regional cumulative effects thresholds exist and, if so, whether they are being approached or have been exceeded.⁷² Former ERCB chairman Neil McCrank advocated for regional hearings to replace the current project by project approach, to help examine the overall extent of development.⁷³

4.1.1 Independent Panel of Experts Identify Interim Environmental Impact Limits

Limits can be defined as “logical and inevitable outcome[s] of a serious commitment to the threshold-based approach to cumulative effects management.”⁷⁴

⁶⁸ Alberta Energy and Utilities Board. “EUB Inquiry – Gas/Bitumen Production in Oil Sands Areas” www.ercb.ca/portal/server.pt?open=18&objID=2418392&qid=57264608&rank=1&parentname=SearchResult&parentid=2&mode=2&in_hi_userid=240&cached=true.

⁶⁹ Government of Alberta, “Information Letter 2004-36, Subject: Gas over Bitumen” inform.energy.gov.ab.ca/Documents/Published/IL-2004-36.pdf.

⁷⁰ Wenig, M. M., 2002, Cumulative Effects: Oil, Gas, and Biodiversity. *LawNow*, 27: 27–29, p. 27.

⁷¹ Wenig, M. M., 2002, Cumulative Effects: Oil, Gas, and Biodiversity. *LawNow*, 27: 27–29.

⁷² Wenig, M. M., 2002, Cumulative Effects: Oil, Gas, and Biodiversity. *LawNow*, 27: 27–29.

⁷³ Neil McCrank, Chairman Alberta Energy and Utilities Board, Presentation: “The Long View: Regulating an Energy Superpower in 2025,” 2007.

⁷⁴ Kennett, Steven A., *From Science-Based Thresholds to Regulatory Limits: Implementation Issues for Cumulative Effects Management*, prepared for Environment Canada, Northern Division, Canadian Institute of Resources Law, 2006, p. 5.

All management frameworks that are incomplete or lack true limits need to have interim limits set before development can proceed. Without interim constraints during the planning phase, development accelerates without any clear understanding of the impacts. This has been the modus operandi in the oil sands region and there is an urgent need for interim limits to be established and enforced.

Interim measures allow for effective planning in areas where development pressures are particularly intense and where important land-use values may be compromised by continuing development during the planning process. Finally, a set of innovative management tools should be deployed to enable decision makers to achieve landscape-scale objectives by ensuring activity and impact levels remain within specified limits.⁷⁵

The recommendation to implement limits to manage oil sands development is not new. Joint panel decision reports for major oil sands projects have expressed concern regarding CEMA and its ability to set limits and address cumulative effects. The Panel for Imperial's Kearl mining project notes that "[t]he existence of regulatory standards and thresholds is an important element in determining whether a project is in the public interest from a cumulative impacts perspective and whether the impacts need further mitigation if the project is to proceed."⁷⁶

Establishing interim limits is also critical to ensuring that any simultaneous efforts in planning or governance process are not dated before they are finalized. In other words, interim measures resolve the problem of shooting at a moving target. They can also avoid the trap of creating incentives for parties interested in the status quo to drag out the planning process while proceeding full speed with development approvals.⁷⁷ As such, we recommend establishing a blue-ribbon panel of scientists and Traditional Ecological Knowledge (TEK) experts from academia and consulting that would be tasked with

1. Recommending interim environmental protection limits using the best-available existing science.
2. Recommending a research/data collection (i.e., monitoring) agenda to validate and/or strengthen the scientific basis of environmental protection limits.

The panel should have access to all scientific studies conducted by the GOA, GOC and CEMA, as well as the academic literature. In addition, the panel should have access to all raw data from government and industry scientific studies, environmental assessments and environmental monitoring. The panel should engage First Nations and Métis elders to incorporate TEK in the development of environmental protection limits.

⁷⁵ Kennett, Steven A., and Richard R. Schneider, *Alberta by Design: A Blueprint for an Effective Land-Use Framework*, the Pembina Institute and the Canadian Parks and Wilderness Society – Northern Alberta, 2008.

⁷⁶ Alberta Energy and Utilities Board. Report of the Joint Review Panel Established by the Alberta Energy and Utilities Board and the Government of Canada, *EUB Decision 2007-013: Imperial Oil Resources Ventures Limited, Application for an Oil Sands Mine and Bitumen Processing Facility (Kearl Oil Sands Project) in the Fort McMurray Area*, 2007, p. 92.

⁷⁷ Kennett, Steven A., and Richard R. Schneider, *Alberta by Design: A Blueprint for an Effective Land-Use Framework*, the Pembina Institute and the Canadian Parks and Wilderness Society – Northern Alberta, 2008.

The panel should have scientists from the GOA and GOC at their disposal and, as required, be able to engage consultants for essential analyses that have not yet been completed. The latter are expected to be minimal given the amount of data collection and analysis already undertaken by various bodies. A timeline for completion of the panel's tasks should be clearly articulated. It is expected that the panel could review materials and recommend interim limits in less than 12 months.

