WET PRAIRIE: AN ENVIRONMENTAL HISTORY OF WETLANDS, FLOODING AND DRAINAGE IN AGRICULTURAL MANITOBA, 1810-1980

by

Shannon Stunden Bower

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY in

THE FACULTY OF GRADUATE STUDIES (Geography)

THE UNIVERSITY OF BRITISH COLUMBIA

August 2006

© Shannon Stunden Bower, 2006
ABSTRACT

Southern Manitoba’s wet prairie region is marked by persistent problems with surface water management. Through a historical geographical approach to wetlands, flooding, and drainage from the early 19th to the late 20th century, this dissertation offers an environmental history of a dynamic landscape, emphasizing the complex two-way relations between changes in human communities and environmental conditions.

European newcomers mimicked Aboriginal populations in making use of wetland resources, and the development of property relations attuned to the local environment helped define the Red River settlement, established at the forks of the Red and Assiniboine Rivers in 1812. The creation of the Province of Manitoba in 1870 prompted new disputes over land rights, and perceived racial distinctions were consolidated by differences in how Aboriginal and non-Aboriginal claims were adjudicated.

Farming expanded in late 19th century Manitoba. Many farmers failed to account for environmental variability and found their progress hampered by wet areas or periodic flooding. Early government drains were inadequate, and failed ditching efforts compounded settler frustration. The Land Drainage Act of 1895 expanded reclamation, but settler expectations remained unmet. The environmental consequences of intensive agriculture compounded the problem. Provincial inquiries in the first half of the 20th century revealed the patterns of contention that, along with the ditches themselves, defined the drained landscape.
Flood problems at the international border, the continental significance of waterfowl habitat, and the catastrophic 1950 flood along the Red River were catalysts of change, and led to involvement by American interests and the Canadian federal government. Still, contention continued. Ultimately, it was new concern over surface water erosion – a problem in many ways specific to the local topography of southern Manitoba – that proved most important to the reconceptualization of the drained landscape.

This dissertation examines efforts to reconcile progress, property and the Manitoba landscape, often through the exercise of government authority. It engages the notions of bioregion and nation, highlighting the importance of culture in the interconnected processes of human and environmental change. Finally, it emphasizes the importance of cultivating the capacity for adaptation to dynamic environments.
# TABLE OF CONTENTS

Abstract ............................................................................................................................. ii

Table of Contents .............................................................................................................. iv

List of Maps ...................................................................................................................... vi

List of Images ................................................................................................................... vii

List of Abbreviations ....................................................................................................... viii

Acknowledgments ........................................................................................................... ix

Dedication ......................................................................................................................... xi

1 Introduction: ................................................................................................................... 1
   1.1 The Wet Prairie ......................................................................................................... 1
   1.2 The Physical Geography of Southern Manitoba .................................................... 5
   1.3 Wet Prairie or Flooded Land? ................................................................................ 9
   1.4 Region and Bioregion ......................................................................................... 12
   1.5 Futility and Its Consequences ............................................................................ 18

2 The Great Adaptation: Wetlands, Aboriginal People and Red River Settlers ............ 24
   2.1 Introduction ........................................................................................................... 24
   2.2 Wetlands as Ecological and Cultural Islands ...................................................... 26
   2.3 The Haying Economy of the Red River Settlement ............................................ 32
   2.4 The Great Transformation: Settler Experiences ................................................. 41
   2.5 The Great Transformation: Aboriginal Experiences .......................................... 52
   2.6 Conclusion ........................................................................................................... 67

3 Making Manitoba: Drainage Before the 1895 *Land Drainage Act* ......................... 69
   3.1 Introduction ........................................................................................................... 69
   3.2 Early Drainage ..................................................................................................... 71
   3.3 Drainage as Permanent ....................................................................................... 80
   3.4 Drainage and Political Culture .......................................................................... 86
   3.5 The Politics of Drainage .................................................................................... 97
   3.6 Conclusion ........................................................................................................... 107

4 Jurisdictional Quagmires: Dominion Authority and Prairie Wetlands, 1870-1930 .... 110
   4.1 Introduction ........................................................................................................... 110
   4.2 Contexts and Precedents .................................................................................... 113
   4.3 The Swamp Lands Arrangement, 1885-1912 .................................................... 126
4.4 Reclamation on the Prairies ......................................................... 136
4.5 Conclusion ............................................................................... 148

5 Watersheds:
  Conceptualizing Manitoba's Drained Landscape ....................... 150
  5.1 Introduction ........................................................................ 150
  5.2 The Land Drainage Act and Early Enthusiasm ....................... 151
  5.3 The Sullivan Commission and the Watershed ....................... 161
  5.4 Dry Years, Obstructed Flows .............................................. 172
  5.5 Wet Years, Flooded Fields .................................................. 186
  5.6 Conclusion .......................................................................... 199

6 Crossing Borders and Restoring Wetlands:
  Changing Perceptions of the Manitoba Environment ................. 203
  6.1 Introduction ........................................................................ 203
  6.2 Roseau River and the International Joint Commission .......... 206
  6.3 Ducks Unlimited and Manitoba's Big Grass Marsh ............... 218
  6.4 Conclusion .......................................................................... 232

7 A Flood of Change?
  Catastrophic Flooding and Agricultural Drainage ..................... 236
  7.1 Introduction ........................................................................ 236
  7.2 Early Catastrophic Flooding ................................................. 239
  7.3 Extreme Floods Return ........................................................ 244
  7.4 Flooding, Erosion and Drainage .......................................... 252
  7.5 Conclusion .......................................................................... 268

8 Patterns of Flow Not Entirely of Their Own Devising:
  Environment, Culture and History in Manitoba ......................... 270

Selected Bibliography ..................................................................... 299

Appendix I: Annual Capital Expenditures on Drainage, 1896 to 1932 .......... 334

Appendix II: The Status of Drainage Districts in 1934 ........................ 335
LIST OF MAPS

Map 1.1: Landforms of Southern Manitoba ................................................................. 6
Map 2.1: The Red River Settlement and Important Wetlands ...................................... 30
Map 3.1: Manitoba Rivers, Creeks and Drains, 1882 .............................................. 99
Map 4.1: The Prairie Region in 1894 ...................................................................... 112
Map 5.1: Drainage Districts in Manitoba, 1933 .................................................... 155
Map 5.2: Municipalities and Drainage Districts, 1933 .......................................... 166
Map 6.1: Surface Waters, Flood Control Infrastructure, and Conservation Districts .... 204
LIST OF IMAGES

Image 5.1: Double Dyke Drain ................................................................. 196
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBC</td>
<td>Hudson's Bay Company</td>
</tr>
<tr>
<td>UMDMD</td>
<td>Union of Manitoba Drainage Maintenance Districts</td>
</tr>
<tr>
<td>IJC</td>
<td>International Joint Commission</td>
</tr>
<tr>
<td>DU</td>
<td>Ducks Unlimited</td>
</tr>
</tbody>
</table>
ACKNOWLEDGMENTS

Every grad student should have a committee like mine. Gerald Friesen (Department of History, University of Manitoba) has been guiding my intellectual development since I found myself in his first-year introductory survey nearly ten years ago. Beyond his continued support, I am grateful for his example of how prairie stories speak to larger concerns, both scholarly and public. I first met Tina Loo (Department of History, University of British Columbia) as assigned reading in Professor Friesen’s course. In the past five years, I’ve learned that her skills as teacher and critic are as impressive as her research and writing. And she always seemed to know just when I needed to be told to relax a bit. Matthew Evenden (Department of Geography, University of British Columbia) has helped me in ways far too numerous to list. Perhaps most important has been his example of careful scholarship, generous criticism and committed teaching. From him I’ve learned a great deal about the scholar I’d like to be. And, finally, my supervisor, Graeme Wynn (Department of Geography, University of British Columbia). I’m always amazed at his ability to do it all: head a large department, pursue an ambitious research agenda, and engage with students in various ways, from welcoming them in his office to shepherding them through the Fraser Canyon. I’m most grateful, I think, for how he always made clear to me that it was because he believed in my capacity for good scholarship that his critique of my work was so vigorous.

The Department of Geography at the University of British Columbia is a remarkable place, where scholars engaged in extremely diverse work find ways to share a coffee maker. I’m grateful to the faculty and staff that make it such a congenial environment. Lorna Chan, Junnie Cheung, Eric Leinberger, Mary Luk and Sally Hermansen merit special mention. I’m especially indebted to fellow grad students, both at UBC and beyond: David Brownstein, Emily Davis, Bonnie Kaserman, Arn Keeling, Sharmalene Mendis, Mary Jane McCallum, Liza Piper, Joanna Reid, Amanda Stan and John Thistle, as well as others too numerous to list. Thanks, too, to those affiliated with the Network in Canadian History and Environment (NiCHE), Nature/History/Society and Quelques Arpents de Neige, whether as organizers or participants. I have been enormously fortunate to work within an historical community (Canadian environmental history) that is showing every promise of a successful maturity.

Gordon Goldsborough (Department of Biology, University of Manitoba) and Dale Wrubleski (Research Scientist, Ducks Unlimited) welcomed a historian into their wetland ecology field course. I appreciate the patience they showed in responding to my questions, as well as their willingness to offer assistance of various sorts. Also, other staff members at Ducks Unlimited (Canada) were extremely helpful. Scott St. George (Dendrochronologist, Geological Survey of Canada) was generous with time and resources. Most importantly, archivists and civil servants in various institutions and departments have facilitated my work in innumerable ways. I’m grateful for their help. Financial assistance from the Social Sciences and Humanities Research Council of Canada and the University of British Columbia is gratefully acknowledged.
Thanks to all my old pals in Winnipeg. Of them, Anders Johansson and Kathryn McKenzie merit special mention. And perhaps this is the place to thank Craig Coughlan. Newer friends in Winnipeg, Toronto, Vancouver, and beyond have helped me laugh through the bleakest moments. Shannon Alary, Jodie Bezdzieny and Dayna Helgason are my main collaborators in the ongoing project of adding magic to everyday life. Without them, my world would make much less sense. Kirsty Bower and Sarah Bower, my sisters, usually remember to ask about my work, but are always more interested in hearing about whatever else is going on. Thanks girls. You help me keep it all in perspective, and make it all that much more fun.

This dissertation probably should be dedicated to my parents, but it isn’t. Nancy Stunden and Peter Bower have always gone far beyond the call of duty in support of my undertakings. In the past five years, they have schlepped my documents and me across the country on numerous occasions, offered invaluable research support of various kinds, and performed heroic work on my footnotes. Throughout, their interest in my project (and the innumerable tales of Manitoba’s wet prairie that I inflicted on them) has not waned. Given all of this, dedicating my work to my parents would seem a little like telling someone you made them dinner after they have done all the chopping. Maybe next time, folks.

Dedications aren’t usually announced in advance, but on this matter I’m very glad to have broken with tradition. Completion was still a distant dream in the winter of 2005, but commitments made at that time, along with the love and encouragement I have always received from my grandparents, have helped see me through the difficult phases of my project. My grandfather passed away in spring 2005. He is missed as much as my grandmother is treasured.

My dissertation is dedicated to my grandparents, George and Janet Stunden.
To George and Janet Stunden, my grandparents.
And to all who remember Xantippe.
1 INTRODUCTION

1.1 The Wet Prairie

The newcomer's confrontation with a vast, unbroken vista of earth and sky has become the archetypal moment of prairie resettlement. Homesteaders were struck by the sheer extent of the prairie, and awed by both the possibility of claiming some of it as their own and the amount of work necessary to make a home in the region. In government immigration literature, this was an auspicious encounter, a contemplative interlude soon replaced by vigorous and productive labour.¹ Little attention was paid to how, as many newcomers stood in southern Manitoba and gazed west, their feet were soaked through.

The prosaic reality of wet boots gets at an often-overlooked aspect of prairie resettlement. This dissertation is an environmental history of the wet prairie of southern Manitoba. The term 'wet prairie' was used by 19th century newcomers to describe parts of the north-central United States and it was adopted by the United States Soil Survey.² The classification was not picked up by Clementian ecologists, and their work has influenced both scientific and popular conceptions of the area. They identified much of south-central Manitoba as tall grass prairie, an ecological community that once extended south to Texas and east to the boreal forest. The south-western corner of


Manitoba and much of agricultural Alberta and Saskatchewan was mixed-grass prairie, with vegetation that rarely achieved the heights reached in eastern areas. More abundant water was a key factor in the growth of tall grasses. And it was the water that caused difficulties for those who sought to replace the tall grass with fields of cultivated grain. I use the term ‘wet prairie’ to convey how many people in southern Manitoba dealt with a set of surface water problems not attributable to a single aspect of regional geography or ecology, but linked by what they saw as too much water in agricultural areas.

In the early 1950s, American geographers Leslie Hewes and Phillip E. Frandson noted that although the amount of American land served by drainage systems was far greater than that improved through irrigation, academic attention focused almost entirely on irrigation in arid areas. For Hewes and Frandson, this owed something to the fact that geographers were primarily interested in explaining discontinuities in the landscape, such as that between the parched and the verdant in irrigated acreages. Drainage minimized differences as formerly waterlogged areas became indistinguishable from adjacent cultivated fields. While irrigation produced the sort of landscape that geographers found intriguing, drainage made the wet prairie less interesting. It is not necessary to accept that geographers are biased toward heterogeneity to appreciate that Hewes and Frandson had identified an important oversight. With the notable exception

---

of Hugh Prince’s recent historical geography of the American Midwest, the
environmental history of the wet prairie still has not been widely studied.4

Renowned conservationist Aldo Leopold reflected on a related point in 1938 after
visiting Delta Marsh, a wetland complex along the southern shore of Lake Manitoba.
Leopold mourned the loss of the wetland landscape that “once sprawled over the prairie
from the Illinois to the Athabasca.” His elegiac description of the plant and animal
communities before him made clear that he was concerned with the ecological diversity
that depended on standing water. Leopold predicted that the marsh would end up
“dyked and pumped,” and, like so many others, be “forgotten under the wheat, just as
today and yesterday will lie forgotten under the years.”5 In his prophecy, Leopold was
wrong. Clandeboye Bay and some other parts of Delta Marsh have survived, but taken

4 Prince, Wetlands of the American Midwest. Recent works of note include: John Thompson, Wetlands
Drainage, River Modification, and Sectoral Conflict in the Lower Illinois Valley, 1890-1930 (Carbondale:
Southern Illinois University Press, 2002). Thompson’s book is a revealing study of a localized region, but
his focus on the flood plain of the Illinois River valley means he is concerned with a somewhat different
set of ecological and human processes. Anthony J. Amato, Janet Timmerman, and Joseph A. Amato, eds.
Draining the Great Oasis: An Environmental History of Murray County, Minnesota (Marshall: Crossings
Press, 2001). This set of articles provides a detailed study of a single county much troubled by surface
water. Ann Vileisis, Discovering the Unknown Landscape: A History of America’s Wetlands
(Washington: Island Press, 1997). Vileisis does not address the wet prairie landscape, though she does
offer insight into the transformation of its wetter areas. Her lack of attention to the wet prairie may be
connected to how contemporary wetlands classification systems often do not address the wet prairie as a
distinctive landscape. On this, see Prince, pp. 337-347.

Influential American historians have noted that eastern areas of the Great Plains receive more
precipitation than western reaches, but have rarely investigated the distinctive environmental histories of
wetter areas. A particularly well-known example is Walter Prescott Webb, The Great Plains (Boston:
Ginn and Company, 1959). As he avoided Webb’s environmental determinism, James Malin has been
seen as an important precedent for modern environmental historians. Nevertheless, like Webb, he did not
devote extensive attention to the wet prairie. For a discussion of Malin and environmental history, see
Richard White, “American Environmental History: The Development of a New Historical Field,” Pacific
Historical Review 54 (1985): 297-335. See also Donald Worster, “History as Natural History: An Essay
many places, but Dan Flores’ discussion is of particular note due to his emphasis on Malin’s possibilism
as an alternative to determinism. Dan Flores, “Place: An Argument for Bioregional History,”

more broadly, Leopold points toward an answer to the question of what happened to Manitoba’s wet prairie landscape and the wetlands it included.\(^6\)

Much of southern Manitoba has been drained for agriculture. In a small handful of articles, historical geographers have emphasized the extent of the province’s drainage infrastructure and the dramatic character of the environmental transformation it effected. Rarely have they attempted to quantify the change.\(^7\) William Carlyle estimated the loss of wetland at one million hectares.\(^8\) More recently, Irene Hanuta compared the records of late 19\(^{th}\) century surveyors to late 20\(^{th}\) century conditions and concluded that the wetland area fell from 11\% to less than 0.1\% in the 100 townships she studied.\(^9\) Similar estimates for the entire wet prairie region remain elusive, but the transformation has been widespread.\(^10\) The history of wetlands, flooding and drainage in Manitoba’s wet prairie region is the story of a forgotten landscape.

---

\(^6\) In my work, wetlands are both component parts of the wet prairie and distinctive ecosystems with their own unique characteristics. Wetlands are typically defined as areas subject to inundation for periods sufficient to permit the formation of hydric soils and to support wetland-adapted flora and fauna. W. J. Mitsch and G. W. Gosselink, *Wetlands*, 3\(^{rd}\) ed. (New York: John Wiley and Sons, 2000), 26.


1.2 The Physical Geography of Southern Manitoba

Making sense of this forgotten landscape requires an understanding of the physical geography of agricultural Manitoba. The provincial south can usefully be conceptualized as comprising three distinct landforms, oriented north-south: the Precambrian Shield, the Manitoba Lowlands (or Valley), and the Southwest Uplands beyond the Manitoba Escarpment (see Map 1.1). The igneous rock of the Precambrian Shield, also known as the Canadian or Laurentian Shield, extends across northwestern Ontario and into Manitoba. This is, almost everywhere, a rough-hewn landscape, carved up by rivers, dotted with lakes, and covered with boreal forest. In southeastern Manitoba, the land generally slopes down to the west, with the transition to the Lowlands occurring around the 300 metre (980 foot) contour line.

Once dominated by tall grass prairie, the Manitoba Lowlands have proven an especially-rich agricultural area. Varying from 64 to 80 kilometres (25 to 40 miles) in width, the Lowlands are bisected by the northerly-flowing Red River. The land slopes in toward the river as well as down toward Lake Winnipeg, though at very modest rates

---


11 The Red River lowlands have been described as the first prairie level and the southwest uplands as the second prairie level.
Map 1.1: Landforms of Southern Manitoba
All cartography by Eric Leinberger.
in both cases. Comparatively flat land and clay-based soils contribute to significant drainage problems in many areas. Above the western 260 metre (850 foot) contour line, soil permeability improves, though the land continues to rise at only a moderate rate.

The Manitoba Lowlands are bounded to the west by a southeast-northwest trending Escarpment, which is marked by a rapid increase in elevation. Beyond the Escarpment are the Southwest Uplands, where the land is more undulating and the precipitation more limited. Over the last century, fire suppression and the absence of grazing bison has allowed aspen and bur oak to invade the Uplands, with rapidly-growing scrub cover moving south from the boreal forest that extends across the northern prairies. This has resulted in an expansion of the Parkland, a transitional area between forest and grassland, even as more and more land has been cleared for agriculture. The Assiniboine River flows east through the Assiniboine Delta, a pre-glacial embayment that interrupts the scarp face to the southeast of Lake Manitoba. Diminishing rates of precipitation to the west are reflected in the river’s flow. Although the Assiniboine drains about 101 388 km² (39 146 square miles), its average flow is much smaller than that of the Red River (which has a drainage basin of only 77 249 km² [29 826 square miles], when the Assiniboine’s contribution is set aside).

---

12 Gene Krenz and Jay Leitch describe the Red River valley, including both north and south of the international border, as “one of the largest, truly flat landscapes in the world (roughly the size of Denmark).” Gene Krenz and Jay Leitch, A River Runs North: Managing an International River (Red River Water Resources Council, 1993), 3.

Taken together, these three distinct areas form the macro-topography that affects surface water patterns in Manitoba's wet prairie. Awareness of the changes in elevation that distinguish them and of the key geographical features of each takes us some distance toward an understanding of what would become, in the later years of the 19th century, Manitoba's drainage problem. The following chapters will examine specific flooding problems attributable not only to this basic physical geography but also to the local topography nested within it and to the climatic disturbances that moved over it.

Climatologist Danny Blair has argued that the Manitoba climate is characterized by extreme temporal variability, manifest in both precipitation and temperature regimes. In the wet prairie, variability operated geographically, creating a checkered landscape of wet and dry, as well as temporally, with some periods far wetter than others. Flood risk was defined in part by soil moisture content, winter snowfall, melt patterns, and spring rain. Vulnerable Manitobans kept a close watch on the interaction between these key variables, not only in their immediate surroundings, but also over a significant portion of the Saskatchewan-Nelson River basin. This immense drainage system discharges through Hudson Bay, and much of the water has first flowed through the provincial south. There is some truth to the assertion that Manitobans sit "downstream from everyone else," and increased flow from the east, west, or south has contributed to flooding. Variability in water patterns should not, however, be regarded simply as a

---

threat to regional prosperity. Some of the province's most fertile soils are those in the Red River valley that have been enriched by deposition during periods of flood.\textsuperscript{16} Wetland ecologists have made clear that expansion and contraction of wet areas is fundamental for continued ecosystem vitality.\textsuperscript{17} Change was basic to the environment of southern Manitoba and water was a primary driver of change.

1.3 Wet Prairie or Flooded Land?

The first chapter in this study considers relatively successful efforts at adaptation to the dynamism of the Manitoba environment. Aboriginal communities made effective use of wetlands in the period prior to colonization. In the Red River settlement, haying in wetlands was an essential activity, and its regulation helped define the nature of the community. Beginning with chapter two, the analytic focus shifts in response to a change in the dominant approach of land users. Efforts to adapt to variability were replaced by efforts to change the environment. The dynamic nature of Manitoba's wetlands proved a major challenge to land drainage projects and made it difficult for contemporaries to differentiate between anthropogenic (human-caused) and non-anthropogenic change. Paradoxically, this provided a major impetus for ongoing political and social debates that turned on flooding but encompassed far more than geography and affected far more than the environment. If water was the primary driver


\textsuperscript{16} J. H. Ellis, \textit{The Soils of Manitoba} (Manitoba Economic Survey Board, 1938), 47.

of nonanthropogenic change in the wet prairie, change in the wet prairie was the primary driver of many of the events analyzed in this study.

Many newcomers to southern Manitoba saw neither the wet prairie nor a wetland landscape, but dry land afflicted by flooding. Even modest agricultural development put human enterprise in the way of ongoing environmental variability. To newcomers, it was the water that seemed to be in the wrong quantities in the wrong places at the wrong times. In agricultural Manitoba, the problem took three guises: too much water some of the time, too much water all or nearly all of the time, and far too much water on rare occasions. Identifying different magnitudes of inundation and frequencies of occurrence help make sense of human efforts to modify the provincial landscape. Too much water some of the time was a problem attributable to the seasonal rise of waterways or accumulation of melt-water; it was a relatively moderate and fairly predictable pattern of inundation that could nonetheless interfere with agriculture in affected areas. Larger rainstorms during the summer months could create problems of a similar magnitude.

Wetlands in desirable agricultural areas were seen to have too much water most of the time. In the early years of drainage, projects designed to address such perennially flooded areas followed a somewhat different trajectory from those designed to cope

---

with periodic flooding on agricultural lands. Finally, southern Manitoba's major rivers, the Red and the Assiniboine, are prone to catastrophic inundation. While large-scale flooding caused problems for early settlers and Aboriginal people on numerous occasions, the period from the mid-1880s to the middle of the twentieth century was remarkably free of catastrophic floods. As a result, and to a large extent, drainage in Manitoba through the period considered here was a means of coping with intermittent inundation and of transforming wetlands.

From the second chapter onward, this study examines how some Manitobans tried to solve the flooding problem. Chapter two addresses the early years of drainage: how the problem was perceived, how efforts to address it related to other developments in the newly-formed province, and the consequences of attempted solutions. From one perspective, chapter three is an extended examination of one remedy, as Winnipeg and Ottawa worked together to address the problem of substantial wetland complexes in desirable agricultural areas. From another angle, this section focuses on an exceptional series of events. Between about 1880 and about 1912, Manitoba wetlands became a political vehicle in an ongoing and often-heated intergovernmental debate over the control of prairie resources. Comparison with developments in Alberta and Saskatchewan clarifies how state actions consolidated environmental differences between Manitoba and the drier prairie provinces.

Provincial legislation, official investigations, and public debate about flooding and drainage between 1895 and the middle of the twentieth century are the focus of chapter
four. Drainage was both a concrete problem requiring a practical solution and a catalyst for creative thinking about the meaning of community and the character of the local environment. Its dual nature did not make the problems it posed easier to solve. Chapter five overlaps chronologically with chapter four, but the theme is quite different. By the second quarter of the 20th century, new ways of thinking about water in Manitoba began to assume greater prominence. These came to the fore in response to changing environmental conditions and increasingly sophisticated ways of perceiving the environment. The final chapter situates water management in agricultural Manitoba in the context of an international move toward multipurpose water management, and considers how the catastrophic Red River flood of 1950 catalyzed policy development at the national level. It makes clear, however, that the contentiousness that had long characterized discussions of surface water management remained a key factor bearing on Manitoba drainage. By the second half of the twentieth century, Manitoba’s tall grass prairie, the only Canadian example of this ecosystem, was nearly eliminated. But the problems of the wet prairie, in many ways also unique to agricultural Manitoba, resisted all attempts at resolution.

1.4 Region and Bioregion

Regions have been important to Canadian historians. They have been one of the primary means of disaggregating a landscape too sprawling and a people too diverse to be explained adequately within a single national narrative. The prairie provinces of Manitoba, Saskatchewan and Alberta have often been studied as a region. Scholars have found it useful to consider three ways of thinking about regions: the formal, the
functional, and the imagined. The formal has been tied to the basic physical geography that some have seen to shape regions. The prairies have been described as both environmentally foreboding and entirely hospitable, with interpretations turning on divergent views of soils, climate, and the sheer expanse of the northwest. Conceived as a functional region, the prairies are related to other places, often through economic or cultural linkages. Such linkages have been seen as exploitative, with central Canadians or the nation at large profiting at the expense of prairie residents. The imagined region is connected to the work of cultural producers, with the prairies emerging out of the contributions of early writers and artists who documented the experiences of newcomers. The imagined region increases in influence as it informs popular conceptions of the place to which it refers.\textsuperscript{19}

The wet prairie landscape has not received much attention from Canadian historians working within this framework. Study of surface water in Manitoba builds on valuable scholarship in the tradition of regional history, while also highlighting elements that merit further historical analysis. Attention to water patterns emphasizes the significance of environmental differences within the prairie region. Further, it illustrates the importance of complex, two-way relations between humanity and the environment. The wet prairie landscape was characterized as much by irregularity and dynamism as by excess water. During the late 19\textsuperscript{th} and early 20\textsuperscript{th} centuries, artificial drainage eliminated

many wetlands and speeded flow from agricultural fields. Attempts to rein in dynamism have been less successful; seasonal and catastrophic flooding remain significant problems. Variations in precipitation rates and melt patterns contribute to the degradation of the drainage infrastructure, emphasizing how, even in the drained landscape, the relation between land and water remains unsettled. As an especially dynamic area, and in the context of a historiography that would benefit from more sophisticated engagement with environmental processes, the wet prairie serves to mark the importance of the sort of ongoing human-environment interaction that takes more subtle forms elsewhere.

Gerald Friesen has recently suggested that Canadian historians should revise the categories used in regional analysis, in part by incorporating the work of geographers and with the intention of developing more complex ways of addressing the spatial dimensions of human history. Friesen proposed that formal and functional be grouped together as objectively-denoted regions, emphasizing their shared origin in the work of experts and academics. Grouping these two emphasizes the contrast with instituted regions that emerge through structures of authority such as governments. Instituted regions are often nested within each other and are always being reshaped in relation to each other and to peoples’ engagements with them. One of the challenges for those who work within this revised framework will be to figure out the role of the environment in regional dynamics. If scholars remain open to the significance of non-

---

human forces, there may be useful cross-fertilization between practitioners of Canadian regional history and environmental history.21

As regions have been important in Canadian history, so bioregions have been important in environmental history. In the 19th and 20th centuries, historians, geographers, scientists, and popular writers concerned with southern Manitoba produced a number of works addressing an environmental unit that spans the international border. Authors have examined concrete geographic illustrations of regional linkages, from a common glacial history to similar agricultural conditions to the shared risk of catastrophic flooding.22 In light of widespread recognition of bioregional integrity, and especially because environmental historians have recently been paying a great deal of attention to bioregionalism, it is important to explain why I have not taken a bioregional approach.

Bioregionalism emerged as a North American cultural touchstone in the 1970s. It was a product of that decade's concern with ongoing environmental degradation as part of a search for new ways of thinking that would be conducive to less destructive interactions between humanity and the rest of nature. Bioregionalism also has longer roots in what


has been called “the biogeographical approach to natural history” evident in the works of Gilbert White and Alexander von Humboldt. For historians, Dan Flores reinvigorated the idea of bioregionalism with his influential 1994 article “Place: An Argument for Bioregional History.” Flores argued that environmental historians should derive their subjects of inquiry from ecological categories. In an oft-quoted phrase, he suggested that “the politically-derived boundaries of county, state and national borders are mostly useless in understanding nature.” Environmental historians, Flores put forth, should investigate the “natural nations” of the world – those defined by boundaries that “make real sense ecologically and topographically.”

Part of the sensitivity to the relation between history and environment at the core of the bioregional approach rests on an understanding that the distinction between humanity and the rest of the nature must be treated with care and precision. This seems at least potentially in conflict with Flores’ proposal that bioregions be drawn according to ecological connections. Bioregional historians are interested in human-environment interactions within the bioregion, but purport to draw the boundaries of the bioregion in relation to environmental factors. Why? Just as environmental boundaries have had consequences for humanity, so human boundaries have had consequences for the environment. Particularly when a bioregion straddles political borders, it is at least possible that the environmentally significant human component might differ.

---


24 Flores, “Place: An Argument for Bioregional History,” 1-19.

substantially from one portion of the bioregion to another. In an important article, historian Richard White called for greater attention to the production of analytic scale. He did not use the word ‘bioregion,’ but his focus on relations between scales (whether defined by human communities or non-human nature) is suggestive.26 As Canadian historians might benefit from attention to how nonhuman processes contribute to the production of regions, so may environmental historians benefit from resisting all rigidity in the conceptualization of environmentally-significant units of analysis.

Wetlands, flooding, and drainage in southern Manitoba may be part of a larger bioregional problem, but their history is best explained with careful and extended attention to the actions of Canadian governments (local, provincial and national) in the portion of the wet prairie north of the international border. This dissertation is both more than and less than a bioregional history of the wet prairie. My work expands on political and social factors that transcend the ecological boundaries of the bioregion while remaining focused on the portion of the wet prairie north of the American border and on the theme of wetlands, flooding, and drainage. It emphasizes the complex role of the environment in the production of Canadian regionalism. In what follows, the geographical area of concern is in part a natural nation and part of a nation state. Both contributed to how residents of agricultural Manitoba perceived the flood problem.

1.5 Futility and Its Consequences

In his essay on Delta Marsh in *A Sand County Almanac*, Aldo Leopold employed a Manitoba example to address the large-scale processes that he saw threatening both Clandeboyse Bay and the other wild areas he valued. This was typical of Leopold’s literary strategy, and his capacity to see the general in the specific is part of the explanation for the continuing significance of his work. However, the story of Manitoba’s wetlands is not adequately explained only through attention to the broad forces that concerned Leopold.

My work might be seen, in part, as a cultural history of drainage in southern Manitoba. In common usage, cultural history refers to the study of the production of meaning in specific historical contexts. Here I wish to broaden the term to encompass how interactions between humanity and nonhuman nature operate as significant generators of meaning. This is in tune with what Richard White has identified as a hallmark of the cultural turn in environmental history: an analytic emphasis on the varied ways people have understood their interactions with the environment. In my view, the most compelling argument for close attention to the production of meaning is William Cronon’s influential 1992 article titled “A Place for Stories.” Though Cronon is

---


focused on the narrative strategies of environmental historians, I would argue that there should also be a place for stories crafted by cultural groups or cultures at large.

I am interested primarily in stories produced as by-products of engagements between humanity and the rest of nature, those that underpin and emerge from interactions shaped by human efforts to meet culturally-specific needs or desires, such as property ownership. These stories are cultural artifacts with material and intellectual consequences. They help define the character of future human-environment interaction and become part of the raw material out of which others will manufacture meanings of their own. In my research, I have found government records particularly rich in evidence of how people – and not only politicians or experts – have understood human-environment interaction. My strategy has been to treat such sources as cultural documents, which they surely are.

Cultural historians have often sought to make sense of local, small-scale historical processes. Such an approach has much to offer environmental historians who continue to bemoan their failure to persuade historians at large that nature matters in history. Because of a discipline-wide commitment to careful examination of evidence, the most convincing way to make this general point is by illustrating it through extended analysis of particular ecological processes in specific historical contexts. Studies that seem to sacrifice theoretical ambition to analytical depth may actually offer satisfying responses

---

to those who continue to doubt the importance of environmental history. Perhaps the
field’s big question (what is the significance of nature in history?) has many small, local
answers, each distinguished by the compounded contingencies of the human and
nonhuman worlds. To recast this in relation to my work: perhaps the swamps of
Manitoba are an effective illustration of how prairie resource administration – long a
concern of Canada’s political historians – is better understood if the environment is
interpreted as carefully as politics.

The importance of fine-grained analysis is redoubled for environmental historians who
are interested in the intellectual as well as the material outcomes of nature-culture
dynamics. While broad interpretive frameworks, such as the idea of progress invoked
by Leopold or the doctrine of liberalism that has been the subject of recent debate
among Canadian historians, contribute a great deal to our understanding of what
happened in Manitoba’s wetlands, the social and political significance of drainage
becomes apparent when the analytical focus is fixed firmly on fleshing out the local
context.\textsuperscript{32} Drainage in Manitoba is not only a microcosm in which to perceive broader
patterns. It is also fertile ground for the development of ways of thinking and interacting
that made sense in the local social, political, and environmental contexts. What follows

\textsuperscript{32} For a discussion of progress see Laurence Fallis, “The Idea of Progress in the Province of Canada: A
Study in the History of Ideas,” in \textit{The Shield of Achilles: Aspects of Canada in the Victorian Age} ed. W.
L. Morton (Toronto: McLellan and Stewart, 1968), 169–183. See also John C. Weaver, “Concepts of
Economic Improvement and the Social Construction of Property Rights: Highlights from the English-
Speaking World,” in \textit{Despotic Dominion: Property Rights in British Settler Societies}, eds. John McLaren,

For a recent engagement with liberalism that has provoked interest among Canadian historians, see Ian
McKay, “The Liberal Order Framework: A Prospectus for a Reconnaissance of Canadian History,”
\textit{Canadian Historical Review} 81, no. 4 (2000): 617-645. See also Ruth Sandwell, “The Limits of
Liberalism: The Liberal Reconnaissance and the History of the Family in Canada,” \textit{Canadian Historical
can be seen as an argument for the generation of meaning at a local level, within communities defined in relation to human and environmental factors.

Life in agricultural Manitoba was, I think, not just the working out of plans conceived or modes of thought developed elsewhere. It was not just the establishment of a liberal hegemony or the continuation of imperial imperatives, though both do figure. Rather, an environmental history of the wet prairie points to a creative process of ongoing engagement between Manitobans, their governments and institutions, and the provincial environment. Drainage in Manitoba was part of wider patterns, both in the history of North American wetlands and in the establishment of Canada as a liberal nation, but it was also a local event, with significant consequences for how Manitobans interacted with their environment and with each other. And while drainage was a relatively small component of progress and liberalism, it was a relatively large part of the environmental discourse within the Province of Manitoba.

Cultural history is characterized by its concern with power. Many cultural historians have been keen to explore how people understood and expressed power relations, and to document when identifiable social groups fared differently. There is a general synchronicity between the work of many cultural historians and those environmental historians who are particularly concerned with environmental justice. To my mind, the experience of Aboriginal people and land change is the fundamental question of

environmental justice in the Province of Manitoba. I suggest something of how drainage in southern Manitoba plays into this, but I do not go very far in this direction. Land change and the Aboriginal experience in Manitoba should be explored in a manner that transcends both the geographical and thematic limitations of my study. The need for work in this vein is growing only more urgent in light of continuing hydroelectric development and the geopolitical consequences of global environmental change, both of which are altering the provincial north.

Here, however, I am interested in a different set of power relations. The public discourse on drainage in southern Manitoba was characterized by discontent and complaint, and the political discourse was riven with worry and dissatisfaction. No one was happy with drainage. To judge from much of the documentary evidence, all parties thought drainage was a colossal failure. Yet despite – or perhaps through – mistakes and unintended consequences, the landscape of Manitoba was transformed. There is a fundamental incongruity between how drainage was perceived at the level of small-scale, interpersonal or inter-group interaction, and the environmental outcome.

Investigating this incongruity required extended examination of the interactions between citizens of Manitoba and the politicians and bureaucrats of their governments. Explaining it required a descriptive focus on a different range of interactions than those that might have attracted the attention of an historian focused on the question of environmental justice. The social, political, and environmental effects of how drainage was perceived in the years under investigation – or, in other words, futility and its
consequences – will be discussed in the conclusion. At this point, it is sufficient to assert that the incongruity is part of the local explanation for why, as Leopold predicted, the wetlands of Manitoba have been forgotten.

My work is not bioregional history, because I have limited my attention to the Canadian portion of the wet prairie bioregion. It differs from most cultural history, because the exercise of power that most concerns me lies between the human and non-human worlds, rather than among social groups. Ultimately, I have come to think of my work as situated at the nexus of cultural and environmental history. It is through such an approach, I believe, that Manitoba’s wet prairie can most appropriately be remembered and understood.
2 THE GREAT ADAPTATION:
WETLANDS, ABORIGINAL PEOPLE, AND RED RIVER SETTLERS

2.1 Introduction

In his essay on Clandeboye Marsh in *A Sand County Almanac*, Aldo Leopold juxtaposed the gradual natural evolution of the marsh and its dramatic alteration through human usage in the twentieth century. What he did not see, or perhaps chose not to describe for literary effect, was how the marsh before him reflected a long accumulation of human as well as nonhuman influences. Here as in the wet prairie more generally, human beings had long interacted with the environment of what is now southern Manitoba. Both natives and nineteenth century newcomers drew on the resources of wet areas and managed these places to serve their purposes. By comparison with the dramatic environmental changes that dismayed Leopold, these adjustments were moderate. But they had lasting consequences for both people and the wet prairie.

