

Policy Paucity? Oil Development and Habitat Conservation in Manitoba

By

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A Thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

in partial fulfillment of the requirements of the degree of

Master of Natural Resources Management

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## **Abstract**

Oil development has recently increased in the southwestern corner of Manitoba due to a combination of technological adaptation and lower oil prices. This oil production increase has produced an additional impact to an already imperiled landscape, bringing invasive species, contamination and further fragmentation to the southwestern corner of Manitoba. Using a qualitative case study strategy, I found several gaps at the intersection of Manitoba's habitat protection and oil and gas law and policy. While the province has many habitat conservation policies, there are several issues with the placement of oil and gas activity within the framework, government oversight, private governance, government resources, lack of regional land use planning and cumulative impacts assessment. I ultimately conclude that these gaps stemmed from an overall neoliberal environmental governance model that has predictably, as neoliberal governance does, facilitated short-term economic gains over long-term environmental concerns like species at risk, water quality/quantity and surface habitat protection.

## Acknowledgements

I would like to acknowledge that this thesis was developed on original lands of Anishinaabeg, Cree, Oji-Cree Dakota [unceded], and Dene peoples, and on the homeland of the Métis Nation.<sup>1</sup>

I would like to thank and recognize study participants. Without your insight, this thesis would have been impossible. Thank you for trusting me with your knowledge.

It is well beyond my ability to write an acknowledgement that captures how I feel about the unwavering support of my mom, Kathy, my dad, Stephen, my grandma Mary and my brother, Mikey (Dr. Mikey now) throughout my life until this point. Without you this work and life as I know it would be impossible. Dad thank you for always telling me that I could do whatever I wanted to do in life, it's gotten me into a bit of trouble but at 35 I know what you mean now. Mom thank you for being proud of me no matter what trouble I got into. It was definitely Dad's fault (see earlier comment). Mikey thanks for paving the way and revealing the reality of academic pursuits. I did it anyway. Gramma thank you for the steady stream of perogies, cabbage rolls and political banter. I'm a richer person because of your perspectives. Thank you to supportive family members that won't see me reach this milestone - Auntie Marilyn, Uncle Harvey, Uncle Terry, Terry Jr. and Uncle Paul – you're in my heart. Thank you to my brave ancestors that came to North America from Ukraine and Norway.

My extended family has also been a tremendous support and very understanding (or perhaps thankful) when I couldn't make family events because I was working on my thesis. I'll be around more now for better or worse.

Thank you to my life partner Christopher who has come along on this extended (thrice extended – thank you, Grad Studies) journey with me. When we met, I was doing my bachelor's degree and you would always cook for me, ensuring I was taken care of. You continued to do that throughout my master's thesis. I love you so much more than words can describe and am really looking forward to the next decades of ~~meals~~ time together.

My colleagues have been phenomenal, and I could not imagine a more supportive work environment. Thanks for all the light-hearted higher-education conversations and the scheduling support. This wouldn't have been possible without all of you, especially Liz, Michael and Christine. I owe you *so* much banana bread.

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<sup>1</sup> Altered from University of Manitoba Traditional Territories Acknowledgement: [http://umanitoba.ca/admin/indigenous\\_connect/5728.html](http://umanitoba.ca/admin/indigenous_connect/5728.html)

Thank you to my favourite aquatic biologist, Laura Groening, for the editing help. Thank you to my favourite literary genius, Brienne Selman for the editing help and most excellent title suggestions. Thank you for the encouraging words and support – Amelia, Colette, Claire, Allison, Liz, Daria, Joan, Rebecca, Elona, Steph, and C-Jae.

Last but not least, my committee. Nicola, thank you for being my advisor throughout the years. Your combination of knowledge, intellect and compassion makes you a great person and professor. John and Jonathan, your depth of knowledge in this area never ceases to impress and humble me whenever we discussed my thesis. Your guidance was personally and professionally vital to me.

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## Acronyms and Abbreviations

Alberta Energy Regulator	AER
Alternative Land Use Services	ALUS
Canadian Dollar	CAD
Conservation Reserve Program	CRP
Cumulative Effects Assessment	CEA
Ducks Unlimited Canada	DUC
Ecosystem Protection Zone	EPZ
Environmental Impact Assessment	EIA
Freehold Owners Association	FHOA
Nature Conservancy of Canada	NCC
Non-governmental Organization	NGO
Manitoba	MB
Manitoba Habitat Heritage Corporation	MHHC
Section	S
Special Conservation Areas	SCA
Saskatchewan Petroleum Industry/ Government Environment Committee	SPIGEC
Wildlife Management Areas	WMA

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## **Chapter 1: Introduction**

This introductory chapter provides a brief background of what compelled this research. I outline the ecological impacts of oil development on Manitoba species in the prairie and aspen parkland ecosystems and Manitoba's oil governance structure. I then briefly describe the objectives of this study, methods and organization of the thesis.

### **Background**

Oil development has a tremendous impact on habitat by disturbing soil, increasing noise levels and human visitation and promoting the introduction and establishment of invasive species (Koper et al., 2014; Wellicome et al., 2014).. In the southwestern part of Manitoba, oil development occurs in an area comprised of aspen parkland and grassland, an ecosystem experiencing an alarming decrease in bird populations. Fifty-four percent of North American grassland bird species have experienced significant declines between 1966 and 2008 (Sauer and Link, 2011). These declines are largely attributed to the complete transformation of the landscape by human activities (North American Bird Conservation Initiative Canada, 2012), such as agriculture, transportation, and human settlement. Since the 1950s, conventional oil development has created a small, but additional disturbance on the Manitoba landscape. However, the scale of oil development in Manitoba has increased dramatically in the past decade, changing the magnitude significantly.

Manitoba has developed several acts, regulations and administrative units to address and monitor the issues of taxation, sustainable use, and surface rights associated with the oil and gas industry (Manitoba Growth, Enterprise and Trade, 2017a). Elements of the *Oil and Gas Act* that pertain to sustainable development (Government of Manitoba, 2017a); however, a review of the

Manitoba Growth, Enterprise and Trade Branch website (2017a) reveals no oil development-specific habitat conservation policy. *TomorrowNow*, Manitoba's Green Plan and Manitoba's Climate and Green Plan both mention habitat conservation but not in a manner that addresses the increasing environmental, economic and social pressure of oil development in the province's southwest (Manitoba Conservation and Water Stewardship, 2015; Manitoba Sustainable Development, 2017a). Similarly, *The Environment Act* and several other Acts and policies reviewed in subsequent chapters reveal no oil development-species habitat conservation policy. This is concerning because an upswing in development means that there is also an increase in environmental risks and a need for strong environmental policy (Carter et al., 2017).

The recent and rapid increase in energy development and weakening of environmental law and policy in Canada and Manitoba has resulted in concerns from non-governmental organizations (NGOs) regarding the severity of the impacts that oil development may be having on wildlife in southwestern Manitoba. These congruent policy directions may be indicative of a neoliberal environmental model of governance, which is generally marked by deregulation, privatization and a roll back of state intervention (Bumpus and Liverman, 2008). One concern expressed by the NGO sector is that current policies and practices may not provide adequate safeguards for species in areas of oil development in Manitoba's grasslands. The uncertainty expressed by NGOs and other civil society organizations regarding the lack of government action and strength of conservation policies designed to protect ecological health, and specifically grassland habitat, is troubling.

In this thesis, I examine Manitoba's law and policy guided by three themes derived from the research of Carter et al. (2017); administrative and political will, cumulative effects assessment and stakeholder and public involvement. I use each theme in my literature review and

organization of interview data to help determine if there are gaps present in law and policy to protect habitat in areas with oil development. I then use a model of neoliberal environmental governance specific to Canada developed by Heynan et al., (2007) and succinctly outlined by Carter et al. (2017) to explain what conditions may be present to create the space for these policy gaps to exist. I explore these criteria in more detail in Chapter Two and Three.

There is a scarcity of oil and gas policy research in Canada and in the USA (Davis, 2012). There is even less policy research specific to Manitoba (Hlushko, 2017). This may be a reflection of the small portion of Manitoba's GDP being earned by the oil and gas sector, and the presence of other much larger oil and gas economies in the country. Because this area is understudied, I developed two broad research objectives.

## **Objectives**

The objectives of this project were to:

- 1) identify and describe any gaps in the policy framework at the intersection of oil development and habitat conservation in Manitoba; and,
- 2) where gaps exist, consider the policy remedies and how these might be applied to the Manitoba oil/conservation case developed in the thesis.

## **Research Strategy**

To satisfy my objectives, I used a qualitative case study strategy of inquiry. I developed a case study of the effectiveness of the current governance of the oil industry in Manitoba. This approach allowed a thorough exploration of oil development law and policy in Manitoba and how NGOs and industry are able to act within the existing system. Semi-structured interviews and document and literature reviews were used to collect data. The study participants included NGOs and one industry member. Where participants consented, semi-structured interviews were

audio recorded and securely stored. Where consent to record was not granted, notes were taken. Interviews were transcribed into Microsoft Word and organized and coded using Microsoft Excel. The methods are detailed in Chapter Three of the thesis.

## **Thesis Organization**

My research is divided into six chapters. To organize my research, I used both policy themes and the criteria of an aggressive neoliberal environmental governance model developed by Heynan et al., (2007) and outlined by Carter et al., (2017). After each chapter I summarize my research conclusions regarding the governance model that Manitoba is currently operating under against the criteria outlined by Carter et al. (2017). This chapter provides a brief outline introducing the thesis, objectives and methods. In Chapter Two, I provide a literature review of the ecological impacts of industrial development on surface habitat and the effectiveness of law and policy developed with the intention of mitigating those impacts in Canada in part organized using the themes developed by Carter et al. (2017). Chapter Two has three objectives to allow me to: gain an understanding of the impacts of oil and gas development and exploration; gain an understanding of how policy can shape those impacts; and to develop a frame to organize and analyze the data. In Chapter Three I describe the study methods in detail. Chapter Four provides a detailed discussion of Manitoba's law and policy related to conservation and oil development to gain an understanding of Manitoba's current habitat conservation governance. In Chapter 5 I reiterate my document, law and policy and literature review results, present my interview data and discuss those results in the context of Carter et al.'s (2017) criteria of a neoliberal environmental governance model, derived from Heynan et al., (2007). In Chapter 6, my

concluding chapter, I finish with concluding remarks regarding the conservation policies that the government of Manitoba could potentially explore and adopt from this thesis.

## **Chapter 2: Literature Review**

In this chapter, I contextualize oil development and review literature relevant to oil development. I reviewed several documents related to the history and evolving legislation of oil development in Manitoba in order to understand the history behind the current system in place and literature related to the environmental impact of conventional oil. I then use the three themes developed by Carter et al., 2017 to guide my literature review. Through a review of major oil producing provinces, Carter et al. (2017:62) found that there were three key policy challenges that were common across provinces, namely: “(a) the streamlining of environmental policy-making in development-oriented agencies and budget reduction at a time of increasing oil and gas activity; (b) continued and mounting impediments to public involvement in decision making on oil and gas activity; and (c) policy inaction on cumulative impacts.” I have entitled these sections administrative and political will, stakeholder and public involvement and cumulative effects assessment, respectively. In the summary and conclusions section, I use the criteria of a neoliberal environmental governance model start to build my findings.

### **Contextualizing Oil Development in Manitoba**

Development of subsurface rights and land ownership legislation in Manitoba began as settlers started to populate the province. Settlers would identify quarter sections and go to the Dominion Land Office to acquire land in the early days of Prairie settlement. If the land was not owned, the buyers would pay \$10 CAD and after completing their duties of cultivation and habitation for three consecutive years, they would then own the land (Cowan, 1956). In the early days of settlement subsurface rights were maintained by the settlers. Discovery of oil in the early 1900s spurred a renewed interest in oil exploration in subsequent decades.

The late-1800s to early-1900s era was an important time for the decentralization of land and resource ownership policy in Canada. As a result of the federal *Constitution Act, 1867*, environmental regulatory authority of oil and gas activity was passed to provinces through the allocation of ownership of ground resources from federal to provincial ownership (Senate of Canada, 2018). To further facilitate the patchwork settlement of the prairies, a series of Acts were passed by the Dominion of Canada in 1930, often referred to as the Natural Resources Acts. Through these acts, the administration of Crown land, forests, wild game, power/energy and mining - with some exceptions including the mining of uranium and the administration and protection of coastal waters - were transferred to the western provinces. Each western province (British Columbia, Manitoba, Saskatchewan, and Alberta) developed its own act that devolved responsibility for protection and use of environmental endowments from the federal to provincial governments (Senate of Canada, 2018).

In Manitoba, oil exploration began in 1877 (Manitoba Energy and Mines, 1985) and production began in 1951 near the town of Virden, which now serves as the hub for many employed by the oil industry in Manitoba (Manitoba Growth, Enterprise and Trade, 2017b). After the first well was discovered, production increased steadily over the preceding decades. Several of the original wells are still operational as of 2017. Although oil has been produced from these fields for over 60 years, more than 60% of the wells were put into production since 2006 after several new discoveries of productive fields and the introduction of new drilling and production technologies (Manitoba Growth, Enterprise and Trade, 2017b). This steady increase in production helped to increase the human population density in Virden, MB by 3.5% between 2006 and 2011 (Statistics Canada, 2016) and 7.6% between 2011 and 2016 (Statistics Canada, 2017). Prior to 2006, the population in Virden, MB had decreased 3.2% between 2001 to 2006

despite a 2.6% increase in Manitoba's overall population (Statistics Canada, 2015) - likely because of depressed economic activity in the area. In addition to the disturbances directly caused by oil infrastructure, increasing population and related human activity has created an increase in vehicle traffic and infrastructure development such as roads, housing, and outdoor recreational usage in the area; i.e., an additional increase in anthropogenic disturbance to the landscape that alters habitat previously available to wildlife.

Currently the provincial government owns relatively few of the subsurface rights in southwestern Manitoba (20%), with the rest mostly held by private landowners (Government of Manitoba, 2017b). Manitoba is an outlier when compared to subsurface rights ownership in comparison to other provincial jurisdictions to the west as Saskatchewan and Alberta both own approximately 80% of subsurface rights (Freehold Owners Association, 2018). The differences in ownership are partially caused by the pattern of European settlement moving from east to west. As legislators and resource developers in more westerly provinces learned of the value of subsurface resources that could become available to them, they developed legislative regimes that would allow them to gain ownership of those mineral resources (Freehold Owners Association, 2018). The amount of subsurface rights owned by private citizens makes the Manitoba landowner a uniquely important part of oil exploration and development in Manitoba, and consequently, an important actor in habitat conservation.

While initial explorations drilled many wells and spent millions in exploration costs, none were commercially productive until February 1, 1951 when the holder of the first oil reservation ever issued in Manitoba. California Standard Oil Company (now Chevron) developed the first commercial well in the Williston Basin (Manitoba Energy and Mines, 1985). The well, approximately 20 kilometres southwest of Virden, was located in the Williston Basin, which now

yields production in Manitoba, Saskatchewan, North Dakota, South Dakota and Montana (Manitoba Energy and Mines, 1985). This area became known as the Daly Field, which by the mid-1950s had over 200 producing wells (Cowan, 1956), and as of 2010 had 2,970 producing wells (Manitoba Growth, Enterprise and Trade, 2017b). As more wells were drilled and more opportunity for resource extraction was discovered, Manitoba became an increasingly more attractive place to develop oil and the province began to experience more drilling activity. Manitoba's oil economy persisted in the decades between the initial boom of the 1950s and the more recent surge in production, mirroring the peak and valleys of resource extraction economies across the country. Many oil developments were on private land; the Surface Rights Board was created in 1983 to act as a intermediary between private landowners and industry (Surface Rights Board of Manitoba, 1997).

The geological and some economic conditions that existed for a boom in the 1950s still exist today. Manitoba's oil fields are shallow in comparison to others in the Bakken Shale, which lies under parts of North Dakota, Montana, Saskatchewan and Manitoba (Cowan, 1956), and are economically attractive as shallow wells cost less to drill. Manitoba's oil does contain some sulphur, which is categorized as an impurity, and as a result usually fetches a lower price than oil from other areas, although otherwise it has been found to be of high quality (Cowan, 1956; Manitoba Growth, Enterprise and Trade, 2017b). Other impurities or excess materials are associated with oil production and are vented or flared at the site, creating emissions of sulphur dioxide (SO<sub>2</sub>) and methane (Canadian Association of Petroleum Producers, 2017a), decreasing local air quality. Manitoba is also relatively accessible in comparison to offshore or oil sands development, so elaborate aquatic infrastructure or earth-moving machines do not need to be used to access it. Currently, Manitoba does not have flaring regulations while Alberta and British

Columbia do (Saskatchewan is under development) (Canadian Association of Petroleum Producers, 2017a). The Fraser Institute (2016) surveyed many industry members and found that they overwhelmingly favour Manitoba due to lax tax regime, regulatory gaps and other industry friendly policies that I describe later in this chapter. The location, quality, and depth of the oil has made Manitoba attractive for investors in past (Manitoba Energy and Mines, 1985) and contemporary times (Fraser Institute, 2016).

While oil has been extracted in Manitoba for over 60 years, only recently has the oil sector become a significant part of the provincial economy. Oil production has rapidly increased in Manitoba since 1999: up to 48,000 barrels per day in 2012, which represents a doubling of production since 2007, and quadruple the number of barrels produced in 1999 (Manitoba Growth, Enterprise and Trade, 2017c). In 2008 global oil production slowed due to a fast drop in oil prices and then increased dramatically especially in the Bakken formation due to new horizontal drilling technologies and other advanced recovery methods (Carter and Eaton, 2016). Oil prices started at a high of \$145.31 USD in July 2008 to a low of \$30.28 USD in December 2008 (Macrotrends, 2017). However, the low price of oil may have benefitted the Manitoba oil industry as drilling figures rose over the next five years. Eventually, Manitoba's burgeoning oil economy followed global boom-bust extraction trends and began to experience the downturn that befalls most extraction economies. Drilling licenses issued fell from 534 in 2013 to 126 in 2016, with only 62 new horizontal wells drilled in 2016, down from 498 in 2013 (Manitoba Growth, Enterprise and Trade, 2017c). However, the Petroleum Services Association of Canada (2017) had predicted a significant upswing in drilling of new wells in 2017.

In 2012 the Fraser Institute (2012), a free-market Canadian public policy think tank, ranked Manitoba as the number one Canadian jurisdiction for oil and gas development, and fifth

in the world out of 127 jurisdictions. The ranking was based on a global survey filled out by senior executive managers on taxation, royalties, the cost of regulatory compliance, trade, labour regulations, legal system fairness and transparency, and political stability. The reason for Manitoba's high ranking is favourable taxation, the lower cost of regulatory compliance, and certainty over environmental regulations (Fraser Institute, 2012). In 2016 Manitoba was still considered to be a top oil jurisdiction but was declining and now scores at 14<sup>th</sup> overall and second in Canada (Fraser Institute, 2016:33). The reason for the lower ranking is a "negative sentiment related to regulatory duplication and inconsistencies, environmental regulations, and taxation in general" (Fraser Institute, 2016:33).

It appears Manitoba is so attractive because it has the lowest or near-lowest costs for regulatory compliance, favourable (to industry) environmental regulations and the appearance of certainty over protected areas. Most respondents to the Fraser Institute 2012 survey were mildly deterred from investing in Manitoba due to environmental regulations, whereas in Saskatchewan about two-thirds of respondents were mildly deterred with one-third being strongly deterred to investment. In every other Canadian jurisdiction, the respondents were strongly deterred from investing due to environmental regulations and the cost of regulatory compliance (Fraser Institute, 2016). This suggests that industry personnel perceive that environmental compliance in Manitoba as being either less strict or less costly than all other Canadian jurisdictions.

Respondents to the ranking survey had the most certainty regarding how protected areas factored into development over other jurisdictions (Fraser Institute, 2016), likely because the majority of oil development takes place on freehold land in Manitoba (Manitoba Growth, Enterprise and Trade, 2017b). About 50% of respondents stated that regulatory duplication and inconsistencies in Manitoba were a strong deterrent to investment. The other half found it a mild deterrent

(Fraser Institute 2016). From the survey results, it appears as though Manitoba remains attractive although there is some uncertainty over regulation.

### **Conservation of Private Land**

Overall, protected private land is uncommon in Canada but it still comprises approximately 1, 755 km<sup>2</sup> (Environment Canada, 2011). Environment Canada (2011) states that private land conservation is particularly important: “1) in areas of intense urban and resource development; 2) in those provinces or regions where a high percentage of the land base is under private ownership; and 3) when areas of high conservation value are located on private land.” In the southwestern corner of Manitoba, the majority of land is privately owned (Government of Manitoba, 2017c) and the majority of oil development takes place on private land.

In Environment Canada’s *Canadian Protected Area Status Report* (2011), it was noted that Nova Scotia, Alberta and Newfoundland and Labrador emphasized a need to work more with private landowners in order to secure areas of high conservation value, especially in areas with increased industrialization or urbanization. The importance that these provinces place on private land as critical to biodiversity conservation is reflected in many other international jurisdictions (Kamal et al., 2015).

Manitoba has made efforts in the past towards conservation on private land. Between 2005 and 2008, grants were awarded to the Nature Conservancy of Canada (Manitoba office) (NCC Manitoba) to purchase land near Riding Mountain National Park to provide habitat corridors to allow for protection of animals so they can move freely through the area (Environment Canada, 2011). This action provided permanent protection for animals such as moose (*Alces alces*), elk (*Cervus canadensis*), black bear (*Ursus americanus*), grey wolf (*Canis*

*lupus*), cougar (*Puma concolor*), barred owl (*Strix varia*), bobolink (*Dolichonyx oryzivorus*) and a variety of grassland birds. While none of these animals are listed as species at risk in Manitoba, moose populations (Manitoba Sustainable Development, 2017b), elk populations (Manitoba Sustainable Development, 2017c), and wolves (Manitoba Sustainable Development, 2017d) in and around Riding Mountain National Park have had lower and spatially restricted populations recently and are of concern to the province of Manitoba.

The integration of private land into conservation networks by governments is a complicated undertaking, especially when it comes to convincing landowners and institutions of the need for private land to close gaps in protection (Kamal et al., 2015). According to my study participants, in Manitoba this is even more complex as landowners have a perception that oil resources may exist under their land and any conservation agreement may hinder their ability to enter into a lease agreement. Given Manitoba's past success with the Alternative Land Use Services<sup>2</sup> (ALUS) pilot program (Manitoba Agriculture, 2017) and the availability of literature on effective practices in private land conservation, the potential complexities should not be a barrier to attempts to educate landowners and fund conservation on private lands if the political or administrative will exists.

Currently, the USA (United States Department of Agriculture, and individual states) have myriad options for landowners to conserve land such as conservation easements, conservation

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<sup>2</sup> Alternative Land Use Services (ALUS) is a voluntary, incentive-based, private land conservation project that paid landowners and farmers to maintain and enhance the natural assets that they manage (Manitoba Agriculture, 2017)

contracts, changes in federal and state tax laws, provisions under the Farm Bill such as the Conservation Reserve Program, which has well over 200 million acres enrolled in various conservation programs on private lands (Wiegard, 2017). Much of the land enrolled in conservation lands under the Farm Bill are in agricultural areas comparable to Manitoba's southwest corner where agriculture and oil development potential exist together (Wiegard, 2017; U.S. Energy Information Administration, 2015) and as such can serve the Manitoba government well as a comparative case study. Working with strong government support, many conservation organizations such as Ducks Unlimited Canada (DUC), Manitoba Habitat Heritage Corporation (MHHC) and the NCC facilitate land purchases and management to achieve conservation goals.

As mentioned previously, private landowners in Manitoba play an important role in oil and gas sector and own a great deal of land in southern Manitoba, making them also an important part of habitat conservation as well. Manitoba's current private land conservation approach is to sign memoranda of understandings with NGOs to grant NGOs legal authority for procurement and management of private lands (Manitoba Protected Areas Initiative, 2017). Manitoba then considers these lands as a part of its conservation network (Manitoba Protected Areas Initiative, 2017). The Manitoba government contributes a substantial amount of funding<sup>3</sup> to all agencies involved in private land conservation and management such as NCC (\$400, 400 in FY16), DUC Manitoba offices (\$402,454 in FY16) and Nature Manitoba (\$32,332 in FY16) (Office of the

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<sup>3</sup> Figures provided are an example of one fiscal year and may not reflect a long-standing pattern or be indicative of future funding.

Auditor General Manitoba, 2017). Saskatchewan uses a similar model; however, government departments also enter into conservation easements with private landowners (Government of Saskatchewan, 2017a). In contrast, Nova Scotia has a multi-faceted program that includes landowner outreach, several legislative tools, information sharing, conducting studies on lands and how to effectively engage private landowners as well as working with NGOs to protect private lands (Nova Scotia Environment, 2017). Manitoba's approach of handing private land conservation to NGOs may not necessarily be an inappropriate strategy if adequate funding and government support is provided to agencies and NGOs. Two of the most active NGOs in private land conservation, NCC and DUC are experts in their field and both hold successful records for private land conservation and management (Ducks Unlimited Canada, 2017; Nature Conservancy of Canada, 2017). DUC and NCC are not only active in Manitoba; together, NCC and DUC make up almost 60% of all of the private land conservation holdings across Canada (Environment Canada, 2011). MHHC is a non-profit Crown corporation that like DUC and NCC work with landowners in partnership to conserve private lands through conservation agreements, easement and management (Manitoba Habitat Heritage Corporation, 2017). MHHC also has a significant impact on private land conservation in the province (Manitoba Habitat Heritage Corporation, 2016).

Because the majority of land in the southwestern corner of Manitoba is privately owned, an increase in efforts aimed at conserving private land could contribute substantially to species and habitat protection. Other jurisdictions have demonstrated that private land conservation contributes substantially to habitat and species conservation (Smith et al., 2006). Private lands can contribute by “targeting key ecological functions or values, including securing habitat, safeguarding water sources, providing corridors and buffers to maintain connectivity and

viability of existing protected areas, and contributing to goals for representative areas” (Environment Canada, 2011:20). Knowing the many benefits of private land conservation efforts, careful attention should be directed towards the potential of private land conservation in Manitoba. Although the majority of private land in southwest Manitoba is cultivated, where natural areas and features exist or where compatible activities like grazing occur, government could consider prioritizing conservation.

### **Oil Governance and Habitat Protection in Manitoba**

Oil governance in Manitoba is unique within Manitoba industrial development governance, and within Canadian oil development. Instead of oversight being the responsibility of the “Environment Ministry”, which in Manitoba is currently called “Manitoba Sustainable Development”, oil development in Manitoba falls under the responsibilities of The Petroleum Branch, which is a part of the Manitoba Growth, Enterprise and Trade department. Unlike the *Environment Act*, there is no mechanism for public participation within the *Oil and Gas Act* or the *Surface Rights Act*, which are the two main acts that the Petroleum Branch oversees. In Chapter 4, I explore these two acts further. Public interaction in the petroleum industry in Manitoba is unique compared with other jurisdictions in Canada, as most oil development is not on public land and as I will explore further in Chapter 4, no opportunities are presented for public comment. As previously discussed, the majority of oil in Manitoba is developed through drilling infrastructure on private lands and interactions between private landowners and industrial actors are often accomplished outside of government presence. The exception of government involvement here lies in considering the role that policy and legislation, mainly the *Surface Rights Act*, plays in how landowners and oil developers interact.

In Manitoba, the *Environment Act* 1994 was developed in part to provide a mechanism for any private or public development in Manitoba to be assessed for environmental impacts before construction (Government of Manitoba, 2018a), although in practice, the efficacy of the Act is much less clear. The Act was intended to ensure that stakeholders, rights holders and the general public are aware of developments: according to the provincial government, the Act “...provides for public consultation in environmental decision making while recognizing the responsibility of elected government including municipal governments as decision makers...” (Government of Manitoba, 2018a:1). The *Environment Act* requires proponents to develop and submit a proposal to Manitoba Sustainable Development, so the project can be evaluated and classed according to the magnitude and type of expected impact (Government of Manitoba, 2018a). Class 2<sup>4</sup> and Class 3<sup>5</sup> developments require public consultation and a higher level of impact mitigation planning than a Class 1<sup>6</sup> development (Government of Manitoba, 2018a). Class 1 developments are only subject to public consultation if a complaint is received or if the Minister demands or approves a request for a public consultation (Government of Manitoba, 2018a). The governance process for dealing with environmental concerns related to developments is well-defined, within Manitoba Sustainable Development through the *Environment Act*.

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<sup>4</sup> Examples of Class 2 developments include smelters, pulp and paper mills, cement plants and mines.

<sup>5</sup> Examples of Class 3 developments include potash mines, large electricity generating facilities, roads more than four lane, large transmission lines and water moving projects (dams, drainage, diversion).

<sup>6</sup> Examples of Class 1 developments include feedmills, grain elevators, fish hatcheries and landfill gas collection systems

The Petroleum Branch has far fewer employees and less general environmental expertise than the Manitoba Sustainable Development department and thus may be faced with challenges with governing a complex industry such as oil development. Increase in production doubled between 2007 and 2012, as Hlushko (2017) reports, the volume of government oversight work in oil development has increased as a result and the staff resources to deal with that work have remained unchanged. Hlushko (2017) also reports that in response to the increase in workload, the Petroleum Branch has altered its process to streamline the system as it is not designed or resourced for the same amount of rigor as is possible within the *Environment Act* and or through the Manitoba Sustainable Development Department. The dramatic increase in drilling sites and oil development infrastructure in need of inspection and approvals as well as potentially inadequate governance mechanisms has created concern among NGOs over the amount of oversight, monitoring and enforcement that The Petroleum Branch can actually maintain. As Hlushko (2017) argues, because most oil development in Manitoba occurs on private land much of the monitoring responsibility is placed on landowners on an almost ad hoc basis and investigations are almost entirely complaint-driven. Carter et. al. (2017) anticipates that fossil fuel development will increase in all producing areas of Canada. Part of my intention with my interviews was to find out if enforcement and monitoring staff were actually overextended and I was never granted access to those staff to ask those questions.

The Manitoba Economic Enterprise, Growth and Trade Department has an imperative to grow the Manitoba economy. Under the “Reduce Red Tape in Manitoba” banner, the department is engaging with businesses, non-profits, local governments and private citizen to identify “red tape” where it is in the way of economic growth (Government of Manitoba, 2018b). According to their website, “red tape” includes permits, license applications, forms, rules and legislation

enforced by inspectors, or other documents that have impeded development for a proponent. They are also asking how government can eliminate “red tape” and how working with government could be made “easier”. In 2011, the federal government led by then Prime Minister Stephen Harper also performed a similar “red tape” reduction through the Red Tape Reduction Commission with similar goals to “reduce burden on businesses” and “making it easier to do business with regulators” (Government of Canada, 2018a). The phrase “do business with regulators” is concerning, because regulators are not supposed to be doing “business”; rather, they are supposed to regulate business.

Using a habitat conservation lens within this model it appears that there is an elevated risk for harm to habitat. As Hlushko (2017) has argued, the manner that environmental assessment and oil and gas legislation has been developed and the absence of a transparent government associated with much of the oil extraction industry in Manitoba production could result in activity that is removed from public engagement, monitoring, and enforcement and is upheld by a lack of potential for preventative action through regional planning.

### **Environmental Impact of Oil Development**

Although oil and gas development threaten conservation of many types of ecosystems, this section focuses on the value of prairie grasslands as a bird habitat, as birds are an indicator species that have been used to detect broad environmental change (BirdLife International, 2013). Like any disturbance, oil development could be particularly detrimental for grassland bird species, which already demonstrate substantial population declines (Manitoba Important Bird Areas Program, 2012). Many Manitoban bird species are listed in the federal *Species At Risk Act*, commonly referred to as SARA, and the provincial *Endangered Ecosystems and Species Act*. Of the threatened and endangered species, half of the faunal species in Manitoba's *Endangered*

*Ecosystems and Species Act* are birds, with six being grassland obligates (Government of Manitoba, 2017c). For example, Sprague's pipits (*Anthus spragueii*) and chestnut-collared longspurs (*Calcarius ornatus*) are listed as threatened under SARA (Government of Canada, 2017). The threatened status of these two species is directly attributed to habitat loss from multiple anthropogenic factors that include roads and other infrastructure from the energy sector (Committee on the Status of Endangered Wildlife in Canada [COSEWIC], 2012).

