

Alberta provincial wetland policy

At a Glance

A province-wide Alberta wetland policy has been under development for at least seven years. Albertans expect that the final policy will acknowledge the true ecological value of wetlands. It is critical that any new policy ensures that wetlands are protected proactively; a key step in doing so is to require developers to avoid and minimize impacts, and to compensate for damage with the goal of ensuring no net loss of wetlands in Alberta. This is especially important in the Green Area, as oilsands development will cause significant loss and alteration of wetlands¹ unless there are sound wetland management policies and guidelines in place.

Background

Wetlands perform numerous important ecological and social functions. For example, wetlands sequester atmospheric carbon, moderate storm and melt-water runoff, filter and purify water, provide habitat for a disproportionately large abundance and diversity of wildlife, and have economic, recreational, aesthetic, cultural, and spiritual value to humans.² The Government of Alberta's renewed Water for Life Strategy affirms the importance of these wetland values in its goal of ensuring healthy aquatic ecosystems.³ Management

of wetlands affected by development activities in the "White Area" (settled region) of Alberta are currently governed by an interim wetland policy⁴ and guidelines enabled by the Water Act.⁵ However, to date there is no such policy or guidelines for wetland management in the "Green Area" (crown land) of the province.

In 2005, the Alberta Water Council (AWC) established the multi-stakeholder Wetland Policy Project Team to develop recommendations for a new provincial wetland policy and implementation plan, which were approved by the AWC board and submitted to the Minister of the Environment in September of 2008.⁶ The submission included a non-consensus letter from the Alberta Chamber of Resources and the Canadian Association of Petroleum Producers.⁷ These two stakeholders objected to the recommendation that there should be no net loss of wetlands in the province, arguing that this is an unreasonable and infeasible requirement for the oilsands industry (but providing no evidence to support such a claim). In October of 2010, after more than two years of deliberation, the Minister of the Environment announced that Alberta would not be adopting the wetland policy recommendations.⁸

The Government of Alberta has since re-committed to establish a provincial wetland policy. In 2010, the provincial government released *Wetlands – Policy Intent*, which states that the future policy's intended goal will be to conserve, restore, protect, and

manage Alberta's wetlands to sustain the benefits they provide to the environment, society and economy.⁹ The policy intent document states that the priorities for wetland management in the province are, first, avoiding adverse effects on wetlands, followed by minimization, and, as a last resort, compensation. It is expected that final policy will include a detailed system for assessing wetland value and a related hierarchy for the required mitigation of adverse effects on wetlands.

The details of the new policy's wetland valuation system and mitigation requirements are currently unknown. It may consider human uses and the relative abundance of wetland types when assessing the value of a particular wetland that has been (or could be) adversely impacted by human activities — in contrast to the current interim White Area wetland policy, which assesses only the area of adversely impacted wetland. Compensation measures under the new policy may require replacing wetlands, but could also include non-replacement measures such as funding wetland-related research and education programs. Under this system, wetland types that are abundant in a region and have low human use would be deemed less valuable, and therefore mitigation requirements for such wetlands would be less stringent and may result in less than 1:1 compensation. Non-replacement compensation could therefore be acceptable mitigation for substantial losses of certain wetlands and wetlands types, despite their ecological functional significance. **If this is the approach adopted, the final Alberta Wetland Policy will still lack a “no net loss” component — thus, substantial loss in wetland area and function may be permitted.**

Discussion

Ensuring that there is no net loss of wetlands is a critical element of responsible wetland management and responsible oilsands development. The mineable oilsands area is 4,750 square kilometres, 99 per cent of which is already under lease for oilsands mining activity¹⁰, and up to 65 per cent of which consists of wetlands.¹¹ Thus, oilsands mining activity alone could potentially result in the loss of up to 300,000 hectares of wetlands over the next several decades. Oilsands mining projects that were already approved as of November 2011 are expected to result in the loss of approximately 28,000 hectares of peatlands (bog and fen wetlands).¹² Another estimate suggests that existing, approved, and proposed oilsands mining and in situ developments combined could result in the loss of as much as 460,000 hectares of peatlands.¹³

