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Lower Athabasca Regional Plan 10-Year Review Part 3: LARP's Management Frameworks

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Matter Commented on: Lower Athabasca Regional Plan

This is the third and final post related to the Lower Athabasca Regional Plan's 10-year review, which was required pursuant to section 6 of the *Alberta Land Stewardship Act*, […]. Part 1 set out the background necessary to understand Alberta's land use framework, while Part 2 got into the details of the Lower Athabasca Regional Plan (LARP). This part focuses on LARP's various environmental management frameworks.

LARP Frameworks

In preparing LARP, some management frameworks were finalized and incorporated into the Draft LARP, and subject to public, stakeholder and Indigenous input. These included:

- Conservation Areas, Conserved Lands and Provincial Recreation Areas;
- *Air Quality Management Framework for LARP* (September 1, 2012);
- *Surface Water Quality Management Framework for LARP* (September 1, 2012); and
- *Groundwater Management Framework for LARP* (September 1, 2012) containing interim quality triggers but no quantity triggers, because information was lacking (at 26). This was updated for the North Athabasca Oil Sands Area (NAOS) (2013) only, which added information but finalized quality and quantity triggers were still under development.

LARP also directed other management frameworks to be developed, including:

- *Tailings Management Framework for the Mineable Athabasca Oil Sands* (2015);
- *Surface Water Quantity Management Framework for LARP* (2015);
- *Bio-Diversity Management Framework for LARP* (still incomplete). There was a *Draft Bio-diversity Management Framework* (v1.0 November 6, 2014) based on Alberta's *Lower Athabasca Regional Plan Strategies Biodiversity Management Framework for the Lower Athabasca Region* (February 2014) (ISBN: 978-1-4601-1528-2) for discussion with comments closing January 2015 but nothing further has been heard. There is a Fort McKay First Nation Position Paper on the Lower Athabasca Regional Plan Frameworks (June 2015) that criticizes LARP for failing to consult and protect aboriginal peoples and their rights in the planning region that mentions the LARP's Biodiversity Framework (at 30 to 42); and
- Integrated Landscape Management Framework for LARP (incomplete).

There does not appear to be any currently accessible public information on input to those frameworks. The links on the LUS website for management frameworks are broken, the provided links are to the Alberta Open Government Program.

Conservation Areas, Conserved Land and Provincial Recreation Areas in LARP

In the LARP's *Regulatory Details Plan,* Part 2 Conservation Areas, in section 14 the Designated Minister is the Minister responsible for the *Provincial Parks Act* with one Conservation Area, in section 15 the Designated Minister responsible is the Minister responsible for the *Public Lands Act*, in Part 3, Conserved Lands, in section 18 the Designated Minister is the Minister responsible for the *Surveys Act*; in Part 7, Recreation and Tourism, at section 40 the Designated Minister in the Minister responsible for the *Public Lands Act,* and at section 41 for Provincial Recreation Areas the Designated Minister is the Minister responsible for the *Provincial Parks Act*.

Under the *Government Organization Act*, RSA 2000, c G-10 and the Designation and Transfer of Responsibility Regulation, Alta Reg 44/2019 (*Transfer of Responsibility Regulation*), all of these Designated Ministers are the Minister of Environment and Parks (AEP). For brevity, additional Designated Minister in the Regulatory Details Plan will be the resultant Minister. AEP was also the Designated Minister for *ALSA* in section 10(2) of the *Transfer of Responsibility Regulation*. Readers should note that as a result of recent changes, AEP is now Alberta Environment and Protected Areas.

Conservation Areas

The Conservation Areas are numbered in the LARP Map from one to six, to be created through the *Provincial Parks Act* or *Public Lands Act* (at s 13). Pursuant to subsection 16(1), AEP "may take whatever steps that in the opinion of [AEP] are desirable for achieving the conservation objectives of the LARP Strategic Plan and LARP Implementation Plan and for implementing Schedule "F" to the LARP Implementation Plan in respect of conservation areas." LARP does not permit the AEP to create new Conservation Areas outside of those established in LARP and is limited to measures in Schedule F within those established Conservation Areas. Schedule F permits human activities damaging to the environment, including among others: increased access; multi-use corridors; and "eco-forestry" in the Birch River Conservation Area.

Pursuant to section 17, AEP is directed to establish programs evaluating the effectiveness of those measures in fulfilling the "relevant conservation objectives in the LARP Implementation Plan." The ambit of those programs and the effectiveness is unclear. A definition is provided in a sidebar at page 30 in the LARP Strategic Plan, which is not binding, where Conservation Areas are defined as "[a] clearly defined geographical space dedicated and managed to achieve the long-term conservation of biological diversity and ecosystem process." For example, conservation areas will be managed:

- to minimize or prevent new land disturbances – existing ones will be honoured and if a conservation area blocks access it will be modified;
- to provide low-impact backcountry recreation opportunities;

- with hunting, fishing and trapping will continue in accordance with provincial laws; and
- grazing leases may be considered.

Conserved Lands

In the LARP's *Regulatory Details Plan*, Part 3, Conserved Lands, section 19(b) defines "conserved land" to mean: parks designated under the *Provincial Parks Act*; wilderness areas, ecological reserves, and natural areas designated under the *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*, RSA 2000, c W-9; and public land use zones managed for one or more conservation purposes and declared under the *Public Lands Act*. Section 19(a) defines "conservation purposes," in respect of these land as those in *ALSA* section 29(1), namely:

(a) the protection, conservation and enhancement of the environment;
(b) the protection, conservation and enhancement of natural scenic or esthetic values;
(c) the protection, conservation and enhancement of agricultural land or land for agricultural purposes;
(d) providing for any or all of the following uses of the land that are consistent with the purposes set out in clause (a), (b) or (c):
(i) recreational use;
(ii) open space use;
(iii) environmental education use;
(iv) use for research and scientific studies of natural ecosystems,

but does not include the following agricultural purposes (i) cultivation; (ii) clearing; and range improvements within the meaning of regulations under the *Public Lands Act*. (Range improvements are defined in the *Public Lands Administration Regulation* 187/2011, section 1(x) to include "a modification to the range or to any resource on the range for the purposes of the proper use and management of a grazing disposition, including specific management for the purposes of increasing or maintaining the carrying capacity of the grazing disposition.")

Pursuant to section 20, the AEP is required to establish and maintain monitoring programs as to the total conserved lands in LARP and the ratio of conserved lands to the total lands in the planning region.

Provincial Recreation Areas

Pursuant to section 40, AEP is responsible for Provincial Recreation Areas in LARP, defined in section 39(a) as those labeled A through I in the LARP Map. Further the AEP, in section 41, is responsible for Public Land Areas dedicated to recreation, defined in section 39(b) as those labelled No. 1 through 5 on the LARP MAP (Recreation Areas). Under LARP the AEP cannot establish additional Recreation Areas. Pursuant to section 42, AEP is responsible for achieving the Strategic Objectives of LARP and implementing Schedule F in the LARP Implementation Plan, which as noted above allow human activities harmful to the environment.