In an influential article, historian Irene Spry traced a nineteenth century “transition in Western Canada from common property resources, to open access resources, and finally to private property.” Declines in game, increasing agricultural settlement, and the

---

1 An earlier version of part of this chapter has been published. Shannon Stunden Bower, “The Great Transformation? Wetlands and Land Use in Late 19th Century Manitoba,” *Journal of the Canadian Historical Association* 15 (2004): 29-47.

establishment of new systems of government all contributed to profound changes in how the riches of the region were apportioned. Other scholars have built on this interpretation.\textsuperscript{4} Historian Gerhard Ens has associated the great transformation with the local consolidation of broadly capitalist economic patterns.\textsuperscript{5} Focusing on the proto-industrial activity of the Metis, those of mixed Aboriginal and European ancestry, Ens described how changes in economic structures were achieved in part through adaptation by individuals and groups.\textsuperscript{6} In the late 19th century, significant numbers of Metis departed from what is now southern Manitoba.\textsuperscript{7} This chapter examines some of the adaptive strategies of those who remained (whether Metis, Aboriginal, or European) and pays particular attention to property relations and environmental conditions. The story of adaptation is expanded through attention to southern Manitoba’s wetlands.


\textsuperscript{6} Proto-industrialism is the process of industrialization before the movement of large numbers of workers to factory employment. The Metis industry involved the household-based production of buffalo-robes for the international market. Ens, \textit{Homeland to Hinterland}, 6-7.

\textsuperscript{7} Factors that prompted the migration of the Red River Metis (or Métis, or other variants) have been the subject of intense dispute. Ens argues that the Metis left in pursuit of economic opportunities. Historian Douglas Sprague is among those who have argued that betrayal by Canadian authorities was the most important factor. See Douglas Sprague, \textit{Canada and the Métis, 1869-1885} (Waterloo: Wilfrid Laurier University Press, 1988). For a useful discussion of the scholarly debate and its political context, see Brad Milne, “The Historiography of Métis Land Dispersal, 1870-1890,” \textit{Manitoba History} 30 (1995): 30-41.
2.2 Wetlands as Ecological and Cultural Islands

Aboriginal subsistence strategies in northwestern North America turned on the seasonal exploitation of the boreal forest, the aspen parkland, and the prairie region. All three areas feature wetlands of some sort, with prairie potholes predominating to the southwest, peat bogs to the northeast, and riverine and lacustrine marshes situated along many water bodies. Anthropologist Matthew Boyd has documented the concentration of archaeological sites near prehistoric water bodies. Noting that wet areas provided opportunities for bison entrapment, hunting smaller game, fishing, harvesting aquatic and semi aquatic vegetation, gathering wood, and collecting drinking water, Boyd argued that "the intersection of a number of different types of resources ... made these locales important points on the pre-contact 'economic landscape.'"

Wet areas throughout the boreal forest, parkland, and prairie region presented some of the same useful characteristics (such as availability of water) and served to concentrate the provisioning opportunities of the region in which they were situated (for instance, they were attractive to ungulates in the woodlands and to bison on the prairie).

Anthropologists Scott Hamilton and B. A. Nicholson have proposed that understanding wetlands as islands of familiarity may help to explain ancient migrations from the

---

8 As historian Sarah Carter has pointed out, to speak of Alberta, Saskatchewan, and Manitoba as the prairie provinces reflects the orientation of the settler society that has moved in over the past 150 years more than the character of the regional environment. Sarah Carter, Aboriginal People and Colonizers of Western Canada (Toronto: University of Toronto Press, 1999), 19.

boreal forest to the prairie region. The ecological change experienced in passing from one ecological zone to another may have been tempered for some groups by an affinity for wetlands.

The Assiniboine and the Cree were the major Aboriginal groups in what is now southern Manitoba in the immediate pre-contact period. While the Assiniboine favoured south central areas and the Cree tended toward the north and the east, both moved through ecological zones as part of their seasonal round. The abilities of Aboriginal groups to exploit the boreal forest, the parkland, and the prairie ensured a measure of flexibility in their subsistence strategies, as abundance in one area might compensate for shortfalls in another. Historical geographer Arthur Ray has made clear how, in relation to the Aboriginal experience, the concepts of stability and change must be treated with care. Geographical movement across zones and adaptation to dynamic environments within zones were the very foundation of stability, as both helped ensure adequate subsistence year-round. Change was a constant in Aboriginal lives and security was ensured through ready adjustment.

With the available historical sources, it is difficult to be certain about late 18th century drivers of population change. Both the Cree and the Assiniboine were heavily involved in the fur trade. Efforts to maximize opportunities at a time of declining furbearer

---


populations may have been a major factor in group movement, but the fur trade was not
the sole element conditioning Aboriginal decision-making. Further, as historian John
Milloy has illustrated in his discussion of the cultural significance of the bison,
decreasing animal numbers were important in a variety of ways, not only in relation to
the utility of furs as trade goods. Aboriginal people adapted by shifting emphasis from
trapping in the boreal forest to hunting on the prairie grasslands and by moving
westward into less exploited regions. Westward migration was neither total nor sudden.
Indeed, there is evidence of significant interaction between the Cree and the
Assiniboine and the western Ojibwa, as the group that was becoming increasingly
prominent in the Red River area has been called.

Historian Laura Peers extends Ray's emphasis on the importance of both continuity and
change within Aboriginal groups in this period, finding a "creative, dynamic" tension at
the heart of the western Ojibwa communities she studied. Though patterns of
movement can also be difficult to pin down, it appears that, having earlier moved west
into what is now northwestern Ontario, the Ojibwa were extending into the Red River
region in substantial numbers by the late 18th century. This move created new
opportunities to profit from the fur trade, but was conceived and executed in relation to

13 Ibid., 116-121.


16 Ibid., ix-xiii.
a broad array of factors, including relations with other Aboriginal groups and the ravages of epidemic disease.\textsuperscript{17}

In the 19\textsuperscript{th} century the Ojibwa were the dominant Aboriginal group in what is now southern Manitoba.\textsuperscript{18} They settled in various locations, with some heading to more remote areas and some establishing strong ties to Netley Marsh, a lacustrine wetland complex in the Red River delta that became an important provisioning node (see Map 2.1). George Van Der Goes Ladd, a minister who authored a history of the community he served, described Netley Marsh as “ideally suited” to the needs of the Ojibwa:

\begin{quote}
Between Netley Creek and Lake Winnipeg the river created its own all-encompassing world. The delta area was a labyrinth of channels, lakes, islands and muskegs – a “wilderness” to white settlers, but a homeland for hunting, fishing, and gathering people who traveled by water.\textsuperscript{19}
\end{quote}

In places such as Netley Marsh, subsistence strategies attuned to the wetlands of northwestern Ontario were still useful. The Ojibwa, like the Cree and the Assiniboine, met a dynamic ecosystem with flexible use patterns. Van Der Goes Ladd’s description suggests how wetlands were important for cultural as well as subsistence reasons, as sources of security and identity.

\textsuperscript{17} Ibid., 3-26.

\textsuperscript{18} Ray, \textit{Indians in the Fur Trade}, 187.

\textsuperscript{19} George Van Der Goes Ladd, \textit{Shall We Gather at the River?} (B.C.: Winnfield, 1986), 23. While Van Der Goes Ladd’s text is more popular than academic, it is based on historical research and informed by postcolonial theory.
Wild rice was an important crop for the Ojibwa of north western Ontario, and it provides a window into the relation between aboriginal people and wetland environments. Traditionally, wild rice grew in an area centred on the Lake of the Woods region and extending east to Lake Superior, west toward southern Manitoba, and south to the American states of Wisconsin and Minnesota. In north western Ontario, Ojibwa families harvested substantial quantities, up to twenty-five barrels in some

---

20 Corn and potatoes were also cultivated as conditions permitted. Peers, *The Ojibwa of Western Canada*, 134.

cases, much of which was stored for winter use or used in trading. Described by one commentator as “a perfect diet in itself,” wild rice had an important place in Aboriginal nutrition. It was also important for spiritual and social reasons, with the fall harvest allowing for community interaction. Geographer D. Wayne Moodie has analyzed techniques by which rice was cultivated. Tying growing stalks into bundles provided protection from pests and inclement weather, opened pathways through dense growth, and prevented early-ripening grains from falling into the water. The technique increased yields, but prevented passive reseeding. Ensuring a crop for the following year through deliberate seeding was an annual responsibility and a key means by which the Ojibwa modified Ontario wetlands. Manitoba’s wetlands were far less rich in rice. Laura Peers has suggested that some adopted the practice of “commuting” back to harvesting grounds and returning with rice-filled canoes. The Ojibwa also sought to expand the crop’s range, seeding it in more westerly areas. They were fairly successful in their efforts, taking significant harvests from new areas by the 1820s. The example of wild rice suggests how wetlands such as Netley Marsh became Ojibwa homelands in part because of how they were modified to suit indigenous peoples’ needs.

22 Peers, The Ojibwa of Western Canada, 24.

23 Amelia M. Paget, People of the Plains (Regina: University of Regina, 2004), 19. For a suggestive account of the importance of plant foods in the diets of prairie aboriginal groups, see Maureen K. Lux, Medicine that Walks: Disease, Medicine, and Canadian Plains Native People, 1880-1940 (Toronto: University of Toronto Press, 2001), especially 3-19.

24 Peers, The Ojibwa of Western Canada, 29.

In the early 19th century, the Ojibwa followed their Aboriginal predecessors in both adapting to the dynamic nature of their environment and capitalizing on the region’s wetlands. Due to declines in game, Manitoba wetlands may have been more significant to the 19th century Ojibwa, relative both to the importance of Ontario wetlands to earlier Ojibwa and to the importance of Manitoba wetlands to the Cree and the Assiniboine. The Ojibwa sought adequate sustenance by maintaining a diverse subsistence base, and their strategy was reasonably successful.

2.3 The Haying Economy of the Red River Settlement

The Hudson’s Bay Company (HBC), an incorporated joint-stock venture developed to exploit the resources of North America, received British royal charter in 1670. It was granted exclusive trading rights in the territory drained by waterways flowing in to Hudson Bay, and established a vast network to satisfy European demand for fur. Thomas Douglas, the fifth earl of Selkirk, was a HBC shareholder with an interest in colonization. In 1811, he secured a grant of about 300,000 square kilometres (116,000 square miles) that included much of southern Manitoba and extended west into Saskatchewan and south into North Dakota and Minnesota. The area became known as the District of Assiniboia. The first of Selkirk’s settlers established themselves at the forks of the Red and Assiniboine Rivers in 1812, and the small community became known as the Red River settlement.

On their arrival, settlers were buffeted by a harsh and unfamiliar environment. Only gradually, as newcomers adopted practices and developed institutions attuned to the
challenges of the region, was some measure of security achieved. Exploitation of the wild resources of the open prairie for food and other essential materials was fundamental to successful adaptation. Hunting and fishing were important, but the management of wild hay became especially significant for the stock-raisers of the Red River settlement. Although hay grew abundantly in wet areas across the region, competition for the more accessible hay lands quickly became fierce. As Surveyor General Lindsay Russell explained in 1871, wetlands were almost as valuable as dry land because “they give without the least trouble of cultivation, extremely rich hay meadow.” The property system that developed in the community was tailored to the management of the wild hay that wetlands produced.

In the Red River settlement, river lots extended two miles back from the banks of the Red and the Assiniboine Rivers (see Map 2.1). Natural drainage dictated the location and size of buildings and fields, with houses erected along the rivers’ well-drained natural levees. River lot owners also had a claim to the two miles behind their lot, an


28 On the importance of hay to earlier settlers in other parts of Canada, see Matthew G. Hatvany, *Marshlands: Four Centuries of Environmental Change on the Shores of the St. Lawrence* (Sainte-Foy: Les Presses de L'Université Laval, 2003), 58-60. For a brief discussion of haying in an Ontario context, see John C. McLaughlin, “Progress, Politics and the Role of Conservation: Wetland Drainage in Ontario” (Ph.D. diss., Queen’s University, 1995), 103-105.

area that characteristically included lower, wetter lands. Known as the hay privilege or outer two miles, the arrangement was to ensure that all settlers had access to some of the most conveniently situated wild hay. The hay privilege was formalized by the Council of Assiniboia, the district’s governing body. Settlers had a right to the hay, not to the land itself, but others were precluded from using the area in any manner that interfered with the hay crop. Prized though the area was, the outer two miles did not always produce enough to satisfy settlers’ needs. The problem was exacerbated in drier years, and became more severe as the settlement’s population increased. As a result, the land beyond the four mile line was managed as a hay commons, with important wetlands becoming major haying areas. The Council of Assiniboia was instrumental in defining haying activity in this area as well by establishing a date when haying on the open prairie could commence.

The dynamic nature of the regional environment was problematic for the stock-raisers of the Red River settlement in a way it was not for Ojibwa. Settlers could get their hay from different locations, within the bounds of what was reasonable given transport by cart, but they had to get their hay. By emphasizing the widespread hardship that attended years when environmental conditions were not conducive to the growth of sufficient hay in accessible locations, historical geographer Barry Kaye makes clear the

---


general importance of the hay resource to Red River settlers. Haying was the settlers’ "grand difficulty," the perennial challenge that concerned them all. Kaye coined the phrase ‘haying economy’ to refer to the practices that integrated the wild grasses of the prairie into local life ways. Haymaking brought people together as they negotiated how best to arrange, as far as possible, for mutual satisfaction of similar needs. All participants were obliged to cultivate relationships in order to reap the benefits of the un-worked fields.

One of the most vivid illustrations of the social significance of the haying economy was provided by the journal of Red River settler Samuel Taylor. He frequently mentioned activities such as cutting hay with James Irwin or borrowing William Pruden’s oxen to haul hay home. Hay cut on the open prairie was not always hauled in immediately. Stacks were often left in the swamps, to be drawn on as necessary during the winter. This meant that even a settler with an ample supply in the field could be short on the farm. Life was easier if it was possible to bridge such shortfalls by calling on a neighbour. As the years passed, Taylor’s oldest son assumed responsibility for more of the labour associated with haymaking. Like his father, William Taylor both gave and received assistance. Other sources record how settlers who had suffered misfortunes resulting in the loss of their hay supply received substantial assistance from their

33 Barry Kaye, “‘The Settlers’ Grand Difficulty’: Haying in the Economy of the Red River Settlement,” 

34 Archives of Manitoba (hereafter AM), Samuel Taylor Journal, MG 2 C13.
neighbours. Through all of this, as Taylor’s diary makes clear, settlers were not only securing necessary resources, but also nurturing a community.

The start of haying was an annual community event. High spirits prevailed as entire families established camps near the best hay swamps, in preparation for the first cut of the year. Desirable locations were identified in advance, and all people were anxious to make their claims by the accepted method of cutting a swath around the chosen area.

Dry seasons clearly illustrated that haying involved competition as well as cooperation. In these years, when the swamps were not very productive, folks set out at the stroke of midnight to cut their swaths, sometimes even ignoring thunder raging overhead. The operation in tandem of the regulated beginning of hay cutting (established by the Council of Assiniboia) and the accepted method of claiming an area (a community convention apparently never codified by the local government) suggests that the distinction between legal and moral obligation was of little relevance in the field.

Some defied the Council’s regulations and cut in advance. Their actions became the talk of the settlement, which suggests that disobedience did matter. However, taken in sum, the evidence indicates that adhering to the arrangements—whether formal laws or community conventions—was less important than behaving in a manner that the settlers found appropriate. Though an area marked off by a swath was identified as the property


37 AM, MG 2 C13, 1 August 1865.
of an individual, anyone who “tried to circle the whole prairie for himself” was at risk of having the claim disregarded. Ambition was tempered by the fact that inordinately large claims would not necessarily be respected. Both Council regulations and community conventions mattered, but only insofar as they bore on the ongoing configuration of a rough consensus on what constituted appropriate behaviour. The haying economy operated as a moral economy in which nearly all settlers were invested.

The community consensus was always evolving because it was defined in relation to environmental conditions. In wetter years when hay was more abundant, larger cuts were tolerated. In years when the land dried more quickly, haying dates were disregarded. In July 1864, Samuel Taylor noted in his journal that “some people went down to Nettly [sic] Creek to cut hay on the 20th although it was settled there should be no hay cut on [until] the 27th. W. Taylor and T. Moar did the same … O! What fine hay weather it is now.” Settlers were aware of the date set by Council and recognized that early haying constituted a violation. Yet Taylor was remarkably matter-of-fact about his son William’s actions. Illegal haymaking was neither a source of shame nor a mark of courage: it simply made sense. It seemed less important to obey regulations than to capitalize on “fine hay weather.” As suggested by the example of an ambitious

38 Macbeth, The Selkirk Settlers in Real Life, 46.


40 AM, MG 2 C13, July 1864.
haymaker who might mark off an inappropriately large area, the community could enforce its own judgments by exacting penalties. Yet Taylor expressed no fear that his son’s actions would bring reprisals. His journal entries reflected his confidence that the community consensus, derived partly from assessments of environmental conditions, would trump the formal regulations governing hay cutting.

Through his journal, Samuel Taylor reminds us of the significance of environmental conditions in determining what constituted a legitimate property claim on the open prairie. While haymaking was governed by law and custom, both might be set aside in favour of practices more attuned to prevailing conditions. Ultimately, the moral economy in operation on the commons helped settlers to secure the hay that was so important to their survival on their privately-held river lots. For many years, in the community of Red River, different ways of managing land complemented each other. The private property of the river lot, the privileged access of the outer two miles, and the commons on the open prairie coexisted because they made sense in relation to the local environment. People lived with complex notions of property and contributed to a community capable of determining how these should be applied in particular instances. Competition and cooperation both figured in this process. And both contributed to the development of a settlement remarkable for its resilience and resourcefulness.

41 There is record of only one court case relating specifically to hay cutting. Even within the relative formality of the settlement court, the judgement was tempered because of an unspecified set of "circumstances.” The involvement of the court did little to disrupt the arrangements that governed haymaking. Indeed, insofar as a judgement was rendered that seems to have been as contingent as those of the community, it may have bolstered the legitimacy of informal means of regulation. AM, District of Assiniboia Court Records, MG2 B4, reel M-389, Hudson’s Bay Company v. James Cook et al, 19 August 1847.
William Taylor’s haying in the Ojibwa homeland of Netley Creek does not seem to have provoked any discontent, likely because the Ojibwa had little call for large stores of hay. Land was more fraught. By the Selkirk Treaty of 1817, the Ojibwa, Cree, and Assiniboine acknowledged the right of the colonists to settle on the lands within two miles of the banks of the Red and the Assiniboine Rivers in exchange for an annuity of 100 pounds of tobacco to each of the three groups. Over subsequent years, some individual settlers made private arrangements with Aboriginal leaders to use lands outside the two mile line. There was, however, no general arrangement whereby settlers had a right to land beyond the two miles closest to the rivers. The nature of the hay privilege as a right to the hay, not the land, was probably an attempt to work around the unresolved matter of Aboriginal title. Despite the motley, provisional nature of the Red River property system, regional resources were apportioned without undue controversy from the 1830s.

The situation would not last. Some settlers had taken to cultivating the lands where they had at best a right to the hay. This brought to a head the inconsistencies between the

---

42 My argument shares elements with the notion of social capital. Many of the weaknesses of the theory stem from its application in an ahistorical manner, without reference to the patterns of difference and inequality that persist, even in the most cohesive community. As the aboriginal experience is a key theme in this chapter, I hope to avoid some of the difficulties inherent to insufficiently critical applications of the social capital idea. For a review of the social capital literature, see John Field, Social Capital (New York: Routledge, 2003). See also Jonathan Grix, “Social Capital as a Concept in the Social Sciences: The Current State of the Debate,” Democratization 8, no. 3 (2001): 189-210.

43 Peers, The Ojibwa of Western Canada, 92.

44 Ibid., 159.

complex notions of property in operation in the Red River settlement and the perspectives of nearby Aboriginal groups. In the late 1850s and early 1860s, Peguis, an important leader of the local Ojibwa groups, began to protest settler encroachment on Aboriginal territory.\textsuperscript{46} The \textit{Nor'Wester}, a newspaper produced in the Red River settlement, published a manifesto issued by Aboriginal leaders on 16 January 1861. The document made clear that cultivation outside the two-mile line was tantamount to trespass. As Peguis and five other Aboriginal leaders explained, cultivators “shall be secured in the enjoyment of the said land ... on the annual payment of one bushel of wheat for every five bushels of seed sown on the aforesaid lands, and for barley and potatoes the same rate.” This annuity was intended, they explained, “as an acknowledgement of our property in the said lands.”\textsuperscript{47} The 1861 manifesto not only represented the assertion of an Aboriginal property claim previously in abeyance, but also presaged a new era of general concern over land rights in the region.\textsuperscript{48} The great transformation from common to private property was well underway, and all in the region were becoming increasingly concerned about how local land use arrangements would align with imported concepts of private property rights.

\textsuperscript{46} Peers, \textit{The Ojibwa of Western Canada}, 198.

\textsuperscript{47} \textit{Nor’wester}, 15 April 1861.

\textsuperscript{48} Peers, \textit{The Ojibwa of Western Canada}, 198.
2.4 The Great Transformation: Settler Experiences

The Province of Manitoba was created by the *Manitoba Act* of 1870. This was made possible through a complicated arrangement transferring the prairie region to the Canadian government, involving both the Hudson’s Bay Company and Britain. But the diplomatic complexities that preceded 1870 were dwarfed by the administrative difficulties that came after. Sorting out landholding in the province was a significant challenge for the new bureaucracy. While the *Manitoba Act* provided that Crown lands and other natural resources would be administered by the Dominion government, it also included some acknowledgement of local land-use practices. However, the government did not immediately fulfill its commitments and some Red River settlers perceived a need to buttress their claims.

Long accustomed to adapting to environmental variability, residents were quick to address the changing political context. Meetings were organized to address land rights. To judge from reports published in local newspapers, these were lively and intense. They brought together representatives from the various parishes, the local administration unit of the Red River settlement (see Map 2.1). Through references to established farms and grazing areas in the outer two miles, parish leaders made clear that the hay privilege was now used in a variety of ways. Over time, settlers had come to regard it as their own property and to use it as they saw fit. A dry period may have

---

contributed to a change in land-use patterns. Dominion Lands Agent McMicken explained in 1872 that "many parts of the country that formerly were of a marshy character are now quite dry." This was the case on many hay privilege lands, with the result, said McMicken, that "settlers now generally go many miles off to cut their supply of Hay" and used the outer two miles in other ways.\(^50\) There is no reason to believe that what McMicken described as a drying trend was anything other than another variation of a dynamic environment, but its coincidence with a key moment in the great transformation made it particularly significant. Settlers would need to convince the Dominion that, despite the unconventional origins of the hay privilege and the fact that the land was often now used in ways inconsistent with the original grant, their claim to the area was legitimate.

Toward the end of a particularly volatile meeting, the President of the Council of Assiniboia asserted that, in relation to land matters, "the whole settlement is united – and we are glad to be united; but at the same time our circumstances are not the same all over."\(^51\) All settlers were concerned about land rights and many river lot owners relied on the hay privilege in some way, but all recognized that usage varied. The president suggested that each parish should prepare a petition detailing local demands with regard to the hay privilege and requesting government assurance that these would be met. A significant number of parishes joined in the coordinated effort to petition the authorities. Some submissions, such as those from St. Charles and Headingly, were relatively brief,

---

\(^50\) LAC, RG 15, vol. 227, file 635, reel T-12176, G. McMicken to J.C. Aikins, 1872.

\(^51\) The New Nation, 6 May 1870.
urging the government to “adjust the two mile hay privilege and the right of common.”\textsuperscript{52} In French, the refrain was no less persistent, with petitioners from St. Norbert and St. François-Xavier Est seeking recognition of “un droit indéniable à ce privilège de foin et à ces communes.”\textsuperscript{53} Notwithstanding nuances of phrasing and argument, these petitions made similar claims to the outer two miles. Local leaders described as “a perfect success” the passage by many parishes of “the same resolutions or resolutions to the same effect.”\textsuperscript{54} The community of Red River, working together despite the cultural and environmental factors that divided the parishes, was deliberately orchestrating its interaction with the Dominion government.

The ways land use was presented in the petitions had as much to do with new political developments as with established practices. This is apparent in the submission from the Parish of Kildonan. Like the others, it demanded attention to the “rights of common and of cutting hay.” It then went further, making clear that definitive title to the outer two miles was the objective.\textsuperscript{55} The commons in question was not the open prairie that was so important to Samuel Taylor and his neighbours, but the commons that had developed in hay privilege lands used for grazing rather than haying. Invoking “the hay privilege and the right of common” in claiming the outer two miles was a political

\begin{itemize}
\item \textsuperscript{52} AM, Alexander Morris Fonds, MG 12 B1, item 55, Minutes of a meeting held in St. Charles, 11 January 1873; item 47, Minutes of a meeting held at Headingly, 7 January 1873.
\item \textsuperscript{53} AM, MG 12 B1, item 59, Minutes of a meeting held in St. Norbert, 13 January 1873; item 57, Minutes of a meeting held in St. François-Xavier Est, 12 January 1873.
\item \textsuperscript{54} AM, John C. Schultz Fonds, MG 12 E1, item 7153, Letter from John Gunn to John Schultz, 28 December 1872.
\item \textsuperscript{55} AM, MG 12 B1, item 1978, Petition submitted to Alexander Morris by the Parish of Kildonan, n.d.
\end{itemize}
strategy. By phrasing their demands in this way, petitioners ensured that differences in how the area was used would not weaken a claim that derived its strength from its collective character. The right to cut hay on the open prairie went unaddressed in the Kildonan submission. In March 1874 Alexander Morris, Manitoba's new Lieutenant Governor, explained to the Minister of the Interior that matters on the open prairie were quite different from those in the hay privilege, and asserted that settlers were not pressing claims to the open prairie. Although a few did seek the right to cut hay on the open prairie, the hay privilege became a rallying point in a way that the open prairie did not. Morris’ interpretation of the matter was consistent with the arguments put forth by the parish petitions: the hay privilege should be regarded as equivalent to land ownership.

The comments of Dominion Land Agent McMicken made clear that residents had not abandoned their reliance on the wild hay of the open prairie. But Red River settlers fought for what they thought they could get, rather than for what they actually used. Dominion officials were convinced by the energetic campaign of Red River settlers. The government accepted that river lot owners had a legitimate claim to the outer two miles, and in 1874 the survey began that would allow for the granting of title. In the Red River settlement, the great transformation sparked residents to work together to


57 AM, MG 12 B1, item 1042, Petition submitted to Alexander Morris from the Parish of St. James, 13 July 1873; item 59, Minutes of a meeting held at St. Norbert, 13 January 1873.

respond to changing political conditions. Their ability to do so was enhanced by a
capacity for strategic cooperation at the community level generated by the haying
economy. To appeal for recognition of “the hay privilege and the right of common”
was to derive from complex property arrangements a clear and persuasive justification
for local land ownership. Anthropologist James Scott has documented an association
between the establishment of an administrative bureaucracy and the simplification of
sophisticated environmental management practices. In his rendering, it is the state
that sifts out the detail, in order to facilitate administration from afar. In Red River,
residents undertook such simplification for themselves. Through a community effort,
Red River settlers sought to characterize local land use practices in a manner consistent
with Dominion notions of land ownership.

Why are these developments significant in a story of wetland use? Historians and
geographers who have studied wetlands have repeatedly made the point that one of the
challenges of these environments is that they are often incompatible with private
property. In the words of Ann Viliesis, there is always a “commons component” to
wetlands. In paying attention to the establishment of private property in Manitoba, and
in particular to the displacement of more environmentally-attuned management systems,
we trace a move away from a land management system aligned with the province’s wet
prairie geography and the establishment of a private-property regime. Ironically, the
settlers of Red River employed a community capacity for collective action derived in

59 James Scott, Seeing Like a State: Why Certain Schemes to Improve the Human Condition Have Failed

60 Vileisis, Discovering the Unknown Landscape, 6.
part from their experience with the commons to ensure they fared as well as possible through the transition to a private property system.

Changing conceptions of the outer two miles not only affected the relation between settlers and their environment, but also between individuals and their neighbours. The growing Red River settlement population required more food and houses, and some parts of the outer two miles seemed suitable for these purposes. As a result, a number of "park lots" – so-called fenced areas that were usually cultivated – were established in the hay privilege lands. There was not necessarily any formal arrangement between the holder of the hay privilege and those who established park lots. In much the same way that Aboriginal people, with no need for large quantities of hay, had tolerated the establishment of the hay privilege, river lot owners who had no need for their hay privilege tolerated the creation of park lots. But as everyone in the region became more attentive to their land rights, tolerance began to seem like risky behaviour.

For those looking to establish park lots, the better-drained lands in the outer two miles of the parishes north of the Assiniboine along the Red River were especially appealing. St. Paul was one such parish. In 1863 or 1864, Celestin Thomas established a park lot in the outer two miles of St. Paul. In 1871, he sold it to John and James Harrower, immigrants from Britain who had spent a number of years in Ontario before coming to Manitoba. Over subsequent years, the Harrowers put a lot of work into improving their park lot: a substantial house and other structures were built; a garden and agricultural
fields were established. Understandably, they were keen to ensure that their investment of time and effort was protected.

For the Dominion officials responsible for administering the distribution of the hay privilege, the existence of park lots was one of the many difficulties highlighted by the ongoing work of the surveyors tasked with measuring individuals’ holdings and resolving outstanding disputes.61 In May 1874, Dominion Land Surveyor J.W. Harris began work in the outer two miles of the parish of St. Paul. Understanding that not all residents would welcome such interference, Harris proceeded with care. Like other surveyors in similar positions, he sought to cultivate positive relationships as a means of easing his task. He seems to have developed a particularly strong connection with the Harrower brothers, as he camped in their yard and dined at their table on several occasions.62 Nevertheless, personal relationships do not seem to have swayed Harris’ professional judgment. In 1874, he gave the Harrowers a document that was probably an early draft of his report to the Dominion Government. The Harrowers immediately wrote to the government:

... a surveyor has been running lines and posting up stakes and [we] have been unofficially informed that the amt of land awarded to us lies within the aforesaid lines. We cannot believe that the Gov intend to do us so foul A Rong nor yet be gilty of so arbitrary an act [sic].... 63

61 AM, Dominion Land Surveyors’ Notebooks, GR 1601, Notebook # 687, Surveyor J. W. Harris.

62 AM, John Walter Harris Fonds, MG 14 C74.

The Harrowers later clarified what they objected to so strongly. Harris had given them a little more than 170 acres. They protested “because it give us less than we should have ... [and] because the arrangement of the surveyor puts us into the swamp.”

Surveyor Harris’ notebook provides no evidence that he considered the significance of a swamp close to the Harrowers’ claim. As there is abundant evidence that Harris was extremely careful in his work, inattention seems an unlikely explanation. So far as possible, even when dealing with settled areas, surveyors were instructed to impose a grid on the land. An existing body of water was noteworthy, but adjusting property lines to accommodate the sort of intermittent wetlands that covered much of southern Manitoba does not seem to have been common practice. No amount of social courtesy could blunt the sharp divide between what was significant to residents and what was recorded by surveyors. The survey conducted by the Dominion Government did not accommodate the environmental logic that had long conditioned life in the settlement. The Harrower brothers were incensed at Harris’ report. They felt that altering their lot in the proposed manner was hardly the “encouragement which as emigrants we have a right to expect at the Hands of the Government.” While it was the surveyor’s recommendation that their holdings be repositioned and reduced that caused the brothers to protest, their correspondence with the government also brought to light their

---

64 LAC, RG 15, vol. 143, file 428, Undated transcript.

65 Diligence is evident not only in Harris’ professional diaries but also in the personal log he kept. AM, MG 14 C74.


conflict with Jemima Bunn. In the late 1870s, Bunn began vigorously asserting her claim to the entire two miles behind the river lot that she occupied. Her hay privilege and the Harrowers’ park lot overlapped.

Though relative newcomers to the Red River settlement, John and James Harrower had readily adapted to the practice of arranging landholding according to community consensus and environmental conditions. When they arrived in the early 1870s, no doubt these practices seemed both appropriate and entrenched. There was no need for the Harrowers to come to terms with the potential consequences of taking up land on the hay privilege, because the area in question was not used for haying and was suitable for other purposes. In reply to a question regarding the overlap between their lot and the hay privilege, they voiced their frustration at the manner in which matters seemed likely to be resolved: “We get nothing instead of what is taken away and the part we do not get is proposed to be given in reconsideration of the hay privilege.” Pressed further as to whether they had ever been in conflict with the holders of the hay privilege, their response was direct and definitive: “No. Never.”

As we have seen, the outer two miles, a precisely defined area of land subject only to a hay claim, was used in a variety of ways. River lot owners used their outer two miles as they saw fit, for hay cutting, summer pasture, or cultivated crops. Some used their land as private property, while others cooperated with neighbours to manage multiple lots as

---

69 Ibid.
a commons. The establishment of park lots depended on the willingness of river lot owners to tolerate incursions. The effect of all of this on the right of river lot owners to the hay privilege was the crux of the disagreement between Jemima Bunn and the Harrowers. The brothers were convinced that, whatever hay privilege claim may once have existed to the lands in question, “it had already been disposed of by the fact of our actual settlement thereon.” But Bunn did not agree that tolerating park lots extinguished her right.

Jemima Bunn was a widow living with her children on a river lot in the Parish of St. Paul. She was anxious to preserve the hay privilege not for her own use, but on behalf of her young son. In an effort to bolster their cases, both Bunn and the Harrowers sought support from John Norquay, an eminent local politician. It is clear which party he favoured. Jemima Bunn had recently returned to Manitoba after more than a decade in the northwest. Her story was certainly one to inspire sympathy, as her husband’s death had left her with three children. The youngest was William Robert, born in 1872. However, Norquay did not use Bunn’s personal tragedy to appeal to Ottawa; instead, he asserted the value to the Bunns of the specific piece of land in contention. An equivalent amount of land elsewhere in substitute, proposed at one point as a possible means to resolve conflicts of this sort, “would be no equivalent for the loss the family


71 AM, Premier’s Office Files, Norquay Administration, GR 553, item A-1127, A. Russell to J. Norquay, 27 April 1882.
would sustain if not confirmed in the possession of that portion of the lot.”

To Norquay, it seemed entirely reasonable for river lot owners to plan their family’s future on the hay privilege, even if some parts were currently occupied by others.

While the Harrowers were convinced that definitive right should be extrapolated from current usage, John Norquay interpreted matters differently. He saw in the Harrowers’ claim something akin to a circle cut on the open prairie. A land claim was made, but it was not of the sort that would endure indefinitely. It was such logic that underpinned Jemima Bunn’s adamant assertion that “Mr. Harrower has no right whatever to the land – his only claim being that he has built a house upon the adjoining lot and improved some of the land around it.”

A home and a farm: these are precisely the elements that the Harrowers felt fully justified their claim to ownership. But to Norquay and Bunn, these were utterly insufficient to do away with the standing right of river lot owners to the hay privilege. At the time that Bunn was so confidently refuting the Harrowers’ claim, her only surviving son was still too young to fulfill her dream of a family farm on the hay privilege. There is no evidence of any immediate need for the land in question. She could have continued to tolerate the Harrowers’ incursion without immediate personal hardship, but the political context for land ownership had changed and this affected how residents interacted with each other. Through her actions, Jemima Bunn was responding to and participating in the alteration of the context in which landholding

---


73 LAC, RG 15, vol. 142. file 361, J. Bunn to Minister of the Interior, 4 April 1882.
was arranged. Through this process, settlers changed how they related to their neighbours.

2.5 The Great Transformation: Aboriginal Experiences

If the great transformation altered settlers' relations to Manitoba lands and to each other, it spelled even greater changes for Aboriginal populations. Until 1870, Aboriginal people retained title to the lands of the province, with the possible exception of some lands along the rivers and a small number of privately-negotiated arrangements affecting small parcels of land. For the Dominion government, Aboriginal title was a pressing concern, due to fears it would retard large-scale migration from Ontario and Europe. For their part, Aboriginal people recognized the importance of securing their rights in advance of an influx of immigrants, and were proactive in their efforts to negotiate with the government.

There has been solid scholarly analysis of the treaty process on the Canadian prairies, with recent investigators attending to cultural questions such as how each party understood the process and how oral as well as written commitments played a fundamental role. An environmental perspective has the potential to further explain

---

74 Those who work within the theory of social capital might describe these events as a significant expenditure of social capital.

75 Peers, *The Ojibwa of Western Canada*, 198.

76 Friesen, “Grant Me Wherewith to Make My Living,” 141-143.

77 Ibid., 141.
important aspects of Aboriginal experiences in the late 19th and early 20th centuries. The wetlands that Aboriginal people used as provisioning nodes were of less interest to the new authorities, because the government was preoccupied with the lands best suited for agriculture. As Indian Commissioner Simpson explained in his initial address to Aboriginal treaty negotiators, in securing the cession of “rocky swampy” land within the Province of Manitoba, the government was in fact “giving them presents – not purchasing from them land of great value.”79 While this was certainly rhetoric designed to assert the Government’s generosity, it also suggests how situating land along a continuum from most to least desirable figured in the treaty process. In Manitoba, paying attention to what happened in wetlands – areas governments and newcomers often dismissed as wastelands – leads to a better understanding of dispossession’s finer grain.

The first treaty between the Canadian government and the Aboriginal people of the prairies region was signed in August 1871. There was some uncertainty regarding the area covered by what became known as Treaty 1 or the Stone Fort Treaty, because of geographical imprecision and lack of participation by affected indigenous groups.80 All the same, the document provided the basis for Aboriginal dispossession throughout much of what is now south central Manitoba. In a speech that opened treaty negotiations, Manitoba Lieutenant Governor Adams Archibald explained the reserve


79 Ray, Miller and Tough, Bounty and Benevolence, 76-77.

80 Ibid., 65.
concept. These were to be parcels of land set aside for exclusive Aboriginal use, of sufficient size for agriculture.\textsuperscript{81} He sought to rein in expectations by suggesting that reserves would not encompass extensive hay lands. Nevertheless, reserve size became a key point of contention, with Aboriginal people at one point indicating they wished 2/3 of the province to be set aside for their use as hunting grounds.\textsuperscript{82}

Aboriginal negotiators eventually came to accept smaller reserves, based in part on the understanding that they would maintain the right to exploit ceded land.\textsuperscript{83} For government negotiators, continued hunting on ceded land was acceptable as it was assumed that Aboriginal people would primarily exploit the “rocky swampy” areas, which were lands not immediately targeted for agricultural settlement. Aboriginal people have remained adamant that, as explained by historian Jean Friesen, “their right to fish and hunt as before had been verbally confirmed by the treaties of 1871.”\textsuperscript{84} While the written treaty included no mention of hunting rights on ceded land, the locations of reserves were precisely laid out.\textsuperscript{85} There would be one at St. Peter’s Parish, one near the mouth of the Roseau River, one along the Winnipeg River, and one in central Manitoba south of the Assiniboine River. Each would contain enough land to allow 160 acres to a family of five. Treaty 1 was a remaking of the geography of south-central Manitoba, one anchored by the reserves it identified. But there were fundamental differences

\begin{itemize}
  \item Alexander Morris, \textit{The Treaties of Canada} (Toronto: Belfords, Clarke & Co., 1880), 28-29.
  \item Ibid., 34.
  \item Ray, Miller and Tough, \textit{Bounty and Benevolence}, 77.
  \item Friesen, “Grant Me Wherewith to Make My Living,” 152.
  \item Ray, Miller, Tough, \textit{Bounty and Benevolence}, 60.
\end{itemize}
between the geographies each party envisioned, based in part on different interpretations of the treaty-making process.

