

The Right to a Healthy Environment

Documenting the need for
environmental rights in Canada

Case Study 3

Regional impacts of oilsands development in northern Alberta

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April 2017

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The Right to a Healthy Environment

Documenting the need for environmental rights in Canada

Case Study 3: Regional impacts of oilsands development in northern Alberta

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Right to a healthy environment

Do Canadians have a right to a healthy environment, or to be protected from environmental harms? Such rights are recognized in more than 110 countries around the world, but not, however, in Canada.¹

The idea of recognizing a right to a healthy environment in the Canadian Charter of Rights and Freedoms has been promoted by a number of groups.² Recognizing this right in the Charter would enshrine environmental protection under Canada's highest law, which would help ensure that laws across the country are consistent in protecting the health of citizens; that a standard of environmental quality is set for all groups; and that environmental laws are protected from further degradation.^{3 4}

Currently, there is no provision in the Canadian Charter of Rights and Freedoms to explicitly protect the environment. Instead, environmental issues or concerns are often considered but one of many "interests" in front of the courts. However, it is possible that current provisions under the Charter regarding individual rights can be interpreted to include more broad protection for the environment, without amending the document.⁵

Section 7 of the Charter is often considered to be a likely provision that can be read to include environmental protections. S. 7 guarantees the "right to life, liberty, and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice."⁶ How s. 7 or other sections of the Charter can be

¹ Ecojustice, "Right to a Healthy Environment". <http://www.ecojustice.ca/case/right-to-a-healthy-environment/>

² David Suzuki Foundation, "Blue Dot." <http://bluedot.ca>

³ Ecojustice, *The Right to a Healthy Environment: Canada's Time to Act* (2015) 6. https://www.ecojustice.ca/wp-content/uploads/2015/04/Right_to_a_healthy_environment_FINAL.pdf

⁴ David R. Boyd, *The Constitutional Right to a Healthy Environment*, (July 2012). http://www.environmentmagazine.org/Archives/Back_Issues/2012/July-August_2012/constitutional-rights-full.html

⁵ Lynda M. Collins, "An Ecologically Literate Reading of the Canadian Charter of Rights and Freedoms," *Windsor Review of Legal and Social Issues* 26 (2009), 8.

⁶ Canadian Charter of Rights and Freedoms, s 7, Part I of the Constitution Act, 1982, being Schedule B to the Canada Act 1982 (UK), 1982, c 11.

interpreted to include environmental protections is outside the scope of this work and has been discussed at great length by other scholars.⁷

The argument has been persuasively made by other organizations and experts that a right to a healthy environment is possible and can be practically implemented;⁸ and it can be effective at improving environmental outcomes and better fulfilling other human rights. As existing rights are violated by environmental harms, placing environmental protection on a greater footing as a right instead of an interest will achieve greater fulfillment of those rights.

Documenting the need for a right to a healthy environment

To illustrate the need for these laws, it is important to document examples where existing rights have been impacted by the insufficient footing of environmental protection. We have compiled three case studies highlighting the adverse impact on people when environmental rights are lacking and regulatory systems failed to prevent harm through the environment. All three case studies look back to previous energy development in Alberta. Each focuses on a different governing body and aspect of its regulatory system, examining the impacts from the level of the individual, the community, and the region. Although in some instances the regulatory systems have shifted partly in response to some of these issues, the pattern of rights impacts across different regulatory bodies, systems, and industries highlights the need for broader environmental protections to prevent these from repeating.

Our three case studies are:

1. Individual impacts of intensive hydraulic fracturing activity in rural Alberta

Looking to a region northwest of Calgary known as the Lochend, this case study examines the negative cumulative impacts from numerous hydraulic fracturing operations on individuals residing nearby. It explores the failure of a regulatory system that often denied individuals a say in initial project decisions that may impact them, and the failure of the former Alberta Environment, Energy Resource

⁷ “An Ecologically Literate Reading of the Canadian Charter of Rights and Freedoms,” 21.

⁸ Avnish Nanda, “Constitutionalizing Environmental Protections Under the Charter: Part 1-4,” *The Court*, March 2014. <https://www.thecourt.ca/constitutionalizing-environmental-protections-under-the-charter-part-i/>

Conservation Board and the later established Alberta Energy Regulator to monitor and manage the cumulative effects of multiple projects.

2. Community impacts of air pollution in urban central Alberta

The second case study examines the negative impacts on air quality on communities in central Alberta when coal-fired power plants were approved despite predicted exceedances of provincial air quality standards and inadequate cumulative effects modelling. Additionally, it examines the regulatory process that excludes parties with an interest in the matter who can provide important information to aid in reducing the impacts of these approvals on communities downwind.

3. Regional impacts of oilsands development in northern Alberta

The third case study examines the implementation of regional planning in the Lower Athabasca Region which began in 2012. This case study primarily focuses on the impacts on First Nation's treaty and aboriginal rights; however, the identified impacts also demonstrate potential violations of human rights under human rights legislation and the Charter. Despite the objectives of regional planning, after four years Alberta's first regional plan does not have the means to prevent cumulative environmental impacts to traditional land, land use, and Indigenous livelihoods and cultural practices.

Our objective was to contribute to discussion for the need for a right to a healthy environment (through either a "reading in" under existing Charter rights or potential Charter amendments), by documenting the human impacts of energy development that are mediated through the environment. Examining both the status quo and more recent efforts of the Alberta government to consider cumulative effects, these case studies demonstrate that processes in place are inadequate to prevent environmental impacts that infringe on currently protected human rights, and that the right to be protected from these impacts needs to be strengthened.

1. Nature and context of industrial activity

1.1 Community and geography

The Lower Athabasca region is a 93,260 km² area in northeast Alberta, and includes most of Alberta's oilsands deposits.⁹ The region is primarily boreal forest, but about 5% of the southern portion of the region is agricultural land.¹⁰ The region is home to multiple industries, and plays an important role in the overall Alberta economy. A major economic driver for the region is development of the oilsands, which represent approximately 95% of Canada's oil reserves.¹¹ The oilsands contributed \$5.2 billion in royalties to the Government of Alberta's coffers in 2013,¹² and was responsible for 26% of direct employment within the region in 2011.¹³ The Alberta oilsands have expanded steadily since the 1960s, and this development has contributed to the formation and expansion of other industries and support services in the region. In addition to both direct and indirect growth from oilsands development, the region is also home to agriculture and forestry activities.

The Alberta Land Stewardship Act, proclaimed in 2009, enabled the Government of Alberta to establish land use and environmental plans for regions throughout the province. Plans established under the act were intended to provide long-term direction and co-ordination, and were meant to balance landscape-scale economic, environmental and social objectives.¹⁴ Through policies and legislation, regional plans were to enable "sustainable development by taking into account of and responding to the cumulative effect of human endeavor and other events".¹⁵ Other legislation that

⁹ 82% of Alberta's oilsands are contained within the Lower Athabasca Region. Alberta Environment and Parks, *Lower Athabasca Regional Plan* (2012), 14.

<https://www.landuse.alberta.ca/RegionalPlans/LowerAthabascaRegion/Pages/default.aspx>

¹⁰ *Lower Athabasca Regional Plan*, 16

¹¹ Alberta Environment and Parks, *Land-use Framework Regional Plans Progress Report 2013* (2014), 5. <https://landuse.alberta.ca/RegionalPlans/LowerAthabascaRegion/LARPPProgress/Pages/default.aspx>

¹² Alberta Energy, "Facts and Statistics." <http://www.energy.alberta.ca/oilsands/791.asp>

¹³ *Land-use Framework Regional Plans Progress Report 2013*, 21.

¹⁴ Government of Alberta, *Alberta Land Stewardship Act, SA 2009, c A-26.8. (2)*

¹⁵ *Alberta Land Stewardship Act, (2)(d)*.

governs environmental impacts or energy development is still relevant, but decision makers that are responsible for approvals and operations under these pieces of legislation must comply with the actions set out in a land use plan.¹⁶

The first of these regional plans, the Lower Athabasca Regional Plan (LARP), was proclaimed in force in September 2012. Although regional plans are meant to address and manage across a variety of industries and municipalities, a significant focus of the LARP is related to energy development, specifically the oilsands. The LARP lays out frameworks with regional limits and triggers for air quality, water quality, biodiversity, tailings, and surface water quantity.¹⁷ Additionally, the LARP creates six new conservation areas and nine provincial recreation areas.