For Recreation Areas, this is subject to permissions from a decision-making body under the *Water Act* or *Environmental Enhancement and Protection Act*, however, for waters in or adjacent to these Recreation Areas, the AEP is required to permit access to all projects under section 44.
Pursuant to section 45, AEP is responsible for developing and maintaining programs to evaluate the effectiveness of the Recreation Areas in meeting the recreation and tourism objectives in the LARP Strategic Plan and LARP Implementation Plans.

One concern that Canada had raised in its commentary on the Draft LARP was "whether newly-established provincial recreation areas will include a restriction that prohibits hydroelectric facilities and transmission-related infrastructure on the Slave River, particularly in the Provincial Recreation Area containing Slave River, Cassette, Mountain and Pelican Rapids, as these potential developments could also impact the Delta" (see *Government of Canada Response to Alberta's Draft Lower Athabasca Regional Plan* (June 6, 2011) (*Government of Canada Response*) at 14). The *Government of Canada Response* also raised concerns about maintaining biodiversity: "protected land designation should ensure the adequate representation of all the ecosystem types in the region, including the boreal plains. Consideration should also be given to ensuring connectivity among protected areas, including National Parks" (at 14).

The finalized LARP ignored Canada, stating that, "[o]ver one-third of Alberta's hydroelectric potential is within the region, distributed mainly between the Athabasca and the Slave rivers. Hydroelectricity, and other electrical generation, can play a role in improving the reliability and security of our overall energy supply," (at 16). Specifically "[a]ccess to water resources and associated allocation and disposal infrastructure will be permitted in the new provincial recreation areas in the Lower Athabasca Region. … Future proposals for hydropower generation would be considered by government in the context of the regional outcomes and objectives defined in (LARP)" (at 33).

Adequacy of Conserved Lands

LARP boasts of increasing the planning region's conserved land base of 6% with an additional 16% being conserved, for a total of 22%. Why 22% was chosen remains a mystery, particularly when the RAC Vision proposed up to 32% conservation area in the RAC Vision's attached Map E (at 35). It should be noted that, at the time the RAC Vision was released in August 2010, the then current *ALSA* said in section 11 that regional plans could cancel statutory permissions without compensation, including oil sands leases.

Parastoo Emami's 2014 Masters' dissertation entitled, *Evaluating Procedural Justice in Regional Planning Process: Lessons From Alberta's Regional Plans*, (MA Thesis: University of Lethbridge, 2014) speculates (at 121) that the oil sands companies, given the overlap in Map F (in the RAC Vision) as to oil sands tenure, lobbied the government to scale back the Conserved Area to the 2011 Draft LARP's 22% particularly given the amendment to *ALSA* requiring compensation as part of the amendments occasioned by the Property Review for both financial reasons, given the uncertainty that compensation that could include future revenues, and the expressed priory to preserving oil sands accessibility.

Another answer may involve a research paper, funded in part by LUS, by Richard R. Schneider, Grant Hauer, Dan Farr, W. L. Adamowicz and Stan Boutin, "Achieving Conservation when Opportunity Costs Are High: Optimizing Reserve Design in Alberta's Oil Sands Region" (2011), 6(8) PLoS 1, published in August 2011. In that paper researchers using a coarse grid Township – level model and found that "[a] better assessment of the societal trade-offs involved in establishing protected areas can be obtained by expressing the opportunity cost of protection as a percentage of the total value of resources in the planning area" (at 5). This modelling was done on a regional level pursuant to LUF boundaries, the Lower Athabasca region had an opportunity cost, because of the value of the oil sands 4 times the provincial average. This economic analysis may have led to the reduction of conservation area from 32% to 22%.

The LARP's 22% conservation area target may be inadequate within the next decade as contemporaneous research by E. Komers and Z. Stanojevic has indicated that "there will be no area left in the Oil Sands Lease Area where a person could go to be farther than 250 m away from an industrial feature": "Rates of Disturbance vary by data resolution: implications for conservation schedules using the Alberta Boreal Forest as a case study" (2013), 19 Global Change Biology 2916 (E Komers, "Rates of Disturbance") at 2923.

Air Quality Management Framework for LARP (September 1, 2012)

In the LARP's *Regulatory Details*, Part 4, Air Quality, section 21, the AEP is responsible for regional air quality. Section 22 defines:

(a) the separate document, the *Air Quality Management Framework for LARP*, as it may be amended, and incorporates it into LARP;
(b) "limit" as the applicable limit specified in Schedule A: Table A-1 Annual Ambient Air Quality Triggers and Limits NO_2 (Nitrogen dioxide) and SO_2 (Sulphur dioxide) in the LARP Implementation Plan (at 73);
(c) "person responsible" as defined in in section 1(tt) of the *Environmental Protection and Enhancement Act*, RSA 2000, c E-12 (EPEA); and
(d) "trigger" as the applicable trigger specified in Table A-1 and Schedule A: Table A-2 Ambient Air Quality Triggers Based on 99th Percentile of the Hourly Data Over a Year (Table A-2) (at 73).

Pursuant to section 23, the AEP has final and binding discretion regarding:

(a) the measurements of substances of concern at monitoring stations established and maintained under the programs in section 24;
(b) whether a trigger or limit has been exceeded;
(c) whether a trigger or limit exceeded in respect of one or more specific regions is of concern in other areas of the planning region or the whole of the planning region; and
(d) the duration of an exceedance of a trigger or limit.

Pursuant to section 24 the AEP is required to establish and maintain programs to:

(a) manage ambient air quality limits and triggers for substances that in the AEP's opinion are indicators of the air quality effects of concern for the planning region;
(b) monitor and evaluate the ambient air quality in the planning region; and
(c) evaluate the effectiveness of the framework in meeting the air quality objective stated in the LARP Implementation Plan.

The "substances of concern" are not defined in the LARP and the only reference is in the Air Quality Management Framework for LARP which states that "[w]hile NO_2 and SO_2 provide a starting point for the development of the framework, other substances are also of concern from an ambient air quality perspective … the process proposed through the Air Contaminants Management Framework (CEMA, 2009) is recommended to identify, prioritize and address these substances" (at 38). There have been no amendments and the AEP has limited itself to monitoring NO_2 and SO_2.

Pursuant to subsection 26(1), if the AEP determines, in its discretion, that a trigger or limit has been exceeded, the AEP must assign an official to supervise a *management response*. Pursuant to subsection 26(2) any management response would bind the Bound Parties. Pursuant to subsection 26(3) a Report as to the details and effect of the management response will be submitted to the AEP Minister. Pursuant to section 26(4) that Report, must be made available to the public on request and posted to LUS website in the Other Reporting Section for LARP.