Some of these differences came to the fore because of declining populations of game animals. Under subsection 16 of section 92 of the *British North America Act*, game legislation was deemed a provincial responsibility.\(^86\) The Manitoba government was concerned about declines and sought to restrict Aboriginal hunting and fishing on ceded but unsettled land.\(^87\) At first, the Dominion government protested that Aboriginal people had an unassailable treaty right to hunt. However, as declines became more pronounced, Ottawa became concerned that unregulated Aboriginal hunting would contribute to resource depletion.\(^88\) If this were to occur, the government feared it would be obliged to assume the expense of providing sufficient provisions to more Aboriginal people over the longer term. The Dominion government began to participate in the regulation of Aboriginal hunting and fishing.

Consensus among governments about the need for regulation did not make game laws easy to enforce.\(^89\) Difficulties may have been compounded on wetlands where transportation and communication were hampered by water and insects made the area unpleasant to patrol. In her analysis of government repression of cultural practices

---

\(^{86}\) Friesen, “Grant Me Wherewith to Make My Living,” 145; Colpitts, *Game in the Garden*, 96.

\(^{87}\) Colpitts, *Game in the Garden*, 101. For a discussion of game management in a later period, see Loo, "Making a Modern Wilderness," 92-121.

\(^{88}\) Colpitts, *Game in the Garden*, 93-102.

\(^{89}\) Friesen, “Grant Me Wherewith to Make My Living,” 147.
among prairie Aboriginal groups, anthropologist Kathryn Pettipas suggests that repression was strongest on lands valued by the colonizers.\textsuperscript{90} Conversely, it may have been less vigorous in areas such as wetlands that the government found less desirable, even though water served to attract game and waterfowl. The areas that government agents least liked to patrol may have been the same areas that Aboriginals best liked to exploit. This may have gone some distance toward tempering conflict. While proximity to agricultural settlement was a key determinant of the extent of regulation to which any land, wet or dry, would be subject, wetlands may have been subject to less stringent regulation than the drier lands they abutted.\textsuperscript{91}

Treaty-makers had anticipated increasing Aboriginal interest in stock-raising, and commitments had been made for the supply of animals, tools, and sufficient hay.\textsuperscript{92} In the years after 1871, however, Aboriginal people found they were not always able to get the animals they wanted. For those who received animals, effective husbandry was complicated by the inadequacy of their tools. Historian Sarah Carter has considered how, in the immediate post-treaty period, lack of tools such as scythes impeded Aboriginal efforts to cut sufficient hay for winter use. In later years, as more effective


\textsuperscript{91} For a general discussion of challenges with policy enforcement, see J. R. Miller, "Owen Glendower, Hotspur, and Canadian Indian Policy," in \textit{Reflections on Native-Newcomer Relations: Selected Essays} (Toronto: University of Toronto Press, 2004): 107-139.

tools became available to non-Aboriginal farmers, some Aboriginal groups were given access only to the old models.\textsuperscript{93}

Especially in drier years, the hay lands of some reserves proved insufficient to supply domesticated animals.\textsuperscript{94} As a result, Aboriginal people were drawn into the haying economy. The success of on-reserve stock-raising often depended on off-reserve haying.\textsuperscript{95} For instance, the Indians of Fort Alexander, the reserve along the Winnipeg River, coped with “the scarcity and inferior quality of hay on the reserve” through “supplementing their supply by cutting hay on Dominion vacant lands in the vicinity of the Reserve.”\textsuperscript{96} Only by such means were they able to procure sufficient fodder to winter their stock. Aboriginal people took proactive measures to safeguard their supply. In 1898, those at Fort Alexander learned that the vacant Dominion land where they cut hay had been identified for transfer to Manitoba as part of a broader programme designed in part to appease provincial discontent over Dominion ownership of lands and resources.\textsuperscript{97} Fearing that their access to hay would be compromised, Aboriginal leaders expressed their concerns to the relevant officials.\textsuperscript{98} On-reserve agricultural activities

\textsuperscript{93} Ibid., 65, 96-98, 213-224.

\textsuperscript{94} See Carter’s discussion of hay. While some reserves have abundant hay and sell it, scarcity seems to have been more typical, especially in dry years. Carter, \textit{Lost Harvests}, 163.

\textsuperscript{95} Carter explores how hunting, fishing and gathering over a larger area prevented starvation on reserves. Carter, \textit{Lost Harvests}, 100.

\textsuperscript{96} LAC, Department of Indian Affairs, RG 10, vol. 3570, file 102, pt. 28, reel C-10101, Clandeboye Agency – Hay Lands (Indian Commissioner for Manitoba and Northwest Territories) 1898-1899.

\textsuperscript{97} The land had been identified as swamp and was eligible for transfer under the swamp lands arrangement. For more information on this matter, see chapter four.
depended on off-reserve provisioning, and thus could be threatened by actions that did not conflict with any treaty-defined Aboriginal right. Aboriginal people did what they could to maintain access to non-reserve lands they saw as essential to their well-being, with hay swamps as of particular concern.

When hay supplies on reserve were insufficient and off-reserve sources were compromised, Aboriginal people had little choice but to dispose of stock. As a sympathetic Indian commissioner explained, when “the only chance the Indians have to obtain hay for their cattle is from the sloughs,” an inability to procure sufficient supplies meant they were “prevented from keeping as many head as they wish.”

Aboriginal people were criticized for selling stock instead of building up larger herds. In 1885, this was the reasoning behind the decision not to supply the St. Peter’s Band with more cattle. In some instances, selling was an effort to capitalize on a resource that would otherwise, in the absence of sufficient feed, literally waste away. Aboriginals who disposed of their stock at what government observers judged to be inopportune moments may have been obliged to do so by an immediate or anticipated hay shortage.

In years when supplies were diminished by dryness or prairie fires, competition for hay could be especially fierce. From 1872 the Dominion government maintained a leasing system to govern access to the hay resource, but often failed to punish those who


99 LAC, RG 10, vol. 6615, file 7125-4, reel C-8018, Memorandum for Deputy Minister by D. Laird, Indian Commissioner, 7 February 1911.

100 LAC, RG 10, vol. 7592, file 7125-6 pt. 1, reel C-11564, Indian Agent Muckle to McColl, 12 June 1885.
violated the regulations. Although a moral economy had been replaced by a formalized permit system, in practice the resolution of hay conflicts continued to stem from local interaction. In some instances, the hay needs of Aboriginal and non-Aboriginal people came into conflict. The Dominion Government was unwilling to become involved in any dispute over hay, whether the proponents were Aboriginal or non-Aboriginal. But race was not insignificant to settlers who perceived Aboriginal hay cutting as a threat to their own supply. In 1899, Leo Schauns appealed for government intervention in the management of the hay lands at Jack Fish Creek. Claiming to speak on behalf of the local settlers, Schauns explained that there were no other suitable haying locations in the vicinity. He went on to say that the government should make sure that settler needs are met before allowing Aboriginal access “because we are Canadian subjects, who have a word to say at the ballot box....” Schauns sought not government management of a limited resource, but government exclusion of Aboriginal hay cutters. The appropriate way to manage shortages was through Aboriginal exclusion, rather than enforcement of regulations on all hay cutters. In Schauns’ view, the haying economy should be racially exclusive.

The history of Aboriginal wetland use in the treaty era suggests that colonialism may have played out differently on different sorts of terrain. Even as conservationist

101 AM, MG 9 A40, William Pearce Manuscript, 47-48; LAC, RG 15, D-V-1, vol. 1192, file 67428, Lyndwode Pereira, Assistant Secretary, Department of Interior to Deputy Minister of Justice Newcombe, 9 January 1899.

102 Carter, Lost Harvests, 185-187.

concerns led to restrictions on hunting, wetlands may have gone unpatrolled for longer than comparably situated dry lands. Less desirable for agricultural settlement, wetlands operated as venues where constraints on Aboriginal access were not imposed as quickly or as thoroughly as elsewhere. As stock-raising by Aboriginal people increased, wetlands gained new significance for them as sources of hay. The success of on-reserve agriculture became fundamentally linked to access to off-reserve lands. The issue of race came to the fore as some non-Aboriginal settlers argued for the restriction of Aboriginal hay cutting as a means of reducing competition for a scarce resource.

As hay shortages became more acute, Aboriginal people considered other means to ensure a steady supply. Hay grew best in moderately inundated areas, with excess water diminishing the crop. Draining wet areas was a means of increasing the amount of hay produced on reserves. Aboriginal people explained their desire to drain to Indian Agents, who conveyed this to government. Officials expressed no objections to the idea of drainage, but were concerned about funding. It was made clear that bands would be obliged to pay for all the associated costs, including surveys, materials, labour, and engineering services. If the band lacked the necessary funds, the project would not go ahead.104

Some Aboriginal communities did manage to begin construction of drainage works in spite of the significant financial barrier. Aboriginal labour was employed and the results

104 LAC, RG 10, vol. 6615, file 7125-5, reel C-8018, H. D. Latulippe, Indian Agent to Secretary, Dept of Indian Affairs, 22 June 1920; LAC, RG 10, vol. 6615, file 7125-4, reel C-8018, Memorandum for Deputy Minister by D. Laird, Indian Commissioner, 7 February 1911.
impressed the government inspectors. For example, in 1886, Indian Agent McColl claimed that

in all my travels throughout the province of Manitoba, I did not see anywhere such a perfect system of drainage as that performed by the Indians of the St. Peters Band... 105

Unfortunately, those who did the work were unlikely to ever see the full benefit of their labours. As McColl explained, the resources of the reserve had proven insufficient and work had been “abandoned before completion for want of funds.” 106 Even with such a promising start, no government assistance was forthcoming. Partially-constructed drainage works not only failed to provide the anticipated benefits, but could also alter hydrological circumstances so as to exacerbate flooding. On the St. Peter’s reserve, the Dominion government not only refused to help continue the improvements, but also was willing to leave the Aboriginal community vulnerable to risks derived from incomplete construction.

Despite unresolved problems with flooding, the lands of the St. Peter’s reserve were desirable because of their location immediately north of the City of Winnipeg. In the early years of the twentieth century, the Laurier administration spearheaded legislation that facilitated the surrender of Aboriginal reserves. 107 Amidst much controversy, the Aboriginal residents of St. Peter’s were relocated to a new reserve on the eastern shore

---

105 LAC, RG 10, vol. 7592, file 7125-6 pt. 1, reel C-11564, McColl to Inspector General of Indian Affairs, 4 July 1886.

106 Ibid.

107 Carter, Lost Harvests, 244.
of Lake Winnipeg in 1907.\textsuperscript{108} In their new location, inadequate drainage was also a problem. The new reserve included "much flat land that is not sufficiently drained," and the Chief and Councilors appealed for government support for ditch construction. Despite the initiative the community had shown and aside from concerns about how to pay for construction, government agents doubted the value of undertaking such work. While drainage "would no doubt enhance the value of the land and make it possible for more extensive farming operations," it was felt that there was "no guarantee that the improvement of the lands would be appreciated or made use of."\textsuperscript{109} Here, drain construction was forestalled principally by doubts about the capacity of those it would serve. Historian Sarah Carter has documented how government officials denied agricultural implements to progressive Aboriginal farmers.\textsuperscript{110} In a manner consistent with her interpretation, drainage was one more tool that Dominion officials were reluctant to make available.\textsuperscript{111}

Aboriginal difficulties in gaining assistance with drainage were in part a product of the jurisdictional confusion and dispute between Ottawa and Winnipeg. Under the \textit{British North America Act}, drainage was a provincial responsibility while Aboriginal matters

\begin{thebibliography}{9}


\bibitem{109} LAC, RG 10, vol. 10303, file 501/8-4-11, reel T-7579, Report from Indian Agent, Fisher River Agency to Assistant Deputy and Secretary, Department of Indian Affairs. 22 January 1914.

\bibitem{110} Carter, \textit{Lost Harvests}, 209-236.

\bibitem{111} See also Leo G. Waisberg and Tim E. Holzkamm, "A Tendency to Discourage Them from Cultivating: Ojibwa Agriculture and Indian Affairs Administration in Northwestern Ontario," \textit{Ethnohistory} 40, no. 2 (1993): 175-211.

\end{thebibliography}
were a Dominion responsibility. Continuing controversy over Dominion ownership of Manitoba lands, an arrangement that ran counter to the precedent set in 1867 when the original provinces of Confederation retained authority over their own lands, established a context in which both governments kept a close eye on jurisdictional matters.

By the late 1870s, the provincial government was undertaking some drainage projects and offering both grants and loans to settlers and municipalities interested in drainage. For its part, the Dominion government was careful not to become involved in anything like a drainage project. Aboriginal people who sought help with drainage were asking for something that the provincial government made available to their non-Aboriginal neighbours, but that the Dominion government was unlikely to grant for reasons beyond the validity of any particular request or even the racial identity of the petitioners. In their relationship with the federal government, Aboriginal people were enmeshed in a bureaucracy that lacked the right or responsibility to undertake drainage works.

However, race was not irrelevant. The Dominion government was more likely to risk transgressing jurisdictional boundaries when the welfare of non-Aboriginal settlers was at stake. For instance, the Municipality of Franklin, one of the parties involved in a provincial drainage project that crossed the Roseau River reserve in southeastern Manitoba, appealed to Ottawa for financial assistance with their part of the undertaking. The Dominion government responded with a contribution of funds, despite the fact that it had refused to help with the cost of draining the reserve. Dominions reticence to undertake on-reserve drainage was consistent with a pattern of stinginess and

---

exacerbated by racist presumptions about the capacities of Aboriginal agriculturalists and persistent preoccupation with federal-provincial jurisdictional boundaries. The result was that large-scale drainage was rarely undertaken on Aboriginal reserves.

Wetlands could become sites of confrontation between Aboriginal persistence and colonial power. In this regard, it is useful to consider closely an example of how unsanctioned use of wetlands by Aboriginal people flared up into a protest addressing the broader questions of domination and dispossession. The Ojibwa who had been relocated from the St. Peter’s reserve to the Peguis reserve on the eastern shores of Lake Winnipeg were unsatisfied with their new lands. In the absence of Government assistance with drainage, the area remained “low and swampy” and so “unsuitable for the growing of grains and vegetables.” As explained in a letter to the Minister of Indian Affairs, the reserve was simply “not suitable for the needs of Indians.” But it was not drainage that these petitioners sought. Rather, they wanted to return to an area near their old reserve. An appropriate mixture of dry land and wet land was part of what made the St. Peter’s area attractive. As petitioners explained, the area consisted “in part of high land, which would be cultivated and afford proper ground for homes the year around, and in part of hay land, which would be valuable to the Indians, both to provide feed for cattle and for sale.”

Some residents of the Peguis Reserve joined those who, in defiance of government efforts at removal, had remained in the area when the St. Peter’s reserve was

113 LAC, RG 10, vol. 4060, file 394,068-1C, reel C-10181, Peguis Band to T. G. Murphy, Minister of Indian Affairs, 14 October 1933.
surrendered. The Government responded by rounding up and imprisoning some of the protesters. Aboriginal leaders were keen to make clear that such confrontations did not suit their purposes. “Your signers do not want to make trouble, or go to Gaol,” it was carefully explained, “but do want that consideration which had been promised to them....” The point of reference for the protestors was the terms of Treaty 1, as one leader explained in a separate submission to Government officials:

we are requesting the Dominion government to give us our reserve back, even if we could get the hay marsh, and half of the reserve, we would all be satisfied.

My people has been waiting too long to get their rights. The St. Peter’s Reserve is still our reserve, because we have been told, when the Treaty was made in 1871, that as long as the sun shines, and the waters flow, and the grass grow, it shall be our own. The sun is still shining, the water flows, and the grass grows. The promise that has been made in 1871 has to stand.115

In their correspondence with government officials, the Aboriginal people lodged a broader protest against an accumulation of broken or unfulfilled promises. In other submissions, they paired their request for the return of their reserve with protests against “unreasonable restraint on the manner in which we should conduct our lives and dispose of our possessions.”116 Through conflict over a particularly piece of land, valued in part for its useful wetlands, Aboriginal people articulated broader objections to what they saw as government disregard of treaty commitments.

114 Ibid.

115 LAC, RG 10, vol. 4060, file 394,068-1C, reel C-10181, Peter Harper to Secretary of Indian Affairs, 23 December 1933.

116 LAC, RG 10, vol. 4060, file 394,068-1C, reel C-10181, Peguis Band to T. G. Murphy, Minister of Indian Affairs, 14 October 1933.
The situation near the former St. Peter's reserve came to a head in the early winter of 1933. Starvation became a problem among protestors. Government officials refused to provide food, even for women and children, for as long as the protest continued. It was thought that, for Aboriginals, the “suffering which they have brought upon themselves is perhaps the only thing that will bring them to a realization of the uselessness and folly of such trespass and defiance.” Eventually, by the summer of 1934, after more than two years of active defiance, with leaders in jail and mass starvation threatening people and horses alike, the protest was broken up. Those not taken into custody either took up residence elsewhere in the area or agreed to return to the Peguis Reserve in order to obtain access to the food, clothing, and money that was dangled before them.

Once the protest was broken up, the Dominion government quickly arranged for the disposal of the lands the Indians had occupied. If the area was private property or under hay lease, it would be up to the owner or permit holder to prosecute Aboriginal trespassers. Aboriginal encroachment would no longer be a Government problem. Hay leases and land sales were employed as a means to consolidate Aboriginal dispossession. Evidence of confrontations between local landowners and Aboriginal people in the late 1930s suggests that, even in the face of all of this, the area remained attractive to the Aboriginal people who had lived there in the past.

---


118 LAC, RG 15, D-V-1, vol. 1192, file 67428, Lyndwode Pereira, Assistant Secretary, Department of Interior to Deputy Minister of Justice Newcombe, 9 January 1899.
Native and newcomer patterns of wetland use were never entirely in alignment. Over time, the experiences of these groups became increasingly divergent. Early in the 19th century, hunting and gathering in wetlands helped ensure adequate subsistence for Aboriginal groups. Only after the heyday of the haying economy in the mid 19th century did Aboriginal people become involved in stock-raising to an extent that obliged them to gather large quantities of hay. Still later, drainage proved less available to Aboriginal people, with jurisdictional questions and racial prejudice complicating requests for government assistance. The dispute over the surrendered St. Peter’s reserve, particularly in its denouement with the Dominion government seeking to dispose of the marsh as a means of consolidating dispossession, makes clear how access to wetlands differed between natives and non-natives. The events at St. Peter’s also make clear how Manitoba wetlands figured in what historian Gerald Friesen has seen as a tradition of Aboriginal protest articulated through relationships to specific parcels of land.\textsuperscript{120}

2.6 Conclusion

This chapter tracks a number of stories, all related by their association with wetlands. Attention to wetlands is not, however, the only unifying thread. Equally significant is the theme of adaptation. The presence of wetlands facilitated adjustment to new locations and compelled the development of land management systems attuned to their dynamic nature. In turn, wetlands were modified by both Aboriginal and non-

\textsuperscript{119} LAC, RG 10, vol. 4061, file 394,068, C-10182, E. McPherson, Indian Agent to Secretary, Indian Affairs, 3 April 1939.

Aboriginal users. Examining environmental relations in the wet prairie contributes to a more nuanced understanding of how a transition in property regimes played out in southern Manitoba. For those who remained at the Red River settlement through the late nineteenth century, adaptive capacity developed in relation to environmental factors facilitated adjustment to political and social change.

As the establishment of a private property system associated with liberal capitalism helped transform the Canadian northwest, interactions between people and wetlands changed. Increasingly, the experiences of Aboriginals and non-Aboriginals diverged. But even as the constraints imposed on Aboriginal people were unfamiliar, the process of adapting to change was not new. Paying attention to wetlands clarifies how, in the face of continuous conflict with the colonial institutions established in the wake of the great transformation, Aboriginal people in Manitoba adapted to prevailing conditions and made the best of difficult circumstances. In this context, Aboriginal drainage was a technique of adaptation and continued wetland use was both a subsistence strategy and a means of protest. The great transformation was a dramatic turn with consequences that were significant for all, even as they favoured some at the expense of others. But there was also continuity in the history of the region, evident in the ongoing process of adaptation to dynamic political, social, and environmental contexts.

121 Environmental historians have recognized the importance of property systems and of the connection between private property, colonialism, and capitalism. See chapter four, "Bounding the Land," in William Cronon, Changes in the Land: Indians, Colonists and the Ecology of New England (New York: Hill and Wang, 1983). In a recent review, Dan Flores has emphasized the continued utility of this important early work. See Dan Flores, "Twenty Years on: Thoughts on Changes in the Land: Indians, Colonists and the Ecology of New England," Agricultural History 78, no. 4 (2004): 493-496.

3 MAKING MANITOBA:

DRAINAGE BEFORE THE 1895 LAND DRAINAGE ACT

3.1 Introduction

In his influential Manitoba: A History, historian W. L. Morton argued that “the shaping of the new landscape was accompanied by the shaping of a new provincial consciousness.”\(^1\) Morton took a broad view of the ‘shaping’ processes to which he referred, describing road construction along with land breaking and local Sunday school meetings along with the formation of political parties. In a recent article on the creation of Canada as a liberal nation, historian Ian McKay emphasized how apparently-unrelated activities helped establish and confirm cultural norms.\(^2\) Taking inspiration from both Morton and McKay, this chapter examines how grappling with the perceived problem of flooding contributed to the formation of a political culture in the Province of Manitoba. This use of ‘culture’ draws on the work of historian Thomas Hughes, who employed the term to refer to the collection of organizations and expertise involved in electricity delivery.\(^3\) By pairing it with ‘political,’ I suggest the involvement of non-experts who contributed to debates over drainage, as well as the connection between drainage and party politics.


What scholarship there is on Manitoba drainage accords little importance to activities prior to the 1895 passage of The Land Drainage Act. While historical geographers John Warkentin and William Carlyle acknowledge some earlier undertakings, their analyses of the early period are relatively superficial. This may reflect an understandable preoccupation with the material outcomes of projects intended to alter the physical environment. During the first two decades after the formation of the province, the Manitoba government gradually undertook a growing number of projects, at first to deal with flooding of land that had been dry at the time of settlement and then to drain substantial wetlands. These began processes of environmental transformation that would, in aggregate, remake the landscape of the southern portion of the province. But change took time. Drainage before 1895 did not dramatically transform the wet prairie, and for this reason may seem less significant than later efforts.

Still, early drainage had important consequences for how Manitobans engaged with each other and their government. In ways consistent with widespread notions of agricultural progress as well as for reasons specific to Manitoba, drainage was expected to alter the land permanently. Anger, frustration, and disillusionment often resulted when it failed to do so. Local governments were established partly to increase local control over drainage. But municipal incorporation was often no more straightforward than land drainage, and snags in each process affected the other. Disputes were shaped

---

and amplified through a difficult period in Manitoba history, when farm failure was a real risk for many settlers and provincial prosperity was far from assured. Drainage became increasingly political, as settlers sought the assistance they needed and politicians tried to appease discontent. Cultural groups situated throughout the province faced similar surface water problems and encountered similar political frustrations. They worked together on solutions to shared challenges, often with the support of the provincial government. Coping with surface water created a political culture defined by a pragmatic inclusiveness on the one hand and a pervasive contentiousness on the other.

3.2 Early Drainage

Early ditches were as small in size as they were few in number. In his 1976 doctoral thesis, geographer Barry Kaye noted a few examples of ditches dug at the Red River settlement in the 1820s to improve drainage.5 John Warkentin refers to some minor drainage work in the 1840s, as part of an effort to cope with “the back swamps behind the natural levees of the Red River.” The environmental changes attributable to these undertakings were no more significant than those resulting from other local projects, such as water mills.7 For residents preoccupied with wresting a living from a challenging landscape, other ways of interacting with Manitoba’s wetlands – through gathering hay or hunting waterfowl, for instance – were of greater consequence.


Drainage for agriculture was not a very important activity in the Red River settlement, whether assessed environmentally, politically, or socially.

Henry Youle Hind, a geologist who assessed the lands of the Northwest on behalf of the Canadian government, was among the first to see drainage as an undertaking potentially of particular significance in Manitoba. Hind’s work has been seen by historians Suzanne Zeller and Douglas Owram as fundamental to an optimistic reassessment of the potential of the northwest. Heading westward from the southwest shore of Lake Manitoba in the late 1850s, he traversed some of the most pronounced ridge and swale topography of the province. He described how tiresome it was to “wade through marshes and bogs, separated by low ridges.” In fact, Hind wrote, the land “may be said to be made up of marsh, bog, ridge, marsh, bog, ridge in most wearisome succession.” This did not dampen his optimism. Drainage, he asserted, could transform the region: “I know of no other enterprise of the kind which could be executed with so little cost and labour and promise at the same time such wide spread beneficial results.” Hind’s assessment was matched by some early local calls for more extensive efforts at drainage. On 1 August 1861, an editorial in the Nor’wester advocated drainage to allow farmers at the Red River settlement to expand their operations and to increase the hay crop. Nevertheless, early historian J.J. Hargrave, writing in 1871, claimed that no

---


significant drainage work had been undertaken within the newly-established province of Manitoba.\textsuperscript{11}

Frustrated at what he saw as a lack of agricultural ambition among his compatriots, Hargrave failed to note drainage undertaken in conjunction with transportation improvements. In the Red River settlement, overland travellers favoured well-used routes along the natural levees of the Red and Assiniboine rivers.\textsuperscript{12} Away from the banks, early trails followed ridges and bypassed low areas.\textsuperscript{13} These routes were “the best natural roads” of the region and became part of the shared resources of the community.\textsuperscript{14} Efficient travel usually meant taking the driest – rather than the most direct – line between two places. The Public Works Committee of the Council of Assiniboia, the region’s governing authority throughout the middle decades of the 19th century, arranged for road construction and maintenance on a contract basis.\textsuperscript{15} Local residents would tender for work on a particular section, and the successful bidder would complete it under the supervision of a Council-appointed overseer. Relatively little work was necessary on trails that followed elevated ridges. But as Dominion government employee William Pearce noted in a review of public works projects before

\textsuperscript{10} Warkentin, “Human History of the Glacial Lake Agassiz Region in the 19th Century,” 332.

\textsuperscript{11} J. J. Hargrave, \textit{Red River} (Montreal: Lovel, 1871), 177.


\textsuperscript{13} AM, MG 9 A40, 156.

\textsuperscript{14} AM, Department of Public Works, Minister’s Office Files, GR 1607, G 7972, item 115, J. A. Macdonell to the Minister of Public Works, 25 January 1894.

\textsuperscript{15} E. H. Oliver, \textit{The Canadian North-West: Its Early Development and Legislative Records} (Ottawa: Government Printing Bureau, 1914), 84.
1870, highways were sometimes constructed "where by reason of intersecting streams, timber marsh and flooded land, conditions were unfavourable for good roads."\(^\text{16}\) The nature of the work in these areas has gone largely unrecorded, though strategies such as the construction of corduroy roads and digging of roadside drains likely were used to facilitate passage through low areas.\(^\text{17}\)

Distance has often been seen as a key factor in Canadian history. Technologies designed to conquer it (such as the railway) have been connected to the achievement of significant political goals (such as Confederation).\(^\text{18}\) Some regions of the country, the Rocky Mountains and the Precambrian Shield in particular, have been identified as geographical challenges to the creation of a political union. In comparison, Manitoba's wetlands did not even register as a significant impediment among railway builders: the challenge of constructing mountain passes dwarfed the inconvenience of digging culverts.\(^\text{19}\) Nevertheless, wetlands were to prove a significant trial for provincial administrators charged with establishing local networks of transportation and communication. Throughout the region in early days, and well into the twentieth

\(^\text{16}\) AM, MG 9 A40, 153.

\(^\text{17}\) Journals of the Manitoba Legislative Assembly, 1874.


\(^\text{19}\) This is not to say that culvert construction was not a significant undertaking. See J. A. Griffiths, The History and Organization of Surface Drainage in Manitoba (Winnipeg Branch, Engineering Institute of Canada, 20 March 1952), 2.
century in the more remote reaches of Manitoba, settlers were separated by the presence of swamps as much as by sheer distance.20

Manitoba’s Department of Agriculture and Public Works was established in 1871 in part to undertake the work needed to facilitate transportation and communication. The Department operated as a joint ministry until 1874, when it was divided into two separate departments. The responsibilities of the Department of Public Works were defined by statute in 1876. The legislation provided for the hiring of expert staff (surveyors and engineers) and experienced administrators (often surveyors and engineers who, in addition to their practical training, had management experience) to plan, design, budget for, and administer the works that fell within its three main branches: Road and Bridges; Ferries; and Public Buildings. While drainage was not identified in the organizational structure of the Department, it was an implicit part of road construction. Wet areas posed significant problem for road builders. “In many cases,” government officials explained, “extensive marshes peculiar of the geographical character of the country prevent altogether the construction and maintenance of public roads except at very great cost and with very temporary results.”21 The solution was drainage. Road grading and drain building were often part of the same project, with road grades being formed with the material excavated from a ditch.22 Even when drains

---


21 AM, Executive Council, Minutes, GR 1659, OC # 6, 21 February 1879.
did not seem essential, excavations usually tracked alongside a road because this was an easy means of accessing material necessary to form the grade.

Employees of the Department of Public Works understood that their task was to facilitate transportation and communication. Engineer H. A. Bowman expressed his desire to assist “women going or returning from market who had to hold their clothes up round their waist when wading the muskegs.” As he explained to a new Minister, he took satisfaction in providing immediate relief along severely flooded routes, even if “it is not possible in many districts to take the water to an outlet, which in numerous cases is many miles away.” As a key component of the process of establishing connections between settlements and homesteaders, drainage in the form of what Bowman called “immediate relief” for troubled travellers was an important undertaking in the new province.

Yet travelling residents did not always see drains as improvements. Roads built by the Provincial government followed the survey, which did not correspond to established routes any more than it accommodated established landholding arrangements. In fact, road construction often ran against the grain of the landscape. In the 1940s, Engineer F. E. Umphrey, a long-time employee of the Department of Public Works, mused in a

---


23 AM, GR 1610, reel M 951, H. A. Bowman, Assistant Deputy Minister, to W. H. Montague, Minister of Public Works, 13 December 1913.

24 Ibid.
letter to an associate that if environmental conditions had been the primary determinant in early road building, “we would probably find many of our roads leaving the right angled section line location for angular location following the sand ridges and higher land, and our drains following the lower lands where they should be, if required at all.”\textsuperscript{25} Especially early on, settlers often preferred to stick to longstanding trails, which even employees of the Department of Public Works recognized as “the best natural roads.”\textsuperscript{26} Drains that cut across established routes could act as barriers. Indeed, drains were seen by some as more inconvenient than swamps. Wet areas could be waded, inconvenient and uncomfortable as that was, but deep, steep-sided drains could not be traversed in this way. Only in winter were travellers not obliged to plan their route to take into account the locations of bridges across drains.\textsuperscript{27} Further, drains were not just an inconvenience. They were also a hazard. Both children and livestock were at risk of falling into these deeper waterways.\textsuperscript{28} Correspondence to the Department of Public Works suggests that settlers complained as much about the drains that had been built as about those that had not.

The earliest drainage projects by the Department of Public Works in southern Manitoba resulted in relatively thorough drainage of transportation and communication routes that

\textsuperscript{25} AM, GR 1617, G 5324, F. E. Umphrey to Harry Christopherson, 14 March 1947.

\textsuperscript{26} AM, GR 1607, G 7972, item 115, J. A. Macdonell to Minister of Public Works, 25 January 1894.


\textsuperscript{28} AM, GR 1607, G 7961, J. O. Smith to T. A. Wade, 10 Nov 1886.
followed the survey, but demand for drainage of another sort was growing. By careful plotting of settlement patterns, scholars of Manitoba have documented how drier sites were occupied more quickly. Nevertheless, proximity to wet areas had its own attractions. Indeed, some regions marketed themselves by emphasizing advantages derived from their wetter character, such as easy access to hay and water. But locations that appeared wise choices in dry years might seem quite the opposite in wet periods, as access to hay became vulnerability to flooding. One significant environmental reversal occurred in 1882, when excessive precipitation and a sudden thaw led to widespread flooding along the relatively densely-settled Assiniboine River and lakeshore regions. The Province appealed to the Dominion government for assistance, claiming that even if the water subsided quickly, there would be “much suffering and poverty, where a few weeks ago there was comparative plenty.” The events of 1882 were particularly well-documented because of the extent of the flooding and the large number of people affected, but similar smaller environmental reversals occurred nearly every year. The settler dismay and government concern that resulted did not always lead to appeals to the Dominion, but they did change the sort of work

---


31 Ellis, The Soils of Manitoba, 27-29. While experts may be able to distinguish wetland from dry land soils even in dry periods, most settlers likely lacked such expertise.

32 AM, Executive Council, Orders-in-Council, GR 1530, OC # 697, Provincial Treasurer John Norquay to Executive Council, 4 May 1882.

33 A. S. Morton argues that the 1882 flooding along the Assiniboine River had a great effect on the settlement geography of the province. A. S. Morton, History of Prairie Settlement (Toronto: Macmillan, 1938), 58.
undertaken by the Department of Public Works. Many areas settled in dry years needed drainage in wet years, and government resources were increasingly directed at the new problem of agricultural flooding.

Before 1895, many Manitobans regarded drainage as a means of safeguarding agricultural improvement from environmental assault. Later government officials would recognize how drainage problems derived in large part from settlement patterns. In 1929, after substantial government investment in drainage infrastructure, H. A. Bowman, who had become Chief Engineer of the Department of Public Works, was asked to summarize the history of drainage in the province. Contrary to Hind's early expectation, drainage in Manitoba had proven neither cheap nor easy. In Bowman's opinion, this was largely due to the fact that settlers had occupied land which "should never have been put under the plough." Settlers broke the land in dry cycles and "when the wet cycles recur, there is an immediate cry for help." While drainage was in keeping with notions of agricultural progress, much early drainage in Manitoba was understood in a more defensive vein. Many drainage projects were efforts to cope with unforeseen changes in water levels derived from variations in climatic patterns.


35 AM, Public Works Department, Deputy Minister's Office Files, GR 1611, G 8062, file: Reclamation Branch, Chief Engineer Bowman to D. G. McKenzie, Acting Minister of Public Works, 12 April 1929. See also AM, GR 1609, G 8046, file: Union of Municipal Drainage Maintenance Districts, Text of an Address delivered at annual meeting of Union of Municipal Drainage Districts, 27 November 1945. In this speech, F. E. Umphrey explained how "...during the dry years land that was broken up for cultivation, was not, however, returned to meadow or pasture when the wet seasons returned, but instead, the drainage system was extended, thus laying the foundation for the complex problem we have on our hands today."
Unexpected flooding of this nature resulted from a conjunction of local factors, with high rates of precipitation over a number of years and a quick spring thaw as factors frequently associated with the sudden flooding of what settlers had taken for dry land. Prairie historians have attended to environmental variability, largely through a focus on the consequences of climatic shifts for agricultural production. Patterns of drought and their consequences for the regional economy and the farm family have been much studied. But this is only part of the story of environmental fluctuation in the wet prairie. The dynamic nature of the provincial hydroclimate both spurred drainage and affected how Manitobans conceived of efforts to transform their environment.

3.3 Drainage as Permanent

To understand how Manitobans responded to variations in water levels, it is necessary to investigate how drainage was understood. Drainage was seen as the solution to the problem of flooding. The presumption was that once drains were in place, floods would not recur. No more would there be water in the wrong quantities in the wrong places at the wrong times. What we now understand as the variability of the Manitoba environment was perceived as a problem that could be solved permanently by drains that would keep water low and land dry. This view of drainage was consistent with

---

36 A recent example of the focus on drought (exacerbated in this case by concern with a particularly dry area) is Barry Potyondi, In Palliser’s Triangle: Living in the Grasslands, 1850-1930 (Saskatoon: Purich Publishing, 1995). The tendency to employ the hardship engendered by drought as the signal of environmental maladjustment on the Canadian prairies is evident even in works that accord more limited attention to environmental matters, such as Gerald Friesen, The Canadian Prairies and Vernon Fowke, National Policy and the Wheat Economy (Toronto: University of Toronto Press, 1957). A similar tendency is also evident in the more recent Bill Waiser, Saskatchewan: A New History (Calgary: Fifth House Ltd., 2005).
optimistic assessments of the agricultural potential of the northwest that emerged in the
late-19th century, such as that offered by Hind. Optimism was amplified by the
boosterism that Douglas Owram detected among many prominent government officials
and private citizens interested in provincial development.37 Scholars such as Hugh
Prince, John Thompson and Ann Viliesis have made clear that settlers and governments
across North America saw drainage as a means to create an agricultural landscape that
would support long-term prosperity.38 The intellectual context of the late 19th century
was conducive to a view of flooding as a problem to be addressed and resolved. But
there are more specific explanations for the widespread association between drainage
and permanence in Manitoba.

In 1880, Manitoba passed The Drainage Act. As explained in the minutes of an earlier
Executive Council meeting, the legislation was designed to address a worrisome
situation. Because of flooding, "immigrants were either deterred from entering the
province, or were forced to pass through it and settle on the drier plains beyond."39
While the effect of flooding on the networks of transportation and communication was
still a paramount concern of the Department of Public Works, the legislation marked a
shift toward drainage projects on a larger scale. The Drainage Act changed the sort of
drainage projects the Department of Public Works would undertake. It authorized the
department to drain nine large wetland complexes in southern Manitoba by the

37 Owram, Promise of Eden, 101-124

38 Prince, Wetlands of the American Midwest, 1-25; Thompson, Wetlands Drainage, River Modification,
and Sectoral Conflict in the Lower Illinois Valley, 16-20; Vileisis, Discovering the Unknown Landscape,
29-50.

39 AM, GR 1659, Order-in-Council # 6, Minutes of the Executive Council, 21 February 1877.
construction of nearly 200 miles of drain. These wetlands were: the St. Andrews Marsh, the Seine River Marsh, the Springfield Marsh, the Boyne River Marsh, the Westbourne Marsh, the Big Grass Marsh, the Woodlands Marsh, the Tobacco Creek Marsh, and the marshes south west of Rat River in Provencher and the vicinity. Thoroughly drained, these areas would attract rather than deter settlement.

*The Drainage Act* was drafted amid ongoing political negotiations between the Province and the Dominion. In this context, Manitoba politicians had reasons to emphasize the permanent character of drainage works beyond the desire to reassure potential settlers. As a permanent improvement, drains could be bankrolled from funds set aside by the Dominion government to support capital projects in Manitoba. Under the terms of Confederation in 1867, the Dominion government assumed some of the debt accumulated by the Canadas, Nova Scotia, and New Brunswick in the construction of essential public works. When Manitoba entered the union a few years later, some means of extending equally generous terms to the new province had to be found. As no substantial infrastructure had been built in the Red River settlement, there was no debt for the Dominion to assume. Consequently, the Dominion government made available funds for capital improvements in Manitoba.