The Alberta Land Stewardship Act provides a mechanism for directly and adversely affected Albertans to request a review of a regional plan. Six First Nations submitted applications for a review of LARP, with the assertion that the implementation of LARP and the cumulative effects of activity in the area have a negative impact on these groups.¹⁸ A Lower Athabasca Regional Plan review panel (LARP review panel) was appointed to review these applications, and concluded their review in 2015.¹⁹

1.1.1 First Nations treaty and ancillary rights

The Lower Athabasca region is within Treaty 6 and Treaty 8 First Nation territory and contains four major municipalities, 12 First Nations, two Métis settlements and several communities with a sizable Métis population. The total population of the Lower Athabasca region was 125,569 in 2013,²⁰ with an estimated 23,000 Indigenous people in the oilsands area.²¹ Approximately 20% of Alberta's First Nations are located in the Lower Athabasca region. While First Nations and Métis communities are present

¹⁶ *Lower Athabasca Regional Plan*, 5.

¹⁷ *Ibid.*, 27.

¹⁸ Alberta Environment and Parks, "Request for Review of LARP."

<https://landuse.alberta.ca/RegionalPlans/LowerAthabascaRegion/LARPRRequestReview/Pages/default.aspx>

¹⁹ Lower Athabasca Regional Plan Review Panel, *Review Panel Report 2015*.

http://landuse.alberta.ca/LandUse Documents/Lower Athabasca Regional Plan Review Panel Recommendations_2016-06-22.pdf

²⁰ This is the most recent estimate for the region as a whole. *Land-use Framework Regional Plans Progress Report 2013*, 23.

²¹ Government of Canada, *Oilsands: Aboriginal People* (2015), 2.

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/eneene/pubpub/pdf/os2015/14-0696-Oil-Sands-Aboriginal-Peoples_access_eng.pdf

throughout the Lower Athabasca region, several communities are located near extensive oilsands development and other industrial activities. In addition to the First Nation reserves and Métis settlements, large areas within the Lower Athabasca are important to First Nations as traditional territories. Portions of this traditional territory overlap with current or proposed industrial developments in the region.

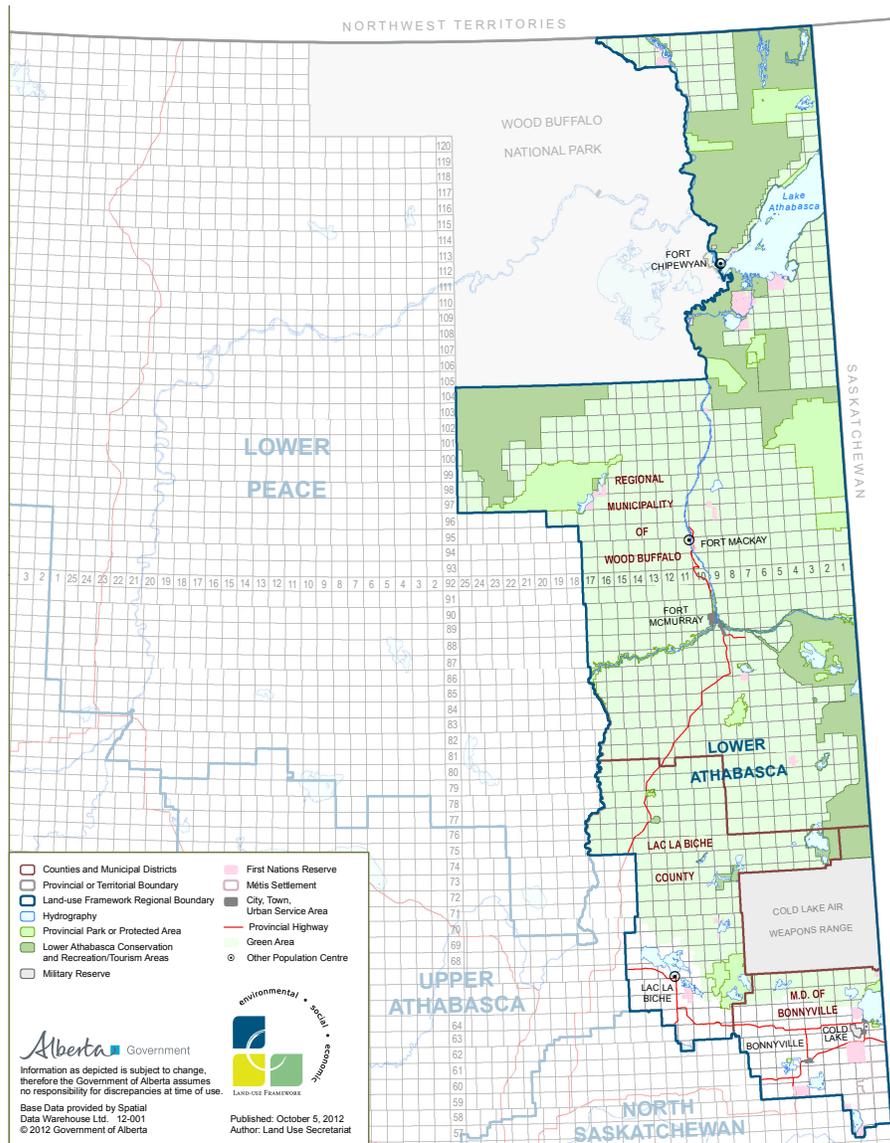


Figure 1: Lower Athabasca Region

Source: Government of Alberta²²

²² Government of Alberta, *LAR Counties and Municipal Districts with Townships* (2012).

<https://landuse.alberta.ca/SiteCollectionDocuments/LAR%20Counties%20and%20Municipal%20Districts%20with%20Townships%20Map%202012-10.pdf>

First Nations in the Lower Athabasca region have constitutionally protected treaty and Aboriginal rights, recognized and affirmed by the numbered treaties (including Treaty 6 and Treaty 8) and Section 35 of the *Constitution Act, 1982*. These rights include the ability to practice traditional culture, interpreted by the Supreme Court of Canada to include a range of cultural, social, political and economic rights.²³ Further, treaty and Aboriginal rights include “ancillary rights,” defined as the right to access those factors incidental to the original right, and reasonably required for the direct exercise of the treaty and Aboriginal right.²⁴ For example, given that fishing requires fish populations of reasonable health and abundance, water quantity and quality can be interpreted as an ancillary right for those who are guaranteed the right to hunt, trap, and fish under section 35 and the numbered treaties. Further, ancillary rights can include sufficient resources for traditional land use, the experience of remoteness and solitude on the land, and appropriate and safe land for traditional activities that is accessible.^{25,26}

The boundaries of their traditional territories are defined differently by First Nations than what has been recognized by the Government of Alberta, and this is a source of disagreement between the two parties.²⁷ On these lands, First Nations communities practise traditional land use, which includes but is not limited to hunting, fishing, or trapping; harvesting wild foods; gathering materials for cultural use; and engaging in important cultural and spiritual practices on the land.²⁸ Traditional land use is widely acknowledged to be a critical element of Indigenous culture, and an important right to maintain and pass on culture, customs and beliefs.

Ongoing industrial development in the region, most dramatically from oilsands extraction, has threatened the abilities of these First Nations to participate in and practice their constitutionally protected rights and associated ancillary rights, as a

²³ University of British Columbia, “Aboriginal Rights”.

<http://indigenousfoundations.arts.ubc.ca/home/land-rights/aboriginal-rights.html>

²⁴ Theresa McClenaghan, *Molested and Disturbed: Environmental Protection by Aboriginal Peoples Through Section 35 of the Constitution Act, 1982* (Canadian Environmental Law Association, 1999), 4.

<http://www.cela.ca/sites/cela.ca/files/uploads/376aboriginal.pdf>

²⁵ See the ACFN Response, *Review Panel Report 2015*, 113

²⁶ All Six First Nations in their submission to the Lower Athabasca Regional Plan Review Panel outlined their interpretation of these treaty and aboriginal rights. *Review Panel Report 2015*, 175.

²⁷ *Review Panel Report 2015*, 185.

²⁸ *Review Panel Report 2015*, 173.

result of the declining availability and quality of resources to support these practices.²⁹ Coordinated efforts from the federal and provincial governments to manage the cumulative impacts of industrial development across Treaty 6 and Treaty 8 territory is crucial to protecting the treaty rights of First Nations.

1.2 Extractive activity: past and present oilsands development

Although oilsands extraction began fifty years ago, until the 1990s, the oilsands were largely inaccessible. In the last 25 years this has changed dramatically. Improvements to technology and strong commodity prices have resulted in increasing rates of oilsands production. In 1990, production was 340,000 barrels per day, but by 2000, it had almost doubled to 670,000 barrels, and by 2010 it had grown by almost another million to 1.6 million barrels per day.³⁰ As of 2015, production in the oilsands exceeds 2.5 million barrels per day, nearly four times the rate of 15 years prior.

Since the Lower Athabasca Regional Plan was announced in 2012, 28 new oilsands project approvals have been issued,³¹ with production growing by almost 30% between 2012 and 2015 (approximately 600,000 barrels per day).³² Currently, there are 38 projects in operation within the Athabasca and Cold Lake oilsands regions, and six projects under construction.³³ This development has created serious challenges in managing the environmental, social, and economic impacts that have resulted from the industry.