Pursuant to section 25(1) any management response must be provided to the potentially Bound Parties in a Notice in which specifies:

(a) as to activities in AEP's opinion have a direct or indirect effect on the limits;
(b) the specific limits that have been exceeded;
(c) the relevant area of the planning region;
(d) directed at the relevant decision makers or (e) local government bodies;
(f) the anticipated duration of the exceedance;
(g) actions to be taken; and
(h) no statutory consents shall be made by the relevant decision makers or local government bodies in respect the activities that have a direct or indirect effect on the limits.

Pursuant to subsection 25(2), the Notice shall be served on the relevant decision makers or local governments personally, or by registered mail or fax, and in section 25(3) they will be bound by the Notice, which shall be made public in section 25(4).

Pursuant to Section 27 AEP may consider any materials it deems relevant in formulating the management response as to:

(a) the particular activities or class of activities;
(b) the relevant areas in which those activities are to occur;
(c) the relevant area or part of the area which an effect is reasonably expected to occur;
(d) the reasonably expected duration of the effects; and
(e) any other matter in the AEP's opinion that are relevant to the programs established and maintained in section 24.

The Air Quality Management Framework for LARP restates this and provides additional details as to the monitoring stations with a map (at 15). It noted the differing purposes for industrial stations as to monitoring local emissions under the licences to operate and the community monitoring stations (at 16-18).

The *Air Quality Management Framework for LARP* also provides a graphic of the staged management response (at 24), which was included in Part II of this ABLawg post. It said,

> The terms management response and management action have distinct meanings in the context of this management framework. The management response is a set of steps that will be undertaken (all or in part) if an ambient air quality trigger or limit is believed to have been exceeded. Part of the management response is determining the need for management actions. Management actions become more stringent at higher air quality levels. (at 23)

Thus, the choice in the "Mitigative Management Actions" are assigned depending on the exceedance of limits, as described in Table 7 (at 31). Notably, only Level 3 exceedances will engage regulatory enforcement under existing legislation and Level 4 exceedances will engage enforcement under LARP, although this will have to be processed through the staged management response.

The Annual Status of Air Quality Reports are found from the LUS website in the Other Reporting Section for LARP, from 2012 to the last report available in 2019. NO_2 exceedance for some stations have exceeded level 2 but not level 3. For SO_2, the situation is different:

- in 2019, SO_2 exceeded level 3 for one station (Lower Camp) located in the Athabasca River Valley about 115 m south of Syncrude pump house (note no monitoring at this Lower Camp for NO_2);
- in 2018, SO_2 exceeded level 3 for one station (Lower Camp);
- in 2017 & 2016, SO_2 exceeded level 4 for one station Lower Camp; and Mannix and Mildred Lake Exceeded Level 3;
- in 2015, SO_2 exceeded level 3 for three stations Lower Camp; Mannix and Mildred Lake;
- in 2014, SO_2 exceeded level 3 for two stations Mannix and Mildred Lake;
- in 2013, SO_2 exceeded level 3 for one station Mannix;
- in 2012 - SO_2 exceeded level 3 for two stations Mannix and Mildred Lake.

Despite these trigger exceedances, the AEP has never initiated regulatory action for Level 3 exceedances or gave directions under LARP for Level 4 exceedances and confined the management responses to investigation measures.

Management responses are available at Alberta's Lower Athabasca regional planning with reports on Status of Ambient Environmental Conditions for 2012, and 2013, with *Lower Athabasca Region Status of Management Response for Environmental Management Frameworks* from 2014, 2015, 2016, 2017, 2018, 2019, 2020, to 2021 (*LARP Environmental Monitoring*).

In Government of Canada Response to the Draft LARP, the choice of NO_2 and SO_2 was criticized saying there are "other important air pollutants that are relevant to the oil sands and have negative human and ecosystem health impacts, specifically particulate matter, ozone, volatile organic compounds, metals and toxics" (at 11 – 13). Canada criticized the use of the 99th percentile as the "proposed method calculates annual ratios of the 99th percentile to the maximum value and then averages the ratio over several sites. This method reduces the influence of the highest concentration values through the use of the 99th percentile, the application of the average ratio from all sites to adjust the trigger criteria, and the combination of urban, industrial and background site data to calculate the average ratio for NO_2" (at 12).

Canada's suggestions were disregarded in Alberta's final LARP.

Surface Water Quality Management Framework for LARP (September 1, 2012)

In the *Regulatory Details*, Part 5, Surface Water Quality, section 28 states that AEP is responsible for surface water quality in the region, in the identical fashion that the AEP is responsible for air quality, with the relevant changes in definitions at section 29(a), incorporating the *Surface Water Quality Management Framework for LARP* (September 1, 2012) [*Surface Water Quality Framework*] document as may be amended (although there have been no amendments). Section 29(c) defines the "Lower Athabasca River" to "mean that portion of the Athabasca River commencing at the easternmost boundary of the Grand Rapids Wildland Provincial Park to the confluence of the Athabasca River to the Athabasca Delta." This means that the Surface Water Quality Management Framework only applies to the lower section of the Athabasca River, from approximately 135 kilometres upstream of Fort McMurray, to the Athabasca River Delta. The only monitoring station is located at Old Fort, some 188 km north of Fort McMurray located on one of the main tributaries in the Athabasca River Delta.

The indicator substances of concern for water quality are listed at Schedule B to the LARP Implementation Plan, with trigger levels at Tables B-1 and B-2 (at 74-76 in LARP). The *Surface Water Quality Framework* states that those indicators were "selected because they: have known concentrations in existing or potential wastewater releases that exceed concentrations in the Athabasca River by two-fold or more; and exhibit a downstream increase (and therefore loading) to the lower Athabasca River between the upstream of Fort McMurray and Old Fort monitoring stations" (at 17, 18).

These were assessed on the basis of historical levels which were derived from the Old Fort records from 1988 to 2009 for the 11 general indicators and from 1999-2009 for the 27 suspended metals indicators (at 19 to 20). Ambient water quality triggers (WQT) were calculated using the historical data, with peak WQT capturing 95% of the dataset with Water Quality Limits (WQL), were based on various water quality guidelines (at 20). This resulted in WQT in the LARP exceeding 10 guidelines levels, and except for total manganese, all of the indicators that exceeded the guideline "were higher than chronic guidelines or chronic criteria for the protection of aquatic life" but this was guessed as being attributable to high concentrations of suspended particles (at 28).

A similar 7 level staged Management Response is present (at 31). The *LARP Environmental Monitoring* indicates water quality exceedances from 2012 to 2020, but again management responses were limited to investigatory measures.

