

**Canadian Institute of Resources Law
Institut canadien du droit des ressources**

**A Transboundary Comparative Analysis of
Opportunities for Public Participation in the
Regulation of Hydraulic Fracturing
in the Bakken Shale Formation**

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A TRANSBOUNDARY COMPARATIVE ANALYSIS OF OPPORTUNITIES FOR PUBLIC PARTICIPATION IN THE REGULATION OF HYDRAULIC FRACTURING IN THE BAKKEN SHALE FORMATION

ABSTRACT

This paper provides a comparative analysis of how the regulatory regimes overlying the Bakken Shale Formation (North Dakota, Montana, Saskatchewan and Manitoba) provide for public participation in government decision-making processes for use of hydraulic fracturing technology. Statutory provisions for public participation are often associated with natural justice and the common law duty of “procedural fairness” when administering the law. A brief description of the Bakken Shale Formation and an overview of public concerns about potential impacts of hydraulic fracturing on the environment, human health, and communities are provided for context. This comparative analysis briefly explores some of the similarities, differences, strengths, and weaknesses of statutory provisions for public consultation or participation in the four jurisdictions, examining three policy development and regulatory decision-making processes regarding fracking: 1) *policy development and rule-making*; 2) *licensing and operational decision-making processes*; and 3) *ensuring compliance with license or approval conditions*.

1. Introduction

Hydraulic fracturing technology (hereinafter “fracking”) has been used throughout North America for over 60 years to stimulate oil and gas production from vertical wells drilled in conventional reservoirs.¹ By combining fracking with multi-stage horizontal drilling, large-scale production of shale gas and tight oil from previously cost-prohibitive shale formations is now possible.²

Briefly stated, fracking involves injecting a mixture of fluids (hereinafter “frac fluid”), typically consisting of water, chemicals, and sand or ceramic beads called “proppant” into a drilled well under very high pressure, fracturing the underground rock formation. Proppant keeps the induced fractures open after the injection pressure is released and allows oil and gas to flow through the well to the surface,³ along with some of the frac fluid (hereinafter “flowback”). Multi-stage horizontal drilling using fracking attracts public attention because it requires “very particular material requirements” and “sustained production requires constant drilling.”⁴

The Bakken Shale Formation (hereinafter “Bakken”) is a large transboundary and trans-jurisdictional shale formation underlying parts of North Dakota and Montana in the United States of America (hereinafter the “US”), and Saskatchewan and Manitoba in Canada. Over the last decade, fracking created an oil and gas production “boom” from the Bakken⁵ in both countries. Compared to the boom in the US jurisdictions, fracking in the two Canadian provinces is “still in its nascent stages.”⁶ In this context, the Bakken provides an opportunity for comparative analysis in two countries, and across four regulatory regimes of laws and procedures for authorizing the life cycle stages of oil and gas wells that use fracking, including: exploration and well pad siting, drilling and completion, production and recompletion, and site reclamation.⁷

¹ C. Rivard et al., “An overview of Canadian shale gas production and environmental concerns”, (2013) *Int. J. Coal Geol.* (hereinafter “Rivard et al.”) at 2, online: <http://dx.doi.org/10.1016/j.coal.2013.12.004>.

² R. Lave R, and B. Lutz, “Hydraulic Fracturing: A Critical Physical Geography Review,” (2014) 8(10) *Geography Compass* 739-754, (hereinafter “Lave and Lutz”) at 740.

³ United States Environmental Protection Agency, “Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United State,” 2016 (hereinafter EPA Executive Summary), online: https://www.epa.gov/sites/production/files/201612/documents/hfdwa_executive_summary.pdf.

⁴ Lave and Lutz, *supra* note 2 at 741.

⁵ *Ibid.* at 740.

⁶ Rivard et al., *supra* note 1 at 2.

⁷ Stantec Consulting Ltd., Prepared for the Government of Saskatchewan, Ministry of the Economy, *Saskatchewan Oil and Gas Supply Chain Requirement Guide*, 2015, (hereinafter “Stantec”) online: <http://publications.gov.sk.ca/documents/310/93668Oil%20and%20Gas%20Supply%20Chain%20Requirement%20Guide.pdf> at 11. Last visited on February 16, 2017.

Fracking is used during the production, completion and recompletion stages, and often attracts special regulations under oil and gas, water, and environmental laws. In some jurisdictions, oil and gas exploration and development are not considered activities that attract environmental impact assessments. Potential health and environmental impacts of fracking are often addressed through oil and gas regulations for permits,⁸ or through water licensing requirements for fresh water,⁹ although some jurisdictions have environmental laws that require the applicant for a well permit to submit an environmental impact assessment.¹⁰

The purpose of this paper is to discuss and compare how each of the regulatory regimes overlying the Bakken provides for public consultation or participation in government decision-making processes both before and during the life cycle stages of oil and gas wells where fracking is used. Statutory provisions for public participation are often associated with natural justice and the common law duty of “procedural fairness” in administration of the law. These include requirements for (i) public access to information, (ii) notice of applications or decisions, (iii) procedures for members of the public to submit statements of concern, (iv) mandatory public hearings, (v) procedures for appeals by those who are affected, or court processes, (vi) impartial and independent decision-makers and tribunals, (vii) release of written reasons for decisions, and (viii) alternative dispute resolution mechanisms, such as arbitration, mediation, or consensus decision-making processes.¹¹

⁸ Manitoba Law Reform Commission, *Manitoba’s Environmental Assessment and Licensing Regime under the Environment Act*, 2015 (hereinafter “Manitoba Report”), online: <http://www.manitobalawreform.ca/pubs/pdf/130-full_report.pdf> at 6. Last visited on February 24, 2017. “Environmental law is focused primarily on protecting environmental resources. This can include the regulation of potentially harmful conduct, legal frameworks designed to produce information needed to make sound environmental decisions (e.g. environmental assessment processes) and the imposition of liability for environmental damage (e.g. contaminated sites legislation). Natural resource law is generally designed to regulate the use of environmental resources. Natural resource legislation normally focuses on granting permission for the exploitation, management and conservation of water, mineral, forest and other environmental resources. Such legislation usually also addresses the rental and usage fees associated with the granting of rights to use natural resources.”

⁹ *Manitoba Water Rights Act*, C.C.S.M, c. W80 (hereinafter the “WRA”), online: <<http://web2.gov.mb.ca/laws/statutes/ccsm/w080e.php#>>. Last visited on March 1, 2017.

¹⁰ *Saskatchewan Environmental Management and Protection Act*, S.S. 2010, c.E.10-22 (hereinafter the “EMPA”), online: <<http://www.qp.gov.sk.ca/documents/english/Chapters/2010/E10-22.pdf>>. Last visited March 1, 2017.

¹¹ The common law duty of procedural fairness in Canada was discussed at length by the Supreme Court of Canada in *Baker v. Canada (Minister of Citizenship and Immigration)*, [1999] 2 SCR 817, 1999 CanLII 699 (SCC), (hereinafter “Baker”). Per L’Heureux-Dubé, Gonthier, McLachlin, Bastarache and Binnie JJ.: “The duty of procedural fairness is flexible and variable and depends on an appreciation of the context of the particular statute and the rights affected. The purpose of the participatory rights contained within it is to ensure that administrative decisions are made using a fair and open procedure, appropriate to the decision being made and its statutory, institutional and social context, with an opportunity for those affected to put forward their views and evidence fully and have them considered by the decision-maker. Several factors are relevant to determining the content of the duty of fairness: (1) the nature of the decision being made and process followed in making it; (2) the nature of the statutory scheme and the terms of the statute pursuant to which the body operates; (3) the importance of the decision to the individual or individuals affected; (4) the legitimate expectations of the person challenging the decision; (5) the choices of procedure made by the agency itself. This list is not exhaustive. ... in certain circumstances, including when the decision has important significance for the individual, or when there is a statutory right of appeal, the duty... will require a written explanation for a decision. ...Procedural fairness also requires that decisions be made free from a reasonable apprehension of bias, by an impartial decision-maker.”

The comparative analysis will include discussion of similarities and differences, and strengths and weakness of statutory provisions for public consultation or participation across the four jurisdictions, in three separate governance processes regarding fracking:

- 1) *policy development and rule-making;*
- 2) *licensing and operational decision-making processes;* and
- 3) *ensuring compliance and enforcement of license or approval conditions.*

The paper is organized as follows: Part 2 is a brief description of the Bakken. Part 3 explains why the public want to participate in statutory decision-making processes for fracking. In particular, the main environmental, human health, and community concerns and corresponding regulatory responses that have arisen since fracking was introduced in the Bakken are presented in the context of the Government of Manitoba's (hereinafter "Manitoba") regulatory regime. Part 4 explores aspects of the regulatory regime in each of the four jurisdictions to determine if there are any statutory provisions in oil and gas laws or other related legislation that require or enable public consultation or participation about fracking. Part 5 presents the comparative analysis, followed by the conclusion in Part 6.

2. The Bakken

The Bakken was discovered by the geologist J.W. Nordquist in the early 1950s, and was named after Henry Bakken, a farmer in North Dakota who owned the land at the time of the discovery. The shale formation was deposited in the late Devonian to early Mississippian age in the central and deeper portion of the Williston Basin, occupying approximately 200,000 square kilometers underlying eastern Montana, western North Dakota, and small areas in southeastern Saskatchewan and southwestern Manitoba.¹² The Bakken has three distinct layers: “an upper shale layer, middle dolomite, and a lower layer of shale. The shale layers are petroleum source rocks as well as seals for the layer known as the Three Forks (dolomite) or Sanish (sands).”¹³

The Bakken is “liquids-rich.”¹⁴ Oil produced from the formation is sweet crude associated with abundant natural gas and natural gas liquids.¹⁵ In 2013, the Bakken in North Dakota and Montana was producing “more than 1 million barrels of oil per day”, or about 10% of US production.”¹⁶ A June 2015 report during the North Dakota boom stated:

The Bakken Shale ranks as one of the largest oil developments in the U.S. in the past 40 years. The play has single-handedly driven North Dakota's oil production to levels four times higher than previous peaks in the 1980s. **As of June 2015**, [North Dakota] is second to Texas in terms of oil production and boasts the lowest unemployment rate in the country at 3.1%. (Emphasis added.)¹⁷

¹² *Bakken Shale: News, Marketplace, Jobs* (hereinafter “Bakken Shale News”), online: <https://bakkenshale.com> Last visited on February 15, 2017. “Oil was initially discovered in the Bakken play in 1951, but was not commercial on a large scale until the past ten years. The advent of modern horizontal drilling and hydraulic fracturing helps make Bakken oil production economic. The U.S. Geological Survey has estimated the Bakken Shale Formation could yield 4.3 billion barrels of oil and estimates from Continental Resources stretch as high as 40 billion barrels.” Also see CBC News, “Bakken Formation: Will it fuel Canada’s oil industry”, online: <http://www.cbc.ca/news/business/bakken-formation-will-it-fuel-canada-s-oil-industry-1.761789>. Last visited on February 16, 2017. “Production from the Bakken has been stupendous,” said Roy Schneider, spokesman for Saskatchewan Energy and Resources. “As recently as 2004, production was 278,540 barrels; last year, 2007, we were nudging up against five million barrels - the exact figure was 4,965,000 barrels.” In the same article, quoting from a USGS study released in April of that year, CBC reported that: “Mean undiscovered volumes of 3.65 billion barrels of oil, 1.85 trillion cubic feet of associated/dissolved natural gas and 148 million barrels of natural gas liquids in the Bakken Formation of the Williston Basin Province, Montana and North Dakota, can be unearthed using current technology.” For a thorough history of the Bakken see Monika Ehrman, “Lights out in the Bakken: A Review and Analysis of Flaring Regulation and Its Potential Effect on North Dakota Shale Oil Production” (2014) 117 *West Virginia Law Review*, 549-591 (hereinafter “Ehrman”)

¹³ *Ibid.*

¹⁴ Lave and Lutz, *supra* note 2 at 740.

¹⁵ Energy & Environmental Research Center, *Bakken Flares and Satellite Images: The Science and the Facts*, online: [https://www.undeerc.org/bakken/pdfs/Bakken Flares and Satellite Fact sheet 2015.pdf](https://www.undeerc.org/bakken/pdfs/Bakken%20Flares%20and%20Satellite%20Fact%20sheet%202015.pdf). Last visited on February 15, 2017.

¹⁶ Lave and Lutz, *supra* note 2 at 740.

¹⁷ Bakken Shale News, *supra* note 12.

However, since mid-2015, the “boom and bust cycle” in the oil and gas industry has affected communities overlying the Bakken on both sides of the border. According to one report, the declining price per barrel of oil led to a “bust” in 2016, with many wells shutting down, and with rippling effects on the economy and job loss in what were once boom communities.¹⁸ In 2017, the EIA, Independent Statistics and Analysis: U.S. Energy Information Administration stated that the Bakken is rebounding due to the stabilizing price of oil.¹⁹

The slowdown in fracking in the Bakken provides an opportunity for provincial and state governments in Canada and the US respectively to review their regulatory regimes in response to public concerns before the price of oil and gas rebounds and the next boom cycle begins. To improve government policy for use of fracking and introduce more “democratic processes”²⁰ during decision-making, the four jurisdictions overlying the Bakken might revise their respective regulatory regime to strengthen or provide for public participation in statutory decision-making processes.

3. Public concerns and regulations to manage potential impacts

Fracking has been described as the “energy game changer,” due to positive impacts on economies, energy independence, and energy security,²¹ and has attracted global attention.²² However, fracking has also generated intense debate around the world due to public concerns and social-ecological system uncertainties²³ related to threats to human health and well-being, and potential negative impacts on the environment and on social and cultural aspects of community life.²⁴

¹⁸ See Robert Rapier, “How Shale Oil Will Survive The Crude Carnage,” 2015, online: <<http://oilprice.com/Energy/Oil-Prices/How-Shale-Oil-Will-Survive-The-Crude-Carnage.html>>. Last visited on February 15, 2017. Also see: *The Atlantic*, “A North Dakota Oil Boom Goes Bust: What will happen to those who built their lives on it?” June 27, 2015, online: <https://www.theatlantic.com/business/archive/2015/06/north-dakota-oil-boom-bust/396620/>>. Last visited on February 15, 2017.

¹⁹ EIA, Independent Statistics and Analysis: U.S. Energy Information Administration. *Short Term Energy Outlook*, online: <https://www.eia.gov/outlooks/steo/report/us_oil.cfm>. Last visited on February 15, 2017.

²⁰ Al Lucas and Heather Lillies, “Opportunities for Public Participation in the Regulation of Hydraulic Fracturing Operations in Alberta” (2016) 54(1) *Alta. L.R.* at 190-191 (hereinafter “Lucas and Lillies”).

²¹ Rivard et al., *supra* note 1 at 1.

²² Lucas and Lillies, *supra* note 20 at 186; Also see George E King, “Hydraulic Fracturing 101: What Every Representative, Environmentalist, Regulator, Reporter, Investor, University Researcher, Neighbor and Engineer Should Know About Estimating FracRisk and Improving Frac Performance in Unconventional Gas and Oil Wells” (Paper delivered at the SPE Hydraulic Fracturing Technology Conference, The Woodlands, Texas, 6-8 February 2012, online: <https://fracfocus.org/sites/default/files/publications/hydraulic_fracturing_101.pdf> at 1. Last visited February 15, 2017.

²³ Steven Carpenter et al., “Science for managing ecosystem services: Beyond the Millennium Ecosystem Assessment”, (2009)106(5) *PNAS* 1305-1312.

²⁴ Concerns have been raised in relation to land and water resources contamination, high levels of water consumption, induced seismicity, greenhouse gas emissions, and more broadly in relation to the industrialization and fragmentation of rural landscapes, insufficiently regulated industry practices and community disempowerment. See Rivard et al., *supra* note 1 at 2: Table 1, for fracking activities and related public concerns.

An emerging debate about fracking is whether the general public should have rights to participate in policy development, rule making, and regulatory decision-making processes both before and after authorizations for fracking are granted. The public on both sides of the 49th parallel want a say in imposing conditions on oil and gas companies that use fracking to protect human health, the environment, and communities. The public also want legitimate means to participate in ensuring that operators are in compliance with permit conditions, as well as the laws and regulations that apply to all oil and gas production within their respective jurisdiction.

In 2015, the Manitoba Law Reform Commission²⁵ explained the important role of public participation in policy development and decision-making to achieve environmental goals, as follows:

Public participation plays an important role in achieving environmental goals and helps to ensure that political actors are properly informed and the interests of the public are represented in their decisions. This is especially important for environmental regulatory systems since decisions about when, where and how projects take place can result in significant adverse effects to the land, air, and water. Public participation helps provide the decision-maker with a full range of information, and ensures that the administration of environmental licensing schemes take into account perspectives other than that of the proponent. It is also important to include the public in such processes so that new ideas and potential alternatives to the proposed development are introduced. Public participation can provide a measure of accountability and facilitate monitoring for regulatory agencies and decision-makers. The more that public contributions are meaningfully incorporated into environmental decision-making processes, the more trust and confidence the public will have in such regulatory systems and their administrators. A final and very important result of adequate public participation is the establishment of awareness among the general public and within the affected communities about the potential effects of an activity and what is proposed to mitigate and avoid those effects. (Original references omitted.)²⁶

²⁵Manitoba Report, *supra* note 8.

²⁶ Manitoba Report, *supra* note 8 at 47.

Recently, in an article related to natural resource development in Alberta, “public participation” was broadly explained as “an all-encompassing label to describe any [and] all mechanisms that allow anyone other than government/governmental agencies and project proponents to communicate their views and influence decision-making.”²⁷ The article clarified that many societal actors might be considered the “public,” for example, landowners, other industries, First Nations and other levels of government, communities, non-government organizations (hereinafter “NGOs”), and any other stakeholders who may be directly or indirectly affected by fracking.²⁸ Communicating views and influencing decision-making are two distinct participatory processes. Some public members in all four jurisdictions have been effective in communicating their views about fracking through both print and online social media, and they have had some success in influencing policy development, rule making, or decision-making. NGOs have sprung up in Canada and the US to act as public information sharing centers and industry watchdogs,²⁹ driving regulatory reform.

Fracking combined with multi stage horizontal drilling attracts a variety of potential impacts on human health and ecosystems. Scientific and public debates have both centered on activities with potential to degrade or pollute local and regional landscapes, watersheds and air quality. However, there are growing concerns about landscape cover disturbances, habitat fragmentation, and proliferation of edge conditions resulting from well pads, access roads, and pipelines.³⁰

While complaints by people who live near well pads are increasing about noise, lights, and truck traffic, so too are complaints related to the disposal of toxic chemicals and radioactive wastes, and induced seismicity from wastewater injection.³¹ However, it remains uncertain that fracking has long term significant adverse impacts on human health,³² as long as the technology is used according to industry standards and the conditions imposed by the regulator.³³

²⁷ Lucas and Lillies, *supra* note 20 at 189. Also see Barry Barton, “Underlying Concepts and Theoretical Issues in Public Participation in Resources Development” in Donald N Zillman, Alastair R Lucas & George Pring, eds, *Human Rights in Natural Resource Development: Public Participation in the Sustainable Development of Mining and Energy Resources* (Oxford: Oxford University Press, 2002) 77 at 77–78. See also “who is the public” in Saskatchewan Ministry of Environment, “Public Participation in Saskatchewan’s Environmental Assessment Process” (hereinafter the “Public Participation Factsheet”) at 1, online:

<<http://www.environment.gov.sk.ca/PublicParticipationInTheEAPProcessFactSheet>>. Last visited on March 1, 2017.