---


41 AM, GR 1530, Order-in-Council # 213, Re Drainage of Wet Lands Report sent to Sec. State, 28 May 1880.

42 *Journals of the Manitoba Legislative Assembly*, 27 May 1888, p. 143.
In a letter dated 24 March 1879 to the Receiver General of Canada, Manitoba Premier and Treasurer John Norquay sought access to this money:

By the 'Drainage Act' contemplated by the Government of Manitoba provision is made that certain districts be surveyed and laid off by competent engineers and estimates of the probable costs submitted to the Department of Public Works, and the process of draining proceeded with under the auspices of the Local [provincial] Government. ... It will be seen that it is necessary that a sum of money for immediate use in this connection be placed at the disposal of the Government in order that the work may be proceeded with, with as little delay as possible.

For these purposes, Manitoba wanted the substantial sum of $100,000.00. According to Norquay, the drainage works that had become "a matter of necessity for the welfare of the settlement of the Province" could not be charged "to current expenditures." As they were of "a permanent character," he explained, they were rightly a charge against the capital account of the province. In this view, drainage was unique, not only in its significance to the province, but also in its nature as a public investment:

while roads and railroads will wear out, bridges will be swept away, and buildings wear out and deteriorate, the ditches if properly located and made in soil such as that of which Manitoba is chiefly composed, will continue to enlarge from year to year.

---

43 AM, Natural Resources Department, Miscellaneous Land Files, GR 7721, reel M 1690, file 5, Extract of a Report of a Committee of the Privy Council, 8 April 1880. See also the Journals of the Manitoba Legislative Assembly, 3rd Session, 4th Legislature, 44 Victoria 1881, Appendix B.

44 Manitoba, Annual Report of the Manitoba Department of Public Works, 1880, Extract from letter from J. Norquay to A. Campbell (Receiver General, Ottawa), 24 March 1879.
Bridges and public buildings were necessary to provincial progress, but only drains were resistant to deterioration, even likely to improve through time. The widespread understanding of drainage works as effecting a permanent improvement to the landscape was consolidated in Manitoba as part of an effort to secure funding from the Dominion government.

Sandwiched between widespread optimism and political strategizing, engineers in the Department of Public Works found themselves in a difficult position. Their rhetoric suggests that they sought a balance between what their advanced training suggested about drains and what they realized was expected of them. In his early days with the Department, still some time before he rose to the position of Chief Engineer, H. A. Bowman explained the principle that governed his actions in relation to drainage. He sought to:

Get good value for the money expended, to do as much work as possible with a definite plan in view, so that the work may be a permanent asset to the neighborhood and settlers at large.  

At one level this sentence is a straightforward expression of policy. At another, it is an attempt to reconcile professional expertise to the predominant social and political context. Bowman’s comment suggests he understood the significance of the association between drainage and permanence, but he tempered his phrasing by valuing drainage as an asset to the community rather than an instrument of landscape change. A drain that constitutes a permanent asset is not the same as a landscape that is permanently

45 Journals of the Manitoba Legislative Assembly, 1881, Appendix B.

46 AM, GR 1610, reel M 953, p. 728, H. A. Bowman to N. Windebank, 5 April 1914.
changed. When discussing drainage, engineers typically employed the notion of permanence but in a more guarded manner than politicians.

The link between careful planning and successful construction that Bowman established in this passage is notable in light of the state of the engineering profession in Manitoba. Until 1922, Manitoba engineers did not have legal standing. Despite the increasing significance of their technical expertise and unlike those practicing medicine or law, engineers “could neither control their professional lives nor protect themselves from competition” because there was no effective means to prevent the unqualified from claiming engineering expertise.47 Late in the 19th and early in the 20th century, the work of engineers and surveyors often overlapped. After Manitoba surveyors organized themselves into a closed profession in 1874, engineers were excluded from surveying but surveyors could work as engineers.48 Engineers who felt vulnerable in their professional role may have been less likely to challenge prevailing notions of drainage as a permanent improvement. Without casting aspersions on the motivations of professional engineers, many of whom operated in the public interest, it should be recognized that engineers were ill-positioned to challenge the erroneous assumptions


48 Sinclair, Ball and Petersen, eds., Let us be Honest and Modest, 233-241. See also Robert Perruci and Jel Gerstl, eds., The Engineers and the Social System, (New York: John Wiley and Sons, 1969). For a suggestion of the local consequences of this, see AM, Premier’s Office Files (Greenway Administration), GR 1662, G 524, item 11973, T. A. Wade to the Lieutenant-Governor of Manitoba, 14 May 1888. This letter is an example of the dismissal of an engineer and his reference to the value of his professional knowledge in an effort to protect his job. See also C. S. Landon “A Short History of the Association of Professional Engineers of the Province of Manitoba, 1920-1945,” in 25th Anniversary Year Book Association of Professional Engineers of the Province of Manitoba, 1920-1945 (Manitoba, 1945).
made by members of government or the public at large. Furthermore, some may have thought they stood to gain by associating higher quality works that they cautiously termed permanent with their own expertise.\textsuperscript{49}

Regardless of engineers' contributions, variations in rates of precipitation and spring thaw patterns could wreak as much havoc in the drained as in the undrained landscape. Just as a wise location for a homestead in dry years could seem utterly foolhardy in wet, so ditches that were entirely adequate in some years seemed like colossal failures in others. This was inconsistent with the expectation of permanence. Early drainage changed the landscape in relatively moderate but nevertheless significant ways, but failed to resolve the basic fact of environmental variability. Significantly, variability acquired other connotations when it played out over a landscape recognized as the product of human action as well as of nonhuman forces. When people were responsible, at least in part, for the state of the landscape, the possibilities for laying blame expanded. Manitoba drainage became a political issue.

### 3.4 Drainage and Political Culture

Before considering drainage as a political issue, it is important to examine how it figured in the formation of political institutions in Manitoba. Municipalities are corporations created by provinces for the purposes of local administration.\textsuperscript{50} Generally,

their powers include the capacity to carry debts, to levy and collect assessments, and to undertake public works of local significance. According to Engin F. Isin, the concept of municipal government was the subject of contentious debate over a long period in British North America. As an administrative mechanism less reliant on punitive, negative law than on institutional and enabling authority, municipal government arose as part of a broader pattern of social change. After a long gestation, it was established in the Canadas during the 1830s and 1840s in part to diffuse tensions between local autonomy and central authority in the period following the rebellions of 1837 and 1838.51

In the northwest at about the same time, the Council of Assiniboia was reshaped in response to factors not wholly dissimilar to those at play further east: the need to provide a locally-responsive administrative body in a region managed from afar by the Hudson’s Bay Company. Membership on the Council was still by appointment, as it had been under Selkirk and his heirs before the District of Assiniboia was transferred back to the Company, but local desires were increasingly taken into account in making appointments. The Council was responsible for an array of locally significant tasks, such as roads, bridges, and poor relief. Its role in the management of the haying economy suggests its operating norms, with settlers respecting the Council’s dictums when it suited them.52


51 See also Allan Greer and Ian Radforth, “Introduction,” in Colonial Leviathan: State Formation in Mid-Nineteenth Century Canada, eds. Allan Greer and Ian Radforth (Toronto: University of Toronto Press, 1992), 3-16.
Under the *British North America Act*, the provinces had jurisdiction over municipal governments. Despite urgings from the Dominion government, Manitoba officials saw little immediate need to create a municipal system. With a provincial population of approximately 12,000 people, less than 1/6 of whom were entirely European or Canadian in origin, many believed that the establishment of another level of government would be premature. As Attorney General H. J. Clarke explained, it was more appropriate that the Provincial government “provide for roads, bridges, registry and other offices, safes, etc.” Largely under the auspices of the Department of Public Works and in part through reliance on the system of parishes that existed in the Red River settlement, the Province took on tasks that had been the responsibility of the Council of Assiniboia and that would later be defined as municipal.

But municipal legislation was not long in coming. In 1873, *The Municipal Act* was proclaimed. This provided a mechanism whereby local resources could be pooled, augmented by contributions from the Province, and directed toward common ends according to local will. While the statute gave the Province authority to incorporate

---


municipalities at the request of local residents, it provided no mechanism by which the Province could foist municipal institutions on unwilling or ambivalent settlers.

Extension of the municipal system in Manitoba depended on the interest of both settlers and provincial leaders because the legislation was enabling, not obligatory.

For settlers concerned with satisfying the needs of daily life, there were advantages in municipal development. Settlers had an interest in expanding social networks as well as in cultivating agricultural fields, and the two concerns came together on projects that were necessary for settler success but impossible to achieve through individual labour or small-scale cooperation. The municipal system provided a framework for the administration of moderate-scale projects necessary for local development. In Manitoba's first decades, the offering of bonuses to attract railway builders was especially important. In many places, and especially after wet seasons, drainage was also a significant community undertaking.

Although the Department of Public Works was responsible for early drainage in Manitoba, the large range of tasks and the substantial geographic area for which the Department was responsible meant that those who sought quick action on local problems often met delay and disappointment. In face of this, the capacity to act locally was a significant impetus to municipal incorporation. But local control came with a price tag. Provincial works were funded out of consolidated revenue. The cost of municipal works was assessed against municipal residents, with some supplemental

---

grants from the Province. Local administration drove home the financial cost of drainage. At a time when many settlers were still struggling to establish themselves, some suffered a severe case of sticker shock. Municipalities that had favoured incorporation as a means of taking control over local works began to see financial advantages in continued reliance on the Province. Focusing on developments in Springfield-Sunnyside, which in 1873 became Manitoba's first incorporated municipality, illustrates the jurisdictional dynamic that developed.

Springfield-Sunnyside, situated northeast of the City of Winnipeg, was described in promotional literature as a landscape “generally pleasing to newcomers.” But according to Provincial Engineer C. E. Blanchard, the area was not always suitable for agricultural settlement. This district, he declared, was “one of the worst drained by nature,” sometimes “quite impassible for man or beast” because of flooding. The mud of the municipality was said to be “the friendliest in the world” – it collected on wagon wheels, eventually making further progress impossible. Addressing the drainage needs of the area was a major impetus for municipal incorporation. But by 1875, only two years after incorporation, the Council was already having trouble balancing the need for drainage against the need to keep municipal assessments low. In 1881, Springfield-

---

58 “Municipality of Springfield, East of the Red River,” (1889). Canadian Institute for Historical Microreproductions no. 39858. The location is indicated on map 5.2, as the Municipality of Springfield. The name was shortened.

59 Public Works, Annual Report, 1883.

60 Dugald Women’s Institute History Committee, Springfield: 1st Rural Municipality in Manitoba, 1873-1973 (Dugald: Dugald Women’s Institute, 1974), 77.
Sunnyside delegates met to discuss drainage with C.P. Brown, who was both the unofficial steward for legislation pertaining to municipalities and the Minister of Public Works. The precise nature of their exchange remains unclear, but it is evident that municipal officials were disappointed by the province’s refusal to take responsibility for a more substantial share of the necessary drainage. “Under the circumstances,” they later explained to the rest of the Municipal Council, “we found ... we could do no better.”

Though Springfield-Sunnyside delegates had not succeeding in winning over C. P. Brown, their actions suggest how municipalities reconciled the desire for local control with the need for provincial funding. Municipal governments operated in part as lobbies to seek assistance from the Province.

The provincial government remained susceptible to municipal lobbying in part because it was concerned to ensure that incorporation remained an attractive option in unorganized areas. Over time, the province became more determined to hasten incorporation and began to curtail its moderate-scale undertakings in areas it believed should become municipalities. If settlers would not be enticed into municipal incorporation, they would be shoehorned into it: necessary improvements remained in abeyance until a local government was created to address them. Throughout the province for many years, the back and forth over municipal formation in unincorporated

---

61 AM, Rural Municipality of Springfield and Sunnyside, Records, GR 1670, G 7379, Minutes, 24 October 1873. See also the petition, 10 April 1875.

62 AM, GR 1670, G 7379, Minutes, 13 August 1881.

63 AM, GR 1610, reel M 863, p. 829-830, J. A. Smart to James Fisher, 18 June 1890; AM, Sessional Papers, GR 174, G 8167, file 1, Sessional Paper no. 14, Morris Bridge, Jas. A. Smart to A. F. Martin, 21 May 1889.
areas and over provincial funding in incorporated municipalities remained the key
dynamic bearing on local public works.

The provincial government often ended up pulling its punches. The period between
1870 and the end of the century was a difficult period in Manitoba history. Despite a
significant boom in the land market in the early 1880s, recovery from the subsequent
bust was slow and rates of growth did not fulfill expectations. For much of this period,
emigration outpaced immigration. This was a significant concern for the provincial
government. For some Manitobans, decisions to stay or go hinged on local
improvements. For instance, Engineer Blanchard made clear that residents of
Springfield would have been forced from their homes, if early drainage projects had not
been undertaken.\textsuperscript{64} In a period of such generalized difficulty and discontent, the
Province felt it necessary to deal generously with both organized and unorganized areas
because of the risk that works left in abeyance would lead to emigration. As Department
officials explained, the government thought it prudent to reserve "the right to expend
the money in performing local works which may appear to be necessary."\textsuperscript{65} The
precarious nature of settlement in the province meant that the government was reluctant
to extricate itself entirely from the business of local public works.

In this way, drainage figured in the halting extension of municipal government in
Manitoba. Immediately following the creation of Manitoba, the Provincial government

\textsuperscript{64} Public Works, \textit{Annual Report}, 1883.

\textsuperscript{65} AM, GR 1610, reel M 863, p. 728-729, J. A. Smart, Minister of Public Works to John Renton, Reeve of
Deloraine, 5 June 1890.
assumed responsibility for a range of tasks generally seen as municipal in nature. Even after the creation of a municipal system, organized municipalities and unorganized regions continued to coexist in the province. While more municipalities were created as the years passed, some municipalities lapsed into disorganization due to financial insolvency. The Provincial government both cooperated with municipal leaders and addressed the needs of regions without local government. This resulted in the establishment of a pattern of jurisdictional ambiguity that characterized early municipal development in Manitoba. As we will see in coming chapters, even as the passage of the 1895 Land Drainage Act changed the administrative context, jurisdictional ambiguity remained one of the key problems in Manitoba drainage.

Drainage contributed to the process of municipality-building and also obliged Manitobans to look beyond the boundaries of local communities defined in linguistic, ethnic, or religious terms. The techno-ecological commons of surface water spurred cooperation among groups who might otherwise have found few shared interests. The Mennonites in Manitoba provide a good example of how participating in public discourse on drainage contributed to the construction of a pragmatically-inclusive political culture that operated alongside other cultural frameworks. Federal legislation provided for the establishment of two Mennonite settlement blocks in Manitoba, one to

---

the east and one to the west of the Red River. For the Dominion, the arrangement increased settlement at a time when rates of immigration did not meet expectations; for the Mennonites, it allowed for cultural concentration amenable to the preservation of distinct lifestyles, including collective land management. As both reserves were situated in areas subject to inundation, drainage was fundamental to agricultural success, particularly as growing populations necessitated more intensive land use. With agricultural viability necessary to keep people together on the reserves, cultural continuity depended on adapting to local environmental conditions. Even while resisting what seemed to them the materialism and godlessness of the larger prairie community, Mennonites became invested in the administrative structures designed to facilitate drainage.\footnote{Friesen, \textit{The Canadian Prairies}, 267-269.}

Manitoba administrative structures were not culturally neutral. Rather, they reflected their origins in Anglo-Ontario society, and their establishment in Manitoba was part of what Ian McKay has termed the expansion of the politico-economic logic of liberalism.\footnote{McKay, “The Liberal Order Framework,” 620.} It is not a coincidence that many of the earliest-formed municipalities were in regions dominated by Anglo-Ontarians.\footnote{For a discussion of the formation of one such municipality with some attention to flooding and drainage, see Margaret Morton Fahrni and W. L. Morton, \textit{Third Crossing} (Winnipeg: Advocate Printers Limited, 1946). This is a history of the Municipality of Westbourne. The location of the municipality is indicated on map 5.2.} The connection between Manitoba’s flood problem (which afflicted many throughout the province, without regard for cultural origins) and the solutions generated by the provincial government (which were
articulated through the liberal assumptions of the dominant culture) meant that there were practical reasons for those who saw themselves as culturally distinct, such as the Mennonites, to act within liberal structures in engagements with the government. Given the need to address surface water problems that extended across the geographical lines defining cultural (ethnic, linguistic, religious) and political (municipal) communities, those who were invested in the liberal project had reason to reach out to, even accommodate, their aliberal neighbours. This showed itself in a variety of ways, such as the use of translators by the Department of Public Works. The need to coordinate public projects within an ecological commons created a pragmatic inclusiveness within the discourse on drainage.

As early as 1883, Mennonites were undertaking drainage projects in cooperation with the Department of Public Works. During the same period, the Mennonite settlers of the West Reserve harmonized community governance with the provincial system of local government and the Municipality of Rhineland was created. While this led some to abandon the reserve, others saw it as necessary, even positive. There were practical advantages to working with the provincial government through the municipal system,


72 Esther, Epp-Tiessen, Altona: The Story of a Prairie Town (Altona: D. W. Friesen & Sons Ltd., 1982), 40-43. The location of Rhineland is indicated on map 5.2. The Mennonite East Reserve became the Municipality of Hanover, also indicated on map 5.2.

73 Epp-Tiessen, Altona, 43. John Warkentin has argued that towns were “the bridgeheads for the assimilation of Mennonites into prairie society.” John Warkentin, The Mennonite Settlements of Southern Manitoba (Ph.D. diss., University of Toronto, 1960), 147.
particularly for those concerned that provincial money be expended on projects favoured by the local community. Drainage was necessary on the lands they occupied, making it difficult for Manitoba Mennonites to stand aside from provincial programmes without risking community prosperity. As those who resisted the formation of a municipality suspected, pragmatic collaboration might speed cultural assimilation. But the processes should be distinguished. Engagement with liberal governments and neighbours often seemed the best solution to the problem of flooding, even to those who resisted cultural assimilation.

The passage of the 1895 Land Drainage Act confirmed the practical advantages of collaborating with the provincial government. It also created conditions for closer working relationships between cultural groups who had established themselves in particular geographical locations. Beginning in 1902, residents of the Municipality of Rhineland cooperated on a substantial drainage project with their neighbours in the substantially non-Mennonite Municipalities of Montcalm and Morris. The Mennonite community, in a manner perhaps suggestive of other cultural groups, was engaged with its neighbours and its government in efforts to address the challenges particular to the Manitoba environment. As historical geographer John Warkentin has made clear, the

74 Manitoba, Land Drainage Arrangement Commission, Report of the Land Drainage Arrangement Commission respecting municipalities containing land subject to review under “the Land Drainage Act” (Manitoba: King’s Printer, 1936), 39. For locations of Montcalm and Morris, see Map 5.2.

75 For a discussion of the ethnic experience in the rural west, see Royden Loewen, Ethnic Farm Culture in Western Canada (Canadian Historical Association, Canada’s Ethnic Group Series Booklet no. 29, 2002). For more on the Mennonite experience, see Royden Loewen, Family, Church and Market: A Mennonite Community in the Old and the New Worlds, 1850-1930 (Toronto: University of Toronto Press, 1993); William Carlyle, “Mennonite Agriculture in Manitoba” Canadian Ethnic Studies 2, no. 81 (1981); John
drains which were "of great importance in the settlement geography of both Reserves" were also "part of the larger works carried out in the Red River Lowland." Group settlement in Manitoba, whether formalized through legislation as in the Mennonite reserves or whether resulting from the common practice of settling near those of similar background, worked to create a cultural patchwork across the province. But cultural patterns and flood problems did not always line up. It was necessary to cooperate with other groups and the provincial government to deal with flooding. Because of this, and even for those like the Mennonites who placed a high value on their distinctiveness, a political culture derived from Manitoba’s drainage problems became meaningful.

3.5 The Politics of Drainage

Few Manitobans blamed the Provincial government for flooding, but many held it responsible for luring settlers into flood zones. Typically, petitioners from the Municipality of Lansdowne felt it was "owing to the energetic immigration policy of our Provincial government" that they had taken up land during dry periods which was flooded in wet. For those who thought along such lines, there was reason to approach the government directly, even in incorporated municipalities. But drain construction did not necessarily quiet the appeals. Indeed, the connection between government action and settler suffering seemed more concrete in drained areas. If individuals create property by mixing labour with nature, the Manitoba government created liability by


77 AM, GR 1607, G 7970, item 17 ½, Petition ie Muncipality of Lansdowne, Grassy River Drain. The location of Lansdowne is indicated on map 5.2.
investing public funds in environmental transformation. In landscapes recognized as the products of both human actions and nonhuman forces, flooding was readily attributed to inappropriate or ineffective drain construction. Where flooding was seen as a problem to be solved permanently, the provincial government seemed negligent every time the waters rose. In drained landscapes, general discontent prevailed as expectations—some reasonable, some unreasonable—went unmet. The bias of many newcomers toward government in the liberal model meant that failed efforts at remaking the environment were seen to reflect the short-comings of particular politicians and administrators, rather than of the liberal project itself. The political culture of drainage and party politics in Manitoba intersected in important ways.

In the Manitoba Lowlands, the component parts of the natural drainage network were not well-articulated. Waterways with defined channels in areas of moderate slope dissolved into marshland as the land flattened out. Many early drainage projects were designed to connect abbreviated streams to more substantial creeks or rivers (see Map 3.1). Good surface drainage, whether natural or artificial, has been described as a dendritic network of interconnected channels. Extending the tree metaphor helps explain the Manitoba situation. Picture how water is drawn up a tree trunk, distributed first among branches and then among twigs and leaves before being dispersed into the atmosphere through transpiration. Effective flow depends on two things. First, the

78 Despite concern over liability, there is slight evidence that the courts were extensively involved in Manitoba drainage. There is little mention of litigation in archival records, and the precedents set through occasional court cases were far less significant than statutory law. On the legal regime governing drainage in Manitoba, see David R. Percy, Wetlands and the Law in the Prairie Provinces of Canada (Edmonton: Environmental Law Centre, 1993).

uninterrupted connection from trunk through to twig. Second, the gradation of size among pathways, from largest to smallest in the tree example. Now imagine a tree laid flat and put in reverse. The smallest drains either collect runoff or draw in standing water, conveying it to larger channels. Receiving inflow from a number of small conduits, mid-sized drains shepherd the water to more substantial waterways. Flow is eventually concentrated in a trunk drain, which sees it through to an outlet in a stream, river or lake.

Map 3.1: Manitoba Rivers, Creeks, and Drains, 1882
Adapted from AM, Manitoba Department of Public Works, A Section from the Map of the Province of Manitoba by Robert D. Richardson, Winnipeg, 1882.

Financial limitations and provincial-municipal dynamics stood in the way of the coordinated design necessary for the creation of an effective drainage infrastructure.
Between 1870 and 1895, Manitoba drainers dug a scattering of twig drains (largely under municipal auspices, with provincial assistance) and some more substantial trunks (largely as provincial efforts to capitalize on arrangements with the Dominion government). Settlers faced with flooding often did not wait on government assistance, whether municipal or provincial. Many did what they could to redeem their own lands, through undertaking their own drainage works or altering those constructed by authorities, and the efforts of various individuals were not always in sync. Some projects compounded the problem of fractured channels, even as others were intended to resolve it. This did not go unrecognized. When William Pearce undertook an inspection of provincial drainage works on behalf of the Dominion government in 1883, he noted that they lacked systematization. This was, in his opinion, the key defect. An article by W. J. Morris in *The Emigrant* in 1887 emphasized that most drainage work had “not been carried out on a scale commensurate with the great benefits that would surely be the result, if done under a properly organized system.”

As the need for coordinated drainage became more widely understood, and particularly as patterns of inundation were altered by ineffective drainage, settlers became increasingly fervent in their appeals for government assistance. Petitioners looked for

---

80 AM, GR 1610, reel M 902, p. 50, Geo. A. Simpson, Chief Clerk to Attorney General, 16 April 1901; AM, GR 1610, reel M 886, p. 253-254, J. A. Macdonell to Attorney General, 2 December 1898. I have noted particularly telling examples of the patterns I describe, even when they occurred after the passage of the 1895 *Land Drainage Act*. While the *Act* provided new options to drainers, it did not immediately remake the predominant social discourse. Examples from the first few years after 1895 are representative of the 1870-1895 correspondence.

81 AM, GR 7721, reel M 1690, file 4834, William Pearce to A. Walsh, 8 October 1883.

some means of drawing government attention to their needs. Quickly they learned to frame their requests and express their frustration through reference to party politics. Settlers felt environmentally besieged, but not politically disempowered. Many fashioned political leverage out of what might have been seen as personal or local misfortune.

The records of the Department of Public Works are replete with letters from settlers warning that inaction in flooded fields would have consequences at the polls. One particularly telling example came from farmer Oswald Berire. Although he had "voted grit for 40 years," Berire threatened that if a government ditch in his area were not finished that fall "I will turn my coat & there is some more of my neighbours like me."\(^{83}\) Governments were evaluated according to their success at transforming the local environment. The expectations of Manitobans were concrete and the consequences of these not being met were plain, as another settler Alf. Douglas made clear:

... there are a great many people in this district who are not married to any party and can easily be influenced to vote for the party who does more for them and if the government does something to help us out we will have something to talk about as many people must see with their eyes in order to believe.\(^{84}\)

As Douglas explained, it was "visible action of the government" that had the potential to swing votes.\(^{85}\) Requests for local projects often included not only descriptions of the

\(^{83}\) AM, GR 1607, G 7986, item 1434, Oswald Berire to R. Watson, 3 September 1898.

\(^{84}\) AM, GR 1609, G 8011, item 521, Alf. Douglas to Mr. Hastings, 23 January 1903.

\(^{85}\) Ibid.
unsatisfactory situation and the improvement expected, but also references to the political ramifications of ignoring the demand. Even settlers who “would rather chop a cord of wood than write a letter” took the time to put pen to paper. In many of their letters, prospects of electoral success were seen to hinge on the completion of public works in the vicinity. Settlers politicized drainage because the threat of voter discontent provided leverage in their efforts to get the drainage that only public bodies could coordinate effectively.

Politicians were well aware that unsuccessful public works were visible and enduring reminders to local residents of their dissatisfaction with the government. A. Begg, a Member of the Legislative Assembly, made this clear when he wrote to the Minister of Public Works in 1889, voicing his fear that his constituents would ensure that their displeasure was “fully exposed through the Public Print....” Begg went on to make a case for the completion of drainage projects in his area. As he told it, the region was in need of drainage; the water on the land inhibited agricultural progress. Furthermore, locals were in need of work. Finally, in its current state, he explained, the unfinished drain was “a standing monument against our government.” In addition to the environmental justification for drainage work, Begg invoked both social and political reasons to undertake drainage. This set of justifications, representative of the range of

---

86 AM, GR 1609, G 8011, item 521, R. Morrison, Reeve, Municipality of Ochre River to R. Rogers, Minister of Public Works, 23 May 1903.

87 AM, GR 1607, G 7965, A. Begg to Minister of Public Works, 6 April 1889.

88 Ibid.
factors often considered in evaluations of potential undertakings, is worthy of further analysis.

As we have seen, Manitoba’s first decades were challenging. Floods were but one of many hardships that beset newcomers and residents alike. The Council of Assiniboia had established a precedent for the provision of relief to those in need, and this was one of the tasks the Province inherited in 1870. Often, it sought to fulfill this responsibility by ensuring that locals found work on government projects. The government would even pay higher rates if the contractor would commit to using local labour and would tolerate higher costs as a result of using unskilled workers. Certain projects were undertaken to provide employment rather than in response to a genuine need for the infrastructure. This was true across the wide range of activities undertaken by the Department of Public Works, including drainage.

While the government desire to relieve the suffering of Manitobans was well-intentioned, there was a seamier side to decision-making about public works. Public works projects were a favoured device of political parties eager to improve their election chances. Generally, most provincial politicians took advantage of the

89 AM, Red River Settlement Minute Book, Executive Relief Committee, MG 2 B6 – 1.

90 AM, GR 174, G8213, Return to an Order-in-Council, re: DD3, 1901.

91 AM, GR 1607, G 7970, Department of Public Works Annual Report, January 1893.

92 AM, GR 1610, reel M 951, p. 765, H. A. Bowman to Minister of Public Works, 13 December 1913.

opportunity to cultivate local goodwill when they were in power and denounced the practice when they were in opposition. Over the years there were a number of investigations into the role of patronage in Manitoba politics, many of which considered contracting for drainage. The extent to which particular administrations awarded contracts to supporters matters little to a history of drainage in Manitoba, but it is important to appreciate that decisions about where, when, and how to build drains were affected by political considerations.

Drainage projects were not only undertaken in response to environmental imperatives, but also to appease, relieve, or woo Manitobans. This seems to have remained relatively consistent throughout the period under analysis, despite changes in government. Under both John Norquay (1878-1887) and Thomas Greenway (1888-1900), with no evidence of deviation through the brief administrations of David Harrison (1887-1888) and Hugh John Macdonald (1900), provincial governments intervened in local public works whenever it seemed advisable, for political and social reasons as well as in response to environmental conditions. Nor did practices change under R.P. Roblin (1900-1915), whose administration is particularly notorious for patronage. In this way, the functioning of the Department of Public Works remained

---

94 Documents pertaining to such investigations can be found in various sessional papers, including AM, GR 174, G 8180, file 25; G 8351, files 3 and 11; G 8373, files 3 and 4. There are also detailed accounts in the local newspapers.

95 There is evidence that the Roblin administration engaged in inappropriate spending of a large amount of money. The most notorious example was in the construction of the provincial parliament buildings. On this matter, see Marilyn Baker, *Symbol in Stone: The Art and Politics of a Public Building* (Winnipeg: Hyperion Press, 1986.) Notably, Manitobans saw a parallel between the construction of the parliament buildings and mismanagement of land drainage. See AM, GR 1609, G 8019, file: Drainage Commission for a 29 January 1917 letter in which a settler writes: “There is a lot of us people around here think this
remarkably consistent through successive administrations, despite substantial political differences on other policy questions. Different governments played drainage politics in similar ways.

This was attributable in part to the nature of drainage work. Newly-elected politicians recognized that they were obliged to complete projects already underway in order to prevent them from becoming hazardous in their incomplete state. When the new Greenway administration adopted a policy of fiscal retrenchment, the only drainage works undertaken in the first year were “in instances whereby contracts have been let by the government or whereby drains [had] been partly constructed and which would in case of floods be a damage in their unfinished state…”96 When politicians tarried in taking up the drainage tasks begun by their predecessors, they were held to account. In 1888, future premier R. P. Roblin, then sitting in the Legislative Assembly as an independent, appealed to J. A. Smart, Minister of Public Works, to complete work begun by the previous administration. Roblin did not mince words:

If the Department should neglect or refuse to carry out the intention or promise of their predecessors, not only would there be breach of faith, but also complete loss of all public monies expended, as well as great damage and loss to settlers in the section of country the drains are calculated to serve.97

---

96 AM, GR 1610, reel M 860, pp. 754-756, J. A. S. Smart, Minister of Public Works to A. Begg, 10 January 1889.

97 AM, GR 1607, G 7964, R. P. Roblin to J. A. S. Smart, 11 September 1888.
Roblin’s list of factors helps us to distinguish drainage from other public undertakings. The first two factors would apply to any abandoned construction project: settler disenchantment and waste of public money already spent. However, the third applied particularly to drainage: incomplete drains could alter drainage patterns in deleterious ways. While an unfinished public building might not be useful, a half-constructed drain was likely to do harm by causing significant changes to flood patterns. If privately-owned lands were affected, the government might be obliged to pay compensation. And perhaps more importantly, settlers’ propensity to blame the government for flooding might be exacerbated.

Despite recognition of the necessity of systematic drainage, governments continued to undertake drainage in response to settler hardship or political circumstances. There was a disconnect in drainage policy, just as there was within the drainage infrastructure itself. By 1895, small drains were scattered across the landscape and trunk drains reached back from streams and rivers. The result was what historical geographer John Warkentin has seen as the “piecemeal efforts” that characterized pre-1895 drainage in Manitoba.98 The collection of fragments did not amount to effective systematic drainage. Relief and patronage offered very different rationales for public works. But both resulted in the construction of drains for reasons that were not strictly derived from environmental conditions. Drains built in response to social or political factors were the

98 Warkentin, “Water and Adaptive Strategies in Settling the Canadian West,” 60. As Warkentin explains: “In the 1870s a few surface drains were dug, usually in connection with road or railroad building. In 1880, the Manitoba Department of Public Works started the attempt to drain the land between the Escarpment and the Red, by constructing a few ditches through the marshes. Accomplishments were limited, because comprehensive draining schemes extending over large areas and including many miles of lateral ditches were what was needed, not piecemeal efforts.”
antithesis of systematic drainage. Projects devised in response to social or political
imperatives may have been more likely to have adverse environmental consequences.
Ultimately, this may well have served to compound the difficulty and discontent that
many drainage projects were intended to redress.

3.6 Conclusion

The passage of The Land Drainage Act in 1895 was a turning point in Manitoba
drainage. It provided an administrative mechanism that was conducive to larger, more
comprehensive projects more likely to respond to environmental than social or political
imperatives. However, the new legislation did not eliminate patterns established in
the period between 1870 and 1895. The Public Works Department continued to carry
out some drainage projects under its own auspices, for purposes of road building, relief,
and patronage. The passage of The Land Drainage Act compounded the jurisdictional
ambiguity between the Province and the municipality by creating another administrative
entity – the drainage district – without clarifying the division of powers. Most
significantly, the political culture of pragmatic inclusiveness and persistent
contentiousness provided the starting point from which later debates over drainage
developed.

99 The enlarged scale of drainage around the turn of the century may be due not only to the new
possibilities contained within the 1895 Act, but also to demographic factors. While provincial spending
generally increased from year to year after the passage of the Land Drainage Act, it shot up in an
unprecedented manner in 1903. In this early year, spending reached levels that would be surpassed on
only three other occasions before drainage financing was substantially altered in the mid-1930s. It seems
likely that the early spike in spending was driven by the immigration boom of the early 20th century. An
influx of settlers and the concomitant expansion of agriculture transformed western Canada and, in
Manitoba, necessitated drainage on a far larger scale. See Appendix I for relevant figures.
Drainage in Manitoba emerged largely out of efforts to facilitate transportation and communication, and took on additional significance as newly-ploughed fields were flooded unexpectedly. The need to cope with flooding helped to generate demand for the social and political structures, such as municipalities, that made drainage possible. As people sought after, negotiated for, and worked together on publicly-sponsored drainage projects, they became invested in the structures of authority that facilitated the work they so desperately wanted. Cooperation between those who embraced liberalism and those who merely consented to work within its administrative structures was basic to drainage. As Ian McKay has argued, the challenges to agricultural settlement across Canada provided justification for a new regime of expertise and authority and a new division of rights and responsibilities – one that would facilitate the undertaking of public works but that also bore on the cultural landscape.¹⁰⁰

In Manitoba, the provincial government undertook drainage for social and political as well as environmental reasons, with effects on both flood patterns and the public sphere. Flood problems were not easily resolved, leading many to doubt the efficacy of their political representatives. This may well have been particularly disheartening for those, like the Mennonites, whose embrace of liberal political structures was not unqualified. The optimism that accompanied the grand project of making Manitoba was balanced by pessimism generated through the small but accumulating failures of local drainage projects. In terminology reminiscent of W. L. Morton's: the processes of becoming

Manitoban and remaking the physical landscape of Manitoba were in many ways intertwined. Both were complex processes involving contention and cooperation.
4 JURISDICTIONAL QUAGMIRES: DOMINION AUTHORITY AND PRAIRIE WETLANDS, 1870-1930

4.1 Introduction

Until the 1970s, wetlands were often dismissed as places of little value by those committed to agricultural intensification. Before then, in many parts of the western world as in the Province of Manitoba, these were places to avoid or eliminate. Yet in the late 19th century, Manitoba and the Dominion government fought over what they termed the "waste lands" of the Province. To explain this, it is necessary to wade from the wet prairie into the equally-murky terrain of federal-provincial relations. The main argument of this chapter is that the prairie environment helped shape jurisdictional conflict. Further, examining the interplay between landscape and politics suggests the importance of disaggregating the prairie region. Both geographical differences within the prairies and change in environmental policy over time bore on federal-provincial relations.

Water management was different in Manitoba than in Alberta and Saskatchewan because of legislative context as well as relative abundance. Under the terms of the 1867 British North America Act, the Dominion government had jurisdiction over large

---


navigable waterways while the provinces administered smaller non-navigable streams. In 1870, this division of powers was applied to the new Province of Manitoba and the North-West Territories. In 1894 the *Northwest Irrigation Act* reserved from any future grant of Crown land the beds and shores of all bodies of water – navigable and non – in the areas that later became Saskatchewan, Alberta, and northern Manitoba. According to C. S. Burchill, this Act represented a “radical” expansion of Dominion authority and “a reform almost equal in importance to the socialization of land.” On the prairies, only the small, southerly rectangle that was then the Province of Manitoba was unaffected (see Map 4.1). To extend the comparison that Burchill, writing in the early post-World War II years, used to underline his point about the significance of the legislation, few commentators have explored the significance of the iron curtain of policy that was pulled along the Manitoba border, or situated it within the context of Dominion-provincial relations.

The *Northwest Irrigation Act* was designed to provide greater Dominion authority over water in areas where irrigation was necessary, which suggests that a rough environmental logic underpinned the exclusion of the wet prairie. However, the Act applied even to the wetter northern reaches of the later Province of Manitoba, but not to the dry corner of the provincial southwest, which is environmentally comparable to

---


5 In contrast to Burchill, my use of language derived from economic systems is entirely metaphorical. The work of American historian Kate Brown suggests that the state, whether capitalist or socialist, can produce comparable landscapes. “Gridded Lives: Why Kazakhstan and Montana Are Nearly the Same Place,” *American Historical Review* 106, no. 1 (2001): 17-48.
southeastern Saskatchewan. This suggests that the boundaries of the *Northwest Irrigation Act* may have been influenced by authorities’ desire to avoid the enduring dispute surrounding Manitoba’s provincial rights. Had the Dominion government attempted to claim non-navigable waters in Manitoba, it would have been obliged to annul an authority granted nearly 25 years earlier to a province with which jurisdictional relations remained highly contentious.

Yet the problems posed by the dynamism of the wet prairie were not so easily sidestepped. Many of the challenges faced by federal and provincial administrators derive from how wetlands vary through time and are hard to demarcate at any particular moment. Wetland boundaries are notoriously difficult to delineate and controversial to maintain. The most basic difficulty derives from the fact that wetlands typically change size and shape in response to the amount of water in the surrounding ecosystem. Indeed, an ongoing cycle from wetter to drier and back again is understood as fundamental for

---

6 For the region’s contemporary political boundaries, see the inset to Map 1.1.

continued ecosystem vitality. Another layer of complexity derives from the fact that wetlands are not often bordered by a significant environmental discontinuity such as a river bank or a lake shore. The changes in soil and vegetation that mark wetlands can be gradual, and materials and energy flow readily across the environmental gradients.