Government of Canada Response criticized the Draft LARP's Surface Water Quality Management Framework noting that "the regional plan does not define or identify what would actually constitute the measured cumulative effects" (at 4). It suggested additional measurements: (a) biological measurements such as fish counts and health assessments and bioaccumulation of toxic substances in key species; (b) flow measurements to understand the interaction of pollution and water currents; and (c) "high profile and important substances specific to the oil sands industry. Two notable groups would be oil sands acids (i.e., naphthenic acids) and polycyclic aromatic hydrocarbons (PAHs)" (at 5 – 6). It also said that,

> there would be benefits to expanding the proposed geographic scope of the monitoring that supports the Surface Water Quality Framework… An increased spatial coverage would address this challenge and also allow monitoring to identify any problematic locations within the region. If there prove to be any localized points of concern, monitoring could be focussed on these areas, and management or protective actions taken if necessary. (at 6)

Relying on one monitoring station at Old Fart was unwise as it could not identify or triangulate on a source, would not take into account significant local impacts upstream in the Athabasca River, on environmentally sensitive tributaries, and downstream to Lake Athabasca. In addition, Canada expressed concerns over the statistical power of the indicators and triggers, noting that "[a] power analysis of a subset of Athabasca River water quality parameters revealed that the existing monthly sampling is likely insufficient to detect a 20% increase in effect size (an effect size often used) as many water quality indicators had low power" (at 7 to 8). Suggesting again that biological cumulative effects monitoring was the proper approach.

Canada's suggestions were disregarded in Alberta's final LARP.

Ground Water Management Framework for LARP (September 1, 2012)

Pursuant to section 45, Part 5, Groundwater, in the *Regulatory Details Plan*, AEP is responsible for ground water quality and quantity, with the definition in section 36 incorporating *Ground Water Management Framework for LARP* (September 1, 2012) [*Ground Water Management Framework*]. Pursuant to section 37, AEP must establish and maintain programs and may pursuant section 38 may require the Director under the *EPEA* to require a holder of ground water authorizations, excluding household and agriculture holders, to prepare a Ground Water Management Plans for approval.

Interim standards for groundwater quality are in Schedule C in the LARP Implementation Plan, and groundwater water quantity levels are still in development. The *Ground Water Management Framework* re-emphasises this (at 26 – 29). *Ground Water Management Framework* notes that "a management response will not be a mandatory requirement of the regional plan until there is better

understanding of the current state of groundwater in the region and final triggers are limits are established" (at 30).

The Ground Water Management Framework divided the planning region into 3 districts: North Athabasca Oil Sands (NAOS) Area, South Athabasca Oil Sands (SAOS) Area, and Cold Lake-Beaver River (CLBR) Area and only applies to non-saline water e.g. water that has a mineralization of 4,000 mg/L total dissolved solids or less at 12-14. The *Ground Water Management Framework* separates the potential impacts to groundwater, from:

- oil sands mines for example, physical changes, de-watering muskeg, leakage, deep water injection etc.;
- *in situ* bitumen recovery where water is heated to provide steam and injected into the oil sands deposit to liquefy the bitumen which is then extracted by wells, for example extraction of ground water, subsurface disruption of ground water, subsidence etc.; and
- other activities, for example leaching of fertilizers, forest fires, natural "climate cycles" affecting basin hydrology, upstream oil and gas etc. (at 15-17).

The Groundwater Management Framework notes that prior groundwater information was limited to site specific monitoring and that the development of a regional groundwater monitoring, modelling and risk mapping was a priority with a summary in Table 2 of progress in this regard (at 17).

Site specific and regional triggers would be developed, but interim quantum and quality triggers were set out for each of the 4 regions with Table 3 setting out primary, secondary and tertiary quality indicators and primary and secondary quantity indicators for oil sands mining; Table 4 did the same for *in situ* extraction and Table 5 for other activities (at 24-25). The level of interim quality trigger concentrations were set out Table 6 for the NAOS; Table 7 for the SAOS and Table 8 for the CLBR (at 28-29).

Interim regional quantity triggers were set for *in-situ* operations based on EAP's *Water Conservation and Allocation Guideline for Oilfield Injection* (2006), which stated that,

> [a]n applicant that proposes to use non-saline groundwater for underground (oilfield) injection will be restricted to a maximum of one-half of the long-term yield of a given aquifer in the immediate vicinity of the water source well. This will be accomplished by limiting drawdown in the production aquifer, as measured in an observation well at a distance of 150 metres from the production well, to 35 per cent during the first year of operation and no more than 50 per cent over the life of the project (at 8).

To implement this, each existing facility operator was required to prepare a Groundwater Management Plan with site specific indicators and a suitable monitoring network within one year and new facility applications would include this as a requirement.

The Government of Canada Response, while acknowledging that the *Ground Water Management Framework* was less developed than Surface Water Quality Management Framework said that "there are environmentally important ground-surface water interactions or exchanges in the oil

sands region. Existing surface water contamination (from the natural oil sand deposits) is largely related to the groundwater flow (level and quantity) and groundwater contaminant flux to the rivers" suggesting that monitoring stations be located adjacent to groundwater discharges i.e. springs as well as seepage monitoring (at 9).

The *Government of Canada Response* questioned the division of groundwater triggers and indicators tiers by oil sands mines, *in situ* and other activities and the interim quality standard's noting that water levels of dissolved metals were not a good measure as fish tissue accumulation of metals was a better predictor of mortality and some monitored compounds, that protected other receptors (e.g. livestock), were not involved in aquatic environment protection (at 6-7). According to Canada, existing trigger levels should be expanded to express upper limits of the dissolved or bioavailable levels of metals to better protect the aquatic environment and while the trigger levels are described as long term mean levels, the monthly sampling is inadequate to yield statistically significant levels (at 8). For groundwater analysis, Canada warned that baseline flows may be difficult to re-construct and recommended a network of monitoring wells near the oil sands to provide early warning as groundwater flows were slower (at 10). Additionally it recommended expanding the relevant monitoring regions particularly the NAOS to include "oil sands projects where there is a reasonable potential for environmental impacts and cumulative effects to groundwater" (at 15).

Canada's suggestions were disregarded in Alberta's final LARP.

As noted, ground water management was updated in 2013 for the North Athabasca Oil Sands Area (NAOS) (2013) only, with added information and the same interim quality triggers because finalized groundwater quality and quantity triggers were still under development.

Tailings Management Framework for the Mineable Athabasca Oil Sands (2015)

In the *Regulatory Details Plan*, Part 8, Monitoring and Reporting, section 46(a) defines the "lead ministry" as the government department identified in Tables 1 and 2 of the LARP Implementation Plan (at 69 to 73). In those Tables, the lead ministry was Environment and Sustainable Resources Department (ERSD). With the passage of the *Responsible Energy Development Act*, SA 2012, c R-17.3 (REDA) in 2012, the Alberta Energy Regulator (AER) established pursuant to section 3 of REDA as the independent corporate single up-stream regulator for energy project, funded by industry and replacing the regulation of energy projects previously held by ESRD. The AER has taken over the environmental jurisdiction in relation to applications under "energy resource enactments" defined in REDA section 1(1)(j) as including the *Oil Sands Conservation Act*, RSA 2000, c O-7 that administers oil sands leases and facilities as well as specified enactments defined in section 1(1)(s) in relation to energy projects.

The AEP retains jurisdiction for non-energy activities. The jurisdictional boundary between the old ERCB, now AER and the old ERSD, now the AEP, was in flux with documents referencing either or both that would change as they were updated.