²⁸ *Ibid.* at 189-190.

²⁹ For example, see Council of Canadians: Acting for Social Justice, “A Fractivist’s Toolkit: How you can take action to protect water and stop fracking”, (hereinafter “CC”). online:

<<https://canadians.org/sites/default/files/publications/fracking-toolkit.pdf>>. Last visited on February 20, 2017.

³⁰ Paul Precht and Don Dempster, *Jurisdictional Review of Hydraulic Fracturing Regulation. Final Report for Nova Scotia Hydraulic Fracturing Review Committee*. Nova Scotia Department of Energy and Nova Scotia Environment, 2012, online: <<http://www.novascotia.ca/nse/pollutionprevention/docs/Consultation.Hydraulic.Fracturing-Jurisdictional.Review.pdf>>. Last visited on February 24, 2017. See also Lave and Lutz, *supra* note 2 at 742.

³¹ Rivard et al, *supra* note 1 at 2.

³² Lauren Vogel, “Fracking tied to cancer-causing chemicals,” *Canadian Medical Association Journal*, 2016, online: <<http://www.cmaj.ca/content/early/2016/12/12/cmaj.109-5358.full.pdf+html>> (hereinafter “Vogel”). “This study is more evidence that there are a lot of red flags around fracking,” says Dr. Courtney Howard, a Yellowknife emergency doctor and board member of the Canadian Association of Physicians for the Environment (CAPE). “We need to increase the levels of research and scrutiny around these projects, with a comprehensive health impact assessment being the responsible thing to do on every single project.”

³³ Lave and Lutz, *supra* note 2 at 749.

However, sufficient evidence already exists to support that fracking does have significant impacts on communities when they have to compete with industry for scarce supplies of surface and groundwater.³⁴ It has been suggested that any identified adverse impacts of fracking are location specific and differ depending on the geology, hydrology, land uses, and population density of the area.³⁵ That is because fracking introduces “batteries”³⁶ pipelines and associated infrastructure onto the landscape, requiring large quantities of materials and water, and heavy use of local roads by tankers and supply vehicles.³⁷ Accidents do happen,³⁸ and governments are required to assess and manage these risks, such as spills and leaks of frac fluid, wastewater and chemicals onto the land and into water bodies and groundwater systems.

Unfortunately, fracking has often proceeded without sufficient baseline data collection³⁹ to allow for monitoring of social-ecological system change over time. For example, the mixtures of chemicals contained in frac fluids are often unknown and untested,⁴⁰ making it difficult to predict or assess risks to human health from direct or indirect exposures.⁴¹ Similarly, the routes through which individuals may be exposed to chemical mixtures used in fracking, or their cumulative effects on human health and ecosystems remain unclear.⁴² Public debate about fracking has prompted governments of several countries to commission studies to identify potential adverse impacts, and clarify whether laws, codes, directives, guidelines, etc. are effective in minimizing or mitigating potential harm. While these studies recognize threats to human health, the environment, and communities, they emphasize the need for more scientific research.⁴³

³⁴ EPA Executive Summary, *supra* note 3. ee FracFocus: Chemical Disposal Registry, “FracFocus 3.0”, online: <<http://fracfocus.org/>>.

³⁵ Council of Canadian Academies, “Environmental Impacts of Shale Gas Extraction in Canada”, 2014, The Expert Panel on Harnessing Science and Technology to Understand the Environmental Impacts of Shale Gas Extraction, Council of Canadian Academies: Ottawa (ON), (hereinafter “CCA Report”) at xvi-xvii, online: http://www.scienceadvice.ca/uploads/eng/assessments%20and%20publications%20and%20news%20releases/shale%20gas/shalegas_fullreporten.pdf>. Last visited on February 17, 2017.

³⁶ See *The Oil and Gas Act*, C.C.S.M, c. O34, (hereinafter “OGA”). online: < <http://web2.gov.mb.ca/laws/statutes/ccsm/o034e.php>>. Last visited on February 20, 2017. See definition of “battery,” which “means a system or arrangement of tanks or other surface equipment that receives fluid from, or delivers fluid to, one or more wells, and includes an injection plant, a pump station and equipment or a device designed to separate the fluid into oil, gas and water and to measure the amount of oil, gas and water.”

³⁷ Rivard, et al., *supra* note 1 at 2.

³⁸ CCA Report, *supra* note 35 at xiv.

³⁹ *Ibid.* at xvi.

⁴⁰ See Lucas and Lillies, *supra* note 20, at 201: In 2012, the Alberta Energy Regulator amended Directive 059 that now requires public disclosure of the contents of fracking fluids used in each well site.

⁴¹ CCA Report, *supra* note 35 at 146.

⁴² *Ibid.* See also Vogel, *supra* note 32.

⁴³ CCA Report, *supra* note 35 at xvi.

Following these studies, some governments have banned or put moratoria in place on fracking until there is more certainty.⁴⁴

In other countries, regulations that permit controlled fracking have been enacted.⁴⁵ Both of the US states and both Canadian provinces that overlay the Bakken have regulatory systems that permit the use of fracking to stimulate production from the formation.

According to a recent Stantec report commissioned by the Government of Saskatchewan (hereinafter “Saskatchewan”) there are five “life cycle stages” involved in development and production from a typical oil and gas well.⁴⁶ Of all the stages, the “recompletion” stage or “enhanced recovery” processes using fracking appear to attract the most public concerns.

1. Exploration: Where new reserves are found (rare) or existing reserves are further developed. The regulatory processes and decision to drill are the predominant activities in the exploration phase.
2. Drilling and Completions: Where the well is drilled, cased, perforated, fractured, and set to produce.
3. Production: Where the natural resource is extracted from the reservoir and brought to market.
4. Recompletion: Where the well characteristics are changed to produce the more difficult volumes within the reservoir. This stage is a sub set of the main production phase, and would include production methods such as artificial lift, injection stimulation, recompletion, and enhanced recovery methods.
5. Reclamation: Where the decision is made to return the production well site, or surface lease, to its original, natural, condition.⁴⁷

⁴⁴ Kevin Bissett, “Fracking moratorium end sought by business groups”, CBC News, May 29, 2016, online: <http://www.cbc.ca/news/canada/new-brunswick/fracking-moratorium-manufacturers-business-1.3510221>>. Last visited on February 18, 2017. See also, CBC News, “The Nature of Things: Fracking in Canada,” May, 23, 2015, online: <<http://www.cbc.ca/natureofthings/features/fracking-in-canada1>.> “There is currently no federal legislation on fracking because water and drilling permits vary from province to province. Current provincial regulations specify how close to the surface wells can be drilled and what testing needs to be done on wastewater. In Alberta, for example, fracking operations must be at least 200 metres or deeper underground and at least 100 metres from a house. Some provincial governments (notably Alberta and British Columbia) have legislation that requires public disclosure of the chemicals used in fracking. The public can find this information on the FracFocus website. Due to public pressure, several provincial governments are now studying the issue further. In Quebec, fracking has been banned pending an environmental review and the Ontario government stated that it would like to review the process before allowing it. Canadian aboriginal groups have been particularly vocal in their opposition against it. The Dene Tha' First Nation is suing the B.C. government to force the province to learn more about the impacts of the process.” See also Vogel, *supra* note 32.

⁴⁵ The Center for Media and Democracy: Source Watch, “Canada and fracking,” online: <http://www.sourcewatch.org/index.php/Canada_and_fracking>. Last visited on February 20, 2017.

⁴⁶ Stantec, *supra* note 7 at 11.

⁴⁷ *Ibid.*

Each of these life cycle stages also requires “numerous construction, maintenance, and support activities.”⁴⁸ Public concerns and fears during each stage act as drivers for government regulation in response. In this way, public members do have some say in influencing how the use of fracking will be regulated and controlled by the regulator. Each of the stages and the public concerns and fears they attract are examined in Tables 1 - 4 below in the context of the regulatory regime provided through Manitoba’s *Oil and Gas Act* (hereinafter the “OGA”).⁴⁹

In Manitoba, for the most part, similar regulations apply for development and production of oil and gas from conventional reservoirs and using fracking in shale formations. However, fracking is addressed as “enhanced recovery”⁵⁰ requiring special permits. Manitoba’s regulatory system for the use of fracking is still evolving because production from the Bakken is just beginning.

⁴⁸ *Ibid.*

⁴⁹ OGA, *supra* note 36.

⁵⁰ *Ibid.*, “enhanced recovery” means increasing the recovery of oil and gas from a pool by the use of artificial means or the application of energy extrinsic to the pool, including pressuring, cycling, pressure maintenance or injection into the pool of a substance or form of energy, but not including injection into a well of a substance or form of energy for the sole purpose of (a) aiding in the lifting of fluids in the well, or (b) stimulating the reservoir at or near the well by mechanical, chemical, thermal or explosive means.

Table 1: Exploration and well pad location, the regulations and public concerns they attract

Considerations in the literature	Regulations (Manitoba Oil and Gas Act)	Public concerns /fears associated exploration
<p><i>“The first stage in shale gas development, exploration, involves scanning the subsurface geology using geophysical methods, mainly ground-based seismic surveys. Next, a few wells are drilled and rock cores collected, mostly from the geological strata where shale gas resources are known or expected. Geophysical measurement tools are run down these holes to obtain additional insights about the geology, porosity, permeability, and other properties of the subsurface. Unless they are to be used later as monitoring wells (usually for microseismic monitoring) these exploration wells are sealed with cement at the surface after the geophysical logging is completed.”⁵¹</i></p> <p>Energy developments have cumulative impacts. Increased well pad density in area. Need for area-based regulation⁵²</p> <p>Disruptive effects on local communities and lands due to the traffic, noise, air pollution and extensive infrastructure required.⁵³</p> <p>Fracking may cause fugitive methane emissions.</p>	<p>Dispositions</p> <ul style="list-style-type: none"> • Application processes <p>Exploration reservations:</p> <ul style="list-style-type: none"> • Permits to explore • Rents and royalties <p>Lease agreements/effect</p> <ul style="list-style-type: none"> • Public and private land use access and leases <p>Pooling orders</p> <p>Spacing units and drilling targets</p> <ul style="list-style-type: none"> • Sizes and shapes • Unit operations <p>Registration of transfers and instruments</p> <p>Oil and gas lease agents</p> <p>Geophysical operations</p> <ul style="list-style-type: none"> • Environmental plans # Stripping and grading of well pad sites #Impacts to biodiversity and environmentally significant areas #Hydrogeological studies and water impact plans #Land fragmentation and proliferation of edges #Impacts on air quality • Environmental risk management to avoid environmental accidents <p>Well licenses:</p> <ul style="list-style-type: none"> • Well pad siting • Well pad construction berms/ ponds • Surface rights • Licensee rights to produce • Impacts on adjacent land users and landowners 	<ul style="list-style-type: none"> • Industrialization of rural landscapes/impact on local culture • Ongoing conflict between surface rights holder re: lease and access • Proximity to residents • Proximity of wells to schools and public institutions • Proximity of well pads to environmentally significant areas • Proximity of well pads to water resources/competition for scarce surface/groundwater supply • Elimination of landscape features • Degradation of landscape • Loss of critical habitat • Landscape fragmentation • Proliferation of edges • Loss of ecosystem services • Increased traffic • Increased noise • Increased light pollution • Increased air pollution and PM2.5 • More roads/traffic, more pipelines, water and wastewater holding ponds, tanks, batteries and buildings • Lack of trust • Industry are not good neighbours • No opportunities for input into approvals • No opportunity to say no to fracking in communities

⁵¹ CCA Report, *supra* note 35 at 39-40.

⁵² See Lucas and Lillies, *supra* note 20 at 213, concerning the Play- Based Regulation Project in Alberta. Also see CCA Report, *supra* note 35 at xv.

⁵³ CCA Report, *ibid.*

Table 2: Drilling and completions and the regulations and public concerns they attract

Considerations in the literature	Regulations (Manitoba Oil and Gas Act)	Public concerns/fears associated with drilling
<p>Striving for a high degree of well integrity to prevent immediate and longer-term leaks of gas and other fluids to groundwater or the surface is a cornerstone of environmental protection in any oil and gas drilling operation.⁵⁴</p> <p>Sufficient well casing, cementing and depth are critical to protecting ground water and human and environmental health during any horizontal drilling operation. Inadequacies in these areas are among the leading causes of groundwater contamination in shale plays in the United States. Wellbore integrity is also crucial during the drilling and fracturing process and the management of flowback and produced fluids.⁵⁵</p> <p>Well integrity continues to challenge engineers.⁵⁶</p> <p>Fracking may trigger tremors and cause small to moderate earthquakes in seismically active areas.⁵⁷</p>	<p>Drilling, completion and servicing regulations 89(1) No person shall drill, operate or carry on any activity related to a well unless the person holds, or is acting under the instructions of a person who holds, a well licence issued under this Part in respect of the well.</p> <ul style="list-style-type: none"> • Drilling • Casing • Regulation of components in frac fluid - flowback • Construction and operation of batteries and gas plants • Flow lines and pipelines • Common carriers • Storage reservoirs • Performance security • Charges as debts to the Crown • Records, reports and confidential information • Offences and penalties 	<ul style="list-style-type: none"> • No faith in current technology due to bad local experience with spills and leaks. • Potential contamination of surface and groundwater supplies during drilling and casing: once an aquifer is contaminated with wastewater, it may be unusable for weeks, decades, or centuries depending on the contaminant. • No opportunity for input into whether the landscape is suitable for fracking technology • Lack of access to knowledge and supporting science-based information about health risks <p>Manitoba specific concerns:</p> <ul style="list-style-type: none"> • Fracking can contaminate groundwater. • Fracking uses a lot of water. • Frack fluids are not properly managed. • Frack fluid additives are toxic. • Fracking causes earthquakes.⁵⁸

⁵⁴ CCA Report, *supra* note 35 at 55-59.

⁵⁵ 17th Legislative Assembly of the Northwest Territories: Standing Committee on Economic Development and Infrastructure, "Report on August 2012 Hydraulic Fracturing Study Tour: Toward a Policy Framework for Hydraulic Fracturing in the Northwest Territories," at 5, online: <http://www.assembly.gov.nt.ca/sites/default/files/12-1105_report_on_august_2012_hydraulic_fracturing_study_tour_toward_a_policy_framework_for_hydraulic_fracturing_in_the_northwest_territories.pdf>. Last visited on February 15, 2017.

⁵⁶ CCA Report, *supra* note 35 at xiii.

⁵⁷ Betsy Trumpener, CBC News "Fracking triggers 90% of large quakes in B.C., Alberta oil and gas patch," May, 2016, online: <http://www.cbc.ca/news/canada/british-columbia/more-than-90-of-larger-earthquakes-in-western-canada-triggered-by-fracking-1.3510812>>. Last visited on February 27, 2017. "It is important for us to realize that indeed hydraulic fracturing can induce earthquakes," said Honn Kao, a research scientist with the Geological Survey of Canada." "Kao and his fellow scientists based their research on 25 years of data on earthquake activity in a swathe of northeastern B.C. and western Alberta, called the Western Canada Sedimentary Basin, that's not traditionally seismically active. They combed through data between 1985 and 2015 about seismic events larger than magnitude 3.0, as well as information from 12,289 hydraulically fractured gas and oil wells, and 1,000 fracturing waste disposal wells ... More than 90 per cent of large earthquakes were associated with nearby fracking operations. More than 60 per cent of these quakes were linked to hydraulic fracture with about 30 to 35 per cent coming from disposal wells. Only five to 10 per cent of the earthquakes had a natural tectonic origin."

⁵⁸ Manitoba Oil and Gas Review, *Fracking in Manitoba*, (hereinafter the "MOGR"). online: <http://manitobaoil.ca/fracking-in-manitoba/>>:"The average frac job in Manitoba uses 400 to 700 cubic metres of

Table 3: Production/recompletion and the regulations and public concerns they attract

Considerations in the literature	Regulations (Manitoba Oil and Gas Act)	Public concerns/fears associated with production/recompletion
<p>Water use and disposal</p> <ul style="list-style-type: none"> • Chemicals used in fracking fluid, heavy metals in high concentrations and radioactive elements due to its prolonged contact with the shale formation may contaminate land and water.⁵⁹ • Fracking uses large volumes of fresh water, which conflicts with other land uses in areas that experience droughts or water shortages.⁶⁰ • Wastewater treatment may be difficult and expensive because the wastewater often contains high concentrations of toxic or carcinogens chemicals and natural radioactive elements.⁶¹ • Some municipal facilities may not be equipped to handle such contaminants.⁶² • Fracking produces high volumes of contaminated wastewater, which needs to be treated, recycled, or safely disposed.⁶³ Wastewater is typically managed either by underground injection or by treatment.⁶⁴ 	<p>Water</p> <ul style="list-style-type: none"> • Water diversion and use • Risk assessment of impacts on surface and groundwater supplies • Wastewater collection, treatment and disposal • Groundwater well testing, monitoring and reporting • Disposal of salt water <p>Other</p> <ul style="list-style-type: none"> • Maximum production rate • Spills • Emergency, fire, blowout, accidents • Seismic activity related to wastewater underground injection at high pressure <p>Enhanced recovery – Guideline 10</p> <ul style="list-style-type: none"> • Application process • Water license to use fresh water is a condition precedent to application • Information requirements – considered public information unless confidential <p>Annual reports - Guideline 11</p> <ul style="list-style-type: none"> • Monitoring and reporting requirements 	<p>Water</p> <ul style="list-style-type: none"> • Competition for surface and groundwater supplies • Underground injection not considered safe: injection wells may contaminate land and water resources • Conflict between local and industrial use of local infrastructure • Fear of spills, leaks, fires, blowouts and accidents requiring emergency response and evacuation • Conflict between industrial use of land and rural culture • Use of municipal facilities to dispose wastewater and impacts on scarce water resources • Constant drilling impacts rural lifestyle • Wastewater injection causes earthquakes • Fear of seismic activity and effects on human health and safety, and on livestock

water, whereas the average family of four uses 500 cubic metres of water each year. The oil industry is reducing the use of fresh water by re-using/recycling frac fluid and using salt water instead of fresh water. In Manitoba, frac fluids are managed from cradle to grave. They are stored in tankage before being injected into a well, and frac fluids produced back from a well are disposed of into an approved underground disposal zone using a disposal well permitted for that purpose. This closed-loop approach minimizes potential adverse environment impacts associated with fracking.”

⁵⁹ Heather Poole, Legislative Analyst Report, “State Policies on Use of Hydraulic Fracturing Waste as a Deicer,” online: <<https://www.cga.ct.gov/2013/rpt/2013-R-0469.htm>>. Last visited on February 20, 2017.

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² *Ibid.* Also see CCA Report, *supra* note 35 at xiv.

⁶³ CCA Report *supra* note 35 at xiv: Wastewater is generally classified in two categories: (1) flowback fluid, which is the fracturing fluid (the mix of water, sand, and chemicals) that returns to the surface when production starts, and (2) production brine (also called produced water, formation water, or simply “brine”), which is the naturally occurring salty water that lies underground and is brought up in the fracking process.

⁶⁴ Earthworks, “Hydraulic Fracturing 101,” (hereinafter “Earthworks”), online: <https://www.earthworksaction.org/issues/detail/hydraulic_fracturing_101>. Last visited on February 20, 2017.