The grassland bird guild population numbers are in decline across North America (North American Bird Conservation Initiative Canada, 2012). As grassland birds are ground-nesters, they are affected by increases in traffic, changes in vegetation, habitat loss and soil disturbance (Linnen, 2008; Hamilton et al., 2011), all of which are increased by oil development. The effects on birds from any further development in the grasslands in southwest Manitoba is particularly concerning because of the high amount of provincially endangered (Baird's sparrow [*Ammodramus bairdii*], chestnut-collared longspur [*Calcarius ornatus*], ferruginous hawk [*Buteo regalis*], loggerhead shrike [*Lanius ludovicianus*]) and threatened bird species (Sprague's pipit [*Anthus spragueii*]) in areas where oil exploration and development occur (Manitoba Wildlife Branch, 2017). Different types of infrastructure (e.g., roads, batteries, wells) have different impacts (noise, direct habitat loss, fragmentation) and magnitudes of impact (e.g., roads have more impact than a small well-head) on different grassland bird species, but overall there are negative impacts (Bernath-Plaisted & Koper, 2016; Linnen, 2008; Hamilton et al., 2011). The impacts of oil and gas development and operation on birds can be direct through infrastructure collisions and habitat loss, or indirect through habitat avoidance, noise, increases in noxious weeds/exotic species, edge increase, patch size decrease and decreased breeding opportunities (Hamilton et al., 2011).

Conventional oil development is not the only type of oil development that is detrimental to birds. In the boreal region of Canada and Alaska, conventional and oil sands development is taking place in a habitat that hosts between 22 and 170 million breeding birds per year (Wells et al., 2008). The oil sands oil development has had a particularly devastating impact on birds as it takes up large tracts of land, and the modification of land and infrastructure is far more invasive than conventional oil development. Oil sands development creates open-pit mines, large-scale habitat fragmentation, toxic waste holding ponds, air and water pollution, upgraders and refineries (Wells et al., 2008). In their report, Wells et al. (2008) estimate between 6 million to 166 million birds are to be lost in the next 30 to 50 years, all directly attributable to oil sands development in North America.

Tailings ponds used in oil sands development are areas where water waste collects. Birds land in these waters and can drown. It is estimated that 8,000 to 100,000 birds drown annually, but a doubling of tailing ponds over the next 40 years could increase annual deaths to between 17,000 and 300,000 birds. Oil sands development projects are estimated to result in the loss of even more forest-dependent bird habitats than strip mining and could harm as many as 14.5 million breeding birds, with as many as 76 million birds being affected by fragmentation and habitat degradation over the next 30 to 50 years (Wells et al., 2008).

Oil development also has a negative impact on grassland habitat through soil disturbance and compaction, increased traffic from oil industry professionals, and the spread of exotic species in the grasslands. These changes modify plant community structure, increase edge habitat, decrease arthropod abundance and changes the rate of litter accumulation (Hartnett et al., 1997). Disturbance and increased visitation to sites brings exotic seeds, pollen and fungus, changing the community structure of vegetation and therefore the structure of the habitat

(Anderson and Briske, 1995). The compaction of soil often leads to areas reverting into bare earth, with primary successive plants on the edge (Hartnett et al., 1996). Vegetation change in the grasslands is one of the main factors indicated in the decline of grassland birds (Lawson et al., 2011).

Three distinct phases of oil development affect grassland birds in different ways, although all lead to fragmentation and a general reduction in habitat quality (Lawson et al., 2011). In the first phase, access roads to oil reserves are established and infrastructure is constructed. These trails and roads can fragment large amounts of continuous habitat, and in their creation, bring exotic invasive plant species via workers' shoes, equipment and vehicles into newly-disturbed areas, which are ideal conditions for exotic plant establishment. These access roads also create habitat edges, which ground-nesting birds often avoid (Lawson et al., 2011). The construction of oil pad sites usually involves clearing a large area and stripping off the topsoil, building up an area with gravel which is then compacted from increased visitation (Linnen, 2008). These changes during the first phase are associated with the peak of impact and highest decline in the grassland bird populations (Linnen, 2008).

In the second phase, an increase in traffic for maintenance and operations has similar impacts, but less so than the first phase of construction. The establishment of edges, mowing maintenance for fire prevention, operational noise, and the arrival and establishment of exotic plant species are the main causes of habitat degradation and the general decline in grassland bird populations (Linnen, 2008). Mowing around oil sites is usually performed around June or July, a critical time for ground-nesters. Mowing is a particularly concerning practice, as it not only disturbs the surrounding habitat but usually destroys nests (Davis et al. 1999). However, management strategies might be necessary for habitat conservation, as a complete ban on

mowing could prevent plants from establishing strong roots and halt reproduction through seeds, thus allowing exotic invasive species to be introduced (Flanders et al., 2006). Delaying mowing until later in the breeding season can increase nesting success (Forman et al., 2002), while delaying until early summer would allow for at least each grassland bird species to fledge one brood (Dale et al., 1997).

In grassland ecosystems, oil infrastructure has been associated with a lower abundance of grassland birds radiating away from active disturbances (Lawson et al., 2011), and although the cumulative area disturbed is relatively small, the effects are evident across the landscape (Braun et al., 2002). Oil development causes a loss of habitat, habitat fragmentation and a degradation of interior intact habitat. Specifically, the main causes of general population decline are attributed to a combination of ambient disturbance (loud noises), invasive exotic plant species, increased edges and changes in disturbance regime (mowing), which in combination lower habitat quality sufficiently enough to cause a decline in the abundance of birds (Lawson et al., 2011).

Noise from development is another contributing factor to the decline of grassland birds as it deteriorates habitat by changing noise characteristics. Adult birds use alarm calls when predators are nearby, and noise can distract birds or make it not possible for parents to hear their chicks (Vickery and Herkert, 2001). Bayne et al., (2008) demonstrated that areas surrounding quiet energy infrastructure had a passerine density 1.5 times greater than areas near noisy infrastructure, and one-third of the species studied were less abundant at noisy sites as compared to quiet sites. Several studies recommend reducing noise and activity at active sites, limiting vegetation disturbance near pads and roads, maintaining existing perch sites and limiting road construction (Lawson et al., 2011).

Several common species of grassland birds may exhibit decreased nesting success near oil development (Bernath-Plaisted and Koper, 2016) due to changes in vegetation caused by mowing, an increase in exotic invasive species, an increase in bare ground, and changes in litter depth and vegetation height (Linnen, 2008; Hamilton et al., 2011). Even birds that use habitat on the interior of patches (i.e., away from edges or development) may have a reduced rate of reproduction due to an increase in predators and nest parasites, a decrease or change in food resources due to changes in microclimates (Davis, 2004), changes to fine-scale interior vegetation characteristics (Linnen, 2008) and large-scale vegetation (Hamilton et al., 2011).

The mere presence and type of infrastructure may also cause lower nesting success for some species. Bernath-Plaisted and Koper (2016) found the presence of oil development infrastructure created perches for birds of prey and an environment attractive to many mammalian predators, creating an ecological trap. Their findings were independent of noise or human activities. They recommend that managers consider how they can reduce their footprint on surface habitat and limit the use of single-drilled wells, as horizontally-drilled wells can allow well heads to be clustered together and thus reduce surface impact (Bernath-Plaisted and Koper, 2016).

Several species at risk live in the grasslands of the southwestern corner of Manitoba. Sprague's pipits (*Anthus spragueii*) generally avoid edges (Sutter et al., 2000), disturbances to grassland vegetation (Dale et al., 1997) and anthropogenic disturbance (Hamilton et al., 2011). Near oil development in the grasslands, Sprague's pipits tend to occur in lower numbers and at fewer sites where natural gas sites and trails are present, but increase in large interior habitat patches (Linnen, 2008) except where increased forbs were present (Davis, 2004). They were found at fewer sites than other birds, and when found were less abundant near oil development

sites, even those that were relatively undisturbed (Linnen, 2008; Sutter et al., 2000). Decreased abundance was found up to 300 metres away from infrastructure into patch interior grassland areas (Linnen, 2008).

Baird's sparrows (*Ammodramus bairdii*) are less abundant near areas of oil development and begin to occur approximately 400 metres into the interior of a habitat patch (Linnen, 2008) and favour an area with taller vegetation (Davis, 2004). They have been found to avoid areas with even minimal fragmentation and vegetation disturbance (Dale et al., 1997). Generally, Baird's sparrows only inhabit areas of large patch habitats without fragmented areas (Davis, 2004).

Chestnut-collared longspurs (*Calcarius ornatus*) avoid habitat edges and roads and generally prefer a larger habitat patch size (Sutter et al., 2000; Davis, 2004) with shorter live and dead grasses (Davis, 2004). They tend to avoid areas directly adjacent to oil wells and even areas of minimal disturbance, like shallow gas developments (Linnen, 2008). However, in their study Hamilton et al. (2011) found the abundance of chestnut-collared longspurs was not related to well density.

Even common species are affected by oil development. Savannah sparrows favour areas near various types of oil infrastructure (Hamilton et al., 2011) over areas with minimal disturbance like shallow oil wells (Linnen, 2008). Generally, Savannah sparrows may prefer dense vegetation (Owens and Myers, 1973), high graminoid cover (Vickery et al., 1994) and little or no shrubs (Lueders et al., 2006; Winter et al., 2006). This may explain why Savannah sparrows are more abundant by active oil wells as the practice of mowing for fire prevention keeps shrubs and non-graminoid vegetation and exotic vegetation under control (Linnen, 2008). However, other studies demonstrate that infrastructure may act as perches for predators and

changes in vegetation may not explain lower numbers near oil infrastructure (Rogers and Koper, 2017). Some populations have been less abundant (Bock, et al., 1999; Nenninger and Koper, 2018) with lower nest density near roads and edges (Herkert, 1994; Renfrew et al., 2005) in comparison to interior patch habitats. The abundance of Savannah sparrows has not been sensitive to the size of interior habitat patch (Davis, 2004). Their nesting success has been lower near some oil infrastructure, including screw-pump sites and grid-powered infrastructure sites (Bernath-Plaisted and Koper, 2016). The likely reason is the increase of predators, as grid-powered sites have overhead wires that provide a perch for birds of prey and oil infrastructure is attractive to mammalian predators (Hethcoat and Chalfoun, 2015).

Like Savannah sparrows, vesper sparrows (*Pooecetes gramineus*) also increase in abundance and occurrences near oil developments (Linnen, 2008) as they tend to prefer a habitat with less litter and lower grass height, and with more perch sites (Rogers and Koper, 2017). Generally vesper sparrows do not avoid edges and occur close to disturbances such as roads and trails (Sutter et al., 2000). Vesper sparrows tend to prefer habitat within 100 metres of oil sites due to the change in vegetation structure for breeding and the preferred shorter vegetation and bare ground for foraging (Linnen, 2008).

## **Summary**

Overall, oil infrastructure has a negative effect on grassland bird populations. Studies have found that oil infrastructure introduces opportunities for mammalian and avian predators, changes in vegetation with the introduction of invasive species and mowing practices, and an increase in noise and activity. Hamilton et al. (2011) concluded that the effects of oil development on individual species should be incorporated into conservation strategies.

## **Issues with Provincial Environmental Policy**

Recall that I am using three themes developed by Carter et al.'s (2017) analysis to organize part of my literature review and interview questions as they were identified as common issues with environmental policy. In this chapter, I will first describe the neoliberal environment governance model, and Carter et al.'s three central issues in environmental governance; administrative and political will, stakeholder and public involvement and cumulative effects assessment. At the end of this chapter and others, I summarize my findings against the criteria that Carter et al. (2017) outlined and Heynan et al., (2007) developed regarding a neoliberal environmental governance model to form an understanding about what may be influencing Manitoba's habitat protection laws and policy.

## **Neoliberal Environmental Governance**

For the purposes of this study, I am considering the definition of "neoliberal environmental governance model" as a governance model for "...managing natural environment and biophysical resources..." (Castree, 2008:131) through marketization of a resource. In many instances this is to the benefit of big market players and the detriment of habitat and citizens (Castree, 2008).

There are many views on neoliberal approaches; some researchers have concluded there are benefits to marketization of nature and others disagree. For example, although the neoliberal approach does evade conservation some find that the outcomes of neoliberalism in conservation are not consistently negative (Brockington and Duffy, 2011). Programs like ecotourism and payments for ecosystem services are often designed and facilitated by volunteers and employees of caring groups that are motivated by conserving our earth and have positive outcomes for ecosystem health (Brockington and Duffy, 2011). Neoliberal programs "...promise to infuse new

types of resources into biodiversity conservation, especially in the poorer parts of the world, where states lack the resources and capacity to effectively protect biodiversity” (Igoe and Brockington, 2007:434). It also promotes “...increased democracy and participation by dismantling restrictive state structures and practices....to protect rural communities by guaranteeing their property rights and helping them enter into conservation-oriented business ventures....to promote green business practices, by demonstrating to corporations that green is also profitable...[and]...through ecotourism, it promises to promote environmental consciousness for western consumers by encouraging them to fall in love with the environment through direct connections to it” (Igoe and Brockington, 2007:434).

According to Brockington and Duffy (2011), the problem with neoliberal rhetoric is its relentless positive presentation of outcomes without highlighting any of the real consequences (Brockington and Duffy, 2011). Because there are a great number of benefits and benefactors to this view in nature, there is a challenge for researchers to effectively communicate concerns with a neoliberal environmental governance model (Brockington and Duffy, 2011). Neoliberal policies are also “...presented as apolitical or neutral because of the reliance on the market to guide the actions of individuals” (Hlushko, 2017:72). According to Hlushko (2017:72), “...this is the ‘common sense’ quality that appeals to market proponents.” Since the purpose of governments are to protect and enhance citizen wellness, not to manipulate markets, supporters of “...neoliberal policies claim that the market provides an impartial. Since governments are not supposed to directly influence the market, proponents of neoliberal policies claim that the market provides an impartial outlet for distributing the benefits and costs associated with capitalism and resource extraction.” (Hlushko, 2017:72)

Neoliberal environmental governance is ubiquitous, unobvious and a difficult concept to grasp and even yet more challenging to prove its existence in any one system. Igoe and Brockington, 2007:436 state that the best way to understand neoliberal environmental governance is to “conceptualize neoliberalism...as a bundle of processes...that varies from location to location”. One obvious indication of neoliberal tendencies is when private interests of either companies or private citizens are benefitting from a natural resources activity and government has taken a reduced role in governing that activity (Brockington and Duffy, 2011). This means that there is more responsibility placed with private citizens, industry and NGOs than with government, sometimes presenting as hybrid partnerships between all players. NGO-Gov, private landowner-industry, private landowner-NGO and similar often have private partnerships that are the result of and facilitate neoliberal environmental governance. These initiatives and practices are where neoliberal governance expresses and is the focus of this thesis. There are key processes identified in several pieces of literature, and for the purposes of this thesis, I focus on Carter et al.’s (2017) distillation of a neoliberal environmental governance model based on Heynen’s (2007) publication. Carter et al., (2017) states that there are five main features of a neoliberal environmental governance model in Canadian oil and gas extraction economy:

- decreasing regulations that constrain corporations’ access to environmental resources,
- reducing government staff and programs protecting the environment,
- devolving environmental regulatory responsibility to lower levels of government,
- privatizing environmental regulation (out-sourcing to industry; using market mechanisms rather than government regulations) and,
- limiting citizen engagement with environmental regulation.

Mansfield (2004) investigated new fisheries quota systems in the North Pacific as a form of privatization, marketisation and enclosure. Mansfield (2004:580) concluded that “neoliberalism is not monolithic” and not a single, easy to distinguish, coherent entity that is

applied in the same way across the globe. Therefore, investigations such as this study are important because these studies look at a case and tease out the reasons for the occurrence of certain phenomena. Mansfield (2004:580) further concludes that neoliberalism is “something created in practice” and can become “varied, fractured and even contradictory” and that researchers must view it as something “created in practice”.

Bury (2004:78) examined mineral exploration in the Peruvian Andes. He found that once the country adopted neoliberal principles into governance in the 1990s, “...transnational mining corporations transformed Peru into one of South America’s leading exporters of mineral resources.” In the early 2000s, mining companies transformed regions that were plagued with high rates of poverty and unemployment into areas with more affluence (Bury, 2004). Although neoliberal policies are not unremittingly negative (Brockington and Duffy, 2011), mineral resources are finite and will become depleted. If the government was previously unable to protect citizens from poverty and unemployment, it is false to assume that marketization of a resource will be able to prop up the community for all time. Post resource-economy planning can be beneficial like in Kenora, ON a town in northwestern Ontario, Canada that further developed a pre-existing tourism industry after the decline of forestry due to the softwood lumber dispute and US housing market crash (Bonin, 2015).

These features of a neoliberal environmental governance model are being used to facilitate the exploitation of Manitoba’s oil at the expense of habitat and to the eventual detriment of the economy. The Petroleum Branch and industry (with the backdrop and influence of the Federal government) have developed “a governance regime which relies on a competitive free market to dictate actions” (Hlushko, 2017:70). If Manitoba is fostering a neoliberal environmental governance model by exploiting natural resources to the detriment of habitat, it will be evident in

the current law, policy and programming and outcomes of indicators such as species at risk. I explore this further with a review of Manitoba policy and legislation in Chapter 4.

**Administrative and political will.** In the neoliberal environmental governance model developed by Heynan et al., (2007) and described by Carter et al. (2017) political and administrative discretionary power is a central mechanism used for expanding development. Politicians and upper level administration have a high degree of influence over laws and policies in Canada, and if they are drawn to neoliberal tendencies, the marketization of nature is likely because of the power and influence they have. In Manitoba, the minister and/or director has the power to decline, stop or grant permission for proposed/in progress activities in all the acts that I describe later in in Chapter 4. Boyd (2003:219) describes this centralized ministerial power as an “unfortunate characteristic of Canadian environmental law” and one of the reasons why Canada is lagging behind several other countries. On the topic of excessive and broad powers enshrined in legislation, Boyd (2003:176) states that “Excessive discretion causes problems in two ways: when politicians or civil servants refuse to exercise it and when they exercise it excessively”.

The first problem with excessive political power according to Boyd (2003) can be demonstrated by the lack of strict wilderness protection in many of Canada’s parks. In Manitoba, the *Provincial Parks Act* outlines several types of protection, yet there are few parks that have complete wilderness protection. Many parks and protected areas have a combination of areas and do allow for resource extraction and other consumptive activities. Boundaries of these areas within parks can change when management plans are reviewed and at the discretion of Ministers. This flexibility demonstrates that protection for nature is flexible to the point of being weak if development will be accommodated through law. It is a way that neoliberalism expresses in laws and programming.

The second problem is improper use of legislative discretion. According to Boyd (2003) examples of this can be seen throughout Canada by governments allowing ecologically destructive activities in areas with high conservation value. In Manitoba it would be abnormal for a development to be rejected even in known habitat of a species listed under SARA or Manitoba's *Endangered Ecosystem and Species Act*, save for a major error like an incorrect survey or calculation. The reason that Manitoba and other jurisdictions have so little prairie left is the selling and conversion of land for industrial developments, residential areas, agriculture and transportation routes. In other words, discretion was used in the past for economic gain and is still used in that manner in contemporary times. The will of the administration to develop was stronger than the will to conserve habitat – even when it knowingly contradicts Manitoba habitat and species protection laws.

One clear example of the improper use of discretion in Canada is Alberta's Energy Regulator blocking a coalition of several environmental organizations from submitting their concerns during a hearing on an oil sands proposal, claiming that they were not directly affected stakeholders (Court of Queen's Bench of Alberta, 2013). An appeal on the decision to block was filed and in *Pembina Institute v. Alberta*; the judge ruled in favour of Pembina Institute (representing the coalition), claiming that the Alberta government blocked them from participating because the organization was "...now less inclined to work cooperatively" given their "publication of negative media on the oil sands" (Court of Queen's Bench of Alberta, 2013). The judge observed that the coalition put forward a collective statement, which actually demonstrated a level of cooperation and in his words would "minimize the proliferation of like submissions before the Director" (Court of Queen's Bench of Alberta, 2013). The judge also observed that Indigenous interests were well represented but those non-Indigenous groups who

voiced environmental concerns were not allowed to be involved in the hearing (Court of Queen's Bench of Alberta, 2013). This is an example of an expression of neoliberal-leaning use of discretionary powers in order to block an organization from rightfully submitting concerns in a public review process.

In resource extractive economies it is imperative that government consider the importance of conservation, as deteriorating environmental policy and implementation is associated with governments increasing economic dependence on oil and gas development (Carter et al., 2017). Davis (2012:188) conducted a study examining USA states and concluded that governments with a dependence on energy extraction would often promote "*status quo* energy extraction" while law and policy intended to protect habitat was eroded. This may be the result of lobbying pressure from the oil and gas industry (Davis, 2012).

Davis (2012:178) found several "...factors or circumstances that can be strategically used to disrupt existing policy arrangements in an effort to promote desired changes." Davis (2012) takes from the works of Kingdon (1995) and Steelman (2010) and notes that there are three variables that can predict new policy direction. The first and most enduring is an electoral outcome that results in a massive turnover and when that election produces unified partisan control (Davis, 2012). Manitoba experienced this in the 2016 Manitoba general election, where the Progressive Conservative Party ended the New Democratic Party's 17-year reign by taking 40 seats (Elections Manitoba, 2016), which was the largest majority in Manitoba's history. According to Corwin (2002) and Teske (2004) this is commonly the result of a newly elected official demonstrating a willingness to work to shape policy decisions. The second variable is the "analysis and manipulation of public problems", which directs focus towards a policy issue (Birkland, 1997). Although some efforts have been made, Manitoba remains a province with

fewer analytical efforts towards habitat conservation and oil development law and policy when compared to other provinces. A third variable is the presence or absence of municipal policy – which can oppose or support a current policy direction or fill a policy gap (Davis, 2012). In Manitoba, there are several orders of government that interact with the province, including municipal, rural municipality, First Nations and private governance created by unofficial public-private interactions. Now may be an incredible opportunity for political and administrative change due to new governments at the provincial and federal levels, incoming changes in the federal environmental impact assessment process and a renewed interest in climate change mitigation, both of which I describe later in Chapter 4.

*Private governance.* Private governance can have power over how regulated regimes operate. Davis (2012) also describes that industry, trade associations, governments and elected officials work together in a type of sub-government to steer environmental policy in a weaker and more economically favourable direction. In Davis' (2012:178) observations, these relationships were built on a shared belief that “building and maintaining a strong economic base offered multiple benefits to the state.” Hayes (2001) claims that industry can have a position of privilege within a state that allows for controlling government, along with ample financial resources and a reputation for expertise. Industry then uses those advantages to effectively control threats to their interests. According to Davis (2012), these strong public-private alliances make it extremely challenging for any groups or individuals to influence change in the system.

Strong private governance and industry influence has adverse effects on ecological health. Rabe and Borick (2013) describe a resource-extractive government as a government that promotes extraction over environmental protection to keep economic gains intact. Carter et al., (2017) argued that the jurisdictions they examined (Alberta, British Columbia, Newfoundland

and Labrador) aggressively demonstrated prioritizing economic development over environmental protection. Carter et al., (2017:63) further argue that this is a display of an “intensified form of neoliberal environmental governance.”

Private governance or partnerships with industry can also be way to replace the role of governments, potentially overcoming conservation deficits in a policy framework (Bäckstrand, 2008). The nature of environmental issues created by resource extraction is made more complicated by a “universal” environmental impact from which no government can exclude itself as political borders do not contain air, water and land pollutants (Ruggie, 2004). Cross-sector partnerships have become particularly pervasive regarding developments that effect the environment in public policy because of how ineffective governments alone are in regulating such complicated activities and impacts (Hahn and Pinkse, 2014).

Although private governance can create negative environmental impacts, great potential exists for NGO/industry partnerships to complement traditional governance mechanisms for rule and norm setting and can steer industry and stakeholders to voluntarily adopt those rules and norms (Andonova et al., 2009). In the environmental sector, there are many voluntary rules that are widely accepted, even with significant cost to industry. For example, the Forest Stewardship Council (FSC) works towards responsible management of forests through private certification that goes well beyond what governments regulate (Forest Stewardship Council, 2017). FSC certification is common around the world despite stringent standards and high costs associated with certification (Forest Stewardship Council, 2017).

Although change within government is possible, industry can hold a great amount of influence over policy directions. While many conservationists would like to see sweeping change in law and policy, what they often see is a “symbolic placating strategies” (Cobb and Ross,

1997:204), meaning a minor expense to appease any group or individual that challenges the *status quo*. For example, funding ENGO conservation efforts or providing infrastructure for community activities could be considered symbolic placating strategies. This is a strategy industry uses to minimize political risk and keep individuals, ENGOs and communities satiated.

Administrative and political will are incredibly powerful factors in how government and industries function, even when laws exist to the contrary of their will. In some areas of policy deficits as seen through an economic lens (i.e., increasing production) or a conservation lens (i.e., developing voluntary environmental standards where none exist) private governance is a powerful tool for change. Because neoliberal environmental governance model is a bundle of processes it depends on the central influence of administrative and political will to function. In Chapter 4, I describe in more detail the discretion built into Manitoba's laws, which allows for an excessive amount of administrative and political power over which policies are followed, and which are not.

**Stakeholder and public involvement.** Carter et al., (2017) argue that generally governments are shifting towards an increase in public engagement in most areas of government decision-making, but not in the oil and gas development sector. In the four provinces Carter et al. (2017) examined, they found that Alberta, British Columbia, Newfoundland and Labrador and Saskatchewan all have systematic barriers to public involvement in government decisions and follow up. Carter at al., (2017) found that not only do citizens in these jurisdictions face high barriers to participation, but when opportunities arise, they are often undermined because of lack of basic data availability regarding developments.

Due to pressure being placed on governments and the advent of the internet, transparent governments have become more of the norm in some countries (Janssen, 2012). For example,

Alberta launched an open government program in 2012 and now publishes a large amount of data and information for public use (Government of Alberta, 2017b). Arzberger et al. (2004) and Surowiecki (2004) make the observation that an important motivation for governments to provide open data is so that citizens and organizations can become involved in the analysis of data and information, offering government with new ways of seeing information. Alberta and other jurisdictions have the appearance of offering open data, open government and many processes for public participation. However, these processes more rarely apply to the oil and gas sector under the guise of proprietary information.

There are many advantages to having an open government. It can facilitate the separation between public citizens that are recipients of services and policy makers (Janssen, 2012), among other direct policy benefits. Janssen (2012) interviewed several participants regarding the benefits of open governments and found many benefits to open data and information during their study. The findings relevant to this thesis are:

- improvement of policy-making processes,
- creation of new insights in the public sector,
- contribution toward the improvement of processes, products and/or services, development of new products and services,
- use of the wisdom of the crowds: tapping into the intelligence of the collective,
- improvement of public policies and,
- access to external problem solving.

Although it is generally viewed as an advantage by conservationists to have open governments and processes that involve citizens and stakeholders, it still creates potential for industry and citizens to influence policy in a way that harms the environment. It was made clear in Carter et al., (2017) that the bias towards development that is apparent in the government system is still supported by many citizens. Carter et al. (2017) interviewed an employee from

Alberta Environment that "...argued that not approving tar sands development would be stranding resource revenue from Albertans." Similarity in Saskatchewan, a former provincial government employee stated that the public was "happy for the tax revenue" and "just wanted a bigger piece of the pie" (Carter et al., 2017:70). Carter et al., (2017) explained that this sentiment extends to other fossil fuel provinces in Canada as well.

In many regimes in Canada, there are systematic barriers in place for the public and stakeholders to become involved in oil and gas planning. When opportunities do exist, they are often undermined by lack of available data, short timelines and active blocks (like in *Pembina vs. Alberta*). Governments are starting to recognize that in certain areas, stakeholder involvement can turn into political support. Throughout Chapter 4, I highlight opportunities for stakeholder involvement in many of Manitoba's habitat conservation-related laws and policies.

**Cumulative effects assessment.** According to Carter et al. (2017:69) one of the features of an energy-dominant government is a failure "...to assess and respond to the cumulative environmental impacts of expanding oil and gas activities". Of the four jurisdictions that Carter et al. (2017) examined, all four failed to properly assess and respond to cumulative impacts of the oil and gas sector. The reasons for this collective failure were all the same; the regulatory processes and follow-through are a hindrance to proper accounting of cumulative effects assessment (CEA) within the environmental impact assessment (EIA) process.

EIAs are a controversial planning tool used to assess adverse impacts to the environment in order to mitigate risks before the project begins. They are intended to "...place environmental protection on a level playing field with economic growth, producing the win-win outcome known as sustainable development" (Boyd, 2003:113) and "...a planning tool that is now generally regarded as an integral component of sound decision-making" (la Forest, 1992:5). John

Livingston, David Schindler, William Rees and Husain Sadar – all prominent researchers in Canadian environmental policy – have collectively described Canadian environmental protection laws as a failure: “...totalitarian, a boondoggle, a hoax, a paper tiger, a Trojan horse, and a nasty game” (Boyd, 2006:113). This is because the former state of practice in Canada is nebulous, strains resources (time, money, human) and as many conservationists have noted, EIAs have not actually prevented serious environmental impacts from occurring in Canada (Boyd, 2003). According to Duinker & Grieg (2006) EIAs were intended to offer the promise of environmental protection, informing decision-makers of adverse outcomes and sustaining environmental values when those values are threatened by a project.

The EIA process has changed over the last decade since it was given so many affectionate descriptors. The Trudeau (2015-present) administration has recently introduced changes to habitat protection under both the federal *Fisheries Act* and the *Canadian Environmental Assessment Act*. The proposed amendments to the *Fisheries Act* include restoring lost protection from the Harper administration and a list of changes that include Indigenous traditional knowledge, increase of transparency, enhanced enforcement and monitoring capacity among many others (Government of Canada, 2018b). Other changes to the Canadian EIA process are more structural – the Trudeau administration is establishing the Impact Assessment Agency of Canada to replace the Canadian Environmental Assessment Agency, and, is creating a new federal regulator, the Canadian Energy Regulator, to replace the National Energy Board (Government of Canada, 2018c). The changes seemed to be aimed at streamlining efforts for government and industry and facilitate consultation with Indigenous peoples.

Cumulative effects are “...changes to the environment that are caused by an action in combination with other past, present and future human actions” (Government of Canada, 2016).

There are several other definitions; for example, Carter et al. (2017:69) offers a broader and more holistic version than the Canadian government, referring to cumulative effects as “the current and projected ecological and social impacts of project interacting with existing and anticipated developments” and suggesting that, “understanding them is a precondition to effectively regulate the industry.” In practical terms each individual action may seem insignificant, but those actions can accumulate and have collectively devastating environmental effects. The reason that the literature places importance on cumulative effects is that it is the norm to look at each project independently. However, we know that each project should not be examined independently as proper environmental planning requires that a host of variables outside of the project be considered.

Proper accounting for cumulative effects in EIAs is an essential part of effective environmental management. Despite having included cumulative impacts as a consideration in decades of laws and policies regarding land use planning and environmental assessments, Duinker and Grieg (2006), Boyd (2003) have concluded that the promise and reality of EIAs and specifically the cumulative effects assessments branch of EIAs do not match up. Duinker and Grieg (2006) have even concluded that the promise of cumulative effects assessment actually does more harm than good as the way it is currently practiced ignores guidance on proper cumulative effects assessment and therefore fails to protect ‘valued ecosystem components’.

In Canada, cumulative effects assessment is a part of the Canadian Environmental Assessment Act, 1995 (CEAA) (Duinker and Grieg, 2006) and is often carried out in large-scale (Class 2 or 3) projects in Manitoba under the *Environment Act*. The *Environment Act* states that the Lieutenant Governor in Council may make regulations and orders regarding “restricting or limiting the number and types of developments that may cause adverse cumulative effects that

may be permitted to be constructed or operated in the province, or any part thereof;” (Government of Manitoba, 2018a). Cumulative effects assessments are not a part of the *Oil and Gas Act* in Manitoba, the act that currently governs oil and gas exploration and development.

Cumulative effects planning is undertaken in Canada, but when used is ineffective due to several process deficiencies (Duinker and Grieg, 2006). The Canadian government acknowledges this somewhat in their *Cumulative Effects Assessment Practitioners’ Guide* (Government of Canada, 2016) by stating “CEA is environmental assessment as it always should have been: an Environmental Impact Assessment (EIA) done well. In practice, the assessment of cumulative effects requires consideration of some concepts that are not always followed in EIAs.” The reason that EIAs and CEAs are ineffective is because the protection of environment is not considered in equal measure to the question of economics. Across all four jurisdictions that Carter et al., 2017 interviewed, they found that the regulatory process is focused on individual projects and did not consider cumulative impacts.