Maintaining the area and functionality of peatlands in Alberta is especially important. Peatlands sequester atmospheric carbon, but the release of greenhouse gases from drained peatlands mean that they become a source of atmospheric carbon if as little as five per cent of the peatlands within a given area are lost.¹⁴ Well over five per cent of the peatlands in Alberta's oilsands region stand to be destroyed by the development of approved oilsands extraction projects, and thus could result in considerable additional greenhouse gas emissions from an already carbon-intensive industry.^{15,16} Moreover, because restoration of peatland is very difficult,¹⁷ peatlands disturbed by oilsands extraction will likely be replaced by other landcover types that are less challenging for oilsands operators to construct (e.g., upland forests, open-water wetlands, and end pit lakes)¹⁸ unless strict policy guidelines require type-for-type replacement of lost wetlands.

Claims that wetland replacement compensation costs are infeasible and cost prohibitive for the oilsands industry have never been substantiated. Industry representatives have not demonstrated that full compensation for wetlands with a minimum compensation value of 1:1 for the most common wetlands is not a reasonable goal and have not provided public wetland mitigation cost estimates. Moreover, independent studies have estimated that wetland reclamation costs are lower for oilsands than for other extractive industries, relative to the typical revenue and capital expenditures of oilsands operators.¹⁹

The new provincial wetland policy needs to align with reclamation requirements and regional environmental objectives, such as regional plans under the Land Use Framework. However, most regional plans have not yet been completed, and specific information on how the new wetland policy will be administered and achieved within them has not been made publicly available. The integration of province-wide, potentially complex, wetland valuation and mitigation systems with yet-to-be-determined regional wetland objectives could be extremely difficult and could make the new wetland policy very challenging for regulators to successfully implement.

Solutions

Alberta's wetland policy must ensure that there is no net loss of wetlands in the province, especially of peatlands in the oilsands region. This is in line with the expectation that Albertans have for wetland management and responsible oilsands development. The final Alberta Wetland Policy can provide strong guidance for wetland management in the province and demonstrate world-class environmental

stewardship if the following important elements are included.

- **A no-net-loss approach:** Albertans expect the ecological extent and functionality of wetlands to be conserved. Embedding a strict “no net loss” component in the new wetland policy will demonstrate the Government of Alberta’s commitment to wisely stewarding public resources and the environment. Relative regional abundance and human values of wetlands should not alter the requirement for on-the-ground mitigation of adverse impacts. Replacement compensation or restoration within the local area in which a wetland is impacted should be required — or at the very least, equivalent conservation offsets outside of the local area should be secured and maintained in perpetuity.
- **Clear rules for avoidance, minimization and compensation:** The new provincial wetland policy should clearly identify the circumstances under which avoidance or minimization of adverse impacts on wetlands is required versus circumstances under which adverse impacts are permissible contingent upon compensation. Terms and phrases that could be subject to interpretation should be avoided or clearly defined (e.g., the definition of “permanent wetland loss” or the circumstances in which replacement compensation is “non-practicable”).
- **Wetland valuation approaches that are consistent and simple for regulators to administer:** The new provincial wetland policy should provide clear guidance for regional wetland management outcomes. This includes clear articulation of how it will be integrated, administered, and

regulated within regional plans that are still under development.

- [A requirement for compensation for all wetland types at a ratio of at least 1:1 for the most abundant wetland types.](#)
Compensation ratios for replacement wetlands should be clearly identified and be at least 1:1. A replacement ratio greater than 1:1 would be even more prudent, given that not all replacement wetlands will successfully achieve full ecological functionality.
- [The exclusion of compensation options that do not lead to restoration or securement of threatened wetlands.](#)
Options such as research, education or in-lieu payments for other activities may be cheaper than on-the-ground compensation mitigation, but do nothing to replace valuable wetlands. Ensuring that private industries do not externalize environmental costs will help them to maintain their social license to operate in the province; any claims that wetland compensation is cost-prohibitive should at very least be substantiated by credible economic modeling. The interests of one or two industrial sectors should not take precedence over environmental sustainability.