The history of drainage across the prairies between 1880 and 1930 is in part the story of how governments addressed the difficult question of wetland identification, first in sub-humid Manitoba and later in the semi-arid western region, with substantially different outcomes. Dominion-provincial relations were bound up in human-environment interaction, with consequences for the people and landscapes of the region. The boundaries of the political sphere were no more stable or clear than those of prairie wetlands.

4.2 Contexts and Precedents

Well before the Confederation debates, future Prime Minister John A. Macdonald envisioned that provincial governments would have little more authority than municipal

---


10 Carter, “Environmental Gradients, Boundaries, and Buffers,” 9. Part of the difficulty of distinguishing wetlands from the terrestrial and aquatic ecosystems that they abut derives from the fact that they are zones of transition. But as historical geographer Michael Williams has made clear, seeing wetlands as little more than the margins of other ecosystems “is one of the reasons why wetlands have been so neglected and their distinctive features and commonalities have not been appreciated.” Michael Williams, “Understanding Wetlands,” in Wetlands: A Forgotten Landscape, ed. Michael Williams (Oxford: Basil Blackwell, 1990), 9.
administrations. Nevertheless, the colonies of Canada, Nova Scotia and New Brunswick vigorously defended their powers. Under the 1867 *British North American Act*, they retained control over all unalienated lands within their borders.\(^{11}\) Revenues from the sale and lease of Crown lands were to allow the eastern provinces to fulfill their substantial responsibilities.

Manitoba joined Confederation under different terms. Under the *Manitoba Act* of 1870, the Dominion government reserved the right to establish land, immigration, and railway policies to best serve national purposes. This was contrary to the desires of many who lived in and around the Red River settlement, most notably the Metis.\(^{12}\) It was also contrary to what local leaders thought was best for the region.\(^{13}\) Historians have interpreted these events in several ways. Chester Martin took the view that Manitoba had been unfairly treated and even participated in the Province’s effort to secure a more generous settlement.\(^{14}\) Gerald Friesen has suggested that prairie residents took pride in the national purposes to which regional lands had been put.\(^{15}\) Recently, Jim Mochoruk has emphasized the colonial nature of the relation between Manitoba and the Dominion government.\(^{16}\)

---


\(^{16}\) Mochoruk, *Formidable Heritage*, 105-151.
Among contemporaries no less than among historians, Dominion ownership of Manitoba’s Crown lands was a persistent matter of concern. Manitoba politicians argued that, without a land base, they lacked a major source of revenue. There is indeed abundant evidence that the activities of the provincial government were constrained by financial limitations. For instance, the Province switched from a bicameral to a unicameral political system in part to trim costs.\(^{17}\) Had Crown lands been under provincial jurisdiction, Manitoba politicians would have had the option of managing them to generate revenue. Provincial politicians were quick to recognize this and blamed their financial woes on the Dominion government. They lobbied persistently for the transfer of Crown lands to the Province.

A significant quantity of Crown land in Manitoba was wetland.\(^{18}\) For those concerned with the success of settlement in the province, surface water was a key barrier to agricultural development. Though the Dominion government retained ultimate authority over Crown land, the Provincial government was responsible for undertaking public works projects, such as road improvement and land drainage, which would make agricultural settlement possible in wet areas. The *British North America Act* made drainage a Provincial responsibility, and the Government of Canada was adamant about this jurisdictional distinction. In the words of one Dominion official many years later: “We have never … felt that we could step into a problem [drainage] which is the

\(^{17}\) Ibid., 111.

responsibility of the Province.”\textsuperscript{19} In effect, the Province was responsible for dealing with the water that interfered with the development of land over which it had no authority.

The difficult situation was exacerbated by the provisions for settlement established by the Dominion government. In October 1870, Adams Archibald, Manitoba’s first Lieutenant Governor, assigned Legislative Clerk Molyneux St. John to investigate factors bearing on land settlement in the Province. His report, returned three months later, is a remarkable document because it is one of the few government efforts to afford local environmental conditions a key role in Manitoba settlement. One section explained how a land claim, “which in one part of the Province would be inordinately large, would in another part be only sufficient for a reasonable sized farm.” The matter turned on “the number of muskegs or swamps which are found in several parts of the Province.” It was reasonable, St. John concluded, “to assume that the value of a claim and the quantity of land which a settler should be entitled to take up must in some measure depend on the nature of the country...”\textsuperscript{20}

Yet the \textit{Dominion Lands Act} of 1872 confirmed the Dominion Land Survey that eventually resulted in the division of much of northwestern North America into evenly-distributed and equally-sized lots, regardless of what St. John called “the nature of the

\begin{flushleft}
\textsuperscript{19} AM, Natural Resources Department, Miscellaneous Land Files, GR 7700, reel M 1639, Drainage Districts General File, James A. Gardiner to R. S. Moore, 26 February 1949.

\textsuperscript{20} AM, Adams Archibald Fonds, MG 12 A1, reel M 3, item 164A, Molyneux St. John to Adams Archibald, 3 January 1871.
\end{flushleft}
country.” Across the northwest, surveyors at work on the township survey noted environmental conditions, but laid out their lines without accommodating local variation. According to sociologist Rod Bantjes, the result was the creation of “a space without particulars, a map drawn up before consulting the terrain, and making no reference to rivers, lakes, hills, or other tangible things.” This was a remarkable project of environmental simplification, one far larger in scope than that undertaken by the Red River settlers in the late 1860s and early 1870s in their bid to secure the outer two miles. Nevertheless, it is important not to attribute too much more power to the grid survey. Wisely or unwisely, individuals selected their own lands. No one was forced to occupy undesirable areas. Yet it is also important to acknowledge that dividing the land into square plots facilitated the administration of settlement without helping settlers make good choices. The grid survey speeded land alienation, but did nothing to aid environmental adjustment.

Both the Dominion and the Provincial governments wanted to encourage settlement, but their interests were not identical. While the Dominion government derived benefit from sale and settlement of lands, processes that were relatively easy to administer once the land had been surveyed, it was the Province that was responsible for the public works necessary to make agricultural settlement viable within the survey grid laid over Manitoba’s irregular and dynamic landscape. These included a variety of projects such as road building, bridge construction, and drainage. Because of the increased demand for public works, Manitoba officials realized at an early date that rapid settlement “was

21 Rod Bantjes, Improved Earth: Prairie Space as Modern Artefact (Toronto: University of Toronto Press, 2005), 119.
a most serious problem for the provincial treasury.” In the late 1940s, engineer and former deputy minister of the Department of Public Works M. A. Lyons described the history of an area south of Lake Manitoba. He recalled how “almost immediately” after the Dominion government opened these lands to settlers, “the provincial government was besieged with requests for drainage.” Construction of roads and bridges varied in difficulty and expense depending on environmental conditions, and drainage was necessary in some places but not in others. Had the Dominion government done more to dissuade settlers from occupying unsuitable lands, had more emphasis been placed on “the nature of the country,” the work of the Province may have been substantially reduced. Consequently, Lyons felt that Dominion land settlement policy had left “the provincial government holding the bag.”

Dominion control of provincial resources meant that Manitoba did not reap the benefit of its improvements to public lands. Though unique in Canada, Manitoba’s position was not without precedent. Decades earlier, some American states had been in a similar position. Early in the 19th century, extensive wetlands in the Mississippi valley remained under federal authority. States lacked a financial incentive to undertake drainage and it was unlikely that settlers would purchase lands that they were unable to farm. Large scale flooding in the 1840s generated greater interest in land drainage and

22 AM, GR 174, G 8303, Return to an Order (no. 56) re Correspondence re Transfer of Natural Resources from the Dominion to Provincial Government. See also AM, Premier’s Office Files (Norquay Administration) GR 553, Letterbook D, pp. 35-39, J. Norquay to Charles Brodie, 14 July 1883. In this letter, Norquay explains that Manitoba has “taken no active part in trying to induce immigration, for the very reason that immigration increases our expenses, without contributing anything to our revenue....”

23 AM, GR 1609, G 8046, file: Special Drainage Survey Conducted by MA Lyons, Lyons to Errick F. Willis, Minister of Public Works, 6 May 1948.
flood protection. In 1849, representatives from Louisiana and Missouri took the matter to the United States Congress. They proposed that ownership of wetlands be transferred to the states. These lands could then be sold and the proceeds used to fund the drainage works necessary to make them suitable for agriculture. Similar provisions were later applied to California and several midwestern states. In the Midwest, the 1849 Swamp Lands Act encouraged drainage, but over time the Act became associated with corruption and abuse. This forestalled drainage in most areas. Indiana spent the proceeds of swamp lands sales on projects not directly related to land reclamation and was unable to complete projected drainage works. Illinois sold large parcels of wetland to speculators, many of whom failed to provide adequate drainage. The American Swamp Lands Act was a creative attempt to promote land drainage, but its many failures reflected the substantial obstacles to successful implementation of such a policy.

Despite its manifold shortcomings, Canadian officials took inspiration from the American legislation. In April 1880, the Dominion government undertook to transfer federal lands to Manitoba in return for drainage through what became known as the drainage lands arrangement. The Province would be granted title to the available even-numbered sections (thereby excluding lands reserved for the Hudson’s Bay Company

24 Vilesis, Discovering the Unknown Landscape, 72.


27 Not only is there evidence that Canadian politicians were aware of the American precedent, but it is also clear that they used the American legislation as a model. LAC, RG 15, vol. 1207, file 142200 # 1, H. H. Smith to A. M. Burgess, 19 August 1889.
and the school endowment) in the areas that it improved.\textsuperscript{28} It was to take advantage of this arrangement that the Provincial government initiated drainage in nine marshes, as discussed in the previous chapter.\textsuperscript{29} The Department of Public Works contracted with private individuals and companies to undertake the necessary projects.\textsuperscript{30} Among the latter was Harris, Bayne, and Young, a firm that included J. W. Harris as one of its principals. After taking on various projects as a Dominion Land Surveyor, including the survey of the Parish of St. Paul in the 1870s, Harris had established himself in the region.

While the Province arranged construction, the Dominion kept an eye on things. Dominion experts inspected some of the land in question and undertook cursory reviews of the Province's plans for drainage. In June 1880, Dominion surveyor Lindsay Russell emphasized the preliminary nature of the planned work and the challenge of draining areas so "thickly covered by the heavy growth of prairie grasses, and reeds or rushes." He suspected that the results of drainage might be disappointing and cautioned that transfer of title should not be hastily made: "it would be well that the cession to the Province ... should follow the fairly demonstrated success of the drainage."\textsuperscript{31} Within two years, having arranged for the construction of 188 miles of drain,\textsuperscript{32} the Province

\begin{itemize}
\item \textsuperscript{28} AM, GR 7700, reel M 1640, Swamp Lands, vol. 1, Copy of a report of a Committee of the Privy Council, 21 April 1884.
\item \textsuperscript{29} AM, GR 1530, Order-in-Council # 213, Re Drainage Wet Lands, 28 May 1880.
\item \textsuperscript{30} AM, GR 1530, Order-in-Council # 220, Tenders for Drainage, 2 June 1880.
\item \textsuperscript{31} AM, GR 7721, reel M 1690, file 4834, Lindsay Russell to J. S. Dennis, 24 June 1880.
\end{itemize}
asked the Dominion to transfer just shy of half the 391,280 acres of land served by the construction.\textsuperscript{33} However, complications arose when Surveyor J. W. Harris submitted reports of his inspection in 1882 and 1883. Harris made clear that the marshes “cannot of course be said to be thoroughly and completely drained by the expenditure already made,” but allowed that “a very decided improvement ... on the condition of the land” had been effected. The work to date had been sufficient “to induce the taking up of unappropriated sections for homestead in portions of the marsh which were formerly considered of no value.”\textsuperscript{34} According to Harris, the Province had done enough to merit transfer, even if further work was necessary.

Harris had not made claims out of keeping with the conclusions of Lindsay Russell in 1880. The reports were moderate in tone. There was no talk of a dramatic change from wet to dry, no overnight transformation from an utterly wasted to a magnificently productive landscape. Nevertheless, Harris’ reports were dismissed by Dominion officials as too laudatory to be believed and too general to be of use.\textsuperscript{35} Ultimately, the trouble in completing the transfer derived more from the difficulty of specifying precisely what area had been drained than from the question of whether the drainage was sufficient. Since much of the land in question lay in townships that had not yet been subdivided, it was difficult to provide precise legal descriptions of the drained land.\textsuperscript{36}

\begin{flushleft}
\textsuperscript{32} AM, GR 1530, Order-in-Council # 619, Report of the Minister of Public Works on Lands Reclaimed by Drainage, 14 January 1882.
\textsuperscript{33} AM, GR 7721, reel M 1690, file 5, Memorandum from the Minister of the Interior, 25 June 1880.
\textsuperscript{34} AM, GR 7721, reel M 1690, file 4834, J. W. Harris to Aquila Walsh, 15 January 1883.
\textsuperscript{35} AM, GR 7721, reel M 1690, file 4834, Unsigned Draft of a Letter to C. P. Brown, 15 November 1882.
\end{flushleft}
Even in surveyed areas, wet lands – places inconvenient for surveyors to measure and evaluate – were often left beyond the grid. Dominion Lands Surveyors simply classified several larger marsh areas as lakes, making it impossible to separate even-numbered sections from odd. As the Order-in-Council authorized only the transfer of the even sections, the imprecision interfered with the transfer. Notwithstanding its eagerness to secure land, the provincial government found it difficult to provide the sort of report that would satisfy the Dominion.

Given the relatively small amount of land in question, why was the Dominion so exacting? The intensity of the dispute makes sense when it is understood that land acreage and quality was of secondary importance. Land mattered, but more because of the larger political context in which it was embedded than as an object in its own right. By dealing in wetlands, the governments addressed one of the environmental constraints on farming in Manitoba. But the focus on wetlands also provided a nonpolitical means of transferring some land to the Province. Both parties wanted to avoid precedents. The Dominion did not want to transfer all Manitoba’s lands, and the Province was loath to signal acceptance of Dominion land ownership. By invoking an environmental logic, the Dominion could make a transfer and the Province could accept it without either side compromising its principled position. The Dominion’s insistence that the Province meet

36 AM, GR 7721, reel M 1690, file 4834, E. Deville, Chief Inspector of Surveys, to A. M. Burgess, Deputy Minister of the Department of the Interior, 25 August 1884.

37 AM, GR 174, G8128, Return to an Order re: Transactions of reclaimed lands, 1886. See also AM, GR 7721, reel M 1690, file 4834, Memo [not signed or dated]. This latter document cites Big Grass Marsh and St. Andrew’s Marsh as examples of areas traversed as lakes by Dominion Land Surveyors.

38 Journals of the Legislative Assembly of Manitoba, 1884.
the terms of the drainage lands arrangement was intended to maintain the jurisdictional status quo by which Crown lands remained Dominion property.

Yet because Dominion demands were extremely difficult to meet, no mutually satisfactory solution was found. The situation degenerated, and both Dominion suspicion and Provincial exasperation increased as correspondence flew back and forth in late 1882 and throughout 1883. Eventually, the Province marked on a map the acres that it had rendered fit for sale, Harris certified the map, and in March 1884, the Dominion accepted the claim. The Province received about 62,810 acres (25,438 hectares) near Winnipeg and about 48,310 acres (19,566 hectares) in areas southwest of Lake Manitoba. This anticlimax begs the question why both governments were suddenly willing to find a solution? While some government officials argued over the transfer of lands under the drainage lands arrangement, others fought about the rest of the lands of the province. Manitoba’s wetlands had become a political instrument. As the political context changed, so did the importance of the drainage lands. By 1884, both governments were anticipating further negotiations concerning Manitoba’s place in Confederation. Given the potential scope of these discussions, with the Province asserting its right to the entire 94,888,467 acres (38,400,000 hectares) within the Provincial boundaries of the day, the approximately 112,000 acres (45,324 hectares) affected by the drainage arrangement were put in perspective. As it became apparent

39 AM, GR 7721, reel M 1690, file 4834, Copy of a report of a Committee of the Privy Council, 21 April 1884.

40 AM, GR 174, G 8128, Return to an Order re: Transactions of reclaimed lands, 1886.
that the drainage lands arrangement had proven an insufficient panacea for Provincial discontent, officials concluded that it was more important to move on than to continue to wrangle over an arrangement that – to Manitoba's satisfaction – had put some lands at the Province's disposal but that – to the Dominion's frustration – had failed to achieve its political purpose.

At the same time, Manitoba officials were becoming increasingly desperate. They were eager to capitalize the small base they claimed from the Dominion. Looking to dispose of land quickly, in large quantities and at a reasonable profit, the Provincial government had initiated negotiations with speculators. It arranged a number of sales even before the land had been formally transferred, at prices ranging from $2.00 to $2.85 per acre. Such haste became a problem when the transfer was delayed. Land speculators who had anticipated making a quick dollar became impatient. Some sought to cancel their purchases and claim damages, arguing that the delay had prevented them from selling the land profitably. Other speculators went ahead and sold their holdings, albeit often with little respect for truthful description of land conditions. Lands the Province sold on the promise of drainage were resold without full disclosure of their flooded condition.

Many foreign owners were "misguided and ill-informed concerning the quality of their

---

41 John Langton Tyman, *By Section, Township, and Range: Studies in Prairie Settlement* (Brandon: Assiniboine Historical Society, 1972), 29. Langton asserts that 250,000 acres were reclaimed, resulting in a transfer of 112,146 acres. While these amounts do not correspond precisely to those cited elsewhere (for instance, see AM, GR 174, G 8128, Return to an Order re: Transactions of reclaimed lands, 1886), they are all fairly similar.


43 AM, GR 174, G 8128, Return to an Order re: Transactions of reclaimed lands, 1886.

44 Ducks Unlimited, Manitoba Office, Office Files. *A Brief History of Big Grass Marsh* by B. W. Cartwright. Underlining in original.
lands, its agricultural possibilities and its actual value.”45 Years later, when some sought to use their lands, they discovered drainage had not been undertaken or had been largely unsuccessful.

An adequate evaluation of these developments demands a return to the broader question of the ethics of drainage. Some of the Province’s eagerness to have the Dominion transfer lands originated with influential private citizens who were keen to buy the land for speculative purposes. A particularly well documented example stems from a later period, but illustrates factors at play earlier on. On 3 March 1909, the Manitoba Free Press reported that Thomas Guinan had offered to share profits with an individual in the Provincial government if the land transfer were expedited. Guinan eventually purchased 16 000 acres from the Province at $3 to $3.25 per acre and sold it within months for about $5 per acre, realizing a profit of $30 000.00.46 The newspaper described the transaction as “but one of the many such deals, by which the Roblin Government, instead of disposing of the lands belonging to the people of Manitoba by public sale… disposes of them by private arrangements.”47 Speculation on wetlands was one of many opportunities to profit from ethically-questionable land deals available to well-positioned Manitobans in the Province’s early years, and some took advantage.48 In the context of the times, however, this made drainage more typical than exceptional. While,


46 Manitoba Free Press, 6 March 1909, p. 4. See also Manitoba Free Press, 13 March 1909, p. 4.

47 Manitoba Free Press, 5 March 1909, p. 3. For more on this matter, see AM, GR 174, G 8180, file 1, Committee Records 1909, Testimony Before Committee on Public Accounts.

48 AM, GR 1609, G 8019, “Drainage Commission,” Wm. R. Wood to T. H. Johnson, 4 September 1916.
as disgruntled Manitobans claimed, “there is good reason to believe that in the Drainage system they were exploited to fully as large an extent as in any other instance,” there is little evidence that they were more severely exploited in drainage matters than in any other instance.\textsuperscript{49}

\section*{4.3 The Swamp Lands Arrangement, 1885-1912}

Negotiations between Winnipeg and Ottawa culminated in an 1885 agreement that redefined Manitoba’s position within Confederation. Premier John Norquay seemed well-pleased with the Better Terms Agreement, which included an increase in financial support from the Dominion. The agreement also provided for the transfer to the Province of all Crown lands in need of reclamation, estimated at between seven and ten million acres.\textsuperscript{50} Manitoba would be able to generate revenue by draining and selling or leasing these lands. This provision was elaborated and formalized by the passage of the \textit{Swamp Lands Act} later in 1885. Norquay saw the swamp lands provision as a “main feature” of the arrangement and optimistically predicted that the 1885 agreement might “finally dispose of the land grievance question.”\textsuperscript{51}

Under the earlier drainage lands arrangement, lands were to be transferred after they had been drained. Now, under the \textit{Swamp Lands Act}, lands were to be transferred as

\textsuperscript{49} AM, GR 1609, G 8019, “Drainage Commission,” Attachment titled “The Drainage Problem” included with letter from Wm. R. Wood to T. H. Johnson, 4 September 1916.

\textsuperscript{50} AM, GR 7721, reel M 1690, Swamp Lands File, vol. 16, Copy of a Report of a Committee of the Executive Council, 20 September 1906. In the same file, see also the Memorial to the Governor General of Canada in Council from Premier R.P. Roblin, 5 November 1906. In the latter document the amount of swamp land is estimated at between eight and ten million acres.

\textsuperscript{51} AM, GR 553, Letterbook D, Norquay to unnamed correspondent, 7 February 1885.
soon as it was established that they required drainage. The work of inspection and the transfer that hinged on it, which the controversy surrounding Harris' report on the drainage lands made clear could be problematic, would precede drainage rather than follow it. While the drainage lands arrangement operated in relation to nine specified projects, the swamp lands arrangement pertained to all wetlands in the newly-enlarged Manitoba. The entire province would have to be inspected. By the late 1880s, Swamp Lands Commissioners were appointed and assigned the enormous task of identifying all the swamp land in Manitoba.\(^52\)

Quickly it became apparent that this was a complicated and time-consuming endeavour. The province was large and wet regions were far-flung. Even the most diligent Commissioners could travel only so fast by horse and carriage over rough terrain. The regulations governing their work, drawn up by politicians and bureaucrats, did not always suit conditions in the field. For instance, Commissioners had to petition Ottawa for approval to inspect particularly wet areas while the ground was frozen and thus more easily traversed.\(^53\) Interactions with local residents were protracted. And Commissioners had to appeal again and again for adequate funds and basic supplies, while Ottawa and Winnipeg bickered over who should pay the bills.\(^54\) The nature of the

\(^{52}\) AM, GR 7721, Swamp Lands File, vol. 16, reel M 1690, Order of the Privy Council, PC 1037, 19 June 1886.

\(^{53}\) AM, GR 7700, reel M 1640, Swamp Lands File, vol. 1, Swamp Lands Commissioners Wagner and Crawford to the Provincial Lands Commissioner, 11 October 1895.

task and the many logistical problems meant that it took a long time to determine what
lands should be transferred to the Province under the Better Terms Agreement. Indeed,
inspections continued well into the 20th century. Premier Norquay had not foreseen this
when he expressed satisfaction with the 1885 agreement. In effect, Manitoba was left
waiting for its better terms.

Deliberate delay by Dominion officials was partly to blame. As the land remained the
property of the Dominion until it was formally transferred by Order-in-Council, the
government in Ottawa continued to derive revenue from timber and grazing leases.55
Moreover, the Dominion was trying to dispose surreptitiously of whatever swamp it
could, while it still had right to the revenues.56 Provincial officials were incensed by
this. Not only were they waiting for their better terms, but as the years passed the better
terms became less good.

Manitoba recognized that not all the blame could be laid at the Dominion’s door.
Nonanthropogenic (not caused by humans) environmental change was complicating
matters. While the drainage lands arrangement indicated the difficulty of establishing

55 AM, GR 7700, reel M 1640, Swamp Lands File, vol. 1, M. A. Ferries, Provincial Lands Inspector to the
Provincial Lands Commissioner, 22 November 1895; AM, GR 174, G 8241, Report of the Provincial
Lands Department for 1905; LAC, Canada, Department of Justice, RG 13, vol. 2321, file 928/1904,
Secretary of the Department of the Interior to the Deputy Minister of Justice, 16 November 1904.

56 LAC, RG 15, vol. 1207, file 142200 # 1. This file contains two letters from H. H. Smith, Commissioner
of Dominion Lands, to A. M. Burgess, Deputy Minister of the Interior. One is official and the other is
unofficial. Both dated 6 August 1889. In the two letters, Smith argues the Dominion should sell the land it
now administers under hay lease, due to the trouble and expense of managing the leasing system. The
unofficial letter then continues: “There is a reason for selling these lands now which I cannot very well
advance officially. It is altogether likely a good many of them may, before long, be selected by the
Swamp Lands Commissioners and we shall lose them entirely. We had better, therefore, make what we
can out of them while we have the chance.”
boundaries in a wetland landscape at a particular moment in time, the swamp lands arrangement made clear that the temporally-dynamic nature of the wetland landscape was equally problematic. As wetland ecologists G. Mulamoottil, B. G. Warner, and E. A. McBean have explained, “even small changes in surface and ground water hydrology may result in significant changes to the wetland.”57 With land ownership hinging on land condition, ongoing environmental processes were invested with political significance.

From 1880 onward, the region trended toward dryness, even as intermittent wet years increased demand for drainage. Manitoba officials recognized that the lands of the province were “becoming dry and changing in character.”58 While drier land improved agricultural prospects in some areas, an outcome that pleased all with an interest in the development of the Canadian west, the Provincial government saw a downside. Land that dried naturally prior to inspection by the Swamp Lands Commissioners remained the property of the Dominion; land that had to be drained became Provincial property. Thus, natural environmental improvement meant a territorial and, ultimately, a financial loss to the Manitoba government.

Manitoba officials also found themselves in an awkward position in relation to artificial drainage. Since drainage was a Provincial responsibility, politicians had to respond to settlers’ demands or face voter dissatisfaction. Particularly in light of difficulties with


58 AM, GR 7721, reel M 1690, Swamp Lands File, vol. 16, Memorial to the Governor General of Canada in Council from Premier R. P. Roblin, 5 November 1906.
attracting and retaining settlers in Manitoba during the 1880s and early 1890s, ditch construction could not wait until the Swamp Lands Commissioners finally completed their inspections. But artificial drainage, supported by Provincial money and policy, decreased the amount of land that qualified as swamp and thereby was eligible for transfer to Manitoba. The Province tried to make the best of the situation by taking steps such as assigning an inspector to accompany the Swamp Lands Commissioners. The inspector was to draw the Commissioners’ attention to any land that had been swamp in 1885 but which had since been drained through local efforts. Nevertheless, Provincial officials remained uneasy, fearing both Dominion cunning and environmental change.

The annual reports of the Department of Provincial Lands, established in 1888, reveal Manitoba’s mounting frustration. “Great loss and injury is being sustained by the province by the failure of the Dominion government to carry out the arrangement entered into in 1885,” warned the Provincial Lands Commissioner in 1906. Hoping to spur more rapid transfer, the Province used the question of natural resources ownership as leverage. In 1890, Commissioner Joseph Martin railed that:

It has always been contended by the Dominion Government that one great reason that they insist upon administering the lands is that they are able to do it so much better than a local government. This Department has no hesitation in

---

59 AM, GR 7700, reel M 1640, Swamp Lands File, vol. 1, Provincial Lands Commissioner to Minister of the Interior, 8 April 1908.

60 AM, GR 7700, reel M 1640, Swamp Lands File, vol. 1, J. Obed Smith, Chief Clerk, Manitoba Commissioner of Railways, to the Provincial Lands Commissioner, 17 August 1896.

claiming that work of this kind could be done in one-fiftieth of the time that it takes your Department and we have only a staff of one man.\textsuperscript{62}

Designed to mitigate intergovernmental disputes over land ownership, the \textit{Swamp Lands Act} compounded tension as it became itself a source of dispute. An arrangement designed to appease Manitoba became ammunition for Provincial rights advocates.

Dominion officials acknowledged that changes in wetland size and shape were problematic. Soon after the 1885 agreement, they decided that lands subject to flooding in an average year – rather than lands inundated in the year of inspection – would be transferred. From then on, Swamp Lands Commissioners were expected to make allowances for annual variation.\textsuperscript{63} When the trend toward a drier environment caused Manitoba to protest, the Dominion agreed that the amount of land to be transferred should equal the amount that had been wetland in 1885.\textsuperscript{64} Coping with changing instructions and compensating for environmental dynamism further slowed the work of the Commissioners.

The Swamp Lands Commissioners recognized the awkwardness of the swamp lands arrangement and communicated their concerns to the Dominion government. Fraud was

\begin{footnotes}
\item[62] AM, GR 174, G 8165, Return to an Order of the House Showing a Copy of all Correspondence with the Dominion Government Having Reference to Swamp Lands, 1891.
\item[63] AM, GR 7700, reel M 1640, Swamp Lands File, vol. 1, A. M. Burgess, Deputy Minister of the Interior, to A. C. Lariviire and D. H. Harrison, 9 December 1887.
\end{footnotes}
one of the possibilities that Commissioners William Wagner and William Crawford
drew to the attention of their supervisors, warning that it was:

in the power of the Government of Manitoba to create swamp lands at any point
in the province where there are lands still at the disposal of the government of
Canada which they wished to have handed over to the province.\textsuperscript{65}

The Dominion also had to guard against settlers who denied the existence of swamps.
The Canadian government made land available to newcomers at remarkably favourable
terms, whereas the Province sought to manage its land for profit.\textsuperscript{66} After swamps had
been transferred and drained, Wagner and Crawford warned, it was possible that settlers
might claim that the land had always been dry and thus should have been Dominion
land available as free homesteads, rather than Provincial land offered for sale.\textsuperscript{67} The
worry was that if such a situation were to arise, the only way to guard against both
public outcry and provincial discontent would be for the Dominion to allow
homesteading in these areas and to compensate the Province for the loss of lands
already identified as suitable for transfer. Clearly, this was not a desirable outcome for a
national government keen to minimize expenditures.

In sum, both governments felt vulnerable in light of environmental change and the
possibility that the other would gain the upper hand through more successful adaptation.

\textsuperscript{65} LAC, RG 13, vol. 80, file 143, A. M Burgess, Deputy Minister of the Interior, to Robert Sedgewick,
Deputy Minister-of Justice, 4 February 1891.

\textsuperscript{66} Swamp Lands were administered under \textit{The Provincial Lands Act} which came into force on July 1\textsuperscript{66},

\textsuperscript{67} AM, GR 1607, G 7977, William Wagner and William Crawford, Swamp Lands Commissioners to
Robert Watson, Minister of Public Works, 3 September 1895.
The environment was not the politically-neutral arbiter that politicians had taken it to be. The situation was conducive to the outbreak of small but intense political battles. The resulting anger and frustration undermined both the larger political purposes (the improvement of intergovernmental relations) and the original environmental aims (the production of land suitable for agriculture) of the *Swamp Lands Act*. The perversity of the situation was epitomized in an 1893 exchange between Manitoba and Canada. The Provincial government had produced a pamphlet extolling the virtues of Manitoba’s lands and advertising those available for purchase. It read in part:

What are known as ‘swamp lands’ are being conveyed by the Dominion Government to the Local [Provincial] Government. Many of these lands are not swamp lands at all, but are valuable for farming purposes.

A Dominion official responded indignantly:

You will observe that the paragraph contains the very important statement that many of these lands are not swamp land at all. Such being the case, I would be glad to have a list of these lands, and in view of the fact that the Manitoba Government are only entitled to the lands described as ‘swamp lands,’ if any others were by oversight conveyed to the Province, no doubt it is only necessary to call our attention to the fact in order to have them re-conveyed to the Crown.⁶⁸

Increased immigration and settlement were desired by both governments. But population growth imposed heavy responsibilities for infrastructure construction and service provision on the Province, even as it led to increased importation of goods,

which inflated the Dominion’s tax revenues. The Dominion had the most to gain and the least to lose from immigration, but still quibbled with the claims of Provincial settlement boosters. Typically, officials got hung up on small details and lost sight of the larger goals of the swamp lands arrangement.

The swamp lands arrangement was an aspect of the 1885 Better Terms Agreement, which was intended in part to solve the complicated political problem of the Crown lands in Manitoba. While disagreeing over which government had the better claim to Provincial resources, both concurred that Manitoba’s lands could be divided into those fit for settlement and those in need of drainage. The basic division between the potentially settled and the frequently sodden acquired additional significance as it was incorporated into intergovernmental negotiations on land ownership. However, governments invested wetlands with political significance without adequately anticipating or effectively accommodating the environmental processes at work in these areas. As a result, their use of Manitoba’s wetlands as a political vehicle drove them further into a political quagmire.

As the marshes of Manitoba changed and were changed, trouble stretched on into the first decade of the 20th century. As part of the 1912 adjustment to the financial and jurisdictional arrangements between Ottawa and Winnipeg, unsold swamp lands were

returned to the Dominion. While some swamp lands had been sold at good prices, the majority were in the less fertile and more isolated northerly and easterly sections of the province. Some 2,131,006 acres (863,057 hectares) had been transferred to the Province; some 1,164,412 (471,587 hectares) were returned. This was an appropriately political ending to a policy that had faltered largely because it had not adequately accommodated the dynamic nature of Manitoba’s wetland landscape.

70 AM, MG 9 A40, 40-45.
71 Tyman, By Section, Township, and Range, 29.
72 Striking connections can be made between controversy over boundary-making in the historical Manitoban and the contemporary American situations. In a collection of works of environmental philosophy, Edward Shiappa examines recent controversy in the United States over wetland delineation. He documents how overt conflict between those who would protect wetlands and those who favour development has been circumvented through political endorsement of a geographically-limited conception of wetland. While scientists emphasize that wetlands expand and contract in relation to the amount of water in the surrounding ecosystem and explain that such processes are fundamental to ecological functions, political and corporate interests have favoured definitions limited to permanently inundated areas, because these hive off riparian zones so as to make them available for development. As a result, the development of riparian areas has gone ahead without sophisticated public discussion of alternatives and consequences. Schiappa, “Towards a Pragmatic Approach to Definition,” 209-230. For more on the matter, see James G. Gosselink and Edward Maltby, “Wetlands Losses and Gains,” in Wetlands: A Threatened Landscape, ed. Michael Williams (Oxford: Basil Blackwell, 1990), 296-322. The parallel suggests how wetlands, though literally situated along the margins of valuable dry land and useful water networks, have been, for a lengthy period and in diverse locations, at the centre of many critical debates over environmental management. As wetlands can be conceived as transitional areas between land and water, so do they mark a particularly important intersection between political and environmental landscapes.

4.4 Reclamation on the Prairies

Dominion interest in Manitoba drainage declined after the return of the swamp lands in 1912. At about the same time, the federal government became more involved with similar matters in Alberta and Saskatchewan. The reasons for this go back a decade or more before the creation of these provinces in 1905 and turn in part on the contributions of a particularly energetic and influential civil servant. William Pearce was one of two officials appointed to the Dominion Lands Board, which had “responsibility for making regulations, recommending legislation, formulating resource development policies, and supervising the exploitation of all land, timber, minerals, and water resources throughout the Northwest.”

As Inspector of Land Agencies, Pearce drew on his organizational talents and his surveying experience to organize and supervise land offices across the prairies. Described by one historian as the Dominion trouble-shooter, Pearce re-evaluated established practices and engaged in policy development.

Like many Canadian officials, Pearce found inspiration in other nations as much as in the land before him. Key American figures such as Elwood Mead, territorial engineer for Wyoming, and John W. Powell of the United States Geological Survey caught Pearce’s attention. As noted by numerous environmental historians, Powell was an

---


76 Mitchner, “The Development of Western Waters,” 50.
early promoter of innovative environmental management. He believed that water in the arid American west should be apportioned to ensure the efficient and equitable use of a scarce resource. Powell took the drainage basin as the key management unit, with resource use to be determined in relation to basin geography. In his view, government management was necessary to ensure that water was administered in the public interest. While neither unprecedented nor uncontroversial, Powell brought such thinking to the American government and his contributions have influenced many, from managers and citizens to geographers and historians. 77

By the early 1890s, William Pearce was convinced that the Canadian government should establish a legislative infrastructure appropriate to watershed management as promoted by Powell. 78 Despite government reluctance to take any action that acknowledged an actual or potential shortage of water on the prairies for fear that this would deter potential settlers, and particularly in the context of a series of dry years that even the government could not simply ignore, the weight of opinion gradually lined up


78 Mitchner, “The Development of Western Waters,” 52.
behind Pearce’s proposals. The result was the passage in 1894 of the *Northwest Irrigation Act*. Under this statute, all water not already acquired by Act of Parliament (as in the case of small irrigation companies operating under a federal charter) or reserved by prior appropriation (as in the case of riparian rights claimed by early settlers) was declared to be the property of the Crown. All water in the North-West Territories, including both navigable and non-navigable rivers, could be accessed only through a permit system administered by the Dominion government. The provisions of the *Act* were not modified in 1905 when the provinces of Alberta and Saskatchewan were created, and thus the Dominion government had more control over waterways in Alberta, Saskatchewan and northern Manitoba (which, as part of the North-West Territories in 1894, was subject to the legislation) than in southern Manitoba.

Historical geographer Matthew Evenden sees irrigation in Canada as distinguished by the Dominion government’s cancellation of riparian rights prior to extensive settlement and its efforts to attract private investment rather than undertake development directly. This approach proved relatively effective at spurring development, but a division of powers appropriate for irrigation became problematic when it became evident that drainage was an essential component of successful reclamation. “In almost all large

---


80 Mitchner, “The Development of Western Waters,” 72.

irrigation projects, particularly if they have been in operation for some time," explained a memorandum circulated in 1913 in the Water Powers Branch of the Department of the Interior,

the lower-lying lands, which when water was first delivered upon them were the most valuable lands within the tract, became after a time so water-logged as to be unfit for cultivation. In many cases such lands became actual marshes....

The problem was seepage. Clearly, from an agricultural perspective, too much water was as bad as too little. The writer concluded that drainage was "as necessary in connection with the successful operation of an irrigation tract as is the delivery of water...."82

Some farmers in Alberta and Saskatchewan, like some of their Manitoba counterparts, were hindered by water that pooled on or near their lands.83 But drainage advocates in the more westerly provinces faced legislative impediments that Manitobans did not. As with Manitoba in 1870, Alberta and Saskatchewan were granted jurisdiction over land drainage in 1905. In contrast with Manitoba, they lacked legislative authority to undertake or approve work that affected any stream, river, or lake. Since drained water had to be routed somewhere, Dominion control over all alterations to any water body under the 1894 Act effectively forestalled drainage initiatives by the provincial governments.


83 For a suggestive discussion of the problem of seepage, see Fiege, Irrigated Eden, 25-41.
This was very different from the situation in Manitoba, where the Provincial government had authority to alter non-navigable waterways. It could allow, prohibit, or ignore alterations to drainage patterns made by individual settlers, government agents, or private contractors as they sought to improve the lands of the province. Manitoba’s control over non-navigable waterways was a rather circumscribed sphere of authority, but it was critical for drainage. The practical work of drainage in Manitoba was maintained on a relatively independent trajectory, and one that was substantially different from that in the two more westerly prairie provinces, largely because the Provincial government was responsible for the small waterways that most often figured in drainage works. The drainage and swamp lands arrangements with the Dominion government were important – if problematic – incentives and supports, but the Province undertook a substantial amount of drainage entirely under its own auspices.  