Some organizations have attempted to address the lack of CEA in EIAs and the lack of quality of CEAs. Regarding the oil sands development in Alberta, the Auditor General of Canada and the development of the Cumulative Environmental Management Authority in Alberta attempted to “make recommendations to manage the cumulative environmental effects of regional development on air, land, water and biodiversity” (Carter et al., 2017:69). Saskatchewan undertook a serious effort to develop an “...ambitious and proactive effort to understand the cumulative regional impacts of gas development...” with the 2007 Great Sand Hills Regional Environmental Study, but Carter et al. (2017:69) uncovered through an interview with a Saskatchewan Environment employee that its “...recommendations were never carried out because of a change in government.” Currently, the Canadian Council of Ministers of the

Environment (CCME) is developing key elements of an effective cumulative effects monitoring regime (Canadian Council of Ministers of the Environment, 2018). The next step is to use that information to “develop CCME guidance for standardized indicators of cumulative effective and measurements of ecosystem health” (Canadian Council of Ministers of the Environment, 2018).

This literature suggests that Canadian jurisdictions have been ineffective in addressing cumulative effects. Cumulative effects assessment is a complicated and expensive undertaking to develop and implement. However, the notion has been discussed in a Canadian environment policy context since the early 1980s and to this day has not been developed, implemented or monitored properly. Some cumulative effects assessments have been undertaken in Manitoba, but only on large projects like hydroelectric generation. The Public Interest Law Centre (PILC) undertook a review of one of the cumulative assessments and concluded that it feel short in several areas, including the exclusion of two new hydroelectric developments/Bipole III<sup>7</sup>, an independent threshold review and stakeholder engagement, which are standard for effective practice in cumulative effects assessments (Public Interest Law Centre, 2017).

## **Chapter Summary and Key Findings**

In this chapter, I have reviewed literature intended to inform my interview questions, and to use as a source of potential recommendations for Manitoba to consider for habitat conservation policies using a basic literature search partially informed by three of Carter et al.’s

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<sup>7</sup> A large, north/south electricity transmission line in Manitoba.

(2017) main themes. So far in this thesis, I have uncovered that some of Carter et al.'s (2017) criteria for a neoliberal environmental governance model have potentially been met by Manitoba.

Manitoba has decreased regulations that would normally constrain access to resources. Oil development, unlike most other natural resource extractive industrial development is administrated by the Petroleum Branch under the *Oil and Gas Act*. The Petroleum Branch is housed under the Manitoba Growth, Enterprise and Trade Department, which has a mandate for economic growth in the province, and not a mandate for environmental protection like other departments would. From this, we could assume that when presented with the choice between economic development and environmental protection were to be presented, the mandate of the department would dictate that the Director choose economic development and would grant access to natural resources in order to fulfil their mandate.

The Manitoba government wants to facilitate business in Manitoba. The Manitoba Enterprise, Growth and Trade Department (that houses oil development) is currently asking businesses, non-profits, local governments and private citizens to identify where “red tape” is a deterrent to economic growth and what they can do to make it easier to work together. This is another example of decreasing barriers to access for businesses to work with the department, who typically are in charge of signing off on oil lease agreements.

From the literature reviewed so far, there is little evidence that Manitoba has an emphasis on increasing government staff and programs protecting the environment. A review of the Manitoba Growth, Enterprise and Trade Branch website, including the mandate letter to the minister, reveals no oil-development specific habitat conservation policy or overriding imperative of sustainable development/environmental considerations. Both Tomorrow Now, Manitoba's former Green Plan and the new Climate and Green plan do not present specifics on

mitigating the environmental impacts from oil development, or on how the Manitoba government will protect grasslands habitat, prairies or listed bird species. It seems like this industry and its impacts are invisible in public strategies, which may relieve public pressure on putting efforts into programming or habitat protection.

Both Canada and Manitoba have shown that they have devolved environmental regulatory responsibility to lower levels of government. Canada has led the way by devolving responsibility as a result of the *Constitution Act, 1867* and the *Natural Resources Acts* in 1930, giving Manitoba and other provinces jurisdiction over lands and resources. Manitoba has made the decision to grant environmental regulatory responsibility for oil and gas to the Petroleum Branch, which has little capacity and regulatory power to protect wildlife and habitat.

Manitoba has privatized some of its environmental regulation. Manitoba's current private land conservation approach is to grant legal authority to NGOs such as Ducks Unlimited, Manitoba Habitat Heritage Corporation and Nature Conservancy of Canada for procurement and management of private lands. As oil production have doubled since 2007, and in 2012, staff resources remain unchanged, reducing the ratio of monitoring staff to oil sites substantially. In response to this, the Petroleum Branch has streamlined their process to deal with the increase of oil license applications. Participants in another study confirmed that there are not enough staff available to provide adequate inspection and monitoring of lease sites, essentially out-sourcing and relying on private citizens, private enterprise and NGOs to monitor sites and report issues. Privatization has contributed to an attractive market for oil production. In 2012, Manitoba ranked best in Canada and 5th best in the world based on favourable taxation, the lower cost of regulatory compliance, and certainty over favourable (to industry) environmental regulations. In

2016, Manitoba ranked lower due to “negative sentiment related to regulatory duplication and inconsistencies, environmental regulations, and taxation in general”.

Citizen engagement with environmental regulation is limited in oil and gas-related activities in Manitoba. As a consequence of organization, oil and gas activities fall under the *Oil and Gas Act*, and not the *Environment Act*. The *Oil and Gas Act* has no mechanism for citizen engagement, while the *Environment Act*, which concerns most industrial development in Manitoba, does. This can contribute to limited knowledge of oil and gas development in Manitoba and likely less pressure on government to protect habitat.

### **Chapter 3: Methodology**

In this chapter I describe my research design, which is a qualitative case study inquiry strategy. In order to meet my objectives, I used document review and interview data from semi-structured interviews. To organize and analyze my data, I developed a conceptual framework, which was informed by a literature review in Chapter 2. In this chapter, I describe my conceptual framework criteria, my data collection methods, study participants, analysis and research limitations.

#### **Case Study Method of Inquiry**

For this research I used a case study inquiry, because a case study inquiry method is used for the study of one case in a bound system in order to explore an issue fully (Creswell, 2014). According to Yin (2011), case studies are the preferred strategy when a researcher intends to find out the answers to “how” or “why” questions when the researcher has no control in the case and when the focus is on a real-life contemporary issue. In this study, I worked to understand “how” the oil and gas regulatory and policy system worked in real-life and if habitat is not adequately protected within that system, “why” is habitat not adequately protected in that system.

There are several types of case studies, and I chose to use an “explanatory” approach. In an explanatory approach, it is typical when asking “why” questions to gather a wide array of documentation from several sources, which commonly includes a literature and document review and interviews (Yin, 2003).

Case studies are used when “exploring new phenomena and for approaching issues from new perspectives, using multiple variables and sources of evidence” (Yin, 2003). To my knowledge, no one has tried to explain how well habitat is protected in areas of oil development

in Manitoba, and some new perspectives and sources of evidence were required to explore this. While oil exploration and development are not new in Manitoba, the recent volume of oil development using laws and policies that were developed at a time with little development with a similar amount of resources has created new interactions/phenomena and sources of stress on the system.

**Study location.** Southwestern Manitoba was chosen as the location for the study for practical reasons: this is where most oil development occurs in the province, where human interventions in the landscape have resulted in a hotspot for endangered and threatened species and ecosystems, and it is the centre of considerable effort by several NGOs to conserve habitat and plant and animal species. In my initial exploration of oil development in southwest Manitoba I engaged in conversations with several local conservation experts who expressed a need for policy research specific to oil development in the region.

**Data collection methods.** Denzin and Lincoln (2005) and Yin (2011) describe the need for multiple and appropriate methods when taking a qualitative approach. The two data gathering methods that best met the research objectives were interviews and document and literature review.

**Document and literature review.** As supported by Creswell (2009) and Yin (2011), I set the context of the study by reviewing Manitoba's law, regulations and policies, and peer-reviewed literature of the impact of oil development on habitat. I also reviewed literature through a lens of regulatory and policy impediments that could be deleterious to habitat conservation in environmental law. In a case study, Yin (2003) recommends a review of literature to develop insightful questions about a topic. I reviewed relevant literature, including the impacts on habitat from oil development and policy solutions that other jurisdictions have developed in order to

form some of the questions for my semi-structured interviews. Reviewing documents prepared me to have informed discussions with my participants to adequately explore their responses.

I also developed an extensive literature review in Chapter 2 in order to organize and analyze my findings. The literature and document review enabled the discovery of policy and practices related to oil development within and outside Manitoba to develop options for analyzing any gaps or inadequacies in Manitoba's current law and policy related to habitat protection. More detail regarding my analysis follows in this chapter.

*Semi-structured interviews.* Semi-structured interviews were used to determine policy gaps in Manitoba, to gather relevant opinions and experiences with Manitoba's law and policy as related to habitat conservation and oil development, and to inform my consideration of any potential policy options for Manitoba. Some structure in the interview questions was required to ensure the interviewer gained an understanding of each participant's knowledge, experience and understanding of oil development in Manitoba. The interviews also needed to allow for follow up questions regarding topics that arose through the interview process to get the most information from each participant (Bryman and Bell, 2016; Noor, 2008). As the non-expert in the participants' field, the flexibility maximized my understanding of the participants' experiences and expert opinions. Because the pool of potential participants was so narrow and because each participant had a unique background and experience regarding the topic, follow up questioning yielded the richest data.

Interview questions contained in Appendix A were developed based on the knowledge base that participants in the study were to have as well as my study objectives. I anticipated that my study participants would have a varying base of knowledge and experience, so most questions are broad and non-technical. For example, "What changes would you like to see from

governments to help conserve habitat in areas of oil development in grasslands?” and “What could your sector do more of/less of to protect habitat in areas of oil development?” Some questions were developed purely for information-gathering purposes to better understand the role that study participants “How does your organization use the *Oil and Gas Act*?” I purposefully did not formulate specific, technical questions because my participants ranged from lawyers, ecologists, volunteers, politicians, etc. and my objectives are broad and ideally receptive to diverse perspectives. The structured and follow up questions were designed to respond to the overall objective to analyze gaps in policy and to consider policy remedies. For example, “How can government help to conserve habitat through legislation or policy?”

**Participants.** Participants were identified in the fields of oil development, biodiversity conservation, environmental protection and land administration in southwestern Manitoba and Canada-wide. I attempted to contact 60 individuals using publicly available email addresses and telephone numbers. These individuals were from rural municipalities, the provincial government (including Crown corporations and agencies), First Nations governments, First Nations Tribal Councils, national Indigenous organizations, provincial Indigenous organizations, regional Indigenous organizations, industry, industry organizations and NGOs. Governments and government personnel were important to contact because they could reveal information regarding the governance role they play in oil development. First Nations governments and Indigenous leadership were important to contact because the proximity of Indigenous communities, oil development on traditional lands and the complicated and fiduciary relationship between the Crown, industry and Indigenous peoples in Canada. Industry and industry organizations were contacted due to their experience navigating the bureaucracy in Manitoba, experience with oil development and because they are the primary proponent of oil extraction in

the province. Regional and National NGOs were contacted because several are active in the region, dealing directly with government, landowners and other NGOs. These NGOs could provide a “hands on” perspective on how law and policy translates into action.

Fifteen individuals representing 15 separate organizations from NGOs and industry agreed to participate. Most that did not participate did not reply to my e-mail or phone calls. Individuals who did respond to email queries but chose not to participate offered reasons for declining that included lack of resources, lack of knowledge and conflict between the organization and the Manitoba government. One potential participant stated they would not participate because they perceived it was a conflict of interest as they work in partnership with the Government of Manitoba’s Growth, Enterprise and Trade department. Of the 15 participants I was able to interview, one declined to be recorded and two recordings failed. I thus obtained 12 recorded audio interviews that were transcribed for analysis and three interviews transcribed through notes only.

Interview locations were based on the preference of the participant. Two interviews were conducted face to face and the remaining were conducted over the telephone. All participants read and signed an ethics waiver (Appendix B) and were subsequently assigned a participant code (Appendix C) which remained their identifier on paper and in electronic form for the remainder of the study in order to preserve confidentiality.

### **Interview data organization and coding**

*Semi-structured interview coding method.* To prepare my interview data for analysis, I used a method developed by Ose (2016) using Microsoft Excel for ease of sorting and combining information, and Word to code responses from participants. Creswell (2007) recommends a similar sequence: transcribing each interview, listing topics, and grouping topics. As I am not

testing an existing theory but rather exploring better ways of working, organizing and categorizing the data was sufficient for my analysis.

Ose (2016) developed a straightforward method that helps to organize and code information from interviews that are separated into logical headings and subheadings. I modified the 10 steps as described by Ose (2016):

1. Collect the data
2. Transcribe the audio files
3. Transfer the text from Word to Excel
4. Prepare the Excel document for coding
5. Code in Excel
6. Prepare the coded interviews for sorting
7. Sort the data
8. Transfer quotes and references from Excel to Word
9. Sort the text into a logical structure based on the coding
10. Analyze the data.

***Transcribe audio files.*** Audio files were transcribed into a Microsoft Word document. As per my ethics protocol, no personal identifying information was used to identify the participants. Codes were used as identifiers and used to ensure the data remained confidential and provided a level of transparency in the results and analysis section of the study.

***Create a Microsoft Excel file to prepare for coding.*** After transcription was completed, I then transferred the text from Microsoft Word to Microsoft Excel. I inserted every sentence, or group of sentences that made a quote into its own row. Every row was identified with either an 'I', which identified the interviewer, and 'P' which identified the participant.

***Code in Excel.*** I scanned each interview and developed a list of themes from reading the interviews and relevant literature. For example, the 'Law and Policy' theme identified a quote that refers to how various parts of the legal and policy elements work together (Appendix D). After scanning through each line of each interview and assigning themes to significant quotes, I

then went through each interview two more times and used sub-themes where a quote either applied to more than one theme, or if a quote applied directly to a sub-theme within a theme. For example, a quote could have both ‘Law and Policy’ and ‘Surface Rights’ assigned to it if it was a quote that referenced the Surface Rights Act as a part of Manitoba’s law and policy. Ose (2016) recommends that lines containing only insignificant quotes such as ‘Hello, how are you?’ or ‘Ok, thank you’ should be assigned a code that was very different from the others so such conversation could be filtered out easily for later analysis. Irrelevant quotes were assigned the code 999. I finished coding with 38 themes.

*Prepare the coded interviews for sorting.* I followed Ose’s (2016) suggested sub-steps to prepare my coded interviews for sorting. The first step is to ensure that each participant has a unique identifier, so I used a coding system for identifying the participants (Appendix C). The second step is to keep track of the sequence that responses come in for the interview, so I sequenced each response using a sequential numerical system.

After organizing the interview responses, Ose (2016) then recommends transferring all the text to a Microsoft Word document for sorting. I decided to sort my text in Microsoft Excel instead and gleaned titles for my results section using the filter and sort functions. The responses were sorted according to the codes and summarized in the results section. The next steps were to analyze the data.

## **Analysis**

Yin (2003) states that typical case study inquiry methods include multiple sources of evidence that triangulate to illustrate a relationship and that the case study inquiry requires researchers to begin with theoretical propositions to provide a base for strong data collection and

analysis. In order to analyze whether or not gaps in Manitoba's law and policy regarding oil and gas development and habitat conservation exist and to develop recommendations based on literature and interview data I have reviewed literature regarding the impacts of fragmentation on grasslands habitat, surface habitat conservation, stakeholder and public involvement in environmental policy, government transparency and private governance. This has illustrated that there are certain criteria that may factor into the effectiveness of environmental law and policy. I use information gleaned from the literature and the issues with public policy in Canadian fossil fuel economies as described by Carter et al. in my organization in order to meet my objectives. I include a detailed description of the themes in Carter et al. in Chapter 2. Below, I have summarized the themes and use the following phrases to describe them throughout the thesis.

These themes are:

- administrative and political will,
- stakeholder and public involvement, and
- cumulative effects assessment.

Interwoven into this thesis is the notion that Manitoba is operating under a neoliberal environmental governance model. I argue that this is the underlying cause of a lax policy environment in the intersection of habitat conservation and oil development. I compared my findings to the criteria that Carter et. al. (2017) describes in their review of Canadian fossil fuel economies after every chapter. I also used these criteria to organize my interview results, discussion and conclusions. Those criteria are:

- decreasing regulations that constrain corporations' access to environmental resources,
- reducing government staff and programs protecting the environment,
- devolving environmental regulatory responsibility to lower levels of government,
- privatizing environmental regulation (out-sourcing to industry; using market mechanisms rather than government regulations), and
- limiting citizen engagement with environmental regulation.

Creswell (2007) recommends triangulating themes to analyze the underlying meaning of interviews. Throughout my analysis, I triangulated my sorted interview transcripts with literature and law/policy documents according to my criteria to analyze the data. The data I collected and organized from semi-structured interviews validated and verified the criteria pulled from the literature. Results and discussion are organized by the criteria I outlined in my conceptual framework. An initial list of themes were developed from the literature to organize interview data, and as sub-themes of perspectives became obvious, those sub-themes were added. The themes, sub-themes and definitions are outlined in Table 1.

**Table 1: Key Interview Themes and Sub-themes**

Theme	Sub-theme	Definition
Administrative and Political Will	Action, Enforcement and Monitoring	Refers to discussion on actions that government should be or are taking, enforcement efforts that are or are not occurring or comments on monitoring.
Administrative and Political Will	Easements	Refers to discussion on easements - usually within the context of where they fall within Manitoba's policy
Administrative and Political Will	Economics	Refers to decisions made based on economics with no or little consideration to environment.
Administrative and Political Will	Law and Policy	Refers to gaps or issues with Manitoba laws or the overall policy in Manitoba.
Administrative and Political Will	Government Priorities	Refers to when participants allude or point to the government having oil development as a higher priority than ecosystem protection.
Administrative and Political Will	Industry Co-operation	Refers to when participants discuss times when industry is co-operative with minimal disturbance practices, either after consulting with participants or when industry has adopted their own practices.
Administrative and Political Will	Minimal Disturbance	Refers to any minimal disturbance practice set of standards or suggestion of that becoming incorporated into Manitoba's law and policy, any other jurisdictions that have that, or any practices that might minimize disturbance.

Stakeholder and Public Involvement	Private Land	Refers to anything involving private land, law/policy on private land, or private landowners.
Stakeholder and Public Involvement	Public Information	Refers to areas where public information is available, unavailable, or should be available.
Cumulative Effects Assessment	Regional Planning	Refers to any mention of planning for more than one site, even if that is within a company, watershed, or entire region.
Cumulative Effects Assessment	Remediation	Refers specifically to remediation efforts.
Administrative and Political Will	Subsurface Rights	Refers to any discussion on subsurface rights, or surface/subsurface rights discussion.
Administrative and Political Will	Surface Rights	Refers to any discussion on surface rights, or surface/subsurface rights discussion.
Administrative and Political Will	Sustainable Resource	Refers to when participants discuss the <i>Oil and Gas Act</i> "sustainable development" section or sustaining the resource/oil development sector versus sustaining the environment/habitat.
Cumulative Effects Assessment	Biodiversity	Refers to technical aspects of biology, e.g., biodiversity, species genetics.
Cumulative Effects Assessment	Conservation	Refers to general discussion on conservation efforts.
Cumulative Effects Assessment	Cumulative Effects	Refers to discussion on cumulative effects as part of an impact, usually within the context of regional planning.
Cumulative Effects Assessment	Species at Risk	Refers to when participants expressed concerns or facts about species at risk in Manitoba.
Administrative and Political Will	Economy	Refers broadly to the economy where economics become political.
Administrative and Political Will	Politics	Refers to how politics may have impacted/influenced decisions or general opinions on politics.
Cumulative Effects Assessment	Impacts	Refers to any impacts, either real or perceived that participants mention or discuss.

Cumulative Effects Assessment	Infrastructure	Refers to impacts from infrastructure, including pipelines.
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In addition to ongoing analysis and organization, I also used two participant reviews as a method of triangulation and verification. In the first review I asked participants to individually look over a list of quotes that I intended to potentially report out on in this research and allowed for time for participants to correct or retract information that they had given me. This also aided in ensuring that participants remained anonymous – as anticipated, several participants asked that some details in our discussion be excluded from my thesis, which I recorded and have not included. In the second review, participants were able to see a draft of the results chapter before it was defended, in order to further ensure accuracy of information and comfort with the thesis.

**Research Limitations**

There were several research limitations that resulted in areas that could not be adequately explored to confirm gaps and develop robust conclusions. I was unable to recruit participants from several essential groups including all governments, Indigenous communities and industry associations. This limited my pool of participants to mostly non-governmental environmental organizations operating in Manitoba and Canada. My understanding and conclusions are influenced by their responses.

I contacted several Province of Manitoba branches, agencies, and departments, and no one was able to speak with me regarding their policy on oil development. Hlushko (2017), who completed a study on Manitoba’s oil economy, industry, faced similar challenges. This limitation created a reliance on literature and non-government individuals to share their knowledge and experience regarding their interaction with industry and/or government. The responses and

Hlushko's (2017) reported experience has led me to believe that there was apprehension among government personnel who work within oil and gas to interview. While my participants were very experienced and knowledgeable in their respective fields, it would be incorrect to say that I have presented a holistic characterization of the workings of government without the views of government officials.

I attempted to contact reeves and mayors in southwestern Manitoba and received no replies. I anticipated that I would have had insightful discussions regarding the changes they have seen in their communities and an overall understanding of the political landscape from a municipal standpoint. I contacted several Indigenous organizations and governments in the study area to get their point of view on oil development; the reply from every Indigenous organization and government that responded was they would have liked to participate but no resources were available.

I interviewed one member from oil industry. The rest of the companies or industry associations that I was able to contact declined to interview, potentially due to a lack of available human resources as the oil industry experienced a downturn around this time. Still, Hlushko (2017) faced similar challenges when contacting industry for study interviews and surmised that there may have been some apprehension to participate. Some Canada-wide industry associations stated that they had little experience with Manitoba policy and operations and felt that they would not be suitable participants.

Access to information was a significant limitation for this study and others (e.g., Hlushko, 2017). I was able to access a database of licenses for oil leases but was unable to access a search feature to aid in finding how many environmental plans exist for licenses and what the plans contain. I was guided by an employee of the Petroleum Branch and he searched for several

keywords that he and I thought would find the plans. Because this was done over the phone, I cannot confirm one of my findings that there are only 14 plans unless carefully examined over 5,000 plans online one by one. This points to an access to information issue that is much larger than I can address in this study.

## **Chapter 4: Environmental Governance of Oil in Manitoba**

In this chapter, I introduce the laws and policies in Manitoba relevant to habitat conservation and oil and gas development. I first provide some broad context and then examine Manitoba's habitat protection policies and laws in order to understand the environmental law and policy context relevant to my objectives. In order to determine if there are laws outside of the *Oil and Gas Act* and the *Surface Rights Act* that protect habitat in areas of oil and gas development in Manitoba and to determine if any patterns emerge that would further support the claim that Manitoba environmental governance is under and producing a neoliberal environmental governance model I reviewed the following: the *Sustainable Development Act*, *Wildlife Act*, *Ecological Reserves Act*, *Endangered Species and Ecosystems Act*, *Provincial Parks Act* and the *Conservation Agreements Act*. I then examined the *Oil and Gas Act*, *Surface Rights Act* and the role of the Surface Rights Board. I have also provided a brief overview of related laws and policies in Alberta and Saskatchewan to provide context for Manitoba. Although associated *Oil and Gas Act* regulations, water and air quality laws are also a part of the oil development and environmental protection framework of the province, I have narrowed the scope of this review to include surface habitat and terrestrial grassland birds as indicators therefore will not be examined as a part of this thesis.

### **Canadian Context**

Canada has recently become a globally significant fossil fuel producer; this has altered federal and some provincial governance to enhance oil and gas development activities (Carter et al., 2017) due to the Harper administration (2006-2015) basing economic development on Canada's energy sector (Brownsey, 2016). During the Harper administration the federal

government actively promoted extraction of resources intended for export by “ensuring trade, fiscal and environmental policy regimes were amendable to the sector” (Carter et al., 2017:63) and promoting projects that would increase access to oil and gas resources (Brownsey, 2016). According to Carter et al., (2017) this can be traced back to changes in fiscal incentives for oil and gas development and efforts to decentralize environmental policy. In support of the oil and gas economy, Carter et al. (2017) and others observed that the federal government stalled specifically on action on climate change mitigation at that time.

The Harper administration aggressively changed policy to ensure that Canada became an “energy superpower” (Government of Canada, 2011), and thus moved further into a neoliberal governance model (Carter et al., 2017). In order to achieve superpower status, the Harper administration removed several environmental policies that may have hampered development in 2012 through two omnibus bills (Carter et al., 2017). These changes limited public participation in National Energy Board industrial development planning and approvals, limited protection on waterways and weakened federal environmental assessment requirements (Carter et al., 2017). The Harper administration also cut “regulatory capacity, scientific knowledge, funding for environment departments and research centres” (Carter et al., 2017:63). This resulted in a federal assessment process that would be “...fragmentary, inconsistent and late...” with a decision-making process that would be “...discretionary and consequently unpredictable...” (Gibson, 2012:179). This pattern demonstrates that Canada’s federal government was promoting a neoliberal governance model to facilitate oil and gas exploration and development and providing the political leadership for provinces and territories to follow.

With the election of the next administration, a Liberal government led by Prime Minister Justin Trudeau, came a substantial push on action on climate change mitigation, adaptation and

economic opportunities. Through an accelerated process that began in 2016, the new federal government solicited input from a variety of stakeholders and rights holders including NGOs, policy think-tanks, Indigenous leadership and Canadian citizens through various processes to develop The Pan Canadian Framework on Clean Growth and Climate Change (PCF) (Government of Canada, 2018c). The Framework is a plan developed by the Liberals to “meet emissions reductions targets, grow the economy and build resilience to a changing climate.” (Government of Canada, 2018c). Acknowledging that actions to stop the progression of and mitigate the effects of climate change and inviting public, stakeholder comment and rights holder involvement in shaping the Framework could be a signal of positive changes in governance for ecosystem health.

Several actions from PCF are aimed at reducing emissions from the oil and gas sector. These actions include carbon offsets and credits, pricing carbon pollution, and a reduction of methane from the oil and gas industry by 40-45% by 2025 for all provinces and territories (Government of Canada, 2018c). These emissions reductions will be facilitated by policy changes implemented in part through equivalency agreements which will grant provinces and territories the power to develop and implement their own regulatory regimes (Government of Canada, 2018c). The coming years will reveal to what degree these actions will be implemented, how, and what results this will have on long term environmental policy development in Canada and how effective these measures will be in reducing climate change.

The elected Liberal government promised to reform the federal environmental assessment process and fisheries/waterway protection (Canadian Broadcasting Corporation, 2018).

According to many, changes to the Canadian Environmental Assessment Act, 2012 (CEAA 2012) by the Harper administration were so radical that the very core of the Act was radically

changed by increasing discretionary powers and a higher reliance on provincial, territorial and Indigenous assessment process (Gibson, 2012). Where the Harper administration concentrated on financial incentives and staff cutbacks to ensure that fossil fuel development was fostered it appears that this new government, the Trudeau administration, may be taking the government efficiency route. However, the Trudeau administration seems to be considering climate change, Indigenous peoples and industry whereas the Harper administration did less in those areas.

Federal environmental policy in Canada is constantly changing, and influences either directly or indirectly policy in provinces and territories. How these changes affect ecosystems, industry and provincial/territorial governments remains to be seen.

### **Manitoba Context**

From the beginning of environmental protection being a part of modern law and policy, the complex structure of authority over environmental protection has “created ample opportunities for ambiguity, redundancy, conflict and evasion of responsibility” (Harrison, 2001:5). In Manitoba, as in all provinces and territories, habitat conservation and wildlife protection are covered by a combination of provincial and federal law and policy, as well as industrial development laws, policies, guidelines. In many sectors, federal, provincial, and territorial governments co-ordinate work through non-governmental committees covering many policy issues, but none currently exist to address the complicated environmental issues of oil development in every jurisdiction in Canada. This is perhaps intentional, as other coordinating bodies on forestry, environment, biodiversity, mining, education and health all benefit from pooling resources into coordinating bodies.

Canada's three prairie provinces have different approaches to conservation and economic development in the prairie ecosystem, which seems to depend on several factors, including but not exclusive to: amount of remaining prairie, politics, law, and economic status. Manitoba's approach in the late 1990s, early-mid 2000s was entitled – "*Identifying and Implementing Economic Activities That Go Hand in Hand with the Restoration and Maintenance of Healthy Prairie Ecosystems*" – which clearly puts economy before environmental protection (Nernberg and Ingstrup, 2005). According to Nernberg and Ingstrup (2005), in comparison to other provinces Manitoba's emphasis is on deriving economic benefit before managing the land in a sustainable manner. The intention is reflected in the *Oil and Gas Act* in which the sustainable development section favours sustainable development of the oil resource above the sustainability of economic, social, and/or environmental sustainability factors (Government of Manitoba, 2017a).

Although Manitoba has released some information on conservation intentions, the extent to which policy in Manitoba protects species and habitat in areas specific to oil development is difficult to determine through a review of publicly available materials. In 2015, when the New Democratic Party (NDP) was in power in Manitoba (1999-2016), the government released a document outlining an all-encompassing environmental strategy entitled "*TomorrowNow*", which was intended to be the "strategy of all strategies" as a summary of new directions in environmental protection policy in Manitoba (Manitoba Conservation and Water Stewardship, 2015). TomorrowNow was presented as a comprehensive strategy that included public feedback to inform most government activities, including several initiatives that had the potential to protect habitat against the effects of industrial development. The document includes a paragraph entitled "Mining and Petroleum Green Solutions" that mentioned the general need to protect the

environmental water supply/quality, air quality, and more broadly the environment (Manitoba Conservation and Water Stewardship, 2015), but there is no specific mention of habitat protection in areas of oil development. The news release for the document did state that there would be increased protection of endangered and protected species, but no specific actions were released. My review of publicly available government documents did not find evidence of rebounding species in the heavily oil-developed southwestern corner of Manitoba or any additional habitat/environmental protection as a result of TomorrowNow.

In 2017, during the Progressive Conservative administration in Manitoba (2016-present), the government released a new plan entitled “A Made-in-Manitoba Climate and Green Plan: Hearing from Manitobans” (Manitoba Sustainable Development, 2017a). The Plan contains no explicit language on limiting oil leases, mitigating environmental impacts from oil, increased habitat protection on private lands or comprehensive land use planning. The Plan does mention that some species at risk will be addressed and like its predecessor, TomorrowNow fails to mention how all species at risk will be protected, and instead focuses on megafauna like caribou and polar bear (Manitoba Sustainable Development, 2017a). The Plan mentions broadly that “several plant and animal species that make their home in prairie grasslands” are designated under provincial legislation and that “Manitoba is committed to supporting efforts to conserve species at risk, working collaboratively with landowners, non-government conservation organizations, Indigenous peoples, the federal government and other provinces and territories, to assess, monitor, protect and recover these vulnerable species”. The language of the plan is very general, with no specific action or plan is explicitly mentioned (Manitoba Sustainable Development, 2017a).

Manitoba recently announced a proposed act for the province to become a “cleaner, greener, more climate-resilient province”. The *Climate and Green Plan Implementation Act* was introduced on March 15, 2018 with intentions to replace the *Climate Change and Emissions Reduction Act* and the *Sustainable Development Act*. (Government of Manitoba, 2018c). The preliminary information released by Manitoba does mention oil and gas activity or enhanced habitat protection for grasslands/listed species. The news release indicates that reporting and an advisory council would be established but does not detail what would be reported out and the purpose or makeup of the advisory council.

**The Sustainable Development Act.** The purpose of the Manitoba *Sustainable Development Act*, introduced in 1997 is to “...create a framework through which sustainable development will be implemented in the provincial public sector and promoted in private industry and in society generally” (Government of Manitoba, 2017d).

The *Sustainable Development Act* contains the requirement that sustainability indicators be developed, approved and reported on (Government of Manitoba, 2017d), but, as with many of Manitoba's environment acts, the discretionary powers of the Minister has allowed for a legal way out of reporting on those indicators. Although sustainability indicators were developed and initially reported on in reports released in 2005 and 2009, no reports have been released since. As Boyd (2003) highlights, it is very difficult to evaluate if governments are protecting or harming the environment if we are unable to establish a baseline or track how implementation and enforcement are carried out over time.

The *Sustainable Development Act* indicator category relevant to this thesis is biodiversity and habitat conservation (Government of Manitoba, 2017d). The only two released reports (2005 and 2009) illustrate that the progress report for biodiversity and habitat conservation are virtually

identical (Appendix F). Despite seven new species being listed as threatened or endangered in Manitoba between 2005 and 2009 (bringing the number from 15 up to 22), several of which are grassland species, the trend for the Wildlife Species and Ecosystems listed in the 2009 progress report was “inconclusive” (Government of Manitoba, 2009). These seven additional listed species represent an 70% increase in the number of listed threatened or endangered species in the province, however the report provides no alternate explanation for the increasing number (such as a change in methodology, or new data). I would argue that “inconclusive” is misleading when the report clearly indicates decline of biodiversity and species loss. The later discontinuation of these reports removed a valuable source of information from the public and thereby creates space for harm habitat. This further illustrates that the Manitoba government is making space for development by weakening availability of information to the public.