²⁹ Government of Alberta, *Land Use Framework* (2008), 6. <http://landuse.alberta.ca/LandUse/Documents/Land-use-Framework-2008-12.pdf>

³⁰ Alberta Energy Regulator, ST98-2016: Alberta's Energy Reserves 2015 and Supply/Demand Outlook 2015-2024 (2016), "Alberta Crude Bitumen Production" spreadsheet data for Figure S3.3.. <http://www.aer.ca/data-and-publications/statistical-reports/report-data>

³¹ Spreadsheet data is not designated by regional plan, so this includes all approved oilsands projects in the Cold Lakes and the Lower Athabasca oilsands region, and may include projects outside the region managed under LARP. This includes all approvals, including primary production projects, in situ and surface mining. Data provided by Alberta Energy Regulator on February 4, 2016.

³² "Alberta Crude Bitumen Production."

³³ Alberta Energy, "Oilsands Publications, Videos & Maps." Athabasca and Cold Lake regions are not aligned with boundaries of the Lower Athabasca Region, and some projects identified in these regions may not fall within the Lower Athabasca Regional boundaries. <http://www.energy.alberta.ca/OilSands/960.asp>

There are two main forms of bitumen extraction: surface mining and sub-surface “in situ” extraction. Bitumen surface mining operations are similar to other surface mining techniques (such as those for coal or other metals). At these facilities, oilsands ore is strip-mined and large trucks transport the ore to central processing facilities. At these processing facilities, the oilsands ore is mixed into large volumes of heated water and other chemicals that assist in separating the bitumen from the sand.³⁴ Once the bitumen is separated from the ore, the resultant process water and sand mixture must be managed. To date, this has been done through disposing of this material in large liquid containment structures, commonly known as tailings ponds or lakes.

In situ extraction superficially resembles more conventional forms of oil production. Generally, in situ techniques require the injection of large volumes of steam into an oilsands reservoir. This steam is generated in boilers at the surface of a facility, and is transported via injector pipelines to the bitumen wells underground. The injected steam heats the oilsands ore, and allows the bitumen to flow to the surface without its sand matrix. The produced bitumen emulsion can then be mixed with diluent, which allows it to be transported in pipelines to upgraders and refineries elsewhere. While mining has more visible direct disturbance from clearing land for open pit mining, environmental impacts from in situ operations are more subtle. This extraction technique could actually have greater cumulative effects as the distributed infrastructure it requires leads to major fragmentation of the landscape.³⁵

³⁴ Natural Resources Canada, “Oil Sands Processes.” <http://www.nrcan.gc.ca/energy/oil-sands/5853>

³⁵ Simon Dyer, Marc Huot, *Mining v, In Situ: What is the highest environmental impact oil?* (The Pembina Institute, 2010), 1. <https://www.pembina.org/reports/mining-vs-in-situ.pdf>

2. Human and environmental impacts from industrial activity

The link between industrial activities and community health has long been important to First Nations and Métis communities in the Lower Athabasca region. According to a recent study entitled *Water Is A Living Thing: Environmental and Human Health Implication of the Athabasca Oil Sands* (herein “the MCFN and ACFN study”), community members who work or have worked in the oilsands are more likely to have cancer than community members who worked in other industries or professions.³⁶ In addition to rates and varieties of cancers observed in the MCFN and ACFN study, communities have concerns that exposure to oilsands development results in more frequent occurrences of neurological illnesses, respiratory illnesses, and gastrointestinal illnesses.³⁷ However, these findings are contradicted by Government of Alberta medical data from the region, which suggests that although there was an increase in cancer rates in Fort Chipewyan in the previous 12 years, rates were within the range of what would normally be expected.³⁸

After reviewing concerns articulated by six First Nations, the LARP review panel reasserted the urgent need to “complete a regional baseline health study focused on First Nations, Métis and other Aboriginal groups to consider all relevant health factors, such as water, air and consumption of traditional foods.”³⁹ Due to the lack of baseline data, and a general dearth of scientific studies on the relationship between the two, it is difficult to credibly determine specific cause and effect relationships.

³⁶ Mikisew Cree First Nation and Athabasca Chipewyan First Nation, *Water Is A Living Thing: Environmental and Human Health Implication of the Athabasca Oil Sands*, Phase 2 report, prepared by Stéphane M. McLachlan (2014), 212. Available at http://landuse.alberta.ca/Forms and Applications/RFR_ACFN Reply to Crown Submission 6 - TabD11 Report_2014-08_PUBLIC.pdf. This report was funded by the National First Nations Environmental Contaminants Program, Health Canada, SSHRC, and both Mikisew Cree First Nation and Athabasca Chipewyan First Nation.

³⁷ *Water Is A Living Thing*, 150.

³⁸ Alberta Health Services, “Fort Chipewyan cancer studies finding released,” media release, February 6, 2009.. <http://www.albertahealthservices.ca/news/releases/2009/Page500.aspx> The press release stated: “A study of the cancer incidence in Fort Chipewyan finds levels of the rare cancer cholangiocarcinoma are not higher than expected.”

³⁹ *Review Panel Report 2015*, 202.

Despite a lack of certainty about the specific, individual relationship between health and environmental harms, there are considerable cumulative environmental impacts from ongoing development in the region. Further, there are a wide variety of environmental impacts from oilsands activity that could directly and indirectly affect the health of First Nations people and the environment on which their treaty rights and traditional use relies. The following sections detail known and potential environmental impacts from development, which may infringe the protection of health and treaty rights of local communities. Although this case study focuses on the impacts on First Nation's treaty and aboriginal rights, the identified impacts are also valuable in demonstrating potential violations of human rights under human rights legislation and the Charter.

2.1 Impacts to air quality

Bitumen extraction and upgrading involves energy-intensive technology processes that generate significant amounts of air pollution. These processes include fossil fuel combustion to produce steam and/or electricity; bitumen separation using solvents that can be subsequently emitted from tailings ponds; diesel exhaust emissions from large mine vehicles; sulphur emissions from bitumen upgrading; and other storage and treatment processes that generate fugitive emissions.⁴⁰ Flares and diverter stacks, used to deal with emergency and upset conditions, can also be a significant source of short-term yet intense air contamination. As a result of these activities, oilsands operations lead to increases in air pollutants in the surrounding region, including sulphur oxides (SO_x), nitrogen oxides (NO_x), fine particulate matter (PM_{2.5}), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and airborne mercury.

Continuous air quality data has shown elevated air quality concerns relative to pre-development conditions and exceedence of Alberta's air quality objectives — especially concerning short-term spikes in air pollution.⁴¹ This may have an impact on the health of residents exposed to acute spikes and/or ongoing emissions of these contaminants, given that fugitive emissions associated with oilsands mining, including volatile organic

⁴⁰ Jennifer Grant, Simon Dyer, Marc Huot, Danielle Droitsch, *Solving the Puzzle: Environmental Responsibility in Oilsands Development* (Pembina Institute, 2011), 27. <https://www.pembina.org/reports/solving-puzzle-oilsands.pdf>

⁴¹ Wood Buffalo Environmental Association, *Annual 2015 ambient air quality monitoring report* (2015), Figure 3. http://www.wbea.org/download/wbea_ambient_annual_report_2015.pdf

compounds (VOCs), are thought to have serious human health impacts.⁴² A recent Health Canada report found that acute exposures to SO₂ has been linked to respiratory morbidity.⁴³ Further, chronic exposure at current ambient levels presents elevated risks for sensitive populations including the elderly, children, and asthmatics and could be related to prenatal development issues.⁴⁴ Additionally, a similar Health Canada report investigating the health risks associated with chronic and acute exposures of NO₂ found that exposure to average ambient NO₂ concentrations could lead to adverse health impacts, with incremental increases in concentration associated with increased risks, up to and including mortality.⁴⁵

Air quality has been a significant issue for First Nations in the region. The community of Fort Mckay was subject of a recurrent human health complaint synthesis, one of three conducted by the AER. Since 2010, 165 complaints specific to industrial air pollutants and odour events were catalogued by the AER over 113 days or 6% of the total period.⁴⁶ Alberta's chief medical officer of health confirmed at the time of release of the technical synthesis that on several occasions, air pollutants in Fort McKay reached levels above what is recommended for human health.⁴⁷

2.2 Impacts to water

Oilsands mining operations divert substantial amounts of water from the Athabasca River, placing pressure on aquatic ecosystems especially during critical low-flow periods. Since surface water withdrawals have a direct influence on flow rates,

⁴² Jennifer Grant, Erin Flanagan, *Losing Ground: Why the problem of oilsands tailings waste keeps growing* (Pembina Institute, 2013). <https://www.pembina.org/reports/losing-ground-oilsands-tailings-fs.pdf>

⁴³ Respiratory morbidity generally refers to the reduced health or function of the respiratory system, and includes health conditions such as asthma, bronchitis and emphysema.