Table 4: Reclamation and the regulations and public concerns they attract

Considerations in the literature	Regulations (Manitoba Oil and Gas Act)	Public concerns/fears associated reclamation
<p>Lack of enforcement or leniency toward industry – regulatory capture.</p> <p>Insufficient monitoring throughout the life cycle of the well pad. No requirement for progressive reclamation.</p> <p>Who pays to clean up orphan wells, or wells that were plugged improperly?</p>	<p>Abandonment and Reclamation</p> <p>Shut down</p> <p>Seizure</p> <p>Enforcement of orders</p>	<ul style="list-style-type: none"> • Well plugging processes are not done properly • Orphan wells • Who bears the costs of clean up? • Contaminated/brownfield sites • Progressive reclamation option • Conflict in land use with adjacent lands – soils no longer suitable for crops or animals

4. Examining the four regulatory systems overlying the Bakken for statutory opportunities for public participation

The four jurisdictions were examined to determine if their oil and gas laws or regulations include provisions that require or enable the general public to participate in policy development, rule-making, or statutory decision making processes for fracking. The following aspects were specifically examined: public access to information, notice of applications or decisions, procedures for members of the public to submit statements of concern, mandatory public hearings, procedures for appeals by those who are affected or court processes, impartial and independent decision-makers and tribunals, release of written reasons for decisions, and alternative dispute resolution mechanisms, such as arbitration, mediation, or consensus decision making processes. Complex, evolving regulatory systems exist in all four jurisdictions, where regulation of the life cycles in oil and gas exploration and development crosses several ministries, including growth and economy, public health, environment, water resources, public lands, private surface rights, and public inquiries. Some of that complexity is captured in the discussion below.

A. Manitoba

According to the Manitoba Oil and Gas Review, an online website that serves Manitoba's oil and gas industry, while fracking had been used in conventional oil reservoirs in Manitoba for over 60 years, in May 2014 there had been no shale gas development using the technology.⁶⁵ Industry claimed that there had "never been a known case where fracking has resulted in groundwater contamination in Manitoba. Oil reservoirs in the province are located 400 to 1,000 metres below groundwater aquifers. This separation distance, coupled with the regulatory requirements for the drilling, construction and operation of oil wells, minimizes the risk of groundwater contamination from fracking."⁶⁶ Further, industry assured that "the oil industry has been proactive in adopting new policies and procedures for fracking to address public concerns."⁶⁷

In Manitoba, regulation and oversight of "all aspects of exploration for and the development of Manitoba's oil and gas resources"⁶⁸ is the responsibility of the Petroleum Branch of Manitoba Mineral Resources, a section under the administration of the Minister of the Department of Growth, Enterprise and Trade (hereinafter the "Petroleum Branch"). The Lieutenant Governor in Council appoints a Director of Petroleum (hereinafter the "PB Director") who oversees the Petroleum Branch and administration of the OGA.⁶⁹ The OGA applies to (i) Crown oil and gas rights and the rights to helium or oil shale owned by the Crown, (ii) the exploration for oil, gas, helium or oil shale, (iii) the drilling of wells, and the operation and abandonment of wells, oil and gas facilities and storage reservoirs, and (iv) oil and gas primary production.⁷⁰

⁶⁵ Earthworks, *supra* note 64.

⁶⁶ MOGR, *supra* note 58.

⁶⁷ *Ibid.*

⁶⁸ Manitoba, "About the Petroleum Branch" (hereinafter "Manitoba PB website"), online: <<http://www.gov.mb.ca/iem/petroleum/role.html>>. Last visited on February 27, 2017.

⁶⁹ OGA, *supra* note 36, see s.11. The Director has broad powers under the OGA to review applications for well pad locations, including those in ss. 6(2): "Where, in the opinion of the director, the location of the proposed well or any related oil and gas facility is in an environmentally sensitive area, the director may require the applicant to submit a plan to prevent or minimize any impact of the well or facility on the area."

⁷⁰ *Ibid.*, ss. 3(1).

Between 2014 and 2017, the Petroleum Branch was working with the oil and gas industry on review and adoption of regulations and guidelines for fracking “to make sure that fracking remains safe and public concerns are addressed.”⁷¹ These new initiatives included: enhanced submission requirements; disclosure of frac fluid contents; baseline water well testing; and collection of water source and usage data,⁷² and are apparently being addressed through emerging “Directives” and “Guidelines.”⁷³ Industry participates in at least some aspects of oil and gas policy development and regulation, although they have no statutory right to do so.

One of the main functions of the Petroleum Branch is to encourage exploration and development of crude oil and natural gas in an “orderly, safe and efficient manner,” and Manitoba has created a website to “provide information and services to both industry and the public.”⁷⁴ While, Manitoba has generated trust and a good working relationship with industry,⁷⁵ the public is less trusting of both. The public is becoming increasingly concerned about many aspects of fracking, including that the technology contaminates groundwater, it uses large quantities of fresh water, and causes earthquakes. Despite changes to the regulatory system in 2005 and emerging Directives and Guidelines, the general public remain concerned that frac fluid is not properly stored or disposed of, and that the contents of frac fluid are toxic.⁷⁶

Some select Manitobans have been granted statutory rights to participate in different aspects of oil and gas development and production, while the general public have none. Landowners and occupants who own surface rights have opportunities to appear before Manitoba’s Surface Rights Board,⁷⁷ a quasi-judicial board established under the *Surface Rights Act*.⁷⁸ According to the Manitoba PB website, “[t]he primary function of the board is to arbitrate disputes relating to right of entry or compensation for surface rights used by holders of oil and gas rights. The board also provides mediation services between surface owners, occupants and oil and gas rights holders on a voluntary basis.”⁷⁹ The *Surface Rights Act* and the board are administered under the Mineral Resources Division of Manitoba Mineral Resources, and are an “independent, impartial body responsible for hearing all sides and, from the evidence, making decisions within the framework of the [Surface Rights] Act.”⁸⁰ The board has produced “A Guide for Land Owners, Occupants and Operators”, and a “Policy and Procedure Manual” that are available on the Manitoba PB website.⁸¹ Therefore, surface rights owners have statutory rights to participate in at least the surface leasing aspect of oil and gas development and production where fracking will be used.

⁷¹ MOGR, *supra* note 58.

⁷² *Ibid.*

⁷³ Manitoba Mineral Resources: “Guidelines” (hereinafter “PB Guidelines”), online: <<http://www.manitoba.ca/iem/petroleum/guidelines/index.html>>. Last visited on February 28, 2017. There are 14 Guidelines in place at March 1, 2017.

⁷⁴ Manitoba PB website, *supra* note 68.

⁷⁵ MOGR, *supra* note 58.

⁷⁶ *Ibid.*

⁷⁷ Manitoba, Growth, Enterprise and Trade, “The Surface Rights Board” (hereinafter “SRB online”), online: <<http://www.gov.mb.ca/iem/board/srboard.html>>.

⁷⁸ C.C.S.M, c. S235, (hereinafter the “Surface Rights Act”).

⁷⁹ SRB online, *supra* note 77.

⁸⁰ SRB online, *supra* note 77.

⁸¹ *Ibid.*

The general public does have a statutory right to access any documents held by the Registrar under the OGA, subject to the *Freedom of Information and Protection of Privacy Act*,⁸² and other provisions in the OGA that protect industry confidentiality.⁸³ In addition to having open access to all the information on the Manitoba PB website, any person with a computer and Internet may access links to scientific materials and studies about the Williston Basin.⁸⁴

At first glance, there are no statutory provisions that enable a member of the general public to have a say in the use of fracking, or “enhanced recovery” in oil and gas operations. To “undertake enhanced recovery,” an operator has to apply for and receive the Minister’s approval, which can be refused or issued subject to conditions. The Minister may require, through order that the operator of “wells in a pool” investigate and report on the feasibility of implementing enhanced recovery in the pool in order to prevent “waste.” As the legislation was originally enacted, if the Minister issued an order for enhanced recovery, and the operator failed to implement within the time specified, the Minister may have referred the matter to the Oil and Gas Conservation Board and directed them to hold a hearing to determine if enhanced recovery was necessary or advisable in order to prevent waste.⁸⁵ The board was designed to have broad powers to conduct hearings, but was never appointed. In 2005, Manitoba enacted *Bill 21: The Oil and Gas Amendment and Oil and Gas Production Tax Amendment Act*,⁸⁶ which, among other things, replaced the board with an “Inquiry Panel” to be appointed by the Minister to hear any matter “relating to the objects and purposes of the [Oil and Gas] Act.”⁸⁷

The “objects and purposes of the legislation,” that introduce principles of “sustainable development” are provided in section 2(1), as follows:

- 2(1) The objects and purposes of this Act are
- (a) to provide for, encourage and facilitate the safe and efficient development, and the maximum economic recovery, of the oil, gas, helium and oil shale resources of the province in accordance with the **principles of sustainable development**;
 - (b) to prevent waste of oil, gas, helium and oil shale resources;
 - (c) to protect the correlative rights of owners;
 - (d) to provide for the safe and efficient construction and operation of pipelines; and
 - (e) to provide for the safe and efficient development and operation of storage reservoirs.

(Emphasis added.)

⁸² C.C.S.M, c. F175 (hereinafter FOIP”). online: <<http://web2.gov.mb.ca/laws/statutes/ccsm/f175e.php>>.

⁸³ OGA, *supra* note 36, ss.15(1) of the OGA provides that “a person may during normal office hours inspect a record or document held by the Registrar and, on the request of the person and payment of any prescribed fee, the registrar shall (a) provide a copy of the record or document, or of an extract from the record or document; and (b) certify the copy as a true copy.” Section 14(1) describes documents and records that are kept by the Registrar.

⁸⁴ Williston Basin TGI, “Abstracts,” online: <<http://www.gov.mb.ca/iem/geo/willistontgi/abstracts.html>>. Last visited on February 28, 2017.

⁸⁵ OGA, *supra* note 36, sections 116 – 118.

⁸⁶ *Bill 21: The Oil and Gas Amendment and Oil and Gas Production Tax Amendment Act* online: <<http://web2.gov.mb.ca/bills/38-3/b021e.php>>. Last visited on March 1, 2017.

⁸⁷ *Ibid.* at section 24.

“Principles of sustainable development”⁸⁸ are clarified, but do not include any statements about the need for public participation in policy development, rule making, or decision-making processes for use of new technology. However, the objects, purposes and principles may provide members of the general public with opportunities to raise health or environmental issues to the Minister, who may determine that the issues need to be addressed through an Inquiry Panel. However, no record of the Minister referring a publicly raised human health or environmental issue related to fracking could be found on the Manitoba PB website.

Subsection 75(1)(c.1) of *The Drilling and Production Regulations*⁸⁹ requires an applicant for a battery operating permit to provide the Director of Petroleum with “the names and addresses of all landowners and occupants within 1.5 km of the proposed site of the battery and a description of the applicant's consultations with those landowners and occupants, including a summary of any concerns raised during the consultation process and all actions taken or proposed to be taken by the applicant to address the concerns of the landowners and occupants.” By inference, this provision requires consultation with a discrete group of people before a battery will be approved, and these people would need to be afforded notice, opportunities to be heard, etc., although procedures that an applicant must follow are not elaborated. There are no records on the Manitoba PB website, and no published decisions with respect to court processes undertaken, allowing for any persons inside or outside the 1.5 kilometer perimeter to be consulted about the location of batteries. It remains unclear how a member of the general public would ask the Director of Petroleum or the Minister to make allowance for consultation outside the prescribed perimeter. Furthermore, it is not clear why the Director of Petroleum requires the information.

⁸⁸ OGA, *supra* note 36, ss. 2(2) For the purpose of subsection (1), the principles of sustainable development include the following:(a) that decisions respecting the development of oil and gas resources be integrated with decisions respecting protection and management of the environment so that oil and gas industry activity is conducted with due regard for its impact on the environment, and environmental programs and initiatives are instituted with due regard for their economic impact;(b) that government and the oil and gas industry acknowledge, in their respective policies and practices, their stewardship of the oil and gas resources of the province so that the economy is developed and the environment is preserved, for the benefit of the present generation and future generations of Manitobans;(c) that government and industry share responsibility for sustaining a sound and healthy environment and developing a sound and healthy oil and gas industry;(d) that hazards to the environment and impediments to the development of oil and gas resources be prevented or minimized by avoiding environmental programs and economic activities that have significant adverse environmental or economic impact; (e) that conservation policies and practices be applied to enable the exploration for and production of oil and gas resources in the province in a manner that is wise and efficient in both environmental and economic terms; (f) that recycling of oil field waste by-products be encouraged to enable the re-use, reduction or recovery of their by-products; (g) that oil and gas industry activity and economic development, as well as government regulation, be conducted with a view to protecting and enhancing the ecosystems of the province; (h) that land which, in environmental terms, is damaged or diminished by oil and gas industry activity be rehabilitated; (i) that scientific and technological research in respect of the processes and methods of oil and gas exploration and production be continued by government and industry, with a view to improving the productivity, efficiency and competitiveness of the oil and gas industry and to preventing or reducing adverse impact on the environment; and (j) that the ecological interdependence of the provinces and territories of Canada and of the nations of the world increasingly requires integration of the decisions of government and industry in respect of the environment and the economy.

⁸⁹ *The Drilling and Production Regulations* 111/94 as amended by M.R. 51/95 M.R. 145/98 M.R. 116/2001, online: <<http://www.gov.mb.ca/iem/petroleum/actsregs/drilprodregs.pdf>>. Last visited on March 1, 2017.

The Director of Petroleum has broad discretion to require that applicants for well licenses and facilities create an environmental management plan, “to prevent or minimize any impact of the well or facility on the area where, in the opinion of the director, the location of the proposed well or any related oil and gas facility is in an environmentally sensitive area.”⁹⁰ It is not clear whether the public have any ability to influence the Director of Petroleum’s opinion about whether an area is environmentally sensitive. The provisions in the OGA and the regulations regarding environmental management plans pertain to conventional and unconventional oil and gas wells and facilities, for example wells that use steam or fracking.

“Guideline 10: Application for Enhanced Oil Recovery (EOR) Project and Voluntary Unitization” (hereinafter “Guideline 10”)⁹¹ sets out the procedures and submission requirements for an operator to apply for an approval for enhanced oil recovery, and all information provided in an application is considered public information.⁹² The applicant must submit a “copy of a notice, and proof of service of the notice to the surface owners in the project area advising of the proposed project of enhanced recovery.”⁹³ There are no records on the Manitoba PB website or records of court processes where a surface owner addressed the failure of an applicant to provide notice, or what the surface owner may do in response to receiving or not receiving notice.

Guideline 10 also requires as a condition precedent to applying, that an applicant for enhanced oil recovery submit proof of compliance with any licensing requirements under *The Water Rights Act* (hereinafter the “WRA”)⁹⁴ if the project involves the use of fresh water.⁹⁵ Under the WRA, if the Minister of Sustainable Development so directs, the public has a statutory right to participate in an application process for a water license for “the use, diversion or control of water or the construction, establishment, operation or maintenance of works or water control works proposed in an application.”⁹⁶

⁹⁰ OGA, *supra* note 36, ss. 6(2).

⁹¹ Manitoba Mineral Resources, “Manitoba Petroleum Guideline 10 – EOR Project and Voluntary Unitization, December 2013” (hereinafter “Guideline 10”), online: <http://www.manitoba.ca/iem/petroleum/guidelines/guideline10_enhancedoilrecoveryvoluntaryunitization_december2013.pdf>. Last visited on February 28, 2017.

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ C.C.S.M, c. W-80 (hereinafter the “WRA”), online: <<http://web2.gov.mb.ca/laws/statutes/ccsm/w080e.php>>.

⁹⁵ Guideline 10, *supra* note 91.

⁹⁶ WRA, *supra* note 94, ss. 6(3) and 6(4). **Publication of application: 6(3)** Where, by reason of the scope and nature of the use, diversion or control of water or the construction, establishment, operation or maintenance of works or water control works proposed in an application for a licence and their possible impact on other persons, **the minister so directs**, the applicant shall, forthwith after submitting the application, publish or cause to be published in a newspaper having general circulation in the area affected, a notice of the application, and the notice shall state (a) the nature of the licence applied for; (b) that **any person wishing to object to the application may do so in writing to the minister** within 15 days of the publication of the notice; and (c) any other information or particulars that the minister may require. **Public hearing: 6(4)** Upon expiry of the 15 days provided in subsection (3) in respect of any application, and before the minister determines whether or not to grant the application, a public hearing shall be held before the Municipal Board **at which any person may make representations**, either himself or through counsel, for or against the application (Emphasis added).

While the public may not be granted statutory rights to participate in applications for enhanced oil recovery directly, they are entitled to receive notice of an application for a water license for use of fresh water in enhanced oil recovery, object to the application in writing, and attend a public hearing to present concerns to the Municipal Board, as provided in subsections 6(3) and 6(4) of the WRA. The Minister of Sustainable Development has broad discretion to direct the hearing processes, but there are no records on government websites where a member of the general public was able to influence the Minister to exercise his or her discretion.

In February, 2015, as per section 73 of the *Drilling and Production Regulations*, the Petroleum Branch issued “The Manitoba *Petroleum Guideline 11 – Enhanced Oil Recovery Report*”⁹⁷ that requires the operator of an enhanced oil recovery (EOR) project to submit an annual report within 60 days after the end of the calendar year that includes information for that year. The information required is comprehensive, but it remains unclear if the public have free access to these reports. Unlike Guideline 10, Guideline 11 does not include the statement that all information provided in the annual report is considered public information.

In summary, in Manitoba, through statutory provisions in the OGA the public are provided with access to much of the information held by the Registrar, which includes notice of applications and decisions to approve fracking. The Manitoba PB website also provides public access to laws, regulations, guidelines, and government processes. However, the legislation does not provide public members with opportunities to participate in policy development and rule making, or in decision-making processes about the use of fracking. Where it appears that industry is regularly consulted by government for input into emergent Guidelines, there are no statutory provisions in the OGA that require industry to be consulted, or for similar reflective contributions by the general public.⁹⁸ There are also no statutory provisions that enable public participation in ensuring compliance with the OGA or conditions of approval in well licenses or approvals for enhanced oil recovery.

It is unclear if oil and gas exploration and development projects are included in any “classes of development” under the *Environment Act* (hereinafter the EA),⁹⁹ the *Classes of Development Regulation*,¹⁰⁰ or the *Licensing Procedures Regulation*.¹⁰¹

⁹⁷ Manitoba Petroleum Branch, *The Manitoba Petroleum Guideline 11 – Enhanced Oil Recovery Report*,” (hereinafter “Guideline 11), online:

<http://www.gov.mb.ca/iem/petroleum/guidelines/guideline%2011_eorannualreport_feb2015.pdf>.

⁹⁸ Manitoba Report, *supra* note 8.

⁹⁹ C.C.S.M, c. E125 (hereinafter the “Environment Act”), online:

<<http://web2.gov.mb.ca/laws/statutes/ccsm/e125e.php>>. Last visited on February 27, 2017: ss.1(1) The intent of this Act is to develop and maintain an environmental protection and management system in Manitoba which will ensure that the environment is protected and maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for this and future generations, and in this regard, this Act (a) is complementary to, and support for, existing and future provincial planning and policy mechanisms; (b) provides for the environmental assessment of projects which are likely to have significant effects on the environment; (c) provides for the recognition and utilization of existing effective review processes that adequately address environmental issues; (d) **provides for public consultation in environmental decision making while recognizing the responsibility of elected government including municipal governments as decision makers;** and (e) prohibits the unauthorized release of pollutants having a significant adverse effect on the environment. (Emphasis added.)

¹⁰⁰ *Classes of Development Regulation*, Man Reg. 164/88.