As these indicators are no longer being reported on, I attempted to find more information via the Manitoba website and direct phone calls and emails to both the department and the Manitoba Roundtable on Sustainable Development<sup>8</sup>. Personal conversations with two Manitoba government employees revealed that publishing updates on indicators had been discontinued. They gave no definite reason and directed me to other information reported on the Manitoba government website, stating that it should cover many of the elements that were reported on through the sustainable development reports. A review of the website revealed that although the indicators themselves are no longer reported on, the downward trend of listed wildlife continued

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<sup>8</sup> Through the *Sustainable Development Act*, The Manitoba Round Table for Sustainable Development are responsible for “advising on the development and review of sustainability indicators...” (Government of Manitoba, 2017e).

and currently the number of endangered wildlife species is 39 (from 22 in 2009, and 15 in 2005) many of which are in grasslands (Government of Manitoba, 2017e). While this information was not hidden, it was made challenging to find out what happened to the reporting and despite follow up emails to the Manitoba Roundtable for Sustainable Development I am still left with an inadequate explanation as to why the reporting stopped.

The sustainable development reports were a broad, accessible, plain language source of information on ecosystem health. Tracking indicators over time should be a way to strengthen public engagement and a useful tool for government and researchers to measure if changes in the governance system caused deteriorations or improvements. Without this reporting requirement, conservationists and the public must rely on species status updates from governments, or individual departmental reports which come long after those working and living in areas know that there are issues and come with less context than the indicators in the *Sustainable Development Act*. Boyd (2003) describes one weakness with protected areas legislation being that many of the laws do not require a regular report in the state of ecological integrity in protected areas. Discontinuing reporting on this indicator has limited the public's ability to engage with environmental regulations and government tracking of progress.

**The Wildlife Act.** The *Wildlife Act* gives power to the province to create several types of protected areas to support wildlife. Each protected area is part of a larger network, which plays an integral role in biodiversity conservation by restricting use of Crown lands for purposes of conservation, reintroduction, or protection of one or more plant or animal species (Government of Manitoba, 2017f). The majority of these lands are on Manitoba Crown land but can also be formed by private land donation. Under the *Expropriation Act*, land can also be expropriated for this purpose (Government of Manitoba, 2017f); however, this has not yet occurred in Manitoba.

Wildlife Management Areas (WMAs) created under the Act are designated with the purpose of the “better management, conservation and enhancement of the wildlife resource of the province” (Government of Manitoba, 2017f). They exist for the enjoyment of people and the enhancement of wildlife resources and to this end, human activities either explicitly allowed and restricted in these designated areas. The use of motorized vehicles and industrial development are typically restricted in WMA areas while hunting, trapping, and recreational non-consumptive activities like hiking, cross-country skiing, and bird viewing are usually allowed (Government of Manitoba, 2017f).

It is unclear how oil and gas development is factored into the use of designated lands under *The Wildlife Act*. The "Use of Wildlife Lands Regulation, Part 3, Wildlife Management Areas, the Regulation" lists several prohibited industrial activities in WMAs which can be interpreted to include oil and gas are not explicitly stated as so. As S. 7.1(1) of the Act states, “Except otherwise provided in this regulation, no person shall carry on any commercial activity...” (Government of Manitoba, 2017g). In S. 7.1(2) several WMAs are listed and the exceptions to 7.1(1) are stated in the regulation. Examples of listed activities include hydroelectric exploration and development, commercial forest harvesting and “...any activities that significantly and adversely affects habitat...” (Government of Manitoba, 2017g). Considering oil development has been present in the province for decades, it is difficult to understand why specific language would be excluded from the list of prohibited activities.

WMAs have a strong public engagement component which plays an integral role in the formation of protected areas in Manitoba. WMAs, like park reserves under the *Provincial Parks Act*, have also been used to create protected areas as an interim conservation strategy until enough information is gathered regarding use by members of the public and stakeholders for

Manitoba to be able to develop park management plans, final borders and land use categories for a final park under the *Parks Act*. For example, there are currently several WMAs acting as a buffer around Wapusk National Park in northern Manitoba while the Government of Manitoba consults with the public and stakeholders on the creation of a polar bear park in Manitoba's north (Government of Manitoba, 2013).

*The Wildlife Act* has tools that can create interim areas for habitat protection on an as needed basis. In the *Wildlife Act* S. 2(2)(d) states, "any other type of area" that the government would like to create as a safe haven can be created under the *Wildlife Act* (Government of Manitoba, 2017f). An example is the Special Conservation Area (SCA). SCAs can change annually and are intended to protect wildlife during those times of the year when it is critical to supporting a healthy population, like breeding and nesting (Manitoba Wildlife Branch, 2017). This provides a flexible process to meet the conservation needs of wildlife in an expedited manner as other type of conservation areas often take years to establish because political will, stakeholder and rights-holder consultations, and scientific studies underpin protected areas planning in Manitoba. In Manitoba there are currently five SCAs: Walter Cook, Clandeboye Bay, Grand Marais, Sandy Bar and Churchill. The Churchill SCA was created to protect Ross' Gull nests and the remaining SCAs protect piping plovers during breeding and nesting periods (Manitoba Wildlife Branch, 2017). This demonstrates the SCA is used as a tool to designate small areas temporarily to support wildlife population numbers.

The *Wildlife Act* has several tools for the protection of wildlife and habitat and focuses on wildlife conservation. Protecting animals is typically more attractive to the public than ecosystems or plants (Gunnthorsdottir, 2015). According to Sections 49 and 50(1) of the *Wildlife Act*, "no person shall destroy or damage nests, eggs, or habitat, unless they have a license, permit

or other authorization given by any other Act of the Legislature” (Government of Manitoba, 2017f). Unless the construction of well sites and exploration is restricted to those times of the year when the surrounding grasslands are not being used for nesting or the rearing of young, oil exploration and development would be harmful to the nesting success and populations of ground-nesting birds, connected species and overall ecosystem health. Although impacts from other commercial activities are not prohibited by the Act, regulations that would prevent impacts on habitat or wildlife from oil exploration and development is inexplicably missing.

The *Wildlife Act* gives extraordinary discretionary powers to the minister. The minister may at any time authorize or prohibit “...any use, activity or thing” in an area under the Act, and may authorize the “...construction, operation and maintenance of any building, structure or thing in a wildlife management area.” (Government of Manitoba, 2017f). The use of the word “thing” is particularly troubling as it encapsulates any number of habitat-damaging activities. The phrasing is also troubling as it does not have other caveats, such as ‘for the economic benefit of Manitobans’, which suggests that the minister has carte blanche control over anything that can occur in an area set aside specifically for wildlife.

**The Ecological Reserves Act.** The *Ecological Reserves Act* has two main functions for conservation in the province: to designate and set aside land for ecological reserves to “enhance the overall well-being of present and future generations of Manitobans” [s. 2(3)], and to create the Ecological Reserves Advisory Committee [s. 9(1)] (Government of Manitoba, 2017h). These lands are not intended for recreation, they are “set aside for ecosystem and biodiversity preservation, research, education and nature study” (Government of Manitoba, 2017h). This is the strictest legislative protection of any habitat conservation tool in Manitoba. S. (8) strictly prohibits most activity from occurring in any reserve, unless permitted explicitly by the Branch

or the minister by way of a permit. S. (8) states that “no person shall a) enter or pass through a reserve, b) use a reserve in any way for any purpose, c) carry on any activity within a reserve, d) do any act or thing within a reserve, e) use any product or thing within a reserve, f) remove any product or thing within a reserve” (Government of Manitoba, 2017h). This wording in this section is purposefully broad in order to encompass any and all activities. The only exception is traditional use by Indigenous peoples; permission for use is granted on a case-by-case basis and is dependent on the ecological sensitivity of an area. Foot travel is the only activity usually permitted on a reserve, and this is also by permission only (Government of Manitoba, 2017h).

The strict protection provided by the ecological reserve designation can ensure that unique and rare examples of flora, fauna, and geological features can be protected under legislation from non-consumptive recreational activities. The Act also allows for officers to arrest and fine individuals caught in a reserve violating any of the restrictions outlined in s. 8(1), creating the ability for enforcement of the Act (Government of Manitoba, 2017h).

The *Ecological Reserves Act* has a public participation component to the establishment of an area. Under s. 9(6)(b) the provincial government must consider submissions from members of the public and make recommendations to the minister based on those submissions (Government of Manitoba, 2017h). This enables any citizen to have an opportunity to present a proposal for a protected area to the province.

Of the several policy tools for habitat protection within Manitoba’s policies, the *Ecological Reserves Act* has the most restrictions, and as such, there are a number of related drawbacks. For example, the strict nature of the Act may prevent areas that have active resource extraction rights or stakeholders with an interest in continued use of an area from being considered for designation under the Act. An area designation may be protested if local hunters

would be inconvenienced by being unable to hunt in any area, or unable to travel through an area. Private land can be expropriated for purposes of creating a reserve through the *Expropriation Act* against the will of landowners.

Another problematic component of the Act is the outdated methods of public communication required for Ministers to revoke the status of a designated area. One of the early actions in that process is to put a notice into the newspaper, as required under 8(4)(a) (Government of Manitoba, 2017h). However, this communication method might not be effective. Not all stake- and rights-holders and citizens receive or read the newspaper, given the many established ways to receive news online. If there is little public interest, the reversal of a designation could go through without consideration from the committee or little public knowledge or engagement. The outdated communication methods and strict nature of this type of reserve may hamper public engagement and advocacy by keeping the public physically away from the area and thus being unaware of changes to the reserve. Some of the reserves do allow for “passive foot traffic”, such as the Jennifer and Tom Shay reserve (Government of Manitoba, 2017h), but many are remote and inaccessible areas where there is little chance for the public to make a connection. No ecological reserves have been established and reversed to date, but this possibility remains open in the Act.

Given the amount of imperiled species in the southwestern corner of Manitoba and the cumulative impacts that human settlement, agriculture, and industry have on the area, ecological reserves seem like a tool that could be used to protect wildlife in southwestern Manitoba on remaining Crown land. However, because of the challenges in representing common private interests even with flexible legislation, this less flexible option may not be ideal in areas of oil development. The average size of a reserve is relatively small compared to Manitoba parks at

approximately 2,800 ha (Government of Manitoba, 2017i). This is still significant as a part of the protected areas network in Manitoba but small in comparison to some provincial parks in Manitoba, the largest being Sand Lakes Provincial Park at 8,310 km<sup>2</sup> (Government of Manitoba, 2017i).

The Act grants three specific discretionary powers to ministers. The first is to make regulations to ensure that the purposes of the Act, like research or ecological preservation, are carried out (Government of Manitoba, 2017h). The second is the power to establish a reserve “...by purchase, lease, exchange, gift, devise, expropriation under the *Expropriation Act*, or otherwise...”. The third and most common in the acts thus far is to have the power to allow anything prohibited in the Act under their discretion (Government of Manitoba, 2017h).

Discretionary power is another way that habitat protection is consistently undermined by the government of Manitoba; industrial development could be permitted if the minister allowed it.

Currently, there are no established or proposed ecological reserves in southwestern Manitoba. The lack of ecological reserves in this region is likely due to strict restrictions provided under this Act coupled with the large amount of privately owned land in southwestern Manitoba, which also affects the likelihood of reserve development. As presented, ecological reserves provide a valuable legislative tool as a part of Manitoba’s conservation law and policy. However, in this context they may not be helpful to protect habitat in areas of oil development due to their restrictive nature.

**The Endangered Species and Ecosystems Act.** The *Endangered Species and Ecosystems Act* has similar protection mechanisms to the *Wildlife Act*, although its purpose is to protect *endangered species and ecosystems* through strict conservation (Government of Manitoba, 2017j). The main tool of this Act is to designate protected ecosystems using

Ecosystem Protection Zones (EPZ). The Act grants the Minister the power to create regulations to prohibit or restrict entry to the EPZ, [s. 12.4(a)], change issuance of permits, suspend/cancel permits/licenses to enter or use the area [s.12.4(b)], and prohibit, govern or regulate any activity occurring or to occur in an EPZ [s. 12.4(c)] (Government of Manitoba, 2017i). In 2015 the provincial government proposed the protection of alvar and tall grass prairie ecosystems through this Act after stakeholder consultation (Government of Manitoba, 2017k).

The Act also protects ecosystems by protecting the habitat of endangered species. When a species is declared as being threatened, endangered or extirpated, it is then against the law to “destroy, disturb or interfere with the habitat of the species; or damage, destroy, obstruct or remove a natural resource on which the species depends on for its life and propagation” [s. 9(1)] (Government of Manitoba, 2017j). Many species are currently protected under the Act and the majority of them have habitat in the southwestern area of Manitoba. Currently, threatened species include Sprague’s pipit and the common nighthawk (*Chordeiles minor*), while endangered species include the burrowing owl, Baird’s sparrow, loggerhead shrike, and chestnut collared longspur (Government of Manitoba, 2017j). All land in Manitoba is considered under the Act and can be taken under the *Expropriation Act*; however, only Manitoba Crown land can be designated as an EPZ (Government of Manitoba, 2017j).

While the Act is designed to protect both endangered ecosystems and species, in practice it has been ineffective. For example, boreal populations of woodland caribou have been considered threatened under this Act since 2006 (when it was known as the *Endangered Species Act*) but woodland caribou habitat is still being harvested for timber and mined for iron ore. Both activities require roads for access and transport, and as a result fragment and disturb habitat by creating roads and work sites, transporting and planting alien plant species, creating noise, and

dispersing air and water pollution. According to the Act, disturbance is unlawful and yet this Act has not functionally protected the habitat of this threatened species.

The reactionary nature of this Act conveys that the rest of the law and policy that Manitoba offers may be inadequate for habitat protection. The Act originally only protected species specifically. Knowing that that animals do not adhere to political boundaries, and activities in surrounding jurisdictions affect Manitoban species and ecosystem health, I argue that even if *Manitoba* was protecting species as stated in their own acts species in Manitoba could still be negatively affected by outside activities and may need to be protected through laws. However, the addition of Manitoba enacting protection over its own *lands*, points very specifically to a failure of government to manage those lands to prevent them from becoming endangered. Those ecosystems became endangered because of weak law and policy (discretionary powers) and the exploitation of discretionary powers (administrative and political will), which supports my claim that Manitoba is operating and encouraging a neoliberal environmental governance model.

Several areas known to be inhabited by threatened and endangered species in Manitoba have been developed for oil over several years. According to Manitoba's collection of technical well files, oil leases have still been developed in several habitat, forage, and nesting areas for the burrowing owl, Baird's sparrow, loggerhead shrike and Sprague's pipit (license number 007447, 007439, 007520, 007521, 007540, 007541, 008030) (Manitoba Growth, Enterprise and Trade, 2017d). Developments that disturb habitat are still allowed in habitats of threatened and endangered species, although this is contrary to the prohibitions in the *Endangered Species and Ecosystems Act* (Appendix G). If a company or person obtains permission from the government they are permitted to alter habitat of an endangered or threatened species (Government of

Manitoba, 2017c), which suggests that the Act is ineffectual in practice and discretionary powers are being used to further promote development.

**The Provincial Parks Act.** The purpose of a provincial park is to “5(a) conserve ecosystems and maintain biodiversity, 5(b) preserve unique and representative natural, cultural and heritage resources and to 5(c) provide outdoor recreational and educational opportunities and experience in a natural setting” (Government of Manitoba, 2017l). There are several classifications and land use categories for designated parks, which guide the day-to-day management of parks. S. (7) outlines five different classifications for parks: s. (7)(a) wilderness park, where the main purpose is to preserve representative areas of a natural region; s. (7)(b) natural park is similar to a wilderness park, although it does allow for recreation and development; s. (7)(c) is a recreational park, whose sole purpose is to provide recreational uses to people; s. (7)(d) heritage park, with the purpose of preserving an area of land containing cultural values (Government of Manitoba, 2017l).

Land use categories further divide the parks into managed zones. These categories divide up areas where industrial development can occur. In parklands categorized as resource management, recreational development or access, mining, oil and gas exploration, and development and hydroelectric development are permitted. In parklands categorized as wilderness, backcountry, and heritage, no disturbances can occur that would compromise the core wilderness protection characterization of each of these categories (Government of Manitoba, 2017l). Forestry is prohibited in all provincial parks in Manitoba, as legislated in s. (15.1) of the *Forest Act*, with the exception of Duck Mountain Provincial Park (Government of Manitoba, 2017m).

Mandatory management plans are to be established for each park [s. (11)], (Government of Manitoba, 2017m). Each area of the park must be managed according to its management plan, and that plan is guided by the classification and categorization of each park and land area within. When a provincial park is formed, according to s. 8(1)(a), it is first placed into park reserve status for at least six months in order to complete the public consultation process (Government of Manitoba, 2017l). Some park reserves have been renewed for many years pending consensus on borders and activities. Management plans often go through years of consultation for the first iteration, and then have scheduled updated with public and stakeholder consultation as a core part of their operations (Government of Manitoba, 2018d).

There are several types of provincial park classifications and categories, and many parks are a combination of these varying types, making this legislation flexible for habitat protection and industrial development in Manitoba. Protected places can be created that are tailored to work with the continuing traditional activities of hunting, trapping, and industry. One example of the flexibility of provincial parks designation is the decision made for Duck Mountain Provincial Park when the province amended the *Forest Act* to prohibit logging in provincial parks. The forestry company operating in the area, Louisiana-Pacific Ltd., claimed the mill in Swan River was “completely dependent” on the timber supply from the park and Duck Mountain Provincial Forest, and thus the province did not ban logging here (Government of Manitoba, 2008).

Most of the categories and classifications of provincial parks provide protection against industrial development while permitting non-consumptive activities that would fall under recreational development. Permitting recreational infrastructure like cabins, camping, hiking trails, and boating facilitates fosters the human-land connection, which can help to shape habitat protection legislation by way of public support. For instance, Manitobans overwhelmingly

supported the banning of logging in provincial parks (Government of Manitoba, 2008) and without that public pressure, the ban may have never been enacted. Thus far, there are no large provincial parks in the areas of the Bakken Formation, which can be partially explained by the large amount of private ownership in the area. There are however areas designated as parks in the surrounding area like Riding Mountain National Park (RMNP) to the north, Spruce Woods Provincial Park and Douglas Marsh Protected Area to the east and Turtle Mountain Provincial Park to the south.

**The Conservation Agreements Act.** The *Conservation Agreements Act* is the act in Manitoba that is used by NGOs to secure legal protection on private lands through memoranda of understanding with the government of Manitoba in cooperation with landowners (Government of Manitoba, 2017n). The absolute guaranteed access to subsurface rights through the *Surface Rights Act* puts landowners into a potential conflict if they have conservation easements on their property. A landowner may not be able to save a native prairie or wetland even if they want to or have taken legal steps to do so because an oil operator is able to assert their rights to the resource through the *Surface Rights Act*. There are several ways that a conservation agreement can be terminated by the landowner through the Act, one of which is “Application to terminate due to hardship”, which is found in S 9(3) of the *Conservation Agreements Act* (Government of Manitoba, 2017n).

**The Environment Act.** The *Environment Act* in Manitoba is the act that “develops and maintains an environmental protection 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” (Government of Manitoba, 2018a). The Act includes a project classification and

review process and in the case of projects that are classes as 2 or 3, and provides the power to mandate public hearings and environmental planning. This Act provides a legal space for citizens to engage in proposals for actions that may adversely affect the environment through public posting (internet, newspapers), comment periods and hearings.

Cumulative effects assessments are a part of the environmental impact assessment process of several jurisdictions. However, along with many other provinces (Carter et al., 2017), Manitoba does not use cumulative effects analyses in the *Environment Act* or any land use planning processes. Like other provinces, Manitoba evaluates each individual oil exploration license or lease without considering how it contributes to the overall impacts of development in grasslands. As described in Chapter 1, oil and gas exploration and development in Manitoba does not fall under the *Environment Act*. If that change was made, it would still does not require oil and gas exploration and development activities to undergo any *cumulative* effects assessments as the *Environment Act* in its current form does not require cumulative effects assessments. (add from Lobe paper).

**The Oil and Gas Act.** The *Oil and Gas Act* governs oil exploration, development, licensing and decommissioning in Manitoba. It outlines the rights of owners, the protection and efficient use of petroleum resources, and principles of sustainable development (Government of Manitoba, 2017a). This Act and its associated regulations guide industry through several processes including application for a lease, remediation, drilling and production and royalties and incentives.

The sustainable development principles in the Act (S. 2)(2) seem to favour the sustainable development of resources although they are cleverly worded to appear protective of the environment (Appendix E). Some of the subsections are strongly worded to favour

conservation, specifically S. 2(2)(g) “(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” (Government of Manitoba, 2017a). Specific evidence of the *enhancement* of ecosystems through oil and gas exploration and development has not been found in the regulations, industry documents, government documents that I have analyzed or the interviews that I have conducted. To the contrary, I have found ample evidence through the literature that oil development degrades habitat through fragmentation, and local evidence through reports of hundreds of spills in the province (Government of Manitoba, 2018e). Without any publicly available habitat conservation regulatory or policy accompaniment to the *Oil and Gas Act*, I cannot confirm that oil exploration and development is carried out in a sustainable manner or enhances the environment in Manitoba.

Unlike the *Environment Act*, the *Oil and Gas Act* creates space between oil exploration and development and public engagement as there is no mechanism for public consultation, comment or review. As stated earlier, most oil exploration and development occurs around Virden, MB in the southwestern corner of Manitoba. Winnipeg, MB is where over half of the provincial population resides, the Manitoba legislature is located, most of the policy work for the province occurs and where most oil and gas corporate decision-making takes place. This physical disconnect from oil development in Virden, MB is compounded by the fact that most policy-makers living in Winnipeg, MB and because there is no legal mechanism to comment on specific oil developments/lease sites in Manitoba. This absence aids in the disconnect that people can feel from the environment where industrial development is occurring. In Manitoba most oil development is on private land and unlike the forestry ban used earlier in Chapter 4, the general

public are not as connected to it and this may be a part of why very little attention is paid to oil development by the public in Manitoba.

Like many of the habitat protection acts reviewed earlier in this chapter, the *Oil and Gas Act* grants discretionary powers to the Petroleum Branch Director over oil and gas operations in Manitoba. Operations include approvals, license specifications, who must develop environmental plans, decommissioning and remediation. As Hlushko (2017) highlights, the Director has several conflicting responsibilities, such as growing a profitable industry, ensuring that habitat is protected and regulating oil and gas companies.

The Director is responsible to ensure that an environmental protection plan is developed when there is an environmental concern related to oil and gas production. Yet, there have been thousands of well licenses approved in Manitoba without any environmental plans. Through a search aided by a Petroleum Branch, an employee and myself uncovered that only 14 licenses had specific considerations for protection of habitat (to avoid harm to riparian areas or endangered species) built into them (Appendix H). If oil and gas development were under the *Environment Act*, an environmental plan would usually be required. However, cumulative effects assessment is not required by the *Oil and Gas Act* and would be not be required by the *Environment Act* which is a major failing considering that oil and gas development is concentrated in one single regional area.

**The Surface Rights Act.** The *Surface Rights Act* enables developers to access their mineral rights for the purpose of resource extraction. The Act provides a procedure to acquire and utilize surface rights, and a compensation mechanism for landowners to grant entry onto their land, who otherwise may be using that land and be subject to loss of income or enjoyment. The Act also provides a mechanism for ensuring that lands are maintained, preserved and

restored after use. In the case of a dispute over land entry, restoration or any other related activity, the Act provides mechanisms for solving disputes through the mediation procedure that is overseen by the Surface Rights Board (Surface Rights Board of Manitoba, 1997).

Because much of Manitoba's oil development takes place on private cultivated land, restoration is often focused on the ability to grow crops after the company is finished with the site. Under the *Surface Rights Act*, whoever owns the mineral rights (also referred to as subsurface rights) is entitled to access the land to work and remove the minerals. Therefore, if the owner of subsurface rights would like to gain access to the subsurface, freehold landowners that only own the surface rights by law must enter into a leasing agreement. If a leasing agreement cannot be negotiated, the owner of the subsurface rights can apply to the Surface Rights Board for mediation or an order permitting access to the land (Surface Rights Board of Manitoba, 1997).

The way that surface and subsurface rights are structured in Manitoba puts landowners in a position of little power compared to the province and industry. If a landowner does not agree with oil development on their land, they have no legal recourse to prevent entry. In this situation, the subsurface rights owner has four options: 1. give up entirely, 2. negotiate with the landowner, 3. go to the Surface Rights Board to gain entry, 4. assess if access can be obtained through another surface rights owner. Of these options, giving up is not feasible when the possibility of losing thousands of dollars is at stake, and the three others all end with access to the subsurface. If the landowner disagrees and any of the three latter options are chosen, they will either receive no compensation if the company is able to gain access elsewhere, or be engaged with lawyers, industry and the Surface Rights Board. If a landowner agrees to access, they have potential for a

simple legal process to negotiate well placement and compensation terms. Compensation can be a nebulous process with each company negotiating compensation directly and privately.

**The Surface Rights Board.** The Surface Rights Board is the quasi-judicial board responsible for the enforcement of the *Surface Rights Act* (Surface Rights Board of Manitoba, 1997). The board is made up of three or more people, each appointed by the province. Although the board oversees the entire Act, the main function of the board is to mediate between landowners and proponents if they cannot come to an agreement for compensation when negotiating a Surface Rights Lease.

After an operator is successful in securing the lease, developing the site and has finished extracting oil from the site, an operator must apply to the Director of the Petroleum Branch at the Department of Manitoba Growth, Enterprise and Trade, formerly the Department of Manitoba Energy and Mines (Surface Rights Board of Manitoba, 1997) to close the well. Once an application is filed, an inspector will witness the closing of the well, which consists of sealing the well and backfilling the excavation site. The site will be restored and contoured, topsoil could be applied, and it must be brought to as close as its original state as possible. The developer remains responsible for the future rehabilitation of the site if the initial efforts did not prove to be effective; e.g., if in subsequent growing seasons crops do not grow as well as surrounding ones. This is in accordance with Section 58 of the *Oil and Gas Act* and Section 36 of the *Surface Rights Act*. Within these Acts there is also a mechanism that allows for the negotiation of alternative arrangements for restoration and rehabilitation between the developer and landowner (Surface Rights Board of Manitoba, 1997).

Introducing new plants to an environment will change habitat and can impede crop growth. In response to these effects, there are several levels of protection against noxious weeds

in policy and legislation, some being related oil development. The control of weeds on an oil site and sites affected by oil development activity is the responsibility of the operator. There are two mechanisms within the *Surface Rights Act* to rid sites of weeds: alert the operator and the owner can enter a site and destroy the weeds, or the owner may apply to the Board for an order requiring the operator to comply. Compensation can be ordered for the surface rights owner if the owners themselves have removed the noxious weeds (Surface Rights Board of Manitoba, 1997).

In Manitoba, private landowners are an important part of the oil economy and have some influence over if, where and how oil is developed on their land surface. The majority (80%) of oil exploration and development is on land owned by private landowners (Manitoba Growth, Enterprise and Trade, 2017b). The remaining 20% of oil activity is on Manitoba Crown land (Manitoba Growth, Enterprise and Trade, 2017b). Companies negotiate with landowners in areas where leases are available. Landowners are presented with an incredible opportunity to receive payments that can include a signing bonus, rental payments and royalties. Royalties can range from 12.5% to 20% of gross production sales value. In 2012 it was estimated the provincial government paid out approximately \$190 million in royalties before payment of provincial and federal taxes to freehold owners (Manitoba Growth, Enterprise and Trade, 2017e).

### **Alberta and Saskatchewan Comparison**

In this section, I contextualize Manitoba by providing information about two oil-producing provinces in Canada – Alberta and Saskatchewan. As is the case in Manitoba, habitat, wildlife protection, and industrial development are governed by a mix of laws, policies, guidelines, and codes across Canada. From the beginning of environmental protection being a

part of modern law and policy, the complex structure of authority over environmental protection has “created ample opportunities for ambiguity, redundancy, conflict and evasion of responsibility” (Harrison, 2001:5). When drawing comparisons between jurisdictions, situational differences must be recognized to fully understand the limitations of a comparison. There are many factors to consider when comparing Alberta and Saskatchewan law and policy to Manitoba, including but not limited to: economy, geography, population, and political and administrative will.

Like Manitoba, Alberta has developed conventional oil for decades. Unlike Manitoba, energy policy development in Alberta is now focused on oil sands policy. Oil sands development has a larger impact on surface habitat than conventional oil and can be seen from space (NASA Earth Observatory, 2017) while a single conventional oil lease site is approximately 100 metres by 100 metres (Canadian Society for Unconventional Resources, 2017). The larger area that oil sands use likely necessitates much of the regional planning, habitat protection/banking, and water monitoring conducted in the province. This may be the reason for the well-developed laws and policies in Alberta.

Saskatchewan is more similar to Manitoba, as Saskatchewan’s oil market developed around the same time and oil has been extracted from some of the same geological formations (Canadian Association of Petroleum Producers, 2017b). However, Saskatchewan has an older and much larger petroleum market than Manitoba (Canadian Association of Petroleum Producers, 2017b), which could be the reason behind a more developed policy framework. Saskatchewan and Manitoba share a border and share some of the same aspen parkland habitat (Canadian Council on Ecological Areas, 2016) where oil is developed in both provinces.

### **Governance.**

**Alberta.** Oil and gas in Alberta is regulated by the Alberta Energy Regulator (AER), which takes direction from the Government of Alberta. The AER collaborates with Alberta Environment and Parks and Alberta Energy; through this partnership, several policy and suggested changes to regulations have been identified and recommended to the government, including groundwater protection, wellbore integrity, air quality, noise and light, and induced seismicity (Alberta Energy, 2017a). The main act that Alberta uses to regulate conventional oil is the *Oil and Gas Conservation Act* (Government of Alberta, 2018), which is very similar to Manitoba's, but does have some key environmental protection differences outlined in a separate section in this chapter.

Alberta and Manitoba are dissimilar as to where oil and gas is placed their respective frameworks, as Manitoba does not have a unique oil and gas regulator working in collaboration with protected spaces and energy government departments.

**Saskatchewan.** Saskatchewan's oil and gas development is overseen by the Saskatchewan Economy Department. The Saskatchewan Economy Department's mission is to "advance economic growth to generate wealth and opportunity in Saskatchewan" (Government of Saskatchewan, 2018a). Several other departments have responsibilities regarding oil and gas development. Saskatchewan Environment and Saskatchewan Agriculture and Food monitor oil lease sites usually through a complaint or issue-driven process, unless the lease is in an environmentally sensitive area. If the area is deemed environmentally sensitive, a monitor is assigned on site to ensure all commitments outlined in the environmental plan are being followed. Saskatchewan Economy monitors the physical aspects of drilling (i.e., how deep the rig is drilling) while the rig is active. In the case of an oil spill, Saskatchewan Economy is also

responsible for ensuring proper clean-up procedures are employed and has the authority to shut the rig down until any spills are effectively remediated (Provincial Auditor Saskatchewan, 2012).

In Saskatchewan, oil and gas is mainly governed through the *Oil and Gas Conservation Act*. The purposes of the Act are outlined in S.3: “to conserve oil and gas resources and also to protect the environment” (Government of Saskatchewan, 2015). Section 3. (3) states, “The minister may determine when the public interest requires that one purpose set out in subsection (1) be given priority over another” (Government of Saskatchewan, 2015). Like the Manitoba *Oil and Gas Act*, this could be interpreted as economics being a higher priority over environment or public health.

Saskatchewan and Manitoba demonstrate an overall imperative to develop oil by placing responsibility in departments with development-focused mandates. In Manitoba, oil and gas activity is overseen by the Petroleum Branch, which is a part of Manitoba Growth, Trade and Economy Department. This is a similar placement to Saskatchewan, which is one of the top energy producers in Canada and was predicted to develop more conventional oil than Alberta in 2017 (Petroleum Services Association of Canada, 2017).

### **Environmental protection.**

*Alberta.* Alberta has requirements to ensure lands that have been altered by oil development are reclaimed. Alberta requires that 100% of all the land used in oil development is returned to “a self-sustaining ecosystem with local vegetation and wildlife” (Canadian Association of Petroleum Producers, 2017b).

In Alberta, the *Environmental Protection and Enhancement Act* establishes the Environmental Protection and Enhancement Fund (Government of Alberta, 2017a). This fund is paid into from a variety of industry streams and is used to protect and enhance the environment

and is also used as a fund to cover costs associated with environmental emergencies. The enforcement of environmental offenses under the Act have a unique tool for penalization that focuses on ecosystem enhancement. In some cases penalties for some mining infractions have been donations to NGOs like Ducks Unlimited Canada for habitat enhancement projects (Alberta Environment, 2010).