⁴⁴ The relationship between prenatal and early childhood development and chronic exposure is not clearly understood, and warrants further research. Andrew Read, *Sulphur Dioxide and Health: Summary of recent findings from Health Canada* (Pembina Institute, 2016). <http://www.pembina.org/reports/background-health-risk-assessment-final-pdf2.pdf>

⁴⁵ Health Canada: "Human Health Risk Assessment for Ambient Nitrogen Dioxide" (2016). <http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/nitrogen-dioxide-dioxyde-azote/index-eng.php>

⁴⁶ Alberta Energy Regulator, *Fort Mckay Recurrent Human Health Complaints Technical Synthesis* (2016). 17. https://www.aer.ca/documents/reports/FortMcKay_FINAL.pdf

⁴⁷ Bob Weber, "Study finds air problems around oilsands community Fort McKay," *Edmonton Journal*, September 21, 2016. <http://edmontonjournal.com/business/energy/study-finds-air-problems-around-oilsands-community-fort-mckay>

withdrawals reduce habitat ability year-round, but are likely to have more profound impacts during low-flow periods in the winter months (Figure 2). When too much water is diverted from a river system at low-flow conditions, water quality may change and fish habitat will decrease.⁴⁸ In turn, winter water withdrawals are more likely to jeopardize the overwintering survival of fish and other aquatic species.⁴⁹ Adequate flow rates are essential to the health of the Athabasca River, and the Athabasca's health has reverberations across the Athabasca ecosystem: it is home to many aquatic species that First Nations traditionally harvested in the area, and supplies water to critical wetlands in the region.⁵⁰

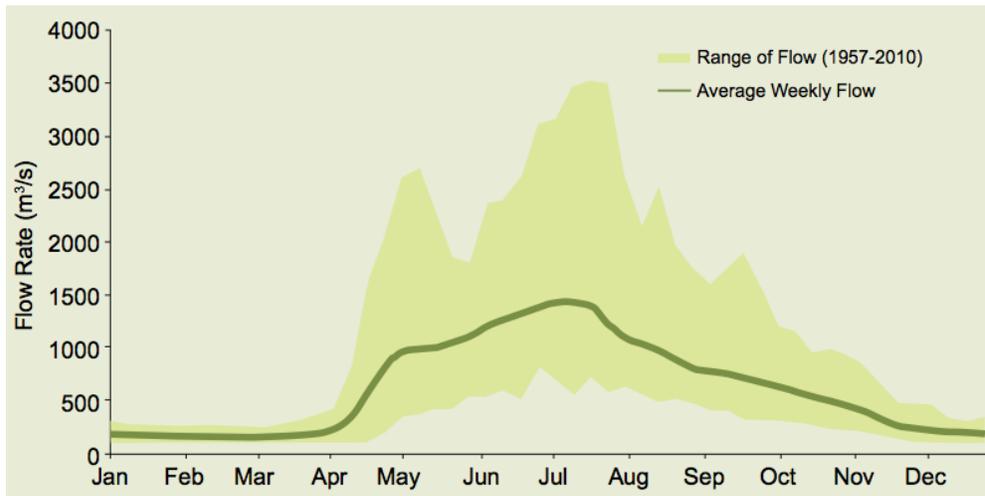


Figure 2: Average flow rates on the Lower Athabasca River by month

Source: Alberta Environment and Parks⁵¹

The Athabasca River watershed and Peace-Athabasca Delta are critical to First Nations for hunting, fishing and gathering. Some First Nations communities remain concerned about the impact of low water flows on access to culturally significant places, travel on

⁴⁸ WWF Canada, *Securing Environmental Flows in the Athabasca River* (2011), 9. http://assets.wwf.ca/downloads/wwf_canada_athabasca_report.pdf.

⁴⁹ Ibid.

⁵⁰ Mathieu Lebel & Rob Powell, "Spotlight on the Athabasca: Supporting 1 Million Birds and 31 Species of Fish," *World Wildlife Fund Canada*, September 5, 2013. <http://blog.wwf.ca/blog/2013/09/05/spotlight-athabasca-supporting-one-million-birds-31-species-fish/>

⁵¹ Alberta Environment and Parks, *Surface Water Quantity Management Framework for the Lower Athabasca River* (2015), 14. <http://aep.alberta.ca/lands-forests/cumulative-effects/regional-planning/documents/LARP-SurfaceWaterQuantity-Feb2015.pdf>

the river, and opportunities to pass culture and knowledge to future generations.⁵² The ACFN and MCFN assert that the absence of sufficient water quantity and quality constitutes an infringement to treaty and Aboriginal rights to hunt, trap and fish.⁵³

In addition to water quantity issues, the aquatic environment is also at risk from the release of toxic contaminants from oilsands operations. For example, the ACFN has alleged that fishing reserves set aside specifically for First Nations to fish and to exercise Aboriginal rights have been contaminated.⁵⁴ Surface water can be contaminated through various channels, including air deposition and ground water–surface water interactions from tailings containment structures along the banks of the Athabasca River. Water from tailings structures contain toxins, including naphthenic acids, cyanide, phenols and metals such as arsenic, cadmium, chromium, copper, lead and zinc.⁵⁵ An assessment in 2010 estimated that the leakages from the current tailings ponds could be responsible for as much as 12.6 million litres of contaminated water flowing back into the Athabasca River per day by 2013.⁵⁶ These toxins present a significant risks to wildlife, who might consume materials in contact with the toxins or exposed to contaminated water. These exposure concerns are particularly troubling for wildlife that act as traditional food sources for nearby First Nations communities. Some of these pollutants can also bioaccumulate in animal tissue, and are biomagnified in ever-increasing concentrations as they make their way through the food chain. The connection between pollution in the environment and contamination of wild foods is particularly concerning given the reliance on traditional foods and harvesting practices in the lower Athabasca region.

2.3 Impacts to biodiversity and land

Impacts to the land are the first that are evident during project development. Once a company has leased the rights to an oilsands resource, they are obligated to explore and

⁵² *Review Panel Report 2015*, 113, 205.

⁵³ Craig Candler, Rachel Olson, Steven DeRoy and the Firelight Group Research Cooperative, *As Long As the River Flows: Athabasca River Knowledge, Use and Change* (2010). Available at <http://s3-us-west-2.amazonaws.com/parkland-research-pdfs/aslongastheriversflow.pdf>

⁵⁴ *Review Panel Report 2015*, 117.

⁵⁵ *Losing Ground*, 4.

⁵⁶ This figure was derived from totaling all seepage values projected for 2013 from Table J1-3. Total E&P Canada, *AI Project Update – Joslyn North Mine Project, Appendix J: Water Quality Supporting Information* (2010). http://www.acee-ceaa.gc.ca/050/documents_staticpost/cearef_37519/142/AdditionalInformationFeb2010/AppendixJ.pdf

characterize the bitumen underlying the leased land in order to maintain the rights to the lease.⁵⁷ These activities require well drilling throughout the leased area and/or the performance of seismic tests. Both activities require the forest to be cleared in order to create access for equipment. At present, project proponents have leased 74% of the resource rights within the Athabasca oilsands area and 56% of rights in the Cold Lake oilsands area.⁵⁸ Exploration activities as a result of these lease agreements can result in significant impacts to land and biodiversity — and these impacts occur well before projects are fully operational in the region.

For example, geophysical seismic lines that involve the removal of vegetation to move drilling and exploration equipment from site to site impact woodland caribou. Because woodland caribou have well defined ranges, land clearing within these ranges is disruptive to the species, and each cutline represents a larger, indirect disturbance since the herds are known to avoid areas around industrial development. According to the federal recovery strategy for Woodland Caribou, every disturbance within a caribou range creates a 500-metre area that caribou herds avoid, rendering significant portions of habitat less hospitable.⁵⁹ Because caribou rely on being sparsely distributed in the forest as a primary defense against predators, a reduction in intact habitat results in increased predation from predators such as wolves.⁶⁰ Increasing rates of land disturbances within caribou ranges, coupled with reclamation plans that only return large swaths of cleared areas to their natural state at the end of project life, have resulted in a substantial decline in caribou populations in the lower Athabasca region. For example, the Alberta Biodiversity Monitoring Institute has estimated that rates of annual decline are 9.4% per year for the four monitored herds in northeastern Alberta.⁶¹

⁵⁷ Alberta Energy, *Alberta Oilsands Tenure Guidelines: Principles and Procedures* (2009), 4-4. http://www.energy.alberta.ca/OilSands/pdfs/GDE_OST_2009.pdf

⁵⁸ The Lower Athabasca Region contains almost the entire area of the Athabasca oilsands area, and most of the Cold Lake oilsands area. The Lower Athabasca region's boundary is not defined by these deposits. Alberta Energy, *Alberta's Oil Sands Leased Area*, April 21, 2016. <http://www.energy.alberta.ca/LandAccess/pdfs/OSAagreeStats.pdf>

⁵⁹ Environment Canada, *Recovery Strategy for the Woodland Caribou (Rangifer tarandus caribou), Boreal population, in Canada* (2012), 14. http://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=2253

⁶⁰ *Ibid.*, viii.