¹⁰¹ *Licensing Procedures Regulation*, Man Reg. 163/88.

If oil and gas projects are a class of development, and the *Licensing Procedures Regulation* applies to that class, the project may attract environmental impact assessment processes where statutory provisions create opportunities for public participation. A Clean Environment Commissioner is appointed by the Minister of the Environment¹⁰² to hold public meetings or hearings in order to gather information or disseminate information, or gather evidence or information from the public.¹⁰³ When advisable, and when parties to a conflict agree, the Minister may also appoint an environmental mediator acceptable to the parties "to mediate between persons involved in an environmental conflict." The mediator has six weeks after completion of the mediation, to report the results of the mediation to the Minister.¹⁰⁴

The OGA includes no provisions that require public participation in any aspect of approving the use of fracking in the Bakken or elsewhere in Manitoba. The lack of statutory rights for public participation in policy development, rule making, licensing and approvals, and ensuring compliance in Manitoba's regulatory regime was best expressed in 2015 by the Manitoba Law Reform Commission. When assessing the need for public participation in the assessment and licensing regime under the *Environment Act*, the Commission stated as follows:

The Act currently contains no provisions that require the consideration of public input during decision-making stages of the process. There are also few opportunities that allow the public to request written reasons for how and why a decision was made. This contributes to a lack of transparency for the public and other stakeholders and often affects the trust of the public. Including prescribed decision-making criteria and opportunities to obtain reasons from decision-makers were suggested reforms that can help address these issues of transparency and trust.¹⁰⁵

¹⁰² Environment Act, *supra* note 99, s. 6.

¹⁰³ *Ibid.* ss. 6(4).

¹⁰⁴ Environment Act, *supra* note 99, ss. 3(3).

¹⁰⁵ Manitoba Report, *supra* note 8 at 53.

Table 6: Manitoba summary of statutory opportunities for public participation

Access to information	Notice	Statements of concern	Public hearings/ inquiries	Appeals	Impartial decision makers	Reasons for decision	ADR
Some EA OGA Registrar	Some EA OGA for EOR	WRA License for use of fresh water EA None-OGA	WRA EA OGA for battery license	EA None-OGA Privative clause	EA OGA Inquiry Panels SRA/ SRB	Some EA OGA Inquiry Panels	Some EA indirect None-OGA SRA indirect

In Manitoba, the public have some access to information about decision-making processes for fracking through the Registrar under the *Oil and Gas Act*, and the comprehensive Petroleum Branch website. Mandatory annual reports for EOR projects may become public documents, but this is unclear. Surface rights owners are entitled to notice of applications for exploration and wells and to hearings before the Surface Rights Board. Appeals are available to surface right owners under the *Surface Rights Act*. Surface rights owners have no right to say no to a proposed oil and gas development. The Minister has discretion to hold hearings on any matter relating to the objects and purposes of the OGA. The drilling regulation requires an applicant for a battery to notify and consult with landowners within 1.5 km of a proposed battery site and report on consultations. Industry is regularly consulted by government during policy development and rule-making, and all public consultation is at the discretion of the Minister. An application for a license to use fresh water in an EOR well attracts WRA notice and a public hearing. Public members can submit written comments. The Minister is not required to act on any of the written or oral comments. Certain classes of development under the *Environment Act* attract an environmental impact assessment, but it is unclear if oil and gas projects are a class of development under the legislation. If so, public notice of the assessment is required and a Commission is put in place to conduct a hearing. A mediator may be appointed to resolve conflict. If the Minister institutes an Inquiry Panel under the OGA then common law rules of procedural fairness apply, however the Minister's decisions are final with a strong privative clause. The Minister is not required to act on any advice from the public, experts or the panel.

B. Saskatchewan

According to Saskatchewan's Ministry of the Economy's "Plan for 2016-2017," the Ministry has ambitious plans to: "achieve drilling activity of 1400 wells; increase initial established oil reserves by 2.5%; ensure a stable oil and gas royalty regime; achieve \$3.6 [billion] of oil investment; and enhance the provincial geoscience database to promote oil exploration and development."¹⁰⁶ The Minister of the Economy has broad powers and discretion in administering the *Oil and Gas Conservation Act* (hereinafter the "OGCA").¹⁰⁷

Two of the purposes of the OGCA listed in section 1 are directly related to protecting public health and the environment. The Minister of the Economy may determine when the public interest requires that one legislated purpose may be given priority over another.¹⁰⁸

Purposes:

- 1(f) to protect the environment, property and the safety of the public with respect to the operations of the oil and gas industry;
- (g) to regulate the injection, storage and withdrawal of substances into or from subsurface formations in a manner that ensures that:
 - (i) the substance is properly stored;
 - (ii) the environment, property and the safety of the public are protected; and
 - (iii) other subsurface resource uses are not unduly diminished

¹⁰⁶ Government of Saskatchewan, "Ministry of the Economy: Plan for 2016-2017" at 4, online: <<http://www.finance.gov.sk.ca/PlanningAndReporting/2016-17/EconomyPlan1617.pdf>> at 4. Last visited on February 2, 2017.

¹⁰⁷ R.S.S., 1978, c. O-2 (effective February 26, 1979) as amended by the Statutes of Saskatchewan, 1982-83, c.1; 1983, c.54; 1988-89, c.31; 1989- 90, c.54; 1990-91, c.39; 1993, c.35; 1998, c.30; 2000, c.50; 2001, c.26; 2003, c.29; 2007, c.7; 2010, c.E-9.22; 2011, c.11; 2014, c.E-13.1 and c.21; and 2015, c.21, online: <http://www.qp.gov.sk.ca/documents/English/Statutes/Statutes/O2.pdf> (hereinafter the "OGCA"). "For the purpose of effectuating the purposes of this Act, the minister has jurisdiction and authority over all persons and property, public and private, and may make or cause to be made inquiries and investigations into any matter or thing in relation to the drilling for, and the resources, occurrence, production, transportation, distribution, disposition and processing of, oil or gas or products derived therefrom in the province at such places and at such times and in such manner as he may deem advisable, and may make or issue orders and take any other action he deems necessary or expedient for or incidental to the performance, execution and carrying out of any duty, function or power imposed or conferred upon him by this Act."

¹⁰⁸ OGCA, *supra* note 107, ss.1(3).

According to section 7.11(1) of the OGCA, the Minister may establish an Oil and Gas Conservation Board and may refer any matter to the board on his or her own motion, or “on the application of an interested person.” However, as in Manitoba, no board exists. While subsection 7.11 seems to provide statutory opportunities for participation by “an interested party” in decision-making, other provisions clearly limit those opportunities. First, the Minister may refuse to hear any matter. Second, “interested party” is not defined, and subsection 7.21(1) of the OGCA provides the Minister with unfettered discretion to determine if an applicant is “directly, adversely and sufficiently affected by the matter or question in issue.”¹⁰⁹

In 2010, the OGCA was amended through “Bill 157, An Act to amend The Oil and Gas Conservation Act”,¹¹⁰ and sections 49-51 were repealed. Prior to amendment, those sections were considered by Saskatchewan Court of Queen’s Bench in *Kennibar Resources Ltd. v. Saskatchewan (Minister of Energy and Mines) and Gulf Canada Resources Ltd.* (hereinafter “Kennibar”) ¹¹¹ (affirmed by the Saskatchewan Court of Appeal).¹¹²

In *Kennibar*, ministerial discretion under the previous provisions was examined to determine if the minister (then the Minister of Energy and Mines) had exercised his discretion in an arbitrary, unreasonable or discriminatory manner when determining the maximum production rate for a well. The court reviewed whether the minister was subject to the common law duty to adhere to the principles of natural justice and procedural fairness during decision making in the context of the OGCA, considering the nature of the rights and interests affected by the minister’s decisions. Specifically, the court examined whether the minister was bound to adhere to the principle of natural justice known as the “*audi alteram partem*” rule, and if the minister had failed to do so given that there was no oil and gas conservation board then in existence to conduct a formal hearing. Whether the minister’s decision would have been the same, even if he had complied with the “*audi alteram partem*” rule was also considered.¹¹³

¹⁰⁹ *Ibid.*, ss.7.21(1) “Notwithstanding any other Act or law, **the minister may refuse to refer** any matter or question for investigation, hearing or inquiry if, in the opinion of the minister: (a) the application is frivolous or vexatious; (b) **the applicant is not, or is not likely to be, directly, adversely and sufficiently affected by the matter** or question in issue; (c) the matter or question also falls within the scope of another Act or within the jurisdiction of another board or tribunal; (d) the matter or question has been sufficiently dealt with in a previous investigation, hearing or inquiry; or (e) the matter or question is before the courts or has been dealt with by the courts. (2) Notwithstanding any other Act or law, **the minister may refuse to hear** any matter or question if, in the opinion of the minister, any of the circumstances described in subsection (1) exist.” (Emphasis added.)

¹¹⁰ Government of Saskatchewan, “*Bill 157: An Act to amend The Oil and Gas Conservation Act*,” online: <http://docs.legassembly.sk.ca/legdocs/Bills/4_26/Bill-157.pdf>.

¹¹¹ 1990 CanLII 7448 (SK QB) (hereinafter “*Kennibar*”), online: <<https://www.canlii.org/en/sk/skqb/doc/1990/1990canlii7448/1990canlii7448.html?searchUrlHash=AAAAAQAgZGlzY2xvc3VyZSBvZiBjb250ZW50cyBvZiBmbHVpZHMMAAAAAAQ&resultIndex=17>>. Last visited on March 1, 2017.

¹¹² *Kennibar Resources Ltd. v. Saskatchewan (Minister of Energy and Mines)*, 1991 CanLII 8016 (SK CA), online: <<https://www.canlii.org/en/sk/skca/doc/1991/1991canlii8016/1991canlii8016.html?autocompleteStr=%201991%20CanLII%208016&autocompletePos=1>>. Last visited on March 1, 2017.

¹¹³ *Kennibar*, *supra* note 111 at para.2.

Speaking for the court, at paragraph 68, Justice Scheibel stated: “[t]here now exists a broadly based common law principle under which every public authority who makes a decision affecting the rights, privileges or interests of an individual must adhere to the requirements of natural justice or procedural fairness. This principle applies to judicial, quasi-judicial or administrative decisions.” Providing a long list of authorities, Justice Scheibel continued at paragraph 73, as follows: “[w]hen one determines whether the principles of natural justice and procedural fairness apply, it is of no moment that the public authority making a decision under a statute is a Minister of the Crown. It is clear that ministerial status of the public authority does not oust the duty of procedural fairness in respect of such decision.” Finally, in paragraphs 79-82, Justice Scheibel found that:

[79] By virtue of s. 50(1) any person who is affected by an order made by the Minister without a hearing is entitled to apply to the Minister for a hearing. This represents a statutory codification of the *audi alteram partem* rule and guarantees a hearing so long as the application is not frivolous or vexatious.

[80] The result of ss. 49 and 50 is that virtually every decision or order made by the Minister under the *OGCA* that affects rights or interests of persons thereunder is made subject to the requirement of adherence to the principles of natural justice.

[81] The provisions of the *OGCA* and the *OGC Regulations* leave little doubt that the Legislature intended that the Minister, in discharging his duties and deciding questions affecting the rights and interests of persons, must comply with the principles of natural justice. That is, the legislation intended adherence to the *audi alteram partem* rule.

[82] It is common ground that the Board contemplated in s.7 of the *OGCA*, referred to throughout the *Act* and particularly in ss. 49 and 50, does not exist and has not existed for many years. The result is there is no Board for the Minister to refer the application to for a hearing, as is contemplated by ss. 50(3). Therefore, the Minister is left to amend or rescind the order or grant a hearing under ss. 50(1). This puts the Minister in the position where he must either have a Board in place to hold hearings or grant a hearing directly to the applicant.

Following *Kennibar*, Saskatchewan might have chosen to abide by the Saskatchewan Court of Appeal’s confirming decision, but instead the OGCA was amended to provide the Minister with broad discretion about whether or not to hold a hearing, and a strong privative clause was enacted making the Minister’s decisions under the OGCA not reviewable by the courts. If the intent of the previous legislation required the Minister to adhere to principles of natural justice and the common law duty of procedural fairness when making decisions, the legislative intent of the new provisions was clearly opposite.

Before applying for a “License to Drill a Well” (hereinafter a “well license”), or a “Licence to Construct and Operate Oil and Gas Facilities,” the proponent must meet “eligibility criteria”¹¹⁴ that function as conditions precedent. These criteria include that the proponent must obtain a surface lease or access agreement from the surface owner of the chosen site and, if on freehold lands, obtain surface rights from the landowner. Also, the proponent must contact the rural municipality to determine if a development permit is required, must obtain environmental clearance from the Ministry of Environment, and must perform assessments required by the Minister of Agriculture. Therefore, to meet the eligibility criteria, the proponent may be subject to other laws and regulations that provide opportunities for public participation.

Oil and gas exploration and development projects may be considered “developments” that require environmental assessments under the *Environment Assessment Act*,¹¹⁵ which provides opportunities for the general public to be consulted and participate in environmental assessment processes.

¹¹⁴ Government of Saskatchewan, “Apply for a Licence to Drill a Well”; and “Apply for a Licence to Construct and Operate Oil and Gas Facilities,” online: <<http://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/oil-and-gas/oil-and-gas-licensing-operations-and-requirements/licence-to-construct-and-operate-oil-and-gas-facilities>>. Last visited on March 1, 2017. “Eligibility: Before applying for an upstream facility licence, you must: Have an Integrated Resource Information System (IRIS) account and the appropriate permissions assigned by the IRIS Security Administrator to submit a facility licence application; If a corporation, be registered through Information Services Corporation (ISC) to do business in Saskatchewan; Obtain surface lease or access agreement from the surface owner of the chosen site: If on Freehold lands, surface rights must be obtained from the landowner; If on Crown land, obtain surface rights from either the Government of Saskatchewan's Ministry of Agriculture or Environment, depending on the location: Contact the Rural Municipality to determine if a development permit is required: Obtain environmental clearance from the Ministry of Environment; Obtain a Heritage Resource Review through the Government of Saskatchewan's Ministry of Parks, Culture and Sport (Heritage Branch); Submit a \$10,000 non-refundable Orphan Fund fee if the licensee has not previously held a well/facility licence pursuant to The Oil and Gas Conservation Regulations, 2012 in the province of Saskatchewan: and Use the Orphan Fund Fee Payment Form to submit the 'Orphan Fund - First Time Application Fee' to the Government of Saskatchewan.”

¹¹⁵ SS 1979-80, c E-10.1, (hereinafter the “Environmental Assessment Act”) ss.1(d) “development” means any project, operation or activity or any alteration or expansion of any project, operation or activity which is likely to:(i) have an effect on any unique, rare or endangered feature of the environment; (ii) substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose; (iii) cause the emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation; (iv) cause widespread public concern because of potential environmental changes;(v) involve a new technology that is concerned with resource utilization and that may induce significant environmental change; or (vi) have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment.” Fracking falls squarely under the definition of a “development.” However, it is unclear if oil and gas projects are considered developments.

The Minister of the Environment is granted broad powers respecting environmental planning, assessments, statements and the quality of the environment” under section 5 of the *Environmental Assessment Act*.¹¹⁶

In 2015, the Minister of Environment released “Environmental Review Guidelines for Oil and Gas Activities” (hereinafter the ER Guidelines)¹¹⁷ that provide specific step-by-step guidelines and procedures for environmental assessments by oil and gas project proponents, clarifying that, in some circumstances, oil and gas project proposals will attract the requirement for comprehensive environmental assessments. Before a proponent for an oil and gas project proposal may be approved under the OGCA, an application must be made to the Minister of Environment for a determination about whether the project is a “development.”¹¹⁸

¹¹⁶ Environmental Assessment Act, *supra* note 115, ss.5(2): “For the purposes of carrying out the minister’s responsibilities, the minister may: (a) conduct or commission research with respect to the environment environmental planning, assessments or statements; (b) conduct or commission studies respecting environmental planning, assessments, statements or the quality of the environment, including but not limited to baseline studies, spatial or regional studies, sectoral studies, issue-based studies or follow-up studies; (c) gather, publish and disseminate information with respect to the environment, environmental planning, assessments or statements; (d) make any examinations, tests and other arrangements that the minister considers necessary; (e) subject to the regulations, determine: (i) the scope of assessments and content of statements for developments and for classes of developments; and (ii) the procedures and methods for conducting assessments and preparing statements for developments and for classes of developments.” For a recent decision concerning the determination of whether an oil and gas project was a “development” for the purpose of the *Environmental Assessment Act*, see the letter from the Government of Saskatchewan, Ministry of Environment, to Tervita Corporation, dated August 30, 2016, “Re: Landfill Leachate Re-use Proposal – Tervita Saskatchewan Landfills,” online:

[http://publications.gov.sk.ca/documents/66/93920-2016007%20Tervita%20Landfill%20Leachate%20Reuse_MD%20&%20RfD%20\(PubCentre\).pdf](http://publications.gov.sk.ca/documents/66/93920-2016007%20Tervita%20Landfill%20Leachate%20Reuse_MD%20&%20RfD%20(PubCentre).pdf). Last visited on March 1, 2017: “The project is deemed not to be a development”.

¹¹⁷ Government of Saskatchewan, “Environmental Review Guidelines for Oil and Gas Activities,” July, 2015 (hereinafter “ER Guidelines”) at ii, online:

<http://publications.gov.sk.ca/documents/66/89138EnvironmentalReviewGuidelinesForOilAndGasActivities2015.pdf>. Last visited on March 2, 2017. “This document provides a description of the Ministry of Environment’s (the ministry) environmental review of oil and gas activities and outlines the appropriate level of review required for various types of oil and gas projects in Saskatchewan. The guideline has been developed cooperatively between the Landscape Stewardship Branch and the Environmental Assessment (EA) Branch and is intended to clarify their respective roles during the review of oil and gas projects. This document also includes guidelines for the preparation of an Oil and Gas Project Proposal (OGP), which proponents will submit to either the Landscape Stewardship [B]ranch or the EA Branch for review.”

¹¹⁸ Environmental Assessment Act, *supra* note 115, ss.7.2(1): “A person who proposes or desires to engage in an undertaking may apply to the minister for a determination as to whether the proposed undertaking is a development.”

If so, the Commissioner of the Environment Assessment Branch determines if the oil and gas project proposal (hereinafter the “OGP”) requires an assessment, and whether the assessment will be conducted through the Land Stewardship Branch of the Department of the Environment, or by the Environmental Assessment Branch (hereinafter the “EA Branch”).