Alberta has considered water management in its oil and gas development regime. It has regulatory requirements to prevent the fluids from mixing with groundwater or surface water, which could be damaging to habitat. Operators are required to share documentation demonstrating that the well site was selected with consideration of potential contamination, and they must have a plan to monitor and test it to ensure the well integrity has not been compromised. The operator must also have a well control plan to manage any impacts in case they occur. There are also setback distances for wells and on top of bedrock. Operators must use environmental friendly chemical additives or fluids in order to protect groundwater in case a breach does occur (Alberta Energy Regulator, 2017a). For long-term projects that require long-term water withdrawals, Alberta asks that industry seeks out deep saline groundwater sources and other conservation alternatives to avoid using fresh water (Government of Alberta, 2006).

Alberta's regulatory regime starts in the pre-assessment phase of development. Under the *Environmental Protection and Enhancement Act*, a pre-disturbance assessment and conservation and reclamation plan have to be submitted to the Alberta Energy Regulator as a part of the application package (Alberta Energy Regulator, 2014a). Alberta has provided a public manual for minimizing surface disturbance in native prairie in parkland areas (Alberta Energy Regulator, 2014b).

It appears that Manitoba's environmental protection lags behind Alberta. Manitoba requires that lands be returned to the satisfaction of the landowner, which does not provide any explicit habitat protection. Guidelines for restoration on Crown lands are not publicly unavailable in Manitoba and may not exist. Only the Manitoba government and operators who have environmental plans specific to the piece of land they are drilling on have access to that information. As discussed, only 14 environmental plans were uncovered in Manitoba. Manitoba also does not require a pre-disturbance assessment under the *Oil and Gas Act* or its associated regulations and does not provide any public information to operators on minimal disturbance standards. Manitoba does not have a government-led environmental protection fund that NGOs who are working on habitat conservation to benefit from or mandated penalties in the form of direct payments to NGOs. Manitoba does not appear to have robust water monitoring regulations or policies like Alberta appears to.

**Saskatchewan.** The *Oil and Gas Conservation Act* outlines several specific parameters designed to protect environmental health. It grants the government the power to amend or revoke a license if there are issues with the protection of the environment, reinforced with specific language in specific sections: S12(1), S17(1)(a), S17(1)(m), S17.01(1) & (2), S18(a)(v), S18(d)(i), and to force a developer to remediate lands if they are not following their legal duties: S18(g), S59.1(1). If the developer cannot/will not remediate lands, in S20.91(1) the Act also establishes further environmental protection through the *Oil and Gas Orphan Fund* designed to fund the remediation of any projects that are not being taken care of by the developer. In recent updates to the Act, setbacks from a water body have been increased and testing/monitoring requirements have been expanded (Government of Saskatchewan, 2015).

On Crown land administered by Saskatchewan Agriculture and Food, which are parcels generally leased to farmers, there are several pieces of policy that oil developers must adhere to (Prairie Conservation Action Plan, 2005). Saskatchewan Agriculture and Food supports oil and gas exploration only under the following principles:

- orderly and efficient resource management through proper planning and development;
- environmental conservation and protection as an integral component in the planning and development process;
- conservation of Saskatchewan's remaining rangelands;
- minimal environmental (specifically soil) disturbance;
- restoration of the land to pre-development conditions;
- use of native plant species when re-seeding or revegetation is a part of the site restoration (Prairie Conservation Action Plan, 2005).

Saskatchewan Agriculture and Food released exploration guidelines based on these principles, and industry shoulders the responsibility to follow these guidelines (Prairie Conservation Action Plan, 2005). Saskatchewan Agriculture and Food also requires a project proposal/environmental plan that outlines the following:

- a survey plan detailing the exact location of all proposed access roads, power lines, pipelines, borrow pits and temporary work camps, as well as permanent facilities such as wells, access routes, compressor stations, and flow line right of way;
- any proposed work near water bodies;
- any locations where grade or corners in the proposed route will require more than the regulation working space;
- locations of any sensitive areas such as steep slopes and water bodies;
- locations of any existing features such as roads, seismic lines and natural openings that may be used as access routes;
- the legal survey plots of all well sites, compressor, meter and battery stations, pipelines and access roads;
- a waste management plan;
- heritage resources;
- a site assessment with a description of the general landscape, soil type and vegetation cover;
- measures to minimize surface disturbance and to safeguard any unique landscape features and/or rare or endangered flora or fauna
- measures to reclaim the land when the lease expires (Prairie Conservation Action Plan, 2005).

After a prospective oil developer submits an environmental plan, it is reviewed and approved by Saskatchewan Agriculture and Food and Saskatchewan Environment. When permits are issued, special project requirements are noted as clauses in the Saskatchewan Agriculture and Food surface lease. Whenever oil and gas exploration occurs where native vegetation is present, minimal disturbance drilling techniques and plough-in pipelining are encouraged. Site restoration and reseeded with native grass mixtures are also required (Prairie Conservation Action Plan, 2005).

In Saskatchewan, oil and gas development in certain predefined areas may require a more detailed project proposal called an Environmental Protection Plan or Environmental Impact Assessment. Most conventional oil and gas developments are not subject to that requirement. Saskatchewan Environment has compiled a public list of these areas based on known environmental sensitivities and/or public concern regarding development activity (Prairie Conservation Action Plan, 2005). This list is public and can be viewed by prospective developers to aid in their planning and decision-making processes.

Once restoration is complete, Saskatchewan Agriculture and Food inspects the site for proper restoration and vegetation establishment (Prairie Conservation Action Plan, 2005). Saskatchewan Agriculture and Food has public restoration guidelines and procedures in place that developers must follow for all Saskatchewan Agricultural Crown Lands. Saskatchewan Agriculture and Food has published “Restoration for Saskatchewan’s Agricultural Crown Rangelands”, which outlines guidelines and procedures for developers. Guidelines include:

- all development must minimize the extent of surface (soil) disturbance, especially on native prairie; plant material used for restoration must be free of noxious weeds as specified under the Canada Seeds Act and Saskatchewan’s Noxious Weeds Act;
- no exotic plant materials are to be used for restoration;

- any plant material to be used for reseeded or revegetation purposes must be approved by a Saskatchewan Agriculture and Food Agrologist (Prairie Conservation Action Plan, 2005).

Saskatchewan has detailed publicly available guidelines for operators on how to conduct surveys, entitled *Oil and Gas Development Survey Guidelines on Saskatchewan Crown Agriculture and Resource Land* (Government of Saskatchewan, 1999). The guidelines strongly recommend that proponents discuss their plans with branch staff early to avoid rejection. Some surveys on certain Crown land, such as provincial forests, parks, and wildlife development lands must be approved prior to surveying. Sketches submitted to Saskatchewan Environment must include all existing developments and alterations to water bodies and approximate locations of trees, shrubs, and other relevant vegetation. There are maximum sizes for lease sites (100m x 100m) and in the case of development on wildlife lands, the maximum lease size is reduced to 100 metres by 80 metres. The guidelines specify that on wildlife habitat land, alterations to habitat are to be minimized and existing trails and seismic lines should be used when possible and where no route exists, a route that is as direct as possible should be made. Saskatchewan also has set-back distances from wetlands, and requires that well sites, access routes, compressor stations, battery sites, and other infrastructure are at least 90 metres away from any waterbody or watercourse with current or potential fish populations, and 45 metres for those without fish-bearing populations. Clearing or limbing of trees to establish sight lines for survey purposes is permitted but must be minimized and at no point can site lines exceed 1 metre in width (Government of Saskatchewan, 1999).

**Manitoba.** Manitoba is not transparent regarding how environmental plans are mandated, how stipulations on lease sites are developed or monitored, or what minimal disturbance is defined as. Manitoba may have an *internal* minimal disturbance policy, however,

personal communication with Manitoba's Petroleum Branch confirmed that their process or procedure is not publicly available. When the Petroleum Branch receives an application for a new oil lease, the lease application is circulated to several other branches such as the heritage branch or protected areas branch. I was unable to obtain a written document or verbal confirmation of which branches applications are sent to, or an official process the Petroleum Branch uses for evaluating lease sites for habitat impacts. The only public evidence that habitat conservation is taken into account in oil development are several license documents describing high-level requirements of what an oil developer must do on lands where species of concern or features, such as a riparian area, exist (Appendix H). For example, the lease agreement between the Manitoba government and Molopo Energy Canada LTD has a requirement to "...exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's sparrow, the loggerhead shrike and the Sprague's pipit birds;" however, minimal disturbance is not described elsewhere in the document (Government of Manitoba, 2010). Of the thousands of license agreements, I was only able to uncover 14 that had site-specific environmental requirements (Appendix H). However, the requirements are vague and specific requirements are unavailable from the Petroleum Branch website and personnel that I contacted. It is possible that Manitoba has a robust pre-disturbance planning process but there is little public evidence proving that this is the case.

### **Stakeholder and public involvement.**

*Alberta.* Alberta has a stakeholder group called the Oil Sands Sustainable Development Secretariat that collaborates with "ministries, industry, communities and stakeholders to address the social, infrastructure, environmental and economic impacts of rapid growth issues in the oil sands regions of Alberta" (Alberta Energy, 2017b). Many oil sands producers participate with

governments and NGOs to be a progressive and constructive part in the oil sands development. The oil sands industry participates in multi-stakeholder land-use strategies and environmental monitoring programs (Natural Resources Canada, 2016). Although oil sands development is dissimilar to conventional oil development, the existence of multi-stakeholder groups in oil development is promising for habitat conservation.

In Alberta, operators who use hydraulic fracking in their wells must by law disclose the fracking fluids they add to the water for their operations (Alberta Energy Regulator, 2017b). This information is then publicly posted on FracFocus' website for public viewing (FracFocus, 2017). Several other jurisdictions mandate this public disclosure, including British Columbia, Northwest Territories, and New Brunswick (FracFocus, 2017). In Alberta, if a fluid used in fracking is returned to the surface, its release into a natural body of water is prohibited, even after/if it is treated (Alberta Energy Regulator, 2017c). Manitoba does not participate in public posting via FracFocus or the government website, although fracking fluid inputs are tested by companies and reported to the province (Government of Manitoba, 2017o).

Citizens in Alberta have open access to online resources for navigating the various laws, guidelines, and policies for oil and gas development. These resources, developed by NGOs, attempt to guide citizens through the policy regime as participants in oil and gas development. The Pembina Institute published the *Landowner's Guide to Oil and Gas Development* and updates it regularly to ensure it is a useful and relevant resource (Pembina Institute, 2016).

**Saskatchewan.** Saskatchewan has a stakeholder group called the Saskatchewan Petroleum Industry/Government Environment Committee (SPIGEC), which was formed in 1992, and responds to the need for government and industry to work co-operatively to resolve provincial environmental management issues while ensuring the continued growth of the oil and

gas sector (Government of Saskatchewan, 2017b). The group is composed of several government departments and industry associations, and occasionally collaborates with others on a project- or issue-specific basis. The committee has successfully worked on many issues and publications.

Environmental issues currently being addressed are numerous:

- Climate Change
- Venting and Flaring
- Remediation Guidelines
- Management Standards
- Representative Areas Network
- Land Use Planning
- Legislation and Process
- Federal/Provincial Co-ordination
- Harmonization/Canada-Wide Standards
- Canada Environmental Assessment Act
- Species at Risk Legislation
- Wildlife Habitat Protection Act Amendments
- Review of Saskatchewan Environmental Protection Legislation
- Cumulative Impact Assessment

The committee has released numerous environmental protection guidelines that have been developed in partnership with government and industry. To date, guidelines released by the committee include waste management, restoration on cultivated fields, restoration of spill sites on agricultural and pasture land, remediation and site assessment for upstream oil, and environmental guidelines for upstream oil development (Government of Saskatchewan, 2017b).

Landowners in Saskatchewan have several publicly accessible resources to help inform them of their rights in regard to compensation, public health, and environmental health. The Saskatchewan Environmental Society commissioned the writing of the guidebook *When the Oilpatch Comes to Your Saskatchewan Backyard: A Citizens' Guide to Protecting Your Rights* (Fortugno, 2004) for Saskatchewan citizens to know, understand, and protect their rights in areas of oil development. The guidebook takes readers through the legal rights of landowners and

occupants, including resource ownership, a step-by-step guide to oil development, environmental emergencies, common law considerations, a comparison between oil regulations and operations in Alberta and Saskatchewan, and a long list of resources for landowners. It is written in plain language so all citizens are able to understand and it is intended to create a level playing field between landowners and oil developers (Fortugno, 2004). The University of Saskatchewan, Centre for Studies in Agriculture, Law and the Environment also published a guide for landowners entitled *Negotiating Surface Rights* (University of Saskatchewan, 1998) that details considerations for landowners in their private negotiations and outlines environmental concerns for users.

**Manitoba.** In contrast, Manitoba citizens have few comprehensive public resources that are easily accessible both in procurement and plain language writing. Some information provided by the Freehold Owners Association (FHOA) (2007) is written in lay language to aid Manitoba landowners. Without paying for membership, which presumably would entitle a member to additional information, the FHOA website acts as a general online resource for freehold landowners in the Prairie provinces. FHOA is a not-for-profit organization with the mandate to provide information, research, education, and advocacy for freehold owners to industry regulators and industry (Freehold Owners Association, 2007). For a landowner who is considering allowing oil development on their property and seeking information, it may be difficult to justify the costs of signing up. Manitoba does have a surface rights guide (Surface Rights Board, 1997) that explains the laws and processes of oil development in Manitoba. In comparison, Alberta and Saskatchewan have a wealth of information on current policy, practice, and potential environmental impacts pertaining to oil development in their respective jurisdictions. In Manitoba, there is much less information publicly available with much more

development occurring on and near freehold land. This could be a barrier to a landowner having sufficient information regarding environmental impacts of oil and gas development on their land and with a corresponding adverse effect on the environment.

## **Chapter Summary**

The majority of law and policy examined in this chapter has the explicit intention of protecting habitat; however, these laws and policies point to a neoliberal environmental governance model and fall short of true habitat protection in several ways. Acting in true neoliberal fashion, ample discretionary power in each act allowed for politicians to have too much power to be able to allow prohibited activities within protected areas, meaning that protected areas are not protected against any and all development. The most concerning finding in the *Wildlife Act* was that several activities were specifically prohibited by name (hydroelectric development, forestry, etc.) but oil and gas development was absent from that list.

In Manitoba there are several acts that protect specific habitat from industrial development, but no acts, regulations, guidelines, or public processes are specific to practical habitat protection in areas of oil development. The *Provincial Parks Act*, *Wildlife Act*, *Ecological Reserves Act*, *Environment Act* and *Endangered Ecosystems and Species Act* all contain sections that describe the protection of habitat against development in specific areas. Although there are several mechanisms in the *Surface Rights Act* used to ensure agricultural producers have high soil quality, acceptable noxious weeds levels and fair compensation for the loss of use of land has been delivered (Surface Rights Board of Manitoba, 1997). However, there are no specifications in the *Surface Rights Act* to ensure that native prairie vegetation is restored to a

certain level. It appears that there is no specific act that ensures protection of habitat and species in areas of oil development in Manitoba.

In this chapter, I have reviewed law and policy in Manitoba related to habitat protection and oil development to understand more about the legal and policy foundation of the day-to-day habitat protection programming in Manitoba. So far in this thesis through literature review in Chapter 1, 2, and 4 I have uncovered that some of Carter et al.'s (2017) criteria for a neoliberal environmental governance model have potentially been met by Manitoba. In this chapter, I continue to support the notion that Manitoba is operating under a neoliberal environmental governance model in regard to oil development and habitat protection in Canada.

A review of several of the Acts uncovered that Manitoba has not necessarily decreased regulations that constrain corporations' access to environmental resources, but that in some instances strong regulation protecting resources did not exist. All of the examined Manitoba legislation (*The Sustainable Development Act*, the *Provincial Parks Act*, the *Wildlife Act*, the *Oil and Gas Act*, the *Endangered Ecosystems and Species Act*, the *Ecological Reserves Act*) allow for development in wildlife habitat either explicitly, and/or through discretionary powers granted to the Minister through these acts. The *Surface Rights Act* grants access rights to entities who own or lease mineral rights, even when they have land currently in production, a conservation agreement on it, or when they may not want to agree to have a company access oil on their property. The *Wildlife Act* does not specifically mention oil and gas development as being a prohibited activity in protected areas but does explicitly list a lengthy list of other activities. Oil development, unlike most other natural resource extractive industrial development is administered by the Petroleum Branch under the *Oil and Gas Act*. These examples all clearly

demonstrate a leaning towards the economic growth mandate of the Petroleum Branch/Manitoba Growth, Enterprise and Trade Department by ensuring that legislation is a weak barrier.

Manitoba has demonstrated a reduction in government staff and programs affecting the environment through the amount of lease sites with environmental conditions on them. From a license search, guided by a Petroleum Branch employee, it appears that only 14 licenses have conditions to protect specific habitat or wildlife while there are thousands of oil lease sites in the province. This means that there are far more lease sites with no specific legal protection for habitat or wildlife.

Manitoba has devolved environmental regulatory responsibility to lower levels of government. Negotiation for compensation and placement of oil site is left in between industry and landowners when oil sites are on private land. As per the Surface Rights Act, the *Surface Rights Board* only intervenes in the case of a dispute. The responsibility is then held by industry and landowners for compensation and placement of oil sites. The power imbalance and financial interests of industry could lead to sites placed in areas that would be destructive to habitat, or, unfair financial compensation.

Further to devolving responsibility to lower levels of government, the emphasis on government regulations are not necessarily a tool that could be helpful in this regard. The wording in the “Sustainable Development” section of the *Oil and Gas Act* clearly favours resource development as there is a clear emphasis having enough resource available for economic gains in the future. Sustainable development is meant to fully and equally consider the current and future social, economic and environmental impacts and interests.

Citizen engagement with environmental regulation is limited in the examined laws, although other laws in Manitoba actively facilitate and emphasize public participation.

Responsibility for oil and gas activities fall under the *Oil and Gas Act*, and not the *Environment Act*. The *Oil and Gas Act* has no mechanism for citizen engagement, while the *Environment Act*, which concerns most industrial development in Manitoba, does. The projects that fall under the *Environment Act* range in footprint much smaller than an oil lease site, and of course to much larger like hydroelectric generation development and transmission. The *Sustainable Development Act*'s reporting on indicators, specifically the Biodiversity and Habitat Conservation indicator was stopped after 2009. The limited amount of engagement opportunities and information regarding the status of endangered species further separates the public from knowledge of oil and gas impacts in Manitoba. This in turn can lead to less political pressure for programming to protect the environment.

## Chapter 5: Perceptions of Manitoba’s oil policy framework and conservation

In this chapter, I present results from participant interviews in five sections structured by the criteria described in Chapter 3 that indicate a neoliberal environmental governance model distilled by Carter et al. (2017) derived from Heynen et al. (2007). In each section, I have further organized interview results relevant to each of the 15 key findings from chapter 1, 2 and 4; some key findings are grouped because they support the same contention. Each finding includes a brief discussion. Table 2 outlines the data themes and sub-themes from my data that I use in each section and which key finding it is applied to.

Policy, legislation and programming review results have strongly suggested that Manitoba is operating under a neoliberal environmental governance model, which is a barrier to conservation. Interviews focused on participants’ understanding of how oil and gas legislation translates into programming and daily practices, and if those programming and daily practices protect habitat in Manitoba.

**Table 2: Heynan/Carter Criteria, Key Findings, Data Themes and Sub-themes**

<b>Heynan/Carter Criteria</b>	<b>Key Findings from Chapter 1, 2 and 4</b>	<b>Data Themes and Sub-themes</b>
Decreasing regulations that constrain corporations’ access the environmental resources	<ul style="list-style-type: none"> <li>• The <i>Surface Rights Act</i> grants access rights to entities who own or lease mineral rights, even when landowners have land currently in production, is subject to a conservation agreement, when they may not want to agree to have a company access oil on their property, or when other conservation values like wildlife exist on the land. (Chapter 4)</li> <li>• All of the Manitoba legislation that I examined (The <i>Sustainable Development Act</i>, the <i>Provincial Parks Act</i>, the <i>Wildlife Act</i>, the <i>Oil and Gas Act</i>, the <i>Endangered Ecosystems and Species Act</i>, the <i>Ecological Reserves Act</i>, etc.) allow for development in wildlife habitat either explicitly,</li> </ul>	<p><b>Theme(s):</b> Administrative and Political Will</p> <p><b>Sub-theme(s):</b> Economics, Law and Policy, Private Land, Relative Impact, Sustainable Resource,</p>

	<p>and/or through discretionary powers granted to the Minister through the Act. (Chapter 4)</p> <ul style="list-style-type: none"> <li>• The <i>Wildlife Act</i> does not specifically mention oil and gas development as being a prohibited activity in protected areas but does mention other activities explicitly. (Chapter 4)</li> <li>• Oil development, unlike most other natural resource extractive industrial development is administrated by the Petroleum Branch under the <i>Oil and Gas Act</i>. The Petroleum Branch is housed under the Manitoba Growth, Enterprise and Trade Department, which has a mandate for economic growth in the province. (Chapter 2) (Chapter 4)</li> <li>• The Manitoba Enterprise, Growth and Trade Department (that houses oil development) is currently asking businesses, non-profits, local governments and private citizens to identify where “red tape” is a deterrent to economic growth and what they can do to make it easier to work together. (Chapter 2)</li> </ul>	
<p>Reducing government staff and programs protecting the environment</p>	<ul style="list-style-type: none"> <li>• From an oil well license search, guided by a Petroleum Branch employee, it appears that only 14 licenses have conditions to protect specific habitat or wildlife. (Chapter 4)</li> <li>• A review of the Manitoba Growth, Enterprise and Trade Branch website, including the mandate letter to the minister, demonstrating no oil-development specific habit conservation policy or overriding imperative of sustainable development/environmental considerations. (Chapter 1)</li> <li>• Tomorrow Now, Manitoba’s former Green Plan and the new Climate and Green plan both do not present specific actions on mitigating environmental impacts from oil development, or on how the Manitoba government will protect grasslands habitat, prairies or listed bird species. (Chapter 1)</li> </ul>	<p><b>Theme(s):</b>  Administrative and Political Will, Cumulative Effects Assessment,</p> <p><b>Sub-theme(s):</b>  Action, Enforcement and Monitoring, Government Priorities, Regional Planning, Biodiversity, Conservation, Cumulative Effects, Impacts, Infrastructure, Pipelines, Species at Risk, Economy, Politics</p>

<p>Devolving environmental regulatory responsibility to lower levels of government</p>	<ul style="list-style-type: none"> <li>• Negotiation on compensation and placement of oil sites is left in between industry and landowners. The Surface Rights Board intervenes in the case of a dispute. This results in the out-sourcing of regulation to industry. (Chapter 4)</li> <li>• Canada has in part facilitated in devolving responsibility in Manitoba as a result of the <i>Constitution Act, 1867</i> and the <i>Natural Resources Acts, 1930</i>, by giving Manitoba and other provinces jurisdiction over lands and resources and setting a precedence. (Chapter 2)</li> <li>• Environmental regulatory responsibility for oil and gas is overseen by the Petroleum Branch, which has little capacity and regulatory power to protect wildlife and habitat. (Chapter 2)</li> </ul>	<p><b>Theme(s):</b> Administrative and Political Will,</p> <p><b>Sub-theme(s):</b> Subsurface Rights, Surface Rights</p>
<p>Privatizing environmental regulation (out-sourcing to industry; emphasizing market mechanisms rather than government regulations)</p>	<ul style="list-style-type: none"> <li>• NGOs and industry in Manitoba have worked together to develop minimal disturbance standards to fill gaps in government policy in Manitoba.</li> <li>• Manitoba’s current private land conservation approach is to grant legal authority to NGOs such as Ducks Unlimited, Manitoba Habitat Heritage Corporation and Nature Conservancy of Canada for procurement and management of private lands.</li> <li>• Negotiation on compensation and placement of oil sites is left to industry and landowners. The Surface Rights Board only intervenes in the case of a dispute.</li> <li>• Oil production has doubled since 2007, and in 2012, staff resources remain unchanged, reducing the ratio of monitoring staff to oil sites substantially. In response to this, the Petroleum Branch has streamlined their process to deal with the increase of oil license applications. As a result, monitoring responsibility falls on the landowner, investigations are complaint-driven and reporting is almost entirely industry-led and unverified by Branch staff. (Chapter 2)</li> <li>• Manitoba has an attractive investment climate and in 2012 ranked best in Canada and 5<sup>th</sup> best in the world based on favourable taxation, the lower cost of regulatory compliance, and certainty over favourable (to industry) environmental regulations. In 2016, Manitoba ranked lower due to “negative</li> </ul>	<p><b>Theme(s):</b> Administrative and Political Will</p> <p><b>Sub-theme(s):</b> Easements, Industry Co-operation, Minimal Disturbance</p>

	<p>sentiment related to regulatory duplication and inconsistencies, environmental regulations, and taxation in general”. (Chapter 2)</p> <ul style="list-style-type: none"> <li>• The “Sustainable Development” section of the <i>Oil and Gas Act</i> favours the sustainable development of the <i>resource</i>, emphasizing having enough resource available for economic gains in the future (Chapter 4)</li> </ul>	
Limiting citizen engagement with environmental regulation	<ul style="list-style-type: none"> <li>• The <i>Oil and Gas Act</i> has no mechanism for citizen engagement, which limits attempts at effective governance (Chapter 2) (Chapter 4)</li> <li>• The Sustainable Development Act’s reporting on indicators, specifically the Biodiversity and Habitat Conservation indicator was stopped after 2009. (Chapter 4)</li> <li>• Some participants, other researchers (Hlushko, 2017) and myself, have been met with silence on answer to our questions regarding oil and gas operations and habitat protection in Manitoba.</li> </ul>	<p><b>Theme(s):</b> Administration and Political Will, Stakeholder and Public Involvement</p> <p><b>Sub-theme(s):</b> Collaboration, Community Pastures, Consultation, Education, Public Information, Stewardship</p>

### Decreasing Regulations That Constrain Corporations’ Access to Environmental Resources

My consideration of the results presented in Chapter 1, 2 and 4 suggest that Manitoba has few regulations and policies for strong protection of natural landscapes. It also suggests that Manitoba has weak habitat protection laws, policies and programming and has shown the aspiration to decrease current regulations to reduce constraints on industry’s access to natural resources. This is apparent in the current and former environmental strategies TomorrowNow, Manitoba’s Climate and Green Plan and Manitoba’s legislation. Interview results are consistent with this contention. The interviews suggest that access to oil resources is all but guaranteed through the *Surface Rights Act*, while other habitat-protection focused acts are undermined by

the absence of protection or discretionary powers built into all examined acts and placement of oil and gas development within a department with an economic development mandate. Below, I relate participant's comments to each of the key findings in Chapter 1, 2 and 4 to demonstrate how Manitoba's environmental governance model plays out in day to day operations.

### **Key Finding 1**

- The *Surface Rights Act* grants access rights to entities who own or lease mineral rights, even when landowners have land currently in production, is subject to a conservation agreement, when they may not want to agree to have a company access oil on their property, or when other conservation values like wildlife exist on the land.

The *Surface Rights Act* is the act that provides the procedure for accessing subsurface rights, the payment for surface rights and dispute resolution. Most (~80%) conventional oil development in Manitoba takes place on private land (Manitoba Growth, Enterprise and Trade, 2017b), with private landowners and industry negotiating compensation for access. The Act stifles private land conservation in two ways: 1. The Act is powerful and grants subsurface rights holders access to the subsurface with little or no environmental conditions, 2. The Act and the frame it is in gives a strong impression to landowners that oil development and habitat conservation are incompatible, hence discouraging landowners from entering into conservation easements.

Four participants felt very strongly that surface and subsurface access rights law and policy is skewed towards development and away from habitat conservation. Two participants (MBNGO01, MBNGO08) specifically stated that the *Surface Rights Act* trumps all other acts that are intended to protect the environment. This is possibly indicative of the government's priority and directly undermines private land conservation tools such as conservation easements.

The same participant stated “...we certainly don't have the power to tell the government that they need to change the whole legal framework” (MBNGO01).

Although not yet tested in court, two participants felt the way the *Conservation Agreements Act* was set up within the conservation framework was weak. They believe that the current set up still allows oil development on private land where easements existed due to agreements being easy to terminate and the powerful rights to access the subsurface through the *Surface Rights Act* regardless of there being a conservation agreement. Even the perception that that this is true lowers the effectiveness of the Act, as landowners may be discouraged from entering into a conservation agreement. A conservation easement or agreement does not guarantee protection, as there are several ways to legally leave an agreement.

Within the legislation and policy examined it is possible through omissions in protection, discretionary power and land use categories in parks and protected areas to legally allow degradation of habitat in areas with perceived protection (parks, endangered ecosystems and ecological reserves). The omission of oil and gas activity in the *Wildlife Act* provides a legal route for industry to potentially develop oil and gas within areas protected for wildlife such as WMAs. Discretionary power has been used to grant oil leases in areas where species at risk such as burrowing owl, Baird's sparrow, loggerhead shrike and Sprague's pipit. Several parks allow mining and other economic activities like Nopiming Provincial Park (Kusch, 2018) and oil and gas wells (in a reclamation process since 2015) in Turtle Mountain Provincial Park (Manitoba Parks, 2017).

One participant pointed out that when a conservation and oil interest are present most landowners and operators do not want to go through mediation and litigation, so they may end up negotiating without government or lawyers present and may settle on a placement or

compensation that is dissatisfactory. The right to surface access on land with a conservation easement remains untested in Manitoba law as landowners tend to comply with the *Surface Rights Act*. One participant summed up the contradictions built into this practice: “*The system puts everyone in an incredibly difficult situation.*” (MBNGO05)

Several participants are dissatisfied that the *Surface Rights Act* only protects specific interests of landowners and the crown, such as land use, compensation and royalties, but does little to protect the environment beyond invasive species concerns. One participant stated, “...*it isn't fair to be the good guy...*” (MBNGO03) in reference to the choice to drill or not drill in the name of environmental protection. According to some participants, landowners are faced with the difficult decision of making tens of thousands of dollars or to not allow access on their land. A participant pointed out that one compounding factor that places additional pressure on landowners is that if one landowner is successful in denying access to an oil company, the oil company will likely find another site and the other landowner would then get the financial benefits from drilling. In other words, the drilling would likely still occur, but someone else would benefit. Participants also pointed out that the *Surface Rights Act* was written when the majority of oil development was occurring on agricultural lands at a much lower volume.

One participant mentioned that although conservation agreements can dissolve because of the *Surface Rights Act* and in several other legal mechanisms, they are still an effective tool for persuading oil operators to avoid certain areas. Two participants did state that conservation agreements are more difficult to secure if oil development is already occurring in an area due to a perception that oil development cannot occur or is more difficult on lands with an easement. One participant stated that because of how oil development is organized, landowners have the

perception that money is being left on the table if native prairie is protected or left undeveloped, which affects the uptake of conservation agreement generally.

Three participants mentioned that the *Surface Rights Act* is outdated and does not reflect the current level of activity in Manitoba or the current reality of the type of landscape the government is giving seemingly barrier-free access to. As one participant points out,

*“...we're using a Surface Rights Act that was developed before we really had any kind of oil, significant oil activity in Manitoba. All the oil prior to that was typically in agriculture, the grain farming agriculture landscape. Down in Waskada. There was some around Virden. The pump jacks in Virden were so salty that there was barely any oil coming out of them. I would say yes, the legislation we have, looking at surface rights and habitat and the requirements for the oil companies are completely out of date. They don't even take that stuff [habitat] into consideration.” (MBNGO05)*

Most interviewees were concerned that the *Surface Rights Act* is a transactional act that facilitates access, rather than considering if access should be granted. This is concerning, as careful consideration to adding more ecological stress to an area with a high concentration of imperiled species and fragmentation should be taken. The *Surface Rights Act* could be altered to consider ecological factors when granting surface access.

## **Key Finding 2**

- All of the Manitoba legislation that I examined (The *Sustainable Development Act*, the *Provincial Parks Act*, the *Wildlife Act*, the *Conservation Agreements Act*, the *Endangered Ecosystems and Species Act*, the *Ecological Reserves Act*, the *Oil and Gas Act* and the *Surface Rights Act*, etc.) allow for development in wildlife habitat either explicitly, by omission and/or through discretionary powers granted to the Minister through the Act.
- The *Wildlife Act* does not specifically mention oil and gas development as being a prohibited activity in protected areas but does mention other activities explicitly.