⁶¹ Alberta Biodiversity Monitoring Institute, *Status of Biodiversity in the Oil Sands Region* (2014). ftp://ftp.public.abmi.ca/Publication/home/publications/documents/40_ABMI_2014_StatusofOSRBiodiversityPreliminary_ABMI.pdf.

In an attempt to maintain and restore caribou populations, the federal government has determined that a caribou range should contain at least 65% undisturbed habitat to provide the herd with a reasonable chance of recover. However, current levels of undisturbed habitat in the ranges of the lower Athabasca are far below this threshold: only 18% of undisturbed habitat remains in Richardson, 31% in West Side Athabasca River, 19% in East Side Athabasca River, 15% in Cold Lake, and 38% in Red Earth.⁶² The woodland caribou is only one example of many species in the area that require careful management and protection to maintain local biodiversity, and allow for meaningful traditional land use. Caribou are considered by many First Nations to be an important part of their traditional diet and subsistence, and are connected to First Nation spirituality and culture.⁶³

2.4 Impacts to traditional land use and traditional foods

Although consumption of traditional foods has declined relative to previous generations, First Nations stress that traditional foods are important for their communities.^{64,65} Further, the MCFN and ACFN study indicates that most First Nations members in the community would prefer to consume more traditional foods than store-bought foods, if they felt they could safely do so.⁶⁶

However, a potential route of exposure to environmental contaminants for First Nation members is through their consumption of traditional foods, harvested through hunting, fishing and gathering activities that occur on their traditional territories. According to the MCFN and ACFN study, there remain significant concerns in the community regarding the safety of traditional foods. This study found that within the traditional territories of the Athabasca Chipewyan First Nations and Mikisew Cree First Nation, elevated levels of arsenic and mercury (at levels of concern for children), and cadmium and selenium (at levels of concern for both adults and children) were found in common

⁶² *Recovery Strategy for the Woodland Caribou*.

⁶³ Danielle Droitsch, Terra Simieritsch, *Canadian Aboriginal Concerns With Oilsands* (Pembina Institute, 2010) 2. <https://www.pembina.org/reports/briefingnoteofntoursep10.pdf>

⁶⁴ *Review Panel Report 2015*, 115.

⁶⁵ Maintaining a diet of traditional foods can contribute to food sovereignty, counter high costs of store-bought food, and provide a healthier alternative to processed food. *Water Is A Living Thing*, 108.

⁶⁶ *Ibid.*, 117

traditional foods,⁶⁷ including moose, which is one of the traditional foods most frequently consumed by members of the community.⁶⁸ The study also found that those who frequently consumed traditional food were more likely to develop cancer^{69,70} and those who rarely ate locally caught fish were significantly less likely to have had cancer than those who consumed fish more often than once or twice a year.⁷¹ However, as mentioned above, the link between various cancers and environmental contamination remains contested, and the data remains largely inconclusive.

Due to ongoing concerns and uncertainty regarding health impacts, some traditional foods are avoided by local communities out of fear. For example, local fish was once commonly consumed in Fort Chipewyan, but it has all but disappeared from diets of individuals in the community⁷² due to government food advisories calling into question the safety of fish found in the Athabasca River.⁷³ Muskrat were also frequently consumed, but a large majority of participants consumed less muskrat than before because they believed that pollution from the oilsands has decreased the quality of muskrats that they could find in the area.⁷⁴ In the absence of certainty on safety to human health, Indigenous rights to traditional hunting practices, food sources and livelihoods are undermined as a result of nearby industrial activity.

In addition to lingering safety concerns of traditional foods, the impact of industrial development on biodiversity has impacted First Nation's ability to exercise their right to practice traditional land use. Extensive disturbance have affected the abundance of many traditional foods. Muskrat have effectively been extirpated in certain areas of the region, such as downstream on the Athabasca river.⁷⁵ Other species, such as moose and beaver, have specific habitat requirements that must be maintained to ensure healthy populations and long-term biodiversity intactness. Without measures to protect

⁶⁷ Ibid., 67.

⁶⁸ Ibid., 113.

⁶⁹ Ibid., 48.

⁷⁰ Due to the complexity of health data, all ailments were self-reported by a comprehensive health survey designed for participants in the study. Cancer was treated as a dichotomous, so additional factors such as length of time employed, and the degree of exposure, were not explored. *Water Is A Living Thing*, 147.

⁷¹ *Water Is A Living Thing*, 148.

⁷² Ibid., 119.

⁷³ Ibid., 11.

⁷⁴ Ibid., 119.

⁷⁵ Ibid., 37.

traditional food sources, First Nations' ability to engage in traditional harvesting practices in the lower Athabasca will decrease over time.

The absence of effective land use planning results in ineffective protection of critical habitat for species, and ultimately erodes First Nation ability to exercise traditional practices in their preferred way. In the long term, this could take away opportunities to hunt and trap in some portions of First Nations traditional territory in the lower Athabasca Region should species become extirpated or permanently extinct. The LARP review panel corroborated this issue, citing concerns about land disturbances and subsequent infringement of First Nations' ability to harvest local food.⁷⁶

Taken as a whole, these cumulative impacts to traditional land use and traditional foods found within First Nations' traditional territories may have significant, adverse effects on their ability to meaningfully practice and maintain their culture — amounting to an infringement of their constitutionally protected treaty and Aboriginal rights. The Government of Alberta is responsible for upholding these rights, and the inadequacy of its cumulative effect management frameworks calls for additional legal and policy action to improve environmental management practices in the oilsands region.

⁷⁶ *Review Panel Report 2015*, 210

3. Regional plan implementation fails to protect rights

This section will outline the policy timeline for the Lower Athabasca Regional Plan (LARP) and existing gaps in its legislative and policy architecture that prevent meaningful protection of First Nations' treaty and aboriginal rights in the oilsands region. Land use planning is a critical and necessary element of responsible decision-making and had largely been abandoned by the Government of Alberta in the previous decades.

3.1 Land use planning in the Lower Athabasca region

LARP outlines regional outcomes and strategies to support a balance of economic development, environmental protection, and social and cultural vibrancy for the region. Its regional outcomes were to optimize the economic potential of the oilsands; diversify the region's economy; manage landscapes for ecosystem function; manage air and water for human and ecosystem needs; provide needed infrastructure; enhance quality of life through recreational activities; and include aboriginal people in land use planning.⁷⁷ Each regional outcome was to be accompanied by an implementation strategy, and was to identify “triggers” and “limits” for regional impacts, and timelines for completion. LARP outcome three (“*landscapes are managed to maintain ecosystem function and biodiversity*”) and outcome four (“*air and water are managed to support human and ecosystem needs*”) were initially viewed as positive first steps to manage the known harmful effects of oil and gas development in the region.⁷⁸ These first steps were recognized as opportunities to manage and mitigate the social and environmental impacts from development that ‘fall through the cracks’ on a project-by-project basis — impacts that, in sum, form the basis for infringement of treaty rights.

⁷⁷ *Lower Athabasca Regional Plan*, 35.

⁷⁸ Pembina Institute, “Pembina Reacts to tabling of the Lower Athabasca Regional Plan,” media release, August 22, 2012. <http://www.pembina.org/media-release/2368>

The LARP identified 35 strategies to achieve the regional outcomes outlined in the plan. Some of these strategies, if properly executed, may help ensure that projects seeking approval in the region do not unnecessarily infringe on the health and human rights of local communities. According to the latest Progress Report update for 2014 (completed in 2016), it is clear that Alberta has failed to implement six strategies by their designated completion date, and these plans are designated as delayed. Additionally, one strategy, “develop a biodiversity management framework,” is marked as completed, but the framework is not yet in place and in use for LARP. Of these frameworks that have been delayed, four are important pieces of LARP to mitigate some of the environmental impacts described above (such as setting triggers for land disturbance, biodiversity, and instream flow), and only one has publicly advanced to date.⁷⁹ For example, the strategy to “create a sub-regional plan using a strategic environmental assessment approach for the South Athabasca Oilsands Region” has not been completed. It was meant to “examine different development scenarios and their potential cumulative effects”, and increase the understanding of the “potential social, economic and environmental effects of in situ oilsands activities in the SAOS area before they occur”.⁸⁰ This would better inform the decision-making process, allowing for proactive management of the region. In contrast, many of the strategies that prioritize economic development in the region were implemented on time or shortly thereafter.⁸¹

The 2014 Progress Report for LARP has improved on its reporting template relative to the 2013 Progress Report. The previous update was riddled with ambiguous timelines for each strategy, using vague descriptions such as “ongoing”, “as soon as possible”, and “continues”, with no other details about progress. The LARP review panel also pointed out that besides the noted late strategies, an additional eleven initiatives mentioned to support LARP’s strategies were not addressed at all in the 2013 update, and publicly have not advanced at all.⁸² Several of these were still not addressed in the most recent 2014 update, including:

⁷⁹ The strategy to “complete an updated surface water quantity management framework” was initially due to be completed in 2012, but was completed in February 2015. Additionally, strategies to “develop a landscape management plan for public lands in the Green Area”(due in 2013), “complete and implement the groundwater management framework for the Lower Athabasca Region” (due in 2014), and “develop the regional parks plan for the Lower Athabasca” (due in 2013) are still not complete as of December 2016.