4.1.2 Integrating Limits into Environmental Management Systems

The Governments of Alberta, Canada and the governments of the five Athabasca Tribal Council First Nations should use the interim environmental protection limits to inform regional environmental management systems, and, in turn, as the basis for making decisions about whether and how future oil sands development occurs. Further, existing approvals should be re-visited in light of these limits and amended as required to ensure these limits are not exceeded.

The governments of Alberta, Canada and the First Nations should develop draft regional environmental management systems based on the environmental protection limits and consult all other interested stakeholders, possibly through the re-structured/reformed multi-stakeholder association (see below). That group of stakeholders should be given a fixed schedule to provide input, including the identification of areas of consensus.

The governments of Alberta, Canada and the First Nations should then finalize and implement regional environmental management and monitoring systems.

Upon completion of all environmental management systems, oil sands lease sales and project review and approvals could re-commence, informed by the environmental protection limits and associated environmental management systems.

4.1.3 Adaptive Management Process

The governments of Alberta, Canada and the First Nations should direct ongoing monitoring and additional scientific study (as per above) using funds collected from industry (under the existing CEMA funding formula) to carry out adaptive management reviews of regional environmental management systems. These reviews and recommendations for adjustments to the environmental management system could be done through the re-structured/reformed CEMA (see below) with specific timelines.

4.2 Re-constitute Stakeholder Engagement

In spite of the best efforts of industry, government, First Nations and ENGO members, we conclude that the role that CEMA currently plays in environmental management in the Athabasca Boreal Region — to define protective limits and to recommend to government protective management systems — has failed and will continue to fail.

4.2.1 Summary of Lessons Learned from CEMA Experience

In the eight years since CEMA was established the government has not implemented protective limits in spite of rapid expansion of approved oil sands activity. Precautionary interim limits can be set with current knowledge and information. It is no longer appropriate to defer these issues to CEMA. The key problems with CEMA are listed below. These problems serve as important lessons learned going forward.

- Too much priority and resources of government have been dedicated to approving new projects and not enough priority and resources have been dedicated to setting protective limits.
- The GOA has not maintained clear accountability between itself and CEMA, nor has it committed senior staff to participating in the process.
- The GOA has abandoned the RSDS, a cornerstone of CEMA's mandate and direction, without providing any new direction to CEMA.
- Parties that have a clear stake in the outcome of the CEMA process are not represented at CEMA, particularly Alberta Energy and several First Nations.
- CEMA has been misused in the provincial/federal regulatory approval processes, thereby undermining both CEMA and the legitimacy of the approval process. CEMA's work on an issue should not have been accepted as mitigation for cumulative impacts for large oil sands projects.
- CEMA is dominated by its industry members. Industry has too many representatives relative to other sectors. Industry has too much control over CEMA's budget.

4.2.2 Proposed Re-Constitution of Stakeholder Engagement

We recommend that CEMA members dissolve the current CEMA organization. Much good work has been done by CEMA to secure a high quality staff team, implementing effective governance mechanisms and a sound finance and administration structure. This “backbone” of CEMA is an incredibly important asset and is still very much needed.

The CEMA backbone should be preserved as part of a new sector based multi-stakeholder organization that has as its primary functions:

- a) Review and evaluation of interim limits and existing management systems as set by the governments of Alberta, Canada and the First Nations.⁷⁸
- b) Ongoing research on cumulative impact management in the Athabasca Boreal Region to recommend adaptive management to the GOA and GOC.

The new organization may also serve as a forum for dialogue on cumulative environmental impact issues — with a focus on identifying priorities and providing strategic advice on potential solutions using a non-consensus approach. The new organization must include participation by the MCFN and the ACFN and other key First Nation governments as well as the Alberta Department of Energy.

CEMA's current governance structure based on one-member/one-representative must be changed. We recognize there is a range of perspectives on the appropriate governance structure and approach to decision making and propose the following option for consideration by the stakeholders:

⁷⁸ This proposal is based on the premise that government moves quickly to implement protective interim limits.

- Establish sector-based representation consistent with the structure used by the Clean Air Strategic Alliance.⁷⁹
- Government decision-making agencies are full participants in the process.
- The GOA and GOC will clearly request specific pieces of work that include deliverables and a schedule.
- Operate by consensus. The organization must agree by consensus on the scope of the work that it undertakes and be able to reject work that its members do not believe can be resolved by consensus.
- Set strict timelines for tasks. Consensus should be sought within timelines. Each working group should have an experienced process manager and access to external facilitators when needed. If consensus cannot be reached, all viewpoints should be provided to government decision-makers for implementation.
- Follow strict procedural rules for documenting discussions, decisions and decision-making.
- Present the recommendations of the new organization to the GOA, GOC and the five Athabasca-region First Nations Governments for implementation.