Discretionary powers in Manitoba undermine the power of wildlife and habitat protection acts from any type of industrial development. Discretionary powers are a central mechanism for expanding development (Carter et al., 2017; Heynen et al., 2007) and are a root cause of

environmental degradation in Canada (Boyd, 2006). Manitoba government ministers and civil service directors have discretionary powers over oil development and habitat protection in Manitoba. For example, the director has used discretionary power in the *Oil and Gas Act* to ensure that very few (possibly only 14) leases have habitat protection considerations attached to their license (Appendix H). The species named in those considerations are listed as endangered or threatened in Manitoba and yet the government still allows for development that disturbs and alters their habitat. Therefore, Manitoba has proven that it is using discretionary powers to undermine habitat protection. This is not uncommon in Canadian environmental law (Boyd, 2007) and makes habitat protection very unpredictable (Gibson, 2012).

This is consistent with comments from many interviews. One participant felt that laws and regulations did not have to be changed, but the absence of action should be changed:

*“The other thing that I have to say somewhere is that the government has an endangered species law, and endangered ecosystems, and it applies on public and private land. If it was enforced, the drilling would not be happening inside the prairies. It would not be happening. They don't need to change regulations because grasslands already are part of them. However... we have the ability now to consider ecosystems. The previous NDP government listed the first 2, tall grass prairie and alvar. However, that doesn't apply everywhere. That one's different. It only applies on crown lands. These are the pieces of alvar that are protected, so that means anything goes on the other ones and private lands are still wide open.” (MBNGO08)*

One participant found the exclusion of oil and gas development activity from the *Wildlife Act* quite problematic.

*“The other piece of legislation that we've worked on recently was the Wildlife Act and wildlife management area regulations, describing what's allowed in a wildlife management area. There is no explicit exclusion of oil and gas development in the wildlife management area regulations, so that's a problem. We have exclusions for all the other industrial activities, hydroelectricity, transmission lines and development, and logging, and mining, but not explicitly oil and gas development. That's not good enough, right? That's a gap there. If we spell out logging and we spell out mining, we certainly can spell out oil and gas development in that legislation. That situation has gone on for 16 years and no one has said anything about it. There's cattle operations,*

*pasturing on some of these areas, on these protected lands, which is a non-conforming practice. There's no push or consideration on what we're going to do about that development. If they want to convert this pipeline to run heavy oil, that in our view would be an oil and gas development. When we reviewed the regulation. There's two separate regulations that dictate wildlife management areas. One of them is the specifics location of it, and one of them is the prohibitions. The entire document, prohibitions, doesn't mention oil and gas in it anywhere.” (MBNGO11)*

My review of Manitoba’s conservation acts and the results of interviews is concerning regarding the ability of these acts to actually protect habitat. The discovery that all of these acts are undermined by discretionary power and omissions that have facilitated oil and gas development is troubling. Most interviewees were also concerned that these acts did not protect areas set aside for wildlife or wildlife that are not in protected areas. This points to a major gap in the framework and should be partially remedied by transparency with discretionary power. If Manitoba will allow development near endangered or threatened species, the public should be made aware and have a chance to send feedback to Manitoba.

### **Key Finding 3**

- Oil development, unlike most other natural resource extractive industrial development, is administrated by the Petroleum Branch under the *Oil and Gas Act*. The Petroleum Branch is housed under the Manitoba Growth, Enterprise and Trade Department, which has a mandate for economic growth.

Several participants stated that they felt the overall imperative of the provincial government was quick economic gain, driving government to use their discretionary power to move away from conservation and towards quick access and development. This is illustrated by the following quotes and comments from participants.

One participant said the sustainable development portion of the *Oil and Gas Act* is clearly skewed, or at least interpreted in practice towards sustainable development of the oil resource

with less priority given to habitat conservation. One participant directly pointed out that there is no actual evidence in the regulations or departmental policy that the sustainable development section has been supplemented with any complimentary law or policy. This emphasizes the development imperative and apparent reluctance to follow through with environmental planning or “barriers” that could be perceived to slow economic growth. There is so little protection that some participants, all of whom work on the land and/or with industry, thought that there were actually no conservation “barriers” to development, as they were not aware of any pre-condition assessments for oil lease sites.

Further illustrating the low value that the government places on prairie habitat and wildlife, the same participant stated that “...*restoration of native grasslands is expensive, and it is not a current government priority to conserve or restore the remaining habitat...*” and “...*if someone tries to put a road through the edge of caribou habitat, there’s people that are going to speak, but the same cannot be said for prairie*” (MBNGO08). The placement of oil development with the Petroleum Branch and the absence of strong protective programming for grassland habitat supports an overall economic development imperative. Participants said that legislation in Manitoba was geared towards economic gain, and that environmental protection was a distant consideration, which implies an overall imperative to lower barriers to access resources.

Most participants knew that development on habitat and near protected wildlife took place because the low value that the government puts on habitat and the low value put on habitat. The mandate for economic growth and the clear use of discretionary power to grant access to protected habitat and wildlife is captured by this quote:

*“...I could cultivate Sprague’s pipit [endangered species] habitat and no one would say anything”. They also stated “...the government [Manitoba] has been completely aware of development in certain habitats and has awarded grants to companies to*

*try out a new crop in Sprague's pipit habitat.” (MBNGO08)*

Unless government experiences a radical shift in values and governance, development will continue to occur in areas with ecological value.

#### **Key Finding 4**

- The Manitoba Enterprise, Growth and Trade Department (that houses oil development) is currently asking businesses, non-profits, local governments and private citizens to identify where “red tape” is a deterrent to economic growth and what they can do to make it easier to work together.

Conversely, several participants felt that there were almost no ecological considerations, or, what some may consider “barriers” to developing oil, hence facilitating easy access. Two participants thought there were no legislative or policy tools specific to oil development that included wildlife or habitat protection. Specifically, one participant pointed out there is nowhere in the *Oil and Gas Act* that states an assessment must be done prior to development to ensure no species or habitat are affected. Two participants examined the regulations under the *Oil and Gas Act* before and during the interview and concluded that the regulations did not prescribe any actual actions to create a sustainably developed resource. One participant also found the *Oil and Gas Act* and regulations did not define what an “environmentally sensitive” area is. Regarding the *Oil and Gas Act*, the same participant stated:

*“...legislation that looks nice in theory but doesn't appear to have been practically applied at the regulatory level...” (MBNGO12)*

*“...you can have the best legislative framework in the world which is really important but if you don't have that kind of administrative will then if you're really concerned about how conservation, how do we create the mechanisms to incent bureaucracies to do that so it's got to be from above, from the legislation and the regulation but also someone's got to make them care. There are enough tools I think out there to do something if we had the administrative and political will to do so... [pointing to Section 2.2 in the Oil and Gas Act]...this is a political statement*

*that doesn't seem to have been practically realized. I think the bigger gaps relate to the framework of environmental assessment itself.” (MBNGO12)*

One participant stated “...*wildlife* [people that work in wildlife conservation] *is at the bottom of the heap. We get blamed for standing in the way of development, but the framework puts us at the bottom. It’s so ironic that we get blamed because we are at the bottom of the pile and the framework is against us”* (MBNGO01). This clearly illustrates that this participant feels that there are few if any barriers to operators to gain access and develop resources.

The results in this finding and others are consistent with what Heynan et al. (2007) describes as a lack of administrative and political will, which is a central mechanism in neoliberal environmental governance models to expand development. Manitoba has a plethora of acts that could be enforced in order to effectively protect habitat. However, the absence of oil and gas development from the Wildlife Act signals that either the Manitoba government does not see oil and gas development as a threat to wildlife - which is inaccurate - or that they are creating the legislative space for oil and gas development to occur in protected spaces.

The combination of responsibility being placed within the Petroleum Branch, a high amount of discretionary power, low provincial interest in private land conservation and new “red tape” cuts is illustrating a neoliberal environmental governance model has negatively affected species and habitat in the southwestern corner of Manitoba. Grasslands and grassland songbirds (Manitoba Important Bird Areas Program, 2012; Manitoba Wildlife Branch, 2017) are in an imperiled state. Based on the past, if Manitoba continues with this model there could continue to be an increase in listed species and degraded habitat.

### **Do these results conform to a neoliberal environmental governance model?**

Manitoba has met the condition of decreasing regulations that constrain corporations' access to environmental resources developed by Heynen et al. (2007) and refined by Carter et al. (2017) regarding what we would typically find in a Canadian neoliberal environmental governance model in an oil and gas case study. Participant interviews supported my conclusions from the policy analysis: that Manitoba has consistently shown either an absence of regulations, an absence of follow through on current regulations and policies, decreased regulations or the aspiration to decrease regulations so industry is less constrained to gain access to natural resources. Using the mineral sector as a case study, Heynen et al., (2007:75) highlights several features that would be present in a neoliberal environmental governance model to reveal decreasing regulations to facilitate access to natural resources; 1. "assigning private rights", 2. "a transformation of the underground into a site for the circulation of capital (in particular, for incoming international capital)" and 3. "...the institutions through which [mining] laws are implemented strongly influence the rate and extent of [mining] investment."

To address the assignment of private rights, I illustrate that strong private rights to access oil are assigned through the *Surface Rights Act* and that the Act is set up to ensure surface access to industry. The Surface Rights Board is almost absent in surface rights negotiations between landowners and industry, save for mediation issues. The absence of government intervention in negotiations further facilitates access and potentially access to areas with habitat value (grasslands, wetlands, for example). To address the transformation of the underground into a site for the circulation of capital, I have demonstrated that there is an overriding economic imperative to develop oil and gas by highlighting discretionary powers in all habitat protection acts that have been reviewed, the placement of oil and gas oversight with a branch that seeks to grow the

economy, active consultations to further remove barriers to business, and the absence of oil and gas activity from protected areas under the *Wildlife Act*. In this case, Manitoba has created the conditions for a high rate of oil and gas activity through a neoliberal environmental governance model.

### **Reducing Government Staff and Programs Protecting the Environment**

My results from Chapter 4 suggest that Manitoba has revealed that either there are no programs to protect the environment, or that the government is reducing government staff and programs protecting the environment. The results from my interviews are consistent with this contention. The interview results suggest that oil development is growing, and government resources intended to protect the environment are staying static, while emphasis on economic growth is increasing. Below, I relate participant's comments to each of the key contentions in Chapter 4 in order to confirm my understanding of how Manitoba's environmental governance model plays out in day-to-day operations.

#### **Key Finding 5**

- From an oil well license search, guided by a Petroleum Branch employee, it appears as though only 14 licenses have conditions to protect specific habitat or wildlife.

Several participants stated that the reason for the absence of environmental planning and minimal disturbance standards was the fact that most oil lease sites are on a land surface that has already been disturbed, like agricultural lands. However, three participants were adamant that it did not matter if land was previously altered, as agricultural land still has value as habitat; it is still an additional disturbance with increased traffic, invasive plant species, air and water pollution and noise. A quote in this regard that in hindsight I wish I had explored further was “*I believe that staff and also sustainable development [department] have to fight pretty hard to even*

*actually conduct the steps needed for an environmental license*” (MBNGO11). This participant was referring to the EIA process, and not the oil and gas lease process; however, my impression from that quote and the rest of our discussion was that even staff are not empowered to act on behalf of habitat when backed by legislation.

Conversely, some current licensing conditions can be detrimental to conservation. Two participants suggested that the time span of a lease can be a barrier to operators protecting habitat. Operators are required to have a well onsite by a specific deadline but development during a period of heavy precipitation is not an option that operators typically like to use as it degrades habitat more than developing during dry conditions. To reduce environmental impacts, operators must have enough time for satisfactory soil conditions and wait for winter or until the ground has sufficiently drained. One participant stated that temptation to cut corners is built into the system for operators. They stated:

*“...I know for a fact that a lot of wells, or a lot of stuff goes on because there's a deadline. We have to think of ways that also reduce barriers for operators.”*  
(MBNGO05)

*“...maybe we need to do something for the oil company to actually get a benefit...we are always picking on what they are not doing for us, but what are we not doing for them?”* (MBNGO05)

A participant stated that there is a serious need for cumulative effects to be included in resource extraction decision-making. Cumulative effects assessment and land use planning were an element that several participants had strong views on. Several compelling quotes collectively sum up most of participants views on the subject:

*“...there's a bunch of sleepy death by a thousand cuts projects out there that we [the public] know nothing about and I don't think anyone's looking at them,”*  
(MBNGO12)

*“...there is no larger strategy for wildlife and conservation in the province that is followed. Ecosystem planning is not done. Planning frameworks and priority setting have been attempted and are often tossed out the window. In order for planning to work, oil development would have to be one consideration in a suite of socio-economic and environmental considerations. Currently it is not a consideration, it is number one. The Manitoba government does not ask that industry does any level of regional planning. Every development is a one-off, so they do not plan in that way – and they shouldn’t – that should be funded by the Manitoba government with involvement from stakeholders. It’s so much better when we can be proactive instead of reactive... we are rarely involved in any type of planning conversation like pump jack location...”* (MBNGO01)

In the context of non-oil and gas-related projects, two participants stated:

*“What we simply saw was a department whose mandate was to increase revenues and wasn't taking a precautionary approach to development at all and didn't, at that point in time, have the tools in their own legislation to do so,”* and *“The other part which is so typical...is the siloed approach of these departments and the lack of integration in terms of any kind of decision making which links back to the dearth of regional planning. The big picture, there's an absence of insight from a regional perspective on what's going on. Even if we're fortunate enough to have an assessment process and licensing process it's not a very alert one and then the following through afterwards, I think the challenges are endemic throughout the provincial bureaucracy.”* (MBNGO12)

*“Class 1 environmental licenses are rubber-stamped with no attention to or connection to the existing policy or legislation in Manitoba, unless it's really, really obvious, like, 'No, you can't put that road there. My house is in the middle of that'.”* (MBNGO11)

These two quotes indicate that there may be issues in environmental protection and a leaning towards marketization of natural resources outside of oil and gas. Another participant explained that a lack of regional planning, cumulative effects assessments and private governance is a recipe for large-scale fragmentation:

*“Fragmentation. How does that happen? Well, you keep adding more, doing more, and the first development basically just opens the floodgates, whether it's the first road into a huge region, or a first transmission line, or whatever, it's just assumed sometimes silently, sometimes in a noisy fashion, that the rest of the development will follow and that's all okay. We do not have [robust] environmental assessment standards in this province and there's no [robust] regulation, which means we have discretionary, often non-public arrangements...”* (MBNGO11)

The lack of regional planning in Manitoba contrasts with Alberta, where regional planning is mandatory, legally binding, incorporates feedback from a broad range of stakeholders and including rights holders like members of Indigenous communities (Alberta Environment and Sustainable Resource Development, 2015). This has resulted in a plan that considers many citizen interests including economic growth, land conservation, regional air and water thresholds and human development considerations (Alberta Environment and Sustainable Resource Development, 2015). As a result of engagement, some high value ecological features were identified as essential for conservation. For example, the Drum et al. (2015) assessment of the biological benefits of a USA conservation reserve program (CRP) in the prairie pothole region concluded that setting aside lands in this region resulted in higher nesting success for waterfowl due to the relatively higher proportion of native grasses versus croplands. Grassland birds are also found in higher densities in CRP grasslands, and have been found to be dependent on CRP cover, especially sedge wren and bobolink<sup>9</sup> (Drum et al., 2015). This method of setting aside lands for wildlife has proven to be effective in grasslands and could be a part of a plan for Manitoba to help conserve wildlife.

The absence of government-led cumulative effects assessment or regional planning is detrimental in Manitoba. According to Heynen et al. (2007), self-interested property owners may not consider habitat protection to be to their benefit and may not consider how their actions can benefit or harm their region or the rest of the world. Likewise, the Saskatchewan Government

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<sup>9</sup> Threatened status under Government of Canada's Species at Risk Public Registry (Department of Justice Canada, 2012)

has observed that companies and landowners are not considering land use impacts resulting from the placement of an oil well when negotiating and signing leases (Government of Saskatchewan, 2018b). Because many landowners may not be aware of the cumulative impacts that conventional oil has, Manitoba government should step in and assess the cumulative impacts in this already fragmented region before considering adding new impacts.

Non-action in the form of absent regional planning or cumulative effects assessments is demonstrated in Manitoba. Environmental plans for individual wells are in no way a replacement for regional planning. As stated in the first section of this chapter, an absence of regional planning is another way that access to resources is facilitated by the government of Manitoba. Staff numbers have stayed static, while leases have only risen, effectively cutting resources from monitoring, enforcement and planning. When enforcement and monitoring are absent, no checks and balances or early warning of issues are detected. This makes responsible management of oil lease sites challenging if not impossible given the high amount of work.

The lack of resources to fund inspection, enforcement and monitoring of water quality is very serious gap. In a review of several international jurisdictions, Ecofish Research (2017) found that policy gaps like lack of licensing, data quality, incorporation of climate change effects can be harmful to ensuring that enough water exists in the ecosystem to maintain normal function. As noted by one of my participants, Manitoba does not track data on water use in industrial applications. Without water licensing or water use data, it is impossible to understand how and if oil development is making our water systems vulnerable, to plan for the effects of climate change or to ensure that enough water is available for human consumption.

## Key Finding 6

- A review of the Manitoba Growth, Enterprise and Trade Branch website, including the mandate letter to the minister, demonstrating no oil-development specific habitat conservation policy or overriding imperative of sustainable development/environmental considerations.
- Tomorrow Now, Manitoba's former Green Plan and the new Climate and Green Plan both do not present specific actions on mitigating environmental impacts from oil development, or on how the Manitoba government will protect grasslands habitat, prairies or listed bird species.

Collectively, all participants concluded that there is no, or very little, effort aimed towards sustainability in Manitoba's oil and gas development. It appears from my results that participants feel that there was never much *action*, and what exists on paper is completely inadequate. The secondary issue is that there have been staff reductions by keeping staff levels the same while work increases. Participants either stated that there were no government- or industry-led cumulative effects planning, regional planning, plans that include oil development, and plans to protect the prairies. One participant remarked that it was impossible to make progress on conservation issues because of the framework and lack of planning efforts:

*“Whenever we get a seat at the negotiating table, we know that we are in a weak and disadvantaged position and not an equal one because we know the priority is to get the oil out of the ground. We are supposed to do all of these really great things like conserve habitat and save all of the animals but the government's priority makes it all impossible. We need regional ecosystem planning that takes into consideration private and Crown land and we need it not to be thrown out shortly after it's developed,” (MBNGO01)*

As another participant and landowner found out, well-intentioned efforts without government-led guidelines or license conditions is a set up for failure:

*“I had one guy talk to me and say, ‘What are we going to do about this? How are we going to do this? Let's work together.’ We developed some protocols [for habitat protection] for the oil company, so we developed some ideas, we put them together. Gave it to him to negotiate because he wanted to negotiate with the oil company. The oil company didn't do anything that we asked them to do. Then I said the landowner, ‘What happened?’ He's like, ‘Well they did what they wanted*

*to do.' I said, 'Well that's not what you and I agreed to.' He was like, 'I can't control what they do.' Yeah. We had the best foot forward, and we still didn't get what we wanted.'* (MBNGO05)

Participants supported my findings that there is little habitat protection through the licensing process and a reduction in programming. Though an oil well license search I found that there is almost a complete absence of licenses that have habitat-specific considerations attached to them. This reflects participants' understanding that there is little done to protect habitat through the licensing process. Through my review of strategy documents and participants comments, I also found that there is a collective view that the overall priority of the Manitoba government is development, which is likely the reason that so few programs exist to protect habitat in areas of oil development in Manitoba.

#### **Do these results conform to a neoliberal environmental governance model?**

Manitoba has met the condition of reducing government staff and programs protecting the environment developed by Heynen et al. (2007) and refined by Carter et al. (2017) regarding what we would typically find in a Canadian neoliberal environmental governance model in an oil and gas case study. Heynen et al. (2007:11) state that several elements would be present in a neoliberal environmental governance model to illustrate reducing government staff and programs protecting the environment; including these features, 1. "non-action", 2. "overt funding rollbacks", and 3. "a shift in important state functions to the private sector or NGOs".

Non-action is pervasive in Manitoba regarding habitat protection in areas of oil development. The two most recent Manitoba government planning documents (Manitoba Sustainable Development, 2017a; Manitoba Conservation and Water Stewardship, 2015) demonstrated promise of action in other areas of habitat conservation and pollution management, but nothing specific to oil development in grasslands, or enhanced protection for grassland

songbirds. However, Manitoba has made significant conservation gains in other areas like parks and forestry, illustrating that oil development is managed differently compared to other developments and protections. The department responsible for environmental action, Manitoba Sustainable Development, does not oversee oil and gas development. Instead, oil and gas development is housed under Manitoba Growth, Enterprise and Trade Branch, which has a mandate to grow the economy, not protect the environment. To address overt funding rollbacks, funding or other efforts for the conservation of grasslands habitat has never been present enough to overtly rollback. However, the “non-action” of keeping oil lease monitoring and inspection staff levels the same despite a four-fold increase in oil development activity, has actually been a covert funding rollback in programs directed to protect the environment. The same “non-action” of ending Sustainable Development reporting signals that funding has been shifted away from supporting efforts to coalesce information and track trends over time for the public.

The third and most prominent feature, a shift in important state functions to the private sector or NGOs, is demonstrated by three important state functions being offloaded to the private sector and NGOs. First, Manitoba’s current practice for private land conservation is to have NGOs identify, develop and administrate protection on private lands (Manitoba Protected Areas Initiative, 2017). Those NGOs are funded through a combination of provincial, federal and private efforts for private land conservation in Manitoba. Second, monitoring efforts (due to a shortage in staff) are now the *de facto* responsibility of the landowner, as it is impossible to maintain a robust monitoring program with the current low staff numbers (Hlushko, 2017). Third, according to four study participants, NGOs and industry have partnered to develop minimal disturbance standards in the complete absence (again, “in-action”) of government-led minimal disturbance standards.

## **Devolving Environmental Regulatory Responsibility to Lower Levels of Government**

Manitoba, led by the precedence set by Canada, has consistently demonstrated that they are devolving environmental regulatory responsibility to lower levels of government. Canada led the way by devolving ownership and responsibility to provinces (Senate of Canada, 2018) and therefore has provided a model for reduced accountability in environmental responsibilities. I have identified such devolution throughout laws, policies and documents that I reviewed. Participants also indicated their concerns about devolution. The interviews reveal that Canada has led the way for provinces to devolve responsibly, and Manitoba demonstrates this by mandating a quasi-judicial board to manage surface rights negotiations issues. Below, I relate participant's comments to each of the key findings from Chapter 4 in order to confirm my understanding of how Manitoba's environmental governance model plays out in day-to-day operations.

### **Key Finding 7**

- Negotiation on compensation and placement of oil sites is left in between industry and landowners. The Surface Rights Board intervenes in the case of a dispute. This results in the out-sourcing of regulation to industry.

Earlier in this chapter, I present a quote regarding the Surface Rights Board that also supports the view that landowners are essentially left on their own with industry:

*“Being more informed and knowing that understanding what rights they have as a surface rights holder in the context of subsurface development. I don't think a lot of ... my opinion is that too many of them are awestruck by the cheque without understanding and maybe they personally are not concerned about it but I think a lot of them just don't understand actually that they do have a degree of control over how that development can take place. As for the conflict between subsurface rights holders and surface rights holders ... It seems like the two sides go from surface rights holders deny that subsurface rights holders have any right when, in fact, they do. They actually have equal rights to access to what they own. There are some that believe that subsurface rights have none, no authority, and then on the other side the surface right holders that believe the subsurface rights owner, has all*

*the authority and they can go get that any way they want. That's not the case, either. They do have quite a bit of ability to reach out and balance.” (CDNGO07)*

Manitoba formed the Surface Rights Board as a quasi-judicial board as a way to devolve responsibility for surface rights access negotiations. This opens up the opportunity for industry to develop their own policies about how much compensation landowners receive, and which landowners receive compensation, essentially turning industry into the lawmakers looking after natural resources and landowner interests. This is particularly troubling as it means there is little oversight on the socioeconomic facets of oil development.

### **Key Finding 8**

- Canada has in part facilitated in devolving responsibility in Manitoba as a result of the *Constitution Act, 1867* and the *Natural Resources Acts, 1930*, by giving Manitoba and other provinces jurisdiction over lands and resources and setting a precedence.
- Environmental regulatory responsibility for oil and gas is overseen by the Petroleum Branch, which has little capacity and regulatory power to protect wildlife and habitat.

Participants generally felt that the Petroleum Branch takes little action to mitigate negative environmental effects that oil and gas development has on habitat in Manitoba. Two participants gave interesting views on this subject; the industry participant stated that the current laws and policies were absolutely protective enough over habitat and another participant pointed out that it does not necessarily matter where a law is housed – if there is political and administrative will for habitat conservation it will happen regardless of where it is in the framework. In response to my question about placing oil and gas within the Manitoba Sustainable Development department, a participant stated:

*“It's a worthy hypothesis. Do we ever test these hypotheses? To me the answer goes to a bigger question, like how do we reinvigorate public policy and the public sector and then how do we test what works and what doesn't? I guess you're trying to keep it constrained. I'm just saying I think there's a cultural problem. Sustainable Development [Department], again I'm going off topic but I'm going off of what I know. To even get*

[that department] *to enforce license conditions that they've imposed. We looked at a license on a industrial activity...we conclude that [less than half of their many] provisions had not been fulfilled.*"<sup>10</sup> (MBNGO12)

In Chapter 4 I outlined where oil and gas responsibilities fell in the provincial government and described reasons why the Petroleum Branch may not be the ideal placement for oil and gas activities. The *Environment Act* and the Manitoba Sustainable Development Department may be better resourced and have developed legislation that considers habitat more strongly during development (the *Environment Act*). However, if oil development was a part of the *Environment Act* and overseen by Manitoba Sustainable Development, that would not guarantee public consultation and a better environmental outcome.

Placement of oil and gas activities within the *Environment Act* could increase the amount of information that would be made public in the pre-construction phase of a project, which would improve public access to information and public interaction with oil development. Depending on how oil development would be classed in this scenario, it may have an optional environmental plan or a mandatory environmental plan associated with the application.

Unlike other areas of natural resources development, environmental responsibilities associated with oil development in Manitoba have been minimized through organization. However, in some cases, environmental accountability has been aided by international agreements, like the successful Montréal Protocol (United Nations Development Programme, 2018). In this case of oil development in Manitoba, there is no federal, provincial or international

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<sup>10</sup> Edited for clarity and confidentiality.

pressure or accountability to protect the environment. It could be argued that oil development falls under the Kyoto Protocol, which aims to reduce greenhouse gas emissions by assigning reduction targets to countries (United Nations Climate Change, 2018). However, Canada left the Kyoto Protocol in 2011, and if Canada had remained a signatory, international and national political pressure to reduce greenhouse gas in Manitoba would be minimal as Manitoba is one of the lowest emission jurisdictions in Canada (Government of Canada, 2018e).

**Do these results conform to a neoliberal environmental governance model?**

Manitoba has met the condition devolving environmental regulatory responsibility to lower levels of government developed by Heynen et al. (2007) and refined by Carter et al. (2017) regarding what we would typically find in a Canadian neoliberal environmental governance model in an oil and gas case study. As Heynen et al. (2007:39) outlines, if this were true we would observe at least these features of a neoliberal environmental governance model. Two features, 1. “devolve *unavoidable* state functions to the lowest level possible” and 2. “less accountability” were described.

To address devolving *unavoidable* state functions to the lowest level possible, it is unavoidable that the government would have to be involved at some level in oil development and the unavoidable elements such as licensing and some intervention on leases have been under the administration of the Petroleum Branch, and not Manitoba Sustainable Development. It is not necessarily a devolution as oil and gas was never overseen by any of Manitoba’s environmentally-related departments as oil and gas development came decades before any of those departments were formed. Low accountability is very prominent as there is no public environmental review or engagement process with oil development.

## **Privatizing Environmental Regulation**

Manitoba has consistently demonstrated that it is privatizing regulation by out-sourcing to industry (e.g., monitoring and lease negotiations) and emphasizing market mechanisms for compliance rather than environmental regulations. The interview results suggest that privatization is pervasive in Manitoba; NGOs and industry have developed minimal disturbance standards, NGOs are tasked with private land conservation and landowners are the *de facto* monitoring bodies for lease sites. Below, I relate participant's comments to each of the key findings from Chapter 4 in order to confirm my understanding of how Manitoba's environmental governance model plays out in day-to-day operations.

### **Key Finding 9**

- NGOs and industry in Manitoba have worked together to develop minimal disturbance standards to fill gaps in government policy in Manitoba.

Minimal disturbance standards explain how developers should proceed in ways that minimally disturb soil, vegetation, and waterways. Many participants emphasized the majority of sites developed in Manitoba are not native prairie and considered to already be developed, and therefore not in need of minimal disturbance standards. Productive agricultural and pasture lands still hold value as habitat, a food source and may eventually be turned back into naturalized land and should be taken care of through sound environmental practices. All sites, regardless of current or prior use, are changed even further by oil development via soil and vegetation disruption, new noise, activity, air pollution and infrastructure.

Participants stated that some industry members are assisting in developing and implementing minimal disturbance guidelines on lease sites in the absence of government-led guidelines. Several NGO participants identified this as a gap and would like to see minimal

disturbance standards on all lease sites. They expressed concerns over fragmentation, the spread of invasive species, and soil disturbance not only in native prairie, but all land in southwestern Manitoba. Continuing without government-led guidelines presents an unfair advantage to industry players who do not spend the human resources and funds to conserve habitat. The current system financially rewards those who do not act in an environmentally responsible manner.

Several NGOs have worked directly with oil operators to develop minimal disturbance standards outside of government regulations in order to mitigate impacts on habitat like laying mats over sensitive areas, washing down trucks when visiting multiple sites and decreasing the physical footprint of the site. CDNGO07 indicated that these processes can be “...*very effective...*” and can “...*significantly reduce impacts*”. sometimes leave .....Participants described how the oil industry's contribution to habitat conservation efforts exceeded expectations in many instances. All participants with on-the-ground experience agreed that environmental stewardship varied widely from operator to operator, which is not uncommon under a neoliberal governance model (Castree, 2008). One industry participant noted that their shareholders expect them to be leaders in conservation and their financial situation allows for that. The same participant also noted that there is no government-developed minimal disturbance standard in Manitoba that they could follow, even on a voluntary basis. This has essentially privatized habitat protection, which is a government responsibility.

Four participants stated that practicing minimal disturbance principles costs more than the *status quo* and not all companies are willing to adhere to those principles, which creates an uneven playing field. Other operators have the opportunity to make more profit than those who are using practices that are less harmful to habitat. Therefore, there is a disincentive for

companies to care for habitat when their competition is not being held to the same standard. One participant noted:

*“...they want to be green where they can but I really think what bugs them is that if they're being green and there's no requirement for their neighbour to be it, it reflects bad on their industry and it's almost like they're being penalized for a choice.”*  
(MBNGO03)

Three participants said that if industry is developing, funding, and implementing minimal disturbance guidelines, it demonstrates weak public policy but a will to do better. Several participants noted that while it is not ideal at all to have more disturbances on the landscape, they are all ready and willing to work with partners. Partnerships are important for successful conservation efforts and are encouraged by Manitoba government as they facilitate a neoliberal environmental governance model (McCarthy, 2005). Five participants emphasized the positive impact that some industry partners have had on habitat conservation and praised some oil operators. Participants emphasized that without industry co-operation and knowledge, the voluntary minimal disturbance guidelines that some operators follow would not have been developed. Four participants thought the reason some operators were not trying to minimize impacts was due to the lack of financial resources and absence of government-led guidelines. With the on-the-ground effort of industry, NGOs and landowners, habitat has been protected using minimal disturbance standards:

*“...in Manitoba and right now we see a lot of habitat that's disappearing, but we also are making progress on educating the oil companies about the importance of this stuff. Whether they know it or not, whether they're willing to accept it or not, I feel as though we've made some progress. It's not because of legislation. It's because of the willingness of the people that work within the oil companies. It's also based on experiences for me, and having the ability to build the relationships with these people...”* (MBNGO05)

The inaction of absent minimal disturbance standards has effectively privatized habitat protection on lease sites, ultimately making landowners the leading administrators and planners when it comes to private land conservation. Manitoba's lack of minimal disturbance standards or protocols for all lease sites is a policy gap, however, from a review of Manitoba lease agreements (Appendix H), there appears to be a mechanism for planning to mitigate effects on habitat and species listed under the *Endangered Ecosystems and Species Act*. No public information was available on the Manitoba website regarding how these plans are developed or how it is decided to develop a plan. This makes it impossible to evaluate and compare Manitoba's standards (if they exist) against literature and the practices of other provinces. A telephone call to Manitoba Petroleum Branch confirmed that nothing was available on the website, no internal guidance documents existed, and no employee could answer my questions (Manitoba Petroleum Branch, 2017, pers. comm).