84 While able to authorize alterations to non-navigable waterways in southern Manitoba because this area was not subject to the *Northwest Irrigation Act*, the Province of Manitoba was as constrained as Albertan and Saskatchewan when drainage required alterations to navigable waterways which in all three provinces were subject to Dominion authority under the *British North America Act*. Some of the most severe and chronic flooding in Manitoba occurred along the banks of the Assiniboine River. Despite the extreme variability of the river’s flow, it was considered navigable. Manitoba was therefore not in a position to authorize alterations. As a result, efforts to address flooding along the river were forestalled, even as drainage projects were underway in surrounding areas. The Province appealed to the Dominion, urging at first that the Dominion undertake the necessary work and later that the Province be granted permission to do it itself. See LAC, Canada, Department of Public Works, RG 11, vol. 4354, file 5816-1-A to file 5816-1-C and vol. 4355, file 5816-1-D to 5816-1-F.

Drainage initiatives along the Red River do not seem to have been forestalled by its status as a navigable waterway. This may be attributable to the fact that many early drainage ditches dumped into small natural creeks or streams that ran a short distance back from the river, rather than directly into the river itself.

This was the case even with major drains and floodways. For instance, the Shannon Creek Spillway, a large drain running through Drainage District No. 2 “emptied into the Morris River by way of the Moyer (Lewis) Coulee.” This description of the Shannon Creek Spillway is from Lowe Farm Chamber of Commerce. *Lowe Farm: 75th Anniversary, 1899-1974* (Altona: D. W. Friesen & Sons, 1974), 15.

Historical Geographer John Warkentin asserts that provincially constructed drainage channels led into “the short tributaries leading into the Red river.” Warkentin, “Water and Adaptive Strategies in Settling the Canadian West,” 67. Map 3.1 illustrates how many (but not all) drainage channels led to small tributaries, instead of to the large navigable rivers.
As a report of the Reclamation Service of the Department of the Interior summarized, in Alberta and Saskatchewan “divided jurisdiction prevented any material development of drainage either by the Dominion or the Provincial Governments and invited controversy between them.” The Dominion was willing to concede that its absolute authority over bodies of water under the Northwest Irrigation Act was not always conducive to progress. Small marshes and shallow lakes might “serve no useful purpose as sources of water supply” and could pose “a serious detriment to the districts in which they occur.” Officials from these provinces and the Dominion realized they had a problem, but solutions were not obvious. The stage was set for intergovernmental negotiation.

Through a series of conferences, meetings and correspondence that began in 1914, responsibility for drainage was divided between governments, based on project size and location. As outlined in the Journal of the Engineering Institute of Canada in March 1919, drainage was separated into four classes: small drainage projects, drainage in connection with road construction, drainage of Dominion land in organized drainage districts, and drainage work initiated by the Dominion government. Each class had a

---

While draining into tributaries rather than the main stem of the Red River may have circumvented jurisdictional conflict in some cases, the complete lack of attention to the possibility of Manitoba infringement on Dominion authority in the documents examined to date suggests that Saskatchewan and Alberta may have been unnecessarily cautious about trespassing on Dominion jurisdiction through drainage work. Indeed, the Dominion was displeased with its role in flood mitigation works along the Assiniboine River and might have been willing to tolerate provincial incursions in order to prevent the development of similar situations.


86 LAC, RG 89, vol. 49, file 22: General Information – Drainage, Unsigned memorandum to Mr. Roche, Minister of the Interior, 13 October 1913
distinct procedure through which funding and approvals were to be obtained. Together, these regulations provided an administrative infrastructure tailored to the drainage needs of Alberta and Saskatchewan.

The federal regulations came into effect in the mid-1910s, just as a series of dry years began. By 1919, many water bodies in Alberta and Saskatchewan were much diminished or even dried completely. Dominion officials who examined the situation concluded that “the natural recession of lakes and sloughs in the west is influenced by two main factors.” The first was “recession due to the fact that the cultivation of the land comprising the tributary drainage basin, has reduced or cut off the natural run-off into the lake or slough.” As this change was seen as permanent, “the land so unwatered may be deemed to be dry land … and may be dealt with in the same way as any other Dominion land.”

The second factor was “periodic recession dependent upon the natural precipitation and run-off.” As this change was not considered to be permanent, the land thereby exposed had to be managed with an eye to the possibility that it would again be flooded.

Dominion officials recognized the dynamic nature of the wetland landscape. They were aware of the need to consider carefully changes in the environment and to accommodate the possibility of change in land management. With regard to much of the land newly-exposed after the dry period of the late 1910s, the Department felt that “it may safely be

---


assumed that the natural condition of the land is such as to be unfit for cultivation” and
as such, “the Department would not be justified in dealing with it other than as a water-
covered area not subject to disposition by patent until reclaimed.”89 Land that was only
temporarily dry would soon return to its natural water-covered condition and its
administration should not be altered by intermittent dry periods.

While officials believed this was sound administrative strategy, they were aware that it
could leave them vulnerable to criticism from land-seekers. A large number of patent
applications for newly-exposed land were received. Dominion officials believed they
understood prairie wetlands better than the average settler, and feared that they would
be put in “a rather awkward position” by the failure of the public to differentiate
between land that had become dry permanently and land that soon would be once more
covered with water. They foresaw that settlers would “make every effort to secure the
areas at present dry and will resent any action tending to interfere with their wishes in
this respect.” But at the same time, administrators were confident that if they made the
land available, it would be “only a question of a few years” until those who got the land
would begin to protest “that the Department has sold them land which is either useless,
or requires considerable expenditure for drainage to make it of use....”90

Officials in the Reclamation Branch recognized that only time would tell if the lands
were permanently dry. They recommended that newly exposed lands should be open for

89 Ibid.
90 Ibid.
homesteading only if there were evidence that they had been dry for at least three years. If observers could not attest to this, it was likely that the land would become wet again and consequently should not be available to prospective settlers. Drainage officials advised that the Dominion should retain ownership of the highly variable wetlands in the southern parts of Saskatchewan and Alberta. Otherwise, after a series of wet years, newly inundated homesteaders would demand drainage, obliging the Department to undertake difficult and expensive projects. A brief period of dryness did not indicate permanent change, and administration had to accommodate environmental variability. Whereas disputes between Manitoba and Ottawa over the swamp lands arrangement descended into perversity, the officials who administered drainage in Alberta and Saskatchewan held to their sensible policies, even in the face of public pressure.

Despite the frustrations of settlers who wanted the dried lands that the Dominion was withholding, much progress had been made. From a jurisdictional gridlock that had impeded drainage, Alberta, Saskatchewan and Ottawa had developed a workable drainage policy. More significantly, officials had come to appreciate that the variability of prairie wetlands should affect land management. Caution was the operative principle. The government did what Molyneux St. John had recommended to Manitoba Lieutenant Governor Archibald decades earlier. “The nature of the country” was taken into account.

Ottawa officials managing the swamp lands that Manitoba returned to the Dominion in 1912 exhibited a similar awareness of the need to accommodate the dynamic nature of
wetland ecosystems. Following the transfer, an employee of the Department of the Interior was asked about the possibility of dividing these acres into two categories: “those which will require drainage and those which are fairly fit for settlement as they stand.” The number of legitimate means by which the Province could have received good land under the swamp lands arrangement. Square areas (quarter sections or quarters of them, depending on the date) were classified as swamp according to the condition of the bulk of the land. 160 acres (65 hectares) legally defined as swamp land and transferred to the Province could, for example, contain up to 79 acres (32 hectares) of good land. Also, the Dominion government had on occasion agreed to transfer good land to the Province in lieu of swamp land, in order to meet the needs of settlers and railway companies who wanted land classified as swamp. When the land was transferred back to the Dominion in 1912, it was estimated that at least 10% of swamp land was in fact not swampy at all.

But how to distinguish this 10% from the rest? Through the work of the Swamp Lands Commissioners, Manitoba land inspectors, and a 1912 inspection undertaken by Dominion agents, officials had a substantial body of information concerning the swamp lands. But all shared the limitations of the maps produced by Dominion Lands Surveyors. As one official explained:

If the subdivision survey were made in a wet year, or after a series of wet years, or in the early part of the season, the surveyor probably found lakes, sloughs, or

marshes, which he accordingly showed on his plans, which became the Departmental record. If the survey were made in a dry year, or after a series of dry season, or late in almost any season, many of the smaller lakes or sloughs were dry, or practically so.\(^9^3\)

In Manitoba as in Alberta and Saskatchewan, lands that vacillated between wet and dry were a concern. If lands that were only temporarily dry were granted to settlers, the inevitable return of water would bring a torrent of complaints. Caution in land disposal was the best way to limit the future liability of the government. Responsible policy would take into account the inherently dynamic nature of the wetland landscape.

With the 1912 revestment of the unalienated Manitoba swamp lands, the significance of the line between wet and dry changed dramatically. Transferring wetlands to Manitoba had provided a means of sidestepping jurisdictional barriers to drainage. But it had also allowed the Dominion to appease provincial rights advocates without conceding that Manitoba had a legitimate claim to its own resources, as the transfer could be explained in environmental rather than political terms. The political consequences of land classification thwarted meaningful attempts to come to terms with environmental conditions. Until 1912, any change from wet to dry or dry to wet produced aggravation and suspicion because of its implications for government jurisdiction. It was only after swamp land management was separated from the continuing controversy over natural resources management that the challenges of administering Manitoba’s dynamic environment came into focus.

Timing was crucial to the different ways wetlands were managed across the prairies. Examining the Manitoba situation makes clear how the environment changed through time. Comparing Manitoba to Alberta and Saskatchewan emphasizes how environmental policy was equally subject to change. Wet areas took on political implications in Manitoba before conservationist thinking had significantly influenced government officials. By the time Alberta and Saskatchewan addressed their drainage problems in the mid 1910s, administrators were aware that marshy areas could be valuable bird habitat. Pressure from conservationists may have helped to keep drainage administrators focused on the environmental context for their work, making it less likely that political considerations would define policy. Drainage became controversial in other ways, as the human benefits of drainage were weighed against the habitat needs of waterfowl. But conservationist debates turned in part on the dynamic nature of wetlands and thus remained far more attuned to environmental processes than political debates over government jurisdiction had been.

At numerous points during the late 1910s and early 1920s, Ottawa, Alberta and Saskatchewan tried to involve Manitoba in their deliberations on drainage. Manitoba ignored most overtures, though its reasons were never made entirely explicit. Most likely, provincial officials simply found very little that spoke to their situation in these negotiations because wetlands management in Manitoba had followed a different trajectory. By the time Alberta, Saskatchewan and Ottawa had worked out a legislative

---

framework for drainage, Manitoba had launched a Royal Commission to investigate aspects of the substantial drainage system already servicing parts of the province. With regard to intergovernmental arrangements bearing on wetlands management before the 1930 transfer of the natural resources to the prairie provinces, Manitoba was a very different place for both political and environmental reasons.

4.5 Conclusion

Manitoba’s drainage and swamp lands arrangements were meant to sidestep jurisdictional barriers to drainage and to ease contention over Dominion ownership of provincial resources, but they proved a source of confusion and controversy. Administrators were preoccupied by the political consequences of land classification. Environmental change was evaluated primarily for how it bore on land ownership, and suspicion and hostility flowed from the dynamism inherent to regional wetlands. In this way, the drainage and swamp lands arrangements exacerbated the political conflicts they were in part intended to ameliorate. Drainage in Alberta and Saskatchewan was addressed at a later period and without the same sort of implications for government authority. Officials developed a land management policy attuned to variability and the complications that might result if settlement went ahead in areas that were only temporarily dry.

Attention to wet areas sheds new light on the history of the Prairie Provinces by illuminating some of the key legislative and environmental discrepancies within the region. As Reclamation Branch Head F. E. Drake wrote of the *Northwest Irrigation Act*: 

148
"The term ‘Irrigation Act’ does not adequately indicate the nature of the law." This was because "The Act vests in the Crown, in the right of Canada, the ownership and control of all sources of surface water supply within a certain described territory. It prescribes the purposes for which grants of the right to the use of water may be made, these being domestic, municipal, industrial, irrigation and ‘other’. It is thus apparent that the Act covers much more than irrigation rights, and might more properly be described as a general water law." Environmental conditions and political developments operated in tandem to distinguish Manitoba from the more westerly Prairie Provinces. Manitoba’s wet prairie was beyond the reach of what Drake called the Dominion’s general water law.

Historian Gerald Friesen has argued that the Dominion’s role in civil administration contributed to the consolidation of the prairie imagined community. "Ottawa treated the west," he asserted, "as a single administrative unit for settlement, for lands and forests, for naturalization and police and Indians and transportation and the tariff." But water policy was not applied so consistently. If the emphasis were shifted from land to water, southern Manitoba might be better understood as a region unto itself.

---


5 WATERSHEDS:
CONCEPTUALIZING MANITOBA’S DRAINED LANDSCAPE

5.1 Introduction

The term 'watershed' has multiple meanings. Taken literally, it can be used to denote a catchment basin; employed figuratively, it refers to a turning point.¹ This chapter will draw on both of these in investigating why the idea of watershed management failed to reshape land drainage in Manitoba and what management strategies were adopted instead.

There are two key intellectual currents to follow. Like the water that drainers tried to channel, they flowed in unpredictable and uncontrollable ways, moving apart and coming together over time. The first sprang from how the ecological commons created by flows of surface water clashed with the settlement geography created by the Dominion Land Survey and the 1872 Dominion Lands Act. Seeking to facilitate rapid agricultural settlement, the Dominion government laid a grid across the prairies. This was used as the basis for land alienation, with many newcomers laying claim to homesteads of 160 acres.² Settlers would legitimate their entry by fulfilling certain duties, such as clearing land and erecting buildings. The provisions for settling the west bore on settlers’ mental maps as much as on prairie landscapes. The Dominion Lands


² For a more detailed analysis of settlement policy, see John Langton, By Section, Township, and Range: Studies in Prairie Settlement (Brandon: Assiniboine Historical Society, 1972).
Act confirmed the local significance of the ideas of private property and land improvement conceived in a capitalist context that were part of the cultural baggage of many newcomers. It did nothing to accommodate the patterns of water flow that were so important on the wet prairie.

The second stream of thought pertained to jurisdiction between the provincial and municipal governments. More specifically, it turned on which party had responsibility for drain maintenance. This question built on the problematic relationship (considered in chapter three) that had already developed between provincial and municipal governments by the time The Land Drainage Act was passed in 1895. The ongoing environmental change that complicated jurisdiction over Manitoba Crown land also affected the process of draining the wet prairie. As in the early days of drainage, the expectations of many Manitobans remained unreasonable, even as the expectations themselves changed through time.

5.2 The Land Drainage Act and Early Enthusiasm

The Land Drainage Act was passed by the Provincial Legislature in 1895. It provided for the creation of drainage districts: administrative entities intended to facilitate the financing and construction of drainage in geographically-bounded areas. The costs of large-scale drainage would be divided among area residents, in the expectation that the improved agricultural productivity of drained land would more than compensate for the expense. Drainage districts were not unique to Manitoba. By the end of the 19th century, such entities were standard in large-scale, government-assisted land drainage projects
across North America. In Manitoba, district boundaries were established through an iterative process. Engineers or surveyors provided an initial evaluation of the area proposed for drainage, determining whether the benefits justified the expense. Local support for drainage projects was assessed, and plans might be modified to include the lands of enthusiastic proponents or to exclude the lands of the strongly opposed. Difficulties were encountered if districts included a significant proportion of Crown land, as the cost of draining these unalienated areas would be spread among district residents, which inflated the drainage levy. Given the importance of public approval and assessable acreage, all drainage districts were compromises between how experts and residents perceived the flood problem on privately-owned lands. They amounted to an aggregation of quarter-sections that were both flooded and settled.


Drainage districts can usefully be considered in relation to a body of literature dealing with special government districts. Though most scholars have focused on later districts conceived for reasons other than drainage, this literature helps situate the drainage district within an institutional lineage. Unfortunately, there has been little attention to Canada by scholars of special government districts. Representative works include John C. Bollens, Special District Governments in the United States (Berkeley: University of California Press, 1957); Donald Foster Stetzer, Special Districts in Cook County: Toward a Geography of Local Government (The University of Chicago Department of Geography Research Paper no. 169, 1975); Nancy Burns, The Formation of American Local Governments: Private Values in Public Institutions (New York: Oxford University Press, 1994); Kathryn A. Foster, The Political Economy of Special-Purpose Government (Washington: Georgetown University Press, 1997).


The problem was amply demonstrated in Drainage District No. 1, when much Crown land was included and residents responded by refusing to pay their drainage assessment. Manitoba. Drainage Commission. Report of the Manitoba Drainage Commission. (Winnipeg: King’s Printer, 1921), 8, 21.

Griffiths, “The History and Organization of Surface Drainage in Manitoba,” 4-6.
The new legislation addressed a major shortfall in earlier efforts at drainage. Effective surface drainage, whether natural or artificial, requires a dendritic pattern of interconnected channels, with smaller waterways collecting runoff and conveying it to more substantial courses. Drains have to be planned not just in relation to the land they serve, but also in relation to each other. Early drainage was hampered by inadequate systematization. Drainage projects in the post-1895 period were distinguished not only by number and size from the fewer and more moderate undertakings of an earlier period. There was also the question of design. The more secure and substantial funding available under *The Land Drainage Act* allowed provincial officials to plan on a broader scale, ensuring adequate outlets for the water they removed from flooded areas.

Drainage in Manitoba depended largely on the construction of surface ditches. Drainage districts abutted the major lakes and rivers of the province, and either dumped directly into them or, more often, into smaller tributaries. Compared to the challenges of conveying water over vast distances for irrigation or the cost of installing tile drains underground, the logistics of draining Manitoba were relatively simple. Generally, government surveyors or engineers laid out the drains and the government contracted with private firms to construct them under the supervision of provincial inspectors. The primary contractor often entered into arrangements with a number of subcontractors. While a substantial amount of work was done by horse and plough, large ditch-digging machines were also employed. In Drainage District No. 1, for instance, two dredges were built on location. They started digging at the high end of one of the major drains and floated downstream in their own ditch as they worked toward the outlet. These
massive, steam-powered dredges were slow, but they completed a large amount of excavation in early 20th century Manitoba. Moreover, these imposing machines lent a sense of grandeur to the enterprise, confirming the association between drainage and progress.

By 1903, there were already 13 drainage projects underway, encompassing just over a million acres. They were numbered in order of creation and identified by number. Drainage districts had been created across a significant portion of the more densely settled southern portion of the province, stretching from near the eastern shore of Lake Manitoba to the Saskatchewan border and from the international boundary to more than halfway up the northern basin of Lake Winnipeg. Despite the extensive area over which they extended and without disregarding differences between local environments, drainage districts shared a similar geographical character. The topography of southern Manitoba has been compared to a vast soup bowl, with the comparatively flat basin of the Red River valley bounded on the east by the irregular topography of the Precambrian Shield and on the west by the dramatic increase in elevation along the Manitoba Escarpment. Most of the drainage districts of the province were situated at or near the bottom of the Manitoba soup bowl (see Map 5.1).

---


7 Warkentin, “Water and Adaptive Strategies in Settling the Canadian West,” 60.


9 The most notable exception to this general statement is Drainage District No. 1. In addition to overland flow from adjacent areas, the marsh was fed by a significant number of underground springs. Flooding in this region was not simply a question of runoff pooling in low areas. The springs – “subterranean rivers,”
What did this mean for drainage? In 1950, provincial government investigator R. H. Clark described the situation in the following terms:

The tributaries which originate in the rolling hills to the west and the high flat marsh plains to the east have steep slopes of entrance to the valley. Upon reaching the ancient lake bed [the bed of glacial Lake Agassiz] these slopes quickly flatten out and, since the channel through the plain has not sufficient according to an early provincial report – meant that, regardless of alterations to drainage patterns and local topography, the area remained swampy. AM, GR 1530, Order-in-Council # 619, Re Report of the Minister of Public Works on lands reclaimed by drainage, 14 January 1882. Today the area is known as Oak Hammock Marsh and is home to the head office of Ducks Unlimited.
capacity to carry the flows, the water quickly tops the banks and spreads out over the valley.\textsuperscript{10}

In the evocative language employed by early drainers, watercourses would “lose themselves” as they passed from the sides to the bottom of the soup bowl. Water would spread out across extensive areas of land. While some of it eventually found its way to the lowland waterways, much of it pooled in slight depressions and disappeared only through evaporation.\textsuperscript{11} Though some areas were afflicted more severely than others and some districts also confronted more localized challenges to drainage, the problem of water pooling in the bottom of the bowl was common to many areas of southern Manitoba. In the view of C. G. Elliot, an international expert on land drainage, the problem was “peculiar to this region,” at least in its severity.\textsuperscript{12}

The soup bowl topography was not taken into account in the formation of drainage districts. The Manitoba approach to district formation can be usefully contrasted to the sort of thinking that defined water administration in the region that came under the 1894 \textit{Northwest Irrigation Act}. In the area that became the Provinces of Alberta and Saskatchewan, water was administered in relation to conditions throughout the drainage basin. As resolving the problem of scarcity meant looking around for outside sources, arid regions lent themselves to a spatially-expansive conception of water management. The \textit{Northwest Irrigation Act} prevented prospective owners from viewing the land

\begin{itemize}
\item\textsuperscript{10} AM, GR 45, N-11-3-16, Notes on Red River Floods with particular reference to the flood of 1950 by R. H. Clark, October 1950, 14.
\item\textsuperscript{11} AM, GR 1607, G 7987, J. A. Macdonnell to the Minister of Public Works, 30 December 1898.
\item\textsuperscript{12} AM, GR 1609, file: Drainage Commission, Report on Land Drainage in the Province of Manitoba by C. G. Elliot, 5 June 1918.
\end{itemize}
solely through the lens of the *Dominion Lands Act*, as they were obliged to think not only of how to get land but also of how to get water. In contrast, the problem of excess in agricultural Manitoba could be considered in a spatially-restricted manner, in relation to the lands immediately afflicted. The narrow focus did not situate the problem of flooding within the larger watershed. This was comparable to irrigators trying to solve aridity without importing water from wetter regions. Work within drainage districts can thus be seen as the construction of a watershed substitute: modifications within limited areas afflicted by flooding were to solve a problem ultimately derived from the geography of the watershed.\(^\text{13}\)

With drainage districts defined by the spatial extent of flooding, rather than in relation to the larger watershed in which the flooded lands were embedded, the water that ran in from higher lands became known as foreign water. The distinction between foreign and local water was central to conflict over drainage in Manitoba. Rather than a proliferation of limited upstream/downstream conflicts among individuals, relatively coherent geographically-defined communities of interest emerged. In many areas that stood to benefit from drainage, interpersonal conflicts were dwarfed by the general significance of one large slope of consequence. Residents shared a comparable topographical location with their immediate neighbours and with many others within their local community. Foreign water was less a matter between neighbours and more a

---

\(^{13}\) This phrasing is inspired by John Opie’s description of the Ogallala aquifer as a ‘climate substitute’ for farmers in the Midwestern United States in “100 Years of Climate Risk Assessment on the High Plains: Which Farm Paradigm Does Irrigation Serve?” *Agricultural History* 63, no. 2 (1989): 254. Donald Worster has referred to the Ogallala aquifer as “invented” water. The drainage district can be understood as an invented watershed. Donald Worster, “Climate and History: Lessons from the Great Plains,” in *Earth, Air, Fire Water: Humanistic Studies of the Environment*, eds. Jill Ker Conway, Kenneth Keniston, and Leo Marx (Amherst: University of Massachusetts Press, 1999), 62.
matter between localities differentiated by elevation. Because of this, individuals’ feelings of anger and resentment coalesced through discussions with others who were similarly afflicted. The terms highlanders and lowlanders became part of the local discourse, consolidating communities of interest among those who occupied similar topographical locations and suggesting conflicts of interest with those who lived at different elevations.\textsuperscript{14}

To better understand the development and operation of these communities of interest, it is helpful to focus on a particular location. Drawing out the nature of the debate in one place suggests the range of concerns and the modes of thought manifest in local debates throughout the province. This method of inquiry also reflects how many alterations to drainage policy came about: a problem that was especially acute in one area prompted the government to change general practices. Government investigation and intervention, rather than litigation before the courts, was the prime means of dispute resolution.

Drainage District No. 2, situated between the Manitoba Escarpment and the Red River south of the Assiniboine, had a particularly severe problem with foreign water. Events in this area -- by far the largest of the Districts at nearly 500,000 acres (202,000 hectares) -- bore heavily on government policy.\textsuperscript{15}

\textsuperscript{14} The use of ‘highlander’ and ‘lowlander’ to describe actors in this debate is also apparent in newspaper reports. For examples, see the \textit{Manitoba Free Press} (16 February 1922) and the \textit{Winnipeg Tribune} (8, 15, and 22 February 1922).

\textsuperscript{15} There were eventually 2,109,154 acres included in drainage districts. See Appendix II for a 1934 breakdown by district. To provide context, after the rapid increases in cultivated acreage early in the 20\textsuperscript{th} century, the number of acres under the plough in Manitoba remained relatively stable through the 1940s, ranging from the high 7,000,000s to the low 8,000,000s. 1921 saw an unusual peak of 9,022,738 acres, which would not be reached again until 1941. See J. H. Ellis, \textit{Manitoba Agriculture and Prairie Farm Rehabilitation Activities} (Department of Agriculture, 1944), 39.
The Manitoba Escarpment is a key topographical feature of the province – the highest and steepest side of the soup bowl. In an examination of the escarpment, geographer W. J. Carlyle provided a good description of the environmental factors that contributed to the foreign water problem in Drainage District No. 2. In the spring months, the flow of melt water from the escarpment was often delayed by the snow and ice that persisted on the low lands. Though precipitation is generally lower to the west, the highlands are vulnerable to intense rainstorms in May, June, and July. The swift moving waters carry a great deal of sediment eroded from the shaly till and shale bedrock of the escarpment. Annual snowmelt flooding that overwhelmed lowland streams; flash floods caused by intense precipitation; and the sediment that clogged waterways and ditches: all clearly descended from the highlands to the west. There was no disputing these basic facts of physical geography and few did. Most lowlanders were content to tolerate some of this, believing that lowlands should absorb what was understood as the natural flow from the highlands.

Drainage District No. 2 was incorporated in 1898, and work according to the original plan took until 1907 to complete. Through a series of main and feeder drains branching out across the area, flow patterns were fundamentally reshaped. The area had included a


17 The Unpublished Sesional Papers contain an incomplete transcript of the hearings of the Legislative Committee on Drainage about the 1921 Report of the Manitoba Drainage Commission. AM, GR 174, G 8374, file 13: Special Committee on Drainage, Drainage Committee Report. Another partial transcript is in the files of the Minister of Public Works, AM, GR 1609, G 8019, file: Drainage - General, Drainage Committee Report.
few substantial wetland complexes such as the Boyne Marsh and the Tobacco Creek Marsh. Drainage efforts zeroed in on these locations, and ditches were constructed in number and capacity appropriate to the existing problem. The massive project took years to complete, buoyed throughout by the optimism of residents and experts.

At the same time, however, rapid environmental change was also taking place beyond Drainage District No. 2. Settlement, clearing, and ploughing had increased in areas both within and beyond the drainage district. The 500,000 acres (202,000 hectares) of Drainage District No. 2 accounted for barely a third of a watershed of over 1.2 million acres (nearly a half million hectares). Though flooding in the district was moderated for a few years by dry conditions, 1912 brought severe inundation. This inaugurated another period of intense construction that concluded in about 1915. By this point, matters were coming to a head. Lowlanders were beginning to look beyond the drainage district to explain continued flooding. They began to articulate the view that ongoing cultivation and deforestation in the longer settled regions along the Escarpment were affecting flow patterns in ways detrimental to the lowlands. In the lowlander view, agricultural progress in the lowlands was hampered by the changed flow patterns derived from agricultural progress in the highlands. In 1918, the Red River Valley Drainage and Improvement Association was formed. Made up largely of representatives of the municipalities of Drainage District No. 2, the aim was to lobby the government more effectively.\(^1^9\) The Government of Manitoba was receptive to the Association’s

\(^{18}\) AM, Drainage Maintenance Boards Minutes and Office Files, GR 7784, Q 032694, file: Drainage - General, Memorandum Related to Drainage District No. 2, n.d.
concerns and connected them to expressions of discontent received from individuals in the area and in other drainage districts. It was clear that something had to be done. Drainage in southern Manitoba was at a watershed.

5.3 The Sullivan Commission and the Watershed

The Provincial Government was eager to respond, but was not clear how to proceed. Officials sought the advice of Charles Gleason Elliot, a prominent American drainage engineer. Elliot served as Chief of Drainage Investigations for the United States Department of Agriculture and had published numerous works on drainage.\(^{20}\) His *Engineering for Land Drainage: A Manual for the Reclamation of Lands Injured by Water* was in its third printing by 1919. In 1918, at the request of the Manitoba Department of Public Works, Elliot conducted an examination of the Manitoba drainage system.\(^{21}\) He was contracted to suggest the sort of inquiry that should be mounted into drainage problems in Manitoba and to offer preliminary thoughts on possible solutions.

Elliot submitted his report to the Minister of Public Works in June 1918. It contained much that was favourable. Well-acquainted with the challenges of drainage, Elliot appreciated the government’s efforts to grapple with a difficult situation. Early efforts seemed well-intentioned and at least moderately successful, given the severity of

---

\(^{19}\) AM, GR 1609, G 8019, file: Drainage - General, Drainage Commission Notes by Mr. McColl, n.d.

\(^{20}\) C. G. Elliot is discussed as a significant figure in the planning and administration of American drainage projects in Meindl, Alderman and Waylen, “On the Importance of Environmental Claims-Making,” 682-701.

\(^{21}\) AM, GR 1609, G 8019, file: Drainage Commission, Report on Land Drainage in the Province of Manitoba by C. G. Elliot, 5 June 1918. See also AM, GR 7784, Q 032694, file: General, Text of an Address delivered at annual meeting of Union of Municipal Drainage Districts by F. E. Umphrey, 27 November 1945.
Manitoba's drainage problem. The province was keeping pace with other regions of the British Commonwealth, many of which were in the process of "revising and perfecting their drainage systems and doing it at large expense." On balance, his report praised *The Land Drainage Act*, while recommending some adjustments.

Though he was careful not to anticipate the results of the official investigation, C. G. Elliot envisioned major changes. In a manner reflecting the careful tone of his report, Elliot began by noting the challenge of establishing appropriate drainage district boundaries, especially "where natural drainage lines do not point out clearly the divisions between the watersheds." He asserted that expert examination of the land was the only way to define watersheds effectively, and recommended that a survey should be part of any government investigation. Though couched in diplomatic terms, it is clear that Elliot made a connection between the constrained boundaries of drainage districts and the problems with which they were afflicted. He goes on to further clarify the matter:

- a drainage district unit cannot often follow political divisions without violating some law of slope or controlling topographical feature of the land. We should observe and be governed by conditions which Nature has imposed, as nearly as we can.


23 Ibid.

24 Ibid.
Elliot had, with feather-light touch, put his finger on the heart of the drainage problem. He also pointed out possible pitfalls in striving for resolution. From a discussion of the importance of the watershed, he moved directly to address the matter of public relations. He recommended that any Commission formed by the government should keep in close touch with the affected settlers, as “the cordial cooperation of all parties concerned is highly desirable, and even necessary, if the best results are to be obtained.”

In a manner consistent with Elliot’s vision, a commission was formed by an Order-in-Council of 17 January 1919.\textsuperscript{25} J. G. Sullivan, a civil engineer much experienced with railroads, was appointed chair with farmer H. Grills and entrepreneur J. A. Thompson rounding out the commission. The commissioners spent about two years examining the question of drainage through the study of local geography, research on drainage practices elsewhere, and consultations with experts and settlers. They returned their report in December 1921. It lacked Elliot’s diplomatic tone, and began with a curt dismissal of complaints about excessive taxation and corruption. It then went on to address the causes of flooding, determining that “the greatest factor causing damage from flooding is the changed conditions since the districts were first formed.”\textsuperscript{26} The change was particularly marked in relation to Drainage District No. 2. In seven townships just beyond the western boundary of the District, there were 4,177 acres (1,688 hectares) of improved land in 1877. Some 13 years later, the amount of cultivation had increased by nearly 4,000 acres (1616 hectares). In 1915, there were

\textsuperscript{25} AM, GR 1530, Order-in-Council # 30724, Report of a Committee of the Executive Council, 17 January 1919.

\textsuperscript{26} Drainage Commission, \textit{Report}, 11.
82,000 acres (33,128 hectares) ploughed. By the early 1920s, nearly all of the land in the area was cleared of timber and planted to crop. In lands further west but still within the watershed, commissioners put the rate of cultivation at 75%. The problem, as the report explained, was that such changes worsened flooding in the drainage district: "no matter how well the original channels were designed, and no matter how well they were maintained, they would not now be capable of properly taking off the extra rush of waters that comes from the higher grounds on account of the changed conditions."\(^{27}\)

Confronted with the inadequacy of the drainage district as a watershed substitute, commissioners pondered what to do. They proposed a solution, to be applied to all the drainage districts of the province: the boundaries of the drainage district should "include all lands whose surplus waters drain into said district and are carried by an artificial channel through it to a natural outlet."\(^{28}\) Sullivan concluded by asserting that the watershed was the natural division of lands, arguing that "any other division leads to disputes."\(^{29}\)

Subsequent events would demonstrate that the watershed approach was no safeguard against disputes. Following the return of the report in December 1921, the Legislative Committee on Drainage convened a series of public hearings. Partial transcripts of the proceedings have survived, and provide a vivid picture of how the watershed idea was

\(^{27}\) Ibid.

\(^{28}\) Ibid., 20.

\(^{29}\) Ibid.
received. Not surprisingly, opinion often broke along topographical lines. The Province had sent notice of the hearings to the municipalities of the province, and those who testified were identified as representatives of specific municipalities (Map 5.2 shows the location of all municipalities involved). Many from municipalities that overlapped substantially with one or more drainage districts were sympathetic to the idea of watershed management. For instance, a representative from Roland, the eastern half of which was included in Drainage District No. 2, argued that “there seemed to be no other logical boundary for [drainage] except the watershed.”

30 AM, GR 1609, G 8019, file: Drainage Commission, Drainage Committee Report, p. 54. Municipal representatives who spoke in favour of the report came from the municipalities of Rhineland, Ste. Rose, Glenella, Roland, Morris, Macdonald, Cartier, and Tache. This list draws on both the hearing transcripts and newspaper reports published in the Manitoba Free Press (16 February 1922) and the Winnipeg Tribune (8, 15, and 22 February 1922).
Those from highland municipalities took a different view, and the arguments they presented before the Committee are worthy of careful consideration. Many highlanders disputed the relation between an action in one region and an effect in another that underlay the watershed idea. They were not convinced by the assertions of the Sullivan Report, which they dismissed it as overly theoretical, and demanded more concrete proof of connections between highland change and lowland floods than the report...
furnished. Further, they doubted that such proof would be forthcoming, as the
Commission's description did not square with how they understood their lands. Many
had a different view of the effect of cultivation on surface water patterns. Reeve D. F.
Stewart of Thompson Municipality, situated directly to the west of Roland, argued that
the Sullivan report was "entirely wrong" in its assertion that extensive cultivation had
led to hastened and increased runoff. He was blunt: "any farmer who knows anything
about farming knows that cultivated land will not run off water faster than wild land."
There was a logic behind his assertions: "the frost is out two feet on the cultivated land
before it is out of the grass land, and it is free therefore to absorb more water...." To
Stewart's mind, commissioners had an erroneous understanding of the environment. He
sought to enlighten them, explaining that in many parts of Thompson Municipality, "we
are holding that water back all we can, and would like to get more. We have lost our
crops for want of water. It is not drainage but irrigation we want."

From the highlander vantage point, the report was simply wrong about the Manitoba
environment.

Sullivan had not anticipated this line of critique. Indeed, he was entirely confident that
all would see the inherent justice of aligning drainage district boundaries with the
watershed and assessing all landowners within the watershed for a portion of the
expense of drain construction. His confidence was reinforced by officials in the

31 AM, GR 174, G 8373, file 13: Drainage Committee Report, Testimony of Reeve D.F. Stewart,
Thompson Municipality, pp. 33-44. According to the hearing transcripts and media reports, speakers from
the municipalities of Stanley, Thompson, Pembina, Lorne, Grey, Dufferin, Victoria, and South Norfolk
disagreed with the Report of the Manitoba Drainage Commission.

32 AM, GR 1609, G 8019, file: Drainage – General, Drainage Committee Report, p. 182
Manitoba Department of Public Works. H. A. Bowman, Chief Engineer in the
Reclamation Branch, wrote to the Chair of the Legislative Committee, explaining that
after having “given this matter considerable study” he had come to the conclusion that
management by watershed “is the only solution to the acute problem before us.”
Further, at this point he felt sure that it would “be hard to find any Engineer of repute
who has made a study of reclamation who will hold a contrary opinion.” However,
scientific consensus on watershed management was not complete. While the experts
cited by the Sullivan Commission emphasized that, as a general rule, tree cutting and
crop planting increased both the speed and amount of runoff, the link between action in
one part of the watershed and effect in another remained diffuse and controversial. For
instance, Engineer Bowman himself noted in a 1929 letter that “opinions are largely
divided among Reclamation Engineers, the majority, perhaps, being of opinion that
growth or denudation of timber has little or no effect on total run-off.” Contrary to
Sullivan’s expectations, even experts disagreed over the effect of highland drainage on
lowlands.

Highlanders had an alternative explanation for the proposals contained within the
Sullivan Report. Those who felt ill-served were quick to claim collusion between
lowlanders and the Commissioners. The recommendations would unfairly involve
highland farmers in the solution of lowland problems, despite the fact that highlanders
had their own environmental challenges to confront. Highlanders were not mollified by

33 AM, GR 174, G 8374, file 13, H. A. Bowman, Reclamation Branch Chief Engineer, to W. C.
McKinnell, Chair, Legislative Committee on Drainage, 16 February 1922.

34 AM, GR 1611, G 8062, file: Reclamation Branch, H.A. Bowman to D.G. McKenzie, 12 April 1929.
Sullivan’s assertions that their contributions to the costs of drainage would be comparatively moderate, and that if the rate of flow had not been increased, they would not be liable at all. Highland representatives completely rejected the idea of watershed management. Indeed, they found it “incredible that any legislative body should attempt to put across such a despotic and arbitrary matter as this.” The report of the Sullivan Commission seemed a “diabolical plot,” and those opposed vowed to fight against it “until the last ditch.”

Why such strident language? The answer to the question goes to the heart of the matter. For those affected, such terminology seemed only appropriate to what they saw as a fundamental betrayal of the terms under which they had taken up land in the province. Highlanders were being told that they contributed to lowland flooding not through an acknowledged evil such as irresponsible drainage but through the apparently good actions of clearing and cultivating. Under the Dominion Lands Act, homesteaders were required to clear land and make improvements in order to secure title to their lands. Purchasers would do the same in an effort to capitalize on their investment. Highlanders who cleared land had been doing just as they had been encouraged – even obliged – by government. Now the Sullivan Commission asserted that by improving the land, highlanders had rendered themselves liable for damage to the lowlands.