A provincial wetland policy is long overdue in Alberta. After more than seven years of development, Albertans expect that the final policy will acknowledge the true ecological value of wetlands and the true costs associated with their loss. A strong and responsible Alberta Wetland Policy will outline clear, effective mechanisms to achieve regional environmental objectives and ensure that there is no net loss of wetlands in Alberta.

¹ Peter Lee, and Ryan Cheng, *Bitumen and Biocarbon: Land Use Conversions and Loss of*

Biological Carbon Due to Bitumen Operations in the Boreal Forests of Alberta, Canada (Global Forest Watch Canada, 2009).

http://www.globalforestwatch.ca/climateandforests/bitumenbiocarbon/BioCarbon_WEB_LR.pdf

² Lee Foote, "Threshold considerations and wetland reclamation in Alberta's mineable oil sands," *Ecology and Society* 17, no. 1 (2012), 35.

³ Alberta Environment and Sustainable Resource Development, *Water for Life: A Renewal* (2008), 10. <http://environment.gov.ab.ca/info/library/8035.pdf>

⁴ Alberta Water Resources Commission, *Wetland Management in the Settled Region Area of Alberta – An Interim Policy* (1993).

<http://environment.gov.ab.ca/info/library/6169.pdf>

⁵ Alberta Environment, *Provincial Wetland Restoration/Compensation Guide* (2007). http://environment.alberta.ca/documents/Provincial_Wetland_Restoration_Compensation_Guide_Feb_2007.pdf

⁶ Alberta Water Council, "Wetland Policy", <http://www.awchome.ca/Projects/WetlandPolicy/tabid/103/Default.aspx> (accessed January 30, 2013).

⁷ Alberta Water Council, "Wetland Policy Project Team Non-consensus Letters." <http://www.awchome.ca/Portals/0/pdfs/WPPT%20on-consensus%20Letters.pdf> (accessed January 30, 2013)

⁸ Kelly Cryderman, "Alberta dilutes wetland defense," *Calgary Herald*, October 30, 2010. <http://www2.canada.com/calgaryherald/news/city/story.html?id=408315c5-15ad-4d72-9879-2435cd1ab705&p=1>

⁹ Wetlands – Policy Intent (2010) is publicly available from Alberta Environment and Sustainable Resource Development on request. Two draft discussion papers relating to the development of a wetland policy for Alberta are not publicly available, but The Pembina Institute has been permitted to review embargoed copies by virtue of membership in the Alberta Environmental Network, one of the participants in the multi-sector working groups that provided input during the provincial wetland policy development process.

¹⁰ Alberta Energy, *Alberta's Leased Oil Sands Area* (2012). <http://www.energy.gov.ab.ca/LandAccess/pdfs/OSAagreeStats.pdf>

¹¹ M. Raine, I. Mackenzie, and I. Gilchrist, *Terrestrial vegetation, wetlands and forest resources baseline*, CNRL Horizon Project Environmental

Impact Assessment Volume 6, Appendix B. Report # 012-2220. (Golder Associates, 2002).

¹² R.C. Rooney, S.E. Bayley, and D.W. Schindler, “Oil sands mining and reclamation cause massive loss of peatland and stored carbon,” *Proceedings of the National Academy of Sciences* 109, no. 13 (2012). <http://www.pnas.org/content/early/2012/03/06/1117693108.full.pdf>

¹³ *Bitumen and Biocarbon*

¹⁴ J.M. Waddington, K.D. Warner, and G.W. Kennedy, “Cutover peatlands: a persistent source of atmospheric CO₂,” *Global Biogeochemical Cycles* 16, no. 1 (2002), 1002. 10.1029/2001GB001398.

¹⁵ *Bitumen and Biocarbon*.

¹⁶ “Oil sands mining and reclamation cause massive loss of peatland.”

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ “Threshold considerations and wetland reclamation.”