The AEP's *Tailings Management Framework for the Mineable Athabasca Oil Sands* (2015) (TMF) is an example of this where references to the ERSD and the AER are present (at 38-39).

The AER, in accordance with the TMF, created AER Directive 085: Fluid Tailings Management for Oil Sands Mining Projects (July 2016).

The TMF was intended to give directions to manage fluid tailings volumes and consequent environmental risk resulting from the accumulation of fluid tailings. The objective of TMF was to minimize fluid tailings accumulation y ensuring that fluid tailings are treated and reclaimed progressively during the life of a project and all fluid tailings associated with a project are ready-to-reclaim within 10 years of the end of mine life of that project **(**at 8). However, the TMF also said "[w]here preferred approaches are found insufficient to manage all of the liberated process-affected water generated and stored on site, regulatory applications that seek the return of new wastewater streams to the environment may be considered" (at 37).

Oil sand mine tailings, as noted in Jennifer Grant, Simon Dyer, Dan Woynillowicz, *Fact or Fiction Oil Sands Reclamation* (2008) (Drayton Valley: The Pembina Institute, 2008) (*Fact or Fiction*) result from oil sands mining and,

> After the oil sands are mined, they must be either thinned or heated to move through a pipeline. The ore is mixed with hot water (and sometimes caustic soda) to wash oil from sand. The slurry is then pumped via pipeline to the extraction plant. The extraction process separates the bitumen from the oil sand. The slurry mixture from the hydro-transport pipeline goes into tanks, which are called primary separation vessels, where it settles into layers. In these vessels, the bitumen floats to the surface, the sand settles to the bottom and in between the two floats a murky water layer (called middlings).
>
> The sand and middlings make up the waste by-product called tailings, which consist of water, sand, silt clay, unrecovered hydrocarbons and water with dissolved components. The bitumen froth is skimmed off the top and sent to froth treatment, the middlings are fed into a secondary separation vessel to undergo more separation, and the sand, mixed with water, is pumped into large settling basins called tailings ponds — more appropriately referred to as tailings lakes.
> ….
> The tailings sand slurry is pumped hydraulically to deposition sites where it is left to separate and settle. The slurry is poured into cells and beaches where the coarser sand settles and is compacted to form containment dykes. The water and suspended fine materials (silts and clays) flow down the beach slopes into large settling basins. This settling could take anywhere from a few decades to as much as 125–150 years, depending on the tailings management and technologies employed and the proportion of fine materials in the mined oil sands. Tailings systems at each oil sands operation are slightly different and change over time as new technologies become available. However, it is estimated that 2–2.5 m^3 of total tailings material is produced on a per-barrel basis.
> (*Fact or Fiction* at 12-14).

Oilsands tailings are a toxic mixture of contaminated water, residual oil, treatment chemicals, heavy metals, silt and clay that pose a risk to animals and wildfowl. These "tailing ponds" were intended to be temporary. Syncrude's experimental oil sands mining project's 1973 water licence

under *The Clean Water Act*, SA 1971 only allowed discharges to "tailings ponds" with future research anticipated to provide an acceptable treatment.

The initial handling is to store them in what are now massive settling lakes, where the heavier sands settle to the bottom. Water with suspended fine materials,

> …form a stable suspension that requires a long time to fully consolidate. As this suspension settles, it is referred to as mature fine tailings (MFT) MFT settle to become less liquid and more dense over time, reaching approximately 30% by weight of fine sand and clays. The remaining 70% is composed of water that cannot be recycled because of the suspended sediments. (*Fact or Fiction* at 14)

The amount of MFT depends upon the oil sands composition but on average, approximately 1.5 barrels (240 litres) of MFT accumulate for every barrel of bitumen produced. In 2013, there were approximately 976 million cubic metres (Mm^3) of fluid tailings contained within 220 km^2 (85 square miles) of tailing lakes that require long term storage in earthen dykes. There is a low annual risk of failure but the possibility remains that over the lifetime of these tailing lakes there will be additional leaks or catastrophic failure contaminating the downstream ecosystems.

Research is ongoing but there are two recognized processes to deal with oilsands mine tailings:

- *Consolidated tailings*, where "a variety of chemical agents (e.g., gypsum, lime, acids, polymers, carbon dioxide) are added to the MFT. These chemicals provide some strength to the silts and clays, allowing them to support a fraction of sand, which initiates and accelerates the consolidation" (Fact or Fiction at 29-30). The process involves dredging the MFT, adding the consolidating material and spreading it out to consolidate. After consolidation those materials would be buried under a layer of sand with a soil top-cover and reclaimed by planting vegetation. The anticipated reclamation has not been seen in practice in part due to the expense involved; and

- *End-of-pit lakes*, where at the end of mining the numerous remaining pits would be converted into lakes intended to provide self-sustaining aquatic environments, with the outflow meeting water quality standards. These have been used in other mining contexts but the difference is the end-of-pit lake will contain: "consolidated tailings, mature fine tailings (MFT), overburden, lean oil sands and operational release waters in varying quantities." Currently, end pit lakes are the lowest cost and the most relied upon practice to date, (Fact or Fiction at 31-34). There are significant uncertainties with this concept and it is an open question whether they even work (Fact or Fiction 41-43). The AER Decision 2019 ABAER 006: Syncrude Canada Ltd. Mildred Lake Extension Project and Mildred Lake Tailings Management Plan said at para 831: "Although Syncrude has identified 2023 as a date by which water capping of fluid tailings might be successfully demonstrated at Base Mine Lake, there is significant uncertainty about whether the technology will be successfully demonstrated by this date."

The TMF, artificially divided:

- *new tailings* generated after January 1, 2015, that had the target of a volume that can be reasonably reclaimed within 10 years of the end of mine life, (at 16-17); and
- *legacy tailings* which had to be reclaimed by end of mine life (at 26 to 27).

For new and legacy mine tailings, the operator would have to submit separate project specific Tailing Accumulation Profiles and Tailings Management Plans by March 31, 2016 for approval by the AER (Tailing Management Plans). Tailing Management Plans would work back from the end-of-mine life date, "despite the many variables that must be considered to address tailings inventory and reclamation, all management efforts can be summarized into an expectation that the fluid tailings volume inventory will initially grow, stabilize, and decline, to meet the objective of having all fluid tailings in a ready-to-reclaim state within 10 years after end of mine life" (at 19). Guidelines in the TMF for Tailing Management Plans were phased:

- Phase 1, where projected tailing volumes would grow to range of 3-10 years of full production and tailing technologies tested;
- Phase 2, where tailing volumes would stabilize as the tailing technologies would accommodate annual tailing generation with *The End of Mine Life Target* for all projects will be the equivalent of 5-years, or less, of fluid tailings volume accumulation; and
- Phase 3 – Post Mine closing where tailing treatment continues (at 19-20)

The definition of "ready-to-reclaim" or reclaimed tailings are left to the oil sands developers to define in the application (at 38-39). There was no government standards or directions, although they were in development (at 45).