The GOA and GOC must no longer assert that CEMA's — or any new multi-stakeholder organization's — work on issues qualifies as mitigation in regulatory approval processes. The GOA and GOC must strengthen their roles in CEMA; plans or policies that conflict with environmental management outcomes must be harmonized; and government representatives that participate in the reconstituted CEMA process must have decision-making authority and experience on issues. In addition, the GOA must provide a clear commitment to backstop CEMA's work by committing to provide its own regulation whether or not CEMA succeeds in reaching consensus recommendations.

The new organization should be funded by government and industry. However, industry support should no longer be voluntary but a requirement of oil sands mineral tenure, the regulatory approvals process and approvals/licenses.

4.3 Implementing a Regional Land Use Strategy

A fundamental yet missing ingredient for effective environmental management in the oil sands region is an integrated, regional plan. As previously discussed, the RSDS was not implemented and is now obsolete. The proposed North East Regional Plan, to be nested within the Alberta Land-use Framework,⁸⁰ has the potential to serve as an effective instrument that would guide management decisions by linking directly to existing policy and legislation and by drawing from established ecological thresholds. A regional plan for the oil sands region needs to equally consider the social, environmental and economic implications of development. The plan should

⁷⁹ Each individual First Nation would be represented, just as municipal, provincial and federal levels of government will be represented.

⁸⁰ The Land-use Framework ensures the integration and coordination of planning and decision-making at the regional level. In addition, the framework will use cumulative effects management to manage the impacts of development on land, air, water and biodiversity. See www.landuse.gov.ab.ca/index.html.

set clear objectives with timelines and milestones that are publicly transparent through regular reporting. Implementing the plan through either existing or new laws that include a clear statement of principles and objectives will ensure it is binding in future land use decisions. Clearly, any new environmental management systems must be integrated with existing plans and laws to avoid duplication or contradiction. This same approach to regional planning is needed in the Peace/Cold Lake areas in advance of increased development. This report focuses on the Athabasca Boreal Region because of the intense developmental pressures it currently faces. Regardless of the planning system chosen, there is an urgent need to pause new approvals and lease sales until environmental rules are in place.

Appendix: History of the RSDS

Oil sands development began over 40 years ago, but the resource remained vast and inaccessible until the mid 1990s. In 1995 an ambitious strategy to increase production to one million barrels per day by 2020 was introduced by the GOA and industry⁸¹. By the late 1990s it was clear that this target would quickly be exceeded. Government, industry and environmental organizations alike agreed that a strategy was needed to determine how to prevent severe cumulative impacts caused by large-scale oil sands expansion.

In 1998, with more than \$12 billion of anticipated capital investments in the Athabasca oil sands region, Alberta Environment led the creation of the Regional Sustainable Development Strategy (RSDS) for the Athabasca Oil Sands Area.

The purpose of the RSDS was to develop a framework to:⁸²

- Provide support for the continued economic development in the region that addresses environmental needs and resource sustainability.
- Create an enhanced management framework that will adapt to the changing needs of the area, which will guide government's environmental and resource managers.
- Develop a strong foundation of environmental information and science to assist in making decisions on sustainable resource and environmental management in the region.
- Create a way to identify priority regional environmental issues, and to organize the science and monitoring work needed to understand these issues.

Alberta Environment consulted a variety of government agencies, First Nations, industry, and non-government organizations and subsequently identified 72 issues in the RSDS. Issues were divided into a list of 14 themes and three priority categories.⁸³ It was anticipated that the highest priority issues (Category A) would be addressed within two years.

Almost immediately the context in which the RSDS was developed changed. In 2000 the necessary conditions for an oil sands boom were in place. Operating costs had been slashed at the same time that oil prices had risen. The one million barrels per day target was surpassed in 2004. When RSDS implementation started in 2000 there were ten existing and approved projects and seven planned projects.⁸⁴ By 2005 there were 18 existing or approved projects and a further 10 planned projects.⁸⁵ Ten years later RSDS is only now undergoing a revision within the GOA.

⁸¹ *The Oil Sands: A New Energy Vision for Canada*, 1995.

⁸² *Regional Sustainable Development Strategy for the Athabasca Oil Sands Area*, Alberta Environment, July 1999, p. 1, www3.gov.ab.ca/env/regions/neb/rsds/, accessed March 24, 2004.

⁸³ Cumulative Environmental Management Association, 2008, "About CEMA," www.cemaonline.ca/content/section/4/38/.

⁸⁴ Spaling, Harry, Janelle Zwier, William Ross and Roger Creasey. "Managing Regional Cumulative Effects of Oil Sands Development in Alberta, Canada," *Journal of Environmental Assessment Policy and Management* 2, no. 4 (2000): 501–28, p. 505.

⁸⁵ Imperial Oil, 2005, *Imperial Oil Resources Kearl Oil Sands Project Environmental Impact Assessment Volume 4, Subsection 2-2*.