This private governance fills two very important gaps for historically opposed sectors: conservation of habitat and appeasing corporate social responsibility/social capital gains. Although the NGO participants expressed appreciation for industry and vice versa on their proactive minimal disturbance work, private governance in the environmental sector may not be suitable to aid habitat protection in this situation. In this case it appears that industry behavior is driven by shareholders demanding corporate social responsibility and a pressure from landowners and NGOs. This raises questions about the suitability of a *status quo* path forward as current efforts towards minimal disturbance standards are based on personality of shareholders and employee's technical knowledge and ability to work with landholders and NGOs. According to participants only one oil development company in Manitoba engages in proactive minimal

standards and other companies have not adhered to requests for habitat conservation efforts even when engaged with NGOs on specific lease sites.

Although corporate cooperation is a positive step, I question how suitable and effective private governance that engages one oil operator is for oil development and habitat protection in Manitoba. Although Bäckstrand (2006) believes that private governance can have a positive impact in regard to policy deficiencies, Bäckstrand would still evaluate the Manitoba example as ineffective. This is not because it fails to mitigate an environmental impact, but because this partnership has been unable to adequately fulfill a specific governance function. Full participation of regulators, NGOs and landowners could be beneficial for the widespread adoption of rules and norms (Hahn and Pinkse, 2014).

Six participants stated guidelines were needed that ensured minimal disturbance of all lease sites to benefit ecosystem health. Two participants stated that Manitoba should require complete avoidance of grasslands and wetlands even if a government-led minimal disturbance standard was developed – “...*all grasslands should just be hands off...*” (MBNGO08). Four participants suggested that subscribing to the hierarchical approach of habitat mitigation should be applicable to oil and gas development in Manitoba; that is, avoid, minimize, and compensate. Two participants thought the government should step in to level the playing field for industry and ensure habitat is protected with minimal disturbance guidelines because “...*right now, minimal disturbance is whatever the operator is willing to do...*” (MBNGO05). Three participants specifically stated there is no regulation on how or where to put in a road or drill pad.

There is potential for landowners to pressure government to adopt minimal disturbance standards. Industry associations like the Canadian Association of Petroleum Producers could also

have a similar influence on individual companies (Hahn and Pinkse, 2014). The likely reason that minimal disturbance standards have not been adopted by all oil companies in Manitoba is the costs associated with habitat protection and the fact that Manitoba has not supported minimal disturbance standards with programming, funding or regulatory changes. In comparison, other jurisdictions such as Saskatchewan and Alberta have existing minimal disturbance standards and many industry players rated Manitoba as an attractive place to develop oil partly because of a perception of lax environmental policy (Fraser Institute, 2012). Minimal disturbance guidelines have existed in Alberta and Saskatchewan since the 1990s (Alberta Energy Regulator, 2014b: Prairie Conservation Action Plan, 2005), which means the Manitoba government can learn from the minimal disturbance practices that have already been in place and the ones developed in a NGO/industry partnership in Manitoba.

The provincial government is well placed to implement minimal disturbance guidelines. Industry is already participating in the development and application of Manitoba-specific minimal disturbance guidelines. If Manitoba led on and promoted conservation agreements and minimal disturbance standards alongside oil development, landowners may be more inclined to sign a conservation agreement knowing that oil development can be compatible with conservation.

### **Key Finding 10**

- Manitoba's current private land conservation approach is to grant legal authority to NGOs such as Ducks Unlimited, Manitoba Habitat Heritage Corporation and Nature Conservancy of Canada for procurement and management of private lands (Manitoba).

A private land conservation program funded by Manitoba but not promoted or enforced by the state increases access to oil development on private lands and supports individual

decision-making over what ecological features have conservation value and which can be disturbed. A lack of action in private land conservation when there is monetary value tied to land access is a way that neoliberalism expresses in governance. Fortunately, there are three successful NGOs working towards private land conservation goals in the southwest of Manitoba aiding landowners with private conservation.

Some participants noted a lack of overall government-led conservation action across program areas in Manitoba but noted that NGO-landowner partnerships fill a gap in government's conservation action. One participant said they feel some NGOs do far more to protect prairie habitat than the government does, which may be because most prairie is on private land and Manitoba does not have a strong private land conservation program. Some NGO participants were involved with conservation easements and noted that although these are backed by legislation, conservation easements can be ineffective for two reasons. The first is that landowners do not want to enter into a conservation easement because they feel that they are bound to the agreement and will jeopardize future income if oil is found under their land. Conversely, the second reason that NGO participants feel that easements are particularly ineffective in Manitoba is that the legislation does allow for landowners to leave conservation easements for myriad reasons and the rights granted to subsurface owners or under a lease in the *Surface Rights Act* can trump a conservation easement (although not yet proven in court).

There are several precedents for private land conservation that may be beneficial as case studies for Manitoba to learn from. In Nova Scotia and parts of the USA, private land conservation efforts have been successful, largely due to multi-faceted programs that target key features to conserve (Nova Scotia Environment, 2017; Wiegard, 2017). Although the efficacy of conservation agreements is not agreed upon, several NGO participants have used easements as

an effective tool to protect habitat on lease sites located on private land. Braza (2017) developed a method for evaluating the effectiveness of habitat conservation easements in agricultural regions and found that easements in the Missouri Coteau, an agricultural region, prevented conversion of grasslands to cultivated lands. In his model, he estimated that approximately 14% of the land protected from 1990-2001 would have been subsequently cultivated without easements (Braza, 2017).

Some NGO participants stated that landowners that are a part of stewarding ecologically significant features on their land are proud to showcase this to friends, families and visitors. One participant told me that they work with a landowner that had a burrowing owl on their property and the landowner did everything in their power to protect it on their land. Several participants from this study and organizations surveyed by Environment Canada (2011) emphasized the difficulty of making gains in conservation with Crown lands alone and that the efforts of NGOs that work with landowners in securing lands are of critical importance to conserving ecological integrity.

The effectiveness and uptake of conservation agreements can be improved. In the southwest of Manitoba, Prime agricultural land is at highest risk to be cultivated and may be difficult to secure a conservation agreement on. Targeting marginal lands and allowing compatible activities such as grazing could be helpful to securing more habitat (Braza, 2017).

Conservation easements can be compatible with oil development. Several NGO participants have worked with industry partners on land that has had both easements and oil development, or land where there was not an easement agreement but where other conservation values exist. One participant worked with a landowner who engaged in a conservation agreement and oil development on the same parcel of land. The landowner, NGO and industry member

worked together to avoid damaging areas that were under the easement. Moon and Cocklin (2011) discovered through interviewing 45 landowners with conservation agreements in Australia that a tailored approach is most effective, as landowners are most likely to participate.

According to Braza (2017), the most effective conservation agreements in agricultural areas scale payments in accordance with risk and work with landowners in order to allow compatible economic activities. However, Several NGO participants stated that offering more compensation could be helpful but competing with oil surface rights payments is impossible. While the *Conservation Agreements Act* provides ways to leave an agreement for landowners who are faced with the possibility of oil development on their land, some participants stated that practices such as minimal disturbance standards can mitigate surface habitat degradation and be mutually beneficial to industry, landowners and NGOs.

In Manitoba, much of the land in the southwestern corner is in agricultural production, so landowners may be reluctant to change if it might affect their livelihood. Moon and Cocklin (2011) found that production landowners were more likely to participate in short-term programs that offered large financial incentive that applied to <25% of their property, whereas nonproduction landholders were more likely to participate in long-term programs that were voluntary or offered small financial incentives that applied to >75% of their property (Moon and Cocklin, 2011). Moon and Cocklin (2011) emphasized that personal circumstances like income, education and health and differences in personal norms were strong factors in personal decisions on whether or not to participate in conservation. This is also reflected in the views of NGOs on participants and industry. Landowners must be ready and willing to participate in private land conservation, whereas according to participants, industry usually needs financial resources and a strong corporate social responsibility culture. Because the majority of oil in Manitoba is

developed on private land, increased conservation efforts could have a positive impact on the status of wildlife in Manitoba's southwestern corner.

Manitoba and other Canadian provinces (Ontario, Quebec, Prince Edward Island, Saskatchewan and Alberta) have had success with Alternative Land Use Services (ALUS) projects, which pay private landowners for conservation of their land for ecosystem services such as water filtration and habitat conservation (ALUS Canada, 2017). Manitoba operated an ALUS pilot project between 2006-2009 in order to evaluate the benefit of paying landowners for providing ecosystem services, rather than converting their land (Manitoba Agriculture, 2017). Approximately 21,000 acres were enrolled in the ALUS pilot project (Manitoba Agriculture, 2017). ALUS was most effective in acquiring wetland services, particularly with no agricultural use or low agricultural potential (Manitoba Agriculture, 2017). This reflects Moon and Cocklin's (2011) findings as well as participant responses; they found that land that is in production is much less likely to be a part of a conservation program and that wetlands get more political attention (hence program attention) than prairies. In both the Manitoba pilot program and Moon and Cocklin's (2011) findings, high level of acceptance and uptake can be attributed to local community involvement in the pilot, and strong support from local, provincial and federal governments and NGO promotion. Because there is so little native prairie left in Manitoba, it is important to go beyond the pilot projects and use programs with proven success records to conserve more grasslands.

Working with landowners was a theme that came up often with all participants, as landowners are the first to know of any potential developments or changes to the landscape. Several participants work directly with landowners and focus on planning exercises to ensure the

landowners can preserve ecological integrity while still pursuing land-based economic gain. One interview emphasizes how important landowners are to conserving habitat:

*“A lot of the ranchers have a real link to the land and a real ethic of stewardship of the land, a sense of that, ‘if I mess it up, my grandkids will pay for my mistakes’... and they understand it can be chemical or can be overgrazing it or it could be depleting the water table or reducing the water retention capacity or making it so that when our environmental changes like drought or flooding come that the land lost its resilience to those fluctuations, they understand that very well. Actually, the private landowners I think ... that's one of the reasons why I said to you before I don't think it's [prairie habitat] lost yet.” (CDNGO06)*

Manitoba has proven that private land conservation can work through ALUS but government still undermines private land conservation with low state effort and the *Surface Rights Act*. Although efforts to conserve habitat on private land are complicated, according to Kamal et al. (2015) private land conservation is critical to biodiversity conservation. Environment Canada (2011) has shown that private land conservation is particularly important in areas that have intensive resource development and where valued ecosystem features are on private land. The southwestern corner of Manitoba is an example that illustrates these features. The Manitoba government has worked with private landowners in the past on conservation efforts (Manitoba Agriculture, 2017), with successful programs to support wildlife (Environment Canada, 2011). However, this is all undermined by the *Surface Rights Act* and the non-action in government-led private land conservation programming.

### **Key Finding 11**

- Negotiation on compensation and placement of oil sites is left to industry and landowners. The Surface Rights Board only intervenes in the case of a dispute.

The absence of government intervention in the development of lease agreements facilitates oil development. The Surface Rights Board only really intervenes if there is an issue, and usually such issues relate to compensation, not habitat protection. One participant felt that

the *Surface Rights Act* (the Act that creates the Surface Rights Board) was designed to protect the landowner and their assets in the absence of direct government intervention:

*“Now, I did look at the Surface Rights Act. That was the most bizarre thing. It was designed, it only mentioned the land owner. Only the land owner, and it was all designed to protect the land owner, make sure that his resource, his farmland resource was not impacted. Essentially, it's non-regulated, as far as I can see, a very under-regulated industry.”* (CDNGO02)

In the last section, participants described how government responsibility has been devolved to lower levels of government. Here, we see that the results are the privatization of negotiations between industry and landowners without government intervention in many cases. The privatization of these negotiations may or may not be advantageous to landowners. While industry members maintain that their compensation packages are fair the only test of that is if landowners actually take their case to the Surface Rights Board to examine if “just and equitable compensation” has been offered (Surface Rights Board of Manitoba, 1997:4). I was unable to find how the Board decides on just and equitable compensation for landowners. This may highlight either no information exists, or it is kept out of the public realm.

### **Key Finding 12**

- Oil production has doubled since 2007, and in 2012, staff resources remained unchanged. This reduced the ratio of monitoring staff to oil lease sites substantially. In response to this, the Petroleum Branch has streamlined their process to deal with the increase of oil license applications. As a result, monitoring responsibility falls on the landowner, investigations are complaint-driven and reporting is almost entirely industry-led and unverified by Branch staff.

The following two quotes from the same participant reflect the symptom or outcome of the two biggest issues; there is no government-led tracking/monitoring and there is a serious lack of government reporting.

*“...we really, really need much more independent assessment, because the entire feature of the province is based on companies doing self-assessments. We have a*

*province pool of infrastructure, and mills, and plants that were grandfathered in 1989. What that means is that there is no monitoring or oversight of environmental licenses or anything on any Class 2 or Class 3 in the province before 1989.” (MBNGO11)*

*“If you take a look at these files [Referring to BiPole III EIA], there have been significant repeat aggressive objections by the farmers and the ranchers. Some of the farmers and ranchers are actually concerned about songbird habitat and the species that are in their pastures, in their wetlands, in their fields that they're grazing in but they're not plowing, for instance. Where they're actually concerned is the lack of environmental assessment and the lack of any concrete information about species.” (MBNGO11)*

Another participant made a similar statement:

*“...there's an absence of insight from a regional perspective on what's going on. Even if we're fortunate enough to have an assessment process and licensing process it's not a very alert one and then the following through afterwards, I think the challenges are endemic throughout the provincial bureaucracy.” (MBNGO12)*

Four participants stated there is a lack of government monitoring on the effects on habitat from oil development activity in Manitoba. Many other participants supported that view and collectively created a picture of what is occurring in day-to-day operations where monitoring is left to industry to ‘govern’.

Regarding water withdrawal and natural ecosystem features, participants describe some concerning behaviours and gaps in reporting policy. One participant said it is common for operators to use water from a holding tank that is used for several sites, making it difficult to measure how much water is used for one site. They also stated that some rural municipalities do take water withdrawal measurements, but usually only to monitor water taken for irrigation. The same participant also noted that the composition of drill mud was tested by the companies themselves, and there is only reporting to government and no external verification or monitoring of those tests. It was also noted there appears to be no monitoring of short- or long-term groundwater levels/quality, leaking wells, or fugitive emissions from gas plants or heat treaters.

One participant noted that in the absence of government programs to monitor rare and threatened plants, they (an NGO participant) are often called on to fill those gaps, although this comment was not specific to oil lease sites. Four participants thought some operators were not avoiding negative impacts due to a lack of financial resources available for mitigation procedures and absence of government-led guidelines.

Five participants stated that there was none, or very little, monitoring or inspection on oil lease sites. When asked about testing drill mud before it is sprayed on a field<sup>11</sup>, one participant stated:

*“No, it's all industry driven. It's up to ... All the Manitoba government does is issue guidelines, and nobody checks on it. It's up to the industry to follow the guidelines. The only time the Manitoba government will get involved is complaint driven.”* (CDNGO02)

Further on the topic of drill mud, and landspraying of drill mud, the same participant stated:

*“Now, first of all, what will happen is the only person who is going to complain is the farmer, and the only reason he'll complain: if his wheat doesn't grow any more, or whatever crop he's got. If they're spraying toxins on wheat, and they still grow, I don't think there's no control over that. If his wheat doesn't grow, then he goes and complains to the oil company, and it's up to the oil company to compensate him and remediate the land. I've never heard or seen of any registered remediation project of the land, or any complaint. I would imagine the oil company, because they've already paid the farmer for the use of his land, would just compensate him in some way with some cash, or whatever, and make the problem go away.”* (CDNGO02)

On the topic of spill reporting, one participant had several comments to share regarding the inadequate reporting requirements, and questioned if spills are reported, remediation quality, policy quality and the reliance on industry for reporting.

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<sup>11</sup> Manitoba allows landspraying of drill mud but relies entirely on industry for testing to allow for that (Government of Manitoba, 2018f). More information to follow in the discussion.

*“The same as there would be for oil spills. Each company is, I'm not exactly sure what the provincial policy is on this. I suspect pretty weak. I know some companies are doing more than they're required to do, which tells me that the policies are pretty weak.” (MBNGO12)*

*“I think there's an obligation from the Province once things get bad, to fix it. In the last ten years, there was so much going on and there's so little provincial staff to monitor the situation. How could they possibly keep up with all the stuff that's occurring? There's requirements as to whether there's a spill threshold. If there's a certain amount of product that hits the ground, and it's the size, I don't know what the numbers are, but if it's a little bit, it's okay. If it's a little more than a little bit, that's still okay. Then if you get to a certain point, there's a threshold there that says, ‘Now we got to call the Province and shut this thing down and make sure it's cleaned up.’” (MBNGO05)*

*“How many times do you think that there was an oil spill or a saltwater spill that was just undetected? Or, people said, “It didn't meet the threshold, so we didn't need to call anybody. Let's just get it cleaned up ourselves.” How do you know it was cleaned up? I'm painting the picture of a terrible industry. The reality is, there are some companies that are really good at what they're doing, and there's some that are really bad. I don't know that our provincial policy [pauses, seemed to indicate that our provincial policy may not be adequate] the ones that are really good are doing more than what the provincial policy needs them to do.” (MBNGO05)*

Most participants had very serious concerns about the lack of monitoring and enforcement in the oil development sector. Several participants stated that not only is there is a lack of monitoring of oil activities, but also a lack of active inspection on leases and enforcement activity of oil development. One participant recalled a time when they noticed the operator had removed a tree stand at a lease site, and another instance where a slough was filled in. They felt that was beyond the scope of what operators should be doing and another participant commented that actions like this were usually at the request of the landowner and that it is not as common as it used to be. The participants also stated that to their knowledge there is no one inspecting sites for rare or listed plants and that if there were, there would have to be several visits to coincide with blooming times and other plant cycles and this is likely impossible due to so few staff. Another participant noted that sometimes area assessments or inspections are in the winter, which makes a proper assessment of existing flora and fauna impossible. One participant

concluded that the Manitoba government does not have the resources to enforce any of the licensing conditions they have imposed. These comments all strongly suggest that habitat conservation, monitoring and enforcement of laws and regulations are a very low priority for the Manitoba government.

### **Key Finding 13**

- Manitoba has an attractive investment climate and in 2012 ranked best in Canada and 5<sup>th</sup> best in the world based on favourable taxation, the lower cost of regulatory compliance, and certainty overly favourable (to industry) environmental regulations. In 2016, Manitoba ranked lower due to “negative sentiment related to regulatory duplication and inconsistencies, environmental regulations, and taxation in general”.
- The “Sustainable Development” section of the *Oil and Gas Act* favours the sustainable development of the *resource*, emphasizing having enough resource available for economic gains in the future.

The preceding three bullets are combined to emphasize that I have found there is an overall economic development imperative in Manitoba. During many of the interviews, it became clear to me that many participants felt that federal and provincial laws, regulations and subsidies were developed to be attractive to oil development. A participant stated that federal market mechanisms create the economic conditions for industry to thrive, the provinces allow habitat destruction, all orders of government and landowners benefit:

*“there is zero appetite for grassland conservation” and “although the new federal government is keen on fighting climate change, we are not preserving grasslands although they are a carbon sink, we are continuing to develop them into a carbon source – as a priority, the government should be eliminating fossil fuel subsidies as they are creating the conditions for habitat destruction. There has been little success for prairies conservation because the money flows to the government and private landowners. And why should one person pay for fighting surface rights when their neighbour is just going to make tens of thousands? The system is set up for oil development to happen no matter what.” (CDNGO06)*

One participant noted in relation to mining, where the royalties from mining are apparently also a priority over habitat conservation, that:

*“the Minister of Mines and Energy trumped the Minister of Environment every time and they know it. With these priorities and this legal framework, you cannot have sustainable development...”* (MBNGO01)

Three participants noted that on the surface oil development as a whole seems viable, but it is only viable because of government subsidies and the costs of clean-up, habitat destruction, and human health impacts are passed onto society. One participant said, *“...if the oil companies had to fully clean up their own mess and do long-term monitoring and maintenance on leaking wells, they would not be in business...”* (MBNGO11). One of the participants who works with landowners stated that they are generally concerned about what is going to happen to drainage, water quality, and species but also have to balance their own economic well-being.

According to several participants, landowners benefit more from oil development than they would from keeping their land out of oil production, and for those who own the subsurface rights, the financial benefits are even more attractive. Two participants said the *Surface Rights Act* was designed to protect private land as a financial resource and not land as habitat. Several participants stated that because the non-oil economy in southwestern Manitoba is depressed, employment in the oil sector and/or financial benefits from oil development compel most to develop oil and gain economic benefits.

One participant felt it would be worth the time to look at the difference between the true costs of conservation versus oil development, factoring in every scenario and looking at the long-term economic impacts of oil development on the economy and habitat. Several participants thought including appraised value of both the land itself and the ecosystem services it provides in a calculation to determine a payment to landowners as a part of a conservation easement could help ensure surface rights/subsurface rights are not exploited.

Four participants expressed the importance of ecosystem valuation when making development decisions. Two in particular felt that unless the land itself had a value that was close or equal to the value of oil, then society will not change its views on surface payments and values and oil development would just keep going on. One participant said, “*We're in an era that the oil has to come out of the ground, and it's just a bird, or it's just a snake.*” (MBNGO05). Similarly, another participant thought that if companies had to pay for land in terms of what it costs to replace it, they would be more likely to avoid disturbing it.

In my Chapter 4 findings I discovered that Manitoba has endeavored to and achieved an attractive status for investors through privatization. I have also found that the current non-action of keeping staff levels steady in spite of a fourfold increase in oil lease sites, monitoring has become the *de facto* responsibility of the landowner, and reporting/verification is the responsibility of industry. The oil and gas industry is almost entirely self-monitored.

**Do these results conform to a neoliberal environmental governance model?**

Manitoba has met the condition of privatizing environmental regulation by out-sourcing to industry and emphasizing market mechanisms rather than government regulations (Heynen et al. 2007; refined by Carter et al. 2017). As Heynen et al. (2007:65) describes several features of state emphasis on privatization, including these elements in a neoliberal environmental governance model; 1. “the use of privatization to create markets for governance access and use of (ocean) resources.” and 2. “ways to reform the property regime to harness individual decision-making to both market and ecological realities”.

To address “the use of privatization to create markets for governance access and use of [ocean] resources” - private land conservation is the legislated responsibility of NGOs, partnerships between NGOs and industry have resulted in minimal disturbance standards and

monitoring is a *de facto* responsibility of landowners. The “non-actions” described earlier in this chapter that include ignoring impact of oil development on habitat in environmental plans, the absence of regulations backing up the sustainable development section of the *Oil and Gas Act*, the absence of new funding to hire lease inspectors in the wake of a four-fold increase in oil development, the streamlining of operations, the “Red Tape” review currently being undertaken by the department overseeing oil development and the comparative economic attractiveness of developing in Manitoba all point strongly to a focus on creating a market that is attractive for and relies on privatization.

### **Limiting Citizen Engagement through Environmental Regulation**

Manitoba has consistently demonstrated that they have limited citizen engagement within the oil sector. The interview results and my experience with gathering information are consistent with this finding and suggest that access to general information and specific information regarding water use, environmental protection, minimal disturbance standards and planning information does not exist or is restricted. Below, I relate participant’s comments to each of the key findings in Chapter 4 in order to confirm my understanding of how Manitoba’s environmental governance model plays out in day to day operations.

#### **Key Finding 14**

- The *Oil and Gas Act* has no mechanism for citizen engagement, which limits attempts at effective governance.

Several participants felt the details of how the government takes care of habitat in areas of oil development in day-to-day operations are not transparent and that makes it difficult to understand government actions and to develop a professional relationship essential to working together towards positive conservation outcomes.

According to Janssen (2012) “the government is compared to an oyster that automatically closes up when approached,” which reflects the experience of two of my participants, as well as Hlusko’s (2017) and my own experiences. Janssen (2012) also makes the observation that “managers and other public servants often have the tendency to avoid opening their data, as this would provide the public with new insights which might in turn result in critical questions.” Janssen (2012) provides evidence for this theory by comparing against institutional theory, which “predicts that the opening of data will reinforce existing structures instead of changing them and allowing them to fully take advantage of new developments.”

In Chapter 2, I stated that Carter et al. (2017) argues that governments are shifting toward an increase in public engagement in most areas of government decision-making, but not in oil and gas development sector. They found that there were significant barriers to public involvement in several provinces, including Alberta and Saskatchewan. One of the barriers to public involvement is that data that are important to decision-making may not exist. In a comparison between Manitoba, Alberta and Saskatchewan, I found that for the latter two water use data, fracking fluid data, minimal disturbance standards information, legal information for landowners exists in abundance. In contrast, Manitoba does not collect these data.

The secrecy of decision-making processes and information keeps power in the public sector over if, where and how natural resources are exploited (Heynen et al., 2007). Further, keeping information away from the public cuts traditional channels of democratic accountability (Heynen et al., 2007) decreasing changes and reduces the ability to pull ideas from the collective intelligence from citizens (Janssen, 2012). Instead of using data, information and insights from government on how we can work better together, I have had to piece together an understanding

using comparatives and incomplete information from what the government chooses to make publicly available.

Although I cannot foresee any change in this area for Manitoba, I need to highlight that Manitoba has seen great successes from involving stakeholders in decision-making with their open and transparent parks planning and hydro transmission line projects. Having been a part of developing comments on several planning documents, including the proposed Polar Bear Park and Manitoba-Minnesota Transmission Line (The Wildlife Society – Manitoba Chapter, 2015). I can confirm that information released was used to develop maps, aid in productive discussions and provide informed views on wildlife management. Advice provided through the commenting process was reflected in follow up documents from the Manitoba government, demonstrating that value was derived from the release of data into the public realm. This reflects the findings of Janssen (2012), who states that releases of government data can create new insights for the public sector, tap into the intelligence of the collective and ultimately improve products and services.

According to Mansfield (2004) governments that are influenced by neoliberalism do not always have poor outcomes and can have contradictory policies. This parks and protected areas public engagement process is interesting in the Manitoba context, as it does not fit neatly into a neoliberal environmental governance model.

If Manitoba provided open information regarding habitat conservation practices in areas of oil development my participants and I would be able to analyze government processes as open information provides an opportunity for creating dialogue with citizens so that the government can learn from a deep and rich pool of knowledge (Janssen, 2012). With current information practices, citizens have less of a chance to become engaged in furthering habitat protection

public policy in the province. Janssen (2012) concludes that traditional planning and control instruments are no longer appropriate, and that government should accept that it needs to change. Manitoba opening up data to stakeholder groups and private citizens could have positive impacts for habitat.

### **Key Finding 15**

- The *Sustainable Development Act's* reporting on indicators, specifically the Biodiversity and Habitat Conservation indicator was stopped after 2009.
- Some participants, other researchers (Hlushko, 2017) and myself, have been met with silence on answer to our questions regarding oil and gas operations and habitat protection in Manitoba.

Difficulty obtaining information from the Manitoba government on water and habitat conservation was a shared experience among study participants, Hlushko (2017), and myself. I found very little information about conservation of habitat or water on the Manitoba government website. I was denied access to interviews with all government departments and persons that I attempted to contact, even after hours of pre-interview questioning and scheduling efforts over just less than a year. This systematic denial of access to information has left my participants and myself with an incomplete understanding of government action towards habitat protection and oil development. Participants, concerned members of the public and myself can only rely on the consistent increase in listed species and habitat degradation as an indicator that the intersection of Manitoba's oil development and habitat conservation framework is insufficient at habitat conservation.

Like the public and researchers, even NGOs working directly with oil companies have challenges obtaining relevant data from industry. When engaged in planning with an industry member, one of my participants was denied information even after entrusting this oil company with their own confidential information:

*“Well they all have their own plans and they never want to share them. We've sat down with oil companies and they've asked us for our information...we said to them, 'If we give you our stuff, you give us yours. What do your plans look like for the next ten years?'[they replied] 'Well we can't do that. We don't want to provide you with that information. You might take it to our competitors.’” (MBNGO05)*

*“And they lost most of the files, I should tell you. Real public registries, with real penalties for incorrect information or missing information, the public registry is in the Millennium Library downtown [Winnipeg] and people just basically take the stuff. There's no longer any central paper registry. We're about two years and four months since it disappeared, so the public access to information, the real public registries, public registries beyond just what we have now, which is why we're talking about planning, and water, and all these other kinds of things, and oil and gas dispositions, and leases, and so on, it would just make an incredible difference.” (MBNGO11)*

It was troubling to discover how little information I was able to receive from the Manitoba government, especially as I was not asking for direct comment on any case, licence, company or negotiation, which can be gleaned from the Research Consent Form (Appendix B). I was declined interviews with every government organization I contacted, often through silence. Hlushko (2017:85) not only encountered people that refused to interview with her, but experienced three encounters with “...tense and confrontational behaviour...” during interviews. One participant contacted the Manitoba government to gain an understanding of how fresh water withdrawals used in oil development were recorded. A government employee told them that the amount of fresh water taken is not recorded and there is no regulation regarding a cap on amount of water that can be used. No rationale was offered to my participant.

### **Do these results conform to a neoliberal environmental governance model?**

Manitoba has met the condition of limiting citizen engagement with environmental regulation developed by Heynen et al. (2007) and refined by Carter et al. (2017) regarding what we would typically find in a Canadian neoliberal environmental governance model in an oil and gas case study. As Heynen et al. (2007:56) outlines, this is typical of a neoliberal environmental

governance model, which demonstrates 1. restricting access to information and 2. information that was once in the public domain becomes commodified, takes on commercial significance and is often treated as confidential.

Hlushko (2017), participants and myself all experienced restricted access to information regarding the chemical composition of fracking fluid, future planning for oil leases and water withdrawals. Further, I have been unable to find evidence of an example of a time when Manitoba or oil companies operating within have shared information in the public domain. However, I did find evidence that several Canadian jurisdictions (Alberta, British Columbia, New Brunswick and Northwest Territories) mandate that the oil industry disclose which fluids they use for fracking and where (FracFocus, 2017). I also found that both Alberta (Alberta Energy Regulator, 2018) and Saskatchewan require reporting on water use in hydraulic fracturing and report out on high-level data (Halliday et al., 2009). In contrast, important information that is shared in other jurisdictions is not shared, or tracked, in Manitoba.

## **Chapter Summary**

In this chapter, I have presented the results from participant interviews and discussed the intersection of Manitoba's law and policy related to habitat conservation and oil development. Interviews provided confirmation of my developing conclusions that suggests Manitoba operates under a neoliberal environmental governance model and that this presents a serious barrier to conservation, among other gaps I have uncovered. Notably, the interviews also yielded positive findings regarding cooperation between NGOs and industry in developing and implementing minimal disturbance standards. This was an additional indicator of a neoliberal environmental governance model, but it does offer a glimmer of hope for native prairie.

## **Chapter 6: Gaps in laws, policy and programming at the intersection of oil development and habitat conservation in Manitoba and suggested policy remedies**

In this chapter I summarize the study objectives and draw conclusions in relation to each. I also have developed general policy recommendations for oil development law and policy in Manitoba and highlight areas of future research. The overall purpose of this research was to understand how well habitats, particularly native prairies, are protected from negative impacts of oil development. To assess this, I used a review of broad government environmental strategy, legislation and related literature as well as interviews with key individuals involved in habitat conservation and the oil industry. The first objective was to identify and describe any gaps in the policy framework at the intersection of oil development and habitat conservation in Manitoba. The second objective was to consider the policy remedies used in other jurisdictions and how these might be applied to the Manitoba oil/conservation case developed in the thesis.

Because of the high number of species at risk (Manitoba Wildlife Branch, 2017) and the low amount of native grasslands habitat left in Manitoba (Government of Manitoba, 2017k), I expected to see some deficiencies in Manitoba's policy. What was surprising was the extensive neoliberalism influence on conservation in Manitoba and how a few seemingly small phenomenon like an under-resourced department and a mandate for economic growth could lead to privatized habitat conservation and may ultimately contribute to the potential extinction of several bird species.

My research suggests that Manitoba is "open for business" due to the gaps in the laws, policies and programming facilitated by a neoliberal environmental governance model. Manitoba has lowered barriers for industry to access oil either by discretionary power, omissions in acts, or a general "hands off" culture where industry and private citizens dictate the market and amount

of oil extraction in Manitoba. Reducing government staff and programs that would normally monitor these activities and ignoring the need for important initiatives like regional planning and cumulative effects assessments contribute to this. Manitoba has also officially taken a “hands off” position using the Surface Rights Board, who are the quasi-judicial board that mediates between landowner and industry in the case of a dispute. Manitoba has taken the devolution of responsibility one step further by essentially privatizing monitoring (due to lack of government resources), habitat conservation (because industry and NGOs have developed their own minimal disturbance standards) and private land conservation (because the government officially gave power to specific NGOs to do so). All of this has been happening unbeknownst to citizens because there is no information supplied to citizens and there is no mechanism for public feedback on projects.