The TMF's project specific triggers will be dependent on AER's approved Tailing Management Plans(at 17). TMF Project Specific indicators and Triggers include:

- *Profile Deviation* engaged by 20% deviation;
- *Total Volume* engaged by 100% of the End of Life Target; and
- *Total Volume Limit* engaged by 40% of the self-defined ready to reclaim state by 10 years of the End of Life Target. (at 24-25)

TMF's Regional indicators, would include:

- *volume of fluid tailings per year* as measured against the total of all approved Tailings Management Plans;
- *rate* total volume of fluid tailings per year; and
- *fines* being the amount of fines captured per year (at 27).

The TMF said that its Management System differs from other LARP frameworks "in that it focuses on managing the environmental pressure (i.e. fluid tailings accumulation) rather than the environmental state (regional ambient environmental conditions)" (at 29). The TMF's Assignment of Management Response, contain 4 levels:

- Level 1 being on the approved trajectory with no action;

- Level 2 where the Profile Deviation Trigger has been exceed which may include penalizing operators that fail to comply;
- Level 3 where the Total Volume Trigger has been exceeded – with investigatory actions contemplated; and
- Level 4 where the Project limits on fluid tailings have been exceeded that requiring the penalizing operators that fail to comply with the TMF (at 29-35)

Triggers and Management Intent are summarized in Table 2 with Table 3 listing potential AER enforcement (at 32-33)

The AER has, as noted above, issued AER Directive 085: Fluid Tailings Management to enable the TMF and recommends reference to the TMF in addition to this Directive (at 3). The AER's Report *State of Fluid Tailings Management for Mineable Oil Sands* (2020) says that all eight of the oilsands mining companies Tailings Management Plans have been approved and all of the oilsands were operating at Level 1 – subject to clarification requests by the AER.

The TMF's mention of the potential for wastewater streams being released to the environment is troubling because, despite research, there is no current technology at optimized production levels that allows for treatment of tailings within 10 years of mine closing (at 37). While TMF acknowledges this, it suggests that the technology will improve (at 23 and 36).

Recent news articles have reported an "urgent requirement" to release "treated" oil sands tailings into the Athabasca river, as improved technology has not been born out. As early as 2020 calls have been made by industry to do so e.g. Janet French, "Companies could be allowed to release treated tailings pond water into Athabasca River by 2023" (January 31, 2020: Edmonton Journal). Canada has been contemplating this in August 2022, Nia Williams, "Canada's oil sands sector aims to release treated tailings water into river" (August 19, 2022: Reuters) and Bob Weber, "Draining tailings into Athabasca River one solution under review in oilpatch, says Guilbeault" (August 18, 2022: CBC News from Canadian Press).

Essentially, LARP defers the issue of growing oilsands tailings until some unknown low cost technology is developed or industry is "compelled" to release waste water from tailings lakes.

Surface Water Quantity Management Framework for LARP (2015)

As noted above, in the *Regulatory Details* Part 8 Monitoring and Reporting, section 46(a) defines the "lead ministry" as the government department identified in Tables 1 and 2 of the LARP Implementation Plan (at 69 to 73). This results in the AEP as the Designated Ministry.

The AEP issued a Surface Water Quantity Management Framework for LARP (2015) [*Surface Water Quantity Framework*] as a replacement to the interim *Water Management Framework: Instream Flow Needs and Water Management System for the Lower Athabasca River* (2007) (Interim Framework). The Interim Framework was criticized with respect to the potential withdrawal amounts by oil sand operators pursuant to their existing water licences, which could exceed a low flow situation in the Athabasca River: see Monique Passelac-Ross and Karin Buss, *Water Stewardship in the Lower Athabasca River: Is the Alberta Government Paying Attention to*

Aboriginal Rights to Water? (Calgary: Canadian Institute of Resources Law, 2011); Arlene J. Kwasniak, "Instream Flow and Athabasca Oil Sands Development: Contracting Out/Waiver of Legal Water Rights to Protect Instream Flow - A Legal Analysis"(2010-2011), 48 Alta L Rev 1 and *Running out of Steam? Oil Sands Development and Water Use in the Athabasca River-Watershed: Science and Market based Solutions* (Edmonton: University of Alberta-Environmental Research and Studies Centre, 2007).

The *Surface Water Quantity Framework* is more developed than the Interim Framework, but it "focuses on the management of water use by the mineable oil sands sector, based on current and anticipated water demands that contribute to reductions in the flow of the Athabasca River" (at 2). The *Surface Water Quantity Framework* only applies to "the lower section of the Athabasca River from just downstream of the Grand Rapids (approximately 135 kilometres upstream of Fort McMurray) to the Athabasca River Delta" (at 3). It is confined to one monitoring station,

> 'McMurray station' will be used as the principal flow measurement site. The McMurray station is the Water Survey of Canada gauge 07DA001 "Athabasca River below McMurray." This location has been monitored since 1957. It is located at Fort McMurray, downstream of the confluence with the Clearwater River, and upstream of all water withdrawals by the oil sands sector. (at 15)

In 2011, the total licenced water allocation from the Athabasca Basin was 848,055,739 m^3 (26.9 m^3 average – with the average as the yearly allocation at constant pumping rate (at 18). The net water allocation (licenced – return flow) was 645,547,643 m^3 (20.4 m^3 avg) and the estimated net water use was 143,483,558 m^3 (4.6 m^3) with oil sands being 51% of the total, 61% of the net allocation and 72% per cent of the net use (at 17-18). The net use of water in the oil sands will increase from increasing production, additional oil sand mines and *in situ* bitumen projects. Existing oil sands projects in 2015 had a licensed pumping capacity of approximately 20 m^3/s, while an additional 7 m^3/s of pumping capacity has been approved but not built, and the maximum licensed pumping capacity will increase as more projects are approved and built.

The *Surface Water Quantity Framework* set the maximum daily withdrawal at 29 m^3/s in high water flow (at 27-28 and 35). With a maximum annual cumulative limit of 441 million m^3/year (14 m^3/s) or three times the current use (at 33). Table 2 details the current allocations (at 18).

The maximum daily withdrawal and the cumulative withdrawal amounts on a seasonal basis is in Table 4 (at 29). That maximum may be shared by agreement between the oil sands water licence holders, which agreement must be provided by November 1 of each calendar year (at 42-43). There is a critical trigger flow of 87 m^3/s as measured weekly in the river, at which point the total authorized withdrawal of all oil sands project is set at 4.4 m^3/s (at 27-29). Once reached the flow is allocated as follows: a maximum of 2 m^3/s to each of Suncor and Syncrude; a maximum of 0.2 m^3/s to each of Shell Muskeg River and Canadian Natural Horizon for freeze protection of existing infrastructure; and zero to all other mineable oil sands water license holders, in accordance with the seniority of water licences (at 42-43).

There are seven adaptive management triggers described including:

1. Upstream Water Use – significant change in upstream water use in Table 4, with triggers:
   - Net water allocation upstream of Fort McMurray reaches or exceeds 160 million m^3/year
   - Actual reported net water use upstream of Fort McMurray reaches or exceeds 60 million m^3/year).