⁸⁰ Government of Alberta, *Lower Athabasca Regional Plan Strategies Fact Sheet* (2014). <http://aep.alberta.ca/lands-forests/cumulative-effects/regional-planning/documents/LARP-FactSheet-Strategies-Feb13-2014.pdf>

⁸¹ *Land-use Framework Regional Plans Progress Report 2013*, 2.

⁸² Review Panel Report 2015: Lower Athabasca Regional Plan, 264

- requiring and managing integrated land management practices,⁸³ which would minimize the amount of disturbance on the land by careful planning for shared resources
- a letter of intent between Fort McKay and the government for a community health assessment in Fort McKay
- an update for the Water Management Framework for in-stream flow needs and water management in the Lower Athabasca River

Clarity is needed to determine if these have been pursued at all, and how the government plans to implement these initiatives. Problems with implementation of the LARP has meant that regional planning in the Lower Athabasca region has failed to manage the overall environmental impacts on First Nations' traditional territory, and has limited practices of traditional land use and culture.

3.2 Despite failure to observe implementation timelines, project approvals continue

The LARP review panel examined six First Nation applications and found all applicants had suffered harm to health, property, income, or quiet enjoyment of property livelihood (or a combination of them), and were directly and adversely impacted from the implementation and execution of LARP.⁸⁴ Instead of ensuring development does not directly and adversely impact First Nations in the region, the implementation of LARP has seemingly done the opposite: project approvals continue to be issued and project proponents and regulators continue to cite the existence of the incomplete LARP as a sufficient proof that the cumulative environmental and social effects stemming from oilsands development are being managed.

As the Fort McKay First Nation (FMFN) argued in their application to the LARP review panel, “LARP is in effect and authorizes resource development in the majority of the Region but in the absence of key measures to manage the environmental and social consequences or deliver on the stated intention of managing cumulative effects”.⁸⁵

⁸³ Although this initiative currently exists, it is unclear how the LARP is to implement this initiative as a management tool within the region, and there is only one listed example of its use in the region, which predates LARP. Government of Alberta, “Integrated Land Management”. <http://esrd.alberta.ca/lands-forests/integrated-land-management/default.aspx>

⁸⁴ *Review Panel Report 2015*, 45, 60, 88, 137, 154.

⁸⁵ *Review Panel Report 2015*, 145.

Without credible environmental frameworks and outcomes in place, there is a significant gap in policy for each department responsible for implementing the objectives of LARP. In the case of energy development, numerous approvals have been issued in the absence of these frameworks. FMFN, in their submission to the LARP Review panel, reiterated “there are no regulatory backstops if the target dates aren’t met”.⁸⁶

In the absence of LARP’s full implementation, projects with significant cumulative effects on First Nations are still being approved. When the Dover Operating Corp. applied for an additional in situ oilsands operation on traditional territory, the community of Fort McKay argued in the 2013 hearing that the project would further affect their ability to practice traditional land use, and that it would have harmful impacts on the Moose Lake Reserves (as development was slated to occur 1500 metres away).⁸⁷ Dover’s own environmental assessment predicted that the project would contribute to both direct and indirect disturbance to caribou habitat in the area, placing additional pressures on herds that would be extirpated or near extirpated within 30 years.⁸⁸

The FMFN also noted that even without the Dover project, 37% of its traditional territory had already been disturbed by oilsands activities and infrastructure, and up to 70% has been leased for industrial development.⁸⁹ According to Dover’s environmental impact assessment, the project would contribute to an additional 5% disturbance to traditional territory when cumulative effects of proposed developments were considered.⁹⁰ When the FMFN requested a buffer around Moose Lake, Dover argued that creation of a buffer zone would “reverse government policy” (referring to the economic areas designated under LARP for oilsands development),⁹¹ despite the fact that policy as designated through LARP wasn’t complete enough to protect or endorse managing cumulative effects as was the original intent of the legislation. In other words, the proponent effectively submitted that all development within the designated “economic areas” should be allowed to proceed even though cumulative effect management

⁸⁶ *Review Panel Report 2015*, 245.

⁸⁷ Alberta Energy Regulator, *Dover Operating Corp.: Application for a Bitumen Recovery Scheme Athabasca Oil Sands Area*, Decision 2013 ABAER 014, para. 16. <http://www.aer.ca/documents/decisions/2013/2013-ABAER-014.pdf>

⁸⁸ AER Decision 2013 ABAER 014, para. 64, 68.

⁸⁹ *Ibid.*, para. 66.

⁹⁰ *Ibid.*, para. 60.

⁹¹ *Ibid.*, para. 41.

frameworks are still incomplete and incapable of protecting the environment and communities — leaving environmental effects management secondary to development.

Despite this evidence, the project was approved. The AER’s approval reflected the attitude that it was not the regulator’s responsibility to manage cumulative effects in the absence of these frameworks, despite being the body that was designated to approve oilsands projects. The hearing panel wrote that “the AER must act in accordance with LARP as it exists today”, noting that the proposed project was within an area designated within LARP, and that it was not within any soon to be designated conservation areas.⁹² According to the panel, despite key frameworks being incomplete, “LARP is the appropriate mechanism for identifying and addressing the regional cumulative effects of resource development activities”.⁹³

In the case of another approval, for Shell’s Jackpine Mine Expansion (JPME), Shell’s environmental assessment found that the project would have a significant adverse effect on wildlife and biodiversity, contributing to a loss of more than 20% for high-value habitat for 13 of the 22 assessed species.⁹⁴ Additionally, it projected that 18% of the wetlands in the regional study area would be lost if the expansion was approved, despite concerns that destruction of peatlands should be last resort and Shell did not propose an adequate wetland, peatland or old forest compensation.⁹⁵ The joint review panel concluded that the project “would likely have significant adverse cumulative environmental effects on wetlands; traditional plant potential areas; old growth forests; wetland-reliant species at risk and migratory birds; old-growth reliant species at risk and migratory birds; caribou; biodiversity; and Aboriginal traditional land use, rights, and culture”.⁹⁶ The panel noted their concern that there was “a lack of proposed mitigation measures that have proven to be effective”.⁹⁷ Despite this, the JPME project was approved. LARP is lacking the kind of initiatives that would address such issues, such as a biodiversity management framework that could define the policy direction on approvals with adverse effects on the already critically endangered caribou herds in the area.

⁹² AER Decision 2013 ABAER 014, para. 44-46.

⁹³ *Ibid.*, para. 43

⁹⁴ Ecojustice Canada, *Submission by the Oil Sands Environmental Coalition.*, October 1, 2012. 17.

⁹⁵ *Ibid.*, 29.

⁹⁶ Alberta Energy Regulator, *Report of the Joint Review Panel: Shell Canada Energy: Jackpine Mine Expansion Project* Decision 2013 ABAER 011 para. 9. <http://www.aer.ca/documents/decisions/2013/2013-ABAER-011.pdf>

⁹⁷ *Ibid.*

These approvals suggest that the AER operates with the working assumption that any capacity to mitigate cumulative impacts is derived from implementation of the frameworks and policies, and despite the valid concerns put forth by the Fort McKay First Nation and remaining questions about the environmental impacts, it is justified to approve these projects in absence of the promised frameworks.

In fact, under the Responsible Energy Development Act (REDA), the AER must ‘consider’ the LARP strategic plan and the implementation plan,⁹⁸ but these are only intended to ‘guide’ the AER in its decisions. The only portion of LARP that is legally binding is the regulatory details plan, which explicitly states that project approvals cannot be adjourned, deferred, denied, refused, or rejected due to an incomplete plan.⁹⁹ This removes responsibility for the AER to adapt its approval process to manage cumulative impacts when it can reasonably predict that approvals may conflict with upcoming frameworks. This creates an incentive to delay the completion of management tools that may hinder project approvals that are seen as economically advantageous.