According to the ER Guidelines, the EA Branch of the department “uses a risk based approach when reviewing a [OGP], which focuses on projects that have the potential to significantly impact the environment. Projects with no or relatively minor environmental concerns may proceed following review by the Landscape Stewardship Branch, without a need for further review from the EA Branch. Projects with the potential to result in more significant environmental impacts will require review by the EA Branch prior to proceeding to the subsequent licensing /permitting phase.”¹¹⁹ Greenfield steam assisted gas development (hereinafter “SAGD”) projects, significant SAGD expansion projects, downstream waste processing facilities and projects located in the Great Sand Hills or Manitou Sand Hills must be submitted to the EA Branch for review.¹²⁰ The use of fracking is not specifically addressed in the ER Guidelines. However, horizontal wells attract special licensing requirements, but public participation about the use of fracking is not one of them.¹²¹

The ER Guidelines “strongly encourage”, but do not require “that proponents discuss their plans with the public in the project area in the early stages of project planning.”¹²²

The level and format of engagement will depend on the project and its location, but at a minimum, it should involve affected landowners/occupants, nearby residents and local municipal government(s). First Nations and Métis communities should also be engaged as early as possible to identify potential impacts and develop appropriate mitigations when the project may have an impact on the ability of communities to hunt fish or trap for food or carry out traditional uses in the project area. Projects with potential for more significant public interest or concern require more extensive consultation. A public meeting or open house can inform local residents about the project and identify and discuss their concerns. Results of these engagements, including responses to issues identified during the discussions, must be documented in the OGP.¹²³

The OGP is considered a public document and may be subject to comprehensive review by provincial and federal agencies. An OGP may be provided to municipal governments, the public and public advocacy groups when public interest or concern is anticipated, therefore, proponents are cautioned to identify information such as business plans or proprietary technology that they wish to remain confidential.¹²⁴

¹¹⁹ ER Guidelines, *supra* note 117 at 1.

¹²⁰ ER Guidelines, *supra* note 117 at 6.

¹²¹ Government of Saskatchewan, “Apply for a Horizontal Oil Well,” online: <<http://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/oil-and-gas/oil-and-gas-licensing-operations-and-requirements/oil-and-gas-drilling-and-operations/apply-for-a-horizontal-oil-well#eligibility>>. Last visited on March 2, 2017.

¹²² ER Guidelines, *supra* note 117 at 13.

¹²³ *Ibid.*

¹²⁴ *Ibid.* at 7.

Further, the ER Guidelines caution proponents that clearance under the *Environmental Assessment Act* “is not an approval to construct, but rather is a clearance to seek other necessary approvals and permits. Proponents must ensure that all applicable approvals and permits are identified and obtained before starting construction.”¹²⁵

Clearly, the *Environmental Assessment Act* provides statutory opportunities for public participation in environmental assessments of “developments”. Recently, the Minister of Environment developed a fact sheet entitled “Public Participation in Saskatchewan’s Environmental Assessment Process” that explains the processes whereby the public may participate in environmental assessments, including notice of assessment, opportunity to review the project, access to project information, and submission of written comments.¹²⁶

The legislative scheme for public consultation under the *Environmental Assessment Act* was reviewed by the Saskatchewan Court of Queen’s Bench in the 1990 case of *Saskatchewan Action Foundation for the Environment Inc. v. Saskatchewan (Minister of the Environment and Public Safety)*,¹²⁷ where Justice Dielschneider explained public participation opportunities in the 1979-1980 version of the legislation, as follows:

Under the Act, no person may proceed with a development unless and until ministerial approval has been received, and then only according to any conditions imposed by the Minister (see s. 8). The proponent of a development must, at its own cost, carry out an environmental impact study, and report it to the Minister (see s. 9). When the Minister becomes aware that a study is about to be made, he shall give notice of it (see s. 10). When he receives the study, he shall cause a review of it to be made, and it and the study must be made available for public inspection (see s. 11). Any person may inspect the study and the review and make written submissions to the Minister (see s. 12). Before making his decision approving a development, the Minister may conduct a public information meeting at which experts will attend (see s. 13). In addition, the Minister may, before approving a development, set up an inquiry under the Public Inquiries Act R.S.S. 1978, c. P-38 (see s. 14). When the Minister has made a decision approving a development, or refusing to approve one, he shall give notice of his decision, and his reasons for making it, to the proponent of the development and to any person who has made written submissions under s. 12 (see s. 15).

¹²⁵ *Ibid.*, at 14.

¹²⁶ Government of Saskatchewan, Ministry of Environment, “Public Participation in Saskatchewan’s Environmental Assessment Process” at 1, online:

<<http://www.environment.gov.sk.ca/PublicParticipationInTheEAProcessFactSheet>>. “Public participation process: The public is first notified of a project when an Environmental Impact Assessment (EIA) is initiated. Early notification gives the public time to assess interest in participating in the EIA process. A notice is advertised in local newspapers and posted on saskatchewan.ca/environmentalassessment. Public engagement in the EIA process will help identify potential impacts from proposed project activities and develop ways to avoid or minimize them. The proponent will develop a public engagement plan outlining the activities to be undertaken to ensure that public concerns are documented in the Environmental Impact Statement (EIS). The aim is to ensure affected individuals and communities have a full understanding of the overall project and how it may impact them. Once all project information has been reviewed by government, the public is notified of the formal public review and comment period. This is the public’s opportunity to review project documents and identify any gaps in the information presented in the EIS and concerns that should be considered prior to a decision being made on the project.”

¹²⁷ 1990 CanLII 7782 (SK QB) at para. 32.

The court determined that these provisions did not compel disclosure of all information in the minister's possession as would be required in a court proceeding. These provisions have not been significantly amended, and continue to provide the general public with opportunities to participate in review and comment on project statements and environmental assessments performed by a project proponent.¹²⁸

Where the Minister of Environment is satisfied that a proponent has met all the requirements of the environmental assessment process, he must, within a reasonable time after making his decision give ministerial approval to proceed with the development and may impose any terms and conditions that he considers necessary or advisable or refuse to approve the development. The Minister must give notice of decision, together with written reasons, to the proponent, any person who has made a written submission to the Minister, and any other persons that the Minister considers advisable.¹²⁹ However, the legislative scheme provides broad discretion to the Minister in making his decision. Further, the Minister is not required to act on any written submission received from any person, the expert evidence, or the findings of the Inquiry Panel. In the broadest sense, the Minister may “consult with any person, any government agency or any other government about any matter governed by the legislation.”¹³⁰

The Saskatchewan *Environmental Management and Protection Act* (hereinafter the EMPA)¹³¹ may also provide statutory opportunities for the public to participate in decision making processes for oil and gas development and production through the use of fracking where the EMPA applies. Under subsection 3(1) of the EMPA, the Minister of the Environment is “responsible for all matters not by law assigned to any other minister or government agency relating to the environment and for enhancing and protecting the quality of the environment.”

¹²⁸ Environmental Assessment Act, *supra* note 115, ss.8-14. When the Minister of Environment becomes aware that an assessment is about to be conducted by a proponent, he must immediately give notice of the assessment. The minister must cause a review to be prepared of each statement that he receives, and when the review is completed, the minister is required to (a) make the proponent's statement and the review available for public inspection; (b) give notice, in any manner prescribed in the regulations, of the locations at which the statement and review may be inspected; and (c) impose any conditions relating to the inspection that the minister considers appropriate. Any person may: inspect a statement and review that is available for public inspection; make a written submission to the minister within 30 days from the date when the minister first gives notice or, if the minister considers it appropriate, within an additional period of 30 days. At any time prior to making his decision whether to approve a development, the minister may: cause an information meeting to be conducted relating to the development; and direct the proponent to make experts available to attend the meeting. At any time prior to making his decision whether to approve a development, the minister may appoint persons to conduct an inquiry or inquiries with respect to all, or any aspect of, the development, and shall set the terms of reference for the inquiry. The persons appointed have all the powers conferred on a commission by sections 11, 15 and 25 of *The Public Inquiries Act, 2013* and may engage the services of any professional or other advisors, experts, assistants or employees that they consider necessary. The minister has discretion to pay persons appointed any remuneration for their services and expenses; enter into agreements and impose any conditions for payment, and provide for the manner of payment.

¹²⁹ *Ibid.*, s.15.

¹³⁰ Environmental Assessment Act, *supra* note 115, ss. 5(2)(g).

¹³¹ EMPA *supra* note 10, ss.3(1)(f).

Section 71 of the EMPA allows the general public to participate in monitoring and reporting compliance with the legislation, regulations and “code” by applying for an investigation.¹³² On receipt of an application, the Minister of Environment must provide the applicant with an acknowledgment of receipt of the application, and investigate all matters that the minister considers necessary for a determination of the facts relating to the alleged contravention. Within 90 days after receiving an application, the Minister must report to the applicant on the progress of the investigation and the action, if any, which the Minister proposes to take. The Minister may discontinue an investigation if the minister is of the opinion that the alleged contravention does not require further investigation. If an investigation is discontinued, the Minister must prepare a written report describing the information obtained during the investigation and stating the reasons for its discontinuation, and send a copy of the report to the applicant and to any person whose conduct was investigated.¹³³ The Minister has broad discretion and is not compelled to take any action upon the written submissions received from the public under section 71, except to notify the complainant as stated above.

The public in Saskatchewan have access to all information found on the Saskatchewan, “Our Oil and Gas Resources” website,¹³⁴ which is comprehensive. Information is updated in real time. Any person can access laws, regulations, guidelines and directives, as well as a listing of Ministerial Orders.¹³⁵ The website connects the public to studies and scientific materials. For example, the “Saskatchewan Hydraulic Fracturing Fluids and Propping Agents Containment and Disposal Guidelines”¹³⁶ are easy to find for anyone interested. However, as yet, Saskatchewan has not made disclosure of the contents of frac fluid a mandatory licensing requirement.

¹³² EMPA *supra* note 10, s.71: “Any resident of Saskatchewan who is at least 18 years old and who is of the opinion that a contravention against the Act, the regulations or the code has been committed may apply to the minister for an investigation of the alleged contravention. A person applying for an investigation section shall ensure that the application is accompanied by a solemn or statutory declaration that: (a) states the name and address of the applicant; (b) states the nature of the alleged contravention and the name of each person alleged to be involved in the commission of the contravention; and (c) contains a concise statement of the evidence supporting the allegations of the applicant.”

¹³³ *Ibid.*, s.72.

¹³⁴ Government of Saskatchewan, “Our Oil and Gas Resources” (hereinafter the “Oil and Gas Website”) online: <<http://www.economy.gov.sk.ca/OilGas>>. Last visited on March 7, 2017.

¹³⁵ Government of Saskatchewan, “Oil and Gas Legislation, Regulations and Minister's Orders,” online: <<http://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/oil-and-gas/oil-and-gas-legislation-regulations-and-ministers-orders>>. Last visited on March 3, 2017.

¹³⁶ Saskatchewan Energy and Mines, “Saskatchewan Hydraulic Fracturing Fluids and Propping Agents Containment and Disposal Guidelines,” online: <<http://publications.gov.sk.ca/documents/310/85366-PDBENV%2011%20Saskatchewan%20Hydraulic%20Fracturing%20Fluids%20-%20Containment%20and%20Disposal%20Guidelines.pdf>>.

Public access to information provided to the Ministry by an oil and gas operator was the subject matter of a 2015 decision by Saskatchewan’s Information and Privacy Commissioner.¹³⁷ The Applicant (a news reporter) requested release of two reports. The Ministry applied **subsections 19(1)(a), (b) and (c)** of *The Freedom of Information and Protection of Privacy Act* (hereinafter **FOIP**)¹³⁸ and withheld both records in their entirety claiming confidentiality. The Privacy Commissioner also applied FOIP and recommended release of some portions of the records because “disclosure [was] in the public interest as it relate[d] to public safety and protection of the environment.”¹³⁹

Under Saskatchewan’s *Surface Rights Acquisition and Compensation Act* (hereinafter “SRACA”)¹⁴⁰ surface rights owners have rights to be heard if there is a dispute about granting surface right agreements to oil and gas operators, similar to Manitoba. There are three purposes of the legislation: (a) to provide for a comprehensive procedure for acquiring surface rights; (b) to provide for the payment of just and equitable compensation for the acquisition of surface rights; (c) to provide for the maintenance and reclamation of the surface of land acquired in connection with surface rights acquired under [the legislation].¹⁴¹ A Board of Arbitration is constituted to resolve conflict,¹⁴² and has broad powers as “conferred on a commission by sections 11, 15 and 25 of *The Public Inquiries Act*, 2013.”¹⁴³ A mediation officer may also be appointed.¹⁴⁴

Table 7: Saskatchewan summary of statutory opportunities for public participation

Access to information	Notice	Statements of concern	Public hearings/inquiries	Appeals	Impartial decision makers	Reasons for decision	ADR
EAA EA None-OGCA	EAA EA None-OGCA	EAA EA None-OGCA	EAA EA None-OGCA	EAA EA None-OGCA Privative clauses	EAA EA None-OGCA SRACA	EAA EA None-OGCA SRACA	None-OGCA SRACA

¹³⁷ Saskatchewan (Environment) (Re), 2015 CanLII 46655 (SK IPC) review of FOIP, online: <<https://www.canlii.org/en/sk/skipc/doc/2015/2015canlii46655/2015canlii46655.html?searchUrlHash=AAAAAQAhcHVibGljIHBhcnRpb2lwYXRpb24gaW4gcGV0cm9sZXVtAAAAAAE&resultIndex=2>>.

¹³⁸ S.S. 1990-91, c.F-22.01, (hereinafter “FOIP”).

¹³⁹ Re Saskatchewan, *supra* note 137 at para 44.

¹⁴⁰ R.S.S. 1978, c.65, (hereinafter “SRACA”).

¹⁴¹ *Ibid.*, s.3

¹⁴² *Ibid.*, s.8

¹⁴³ *Ibid.*

¹⁴⁴ *Ibid.*, s.18

In Saskatchewan, the public have limited statutory opportunities to participate in the regulation of exploration and development of oil and gas using fracking. The public does have access to information about applications for permits and Ministerial Orders through a comprehensive website that links to laws, regulations, guidance, etc. Information is in real time, and regularly updated. Under the OGCA the Minister of Economy has unfettered discretion to hear any matter within the scope of the legislation brought forward on the application of an “interested party.” Interested party is not defined. However, the Minister may refuse to hold a hearing on a number of grounds. The Minister’s decisions are final and not reviewable by the courts. Strong privative clauses were enacted following the Saskatchewan Court of Appeal decision in *Kennibar* that “every public authority who makes a decision affecting the rights, privileges or interest of an individual must adhere to the requirements of natural justice or procedural fairness.” However, the OGCA permitting processes for a license to drill a well or to construct or operate an oil and gas facility have certain ‘eligibility criteria’ that act as conditions precedent before a proponent may apply for other permits or licenses. These criteria include, among other things that a proponent must have negotiated a surface rights agreement with the surface rights owner or tenant, and must receive environmental clearance from the Minister of Environment. Surface rights owners have rights to notice, a hearing under the SRACA, arbitration and a mediator may be appointed to resolve conflict. Surface rights owners have no right to say no to proposed development. Requirements of the *Environmental Assessment Act* allow for public comment on environmental impact assessments of OGP that are deemed to be “developments.” An OGP is considered a public document. ER Guidelines have been put in place to help industry work through the assessment process and information is provided to help the public participate in hearings and make written submissions. Public notice of decisions with reasons respecting assessments is required. However the Minister is not compelled to act on any written or oral comments received. Section 71 of the EMPA also enables any interested person to ask for an investigation about non-compliance with that law, its regulations and code. The Minister of Environment has broad powers to investigate complaints, but is only required to notify the complainant of the steps taken and the decision, which is final according to a privative clause.

C. North Dakota

In North Dakota, oil and gas exploration and development is regulated through Chapter 38-08 (legislative provisions) of the North Dakota Century Code (hereinafter the “NDCC”),¹⁴⁵ and Chapter 43-02-03: “Oil and Gas Conservation” (the administrative rules)¹⁴⁶ of the North Dakota Administrative Code (hereinafter “NDAC”). The NDCC and NDAC are administered by the North Dakota Industrial Commission (hereinafter “Industrial Commission”) under the Department of Mineral Resources, Oil and Gas Division.¹⁴⁷ The Industrial Commission may appoint a Director to carry out all functions.¹⁴⁸

Through policy statement in the NDCC, the North Dakota Legislative Assembly declared that oil and gas development is in the public interest, such that “the general public realize and enjoy the greatest possible good from these vital natural resources.”¹⁴⁹ Further, unlike Canadian provincial oil and gas statutes that do not mention fracking, the NDCC provides that “[n]otwithstanding any other provision of law, the legislative assembly designates hydraulic fracturing, a mechanical method of increasing the permeability of rock to increase the amount of oil and gas produced from the rock, an acceptable recovery process in this state.”¹⁵⁰ The NDAC also includes specific administrative rules for “hydraulic fracturing stimulation.”¹⁵¹ However, other than in the policy statement referred to above, the “general public” are not mentioned anywhere else in the NDCC. While “person” is broadly defined,¹⁵² a person has no substantive statutory rights to participate in policy development, rule making, or decision-making about oil and gas development or production using fracking.

¹⁴⁵ *North Dakota Century Code*, “Control of Gas and Oil Resources,” Chapter 38-08, (hereinafter “NDCC”), online: <<https://www.dmr.nd.gov/oilgas/rules/rulebook.pdf>>. Last visited on March 1, 2017.

¹⁴⁶ *North Dakota Administrative Code*, Chapter 43-02-03 (hereinafter the “NDAC”), online: <<https://www.dmr.nd.gov/oilgas/rules/rulebook.pdf>>. Last visited on March 1, 2017.

¹⁴⁷ North Dakota Industrial Commission, Department of Mineral Resources, “Oil and Gas Division, Home page”, (hereinafter “ND home page”), online: <https://www.dmr.nd.gov/oilgas/>. Last visited on March 3, 2017.

¹⁴⁸ NDCC, *supra* note 145, s. 38-08-04.2. The commission may delegate to the director of oil and gas all powers the commission has under this title and under rules enacted under this title.

¹⁴⁹ NDCC, *supra* note 145, s. 38-08-01, “Declaration of Policy”: It is hereby declared to be in the public interest to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected; and to encourage and to authorize cycling, recycling, pressure maintenance, and secondary recovery operations in order that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.”

¹⁵⁰ NDCC, *supra* note 145, s.38-08-25: “Hydraulic Fracturing- Designated as acceptable recovery process”

¹⁵¹ NDAC, *supra* note 146, s.43-02-03-27.1, “Hydraulic Fracturing Stimulation.”

¹⁵² NDCC, *supra* note 145, s. 38-08-02-11, “person.”

As in the Canadian provinces, surface owners and mineral owners in North Dakota have some statutory rights to participate in oil and gas development decision-making processes, but these rights are severely limited. Unlike surface owners of private lands in the Canadian provinces where operators (“mineral developers” in North Dakota) must enter into agreements before they can apply for exploration or a well permit, surface owners in North Dakota only have the right to be compensated after the fact for provable injury to their person or property caused by drilling operations.

Surface owners do have a right to be notified of pending exploration and operations. Before the initial entry upon the land for activities that do not disturb the surface, including inspections, staking, surveys, measurements, and general evaluation of proposed routes and sites for oil and gas drilling operations, the mineral developer must provide at least seven days' notice to the surface owner unless waived by mutual agreement.¹⁵³ The contents of the notice are prescribed and the mineral operator must offer to consult by providing “an offer to discuss and agree to consider accommodating any proposed changes to the proposed plan of work and oil and gas operations before commencement of oil and gas operations.”¹⁵⁴ These are not statutory rights, and any agreement reached is purely contractual.

Before a mineral developer may commence drilling of a well, he or she must give the surface owner written notice of the contemplated oil and gas drilling operations at least twenty days in advance, unless notice is mutually waived. If the mineral developer plans to commence drilling operations within twenty days of the termination date of the mineral lease, the required notice may be given at any time before commencement of drilling operations.¹⁵⁵ If a mineral developer fails to give notice, the surface owner may seek appropriate relief in the court of proper jurisdiction and may receive punitive as well as actual damages.¹⁵⁶ However, similar to in the Canadian provinces, after receiving notice, the surface owner has no veto rights to exploration or drilling operations.