2. Changes to Long-Term Seasonal Low Flows in the Athabasca River – "Low Flow Adaptive Management Triggers have been identified for six seasons (in Table 5). The model used an analysis of historical flows (1957-2007) extrapolated on the basis of future climate change, which resulted in a flow reduction of 10.8 per cent in winter and 12.1 per cent in the open-water season by 2039 (Appendix F)." It should be noted that this climate change model has been challenged, see: David J. Sauchyna, Jeannine-Marie St-Jacques, and Brian H. Luckman, "Long-term reliability of the Athabasca River (Alberta, Canada) as the water source for oil sands mining" (2015), PNAS | October 13, 2015 | vol. 112 | no. 41 | 12621, and Amy Mannix, Chokri Dridi and Wiktor Adamowicz, "Water Availability in the Oil Sands Under Projections of Increasing Demand and a Changing Climate: An Assessment of the Lower Athabasca Water Management Framework (Phase 1) (2010), 35(1) Canadian Water Resources Jnl, 29.

3. Changes to Oil Sands Water Use – Oils sands water use with triggers in Table 4 would initiate the management response if cumulative annual water withdrawals by the oil sands sector exceed 441 million m^3/year (14 m^3/s)."

4. Cumulative Oil Sands Water Use, Relative to Weekly Flow – three adaptive management triggers are designed to detect whether water use (mineable and *in situ*), relative to flow, is outside of the modelled predictions applied in the development of weekly management triggers and withdrawal limits Table 4:

   - the first trigger will be reached if cumulative oil sands water use is equal to or greater than 10 per cent of the flow measured at the McMurray station for six or more weeks during the winter period of any given year (weeks 1 to 15 and 44 to 52);
   - the second trigger will be reached if cumulative oil sands water use is equal to or greater than 6 per cent of the flow measured at the McMurray station for six or more weeks during the open water period of any given year (weeks 16 to 43);
   - the third trigger will be reached if cumulative oil sands water use is equal to or greater than 15 per cent of the flow measured at the McMurray station for a single week at any time of the year.

   It should be noted that these triggers are unlikely to be reached and the management action is limited to re-assessment of Table 4.

5. High Oil Sands Water Use During Low Summer/Fall Flows – the framework currently allows for up to 29 m^3/s to be withdrawn from the Athabasca River during the Summer/Fall season – a management response will be triggered if cumulative oil sands water use exceeds the predicted full build-out scenario (16 m^3/s) during any week in the Summer/Fall season (weeks 24 to 43) in which the average weekly flow is less than 400 m^3/s

6. Development of Ecological Indicators and Triggers – these are under development; and

7. Preliminary Aboriginal Navigation Index - incorporates a preliminary Aboriginal Navigation Index (ANI; Appendix G), which is based on the concepts of Aboriginal Base Flow (ABF; 1600m^3/s - based on a laden motor boat drawing 1.2m to navigate one specific chokepoint) and Aboriginal Extreme Flow (AXF; 400 m^3/s) to ensure navigation. A management response would be initiated if the change in fall season (weeks 34 to 43) ANI were to exceed 10 per cent in any year – but this was limited to an investigation as to the factors affecting the exceedance (at 30-40).

Essentially, surface water quantity monitoring in LARP involves a geographically limited area of the region – one monitoring station - and there are no framework triggers to account for flow level effects on the aquatic environment i.e. Environmental Base Flow (EBF) promised since 2006. The choice of fixed withdrawal quantities for developments instead of flow ratios means there is no there is no incentive to conserve water, or construct water storage for low flow times.

Management Frameworks in LARP

In summary, the existing Management Frameworks' substantial deficiencies include:

- Re: conservation lands: the 22% conserved lands not only broke the contiguous nature required but may ultimately prove useless in preventing lasting environmental damage;
- Re: air quality: measures a limited subset of pollutants, using questionable methodology with limited monitoring stations;
- Re: water quality : measures a limited subset of pollutants that are not bio-accumulative in the aquatic environment; in a limited area; using questionable methodology and only one monitoring station – unable to triangulate sources of water pollution;
- Re: groundwater quality : measures a limited subset of pollutants that are not bio-accumulative to in the aquatic environment; in a limited area; using questionable methodology with only interim triggers and with a Quantity Framework to be developed;
- Re: surface water quantity : in a limited area; using one monitoring station; with volume withdrawals that can impede navigation in low flow situation and not ratios that would encourage water conservation with ecological indicators and triggers under development;
- Re: tailings management : with applicant defined ready to reclaim measures; untested methods and inappropriate targets; with anticipated improvements in reclamation technologies – that have yet to pan out resulting in calls to discharge "treated" tailings directly into the Athabasca River.

In the 10 years of LARP, the mandated management responses have been, in the AEP's final and binding discretion, investigatory in nature with no discernable connection to regulatory action.

As noted by the Calgary Herald on March 6, 2013, six months after the passage of LARP, the AEP's budget was cut 4%, with Emami noting that conservation budgets were cut by 30% - this may account for lack of progress on the missing frameworks (at 122-129).

Review Panel Report 2015: Lower Athabasca Regional Plan (June 2015)

Frustrated by the LARP development process and the resulting LARP, five First Nations (Mikisew Cree First Nations, Athabasca Chipewyan First Nation, Cold Lake First Nations, Onion Lake Cree Nation, Fort McKay First Nation and, Chipewyan Prairie Dene First Nation and 1 Métis Community (Fort McKay Métis Community Association) filed complaints to the Stewardship Minister under *ALSA* that resulted in the non-binding recommendations to the Alberta Cabinet in the *Review Panel Report 2015: Lower Athabasca Regional Plan* (June 2015) (*Review Panel*).

The *Review Panel*'s Executive Summary stated that:

> The Applications reviewed by the Panel included assertion and evidence the cumulative effects of rapid change in the Lower Athabasca Region are having an impact on the First Nation Applicants.
> …
> One of the difficulties encountered by the Review Panel in assess the Applications was that, Alberta, in its responses to the concerns raised by the Applicants, frequently disputed the jurisdiction of the Panel to address those First Nations' concerns. Alberta's response was essential the same to each of the Applications. Alberta chose to rely on its legal argument and filed little in the way of rebuttal evidence. (at 4)

To address the jurisdiction issues raised by Alberta, the *Review Panel* issued an Information Request under the Rules to Alberta and ultimately determined that the *Review Panel* had jurisdiction to consider LARP's impact to treaty rights (at 22 to 25 - this Jurisdiction Ruling is appended as Appendix 3 to the *Review Panel*). The Province's standard form legal arguments for all of the First Nation Applicants was to assert they are not affected by LARP, but the *Review Panel* said this would make the *Review Panel* 's process meaningless. In doing so, the *Review Panel* gave consideration to the phrase "*person who is directly and adversely affected*" as a foundational consideration of its jurisdiction: it noted that *ALSA* was drafted with broad purposive intent but did not include a definition of "harm" which the *Review Panel* equated with infringement on aboriginal rights, based on a legal opinion generated at their request and formally adopted (at 26). The *Review Panel* said,

> Consideration of Treaty rights is with the Review Panel's jurisdiction, to the extent that it is necessary to consider treaties while ruling on Applications made by First Nations for a review of the LARP. In order to decide whether the First Nation Applicant's Treaty rights are "directly and adversely affected" by the LARP, the Review Panel must address these Treaty rights.
>
> The Review Panel does not have the jurisdiction whether the LARP, or any government action has infringed Treaty Rights, as this is a determination of law, however, the Review Panel should be sensitive to the potential for Alberta to authorize activity that would infringe Treaty Rights (at 27).