Approving projects in the absence of completed management frameworks contributes to the further degradation of the quality of traditional territories, and represent further infringement on First Nation’s abilities to practice their Section 35 rights.

3.3 Management frameworks fail to reduce or mitigate cumulative impacts

In the currently implemented LARP frameworks, there are no mechanisms to enable or require decision makers to modify or deny an application when project modelling forecasts that there will be significant adverse effects, or if there is potential that a trigger or limit may be exceeded. As planning for cumulative effects is inherently complex and involves a great deal of uncertainty, it is important that planners be required to apply the precautionary principle when addressing potential cumulative effects in order to protect treaty, aboriginal and human health rights. Instead, the current frameworks allow development to occur up to the policy trigger, and then require governments to deploy resources to address the environmental impact at some future time.

⁹⁸ *Responsible Energy Development Act*, section 20.

⁹⁹ *Lower Athabasca Regional Plan*, Regulatory Details Plan, 7(3).

Under frameworks that are currently in place, the triggers and limits are identified based on ongoing monitoring, including through partners such as the Wood Buffalo Environmental Association, who monitor and regularly report to the government on the state of the indicator. Although different for each framework and indicator, a limit is the absolute highest impact that must not be exceeded, while a trigger will signal that cumulative effects for a specific indicator are approaching the limit. Once a trigger is exceeded, LARP’s regulatory plan only requires that the designated authority “initiate a management response consistent with the framework”, with each framework identifying a different approach.¹⁰⁰ However, these frameworks may or may not require that the Government of Alberta initiate any *proactive* management response, to prevent a trigger from being exceeded or a limit to be reached. In fact, the Surface Water Quality Framework does not require any mitigation measures to occur at all, nor does it require the project-specific review process to adapt to mitigate the likelihood of further exceedances. For example, in 2012, it was identified that triggers were exceeded under the Surface Water Quality Management Framework. By 2014, as described in the air and water quality status update for 2012, ESRD had only completed the first two steps of the management framework (verification and preliminary assessment).¹⁰¹ ESRD committed to “continuing to evaluate the need for action on the trigger exceedances observed”, but with no indication that further steps will be taken. The 2015 Surface Quality Management Response Update recognized that further triggers occurred in 2013 and 2014 and noted that management response for 2012 had moved into investigation.¹⁰²

The Air Quality Framework is also inherently reactive. Recent air quality issues suggest there are significant air quality concerns for communities living downwind of development— such as the AER’s most recent findings in Fort McKay¹⁰³ — and future project expansions will only bring additional pollution effects. As was to be expected, in the first year of implementation of the LARP, there were four instances of an

¹⁰⁰ *Lower Athabasca Regional Plan, Regulatory Details Plan, 33(1).*

¹⁰¹ Government of Alberta, *Lower Athabasca Region: Status of Management Response for Environmental Management Frameworks (Air Quality Management Framework and Surface Water Quality Management Framework) 2014* (2016). <http://aep.alberta.ca/lands-forests/cumulative-effects/regional-planning/documents/LARP-StatusAirSurfaceWaterQuality-Mar2014.pdf>

¹⁰² Government of Alberta, *Lower Athabasca Region: Status of Management Response for Environmental Management Frameworks (Air Quality Management Framework and Surface Water Quality Management Framework) 2015* (2016). <http://aep.alberta.ca/lands-forests/cumulative-effects/regional-planning/documents/LARP-StatusAirSurfaceWaterQuality-May2015.pdf>

¹⁰³ *Fort Mckay Recurrent Human Health Complaints Technical Synthesis, 17.*

exceedance of air quality triggers, for NO₂, and SO₂.¹⁰⁴ Triggers were exceeded again in 2013 and 2014.¹⁰⁵

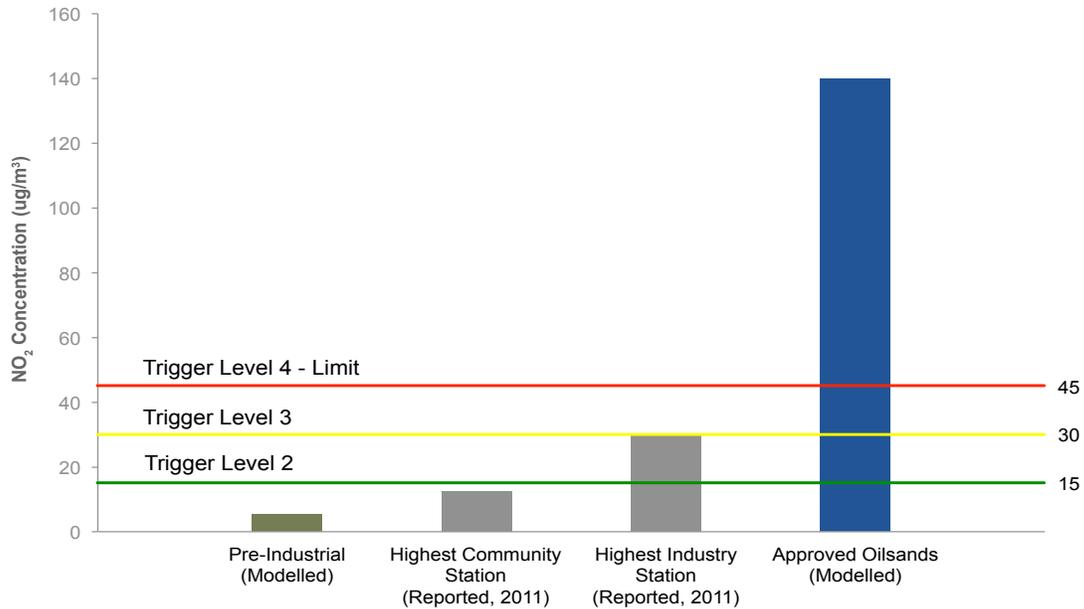


Figure 3: Measured and anticipated exceedances of triggers and limits for NO₂ set under LARP

Data sources: Shell Canada, Wood Buffalo Environmental Association¹⁰⁶

Overall, this “trigger and limit” management approach is troubling. Since LARP has been implemented, 28 new oilsands approvals have been issued in the Lower Athabasca and Cold Lake oilsands region.¹⁰⁷ After four years of LARP, an action plan was eventually

¹⁰⁴ *Surface Quantity Management Framework for the Lower Athabasca River*, 2.

¹⁰⁵ *Lower Athabasca Region: Status of Management Response for Environmental Mangement Frameworks (Air Quality Management Framework and Surface Water Quality Management Framework) 2015*, 7.

¹⁰⁶ Pre-industrial: Shell Canada Ltd., *Response to JRP August 15, 2012 Supplemental Information Requests* September 2012. Current levels for highest community station (Fort McKay) and the highest industry station (Millennium Mine): Wood Buffalo Environmental Association, *Annual Report 2011*, AMS 1 Station: Table T27, AMS 12 Station: Table T6. Modelled results for air quality if all currently approved oilsands are operational: Shell Base Case: Shell Canada Ltd., *Joint Review Panel Supplemental Information Requests*, May 2012. Appendix 3.2: Air Emissions and Prediction, Table 4.2-1.

¹⁰⁷ Spreadsheet data is not designated by regional plan, so this includes all approved oilsands projects within the Cold Lakes oilsands region and Lower Athabasca oilsands region, and may include projects outside the region managed under LARP. This includes all approvals in these oilsands region, including

unveiled in the most recent update Air Quality Framework update, which identified that Syncrude’s Sulphur Emissions Reduction Program will contribute to lowering emissions. However, there is no indication of the proactive measures that will be undertaken under this program will be adequate in light of the most recent approvals. The regulatory approval process for oilsands project applications require project proponents to model the resultant air quality if all approved development in the region proceeds to full operation. The JPME forecast modelled an exceedance of the ambient air quality limit if approved projects come online (Figure 3). This modelling shows trigger levels had already been reached before LARP was implemented, raising concerns at the time about managing air quality in the future.¹⁰⁸ Despite this, JPME and additional projects continue to be approved.

These projects will inevitably have an impact on the air and water quality of the region as they come on line. With no management action taken at the approval stages, new development will only exacerbate the problem. Preventative action is critical to ensure that First Nations aren’t adversely impacted by further development in the region, in addition to the adverse impacts that have already occurred.

3.4 Triggers and limits are not based on meaningful measurements of human or ecosystem health

The frameworks that have been implemented raise concerns of whether the trigger and limit system will adequately measure important impacts on human health and traditional land use. In their submission to the LARP panel, ACFN argues that LARP’s frameworks “do not contain measures that address the health impacts of air pollution, water pollution, odour, and noise on ACFN’s members using their Reserve Lands.”¹⁰⁹

For example, the Water Quality Management Framework’s water quality indicators employ flawed historical concentrations as a baseline to compare present-day

primary production projects, in situ and surface mining. Data provided by Alberta Energy Regulator on February 4, 2016.