35 AM, GR 1609, G 8019, file: Drainage Commission, Drainage Committee Report, pp. 20, 33, 48, 55.

36 The fact that the Dominion Lands Act was federal legislation and land drainage was governed by provincial legislation did not receive any attention. Likely, jurisdictional distinctions seemed less significant than the regulations themselves.
Beyond the question whether such good work as land improvement could have negative consequences such as financial liability, there was the issue of whether settlers had any responsibility for quarter-sections other than their own. Much highlander testimony came in the form of stories of settlement on quarter-sections beset with challenges every bit as daunting as the flooding that afflicted lowlanders. Indeed, some highlanders claimed to have recognized the flood danger in the lowlands and decided that they preferred to invest time and money in clearing and breaking the highlands. The census of 1921 suggests that, once established, farms in the lowlands were generally more productive than those in the highlands.\(^{37}\) Resentment was exacerbated by what seemed the injustice of funding the improvement of, in the words of the representative from Thompson Municipality, “land which is worth much more than ours.”\(^{38}\)

Before the Legislative Committee, the complexity and diversity of highland settler experiences was reduced to one substantive point. They had received no assistance with the hard tasks they faced on arrival. So why should they assist with drainage? One highlander explained how he paid $4,500 for a highland quarter-section that had been already cleared of timber. His brother paid $1,700 for undrained lowland that was subject to flooding.\(^{39}\) In his mind, the $2,800 difference in their initial outlay represented the price of improvement, whether what was needed was clearing or

\(^{37}\) The 1921 census suggests that the lowlands were in fact more agriculturally productive than the highlands, despite drainage problems. Canada. Census of Canada. Table 79: Farms and Farm Property, 1921.

\(^{38}\) AM, GR 1609, G 8019, file: Drainage Commission, Drainage Committee Report, pp. 33.

\(^{39}\) AM, GR 174, G 8374, file 13, Drainage Committee Report, p. 127.
drainage. Having paid the price himself, he was unwilling to subsidize his brother. Not even familial relationships moderated the conviction that individuals should fund improvements to their own homesteads. Highlanders felt they should be free to do as they wished on their own lands. Indeed, it was the opportunity for private land ownership extended by the *Dominion Lands Act* that had drawn many to the prairies. The notion of watershed management proposed by the Sullivan Commission conflicted with the individualistic terms in which settlers conceived their lives.

This was a heated debate and its key referents were the fundamental legislative and ideological pillars that underpinned the settlement of the Canadian prairies. The *Dominion Lands Act* linked private property and agricultural progress, as homesteaders proved up by cultivating their lands. In southern Manitoba’s soup bowl, progress for some meant disaster for others. Watershed management seemed to some a solution, but to others, a betrayal. The watershed concept would have redefined property and progress by establishing a relation between highlander and lowlander areas. As highlanders could potentially be obliged to contribute to the cost of lowland drainage, they would be involved in the improvement of lands they did not own. Not surprisingly, they objected.

Environmental historian Mark Fiege has used patterns of water flow to explain the experienced environmental and social world of irrigated Idaho. The Manitoba example illustrates that settlers not only lived amidst watershed processes, but also

---

engaged actively with the notion of the watershed. They were enmeshed with the watershed not only experientially, but also intellectually. For some, notably the highlanders, other ways of conceptualizing their land and their lives seemed to them both more accurate and more fair. The watershed idea did not accommodate the human history of the landscape – the notion of private property legitimized by agricultural improvement that was, to settlers, entirely naturalized. The scope of the debate, in which watershed management was likened to treachery, certainly made it more difficult for any party, individual or government, to advocate the adoption of management by watershed. In the wake of the hearings, the Provincial Government would not – could not – enact the watershed approach.

5.4 Dry Years, Obstructed Flows

In Manitoba, the use of surface ditches rather than underground tile drains substantially reduced capital costs. However, it created the necessity for ongoing maintenance, as surface drains were vulnerable to processes of erosion and sedimentation that could significantly impede their capacity to transport water quickly and effectively.⁴¹ Open ditches proved particularly problematic in light of how agricultural intensification affected the regional environment. The problem of topsoil loss was evident across the prairies from early on. In 1901, the annual report of Manitoba’s Department of Agricultural and Immigration explained that

---

⁴¹ Hewes and Frandson, “Occupying the Wet Prairie,” 40.
The prairies, which had for years been storing up humus, and whose particles of soil were knit together by the fibrous roots of grasses, have in some districts become moving drifts of soil.42

Topsoil blown by the wind collected in low areas such as drains. In 1922, engineers estimated that the capacity of some early drains was already diminished by as much as 40% to 50%.43 Matters worsened over subsequent years, with the winds of 1925-26 so “disastrous” as to result in drains “being blocked for half a mile at a stretch.”44 A problem that was building at the turn of the century was a crisis by the 1930s. Dry periods such as the dirty thirties exacerbated the processes that contributed to drain degradation.45 Across the prairies, farmers watched as dry winds stripped fertile topsoil from their fields. In Manitoba’s drained landscape, lowland settlers watched with equal dismay as the material lodged itself in their ditches.

The topsoil that was so valuable on the fields was nothing but a problem in the ditches. Clogged drains caused water to back up over the fields, but “the cost of cleaning out drains after every wind storm [was] heavy.”46 There was no machine suited to the task, and drains had to be completely dry to allow for the use of horses. Disposal of the topsoil was another problem. As reported by the Department of Public Works, topsoil was “the very worst road material we have, and laid thickly on top of an existing grade

42 AM, GR 174, G 8218, Department of Agriculture and Immigration Annual Report, 1901.
43 AM, GR 174, G 8374, file 13, H. A. Bowman to W. C. McKinnell, 16 February 1922.
44 AM, GR 174, G 8379, file 2, Department of Public Works Annual Report, 1927.
45 Ellis, The Soils of Manitoba, 31.
46 AM, GR 174, G 8379, file 1, Department of Public Works Annual Report, 1926.
renders it almost impassable in wet weather.\textsuperscript{47} The material that ended up in the ditches had lost none of its fertility, though this was no longer available to farmers. Weeds grew abundantly in the silted ditches, further anchoring the blockages and complicating drain maintenance. By 1930, the willows in the drains of District No. 2 were nothing less than “a menace that must be dealt with.”\textsuperscript{48} As farmers in the early 20\textsuperscript{th} century became increasingly concerned with weed growth and as governments established policy designed to encourage eradication, unmaintained drains became notorious as vectors of weed dispersal.\textsuperscript{49} The material removed in drain construction was generally either formed into levees along the length of the drain or spread over the adjacent land. Farmers were encouraged to sow useful grasses in these areas, in order to leave less space for weeds. This strategy was of course not appropriate in the drains themselves, where a relatively clear channel was necessary to maximize water flow. Drains that failed to adequately transport water because of siltation proved ideally suited to the diffusion of unwanted plants.\textsuperscript{50}

Drain degradation was also worsened by farmers’ efforts to adapt to dry periods an infrastructure that was tailored to wet years. Some deliberately obstructed drains. Erecting a small dam was an easy way of creating a convenient source of water for

\textsuperscript{47} AM, GR 174, G 8374, file 2, Department of Public Works Annual Report, 1921.

\textsuperscript{48} AM, GR 174, G 8379, file 4, Department of Public Works Annual Report, 1930.

\textsuperscript{49} AM, GR 174, G 8367, file 2, Department of Agriculture and Immigration Annual Report, 1922.

specialty crops or livestock. This became especially prevalent in areas where groundwater resources were inadequate or unsuitable, such as throughout much of the clay-soiled Red River valley. Even if farmers removed the dams during periods of high water, pooling behind obstructions would have already induced deposition of sediment that would have remained suspended in flowing water. Dry years contributed to infrastructure degradation that would have catastrophic potential when wet years returned.

Obstructed ditches disrupted the water flows that the systematic drainage of The Land Drainage Act had made possible. But flows of cash between the province, the municipality, and the drainage district were every bit as problematic, and came into sharp focus over the question of maintenance. We have seen how drainage figured in the development of the municipal system in Manitoba. Over the years, municipal governments acquired meaning as they played a role in local affairs and cooperated with the Manitoba government on larger projects of local consequence. In the years before the Act, drains were funded as entirely municipal, entirely provincial, or joint undertakings, depending largely on size and location. Maintenance was the responsibility of the municipality where the drain was located. Though the work undertaken before 1895 did not amount to systematic drainage, it nevertheless established institutional patterns that remained prevalent into the twentieth century.

The 1895 *Land Drainage Act* was designed to facilitate large-scale drain construction, but municipal governments remained fundamental to project financing. Drainage districts lacked independent administrative infrastructures and thus were unable to collect their own levies. The municipality became responsible for collecting the assessment from the residents of all drainage districts within its borders and for forwarding the money to the Province. Drainage districts often overlapped a number of municipalities. For instance, Drainage District No. 2 included portions of the Municipalities of Morris, Roland, Macdonald, Dufferin, Grey, Portage la Prairie, and Cartier. Each of these seven municipalities was responsible for collecting the drainage levy from the landowners in the portion of Drainage District No. 2 in their municipality, as well as from any other drainage districts within their jurisdiction. Collecting the drainage taxes was a significant imposition, especially when a single municipality overlapped with several drainage districts.

The provincial government also used municipalities to prop up drainage districts in financial ways. This provoked dissatisfaction among municipal residents as well as municipal officials. Municipalities levied taxes on all residents to cover the costs of local services and infrastructure. The rate of taxation for which landowners were liable was determined partly in relation to the value of their property. *The Land Drainage Act* specified that, for the length of time it took a drainage district to pay down the drainage debt, no adjustment could be made to the assessed value of the drained land.\(^{52}\) As a result, after a few years, landowners benefiting from drainage were still paying

\(^{52}\) AM, GR 1610, reel M 932, p. 193, C. H. Dancer to J. G. Harvey, 4 May 1909.
municipal taxes as if their lands were waterlogged. Drained land worth $60 to $100 per acre was assessed as if it were still wet land worth $2 or $2.50. As drainage levies were to be paid over periods of 25 or 30 years, those in drainage districts were given what amounted to a long-term break on their municipal taxes.

The frozen municipal assessment was used as an incentive by government officials and drainage advocates as they sought to sell the idea of drainage district formation to skeptical landowners. The problem was that this incentive came at the expense of the municipality. The power of municipal officials to increase taxes was distorted. The Land Drainage Act imposed no restriction on rates levied on municipal residents outside drainage districts, but rates within drainage districts were restricted. Municipal officials were confronted with a decision. Should levies be dramatically increased on those outside the drainage district, to compensate for the impossibility of enacting a more moderate increase across the entire municipality? Should municipal infrastructure projects be curtailed? The larger the portion of a municipality included in drainage districts, the more difficult the situation for local officials.

The situation was exacerbated by the fact that drain maintenance was a municipal responsibility. Under The Municipal Act, municipalities were responsible for the maintenance of local infrastructure. By and large, this meant taking care of roads,

54 Ibid.
bridges, and drains. All of this was funded out of revenue generated through municipal
taxes, with occasional assistance from the provincial government. After the 1895
passage of The Land Drainage Act, looking after drains became a much more onerous
responsibility. Indeed, maintaining the infrastructure of a drainage district was an
undertaking on an entirely different scale from the care of the small drains that had
existed prior to 1895. Many municipal officials were not aware of their responsibility
for drainage district drains, assuming that as the Province was responsible for
construction, so was it responsible for upkeep. Others objected to the arrangement and,
in protest, resisted spending their limited municipal resources on maintenance.

Those who were liable for the drainage levy that covered the cost of drain construction
benefited from a frozen municipal assessment and thus paid a reduced rate to the
municipality. As a result, residents who had the most tenuous connection to the benefits
of drainage made a disproportionately large contribution to local coffers. As drain
maintenance was to come out of municipal funds, those living outside drainage districts
ended up contributing the largest proportion of the money available to fund drain
maintenance and other municipal undertakings. Provincial legislation shielded drainage
district residents from increases in the municipal assessment, and ensured that a
substantial proportion of municipal tax revenues were spent on maintenance within the
drainage district. To municipal residents beyond drainage district boundaries, it seemed
that those in drainage districts paid less but got more. That this situation "did not lend
itself to the raising of money for the maintenance of ditches...” was readily apparent to members of the Sullivan Commission by 1921.\textsuperscript{56}

But dissatisfaction was not limited to municipal officials and residents outside drainage districts. People living in drainage districts sometimes failed to appreciate or acknowledge that they were getting a break on their municipal taxes because even a low municipal tax could add up to a substantial sum, when inflated by the drainage levy. Also, as drains were built at once but paid for over time, their ineffectiveness could be assessed long before the debt was retired. In many places, it was soon apparent that drainage would fail to live up to expectations. Some people attributed their disappointment to land use changes on the highlands. Unreasonable expectations were also a problem when some drained land simply turned out to be less productive than had been hoped. Combined with the issue of inadequate maintenance, which threatened whatever improvements had been effected, these concerns left many lowlanders dissatisfied. Some drainage district residents withheld payment of the drainage tax out of anger and frustration; others, especially in difficult economic times, simply could not make enough to pay the bill.\textsuperscript{57} As the municipality collected the drainage levy for the Province, landowners who did not pay became a municipal problem.

\textsuperscript{56} Drainage Commission, \textit{Report}, 9. For further evidence that Sullivan understood that a key aspect of the problem was the tension between the municipality and the drainage district, see AM, GR 1609, G 8019, file: Drainage – General, Drainage Committee Report. Note especially pages 131-158.

\textsuperscript{57} AM, Executive Council, Premier’s Files (Administrations of John Bracken, Stuart Garson, and Douglas Campbell), GR 43, G 61, file: Drainage Districts, Drainage Districts Committee to W. R. Clubb, 15 February 1934.
The awkward administrative and financial relations between the Province, the municipalities, and the drainage districts were the roots of a crisis in drainage financing. The catalyst was the economic catastrophe of the Great Depression. The Province looked to municipalities for remittance of the drainage levy. When prices for agricultural products plummeted and farmers defaulted on their municipal taxes, many municipalities were unable to meet this obligation. As the Minister of Public Works heard in February 1934:

the farmers in the drainage districts are finding it exceedingly difficult to pay those extra taxes, and in some districts these taxes are the main cause of the general exodus, and have placed the municipalities serving these areas in an extremely precarious position.

Between 1928 and 1935, the government allowed 16 municipalities to postpone drainage payments. On 30 April 1935, the drainage districts owed the Province almost $4 million – a substantial debt on a drainage infrastructure valued at approximately $7 million. Clearly, adjustments were necessary if municipalities were to remain solvent.

_The Land Drainage Arrangement Act_ of 6 April 1935 established a Royal Commission to investigate municipal debt resulting from drain construction. Professor John N. Finlayson of the Faculty of Engineering at the University of Manitoba was appointed

---


59 AM, GR 43, G 61, file: Drainage Districts, Report submitted to W. R. Clubb, Minister of Public Works, 15 February 1934. For more on this, see AM, GR 174, G 8233, file 3, Select Standing Committee on Agriculture and Immigration – Reports, 1933.

60 Land Drainage Arrangement Commission, _Report_, 16.
chair. John Holland, Reeve of the Municipality of Springfield and John Spalding, Secretary of the Union of Manitoba Municipalities were also appointed. Reflecting the desperate nature of the situation, *The Land Drainage Arrangement Act* not only defined the powers and responsibilities of the commission, but also made some preliminary adjustments designed to ease the financial burden of municipalities. Although these interim grants from the provincial government were intended only to tide over particularly hard hit municipalities, they seem, in hindsight, a harbinger of what was to come.

The Finlayson Commission recommended that the Province assume about 45% of the accumulated debt of the drainage districts. This was a notable departure from earlier thinking on drainage whereby district residents were to bear the entire financial burden of drainage. It was related to shifts at various levels of government, as policy-makers increased state intervention in response to the dual environmental and economic crises of the 1930s. Provincial funding for drainage was in keeping with the tenor of the times.

The idea of the Province paying for drainage conducted under *The Land Drainage Act* was not entirely new. Indeed, the question had come up for discussion before the Legislative Committee on Drainage in the early 1920s. At the time, the question of road-building provided the catalyst. Road-side ditches were identified as a means by which changes in the highlands had a detrimental effect on the lowlands. Leaving aside

---

61 AM, GR 589, Order-in-Council #602/35, 23 May 1935.

62 AM, GR 1617, G 5324, Survey of Foreign Water in Manitoba by H. H. McIntyre, September 1946.
for the moment their unwillingness to accept any connection between actions on the highlands and effects on the lowlands, highlanders submitted that anyone who traveled through the highlands, not only residents, benefited from road improvements. Indeed, it was asserted, provincial prosperity was tied to the existence of a road network. Representatives from highland municipalities argued that because all Manitobans had an interest in road-building, the entire province should be liable for any damage caused by road-side drainage. Highlanders alone should not be obliged to compensate lowlanders for increased flow resulting from road construction. The whole province should pay.

The matter ramified. If the province at large had an interest in roads, perhaps the province at large had an interest in drains. Drainage was necessary for agricultural progress. Agriculture was fundamental to the future of the province. Therefore every Manitoban was interested to the extent that all would benefit from the provincial prosperity an effective drainage system would ensure. Not surprisingly, representatives from the lowlands climbed aboard this train of thought. Some argued that the entire province should be considered as part of a single drainage district, with the result that the cost of drainage would be shared among all Manitobans.63 It was not only victims of flooding who found this a persuasive line of argument. Reeve Morten of the Municipality of Westbourne, who had never himself been subject to flooding and who represented an area that included but a relatively small amount of drainage district land, argued that the cost of drainage should be distributed among all Manitobans. “I am in

63 AM, GR 1609, G 8019, file: Drainage – General, Drainage Committee Report, p. 121.
favour of taking the whole province into the drainage district,” he submitted, “make it wide.”

But the provincial scale proved slippery. While all Manitobans would benefit from improved roads, so would visitors from Toronto. If agricultural production was the concern, drainage could have consequences that transcended even national borders. An article describing drainage in Manitoba published in “The Canadian Engineer” in the late 1910s identified “thorough and systematic drainage” as “the only hope of insuring good crops from year to year.” Good crops were essential if Manitoba were to fulfill its role in the empire. As explained in the article, “The basic industry of Manitoba is agriculture and the greatest economic service we can render the Empire is to increase the production of foodstuffs.” Particularly in the years following World War I, Manitoba’s imperial role was no minor consideration. Clearly, determining who had a stake in drainage was not an easy task. There was no natural scale at which projects should be financed.

Defined in terms of the identities of participants, debates over drainage in the first third of the 20th century were largely local. Despite the importance of occasional interventions from international experts such as C. G. Elliot, contributors were overwhelmingly Manitoban: rural landowners, local professionals, and municipal and

---

64 Ibid., 105-107
65 AM, GR 174, G 8374, file 13, Special Committee on Drainage, p. 90.
provincial governments. Nevertheless, the terms of debate were certainly not provincial. Working out the matter of drainage meant considering broader questions. What was the interest of the province, the nation, the empire in drainage? What was the appropriate relation of settlers to their land, and of neighbors to each other? For participants, the debate was carried out in a local context but the stakes were far larger. Critiquing the grand scale of earlier water histories by scholars such as Donald Worster, environmental historian Donald Pisani has emphasized that reclamation in the United States should be analyzed from the bottom up, with attention to local context and regional diversity. While many participants in Manitoba’s drainage discourse resembled Pisani’s locals, they dealt in Worster’s big ideas. Despite the importance of the distinction between highlander and lowlander perspectives, divisions faded somewhat as all grappled with the question of how best to make use of a challenging environment. Even in the context of public hearings that heightened antagonism by enabling confrontation, many Manitobans displayed a capacity for creative thinking about how best to live in the region.

The Finlayson Commission’s recommendation that the Province take on a substantial role in funding drainage was moderated by one of the report’s major assumptions: that the period of intensive drain construction in Manitoba was at an end. In the Commissioners’ views, drainage construction costs were about to drop substantially and

---


68 Such creativity is similar to that which historian Thomas Hughes sees as fundamental to the work of 20th century engineers. Thomas Hughes, *Human-Built World: How to Think about Technology and Culture* (Chicago: University of Chicago Press, 2004), 5-7.
all resources, administrative and financial, could be reoriented toward maintenance. Following from this, the Commission recommended a sweeping reorganization of the administrative infrastructure. Drainage districts should be slightly reshaped, renamed drainage maintenance districts, and equipped with a staff to manage maintenance. A board of maintenance trustees was to be established for each drainage maintenance district, consisting of one representative from each municipality within the district. All boards were to be chaired by an individual appointed by the Lieutenant Governor in Council. The board was to be granted full control over the maintenance of drainage works. It would have at its disposal both the funds supplied by the province and the money raised through an annual levy on residents of drainage maintenance districts.

All of this seemed reasonable in the dry years of the 1930s. With less water in the ecosystem, there was little risk of flooding and there were few tangible reminders of the inadequacies of the drainage infrastructure. While all parties were aware that precipitation rates varied through time, there was still little appreciation of what this meant for drainage in practical terms. Chapter three considered how an association between drainage and permanence figured in early drainage efforts, and examined the dissatisfaction that resulted when drains needed further work. Here again is the problem of unreasonable expectations. The dynamic nature of the Manitoba environment compelled ongoing adjustments every bit as expensive as new work. The presumption that maintenance would be easier than the hard work of construction belied the reality of drainage as an ongoing, adaptive endeavour driven by both anthropogenic and nonanthropogenic environmental change.
The Finlayson Commission addressed a financial crisis and clarified responsibility for maintenance. However, the consolidation turned on the unhelpful, even misleading, distinction between construction and maintenance. As an earlier generation of Manitobans had anticipated that drain construction would resolve the flooding problem, the Finlayson Commission’s report turned on the presumption that a limited annual expenditure on maintenance would accomplish the same end. While this was perhaps a more realistic view, it was still problematic. As defined by the government, maintenance implied moderate projects involving modest expenditure. But adapting drainage infrastructure to environmental change could involve projects as substantial as initial construction. Expectations had changed, but they remained unreasonable. The sort of modest financial arrangements seen as sufficient to fund maintenance were entirely inadequate when the necessary work was logistically and financially on par with new construction. While farmers across the prairies hoped for rain in the dry years of the 1930s, the increased precipitation of the 1940s brought problems to the surface in Manitoba’s drained landscape.

5.5 Wet Years, Flooded Fields

The provincial government was willing to go some distance to make the new arrangements work. Engineer E. F. Umphrey was appointed chair of the drainage maintenance boards, and he set about establishing a new administrative infrastructure. But a letter from the Province to the municipalities in the spring of 1936 indicated that not all the recommendations of the Finlayson Commission would be adopted. Although
Finlayson proposed that the government undertake certain improvements immediately and make an annual contribution toward the cost of maintenance, municipalities were informed that the government was “unable to undertake the capital expenditures involved in some of these recommendations.” The financial crisis that had obliged the government to reevaluate drainage financing was now hampering its ability to follow through on the proposed solution. Still in a dry period, there were no immediate environmental consequences from a decision to scrimp on drain upkeep. With little water in the drains and many other pressing worries, it does not seem surprising that there was little significant public protest.

Over the years, the Manitoba government continued to interpret the Commission’s report in ways that minimized its obligations. Instead of paying either a third or a half of the cost of maintenance as recommended by Finlayson, the Province provided either a third or a half of municipal contributions, up to $30,000. Although this was later raised to $40,000, any cap made the drainage maintenance boards liable for heavy costs in particularly wet seasons. During the dry years of the late 1930s and early 1940s, drainage expenditures fell well within the $30,000 allowed by the Province. Indeed, a small surplus was accumulated and made available to any district in need of additional funds. In this period, maintenance boards chair Umphrey did what he could: assisting

---

69 AM, GR 1609, G 8048, file: Levies, Attachment to an interdepartmental memorandum titled Re Drainage by A. W. Smith, 12 May 1936.


71 AM, GR 7784, Q 032694, file: Letters etc. Drainage Maint. B’d’s, F. E. Umphrey to W. R. Clubb, 4 March 1938.

187
with the establishment of the drainage maintenance boards, managing the equipment to be used in maintenance, and establishing strong working relationships with municipal and provincial officials and the trustees of the drainage maintenance boards. Umphrey knew full well, however, that he was simply making good use of the calm before the storm. With inadequate government support, wetter years would bring trouble.\textsuperscript{72}

In 1943, it started to rain. Higher water quickly drew attention to "many instances of errors in judgment and neglect in maintenance" over the years since the Finlayson Commission.\textsuperscript{73} Drainage maintenance boards began asking municipalities for funds to cover necessary work beyond what was possible through the provincial grant. Still, it was impossible to fund sufficient work to entirely offset the higher water levels. Once again, lands were flooded and Manitobans were unhappy.

On 27 June 1944, the Union of Municipal Drainage Maintenance Districts [UMDMD] was organized. By 1947, 24 of the 27 municipalities in drainage maintenance districts were members.\textsuperscript{74} In a manner reminiscent of the Red River Valley Drainage and Improvement Association's lobbying for an enquiry in the 1910s, the UMDMD demanded a government investigation. The government quickly increased funding to the drainage maintenance districts and began to consider ways in which additional

\textsuperscript{72} AM, GR 1617, G 5324, Address Delivered by F. E. Umphrey at the Union of Municipal Drainage Districts, 27 November 1945.

\textsuperscript{73} Ibid.

\textsuperscript{74} AM, G 1609, G 8046, file: Drainage Maintenance Boards Overexpenditure 1944, 1945. Union of Municipal Drainage Maintenance Boards, President's Address at 3rd Annual Convention, 9 January 1947. AM, GR 7784, Q 032694, file: General, M. A. Lyons to F. E. Umphrey, 10 December 1945.
resources would be made available in times of crisis. While the government was unwilling to establish another Royal Commission, it acknowledged that action was necessary, both to address the current situation and to prevent similar crises in the future.

By Order-in-Council of 14 January 1947, Civil Engineer M.A. Lyons, recently retired from a long career with the Department of Public Works, was appointed to investigate the drainage situation. Lyons’ review was far more comprehensive than the government had envisaged. It included interviews with municipal officials and farmers and inspection trips to each drainage maintenance district. Lyons operated in a context very different from that of the Finlayson Commission. By and large, the Finlayson report had addressed a concrete financial problem in a specific environmental context: a municipal debt crisis in a dry period. By 1947, increased wetness had exposed the government’s failure to implement some of Finlayson’s major recommendations and highlighted some of his report’s limitations. It also provided an especially vivid illustration of the dynamic nature of the Manitoba environment. Lyons began to think about what drainage arrangements predicated on environmental change would be like. The view of drainage as an ongoing activity began to gain legitimacy.

75 AM, GR 7784, Q 032694, file: General, M. A. Lyons to F. E. Umphrey, 10 December 1945.

76 AM, GR 589, Order-in-Council # 50/47, 14 January 1947. Lyons’ appointment was made retroactive to 1 September 1947, which suggests that he had been working on the matter since that time.

77 AM, G 1609, G 8046, file: Special Drainage Survey Conducted by MA Lyons, M. A. Lyons to E. F. Willis, n.d.
Accommodating dynamism meant tailoring funding to environmental conditions. Both anthropogenic (ongoing road building and land clearing) and nonanthropogenic (ongoing swings between wet and dry periods) changes required substantial alterations or additions to drainage infrastructure in order to cope with altered drainage patterns. As a result, Lyons concluded, there should be no fixed cap on government contributions. While $90,000 or $100,000 was estimated as an appropriate average annual government contribution, a key aspect of Lyons' recommendation was that the final figure would rise and fall entirely in relation to actual costs. Drainage funding would not be permanently fixed. It would be adjusted on an ongoing basis, in relation to prevailing conditions.

There were early indications that reconceptualizing drainage in relation to a dynamic environment would not be the only innovative aspect of Lyons' approach. At his own request, Lyons had been charged with considering the broad question of water management. The Order-in-Council by which he was appointed gave him a mandate to think about watersheds, referring to an investigation of "drainage, water conservation, and possible irrigation projects in Manitoba." Lyons was certainly not the only Manitoban thinking along these lines. Officials from a number of provincial

78 Griffiths, "The History and Organization of Surface Drainage in Manitoba," 4-7.
79 AM, G 1609, G 8046, file: Special Drainage Survey Conducted by M.A. Lyons, J. A. Griffiths to G. Collins, 11 June 1951.
81 AM, GR 589, Order-in-Council #50/47, 14 January 1947.
departments favoured rethinking government policy in this way, rather than dealing with either drainage or supply in isolation. Further, the brief from the UMDMD that had catalyzed the entire process specifically referred to the need to place the foreign water problem in its watershed context. Over the course of his investigation, however, Lyons became more pragmatic about watershed-based administration. Despite a general drift toward watershed thinking by the 1940s, Lyons’ report argued that the watershed concept was of little practical use in contemporary adjustments to the drainage infrastructure.

In a summary submitted to the Minister of Public Works in March 1948, Lyons recognized the intrinsic appeal of apportioning drainage costs on a watershed basis and explained how the first drainage investigation under J. G. Sullivan had proposed something along these lines. But he then noted that, however elegant in the abstract, the basic principle was difficult to reconcile with the Manitoba environment. The key problem was the lack of consensus on the effects that changes in the highlands had on the lowlands. From a lengthy survey of the relevant scientific literature, Lyons concluded that “it is extremely difficult, if not impossible, to determine definitely what effect changed conditions on the higher portions of the watershed has had on the run-off”

82 AM, GR 1609, G 8046, file: Special Drainage Survey Conducted by M.A. Lyons, Deputy Minister to E. F. Willis, 17 September 1946.

83 M. A. Lyons, Report and Recommendations on “Foreign Water” and Maintenance Problems in Drainage Maintenance Districts constituted under the Land Drainage Arrangement Act, 1935, Province of Manitoba (Winnipeg: King’s Printer, 1950), 1.

84 AM, G 1609, G8046, file: Special Drainage Survey Conducted by M. A. Lyons, M. A. Lyons to E. F. Willis, Minister of Public Works, 31 March 1948.
from these watersheds onto the lands in the drainage districts." Uncertainty regarding the relevant ecological processes, environmental records that were insufficient to establish prior conditions or track changes, and the inadequacy of existing logistical arrangements simply made it too difficult, in Lyons' opinion, to manage drainage on a watershed basis.

The concept of technological momentum helps to make sense of Lyons' change of heart. Through examination of the relation between technology and society, historian of science Thomas Hughes has argued that newer technological systems are more open to social influences while older systems tend to be less vulnerable to forces of change. By the mid-twentieth century, the drainage system in Manitoba represented a substantial investment of time, money, and effort. The physical infrastructure of drainage, though not always successful at keeping the water flowing, had momentum simply because it was already in place. Engineer F.E. Umphrey, chair of the drainage maintenance boards, explained the situation in typically awkward prose: "Watersheds are important only from an Engineering point of view for the purpose of the comprehensive design of an efficient and sufficient system...." He went on to explain how, at this late date, they would not necessarily play a helpful role in resolving the province's drainage problems.

85 Lyons, Report, 16.
87 AM, GR 1617, G 5324, Memorandum re: The Drainage Problem and a Suggested Solution, 14 April 1947.
In this view, the problem was less with the watershed idea than with the fact that it came so late to Manitoba.\textsuperscript{88} To invoke terminology applied by historian Martin Melosi to urban sanitary systems, drainage in Manitoba had become path-dependent.\textsuperscript{89} The Province missed its chance to introduce watershed management way back in 1895 with the passage of drainage legislation that did not incorporate the watershed idea. Particularly through the construction of physical infrastructure, developments since that time had set the province on a course that led away from watershed management.

Lyons feared that recommending a watershed approach at such a late date would exacerbate public dissatisfaction by confirming persistent suspicions of government mismanagement. The three commissions had failed to find evidence of anything much beyond oversight or error. Generally, those who administered drainage after 1895 seem to have done so in service to what they believed to be the public interest. Nevertheless, administrators were dogged by a public disappointed with fields that were still wet and suspicious of bills that kept coming. By the 1940s, administrators felt their jobs were as much the management of contention as the management of water. Beyond the sheer amount of work that would have been required to reshape the drainage infrastructure, public officials also considered the anger that might arise from a tacit admission that

\textsuperscript{88} Geographer James Wescoat connects what some commentators have seen as the failure of watershed-based management approaches to exactly this phenomena: “authorization of engineering projects has often preceded comprehensive basin surveys. This results in an unfortunate development sequence in which technological alternatives are selected first, after which planning becomes an exercise in adjusting to the new physical system.” Wescoat, \textit{Integrated Water Development}, 12.

earlier efforts to address flooding had been wrong-headed. In this social context, and notwithstanding Lyons’ innovative attention to the dynamic nature of the Manitoba environment, it seemed more expeditious to continue tinkering with the existing infrastructure than to try rethinking the problem it had failed to solve. Watershed management seemed both daunting and risky. This was an example of what might be called conceptual momentum.

Lyons’ recommendations built on the Finlayson Commission’s proposal that the Province should assume a substantial proportion of drainage costs. He proposed that the rate of funding should turn on the type of water to be carried: drains carrying only foreign water were to be paid entirely by the Province; drains carrying both foreign and local water were to be 2/3 paid by the Province; and drains carrying only local water were to be 1/3 paid by the Province. Lyons felt that “dealing with the ‘foreign water’ problem separately from ‘local water’ ” would allow for “a more rational basis of allocating the costs” of drainage. However, distinguishing foreign water from local water within a drain was no simpler than measuring highland run-off. Lyons’ pragmatic solution was based on the use of double dyke drains.

A double dyke drain consisted of two ditches excavated at some distance from each other. The material taken out of each drain was deposited on the bank furthest from the other drain, creating levies that enclosed the two ditches as well as the expanse of land.

91 AM, GR 1609, G 8046, file: Special Drainage Survey Conducted by M. A. Lyons, M. A. Lyons to E. F. Willis, 31 March 1948.
between them (see Image 5.1). In years of regular flow, water would be confined to the two drains. During freshet, the levies served to contain the early spring flow that often occurred before the ice had cleared from the drains. In times of extreme flood or heavy freshet, the levies provided an additional measure of protection for the surrounding area as water could flow over the land between the drains. The distinctiveness of these massive drains within a landscape crisscrossed by smaller waterways is emphasized by the fact that they were often referenced by name. Smaller excavations were known primarily by location, at least beyond the local community. The double dyke was not a new idea in the 1940s. Indeed, the Sullivan Commission had suggested in the early 1920s that double dykes might be useful in areas suffering from particularly severe spring flooding. This recommendation had led to the construction of the Norquay Channel, the 4N Drain, and the Tobacco Creek Channel. Construction costs were borne by the drainage districts these traversed. The Finlayson Commission recommended the construction of further double dykes at government expense, and identified as particularly important double dykes along the Elm Creek Channel and the Shannon Creek Channel in Drainage District No. 2 and the Hespeler Channel and Rosenheim Channel in Drainage District No. 12.

For Lyons, double dykes represented a means not only of coping with extreme flow, but also of maintaining a physical separation between highland and lowland water. The levies along the outer banks that prevented unusually large flows from spilling over

---


93 Lyons, Report, 7-8.
onto the lowlands also kept the drains from collecting any lowland water. If the same drains carried both foreign and local water, sorting natural from unnatural water would be difficult. If foreign water could be managed through an independent system, it would be far easier to relieve the lowlands of the financial burden of managing highland water.

The use of double dyke drains proposed by Lyons represented an approach to drainage that was entirely different from that advocated by the Sullivan Commission. Spared the impossible task of distinguishing between foreign and local water and relieved of the expense of draining foreign water, the drainage maintenance district constituted a viable entity. Instead of expanding districts to more closely approximate the watershed, patterns of water flow were to be altered so as to accommodate established district boundaries. The watershed was to be remade to accommodate the drainage district. As we have already seen, a drainage district – even when slightly modified and renamed a
drainage maintenance district – represented an aggregation of privately-owned quarter-sections beset by a flood problem. Bending the watershed around the drainage district amounted to bending the watershed around the ideologies that underpinned the quarter-section. Partly because of the problem of conceptual momentum, Lyons’ recommendations represented an effort to sustain within the troublesome topography of Manitoba’s soup bowl the conceptualizations of agricultural progress and private property affirmed over 70 years earlier by the *Dominion Lands Act*.

Lyons’ thinking was based as much on the responsibilities of the Province of Manitoba as on the rights of the individual land-owner. Explaining his recommendation that the Province assume more of the responsibility for funding drainage, Lyons pointed to what he saw as a fundamental principle of the 1895 *Land Drainage Act*: drainage works could be undertaken if they were to be of public benefit. Despite the many problems that had beset drainage in Manitoba, Lyons felt that the entire province had derived significant benefit from drainage. While noting that approximately 2,100,000 acres were included in drainage districts and that these were among the most productive areas of the province, Lyons argued that the benefits of drainage were far more widespread. 94 For Lyons, the matter ramified as it had before the Legislative Committee on Drainage over 20 years earlier. Drainage was necessary to agriculture. Agriculture was necessary to municipal success. Successful municipalities were necessary to Manitoba prosperity. 95 In support of his argument, Lyons highlighted some specific benefits of

---

drainage, such as increased land values, diversified and increased agricultural production, and enhanced transportation and communication networks. Despite the persistence of contention, there were indications that many Manitobans felt this way. Complainants to the Minister of Public Works occasionally accompanied their demands with acknowledgements that “successful farm communities” in many areas of the province “could never have been settled were it not for the drainage work.” Even those most dissatisfied with specific projects recognized that, in general, a drained landscape was more productive than an undrained landscape would have been.

While the provincial scale had proven slippery before the Sullivan Commission, with contributors moving beyond it to consider the national and imperial interest in drainage, Lyons found a handhold in provincial government willingness to contribute more money to drainage. Prior to the launch of his investigation, Minister of Public Works E. F. Willis had indicated to Lyons a willingness to “be fairly generous [with] the Drainage Maintenance Boards.” He felt it was “doubtful whether the Provincial Treasury pays a fair share of the cost of the work within the Drainage Districts in this Province.” This was in tune with broader shifts in thinking about the role of the state, with increasing acceptance of substantial intervention by governments after the 1930s. Public and political acceptance made enhanced provincial funding seem the most viable

95 Lyons, Report, 19.

96 AM, GR 1609, G 8046, file: Summary of Drainage Districts, Drainage Districts Committee to W. R. Clubb, 15 February 1934.


solution. The expenditure of provincial money could have been seen as another violation of individualism because it involved all Manitoba tax-payers in the funding of lowland drainage. Nevertheless, no substantial highlander protest was mounted; indeed, tensions between highlanders and lowlanders were somewhat defused. Provincially-based funding did not conflict with the basic terms of settlement in the way that highlanders felt watershed-based funding did. Provincial money would fund the remaking of watersheds to accommodate the twinned ideas of agricultural progress and private property that had not only governed agricultural settlement in Manitoba, but also defined how Manitobans perceived the problem of flooding.