The biodiversity of Manitoba and North America’s grasslands is being lost at an unprecedented rate, due to human activity, habitat fragmentation, and associated environmental issues (North American Bird Conservation Initiative Canada, 2012). Before the latest oil boom, Manitoba’s portion of the prairies was already fragmented by agriculture, transportation, and residential developments (North American Bird Conservation Initiative Canada, 2012). Some study participants have said oil development itself does not have a large footprint, but it does add another factor that further endangers plants and animals and degrades an already imperiled ecosystem.

The Manitoba government has historically lagged in habitat protection in grasslands evidenced by species decline and ecosystem fragmentation, and has no public plan indicating that they intend to. TomorrowNow, Manitoba’s former environmental strategy (Manitoba Conservation and Water Stewardship, 2015) and the new 2017 Climate and Green Plan

(Manitoba Sustainable Development, 2017a) have three common elements: neither mentions any plan for habit protection in grasslands, action on cumulative effects assessments, or conservation plans for the many imperiled grassland bird species. In the absence of government leadership, we will have to continue to look to NGOs and whatever actions industries (oil, agriculture) are willing to take to protect habitat. Unless Manitoba follows through with development and implementation of habitat conservation plans in the southwestern corner, specie and ecosystem health will continue to decline.

The current Manitoba neoliberal environmental governance model has resulted in a framework with a bundle of processes, omissions and powers that facilitate a culture that values economy over nature. This is consistent with several other studies, such as Bury's (2004) exploration of mineral exploitation in Peru, which arguably also exploits the citizens of Peruvian Andes by marketizing mineral resources until those resources run out. Neoliberal marketization is used as a replacement for government responsibility to ensure that citizens have employment opportunities. This case is very similar to Manitoba's reliance on oil extraction in rural areas. Both governments were unable to take care of their rural citizens and have turned to neoliberal practices to take the place of government. It is also consistent with other studies (Mansfield, 2004) that concluded neoliberalism can be inconsistent and contradictory, such as the amount of public feedback Manitoba receives and incorporates into parks planning, which is not a typical feature of a neoliberal model.

Changes could be made to the current legal, policy and programming framework to address existing gaps. As stated earlier, there are a plethora of acts that protect habitat, including the *Wildlife Act*, *Parks and Protects Areas Act*, the *Environment Act* and the *Endangered Species and Ecosystems Act*. While some changes could be made to the acts to strengthen them, all of the

essential elements are present for strong conservation. It is how the legislation and policy is used that is the centre of the issue of lax habitat protection. It is not likely that sweeping change in the current governance model will occur, so we need to work within the system to ensure that habitat is protected.

Some conservation issues result from the placement of Manitoba oil and gas development management with the Petroleum Branch, which is mandated to develop the economy. The oil industry in Manitoba is largely operated through private entities, agreements, and land in rural areas with fewer economic opportunities than in urban centres. This results in conflicting interests, dwindling monitoring and enforcement resources and lack of overall environmental protection imperative. Further, the *Oil and Gas Act* lacks an environmental review process. If oil and gas development came under *The Environment Act* and went through an EIA process, there is no guarantee that projects would not affect the environment. The EIA process in Manitoba and Canada is not robust, does not stop negative individual and cumulative environmental impacts from occurring and has some deficiencies in its public review process (Boyd, 2003) although recent reforms in Canada may change this (Government of Canada, 2018c). Similarly, Manitoba does not currently use cumulative effects assessments as a part of their planning efforts which is an issue because of the high amount of human and oil development activity and listed species (Government of Canada, 2017; Government of Manitoba, 2017c) in one small area. It appears that there is no political and administrative will to integrate it into the EIA or oil and gas development framework (Government of Manitoba, 2018a, Manitoba Sustainable Development, 2017a).

Some specific problems result from the neoliberalism perspective, and lead to conservation challenges in south-west Manitoba. The Petroleum Branch is understaffed for the

amount of oil lease sites that are in Manitoba (Hlushko, 2017). Further, the Surface Rights Board only steps in for issues with compensation and loss of income pertaining to oil operations on private land, but not any habitat destruction issues. Effectively, this makes the landowner responsible for monitoring land (Hlushko, 2017), further facilitating the neoliberal environmental governance model of privatization (Heynan et al., 2007). The heavily influence of neoliberalism can also be seen in how discretionary powers and administrative and political will change policies and make exceptions. The Petroleum Branch has proven this with only 14 environmental plans for the thousands of lease sites that exist in Manitoba. If neoliberal influence on discretionary power continues to allow oil development near species at risk, it will do harm to habitat, species at risk and undermines the protection of the *Endangered Ecosystems and Species Act* and the *Wildlife Act*.

## **Recommendations**

**Manitoba should consider providing the same type of resources and processes to protect habitat from the impacts of oil development as other developments.** Many developments with a smaller single footprint than an oil lease site are included under The Environment Act as Class 1 and Class 2 developments. Oil lease sites should have the same pre-development consideration given as other developments are.

**Manitoba should develop regional planning that includes cumulative effects assessment.**

Regional planning with cumulative effects assessment could mitigate impacts on habitat and provide cohesive management. Involving landowners in a government-led private land conservation program would be imperative as over 80% of oil development occurs on private lands in Manitoba.

**Manitoba should adequately resource the Petroleum Branch monitoring and enforcement staff.** Currently there are too few staff for a robust inspection, monitoring and enforcement program. Manitoba should examine the staffing levels that it would take to have a robust program or should reduce the amount of approvals to ensure that there are adequate resources for habitat protection.

**Manitoba should examine the role of the Surface Rights Board and expand its responsibilities.** When considering whether to grant access rights, the Surface Rights Board should consider criteria such as the existence of a conservation easement, presence of native grassland or other potential habitat, presence of species at risk, or other pre-defined criteria.

**Manitoba should consider developing and implementing minimal disturbance standards.** Minimal disturbance standards have been developed through an NGO-industry partnership, are voluntary and have little uptake. This initiative should be government-led because government is responsible for habitat protection and ensuring and industry are held to the same conservation standards.

**Manitoba should develop a robust private land conservation program.** A private land conservation program should be developed to ensure that habitat of all types in southwestern Manitoba (native plants, agricultural lands, pasture) are protected. Manitoba should consider several elements in a private land conservation program, including;

- additional funding for NGOs to assist in planning on conservation on private land with conservation value or with previous conservation agreements.
- active promotion of private land conservation in the southwestern corner of Manitoba and other regions
- clarification of how oil access affects and how both activities are not mutually exclusive

**Manitoba should develop regional planning that includes oil development and a stakeholder process.** Stakeholders are already forming their own partnerships and policies in the absence of a government-led process. Manitoba should examine the aforementioned stakeholder models from Alberta and Saskatchewan to develop their own public and stakeholder involvement model.

**Manitoba should publicly release information to increase accountability.** Currently, there is little government accountability for oil and gas exploration and development in Manitoba. Manitoba should look at the examples of Manitoba parks and protected areas engagement, Alberta and Saskatchewan public information and the *Environment Act* process to model a similar process that would grant the public access to information regarding impacts, while still respecting landowner privacy.

**Manitoba should be more transparent with information regarding oil and gas development.** Currently, information including water withdrawals, the content of fracking fluid, how discretionary powers are used and how environmental plans for oil leases are formed is not publicly available – even upon direct request. Manitoba should become a contributing member of FracFocus also disclose the chemical composition of their fracking fluid used in specific wells.

### **Future Research**

As others (Carter, 2017; Eaton, 2016; Hlushko, 2017) have researched the social and natural effects of oil and gas development in the prairie provinces of Canada, I have contributed research that will help understand the environmental governance model that shapes Manitoba's oil economy. This research has unearthed many questions that may be topics for future research.

I concluded that there are several issues with Manitoba's habitat conservation efforts in areas of oil development. I believe that these issues do not stem from direct deficiencies in any one law or program, but instead can be traced back to a neoliberal environmental governance model. This model allows for the marketization of natural resources and in order to be successful must rely on the will of politicians and administration, which in this case have resulted in inaction in programs such as an absence of minimal disturbance standards, conservation programming and public engagement. In order for the model to be successful it also needs caveats in conservation-focused acts such as discretionary power and the mandate to use it against barriers to access natural resources.

Research examining how discretionary powers affect habitat in a neoliberal-influenced natural resource extraction environment could be beneficial for planning more effective conservation programs. The focus should be on natural resource extraction environments that are subject to subsidies or other pressures such as a strong economic development mandate.

Manitoba habitat would benefit from a strong private land conservation program. Research examining what conservation agreement regimes exist in Canada, the effectiveness of those regimes and what lessons could be learned for Manitoba would be beneficial. Research should concentrate on private lands with high natural resources value.

Manitoba wildlife could benefit from government-led minimal disturbance standards. Research evaluating effectiveness of the current minimal disturbance standards undertaken by NGOs and industry in Manitoba would be beneficial as a basis for government-led standards. Research should focus on what would be most effective in grasslands and could consider other minimal disturbance standards from Alberta and Saskatchewan.

“...meet the new boss, same as the old boss...” (Townshend, 1971)

## **Appendices**

### **Appendix A: Sample Interview Questions**

How can industry help to conserve habitat during development?

How can government help to conserve habitat through legislation or policy?

How can landowners help to conserve habitat?

How does your organization use the *Oil and Gas Act*?

How could the *Oil and Gas Act* be changed to protect habitat?

How does your organization use the *Surface Rights Act*?

How could the *Surface Rights Act* be changed to better protect habitat?

What do you see as the biggest threat to habitat in areas of oil development?

Which industrial development practices harm habitat? How?

Which industrial development practices conserve habitat? How?

Which changes in industrial practice do you think could help to conserve habitat?

What could your sector do more of/less of to protect habitat in areas of oil development?

What changes would you like to see in oil development on grasslands?

What changes would you like to see from governments to help conserve habitat in areas of oil development in grasslands?

## **Appendix B: Research Consent Form**

**(adapted from Eaton, 2007 and Fort Garry Campus Research Ethics Boards 2013)**

### **Habitat Conservation Practices in Oil Development Activities in Manitoba Research Proposal**

#### *Research Consent Form*

#### Contact:

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This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Thank you for agreeing to participate in this study. This research consent form outlines the purpose of this study and describes your involvement and rights as a participant. If you would like to know more about the study, a proposal is available upon request, and/or the researcher is available to go over the study with you individually prior to participation.

The objectives of this project are:

- 1) Identify and describe gaps in Manitoba's law and policy related to oil resource development and the extent that it addresses habitat conservation in Manitoba.
- 2) Confirm gaps and uncertainties through interviews and document review.
- 3) Where gaps exist, describe policy used in other jurisdictions and the views of interviewees to address policy gaps.

The interview schedule will consist of an initial contact to familiarize participants with the project and interview topics. Participants will then be sent the list of standardized questions that will be discussed. The Principal Investigator will check in either via email or phone to schedule the interview and ensure that you have read and understood the materials and to answer any

questions the participant may have. The interview will be scheduled between one to three weeks after receiving the questions and will last between 30 to 60 minutes. After the interviews are transcribed, the researcher will analyze themes of the research, write the thesis, defend and finalize their degree by May 2017. A summary of findings from interviews will be forwarded to participants for their review before Spring 2016. The final thesis will be forwarded upon completion, prior to May 2017. If at any time the participant would like to withdraw, they can do so for any reason in writing via email to the researcher without prejudice, consequence, or questioning. A confirmation of receipt will be sent to the participant describing how and when any information collected will be destroyed.

Participants are encouraged to ask questions, expand or add topics at any time. It is important to this study to understand the broad picture of policy and practice in Manitoba oil development in order to make robust recommendations on improvements to habitat conservation. This information is being used for a Master's thesis, and will not be used anywhere else without participant's explicit and written permission.

The Principal Investigator and research committee anticipate that there is little risk to any of the participant's due to the strict confidentiality and interest of the researcher. The research is focused on understanding how the data collected from interviews relates to high-level policy and will use this to contribute to analysis. Interviews will be recorded with a mp3 recorder for the purposes of this study only. Under normal circumstances, no individual other than the researcher will hear the recording, or have access to the transcripts. Recordings or transcripts will never be analyzed on public computers by the researcher. However, all materials are subject to review by the Research Ethics Board of the University of Manitoba. Participant's names will not be included in the final product, nor will anything be published to positively identify participants. Recordings, interviewer notes, and transcripts from this study will be erased or shredded one calendar year after the completion of this study.

A code identifier will be used throughout the research process as outlined, but not included in any published materials. Interviewee Identification Codes Jurisdiction will be represented by a letter, A = Alberta and M = Manitoba. Sector of interviewee will be represented by a letter as follows; I = Industry, G = Government, including Federal, Provincial, Municipal and Aboriginal, N = Non-Governmental Organization (including charity, non-profit and not-for-profit sector), C = Crown Corporations or Agencies. Lastly, the code will be followed by a sequential number to be determined by order of contact. For example AG01 would read, Alberta Government, First Interviewee.

While the Principal Investigator cannot offer financial compensation, it is anticipated that this will benefit habitat conservation in Manitoba by informing industry of policies that could be adopted to mitigate negative impacts on imperiled grassland habitat.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved

institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

The Fort Garry Campus Ethics Research Board has approved this research. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204) 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Do you grant permission to be quoted in the published thesis and presentations, **without** any identifying information included?

Yes \_\_\_ No\_\_\_

Do you grant permission to be recorded?

Yes \_\_\_ No\_\_\_

Study Participant \_\_\_\_\_ Date\_\_\_\_\_

Principal Investigator \_\_\_\_\_ Date\_\_\_\_\_

## **Appendix C: Participant Identification Codes**

Jurisdiction will be represented by a letter, AB = Alberta, SK = Saskatchewan, and MB = Manitoba. Sector of participant will be represented by a letter as follows; IND = Industry, GOV = Government, including Federal, Provincial, Municipal and Aboriginal, NGO = Non-Governmental Organization (including charity, non-profit and not-for-profit sector), CRO = Crown Corporations or Agencies. Lastly, the code will be followed by a sequential number to be determined by order of contact. For example, ABGOV01 would represent, Alberta Government, First participant.

## Appendix D: All Themes and Definitions

Heynan/Carter Criteria	Theme	Sub-theme	Definition
Reducing government staff and programs protecting the environment	Administrative and Political Will	Action, Enforcement and Monitoring	Refers to actions that government should be or are taking, enforcement efforts that are or are not occurring or comments on monitoring.
Limiting citizen engagement with environmental regulation	Administrative and Political Will	Collaboration	Refers to collaborative efforts that have, are or could/should be taking place.
Limiting citizen engagement with environmental regulation	Administrative and Political Will	Community Pastures	Specific discussion on community pastures and where they are at in Manitoba.
Limiting citizen engagement with environmental regulation	Stakeholder and Public Involvement	Consultation	Refers to when participants are consulted or general consultation quote or discussion.
Privatizing environmental regulation (out-sourcing to industry; emphasizing market mechanisms rather than government regulations)	Administrative and Political Will	Easements	Discussion on easements - usually within the context of where they fall within Manitoba's policy
Decreasing regulations that constrain corporations' access the environmental resources	Administrative and Political Will	Economics	Refers to decisions made based on economics with no or little consideration to environment.
Limiting citizen engagement with environmental regulation	Stakeholder and Public Involvement	Education	Refers to anytime that education is referred to - mostly educating landowners on rights and conservation.
Decreasing regulations that constrain corporations' access the environmental resources	Administrative and Political Will	Law and Policy	Refers to gaps or issues with Manitoba laws or the overall policy in Manitoba.
Reducing government staff and programs protecting the environment	Administrative and Political Will	Government Priorities	Refers to when participants allude or point to the government having oil development as a higher priority than ecosystem protection.
-	Cumulative Effects Assessment	Horizontal Drilling	Refers to a minimal disturbance practice, or just horizontal drilling as a practice.
Privatizing environmental regulation (out-sourcing to industry; emphasizing market mechanisms rather than government regulations)	Administrative and Political Will	Industry Co-operation	Refers to when participants discuss times when industry is co-operative with minimal disturbance practices, either after consulting with participants or when industry has adopted their own practices.
Privatizing environmental regulation (out-sourcing to industry; emphasizing market mechanisms rather than government regulations)	Administrative and Political Will	Minimal Disturbance	Refers to any minimal disturbance practice set of standards or suggestion of that becoming incorporated into Manitoba's law and policy, any other jurisdictions that have that, or any practices that might minimize disturbance.

Decreasing regulations that constrain corporations' access the environmental resources	Administrative and Political Will	Private Land	Refers to anything involving private land, law/policy on private land, or private landowners.
Limiting citizen engagement with environmental regulation	Stakeholder and Public Involvement	Public Information	Refers to areas where public information is available. unavailable. or should be available.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Regional Planning	Refers to any mention of planning for more than one site, even if that is within a company, watershed, or entire region.
Decreasing regulations that constrain corporations' access the environmental resources	Cumulative Effects Assessment	Relative Impact	Refers to when participants discuss agriculture and its relative impact to oil development in Manitoba.
•	Cumulative Effects Assessment	Remediation	Refers specifically to remediation efforts.
Limiting citizen engagement with environmental regulation	Stakeholder and Public Involvement	Stewardship	Refers to discussion on private land stewards or other suggestions that participants have made.
Devolving environmental regulatory responsibility to lower levels of government	Administrative and Political Will	Subsurface Rights	Refers to any discussion on subsurface rights, or surface/subsurface rights discussion.
Devolving environmental regulatory responsibility to lower levels of government	Administrative and Political Will	Surface Rights	Refers to any discussion on surface rights, or surface/subsurface rights discussion.
Decreasing regulations that constrain corporations' access the environmental resources	Administrative and Political Will	Sustainable Resource	Refers to when participants discuss the <i>Oil and Gas Act</i> "sustainable development" section, or sustaining the resource/oil development sector versus sustaining the environment/habitat.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Biodiversity	Refers to biodiversity, species genetics.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Conservation	Any general discussion on conservation.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Cumulative Effects	Any discussion on cumulative effects as part of an impact, usually within the context of regional planning.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Impacts	Refers to any impacts, either real or perceived that participants mention or discuss.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Infrastructure	Refers to impacts from infrastructure, including pipelines.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Pipelines	Refers to quotes that refer to pipelines that might be outside of the scope of this study.
Reducing government staff and programs protecting the environment	Cumulative Effects Assessment	Species at Risk	Refers to when participants expressed concerns or facts about species at risk in Manitoba.

Reducing government staff and programs protecting the environment	Administrative and Political Will	Economy	Refers broadly to the economy where economics become political.
Reducing government staff and programs protecting the environment	Administrative and Political Will	Politics	Refers to how politics may have impacted/influenced decisions or general opinions on politics.

## **Appendix E: Sustainable Development Section of the Oil and Gas Act**

(Government of Manitoba, 2017a)

“(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.” (Government of Manitoba 2017a)

**Appendix F: Manitoba Sustainability Progress Report: Biodiversity and habitat conservation indicator section in 2005 and 2009**

(Government of Manitoba, 2009)

2005 Sustainability Progress Report Biodiversity and habitat conservation indicator	2009 Sustainability Progress Report Biodiversity and habitat conservation indicator
<p>Wildlife Species and Ecosystems at Risk TREND – UNCLEAR</p> <p>Species at risk are animals and plants that are endangered, threatened or extirpated. Habitat loss and invasive alien species are widely recognized as the two main threats to wildlife.</p>	<p>Wildlife Species and Ecosystems at Risk TREND - INCONCLUSIVE</p> <p>Species at risk are animals and plants that are endangered, threatened or extirpated. Habitat loss and invasive species have been widely recognized as the two primary threats to wildlife. More recently, climate change has become a focal point of concern as well.</p>
<p>Preventing species from becoming rare or at risk can be more cost-effective than recovery programs for species at risk. While the population trends for some species are well-known, we have little to no data on the population status or trends for the vast majority of species native to Manitoba.</p>	<p>Preventing species from becoming rare or at risk can be more cost-effective than recovery programs for such species. The loss of wildlife species and biodiversity is a global phenomenon for which there are no simple solutions. Governments and agencies and non-profit organizations are working hard to try and protect species and ecosystems at risk around the world and right here in Manitoba. While the population trends for some species are well-known, there is little data on the population status or trends for the majority of Manitoba’s native species.</p>
<p>This is also true for the 28 species of plants and animals that are designated under The Endangered Species Act of Manitoba as endangered, threatened or extirpated. Of these, 15 species are also considered at risk on a national scale. Some species are not designated at risk but are vulnerable to changes in their environment, such as woodland caribou. They are found throughout much of the eastern and northern boreal forests, but have not been in the Whiteshell or southern areas since the 1950s.</p>	<p>This is also true for the 35 species of plants and animals that are designated under Manitoba’s Endangered Species Act. And of these, 22 species are also considered at risk on a national, Canada-wide, scale. Some designated species are vulnerable to changes in their environment, such as the woodland caribou. Today they are found throughout much of the eastern and northern boreal forests, but have not been seen in the southern Whiteshell area since the 1950s.</p>
<p>The polar bear has also been the focus of concern, as bears in the Western Hudson Bay population are showing lower body weights than in previous years. One endangered species that has been brought part way back from the brink is the peregrine falcon. These birds of prey have responded positively to a ban on the use of hazardous organochlorines, such as DDT, and to releases of birds into the wild. Several pairs of peregrine falcons, which typically breed on remote northern cliffs, currently nest each year in Winnipeg and Brandon.</p>	<p>The Western Hudson Bay polar bear population has now also become a concern due to the risk associated with accelerating climate change. One endangered species that has been brought part way back from endangered status is the peregrine falcon. They have responded positively to a ban on the use of hazardous organo-chlorines such as DDT, and to the release of birds into the wild. Several pairs of peregrine falcons, which typically breed on remote northern cliffs, currently nest each year in Winnipeg and Brandon, as well as other cities in the northern United States.</p>

<p>While progress has been made by increasing protection, natural habitats continue to be under growing threat from external factors, such as exotic species. The resulting reduction in biodiversity may make our environment less sustainable in the long term and could result in higher economic costs for industry, agricultural producers, government and individual Manitobans. While the picture on species at risk is mixed or unclear due to lack of data, there are signs of success and hope. In a number of cases, populations of endangered species responded well to conservation measures and rebounded. There are even examples, such as the Canada geese, where increased population has led to new problems caused by overabundance. This underlines that sustainability is neither an end point nor a pathway for unlimited growth. It is much more about maintaining viable and resilient populations of wildlife species around a socially and ecologically acceptable medium.</p>	<p>While progress has been made by increasing their protection, natural habitats continue to be under pressure from external factors such as encroachment and the introduction of exotic species. The resulting pressures on biodiversity pose environmental risks and diminished long-term habitat sustainability. While more species are now at risk in Manitoba, there are signs of success and there is reason for optimism. In a number of cases populations of endangered species have responded well to conservation measures and have seen population increases. And then there are also examples, such as with Canada geese, where increased populations have led to problems associated with overabundance, in both urban and rural areas. This underlines the fact that sustainability is neither an end point nor a pathway for unlimited growth. Rather, it is about maintaining viable and resilient populations of wildlife species</p>
<p>For Manitoba's woodland caribou population, a management strategy has been developed. This strategy is in place to minimize impacts on woodland caribou, and ensure the viability of the species by working with the various stakeholders now and in the future. This will continue to be a priority.</p>	<p>A recovery and conservation strategy has been developed for Manitoba's woodland caribou population. This strategy is in place to minimize impacts on woodland caribou and to ensure its viability by developing partnerships with the various stakeholder groups which will need to be involved. Developing action plans for each range is now a priority. Despite successes, society must be diligent and recognize that all species will not respond equally to conservation measures.</p>
<p>Success, in particular cases, should not detract us from the fact that all species do not respond equally to conservation measures. Also, not all species have the same visibility and direct economic importance as waterfowl and other big game animals. The intensity and success of conservation measures in such cases is much more uncertain. Currently, the inventory and monitoring of species of concern is among the weakest link in the chain of conservation actions. Information gathered through well-designed monitoring systems is essential for making sound conservation decisions and to support sustainable development.</p>	<p>Despite successes, society must be diligent and recognize that all species will not respond equally to conservation measures. Maintaining an inventory and actively monitoring species of concern continues to be a challenge. Information gathered through well-designed monitoring systems continues to be essential for making sound conservation decisions, in support of sustainability and to secure the future of Manitoba's impressive biodiversity.</p>

**Appendix G: Prohibitions in the *Endangered Species and Ecosystems Act*.** (Government of Manitoba, 2017a)

**“Prohibition**

10(1) No person shall

- (a) kill, injure, possess, disturb or interfere with a member of an endangered species, a threatened species, or an extirpated species that has been reintroduced;
- (b) destroy, disturb or interfere with the habitat of an endangered species, a threatened species or an extirpated species that has been reintroduced; or
- (c) damage, destroy, obstruct or remove a natural resource on which an endangered species, a threatened species or an extirpated species that has been reintroduced depends for its life and propagation.

**Exception**

10(2) Subsection (1) does not apply to a person

- (a) who acts under the authority of a permit issued by the minister under section 11;
- (b) who is exempted from the application of this Act under section 12; or
- (c) who acts under the authority of a licence issued under *The Environment Act*, if the minister is satisfied with respect to the matters described in clauses 12(1)(a) and (b).”

**Appendix H: Environmental Requirements for Lease Sites in Manitoba** (Manitoba Growth, Enterprise and Trade, 2017e)

Lease Number	Company	Details
004919	Progress Energy Ltd	<p>2. The well must be diked in such a manner as to catch all potential spillage from the well and associated flow line and storage tanks. 3. The dike must be constructed of impermeable clay, be erosion resistant and be capable of containing any run-off entering the site. 4. All storage tanks must be located on the opposite site of the well to the ravine's edge. 5. The storage tank must also be independently diked to 110% of the tank capacity. 6. The storage tanks must, at all times, have a least 24 hours of production capacity in reserve. 7. If a temporary surface flow line is used it must be pressure tested to 7,000 Kpa prior to being put into use. The pressure test must be witnessed by an inspector from the Virden District Office. 8. The well site must be inspected daily by a Progress employee. 9. All fresh water run-off fluid contained inside the dikes must be analyzed by an inspector from the Virden District Office and approval received prior to pumping out. 10. In addition to the other conditions designed to prevent a spill into the Birdtail Creek, Progress is to file an environmental protection plan in accordance with Section 120 of The Oil and Gas Act5913.</p>
005249	Compton Petroleum Corporation	<p>2. Compton Logging is required to provide as per drill Section cutting 113 samples of the Regulation taken at 5m have intervals been waived. from the In intermediate lieu of logging, casing • shoe to T.D. The samples are to be washed and vialled in accordance with Subsection 111(2) of the Regulation and shipped to the Rock Preparation Lab. As well, Compton will supply copies of the Geological Report and detailed strip log which shows the well trajectory and rates of penetration. 3. Two copies of the final directional survey are to be submitted to the Branch with the drilling tour reports as soon as drilling is finished. 4. Prior to commencing drilling, Compton is to shut-in the well located at 3-33-8-24. , 5. Site specific environmental mitigation plans outlined in the Environmental Mitigation Plan "Oak Lake" 04-33-008-24 W1 M Wellsite and Access Road R an Cameron, Alpine Environmental, June 2003 must be allowed. 6. Access will be by way of existing trails and should be used during dry weather to avoid surface disturbance and damage. Appropriate precautions are to be taken when accessing the well during wet conditions. In addition, the access route should also be consistent with minimal disturbance practices (controlled truck traffic, rig matting, etc.). Culverts are to be installed where necessary under the access road. 7. To minimize well site disturbance, the area of the lease that is stripped should be kept to a minimum. 8. The wellsite will have to be diked in accordance with the instructions of an inspector from the Virden District Office to prevent run-off into water covered areas. The spill containment and contingency provisions of the environmental mitigation plan are to be followed. 9. Erosion control measures are to be used along the access road and on the well site. 10. Compton is to have a sufficient amount of weighting material (i.e. barite) and two 400 bbl tanks located on-lease in the event of a loss of well control. 11. All drilling fluids, cuttings and waste must be contained in tanks and disposed off-lease. No pits will be allowed. 12. Surface casing cement returns have been noted to be a concern in the area. Surface casing cement should be pumped until returns are noted at surface. \ 13. All refuse will be removed to a designated landfill site. 14. Reclamation work is to be initiated within the current growing season. Seeding is to be done with a seed mixture compatible with surrounding native vegetation in the area. 15. Because the well is an environmentally sensitive location the licensee, after evaluating</p>

		<p>the well's production potential, is to provide the Branch with a plan for long term production operations. 16. Compton is reminded that a condition of license #5193 required the licensee to obtain water samples from the sloughs adjacent to the well location prior to commencing drilling. Compton is to supply the Branch with a copy of the analysis. 17. This license Is Issued under the condition that Branch approval to spud the well Is required. Compton Is to contact the Virden District Office at least 48 hours prior to rig move. At that time the Branch will determine whether the well can be safely drilled and the rig released prior to spring break up making the site inaccessible.</p>
007247	Molopo Energy Canada LTD	<p>From: Barsness, Lome (STEM) Sent: Thursday, February 11, 2010 12:58 PM  To: Seymour, Paulette (STEM) Subject: New Molopo location Paulette, The following Molopo location has a slough in the NE corner of the lease that may be considered water covered on a seasonal basis. I have requested the company address this issue in the pre site assessment. They have submitted the pre site assessment and it appears to adequately address this issue, so we can proceed with this one by attaching the following condition: • Molopo Pierson HZNTL 13-27-1-28: The Branch has reviewed the pre-site assessment submitted by Molopo at the time of well licensing. Molopo is required to comply with the provisions established in the pre-site assessment addressing the sensitive nature of this location. Lome</p> <p>1) 311mm SURFACE HOLE Surface Casing Depth: Surface casing to be set&gt; 300 m KB to cover MB reg's &amp; gravel encounters Notification: Phone MB gov't branch at 204 673-2472 (24 hr service) within 24 hrs of spudding. Fax in Well Supervisor's Pre-Spud and Weekly Checklist. Size &amp; Depth: Drill 311 mm hole to +/- 300 m KB as follows: • Drill to +1- 300 mKB or deeper to accommodate casing with minimal stickup for cementing. • Wiper trip to surface 15 m short of Surface Setting Depth and Strap Pipe and BHA • If necessary, jack &amp; level rig prior to cementing surface casing. • WATCH FOR POSSIBLE SAND AND GRAVEL: Treat as per Prairie Mud program if required. • SPUD with Native Clays and light vis of 40-45 sec/L. Deviation: Max. 1.5°, survey at 20mKB and then every 30 m as per the Superintendent. Max. rate of change 112 ° per 30m. Discuss strategy with superintendent if deviation exceeds 2°. Mud: Native Clay mud as per Mud Program provided. Arrange for and Fax in Daily Mud Checks.</p>
007721	EnerPLUS	<p>The Licensee shall comply with all the provisions of the Oil and Gas Act, the Drilling and Production Regulation and the following terms and conditions: 1. Due to the proximity of the Assiniboine River, Enerplus is to adhere to the approved environmental site assessment plan.</p> <p>All accidents and near misses will be reported in the tour book and the morning report. Proper enerPLUS Resources Fund reports will be completed and sent to Calgary with final paper work. Ensure that all onsite contractors are orientated to enerPLUS standards. Ensure the location is cleaned up prior to turning the well over to production operations. This includes the safe and environmentally controlled removal and disposal of the following: frac sand perforating debris rags and cloths waste oil contaminated soil all fluids The wellhead will be cleaned with an environmentally acceptable solvent prior to leaving the location and the location sign with enerPLUS Resources Fund location, UWI and Emergency Contact numbers installed at the lease access.</p>
009835	EOG	<p>This location may be subject to seasonal flooding. EOG is to ensure all environmental hazards associated drilling, completing and production of this well during seasonal flooding conditions are adequately addressed.</p>
007447	Molopo Energy Canada LTD	<p>10. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.</p>

009706	Legacy Oil and Gas Incorporated	1. Due to the sensitive nature of this location, Legacy Oil and Gas is to take a low impact approach during lease construction. 2. Lease construction is not to impede the natural flow of surface water. 3. The well site and production tank area is to be diked as a precautionary measure to protect the Antler River. 4. No construction is to be performed on the riparian area of the Antler River
007439	Molopo Energy Canada LTD	9. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.
007520	Molopo Energy Canada LTD	6. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.
007521	Molopo Energy Canada LTD	6. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.
007540	Molopo Energy Canada LTD	6. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.
007541	Molopo Energy Canada LTD	6. Molopo is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds.
008030	Legacy Oil and Gas INC	4. Legacy is to exercise minimal disturbance on this site as it contains a habitat area for nesting and foraging for the Baird's Sparrow, the Loggerhead Shrike and the Sprague's Pipit birds and occasionally by Burrowing Owls.

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