¹⁰⁸ Shell Canada, *Application for Approval of the Jackpine Mine Expansion Project and Pierre River Mine Project*, “Environmental Impact Assessment Volume 3: Air Quality, Noise and Environmental Health,” (2007).

<ftp://ftp.gov.ab.ca/env/fs/EIA/2007-12->

<ShellJackpineMineExpansionPierreRiverMineProjects/EIA%20Vol%203%20Air%20Quality...Health.pdf>

¹⁰⁹ *Review Panel Report 2015*, 118.

concentrations. The trigger level relies on the assumption that the baseline represents contaminants that occur naturally in the oilsands region due to natural seepage of bitumen into water bodies. This historical data, however, includes contaminant levels measured no earlier than 1988. For most metal indicators, “historical” data comes from 1999, with some data collected as recently as 2003 to 2009.¹¹⁰ These early measurements show a higher level of contamination than would occurring naturally prior to development, as they were taken somewhere between 21 to 42 years after oilsands mining development began.

Out of 38 total indicators in the Water Quality Management Framework, 10 were not designated as limits because these “historical” baseline concentrations were already higher than the provincially accepted guidelines. Using baseline data collected at least two decades after mining operations began in the oilsands to justify the lack of limits is not acceptable. Water quality guidelines with limits based on human and ecological health should be used. If there are exceedances of human health limits, further investigation should be done to understand the implications of these exceedances; “historical” comparisons are inadequate.

In addition to water quality concerns, there are issues with proactive management of water quantity and base flow in the Lower Athabasca River. Since water diversions are largely permanent (only 3.3% of the water used in oilsands processing is returned to the river), a comprehensive water quantity management plan is needed to ensure that current and future projected diversions protect the integrity of the Lower Athabasca’s aquatic ecosystems. Prior to the implementation of LARP, traditional resources from the river system had been difficult to access due to lower flows,¹¹¹ which threatened the ability of First Nations to harvest fish as a part of their traditional diet. In their report, *As Long as the River Flows*, ACFN and MCFN recommended the adoption of a precautionary flow level whereby no surface withdrawals would be allowed when the river flow drops below 100 m³ per second.¹¹² This precautionary flow was recommended

¹¹⁰ *Surface Water Quality Management Framework for the Lower Athabasca River*, 20.

¹¹¹ Athabasca Chipewyan First Nation Industry Relations Corporation and Mikisew Cree First Nation Government and Industry Relations, *The Relationship Between the Lower Athabasca River and the Traditional Uses and Rights of the Athabasca Chipewyan First Nation and Mikisew Cree First Nation Summary Report* (2010).

¹¹² *As Long As the River Flows*, .

as a management tool to ensure that traditional land use practices, including navigation, would not be impacted at low-flow conditions on the Lower Athabasca.¹¹³

Despite the known environmental impact of low-flow water withdrawals and policy recommendations from First Nations communities, the LARP did not establish a low-flow cut off point to protect First Nation rights. Its Surface Water Quantity Management Framework adopted a low-flow *target* of 87 m³ per second, at which point the oilsands industry can withdraw no more than 4.4 m³ per second of raw water from the Lower Athabasca. In other words, there is no absolute cut off (or limit) for water withdrawals during low-flow periods. This is not consistent with the ACFN and MCFN recommendations regarding Aboriginal low-flow requirements for navigation, and is not a precautionary approach to river management. While Government of Canada scientists have acknowledged the need to establish a low-flow zero withdrawal point¹¹⁴ the Surface Water Quantity Management Framework in place today does not achieve this end. Since LARP, many more projects have been approved, which creates further strain on the water levels of the Athabasca River and may infringe on First Nations' rights to use the river for traditional activities.

For air quality, the Air Quality Management Framework is limited in scope and only monitors SO₂ and NO₂. The LARP review panel called into question whether SO₂ and NO₂ monitoring is adequate to capture the full range of industrial air pollutants within the region.¹¹⁵ In particular, the community of Fort McKay, surrounded by oilsands mining operations, is routinely exposed to poor air quality and offensive odours. More concerning is the lack of knowledge about the pollutants that are causing these odours. Research is still ongoing into these events, but what is known is that SO_x and NO_x are not solely responsible. Fort McKay First Nation submitted to the review panel that other air contaminants such as ozone, carbon monoxide, particulate matter, hydrogen sulphide, and benzene “need to be regionally managed because of the threat they pose to human health”.¹¹⁶

¹¹³ Athabasca Chipewyan First Nation and Mikisew Cree First Nation, *A Review of Lower Athabasca River Instream Flow Needs Phase 2 Water Management Framework: Fishes and their habitat*, prepared by Applied Aquatic Research (2010). 13. www.acee.gc.ca/050/documents_staticpost/cearref_37519/44815/A12.pdf. The idea of a 100 m³/s precautionary threshold arose during a meeting of the Canadian Science Advisory Secretariat who hosted a workshop on instream flow needs.

¹¹⁴ Fisheries and Oceans Canada, *Science Evaluation of Instream Flow Needs (IFN) For the Lower Athabasca River* (2010) http://www.dfo-mpo.gc.ca/csas-sccs/publications/sar-as/2010/2010_055_e.pdf

¹¹⁵ *Review Panel Report 2015*, 170.

¹¹⁶ *Ibid.*, 148

The review panel implies that the ambient air quality objectives that the air quality framework is based on should be reviewed¹¹⁷ as they may not be adequate to assess human health impacts (as they were not designed to be human health limits), and do not reflect the World Health Organization's ambient air quality criteria.¹¹⁸ Similar concerns have been raised about the adequacy of the other trigger and limit systems, such as a critically low Ecological Base Flow developed for the Surface Water Quantity Framework released in 2015; ambiguous ground water triggers and limits;¹¹⁹ and a tailings management system that fails to acknowledge issues around seepage and tailings process-affected water return.

Despite the suggestion from First Nations during the consultation phase, LARP does not contain any formal provision to protect and manage traditional land use, such as a trigger or overlying framework.¹²⁰ This limits the regional plan's effectiveness as a tool to support traditional land use outcomes. For example, many First Nations that submitted applications to the LARP review panel were not supportive of how conservation areas were implemented, as they argued the areas failed to support traditional land use, as was part of their objective. In some cases, conservation areas were placed inappropriately far from First Nations reserves rendering them less accessible, while other conservation areas were ultimately not located within traditional territories at all.¹²¹ The review panel has recognized that without a traditional land use framework, LARP may not be compliant with its own mandate.¹²²

¹¹⁷ *Ibid.*, 171

¹¹⁸ *Ibid.*, 148

¹¹⁹ *Review Panel Report 2015*, 170.

¹²⁰ *Ibid.*, 158.

¹²¹ *Ibid.*, 47.

¹²² *Ibid.*, 183.

4. Conclusion

To mitigate and avoid further environmental and social impacts from oilsands development, the Lower Athabasca region should be managed through careful measures that protect the health of local residents and the ability for First Nations to meaningfully practice their constitutionally protected treaty and Aboriginal rights. However, without environmental frameworks in place to examine cumulative effects, the governments of Alberta and Canada do not have the appropriate tools to determine whether additional oilsands projects are likely to create unacceptable environmental and social impacts.¹²³ Without credible cumulative effects management tools in place, governments cannot provide adequate assurance to First Nations communities that current and future oilsands developments will not excessively infringe on treaty, Aboriginal and other rights of nearby First Nations communities.

As the LARP review panel has acknowledged, assessing oilsands development on a project-by-project basis does not support cumulative effects decision-making.¹²⁴ Yet Alberta's first regional plan is still using such a project-by-project approval and management system — and it has fallen flat on the promises of reducing adverse cumulative impacts. Four years into its implementation, the LARP's undeveloped frameworks undermine the province's ability to effectively manage cumulative effects, while projects that contribute to adverse effects continue to be approved. Additionally, the frameworks that have been developed lack the ability to be proactive, and triggers and limits are not in line with protecting health and traditional land uses. Overall, the LARP has, to date, failed to protect First Nations' treaty and other rights from cumulative environmental impacts to traditional land, land use, and indigenous livelihoods and cultural practices.

If Alberta is serious about managing the cumulative impacts from oilsands development — and about building a more just and equitable relationship with First Nations — it should heed expert advice and re-imagine its approach to land use planning, with an emphasis on addressing the systemic weaknesses of the existing regulatory systems, the delays in the implementation of management frameworks, and the need for protective thresholds and triggers that meet expectations for protection of the environment.

¹²³ Chris Severson-Baker, Jennifer Grant, Simon Dyer, *Taking the Wheel: Correcting the Course of Cumulative Environmental Management in the Athabasca Oilsands* (Pembina Institute, 2008).

¹²⁴ *Review Panel Report 2015*, 197

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