The *Review Panel* analogized Treaty rights to property rights in circumstances where they could found tortious claims in nuisance or, for example, the right to quiet enjoyment of property. This is not unprecedented in Alberta as the Gross-Royalty Trust Claims where various contractual royalty arrangements were interpreted in diverse cases to constitute in effect a property right see: David

Legeyt, Ashley Weldon, Natasha Wood, and Brendan Downey, "Let's Talk About Royalties: The Continued Uncertainty Surrounding the Creation and Legal Status of the Overriding Royalty" (2019), 57:2 Alberta Law Review 335 (in the interest of full disclosure, David Laidlaw was an associate at Lang Michener, counsel for the Bankruptcy Trustee on the *Bank of Montreal v Dynex Petroleum Ltd*, 2002 SCC 7 (CanLII), [2002] 1 SCR 146 at that time.)

The *Review Panel* also made a general recommendation that based "[u]pon review of the Applications, it was evident to the Review Panel that the Traditional Lands described in the submission of each First Nation Applicant were being, for the most part, encroached upon and reduced by rapid industrial development of the Lower Athabasca Region" (at 6). It gave the example of the Fort McKay First Nation with, at that time, 70% of their Traditional Territory being taken up in oil-sands leases. Consequently, in its general recommendations:

> The Review Panel suggests to the Minister that, in order to achieve the purposes described in ALSA, a TLU Management Framework must be developed and included as an important component of the LARP. This will recognize and honour the "constitutionally-protected rights" of the First Nation communities residing in the Lower Athabasca Region.
> …
> The Review Panel strongly suggests to the Minister that to achieve effective cumulative impact management in the Lower Athabasca Region, as prescribed by LARP, an equalization must be achieved to find a balance between industrial activity and the "constitutionally-protected rights" of the First Nation Applicants which must be achieved in order for the LARP to attain its prescribed "vision" and "purpose." (at 6)

After the *Review Panel* Report was leaked, there has been no public information in the past 6 years as to any progress on this TLU Management Framework or other missing Frameworks.

Blueberry Comes to Alberta

Alberta has received it's first Blueberry case on August 29, 2022 with Duncan's First Nation (DFN) claim against Alberta as announced by Osler, Hoskin & Harcourt LLP by Maureen Killoran, KC, Sander Duncanson, Sean Sutherland, Lisa Manners, "Treaty infringement claims for cumulative effects come to Alberta". A Blueberry case, technically described as *Yahey v British Columbia*, 2021 BCSC 1287 (*Yahey*) is the first successful case to find the provincial government liable for the cumulative effects of development approvals on the traditional territories of First Nations that was found to infringe Treaty 8. My colleagues Robert Hamilton and Nick Ettinger have written extensively on this Robert Hamilton & Nick Ettinger, "Blueberry River First Nation and the Piecemeal Infringement of Treaty 8" (ABLawg: July 20, 2021) and Robert Hamilton & Nick Ettinger, "Yahey v British Columbia and the Clarification of the Standard for a Treaty Infringement" (ABLawg: September 24, 2021).

The regulatory approval structure for developments in British Columbia is, for the most part, identical to Alberta's. Liability in *Yahey* was established on the basis of evidence that "that 85% of the Blueberry (Traditional Territories) is within 250 metres of a disturbance, and 91% of the Blueberry Claim Area is within 500 metres of a disturbance" (at para 1076).

LARP includes Treaty 8 areas, and Alberta's *Aboriginal Consultation Response*, the Fort McKay First Nation Position Paper on the Lower Athabasca Regional Plan Frameworks (June 2015) and the *Review Panel Report* all strongly suggest that Treaty 8 rights were not seriously considered in the formulation of LARP. As noted above, research by E. Komers, "Rates of Disturbance" says "there will be no area left in the Oil Sands Lease Area where a person could go to be farther than 250 m away from an industrial feature." This demonstrates potential evidence of the cumulative effects of development approvals by Alberta, particularly in oil sands project approvals that will infringe Treaty 8's aboriginal rights.

Recommendations for the 10-year Review of LARP

Some recommendations for this 10 Year Review would include, not only referencing the *Review Panel Report*, but the 5 Year Review of LARP, the *Government of Canada Response*, and input from the informed public, environmental groups and academic criticism, for example Clinton Westman and Tara L Joly, *Taking Research Off the Shelf: Impacts, Benefits, and Participatory Processes around the Oil Sands Industry in Northern Alberta* (2017), (Final Report for the SSHRC Imagining Canada's Future Initiative, Knowledge Synthesis Grants: Aboriginal Peoples) canvasses the literature and Canada's Oil sands monitoring: scientific papers and presentations has a list of the post 2011 scientific literature.

Most significantly serious consideration of any input Indigenous Peoples, who have lived in planning region for thousands of years, must be considered by Alberta in revising the LARP.

Other recommendations would include:

- expand not only the substances of concern indicators, additional monitoring stations, including indigenous monitoring, and expand the geographic areas of regional management to include all of the planning region;
- changing the cumulative effects monitoring to biological indicators in conjunction with Indigenous Knowledge Systems;
- finalize the missing Ground Water Quantity Management Framework Bio-Diversity Management Framework and Integrated Landscape Management Framework;
- re-think the conservation area objectives this could be accomplished by giving the AEP the power to create new conservation areas – this would also fulfill Alberta's constitutional honour of the crown obligations in providing conservation offsets wherein Indigenous Peoples could exercise aboriginal harvesting rights;
- fund scientific research in conjunction with Indigenous Knowledge systems to address the oil sands tailing lakes issues; and
- taking the *precautionary principle* seriously, by among other things, hard limits on the investigation stage of the management response before regulatory responses are invoked.

The alternative may be expensive, extended and protracted Blueberry type litigation that would create uncertainty for oil sands developers and all Albertans or an ecological disaster occasioned by the collapse dams for tailings lakes or release of polluted waters – leading to not only

downstream damage to the Athabasca River and Athabasca Lake and the entire watershed flowing to the Arctic Ocean.

We suggest that in the Lower Athabasca Region – a rebalancing of development and the environment is required.

I would like to express my thanks to Professor Martin Olszynski and Athina Pantazopoulos for their comments in preparing this series of posts. Any mistakes or omission are my own.

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