The legislative provisions concerning private lands and surface owners reflect the North Dakota Legislative Assembly's “findings” in section 38-11.1-01 of the NDCC:

1. It is necessary to exercise the police power of the state to protect the public welfare of North Dakota which is largely dependent on agriculture and to protect the economic well-being of individuals engaged in agricultural production.
2. Exploration for and development of oil and gas reserves in this state interferes with the use, agricultural or otherwise, of the surface of certain land.
3. Owners of the surface estate and other persons should be justly compensated for injury to their persons or property and interference with the use of their property occasioned by oil and gas development.

¹⁵³ *Ibid.* s. 38-11.1-04.1, “Notice of Operations.”

¹⁵⁴ *Ibid.*

¹⁵⁵ *Ibid.* “The notice must include: a. Sufficient disclosure of the plan of work and operations to enable the surface owner to evaluate the effect of drilling operations on the surface owner's use of the property; b. A plat map showing the location of the proposed well; and c. A form prepared by the director of the oil and gas division advising the surface owner of the surface owner's rights and options under this chapter, including the right to request the state department of health to inspect and monitor the well site for the presence of hydrogen sulfide.”

¹⁵⁶ *Ibid.*

While these “findings” recognize the need to justly compensate “owners of the surface estate and other persons for injury to their person or property,” they do not provide surface owners or the general public with rights or opportunities to participate in policy development, rule making, or statutory decision making about the use of fracking that may cause such injury. Further, surface owners and other persons must sustain injury, and be able to prove damages before the provisions are triggered. For example, North Dakota requires a mineral developer to pay the surface owner a sum of money equal to the amount of damages sustained by the surface owner and the surface owner's tenant, if any, for lost land value, lost use of and access to the surface owner's land, and lost value of improvements caused by drilling operations. However, payments for “damage and disruption” only cover land directly affected by drilling operations.¹⁵⁷

As well, under certain conditions, any person who owns an interest in real property within one-half mile [804.67 meters] of where geophysical or seismograph activities are or have been conducted or within one mile [1.61 kilometers] of an oil or gas well site, has a right to make a claim for relief for damages to his or her water supply, whether for domestic or livestock or irrigation purposes.¹⁵⁸ The person claiming relief must have had a certified water quality and quantity test performed by an expert within one year preceding the commencement of drilling operations to be entitled to recover the cost of making repairs, alterations, or construction that will ensure the delivery to the surface owner of the quality and quantity of water available to the surface owner prior to the commencement of drilling operations.¹⁵⁹

¹⁵⁷ NDCC, *supra* note 145, s. 38-11.1-04, “Damage and Disruption Payments.”

¹⁵⁸ *Ibid.* s. 38-11.1-06, “Protection of Surface and Ground Water – Other Responsibilities of Mineral Developer.” “If the domestic, livestock, or irrigation water supply of any person who owns an interest in real property within one-half mile [804.67 meters] of where geophysical or seismograph activities are or have been conducted or within one mile [1.61 kilometers] of an oil or gas well site has been disrupted, or diminished in quality or quantity by the drilling operations and a certified water quality and quantity test has been performed by the person who owns an interest in real property within one year preceding the commencement of drilling operations, the person who owns an interest in real property is entitled to recover the cost of making such repairs, alterations, or construction that will ensure the delivery to the surface owner of that quality and quantity of water available to the surface owner prior to the commencement of drilling operations. Any person who owns an interest in real property who obtains all or a part of that person's water supply for domestic, agricultural, industrial, or other beneficial use from an underground source has a claim for relief against a mineral developer to recover damages for disruption or diminution in quality or quantity of that person's water supply proximately caused from drilling operations conducted by the mineral developer. Prima facie evidence of injury under this section may be established by a showing that the mineral developer's drilling operations penetrated or disrupted an aquifer in such a manner as to cause a diminution in water quality or quantity within the distance limits imposed by this section. An action brought under this section when not otherwise specifically provided by law must be brought within six years of the time the action has accrued. For purposes of this section, the claim for relief is deemed to have accrued at the time it is discovered or might have been discovered in the exercise of reasonable diligence. A tract of land is not bound to receive water contaminated by drilling operations on another tract of land, and the owner of a tract has a claim for relief against a mineral developer to recover the damages proximately resulting from natural drainage of waters contaminated by drilling operations. The mineral developer is also responsible for all damages to person or property resulting from the lack of ordinary care by the mineral developer or resulting from a nuisance caused by drilling operations. This section does not create a cause of action if an appropriator of water can reasonably acquire the water under the changed conditions and if the changed conditions are a result of the legal appropriation of water by the mineral developer.”

¹⁵⁹ NDCC, *supra* note 145, s. 38-11.1-06.

For any person to receive compensation, under subsections 38-11.1-08 and 38-11.1-09, they must notify the mineral developer of the damages sustained within two years after the injury occurs or would become apparent to a reasonable person.¹⁶⁰ The person must sustain a provable injury and the claim must be brought within six years of the time the action accrued, before any compensation may be ordered by a court.¹⁶¹ This limited group of real property owners may have a statutory right to claim relief for provable damages to their water supplies, but they are not entitled to participate in policy development, rule making, or decision-making processes that would mitigate or minimize the risk of harm in the first place.

A surface owner or adjacent landowner may ask that a well site be inspected for the presence of hydrogen sulfide, and if detected the state department of health must issue appropriate orders under chapters 23-25 of the NDCC to protect the health and safety of the surface owner's health, welfare, and property.¹⁶² Again, the affected person must ask for an inspection to be done, or none will be carried out as a routine exercise to mitigate potential harm.

Drilling activities do require a permit from the Industrial Commission.¹⁶³ Certain affected landowners may be entitled to participate in certain aspects of decision making about oil and gas permits and authorizations. For example, since 31 July 2013, the applicant for a drilling permit must give notice to the “owner of a permanently occupied dwelling within one thousand three hundred twenty feet [402.34 meters] of the proposed oil or gas well.”¹⁶⁴ The purpose of this notice is to allow the owner to request that the location of all flares, tanks, and “treaters” connected with the permitted well be located at a greater distance from the occupied dwelling than the oil and gas well.¹⁶⁵ The owner must submit written comments to the Industrial Commission within 5 days business days from the date of notice. The Industrial Commission may accept the request “if the location can be reasonably accommodated within the proposed pad location”. If the facilities are proposed to be located farther from the dwelling than the well bore, the Industrial Commission can issue the permit without comment from the dwelling owner.¹⁶⁶

Permit applications for “special procedures” on private lands must be advertised in the county and are subject to a mandatory hearing.¹⁶⁷ In this case, “any interested party may appear at the hearing to oppose or comment on the application” and may submit written comments or objections on the application.¹⁶⁸

¹⁶⁰ NDCC, *supra* note 145, s. 38-11.1-07, “Notification of Injury – Statute of Limitations.”

¹⁶¹ *Ibid.* s.38-11.1-06, “Protection of Surface and Ground Water – Other Responsibilities of Mineral Developer.”

¹⁶² *Ibid.* s, 38-11.1-03.1, “Inspection of Well Site.”

¹⁶³ *Ibid.* Also see NDAC, *supra* note 146, s.43-02-03-16.

¹⁶⁴ NDCC, *supra* note 145, s. 38-08-05.

¹⁶⁵ NDAC, *supra* note 146, s. 43-02-03-16.

¹⁶⁶ *Ibid.*

¹⁶⁷ *Ibid.* s. 43-02-03-88.1. “Special procedures” include applications for increased density wells, pooling, flaring exemption, underground injections, and commingling, converting mineral wells to freshwater wells, and central tank battery or central production facilities applications.

¹⁶⁸ *Ibid.*

The term “interested party” is not currently defined by statute, which has allowed some interest groups to routinely testify at oil and gas hearings. However, in April 2016 the Industrial Commission proposed to amend the rule and define the term as “an individual or number of individuals that have a property ownership or management interest in or adjacent to the subject matter.”¹⁶⁹

Citizens expressed concerns that this limiting definition would infringe on their ability to participate in the regulatory process,¹⁷⁰ and the proposed new definition was “axed” in June, 2016.¹⁷¹ However, the right of “any other interested person” to launch an official complaint alleging a violation of the oil and gas conservation statutes or any rule, regulation, or order of the commission to launch an investigation, or to appeal the director’s decision about such a complaint or an investigation had already been removed in 2012.¹⁷² Information about archived hearings before the Industrial Commission can be found on the North Dakota website. Live telecasts of hearings are accessible to the public.¹⁷³

¹⁶⁹ North Dakota Industrial Commission, “ Full Notice of Intent to Adopt and Amend Administrative Rules,” online: <<https://www.dmr.nd.gov/oilgas/RuleChanges.2016.2016-02-29.LC.FullNotice.final.pdf>>. See Proposed Rule 43-02-03-01.25, online: <https://www.dmr.nd.gov/oilgas/2016_43-02-03-et-al-NDAC.pdf>. Last visited on March 1, 2017.

¹⁷⁰ Emily Guerin, “Industrial Commission considering who can and cannot comment during oil and gas hearings” *Prairie Public News*, April 12, 2016, online: < <http://news.prairiepublic.org/post/industrial-commission-considering-who-can-and-cannot-comment-during-oil-and-gas-hearings>>. Last visited on March 2, 2017.

¹⁷¹ Amy Dalrymple, “Industrial Commission Kills ‘Interested Party’ Definition,” *Oil Patch Dispatch*, June 29, 2016, online: <<http://oilpatchdispatch.areavoices.com/2016/06/29/industrial-commission-kills-interested-party-definition/>>. Last visited on March 2, 2017.

¹⁷² See how the legislative assembly took away the right of “any other interested party” to submit a written complaint and launch an investigation, and appeal the Director’s decision with respect to the complaint or complaint: Original **s.43-02-03-54. INVESTIGATIVE POWERS.** “Upon receipt of a written complaint from any surface owner or lessee, royalty owner, mineral owner, local, state, or federal official, or any other interested party, alleging a violation of the oil and gas conservation statutes or any rule, regulation, or order of the commission, the director shall immediately cause an investigation of such complaint to be made within a reasonable time reply in writing to the person who submitted the complaint stating that an investigation of such complaint will be made or the reason such investigation will not be made. The person who submitted the complaint may appeal the decision of the director to the commission. The director may also conduct such investigations on the director's own initiative or at the direction of the commission. If, after such investigation, the director affirms that cause for complaint exists, the director shall report the results of the investigation to the person who submitted the complaint, if any, to the person who was the subject of the complaint and to the commission. The commission shall institute such legal proceedings as, in its discretion, it believes are necessary to enjoin further violations.”
New provision, April 2012: **43-02-03-54. INVESTIGATIVE POWERS.** “Upon receipt of a written complaint from any surface owner or lessee, royalty owner, mineral owner, local, state, or federal official, alleging a violation of the oil and gas conservation statutes or any rule, regulation, or order of the commission, the director shall within a reasonable time reply in writing to the person who submitted the complaint stating that an investigation of such complaint will be made or the reason such investigation will not be made. The person who submitted the complaint may appeal the decision of the director to the commission. The director may also conduct such investigations on the director's own initiative or at the direction of the commission. If, after such investigation, the director affirms that cause for complaint exists, the director shall report the results of the investigation to the person who submitted the complaint, if any, to the person who was the subject of the complaint and to the commission. The commission shall institute such legal proceedings as, in its discretion, it believes are necessary to enjoin further violations.”

¹⁷³ North Dakota, “Oil and Gas Hearing Docket Index,” online: <<https://www.dmr.nd.gov/oilgas/docketindex.asp>>. Last visited on March 5, 2017.

For *public* lands, the Industrial Commission recently established special procedures and a public comment period for permit applications to drill within specified landscapes called “areas of interest.”¹⁷⁴ The Industrial Commission released the new rules following a heated public debate on applications in 2014 to drill near a 19th-century battlefield and near the Elkhorn Ranch in Theodore Roosevelt National Park. The public were given ten calendar days to submit comments to the Industrial Commission on issues relating to the application, such as access road and well location, reclamation plans and timing, noise, traffic, and visual impact mitigation.¹⁷⁵ All comments were required to be reviewed by the Industrial Commission.¹⁷⁶ However, the Industrial Commission was not bound to act upon any comments.¹⁷⁷

The Industrial Commission may adopt rules governing its practice and procedure, and may issue an emergency order without a notice or hearing that may remain in effect for forty days.¹⁷⁸ The Industrial Commission “may act upon its own motion or upon the petition of any interested person. On the filing of a petition concerning any matter within the jurisdiction of the commission, the commission must fix a date for a hearing and give notice. Upon the filing of a petition of any interested party, the commission must enter its order within thirty days after a hearing. A copy of any order of the commission must be mailed to all the persons filing written appearances at the hearing.”¹⁷⁹ The Industrial Commission has broad powers to require production of documents, subpoena persons and hear oral testimony under oath. Any party adversely affected by any order of the Industrial Commission may appeal to the commission and if denied relief, may appeal to the district court. A weak privative clause provides that “[o]rders of the commission must be sustained by the district court if the commission has regularly pursued its authority and its findings and conclusions are sustained by the law and by substantial and credible evidence.”¹⁸⁰

¹⁷⁴ North Dakota Industrial Commission, “North Dakota Industrial Commission Area of Interest Review Policy,” March 3, 2014 (hereinafter “NDIC- PP”), online: https://www.dmr.nd.gov/oilgas/AreaOfInterest_Policy.pdf. Last visited on March 3, 2017. Since May 1, 2014, any application for a permit within specified “areas of interest” that relates to public lands, must comply with NDIC-PP 2.02 through NDIC-PP 2.04.

¹⁷⁵ NDIC-PP, *supra* note 174: 2.02

¹⁷⁶ NDIC-PP, *supra* note 174, 2.04. The director may consider the comment summaries for the purposes of attaching conditions to any permit pursuant to NDAC 43-02-02, 43- 02-02.2, 43-02-02.3, 43-02-02.4, 43-02-03 and 43-02-05 to mitigate potential impacts to the sites listed in NDIC-PP 2.01.

¹⁷⁷ *Ibid.*, NDIC-PP 2.03. All comments shall be reviewed by the Industrial Commission executive director's designee who shall summarize any comments received for the director of the Division of Mineral Resources. However, the Mineral Resources director is not bound to act upon any comments. (Emphasis added.)

¹⁷⁸ NDCC, *supra* note 145, s.38-08-11.

¹⁷⁹ *Ibid.*

¹⁸⁰ *Ibid.*

In the first years of the oil boom in North Dakota, the public did not raise major objections to fracking due to economic benefits. However, citizens and local communities are now demanding more involvement in decisions that affect them, stricter regulations and stronger enforcement actions against companies that pollute the land, air and water through spills, leaks, blowouts and other accidents.¹⁸¹ The media were instrumental in raising public awareness about the dramatic increase in oil spills, leaks, and blowouts being reported to regulatory bodies. An investigation conducted in 2014 by the New York Times found that “more than 18.4 million gallons of oils and chemicals spilled, leaked or misted into the air, soil and waters of North Dakota from 2006 to early October 2014”.¹⁸²

Pipeline spills have a bigger impact than incidents at well sites because they occur in remote areas, away from the containment berms that surround most sites.¹⁸³ In 2013, a pipeline rupture released over 20,000 barrels of crude oil near Tioga, causing one of the largest oil spills on land in the United States.¹⁸⁴ Many spills in North Dakota also come from gathering pipelines, which transport fracking wastewater. The worse wastewater spill happened in January 2015.¹⁸⁵ In response to these spills, landowners and environmental groups pressed the government and the Industrial Commission to issue stricter regulations on gathering pipelines that transport fracking wastewater. Locals were particularly frustrated by the lack of mandatory requirements on leak detection equipment, and asked for regulatory requirements on advanced systems to decrease the impact of pipeline spills.¹⁸⁶

¹⁸¹ Deborah Sontag and Robert Gebeloff, “The Downside of the Boom”, November 22, 2014, *New York Times* (hereinafter “NYT Article”), online: <https://www.nytimes.com/interactive/2014/11/23/us/north-dakota-oil-boom-downside.html?_r=0>.

¹⁸² NYT Article, *supra* note 181.

¹⁸³ Mike Lee, “After years of spills, N.D. still deciding how to handle pipeline leaks” October 29, 2015, *EnergyWire* (hereinafter “Lee”), online: <<http://www.eenews.net/stories/1060027102>>.

¹⁸⁴ The Associated Press, “Burst oil pipeline spewed crude, N. Dakota farmer says,” October 11, 2013, *CBC News*, online: <<http://www.cbc.ca/news/world/burst-oil-pipeline-spewed-crude-n-dakota-farmer-says-1.1987683>>. A farmer harvesting discovered the spill and the public was alerted through the local media. The government publicly announced the spill after twelve days, which raised questions of transparency. Even though an investigation revealed that the probable cause of the pipeline rupture was lightning, locals complained because the spill was undetected for two months.

¹⁸⁵ Renee Jean, “County signs and sends letter pleading for no leniency in Blacktail, other large spills,” [January 6, 2016, Williston Herald](http://www.inforum.com/news/3917970-county-signs-and-sends-letter-pleading-no-leniency-blacktail-other-large-spills), online: <<http://www.inforum.com/news/3917970-county-signs-and-sends-letter-pleading-no-leniency-blacktail-other-large-spills>>. Last visited on March 1, 2017. Three million gallons of fracking wastewater spilled from a leaking pipe near Blacktail Creek, in western North Dakota. The Blacktail Creek, located 14 miles north of Williston, feeds into the Little Muddy River and ultimately the Missouri River, which supplies drinking water to the area. Officials reported that there was no immediate threat to human health, however, the extent of the damage and threat to human health were largely unknown. The ruptured pipeline had been leaking since at least October 2014. The wastewater had a high concentration of toxic chemicals and radioactive elements, which can destroy the entire area where it spilled. The Environmental Protection Agency (hereinafter the “EPA”) assessed the extent of the damage and effects. The Industrial Commission proposed a \$2.4 million fine, but the public reacted strongly against the possibility of a settlement with the company.

¹⁸⁶ Lee *supra* note 183: The Northwest Landowners Association, pushed the state Legislature to enact tougher standards for gathering lines in 2013 but the Legislature declined to take action.

Following public pressure the government set aside \$1.5 million to (i) analyze the existing regulations on construction and monitoring of crude oil and produced water pipelines, and (ii) determine the feasibility and cost-effectiveness of requiring leak detection and monitoring technology on new and existing pipeline systems.¹⁸⁷

In 2017, according to the Department of Health incident reporting website to which the public has free access, that department reports on “general environmental incidents,” and the Industrial Commission reports on “oilfield environmental incidents.”¹⁸⁸ Monitoring, reporting and public access to information about leaks, spills, and blowouts, have improved as a result of media attention and public pressure on the regulator.

While the public have no statutory rights to participate in monitoring the conditions in approvals, the lack of adequate monitoring and inspections in the Bakken area prompted some landowners, whose land has been irremediably damaged by highly contaminated wastewater, to take an active role in monitoring. In 2011 one of the major operating companies, Sagebrush Resources (hereinafter “Sagebrush”) sued these landowners for trespassing the well pads.¹⁸⁹ The district judge dismissed the case and concluded that the action was “frivolous”, “not made in good faith”, and “brought solely to vex, annoy, harass, and intimidate the defendants.”

¹⁸⁷ *North Dakota House Bill 1358 (HB1358)* section 8, online: <<http://www.legis.nd.gov/assembly/64-2015/documents/15-0460-01000.pdf?20151130150425>>.

¹⁸⁸ North Dakota Department of Health, “Environmental Incident Report.” online: <<http://www.ndhealth.gov/ehs/spills/>>. “In 2017, the website provides related information and procedures for submitting an environmental incident report and making an open records request. All reported general environmental incidents and oilfield environmental incidents are provided on the website. “In North Dakota, both the Department of Health’s Environmental Health Section and the Department of Mineral Resources’ Oil and Gas Division of the North Dakota Industrial Commission receive reports of environmental incidents. Incidents reported to the Department of Health are called General Environmental Incidents while those reported to the Department of Mineral Resources are called Oilfield Environmental Incidents. Details about reporting requirements can be found on the Submit an Environmental Incident Report page. The oilfield environmental incident data is gathered and maintained by the Oil and Gas Division. The Department of Health is allowed read-only access to a portion of this data and provides it to the public as received without modification. When Department of Health staff investigate reported incidents, they will update the information and record it in the update section of each report, producing a new version of the summary report with the next web page update cycle. The web page is updated routinely.”

¹⁸⁹ *Sagebrush Resources, LLC v. Peterson*, 2014 ND 3, 841 N.W.2d 705, NDSC. NDSC (hereinafter “Sagebrush”), online: <https://www.ndcourts.gov/court/opinions/20130080.htm>. See also NYT Article, *supra* note 181 at 16.

In his decision, the district judge recognized that the citizens have the right to voice their concerns to the regulatory authorities and may even have a moral obligation to bring pollution problems and spills to the attention of the authorities.¹⁹⁰ The district court's decision was upheld on appeal to the North Dakota Supreme Court.¹⁹¹

The New York Times article claimed that the Industrial Commission works alongside industry and generally develops new guidelines or regulations only when issues become too obvious to ignore.¹⁹² However, public pressure influences regulatory response, and it was only after mineral owners filed several class action lawsuits against oil companies for waste that the Industrial Commission established targets to reduce the amount of natural gas flared to 10% by 2020.¹⁹³ The Industrial Commission uses a collaborative approach in enforcement with industry rather than a punitive one. Industry is penalized as a last resort, and the Industrial Commission rarely pursues formal complaints, settling with companies even after significant accidents, typically for about 10-25 percent of the assessed penalties.¹⁹⁴ State regulators and officials have indicated that they deliberately chose a permissive approach in enforcement because, given the state's history of population loss and economic decline, they welcome the arrival of oil companies.¹⁹⁵ Especially during the first years of the oil boom, the focus was primarily on exploiting the potential of the Bakken without regulations that discourage investment.¹⁹⁶

¹⁹⁰ Sagebrush, *supra* note 189.

¹⁹¹ *Ibid.*

¹⁹² NYT Article, *supra* note 181 at 4. For instance, in 2014 the Industrial Commission took action on the longstanding problem of gas flaring only in response to strong public pressure. Between 2010 and 2014 oil production from the Bakken quadrupled, which led to increased volume of natural gas associated with the oil produced. Due to economics and lack of pipelines or processing facilities, many operators in North Dakota started flaring, i.e. burning off, the natural gas associated with the oil. The public was alerted of the magnitude of this issue by controversial satellite images that circulated on the Internet in 2013 showing natural gas flares lighting up at night across million of acres. North Dakota's flaring attracted global attention and public scrutiny because flaring releases greenhouse gas emissions and wastes an important source of energy. In addition, it seems that oil companies were flaring the natural gas without permission and without paying royalties.

¹⁹³ Ernest Scheyder, "North Dakota postpones deadline for natural gas flaring rules", Sept, 24, 2015, Reuters: Commodities, online: <<http://www.reuters.com/article/us-north-dakota-flaring-idUSKCN0RO2KX20150924>>. The Order allowed for exemptions on a case-by-case basis. Also see Ehrman, *supra* note 12 for an excellent analysis of the flaring regulations.

¹⁹⁴ NYT Article, *supra* note 181 at 4.

¹⁹⁵ *Ibid.* at 7 and 9

¹⁹⁶ *Ibid.* at 9-11. In 2006, the Industrial Commission issued approximately 400 drilling permits with an average of five days to process applications. In 2011, the Industrial Commission issued approximately 1900 drilling permits and still managed to process applications in ten days. A 2011 spill emphasized the reluctance of the Industrial Commission to sanction responsible oil companies even in the worse cases. During the spring, the waste oil open pits adjacent to rigs throughout the Bakken released oil-based mud mixed with snowmelt, which streamed across farmland into ponds, creeks and river tributaries. The public was alerted through to the local media. Following strong reactions of farmers and landowners, the Industrial Commission developed new regulations, which prohibit liquid waste pits. The NDIC also had to take measures against the responsible companies, and filed formal complaints against those companies that had ignored the warnings to take precautions. However, some companies disputed their responsibility attributing the overflows to unforeseeable extreme weather, and the Industrial Commission settled with these companies for ten percent of the penalty. Following public criticism of this lenient approach, the Industrial Commission justified it as a way to promote "a culture of change within the company." However, critics noted that "announcing publicly that it is your practice to suspend the bulk of all fines makes a mockery of the whole enforcement system." Without enforcement there is no incentive to comply with the law.

The North Dakota Supreme Court’s decision in Sagebrush supports more public participation in all aspects of oil and gas exploration and development regulation, monitoring, and enforcement. Media attention and corresponding public pressure are influencing regulatory responses to several issues, and in October 2016, the Industrial Commission released a new set of rules,¹⁹⁷ many associated with the use of fracking. However, providing or strengthening statutory opportunities for public participation in policy development, rule making, or decision-making processes about fracking was not among those changes.

Table 8: North Dakota summary of statutory opportunities for public participation

Access to information	Notice	Statements of concern	Public hearings/ inquiries	Appeals	Impartial decision makers	Reasons for decision	ADR
Websites Oil and Gas Public Health Hearing Index	Surface owners Some adjacent landowners Public notice for applications and hearings	Written for hearings	Industrial Commission has discretion hearings. Applications for special procedures attract mandatory hearings. “Interested parties” may petition for a hearing.	“Parties adversely affected by decision” can appeal. Weak privative clause	Courts on appeal by parties	Yes Searchable website for current hearing docket and archived hearings Can watch hearings live.	No

¹⁹⁷ ND home page, *supra* note 147, see “2016 Rule Changes FAQ,” online: <<https://www.dmr.nd.gov/oilgas/rulechangesfaq2016.asp>> Last visited on March 3, 2017. New rules for pipelines, perimeter berms and saltwater handling facilities came into effect on October 1, 2016.

The public have access to information and to participate in live webcasts of hearings through a comprehensive searchable website. The NDCC declared fracking an acceptable form of well stimulation, and the NDAC provides specific administrative rules for fracking. The media and the public have driven regulatory change. “Person” is broadly defined, but a person has no statutory rights to participate in policy development, regulation or decision-making about fracking, except through hearings. Drilling requires a permit, and certain persons are entitled to notice: for example, an owner of a permanently occupied dwelling within 1,320 feet of a proposed well. That intent of notice is to allow the owner to propose through written submission that tanks, flares and treaters be moved further away from the dwelling, and the request may be accepted. For special procedures on private lands, such as injection of fracking wastewater, the proponent must advertise and there must be a hearing where “any interested party” may appear. Interested party is not defined, and an attempt to do so to limit public participation in hearings was defeated due to public pressure. The Industrial Commission is not compelled to act on any public comments, and decisions and reasons must be published. While parties have rights to appeal, the NDCC provides a weak privative clause. However, in 2012, the right of “any other interested person” to file a petition to launch an official complaint alleging violation of the NDCC or NDAC, or appeal the decision about the complaint was removed. Surface owners are entitled to notice of exploration and drilling operations and have a right to claim proven damages after the fact. The notice must include an offer to discuss and consider changes to the proposal, but any agreement is contractual. Landowners within a half mile of a proposed well may claim damages for provable injury to their water supply, but they are not entitled to participate in siting the well in advance to avoid harm. Landowners may request an inspection of a well site for hydrogen sulfide.

D. Montana

Since 2006, small Montana border towns have been subject to explosive growth and a massive migration of workers chasing their fortunes in the Bakken.¹⁹⁸ In Montana, fracking is regulated through the *Montana Code Annotated*, 2015, Title 82, Chapter 11 (hereinafter the “MCA”) and the *Administrative Rules of Montana*, Title 36, Chapter 22 (hereinafter “ARM”) by the Board of Oil and Gas Conservation (BOGC). The BOGC is a quasi-judicial body under the Department of Natural Resources and Conservation.¹⁹⁹ Montana has special rules for regulating fracking that became effective on August 27, 2011 following extensive public consultation and a rule making hearing.²⁰⁰

Montana has similar statutory provisions as those in Manitoba and Saskatchewan concerning the rights of surface owners to be compensated by oil and gas operators. Under “Part 5: Surface Owner Damage and Disruption Compensation” of the ARM, an operator is required to give notice of intention to drill to the surface owner and “any purchaser under contract for deed” to “sufficiently disclose the plan of work and operations to enable the surface owner to evaluate the effect of drilling operations on the surface owner’s use of the property.”²⁰¹ As in Canadian provinces, the operator must compensate the surface owner for damages, and there is a legislative process whereby a mediator will help resolve conflict.

However, Montana is unique in that public notice is required when an operator applies for a drilling permit. An interested person may demand a hearing within 10 days of publication to make comments or express concerns in relation to the application.²⁰²

¹⁹⁸ Ami Vitale, “Bakken Oil Boom Brings Growing Pains to Small Montana Town,” *National Geographic*, online: <<http://news.nationalgeographic.com/news/special-features/energy/2014/07/140709-montana-oil-boom-bakken-shale/>>

¹⁹⁹ Montana Government, “Montana Board of Oil and Gas,” online: <<http://bogc.dnrc.mt.gov>>. Last visited on March 14, 2017. See *Montana Code Annotated*, 2015 (hereinafter “MCA”).

²⁰⁰ Montana Government, “Hydraulic Fracturing Rulemaking,” (hereinafter “Montana Fracturing”) online: <<http://bogc.dnrc.mt.gov/Frac.asp>>. Last visited on March 14, 2017.

²⁰¹ Administrative Rules of Montana, (hereinafter the “ARM”), Rule 36.22.601. MAC, *supra* note 199, Rule 82-10-504. “Surface damage and disruption payments -- dispute resolution -- penalty for late payment. (1) (a) The surface owner and the oil and gas developer or operator shall attempt to negotiate in good faith an agreement on damages. The oil and gas developer or operator shall pay the surface owner a sum of money or other compensation equal to the amount of damages sustained by the surface owner for loss of agricultural production and income, lost land value, and lost value of improvements caused by oil and gas operations. (b) The amount of damages may be determined by any formula mutually agreeable between the surface owner and the oil and gas developer or operator. When determining damages, consideration must be given to the period of time during which the loss occurs. (c) At any time during the negotiation, at the request of either party and upon mutual agreement, the surface owner and the oil and gas developer or operator may enter into a dispute resolution process, including mediation. (d) The surface owner may elect to receive annual damage payments over a period of time, except that the surface owner must be compensated by a single sum payment for harm caused by exploration only. (e) The payments under this subsection (1) may cover only land directly affected by oil and gas operations and production. Payments under this subsection (1) are intended to compensate the surface owner for damage and disruption. A person may not reserve or assign damage and disruption compensation apart from the surface estate except to a tenant of the surface estate. (2) An oil and gas developer or operator who fails to timely pay an installment under any annual damage agreement negotiated with a surface owner is liable for payment to the surface owner of twice the amount of the unpaid installment if the installment payment is not paid within 60 days of receipt of notice of failure to pay from the surface owner.”

²⁰² *Ibid.* Rule 36.22.601 and Rule 36.22.602. (1) If no written demand for hearing has been filed within ten (10) days following the date of publication of the notice as specified in ARM [36.22.601](#) and the planned drilling operations do not require further environmental review, and the application complies in all respects with the applicable rules of the board, a permit shall be issued promptly by the petroleum engineer or his authorized agent.

The proposed well may attract an environmental review process.²⁰³ If an operator is applying to use fracking to stimulate production from the well, this must be provided in the public notice, which requires, among other things, disclosure of processes, chemicals and proppants that will be used.²⁰⁴

These unique procedural rights in the regulatory approval process for applying for a well that will use fracking reflect two broader constitutional provisions: Article II, sections 8 and 9 of the *Montana Constitution*. These provisions recognize first, the “Right of Participation: The public has the right to expect governmental agencies to afford such reasonable opportunity for citizen participation in the operation of the agencies prior to the final decision as may be provided by law,”²⁰⁵ and second, the “Right to Know: No person shall be deprived of the right to examine documents or to observe the deliberations of all public bodies or agencies of state government and its subdivisions, except in cases in which the demand of individual privacy clearly exceeds the merits of public disclosure.”²⁰⁶ These two constitutional rights are considered fundamentally linked and in *Bryan v. Yellowstone County Elementary School Dist. No.2*,²⁰⁷ the Montana Supreme Court indicated that they should not be analyzed in a vacuum or as “separate and distinct” rights. Delegate Foster commented on the rationale behind these provisions stating that “[p]ublic awareness and access seem to be the only tools to remind the great mass of public servants that their job is to serve the needs of the public and no other; they are paid by tax dollars to benefit the public above all else.”²⁰⁸

²⁰³ MAC, *supra* note 199.

²⁰⁴ ARM, *supra* note 201, Rule 36.22.608, “Well Stimulation Activities Covered by Drilling Permit.”

(1) Well completions which include hydraulic fracturing, acidizing, or other chemical stimulation done to complete a well are considered permitted activities under the drilling permit for that well **only if** the processes, anticipated volumes, and types of materials planned for use are expressly described in the permit application for that well. ... (3) For the purpose of this section, an adequate description of the proposed well stimulation includes: (a) the estimated total volume of treatment to be used; (b) the trade name or generic name of the principle components or chemicals; (c) the estimated amount or volume of the principle components such as viscosifiers, acids, or gelling agents; (d) the estimated weight or volume of inert substances such as proppants and other substances injected to aid in well cleanup, either for each stage of a multistage job or for the total job; and (e) the maximum anticipated treating pressure or a written description of the well construction specifications which demonstrate that the well is appropriately constructed for the proposed fracture stimulation.

²⁰⁵ Montana Constitution, Article II, s.8.

²⁰⁶ *Ibid.* s.9.

²⁰⁷ *Bryan v. Yellowstone County Elementary School Dist. No.2*, 2002 MT 264, at para 30, online:

<<http://law.justia.com/cases/montana/supreme-court/2002/a18ffc5a-8b22-40d5-b858-53c50155604d.html>>. See also Fritz Snyder, “The Right to Participate and the Right to Know in Montana” (2005) 66 Mont. L. Rev. 297 at 298-299 (hereinafter “Snyder”), online: <<http://scholarship.law.umt.edu/cgi/viewcontent.cgi?article=1012&context=faculty>>.

²⁰⁸ *Ibid.* at 299.

The right of participation in the operations of government agencies is also recognized in the MCA with a similar provision requiring government agencies to “develop procedures for permitting and encouraging the public to participate in agency decisions that are of significant interest to the public.”²⁰⁹ The procedures must ensure adequate notice and assist public participation before the agency makes the final decision. Also, the public must be allowed to make comments on any public matter that is not on the agenda of the meeting and that is within the jurisdiction of the agency conducting the meeting.²¹⁰ Despite these statutory rights to know and participate in statutory decision-making processes, citizens complain that their concerns are not adequately reflected in the approval process for fracking because the BOGC is not required to take any of the comments from the general public into account. Therefore, the BOGC may rubber-stamp permits with no conditions or protection for landowners.²¹¹

²⁰⁹ MCA, *supra* note 199. Rule: 2-3-103, “Public participation -- governor to ensure guidelines adopted” (1) (a) Each agency shall develop procedures for permitting and encouraging the public to participate in agency decisions that are of significant interest to the public. The procedures must ensure adequate notice and assist public participation before a final agency action is taken that is of significant interest to the public. The agenda for a meeting, as defined in 2-3-202, must include an item allowing public comment on any public matter that is not on the agenda of the meeting and that is within the jurisdiction of the agency conducting the meeting. However, the agency may not take action on any matter discussed unless specific notice of that matter is included on an agenda and public comment has been allowed on that matter. Public comment received at a meeting must be incorporated into the official minutes of the meeting, as provided in 2-3-212. (b) For purposes of this section, “public matter” does not include contested case and other adjudicative proceedings. (2)The governor shall ensure that each board, bureau, commission, department, authority, agency, or officer of the executive branch of the state adopts coordinated rules for its programs. The guidelines must provide policies and procedures to facilitate public participation in those programs, consistent with subsection (1). These guidelines must be adopted as rules and published in a manner so that the rules may be provided to a member of the public upon request. MCA Rule: 2-3-102. Definitions) defines “agency” as “any board, bureau, commission, department, authority, or officer of the state or local government authorized to make rules, determine contested cases, or enter into contracts” except the legislature, the judicial branches and the governor. Several cases not related to fracking have interpreted the right to participation and the right to know. For a review of some of these cases see Snyder, *supra*, note 214.

²¹⁰ MCA, *supra* note 199, Rule: 2-3-103. See Hannah Hostetter, “Court nixes challenge to 48-hour fracking rule,” *Northern Plains Research Council, Plains Truth*, (2015)44:4, at 4. online: <<https://www.northernplains.org/wp-content/uploads/2015/10/PT_Fall_2015_WEB.pdf>>. In December 2014 the BOGC approved a well permit in the Belfry area without allowing the interested parties to testify at the hearing. Two interest groups filed a lawsuit against the BOGC for breach of section 8 of the Montana Constitution, which grants citizens the right to participate in government decisions. In response to the lawsuit, the BOGC revoked the permit and scheduled a new hearing for February 2015. Farmers, ranchers and residents raised many concerns on water quality and quantity, air pollution and infrastructure. They asked the BOGC (i) to require baseline water testing data to be collected before and after the fracking operations, (ii) to conduct a more thorough Environmental Assessment as the impacts of the project on several water wells, irrigation ditches, streams, animals, and soil had not been addressed, (iii) to take into account the local impacts of the fracking project and (vi) to require the applicant to submit the specific plans of the fracking project so that the public would have an opportunity to comment on them. The latter is one of the major concerns because under the current rules, fracking operators do not have to submit specific plans until 48 hours before they start fracking, which means that neither the public nor the BOGC has an opportunity to review and comment on them. After the second hearing, the BOGC again approved the permit. According to the locals, the final decision of the BOGC does not address their concerns and there was little discussion of the comments they had submitted at the hearing. As a result, the interest groups have amended their claim against the BOGC indicating that despite the hearing, the approval of the Belfry well application still violates section 8 Constitution because they were not granted meaningful participation.

²¹¹ *Ibid.* at 4

Similar to North Dakota, insufficient regulations and monitoring of fracking operations also seem to be a major concern in Montana, and it takes public pressure on regulators to drive regulatory change. In 2011, several environmental groups unsuccessfully lobbied the government to adopt stronger safeguards to protect water resources.²¹² The lack of effective regulations on wastewater management is another major concern. At that time, Montana did not have any specific plans or policies in place for the treatment or disposal of fracking wastewater.²¹³

The lack of adequate regulations on fracking and insufficient monitoring of permit conditions may expose the Montana government to environmental liability. Article II, Section 3 of the Montana Constitution explicitly recognizes the “right to a clean and healthful environment” as an inalienable right of all persons. In addition, Article IX Section 1 places responsibilities on the government for the protection and improvement of the environment as follows: “(1) The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations. (2) The legislature shall provide for the administration and enforcement of this duty. (3) The legislature shall provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.”

²¹² Northern Plains Resource Council, “Hydraulic Fracturing, the Right to Know Act” (hereinafter “NPRC”), online: <https://www.northernplains.org/wp-content/uploads/2013/06/Fracking_2011_Factsheet.pdf>. Following public pressure, in August 2011 the BOGC adopted some regulations on chemical disclosure aimed at protecting public health. Under the new rules, operators must disclose the names of the chemicals used in fracking operations and their Chemical Abstract Service Registry numbers either to the BOGC or to a national fluid disclosure database maintained by FracFocus.org. Despite welcoming the new rules as a positive step forward, the public has described them as insufficient and a breach of their constitutional right to know because only limited information must be disclosed. In addition, there is a broad exemption for trade secrets, which allows the operator to only disclose information to health care professionals in the event of an emergency. Operators can decide whether products or chemicals are proprietary with no oversight, and are not required to give notice of commencement of fracking to adjacent property. These limits make it difficult to obtain baseline water quality data before fracking occurs or to test the adverse effects of the actual formula used in the fracking operations.

²¹³ NPRC, *supra* note 212. Several wastewater spills and well injection leaks have contaminated land and water resources, including First Nation reserves. In 2013 the Montana Department of Environmental Quality established some solid-waste disposal regulations for oil and gas operations. However, these regulations are considered weak and for instance allow facilities in Montana to dispose waste that is up to six times more radioactive than North Dakota allows. Of particular concern are “filter socks”, which are socks used to capture the solids in flow back water or filter wastewater at drilling sites. The socks often contain toxic elements and naturally occurring radioactive materials (NORMs). North Dakota prohibits disposal of waste that emits more than 5 picocuries per gram of radiation. But some operators may have to dispose waste that emits up to 47 picocuries per gram, which has forced these operators to look for disposal options out of state. Taking advantage of the weak regulations, several Montana disposal sites have started taking waste from fracking operators in North Dakota, putting the state in danger of becoming the dumpsite for North Dakota’s oil boom without even analyzing the realistic short and long-term impacts.

In the leading case *MEIC, et al. v. Department of Environmental Quality and Cattle Development Center*,²¹⁴ the Montana Supreme Court had the chance to address the relationship existing between these two provisions and what level of government interference with an individuals' right to a clean and healthful environment is allowed under these provisions. This lawsuit was brought by MEIC against the Department of Environmental Quality for allowing a private company to discharge water contaminated with arsenic, iron, zinc and manganese in excess of state standards out of three wells into shallow pits that drained through the soil and into the Landers Fork and Blackfoot Rivers. MEIC claimed that the discharges violated the right to a clean and healthful environment and that the exemption was unconstitutional.

The Supreme Court ruled unanimously that the "right to a clean and healthful environment" recognized under the Montana Constitution is a fundamental right, and that the environmental rights of Article IX, Section 1 are interrelated and interdependent.²¹⁵ The Supreme Court did not distinguish between the rights recognized under the two provisions and seems to suggest that they may be read together as one single right.²¹⁶ The Supreme Court held the provisions of the Montana Constitution provide protections that are "both anticipatory and preventive".²¹⁷ Therefore, proof of environmental damage or threat to public health is not needed to invoke environmental protection.²¹⁸ In addition, any infringement of the right to a clean and healthful environment "must be strictly scrutinized and can only survive scrutiny" if (i) the state establishes a compelling state interest, (ii) its action is closely tailored to effectuate that interest, and (iii) its action is the least onerous path that can be taken to achieve the state's objective.²¹⁹

²¹⁴ LLC CDV 2001-210, 1st Judicial District (2003), online: <<http://leg.mt.gov/content/Services%20Division/Lepo/mepa/Court-Cases/MEICvsDEQ.pdf>>. Judge Honzel's decision.

²¹⁵ John L. Horwich, "MEIC v. DEQ: An Inadequate Effort to Address the Meaning of Montana's Constitutional Environmental Provisions," 62 *Mont. L. Rev.* (2001) 269 at 276 (hereinafter "Horwich"), online: <<http://scholarship.law.umt.edu/mlr/vol62/iss2/2>>.

²¹⁶ *Ibid.*

²¹⁷ *Ibid.*

²¹⁸ Horwich, *supra* note 215.

²¹⁹ *Ibid.*

The right to a clean and healthful environment recognized not only creates an obligation on the government to refrain from taking or authorizing actions that unreasonably impair individuals' right to a healthy environment, but also creates an obligation on the government to take *positive actions to prevent* unreasonable depletion and degradation of natural resources and to maintain and improve a clean and healthful environment in Montana for present and future generations. Therefore, the government may be required to adequately regulate fracking procedures and operations due to the threats they pose to human health and the environment. While the current scientific studies on fracking are still insufficient to characterize and identify with precision its adverse impacts and threats, their results undoubtedly, suggest that plausible risks exist.²²⁰

The Montana disclosure rules about fracking allow a blank trade secret exemption.²²¹ Arguably, the trade secret exemption is a breach of the right to a clean and healthful environment because *de facto* it precludes establishing baseline conditions and monitoring water resources to ensure their safety.²²² The environmental quality required to meet the constitutional right to a clean and healthful environment, the extent to which the Montana government is required to take positive actions, and what constitutes a violation of the right all remain uncertain under the existing legislation.²²³

²²⁰ U.S. EPA. "Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States (Final Report)." U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-16/236F, 2016 (hereinafter "EPA Report"), online: <<https://www.epa.gov/hfstudy>>. The impacts of fracking on water resources discusses several circumstances in which drinking water resources have either already been contaminated or are subject to the risk of contamination. One of these circumstances is the risk of water contamination if fracking wastewater is inadequately treated and discharged to surface water. It is unknown whether even the most advanced waste treatment systems are currently effective at treating fracking wastewater. The reason is that the limited disclosure on the chemicals used in the fracking fluids precludes the treated wastewater to be tested for those chemicals. The report identifies a list of 1,076 chemicals used in the fracking fluids, and indicates that the number of unique chemicals per well ranges from 4 to 28, with a median of 14 unique chemicals per well. The composition of fracking fluids varies by state, by well, and within the same service company and geological formation. Accurate information on the identity and composition of chemicals used in the fracking operations is needed to help establish baseline conditions and to test the chemicals in the event of a suspected water impact. Without this information, it is not possible to evaluate the effectiveness of wastewater treatment and determine the downstream effects on drinking water resources when wastewater is treated and discharged.

²²¹ See note 212.

²²² EPA Report, *supra* note 220: Executive Summary at 22. It may be difficult for the Montana government to justify this blank exemption for trade secrets as a compelling interest of the state. A less onerous path could be taken to achieve the same result – an industrial operator could be required to disclose its frac fluid formula to the BOGC or another state agency that would hold the information in confidence as proprietary information. This would allow trade secrets to be protected, and at the same time would allow the state to accurately test and monitor land and water resources, ensuring safety for present and future generations.

²²³ For instance, the courts do not discuss what may be justified as a "compelling interest". Also, it is not clear whether the provisions of the Montana Constitution are self-executing or non-self-executing. Traditionally, a constitutional provision is considered self-executing if the judiciary can enforce the provision without a legislative enactment. By contrast, a non-self-executing provision is not enforceable until the legislature gives it effect. In MEIC, the Court does not address this point. For a discussion on this point, see Horwich, *supra* note 215 at 284-287.

Challenges also include the fact that under section 82-1-401 of the MCA "[i]n any action filed in district court invoking the court's original jurisdiction to challenge the constitutionality of a licensing permitting decision made pursuant to Title 75 or Title 82 or activities taken pursuant to a license or permit issued under Title 75 or Title 82, the plaintiff shall first establish the unconstitutionality of the underlying statute."

Regardless, substantive environmental rights granted in the Montana Constitution, and the MCA and ARM provisions that provide for natural justice and procedural rights support public participation in policy development, rule making, and decision-making processes during all of the life cycle stages of wells that use fracking. The public have no procedural right to monitor non-compliance with oil and gas legislation and regulations.

Table 9: Montana summary of statutory opportunities for public participation

Access to information	Notice	Statements of concern	Public hearings/ inquiries	Appeals	Impartial decision makers	Reasons for decision	ADR
Yes Constitution	Yes Constitution	Yes Constitution	Yes Constitution	Yes	Yes	Yes	Yes
MCA and ARM	MCA and ARM	MCA and ARM	MCA and ARM	MCA and ARM	MCA and ARM	MCA and ARM	MCA and ARM
Website							
FracFocus							

Montana’s Constitution provides the general public with the right to know, right of participation, and right to a the BOGC to develop procedures for permitting and encouraging public participation in decision making. The ARM rules about fracking came about due to extensive public hearings for rule making about the emergent issue. The general public has access to information provided through a comprehensive website. A permit is required to drill an oil and gas well, and an application attracts mandatory notice and a public hearing. Once a notice is published, any person may demand a hearing within 10 days to make comments or express concerns. Hearings are held according to principles of natural justice and procedural fairness. The BOGC is not compelled to act on any public comments. If fracking is to be used, public notice is required disclosing the processes, chemicals, and proppants that will be used. Surface owners have rights to notice and hearings before the BOGC.

5. Comparative analysis

Table 10 below compares statutory provisions for public consultation or participation in the four jurisdictions examined in policy development and rule-making, licensing and operational decision-making processes, and ensuring compliance and enforcement of license or approval conditions. Five topics below illustrate similarities, differences, strengths and weaknesses of those provisions.

A. Oil and gas well stimulation through fracking is in the public interest:

In all four jurisdictions, oil and gas development and well stimulation using fracking and horizontal drilling are desired and promoted by the government in the public interest. The NDCC also includes a strong policy statement that fracking is an acceptable well stimulation technology.

B. Surface owners:

A surface owner has statutory rights to be consulted by the applicant for an oil and gas exploration and development permit. In Manitoba and Saskatchewan special boards are in place under surface rights legislation to conduct hearings and help parties enter into mutually acceptable surface rights agreements. Having such an agreement in place is a condition precedent to applying for a permit to explore and develop oil and gas. In Montana, a similar surface rights system is embedded in the oil and gas legislation and administrative rules, providing an opportunity for hearings and mediation services to resolve conflict between oil and gas proponents and surface owners. In North Dakota, the NDCC and NDAC provide for court processes whereby surface owners may claim relief for provable damages through the district court. Proponents for oil and gas exploration and development must provide notice to surface rights owners which must include an offer to enter into negotiated settlements for damages. None of the jurisdictions enable a surface owner to say no to the oil and gas development. The Canadian provinces have the strongest surface rights legislation and regulations that require or enable participation by surface rights owners in exploration and siting of wells, but those regulatory systems do not specifically address consultation or participation in hearings specifically related to fracking.

C. Other landowners and the general public:

Other landowners in the vicinity of proposed wells where fracking will be used do not fare as well as surface rights owners in Canada, and they have no legislative rights to be consulted or to participate in any aspect of oil and gas regulation. Fracking is not mentioned in the legislation in either province. The Saskatchewan government ensured that the Petroleum Board's decisions under the OGCA are not reviewable by the courts with strong privative clauses. Hearings are at the sole discretion of the Petroleum Board that is not compelled to act on any information provided by anyone at such hearings. However, the *Environmental Assessment Act* does enable public participation in reviewing applications for activities and infrastructure associated with fracking that attract the need for an environmental impact assessment. As well, the EMPA does enable the responsible minister to hold a hearing to resolve complaints raised by members of the public. Again, the minister has discretion to hold a hearing and is not required to take any information presented into account. Any person may apply to the Minister of Environment for an investigation alleging non-compliance with the EMPA, its regulations or code.

In Manitoba, the OGA does not require or enable consultation or participation by the general public, and hearings are held at the discretion of the Director of Petroleum. The general public have no statutory mechanism to ask for a hearing except through provisions of the WRA. If an oil and gas project will use fresh water, then members of the public receive official notice of an application, may submit written statements, and attend any hearing (information meeting) before a fresh water license is issued. However, the minister responsible is not compelled to act on any information presented at a hearing. Both Saskatchewan and Manitoba provide comprehensive oil and gas websites that link the general public to emerging knowledge, laws and regulations, Ministerial Orders, etc. Montana and North Dakota also provide websites with comprehensive real time access to hearings and data.

In North Dakota landowners who incur damages to their water supplies have rights to be compensated for provable damages through court processes, but do not have any special statutory rights to participate in well siting before harm occurs. Public notice of hearings before the Industrial Commission is provided, and the ND website has up to date listings of all hearings since 2015. Hearings may be attended by telephone, and people can participate in live telecasts through the website. Any interested person has a right to make a written submission and be heard at a hearing and may appeal a decision of the commission to the District Court, where a weak privative clause requires deference to the commission's decision. North Dakota has an evolving, regulatory system and seems to be responsive to media attention and public pressure for new regulations for fracking.

D. Montana is unique:

Montana's overall legislative regime for oil and gas exploration and development is unique among those examined, because it both requires and enables public consultation and participation in many aspects of policy development, rule making, and decision-making processes specifically about fracking. While members of the general public receive public notice and may attend hearings and make written submissions, like the other three jurisdictions, the Director of BOGC is not required to act on any comments provided. Also members of the general public have no statutory right to participate in monitoring and reporting on compliance by oil and gas operators with oil and gas laws or regulations. However, a recent Manitoba Supreme Court decision supported monitoring actions of citizens, stating that they had a moral obligation to do so.

Montana's Constitution provides the public with the substantive rights in addition to statutory rights in the MCA and ARM. New rules for fracking operations were put in place after extensive public consultation and a hearing. These address pipelines, saltwater facilities and other infrastructure related to fracking where spills, leaks and blowouts caused the media and the public to put pressure on the government. Similar to North Dakota, the regulatory system for fracking is dynamic and evolving due to emergent issues that attract media attention and public pressure for change.

E. Citizen groups and NGOs:

In all four jurisdictions, citizen groups and NGOs have emerged along with the new technologies and infrastructure associated with fracking. These groups have been actively engaged in monitoring the oil and gas industry's compliance with laws and rules and permit conditions, and they provide public information, policy recommendations, and scientific reports on their websites. Along with the general public and the media, industry representatives also seek to influence government policy and regulations regarding fracking. In all four jurisdictions in the Bakken, while industry has no statutory right to be consulted in policy development and rule making about fracking, it seems that all the government agencies do consult industry as a matter of practice.

Table 10: Comparative analysis of statutory public participation opportunities in 4 jurisdictions

	Jurisdiction Canada	Canada	US	US
Statutory provisions for public participation	Manitoba Growth, Enterprise and Trade: Petroleum Branch OGA and regulations Director of Petroleum	Saskatchewan Department of the Economy OGCA and regulations Minister of the Economy Petroleum Board	North Dakota Department of Mineral Resources, Oil and Gas Division NDCC and NDAC Industrial Commission Director	Montana Department of Natural Resources and Conservation MCA and ARM Board of Oil and Gas Conservation
Policy development and rule-making	None in the OGA but in practice government consults with industry.	None in the OGCA but in practice government consults with industry.	None in the NDCC or the NDAC, but in practice government consults with industry.	Yes – the general public Constitution MCA and ARM hearings
Licensing and operational decision-making processes	Access to information; Registrar of documents and records and release to the public	Access to information on the website, Ministerial Orders are published.	Access to information on website Interested party may petition a hearing Special procedures attract mandatory hearing	Yes Constitution MCA and ARM hearings Appeals
Ensuring compliance and enforcement of license or approval conditions	None	None	None	No But see recent court decision.

All four jurisdictions have comprehensive searchable oil and gas websites kept current by the responsible ministry or department. Montana is unique due to constitutionally protected substantive rights to be heard, to participate, and to have a clean and healthful environment that are coupled with statutory rights to participate and be heard during policy development, regulation and decision making about fracking. Manitoba and Saskatchewan provide no statutory rights for public participation regarding fracking, while North Dakota has some. None of the jurisdictions require the regulator to act on any comments provided in written submissions or at public hearings, and similarly, none of the jurisdictions provide statutory opportunities for the general public to ensure compliance and enforcement of license or approval conditions.

6. Conclusion

There are two legislative approaches to require or enable public consultation and participation in government processes to regulate the use of fracking in the Bakken. Government laws may provide a set of statutory *procedural rights*, entitling individuals access to information and rights to participate in policy development, rule making, decision-making, and monitoring and reporting processes. Procedural rights acknowledge that certain members of the public should have opportunities to help shape laws and decisions that affect them. As oil and gas regulations directly affect industry members, they have access to natural justice and procedural fairness by government agencies that regulate their activities, both through procedural rights to appeal agency decisions, and in daily practice where they are consulted about emerging policies, laws and technology. Surface owners are also recognized in all four jurisdictions as public members who need to be consulted and generally they have statutory rights to negotiate agreements and settle conflict between themselves and oil and gas operators. However, in all four jurisdictions overlying the Bakken, surface owners have no right to say no to oil and gas development, or to the use of fracking.

Public participation is critical to the effectiveness of law and its legitimacy because the governed must perceive that they have a legitimate voice in governance processes and in determining their own future. However, procedural rights for members of the general public to access information, be notified, attend hearings, provide written submissions, appeal decisions and participate in monitoring are not available in all four jurisdictions, Montana being the exception.

Access to information is a prerequisite for public participation or involvement, and in all four jurisdictions the regulators have comprehensive websites with up to date policies, laws, scientific studies, links to other websites, and in most cases real time data provided by industry about operations. Not all information is made public because industry has the ability to claim trade secrets and confidentiality for some operations. Not all information provided to government is freely available, and members of the public often must use freedom of information legislation to obtain documents to launch investigations, petitions, or to become informed enough to make written submissions or provide oral testimony at hearings.

Enhanced public awareness allows for informed participation in regulatory decision-making processes, and helps the public monitor governmental and private sector activities during applications for licenses, permits and approvals, before and after they are issued. The media are instrumental in raising public awareness and helping citizen groups and NGOs understand why they need to be involved in regulation of fracking. In turn, there is strong evidence that an informed public are putting pressure on governments for new or stronger regulations for fracking, and for monitoring and reporting publicly on compliance with laws, rules and permit conditions.

While the general public in all four jurisdictions may not have statutory rights to participate in policy development, rule making or decision-making processes through oil and gas laws, they often have participatory rights in environmental or water laws that apply to certain fracking activities and associated infrastructure development. Rights to be notified about, access information, and participate in environmental assessment hearings and water licensing hearings are becoming more common in both the US and Canadian jurisdictions.

A second legislative approach involves making government fracking decisions be subject to *substantive legal rights*. Montana's Constitution provides the general public with a right to know, a right of participation, and a right to a clean and healthful environment. As a result, public members in Montana have been effective in putting pressure on the BOGC to create or strengthen laws to protect their landscapes, watersheds and airsheds from the negative impacts of fracking. However, as in all other jurisdictions examined, the BOGC is not required to act on any information provided at a hearing and has broad discretion in administration of the MCA and ARM.

In the Bakken, government policies and regulatory systems for fracking are complex, emergent phenomena, and as such, are both dynamic and evolving along with social norms and technology. Hopefully, as the complex social-ecological system unfolds over time public participation in the regulatory system for all life cycle stages of oil and gas exploration and development will ensure that human health and ecosystems are not irreparably harmed. Industrialization of the rural landscape, extensive use of freshwater, spills and leaks that degrade watersheds and landscapes, methane emissions, increasing landscape fragmentation and proliferation of edge conditions that destroy critical habitat for humans and all living things are driving the public's need to know and desire to participate in government regulation of the use of fracking.