5.6 Conclusion

Before the Legislative Committee on Drainage in the early 1920s, J. G. Sullivan asserted that drainage was "one of the most complicated and difficult problems in the country or in the world since the beginning of time." Though melodramatic, such an assertion may have provided some comfort to Manitobans who found themselves deeply mired in debates over drainage. From the passage of The Land Drainage Act in 1895 through the publication of M. A. Lyons' report in the late 1940s, drainage was a topic of persistent and serious concern for many Manitobans and their governments. Drainage before 1895 helped create a political culture characterized by persistent contention and pragmatic inclusiveness, with members of both dominant and subordinate cultures working together because of their understanding that successful drainage depended on cooperation and coordination. In the post-1895 period, inclusivity

was displaced somewhat by rivalries between topographically-defined communities of interest. Contention only intensified as it became entrenched in provincial geography.

Yet over the first half of the 20th century, there had been significant shifts in the conceptual underpinnings of Manitobans’ debates over drainage. Before the Sullivan commission, the key issue was whether drainage should be financed by the watershed conceived in relation to patterns of water flow or according to the drainage district conceived as an aggregate of flooded quarter-sections. This amounted to a debate over whether environmental conditions or state provisions for settlement should be preeminent. Sympathy increased over time for the idea that costs should be borne by all residents of the province. This reflected creative thinking on the part of Manitobans as well as the expanding role of the state across North America in the mid-twentieth century. Provincial money was put toward remaking the environment to accommodate how the land had been settled. There was also increasing acceptance of the need for accommodation on the human side, driven by the apparent inability to completely moderate the effects of swings between wet and dry. Annual Provincial contributions to drainage would rise and fall in relation to infrastructure needs largely reflecting the dynamic nature of the Manitoba environment.

Discussions about drainage were shaped in large measure by the history and geography of the province. The 1894 Northwest Irrigation Act, with its emphasis on management by watershed, was not applied to Manitoba and the 1895 Land Drainage Act did not incorporate the watershed idea. This left open the possibility of debate. In subsequent
years, drain administrators and special investigators took up the task of defining how the watershed concept would affect drainage in the province. Interested Manitobans made clear they would not be left out of the process. Deploying and evaluating the concept of the watershed was not merely the work of government officials assigned to the task. Clearly, the history of the watershed concept extends beyond the mythology of American John Wesley Powell. The Manitoba example illustrates the importance of local advocates – most notably the members of the Sullivan Commission – and of residents with vested interests in how water was managed. Many Manitobans worked with the watershed idea, both to make sense of the environment and to relate it to the other big ideas that defined their lives. Opinions about the concept often aligned according to geographical location, though the split was neither absolute nor final. Contention reigned as Manitobans engaged their governments and each other.

English planner Thomas Adams' assessment of conditions on the prairies, part of his broader analysis of rural life in Canada, was published by the federal Commission of Conservation in 1917. Adams' critique of prairie settlement operated on two main lines: environmental, with attention to the effects of farming according to land division that did not accommodate environmental variation; and social, with attention to the isolation created by the sparse, sprawling population created by settlement by quarter-section. The Manitoba experience bears out Adams' assertion that how the prairies were settled had profound environmental and social consequences. But these need to be explained and assessed with precisely the attention to local conditions – geographical

100 Thomas Adams, Rural Planning and Development: A Study of Rural Conditions and Problems in Canada Commission of Conservation (Ottawa, 1917).
and historical – that the survey did not employ. Analysis of flood-prone Manitoba suggests how the settlement grid’s environmental limitations may have served to counteract its social shortcomings as Manitobans were drawn together to cope with environmental problems that could only be addressed at scales larger than the quarter-section. Community and family isolation was curtailed to some degree by the need to work together for drainage. Even as highlanders and lowlanders were involved in often fractious exchanges, they were bolstering community lineaments through engagement in what both sides agreed was one of the province’s key difficulties. In short, the problem of drainage created community by involving residents in an ongoing process over a significant period of time.\footnote{Drainage was an enduring source of controversy in many places. Janet Timmerman says of a ditch in Minnesota: “Today, though the ditch is almost ninety years old, it continues to be controversial. Each time it must be cleaned of silt, new liens and taxes are assessed on the lands adjacent to it. Bitter feuds rekindle over the worth of the ditch. The wound in the land, to some farmers, continues to bleed them dry in taxes.” Janet Timmerman, “Draining the Great Oasis” in \textit{Draining the Great Oasis: An Environmental History of Murray County, Minnesota}, eds. Anthony J. Amato, Janet Timmerman, Joseph A. Amato (Marshall: Crossing Press, 2001), 101.}

It would be melodramatic to claim with Sullivan that drainage is “one of the most complicated and difficult problems in the country or in the world since the beginning of time.” But it is not overstating matters to assert that, in grappling with the geography of their province, Manitobans confronted not only the environmental conditions but also the political and social arrangements that bore on their lives. As they debated drainage, they considered the character of their society. In exchanges that took off from drainage, Manitobans grappled with broad questions that were posed in particular ways by their natural and cultural environments.
6 CROSSING BORDERS AND RESTORING WETLANDS:
CHANGING PERCEPTIONS OF THE MANITOBA ENVIRONMENT

6.1 Introduction

Big Grass Marsh, situated west of the southwest shore of Lake Manitoba (see Map 6.1), was once among the largest wetlands in the Province of Manitoba. But by the 1930s, the area that had been so deserving of its name was more a moonscape than a marsh. 40,000 parched acres (16,160 hectares) offered little to agriculturalists. The peat soils were highly combustible and fires smoldered underground. Escaping smoke mixed with the soil that drifted across the landscape, creating an atmosphere of eerie neglect. But to some ambitious Americans and their Canadian collaborators, this seemed the ideal location in which to launch their newest enterprise. What had once been Big Grass Marsh, they decided, would become Duck Factory No. 1. While continuing the history of wetlands in the wet prairie, this chapter explores changes in thinking about surface water management. It addresses how new modes of thought bore on established patterns of human-environment interaction.

Between the passage of The Land Drainage Act of 1895 and the middle of the twentieth century, Manitobans, environmental experts, and provincial politicians grappled with the question of drainage. In some ways, the problem seemed basic: there was too much water on agricultural land. Yet the very simplicity of this problem frustrated everyone and produced anger and resentment among those whose properties remained vulnerable to flooding. Gradually, however, people began to adopt new ways of thinking about surface water management. As the physical work of drainage proceeded through the
aggregation of small changes in a large number of areas, so a change in thinking came about through the accumulation of multiple catalysts. Events in two areas beset with persistent and challenging problems reveal how wider circumstances introduced new and different perspectives into the long-running debate over water management in Manitoba.

Map 6.1: Selected Surface Waters, Flood Control Infrastructure and Conservation Districts
Adapted from Figure 1: Location of Assiniboine River in N. Mudry, G. H. Mackay and V. M. Austford, “Flow Control and Flow Regulation Problems on the Assiniboine River,” in River Basin Management: Canadian Experiences, eds. Bruce Mitchell and James S. Garner, 297-309 (Waterloo: University of Waterloo Department of Geography, 1983); Map, Conservation Districts in Manitoba, Manitoba Water Stewardship, 2004.
The Roseau River crosses from the United States into southeastern Manitoba before joining the Red River some 22.5 kilometers (14 miles) into Canadian territory (see Map 6.1). This region was flooded periodically, but the situation deteriorated shortly after Canada and the United States signed the *Boundary Waters Treaty* in 1909 and created the International Joint Commission [IJC] as a mechanism to facilitate coordinated management of boundary waters.¹ Because of the international aspect, the Dominion government became far more involved in surface water management along the Roseau than in other parts of the province. The establishment of the IJC and its hearings on the management of the Roseau River expanded the number of actors involved in drainage and produced a significant shift in government thinking about water in Manitoba.

Big Grass Marsh had long frustrated attempts at drainage. Indeed, Ducks Unlimited [DU] became involved years after most Manitobans had given up on the area. A short biography of the marsh reveals the organization’s restoration efforts and the intellectual consequences these had, as efforts to bolster duck populations induced changes in public perceptions of prairie wetlands. It also details another way that influences from outside the province came to bear on Manitoba’s wet prairie landscape. The fate of Big Grass Marsh mattered even to those too far away to choke on its smoke.

6.2 Roseau River and the International Joint Commission

If North America could be abstracted from its political and economic history, there would be as many reasons to divide it into long north-south strips as into the east-west blocks of Canada and the United States. A number of commentators have remarked on the north-south grain of the American continent. Political scientist Kim Richard Nossal has suggested that this is reflected in the 42 rivers that cross and crisscross the 8,800 kilometre (5,466 mile) border between the two countries. In Manitoba, the most renowned of these is the Red River. Yet the much smaller Roseau River figured large in early international cooperation on water management. The Roseau runs northwestward through the state of Minnesota for about 65 kilometres (40 miles) before crossing into Manitoba. It drains an area of approximately 3,317 square kilometres (2,060 square miles), slightly less than half of which are in Canada. In 1893, Chief Engineer Louis Coste with the Dominion Department of Public Works reported that the river was 30 to 60 metres (100 to 200 feet) wide and varied in depth from 0.5 metres (1.5 feet) in dry

---


times to 3 metres (10 feet) in wet periods. He also noted that in some places the river was particularly marshy, with vegetation growing as high as 2 meters (7 feet).  

The land along the Roseau River was not Manitoba’s most desirable for agriculture. The soil was stony and fairly unproductive. Yet the combination of abundant wood and water, along with plenty of room for community expansion, proved attractive to settlers. Pockets of ethnic concentration developed, including a significant number of immigrants from Eastern Europe. Over time, mixed farming communities grew up. A government official noted that for the “hard-working, thrifty type of Central European” who had settled in the area, “the revenue from stock, dairy products and hay provided a good living for a family on nearly every quarter section.” As farms prospered, community institutions developed. Two municipalities were formed along the Roseau River: Franklin in 1883 and Stuartburn in 1902 (see Map 5.2).

---


Quickly it became clear that community prosperity would be threatened by insufficient
drainage and periodic flooding. As early as 1881, the provincial government undertook
improvement projects along the Roseau River. A drain was built to the river about 1.5
kilometres (1 mile) north of the international boundary. Due to both faulty design and
poor execution, the desired results were not achieved.\textsuperscript{9} Sent to evaluate the situation,
engineer John Molloy cautioned that failure to alleviate flooding would likely result in
abandonment of the region.\textsuperscript{10} The Municipality of Franklin undertook numerous
drainage projects, accumulating a debt of more than $100,000.\textsuperscript{11} Even this was
insufficient. Officials with both the Province and the Municipality came to believe that
formation of a drainage district under \textit{The Land Drainage Act} was the best way to
secure financing for the necessary works. In 1899, Drainage District No. 3 was formed.

Even generous funding and careful construction failed to solve the drainage problems of
the area. Some Canadians insisted that flooding was due to changes in the watershed
south of the 49\textsuperscript{th} parallel. Nevertheless, as the hearings on the Sullivan report showed,
there was no consensus on ecological linkages between the upper and lower watershed.

In the United States, uncertainty set the stage for a dispute between federal agencies
over whether deforestation radically altered runoff and stream flow. The Department of
Agriculture, with the support of many conservationists, took the view that changed land
management practices could solve surface water problems. In contrast, the Army Corps

\textsuperscript{9} AM, GR 1607, G 7980, item 874, Report on Drainage Municipality of Franklin by John Molloy, 5
August 1896.

\textsuperscript{10} Ibid.

\textsuperscript{11} AM, GR 1607, G 7988, item 411, L. Ross to Robert Watson, 3 April 1899.
of Engineers argued that massive infrastructure projects like dams were necessary in part because upstream land management could not sufficiently moderate downstream flooding.\textsuperscript{12} As federal money and agency prestige hung in the balance, what has become known as the forest-stream-flow controversy was fought with fervor comparable to that animating Manitoba's highlander-lowerlander disputes. When the upstream-downstream question was recast across the international border as a conflict between Minnesotans and Manitobans, however, there was a significant shift in thinking.

In 1909, as the \textit{Boundary Waters Treaty} inaugurated a new era of international cooperation on waterways of mutual concern, American officials suggested to Manitobans that both parties would benefit through cooperative management of the Roseau River.\textsuperscript{13} The Roseau offered an opportunity to address contentious issues at a relatively small scale.\textsuperscript{14} If a satisfactory resolution to transboundary management problems could be found, the precedent might govern the resolution of similar issues


\textsuperscript{13} AM, GR 174, G 8262, Navigation of Red River, 1908 and G 8327, Return to an Order of the House (no. 44) re flood control of Red River, 1922.

\textsuperscript{14} LAC, RG 51, vol. 1. "International Joint Commission Waterways Problems" by LJB, 17 September 1923. The author states that the Roseau River matter is an example of a situation that could develop along the Red River but at a smaller scale.
along larger waterways, such as the Red River.\textsuperscript{15} Despite continued problems along the Roseau and the opportunity to establish a precedent, American overtures for cooperation on Manitoba’s boundary were largely ignored until the creation of the Sullivan Commission. On 16 December 1919, American representatives travelled to Winnipeg to meet with politicians and administrators from the Manitoban and Canadian governments. The idea was “to arrive at some basis of co-operation on the large international aspects of the Red River problem.”\textsuperscript{16} J. G. Sullivan and J. A. Thompson of the Sullivan Commission and H. A. Bowman, Chief Engineer of the Manitoba Department of Public Works, attended. While “a basis of good feeling was established,” no practical strategies for cooperative management were devised.\textsuperscript{17} No ongoing relationship was established. On this matter as with so many others, the progressive activity of the Sullivan Commission had little lasting impact.

This was partly attributable to ongoing jurisdictional conflict. Both the Province and the Dominion were adamant that the other had lead responsibility. The Province argued that the international dimensions of the Roseau debate made it a Dominion matter. Ottawa countered that the matter was provincial jurisdiction under the \textit{British North America Act} because the Roseau was non-navigable and the problem was fundamentally one of drainage. Dominion officials may also have been deliberately uncooperative to protest


\textsuperscript{16} Herbert A. Hard, \textit{Report to the Governor of North Dakota on Flood Control, 1919-1920} (Grand Forks: Normanden Publishing Co., n.d.)

\textsuperscript{17} AM, GR 174, G 8375, Return to an Order (no 44) re flood control of Red River.
Manitoba’s continued lack of interest in a drainage arrangement with Ottawa comparable to that negotiated with Alberta and Saskatchewan.\textsuperscript{18} The difficulty of sorting out which government should take the initiative was compounded by recognition that the Americans likely would contest any claim that upstream drainage exacerbated downstream flooding. Facing jurisdictional ambiguity and anticipating international disagreement, Canadian and Manitoba officials were disinclined to cooperate with their American counterparts.\textsuperscript{19}

While Canadian governments resisted American overtures, drainage in the northern states continued. Most drainage in Minnesota took place in the first decade of the 20\textsuperscript{th} century, altering the conditions that Drainage District No. 3 had been formed to address.\textsuperscript{20} By 1920, there were 90,446 drained farm acres (36,540 hectares) in the American portion of the Roseau River watershed.\textsuperscript{21} Some Canadians concluded that drainage by Americans had altered the magnitude and timing of flow in a manner

\textsuperscript{18} LAC, RG 89, vol. 227, file 2692, Memo re Flood on Roseau River to W.W. Cory from RJB, 5 September 1919. A handwritten note signed with indecipherable initials has been added to this typed memo: “A matter for the province to deal with – until at all events it passes a Reclamation Act similar to Sask. & Alberta.” See also LAC, RG 89, vol. 227, file 2692, Drake to J. G. Sullivan, Chair, Manitoba Drainage Commission, 16 September 1919; LAC, RG 89, vol. 580, file 963, History of Roseau River Floods, 21 December 1925. There is also evidence that Dominion officials were concerned over the more basic issue of their lesser authority in the region of southern Manitoba that was excluded from the 1894 Northwest Irrigation Act. See LAC, RG 89, vol. 580, file 963, Historical Summary of the Roseau River Flood Investigations compiled by H. R. Cram, December 1925, Appendix 7, F. E. Drake to J. M. Mysyk, 23 July 1915; LAC, RG 11, vol. 4370, file 7438-2-A, Robert Semple to Robert Rogers, 22 October 1930; LAC, RG 89, vol. 227, file 2692, Memorandum for file, 27 March 1927.


detrimental to people living along the river north of the border. In 1919, J. M. Mysyk, Secretary Treasurer of the Rural Municipality of Stuartburn, informed the Department of the Interior that “the Minnessota [sic] government is dredging the swampy countries and lets all the water flow into the Roseau River which is too small in its bed to carry that mass of water.” Flooding resulted. “The settlers living in the neighborhood,” he elaborated, “have completely lost their coming crops and a cry is heard from them everywhere.”

There was no immediate response to Mysyk’s protests. In 1925, 99 settlers in the Roseau area expressed a desire to abandon their lands and take up new homesteads elsewhere. Additional information on the environmental reversal caused by exacerbated flooding was collected through inspection by a Dominion agent. Under the influence of excessive water, “a change began to take place.” The agent explained how:

The land began to go back to its former barren state. The hay sloughs, usually passable by July first, remained wet all summer, and in a few years once profitable stands of grass began to be replaced by a wire grass and rush growth. Wire grass areas began to be replaced by black rush and moss, while the shallow sod began to disappear and the sand and gravel to appear on the surface.

Government officials sent to evaluate the situation concurred with local residents: the community’s agricultural progress was at risk of being washed away because of

---

22 LAC, RG 89, vol. 227, file 2692, J.M. Mysyk to Department of Interior, 5 August 1919.


changes in flood patterns as a result of American drainage. With the claims of locals confirmed, governments were moved to cooperate. Manitoba and Ottawa agreed to share the cost of constructing a substantial double dyke floodway designed to alleviate flooding north of the international border.²⁵

Manitoba and the Dominion were collaborating, but they were still not prepared to work with the Americans. Canadian reluctance to engage in transboundary negotiations is reflected in the design of the double dyke floodway. Plans were deliberately modified to eliminate any possibility of a backwater effect that would alter conditions on the American side of the border.²⁶ The hope was that effective engineering could fashion a domestic solution for an international problem. Despite the best efforts of Canadian engineers, American experts doubted the project would leave the upper watershed unaffected. A reference to the IJC was again proposed and this time Canada chose to cooperate.

As the Dominion government resigned to taking the lead on the Roseau River matter, the City of Winnipeg began to assert its interest. Urban development near the forks of the Red and Assiniboine rivers depended on drainage, but urban drainage differed from

²⁵ LAC, RG 11, vol. 4369, file 7438-1-A, F. G. Goodspeed, District Engineer, to K. M. Cameron, Chief Engineer, 21 April 1926

²⁶ LAC, RG 89, vol. 596, file 1312, Copy of a letter sent from Premier Bracken to O.D. Skelton, 14 November 1928, included in the appendix to a Brief filed for the Department of Public Works of Canada by R. de B. Corriveau. See also LAC, RG 11, vol. 4369, file 7438-1-A, Goodspeed to Cameron, 21 April 1927; LAC, RG 11, vol. 4369, file 7438-1-B. This latter file contains a flurry of letters from Prudhomme to various Manitoba and Dominion officials on the matter.
rural land drainage. The City was not a player in most early debates over agricultural land management. Still, civic administrators recognized that as rural land drainage might bear on urban flood patterns, the city had an interest in conditions upstream. Perhaps prompted by J. G. Sullivan’s 1922 article in *The Engineering News-Record* which suggested that drainage in the lower Red River valley would likely worsen conditions in the city, Winnipeg officials of the 1920s investigated urban flood protection. In 1927, in light of attention to flooding in the provincial south, City Solicitor J. Prudhomme approached the Dominion government. He was concerned that projects might have a deleterious effect on the city. Prudhomme became involved in the Roseau River International Joint Commission hearings and his brief made clear the city’s perspective: “Communities which desire to change the natural conditions must not be allowed to do so at the expense of other communities without proper steps being taken” to provide appropriate protection or compensation. Prudhomme’s position paralleled the arguments put forth by lowlanders who argued before the Legislative Committee on Drainage that they should not suffer the consequences of highland

---

27 Robert Michael William Graham, “The Surface Waters of Winnipeg: rivers, streams, ponds, and wetlands, 1874-1984: the cyclical history of urban land drainage,” (M.L.A. Practicum, University of Manitoba, 1984). It is evident that urban land drainage proceeded at a pace at least equal to that of rural land drainage. With regard to a 181.99 km² area including what is now the City of Winnipeg, estimates put the wetland area in 1800 at 134.01 km². In the late twentieth century, the wetland area is estimated at 3.96 km². See Manitoba, Water Resources Branch, *Papers of the Third Annual Western Provincial Conference. Rationalization of Water and Soil Research and Management* (Winnipeg, 1985), 423.


29 LAC, RG 11, vol. 4369, file 7438-1-A, J. Prudhomme to Dominion Government, 5 March 1927. In this document, Prudhomme indicates that he had learned of the reference to the IJC from a report in a local newspaper.

changes that modified the flow regime. Winnipeg was a new actor in the drainage debate in the late 1920s, but its representatives invoked an old logic.

For the participants in the IJC hearings who were more attuned to the international context, the line of argument put forth by the City of Winnipeg was not useful. As Kim Richard Nossal has explained, rather than a consistent upstream/downstream relationship between Canada and the United States, “there are upstream and downstream localities in both states along the length of the frontier.”  

Though downstream along the Roseau, Canadian officials were careful not to invoke arguments that could be turned against them in other contexts. They were particularly fearful of compromising their position with respect to the Souris River.

The Souris River runs southward from Saskatchewan into North Dakota before it curls northward into Manitoba to join the Red River (see Map 6.1). It passes through drier country than the Roseau, but wet periods could still lead to flooding. In April 1928, Americans requested information about drainage in Saskatchewan on the grounds that drainage along the Souris River was worsening flooding in Minot, North Dakota. In response, J. T. Johnson, Director of the Water Powers Branch of the Canadian Department of the Interior, supplied the requested documents and indicated that he would like to receive comparable information about American drainage in the Roseau River area.  

The tone of these letters was entirely diplomatic, but the subtext was clear.

32 LAC, RG 89, vol. 69, file 64, vol. 1, J. T. Johnston to R.C. Williams, 30 April 1928.
Any action that Americans took with regard to flooding along the Souris would be matched by Canadian action along the Roseau. While the success and longevity of the IJC has been connected to how commissioners investigated each reference independently, officials in each country made connections between localities in ways that served their national interests.

Before the IJC, Winnipeg’s representative argued that the City had a right to compensation for any damage caused by flooding of the Red River because of changes to the Roseau River watershed. In contrast, Canada’s representatives sought a compromise that seemed fair in light of the current condition of the river and the needs of the communities situated along its course. While the city was upstream from no large centre of population and thus unlikely to be confronted with its downstream effects, Canadian officials recognized that claims made along the Roseau could be turned against them along the Souris. For those with an eye to conditions in the different localities situated along the international boundary, it was important to balance the effects of alterations in one place to the effects of alterations in another. Their approach was more conciliatory than that of the City of Winnipeg, defined by mutual recognition of the challenges to defining fairness in dynamic natural and cultural contexts.

33 Nossal, “Institutionalization and the Pacific Settlement of Interstate Conflict,” 75-87, 84.

This shift in perspective did not provide a straightforward means of dispute resolution. But participants were left to grapple with the environment before them in a context more conducive to open dialogue and careful compromise. The polarization of views that took place between highlanders and lowlanders in Manitoba (or between federal agencies in the United States) was not replicated across the international border.35

Ecological linkages between upper and lower watershed remained poorly understood, but uncertainty served to spur compromise, not polarize debate.36 The management of international waterways suggested another framework for discussion about how to live within a watershed, in which human-caused environmental change was the starting point for negotiations.

35 It is interesting to note that Sullivan foresaw the parallel between highlander/lowlander disputes and those between Americans and Canadians. In trying to convince highlanders to accept that they should contribute to the cost of lowlander drainage, Sullivan invoked the American example. If upstream Canadians failed to accept liability, he warned, upstream Americans might build on this precedent to avoid paying compensation to Canadians detrimentally affected by American drainage. See AM, GR 174, G 8364, file 13, p. 80, 169-170 and GR 1617, G 5324, Drainage Committee Report, 15 February 1922. There was some political attention to this argument, and the recommendations of the Sullivan commission were defended in light of the fact that they were consistent with what Manitoba saw as the obligation of Minnesota to compensate Canadians for damage caused by American drainage. See AM, GR 1609, G 8019, file: Drainage – General, Speech Made by Mr. Clubb to House on Drainage, 10 May 1923.

In a report released on 8 June 1929, the IJC ruled that works underway north of the international border would not worsen conditions in the United States. Canadian flood mitigation projects could continue.\textsuperscript{37} The situation along the Roseau River was further eased by the dry years of the 1930s. Dominion officials were able to cross the river bed on stepping stones and to drive over land that they had previously surveyed by canoe.\textsuperscript{38} But if Canadians along the Roseau breathed a sigh of relief, few others found much to celebrate in this difficult period. Those who lived along the Souris, Canadians and Americans alike, became more concerned with water scarcity than flooding. Even the flow of the Red River was substantially reduced.\textsuperscript{39} The drought of the 1930s was an environmental disaster across much of the Canadian prairies. Its consequences for water management in Manitoba were significant.

6.3 Ducks Unlimited and Manitoba's Big Grass Marsh

William Upham, a geologist with the United States Geological Survey and author of an 1895 volume on the glacial Lake Agassiz region, described Big Grass Marsh prior to extensive drainage. According to Upham, the marsh extended parallel to Lake Manitoba's western shore for "more than 20 miles [32 kilometres] from south to north,

\textsuperscript{37} For further information on IJC involvement in the management of Roseau River, see L. M. Bloomfield, \textit{Boundary Waters Problems of Canada and the United States} (Toronto: Carswell, 1958), 139-140.

\textsuperscript{38} LAC, RG 11, vol. 4369, file 7438-1-C, Goodspeed to Cameron, 28 August 1929. The description is vivid: "Everything is very dry, the river itself carrying scarcely any water. We were able to walk across the river on some stepping stones which had been placed for that purpose. We also motored almost the same ground that Mr. Corriveau and I crossed in a canoe a year ago. The ground is absolutely dry and parched and the grass crunches under foot although appearing green on top."

\textsuperscript{39} Gene Krenz and Jay Leitch, \textit{A River Runs North: Managing an International River} (Red River Water Resources Council, 1993), 1.
with a width of 3 to 5 miles [5 to 8 kilometres].” Both the White Mud and Big Grass Rivers ran into the area, and then “flow[ed] sluggishly through a broad, quaking morass” interspersed with “shallow, rush-filled lakes.”

From the late 19th to the early 20th century, aspiring drainers – settlers, capitalists, or government officials – saw potential in the region. Later on, when it was clear that no amount of ambition would translate into successful reclamation, the restoration of Big Grass Marsh by Ducks Unlimited figured in the development of the conservation movement in Manitoba. As DU agents matched their physical labour in the marsh with educational efforts in the public sphere, changing perceptions of Big Grass led people to appreciate the value of wetlands, within Manitoba and beyond.

For newcomers, Big Grass Marsh inspired big dreams of environmental transformation. In 1873, settler William Gordon, writing on behalf of several homesteaders in the region, sought Dominion assistance to improve water flow through the marsh. This petition urged the government to support settlers’ drainage efforts, both to aid those already there and to attract more immigrants. The petitioners were optimistic that the project could be accomplished at a reasonable price. One hundred dollars would take care of the most pressing work. For three or four hundred dollars, the entire swamp could be drained and made available to settlers. It is not clear if the Dominion government was convinced by these arguments or if the local people went ahead with

---


41 LAC, RG 15, D-II-I, reel T-12178, vol. 230, file 223, Enclosing Two Petitions from Joseph Little and others, asking for an appropriation to drain the “Big Grass” into the “White Mud River,” 1873.
their project. What is abundantly evident is that the drainage of Big Grass Marsh proved to be a much more complicated undertaking than it seemed to these optimistic early settlers.

The provincial government soon became involved in the drainage of Big Grass. The 1880 drainage lands arrangement between Winnipeg and Ottawa was designed to remake the more substantial marshes of the province. Under its terms, title to most of the even-numbered sections in areas improved by the Province would be transferred from Canada to Manitoba. Big Grass Marsh was among those areas the Province proposed to drain. In May 1880, engineer G. B. Bemister was sent to determine what would be necessary to drain the marsh. His report made clear that the work would be challenging, because of the size of the project and the difficulties of working in a swampy location. Not easily dissuaded, the provincial government contracted a number of private parties to excavate ditches through the area.

Under the drainage lands arrangement, funds for the work would come from Manitoba’s capital account with the Dominion government. The Province would then lend the money to private companies that would undertake the drainage, on the understanding

---

42 AM, GR 174, G 8128, C.P. Brown to unnamed, 6 April 1882.
43 AM, GR 174, G 8128, file 6: Return to an Order re: Transactions of reclaimed lands, 1886.
44 AM, GR 1607, G 7959, G. B. Bemister to C.P. Brown, 3 May 1880.
45 AM, GR 1607, G 7959, Agreement between the Manitoba Government and Elijah Griffith. See also Manitoba, Department of Public Works, Annual Report, 1880.
46 AM, GR 174, G 8128, Return to an Order re: Transactions of reclaimed lands, 1886.
that the loan would be repaid in full six months later.47 The Manitoba Drainage Company won the contract for Big Grass Marsh.48 The Company divided the undertaking into smaller projects and subcontracted these to local labourers at low rates, retaining as profit the difference between the amount received from the government and the cost of the subcontracts. Additionally, a portion of the area the Dominion transferred to the Province passed directly to the company.

The Westbourne Municipal Council was happy to have the Manitoba Drainage Company take charge of local drainage, so long as “the main object” of eliminating flooding was achieved.49 However, it eventually became clear that the work had not been sufficient. Though years passed without additional large-scale drainage undertakings, complaints from flooded residents kept the question alive. Seizing the new opportunities offered by the 1895 Land Drainage Act, the Municipality lobbied for organization of a drainage district in Big Grass Marsh.50 Flooded residents were disheartened, however, by the results of a provincial survey which concluded that the area would be extremely difficult to drain thoroughly.51 Bounded on the east by a pronounced ridge that ran north-south about four or five miles from the lake, Big Grass

47 AM, GR 1607, G 7959, Agreement between the Manitoba Government and the Manitoba Drainage Company, n.d.
48 AM, GR 1607, G 7959, Contract with the Manitoba Drainage Company, 10 June 1880.
50 AM, GR 1670, G 7379, Westbourne Municipal Council Minute Book, 10 May 1899.
Marsh presented particular challenges to drainers. As neither cutting through the ridge nor carrying the water around it seemed feasible, “the scheme of forming a drainage district was abandoned,” at least temporarily.

In 1909, perhaps as a result of skyrocketing immigration rates that increased demand for agricultural land, caution was set aside and Drainage District No. 8 was formed in Big Grass Marsh. Work started in August of that year. The project included the deepest channel ever cut for drainage in the province; in places it was 4 metres (13 feet) deep. As the years passed and the work continued, the government received both protests against the drainage and requests that it be expanded. The project was enlarged in 1912. More than $880,000.00 was spent in Drainage District No. 8. A local paper commented that

While the sportsmen of the province have lost a grand duck shooting ground at Big Grassy Marsh the province has gained thousands of acres of land which will produce returns on a valuation of millions of dollars.

---

52 Known locally as the Kinisota (or Kinnesota or Langruth) Ridge, the landform was part of a glacial feature known as the Burnside Beach, which marks one of the former shorelines of Lake Agassiz. Upham, *The Glacial Lake Agassiz*, 467; Warkentin, “Human History of the Glacial Lake Agassiz Region in the 19th Century,” 327; William John Carlyle, “The Relationship Between Settlement and the Physical Environment in Part of the West Lake Area of Manitoba from 1878 to 1963” (M.A. Thesis, University of Manitoba, 1965).


55 Land Drainage Arrangement Commission, Report, 32.


57 Land Drainage Arrangement Commission, Report, 33.
But *The Gladstone Age* was too quick to count up gains and losses. Not all drained land in Big Grass Marsh equated to agricultural land.

Some lands around the marsh edges were successfully cultivated, but about 35,000 acres in what had been the lowest part of Big Grass remained unsuitable for crops.\(^{59}\) Peaty soils were the major problem.\(^{60}\) In 1934, the Committee on the Utilization of Public Land in the Province of Manitoba argued that the area should never have been brought under *The Land Drainage Act*.\(^{61}\) The following year, a land survey sponsored by the provincial government indicated that only 4% of the lands in Drainage District No. 8 were suitable for cultivation. Slightly less than a third of the area was considered adequate for mixed farming. The rest of the land, over 260,000 acres (105,040 hectares), was entirely unsuitable for agriculture.\(^{62}\)

Though drainage had not produced farms, water patterns had been altered dramatically. With the water table lowered, formerly dependable wells began to run dry.\(^{63}\) For the first time, residents were obliged to haul their water. Marsh grasses valuable to cattle

---


59 Office files of Ducks Unlimited, Manitoba Branch, Brandon [hereafter DU Office]. *A Brief History of Big Grass Marsh* by B. W. Cartwright. Underlining in original.

60 Carlyle, “The Relationship Between Settlement and the Physical Environment in Part of the West Lake Area of Manitoba.”

61 Manitoba, Committee on Utilization of Public Lands in the Province of Manitoba. *Report Submitted to the Minister of Agriculture: An Overview*. (Winnipeg: Manitoba Department of Agriculture, 1934), 8-18. The report argues that Drainage Districts 8 and 19 (those in the vicinity of Big Grass Marsh) should not have been created.

62 AM, GR 7784, Memorandum for W.R. Clubb, 24 Jan 1935.

ranchers and sheep herders no longer grew. Although the area remained vulnerable to flooding in especially wet years, in most years it was little more than barren land. Peat fires and dust storms were particularly severe in dry periods. At points in the 1930s, there were more than 300 fires burning in the former marsh. 64 The drainage canals deteriorated and filled with sand and ashes. 65 Few owners were able to make profitable use of their land and much of it reverted to the government. 66 In the late 19th century, governments referred to wetlands as wastelands. Drainage was perceived as a way of creating useful lands. In a striking reversal, in 1938 the author of a letter to the editor of a local newspaper described the drained marsh as “a burning waste.” 67

In the late 1930s, this singularly unsuccessful drainage district seemed to typify the state of much agricultural land across the Canadian Prairies. While Manitoba had little to compare with the most severely drought stricken areas of the western prairie provinces, southwestern Manitoba was of a piece with southeastern Saskatchewan and the situation west of the Red River seemed comparable to that of northern Saskatchewan. 68 Widespread hardship across the prairies was conducive to what Manitoba’s Department of Mines and Natural Resources described in 1937 as a rise in conservation sentiment. 69

64 DU Office, Letter to the Editor of the *Gladstone Age*, 9 August 1948.


67 DU Office, Letter to the Editor of the *Gladstone Age*, 9 August 1948.

68 AM, GR 174, G 8340, file 1, John Bracken to R. B. Bennett, Prime Minister of Canada, 19 August 1931.

While the fate of farmers remained paramount, some people also began to consider another constituency that had been hit hard by the drought: ducks. If Big Grass Marsh seemed a picture of agricultural failure, it was also "a death trap for waterfowl."\(^{70}\)

For those with a long acquaintance with the area, the dearth of waterfowl was as shocking as it was troubling. The "spring and autumn goose hunts" had been fixtures in the Red River settlement. As described by settler J.J. Hargrave:

Many families leave the settlement and go off a distance of sixty or eighty miles to the neighbouring lakes to live for a few weeks a camp life in the open air. The geese which fly with almost incredible speed and at great height come down to drink from the lakes and rivers, on the shore of which the hunters are encamped, and are dispatched by the latter in great numbers."\(^{71}\)

The seasonal pattern of exploitation persisted through the 19\(^{th}\) century, as settlers matched their hunting forays with the annual movement of birds along what contemporary scholars would call the Mississippi flyway. As with the haying economy, there was something of a festival atmosphere to all of this.\(^{72}\) While the hay resource was often insufficient to meet the demand, waterfowl seemed so abundant that there was no need to regulate harvesting. By the early decades of the twentieth century, however, the waterfowl population was in serious decline.

---


In the United States, concern about waterfowl populations had been mounting for decades. Early activists perceived a relation between habitat loss in Canada and declining bird populations in the United States, and made efforts to investigate the Canadian situation. By 1909, Manitoba government employees were making connections between wetlands and duck populations. By 1935, rising concern led the government to consider ways of ameliorating the situation. Yet while Manitoba officials felt that their province was “by far the most important breeding ground for game wildfowl,” they were also aware that “the problem of safeguarding wildfowl is not a local one. Wildfowl are cosmopolitan creatures and their welfare is in the interest of all provinces and states in which it seeks seasonal refuge.” While Big Grass epitomized the agricultural problems evident across the prairies, it also held particular potential within the continental project of waterfowl rehabilitation. For a province still adjusting to managing its own natural resources, the area presented a significant challenge.

In October 1930, a group of capitalists in the United States formed The More Game Birds in America Foundation. Their intention was to apply the same methods to duck propagation as they believed had led to their success in the business world. The Foundation harnessed burgeoning enthusiasm for wildfowl conservation and quickly

73 Leitch, *Ducks and Men*, 8.

74 AM, GR 174, G 8261, Annual Report of the Department of Agriculture and Immigration, 1909. Naturalist Ernest Thompson Seton was employed by the Manitoba government for a short period in the late 19th century, and he was important in raising early alarm about wildlife depredation.

75 AM, GR 174, G 8360, Annual Report for the Department of Mines and Natural Resources, 1935.

76 AM, GR 174, G 8251, Annual Report for the Department of Mines and Natural Resources, 1933.
made its influence felt on the American scene by establishing connections with politicians, scientists, and conservationists.\(^77\) But early efforts to increase duck populations were hampered by the transnational reach of waterfowl migrations. American activists believed that waterfowl numbers depended on the preservation of Canadian habitat, but there was no mechanism through which they could work for wetland conservation north of the 49\textsuperscript{th} parallel.

To address the problem they established connections with similarly-minded Canadians, including lawyer and later judge W.G. Ross, newspaper executive O. Leigh Spencer, and entrepreneur James Richardson.\(^78\) In the early 1930s, Canadians and Americans cooperated on large-scale efforts to conduct a census of the duck population.\(^79\) By 1935, conservationists felt they had confirmed that “the future of waterfowl lay in preserving the breeding grounds in Canada.”\(^80\) They devised a plan involving the preservation of unspoiled habitat and the restoration of degraded areas, and created a new organization to bring this about.\(^81\) Ducks Unlimited was incorporated on 29 January 1937; Ducks Unlimited (Canada) followed on 10 March 1937. Thomas Main, the newly-appointed General Manager for the Canadian operation and a former CNR Surface Water Engineer, described the relation between the two organizations: “The function of DU,

---

\(^77\) Leitch, \textit{Ducks and Men}, 14. See also Wentz, ed. \textit{Return to Big Grass}, viii.


\(^79\) Wentz, ed. \textit{Return to Big Grass}, 4-5.

\(^80\) Leitch, \textit{Ducks and Men}, 18.

\(^81\) Report reproduced in Ibid., 19.
Inc., is to accept cash from US sportsmen and transmit it to DU (Canada),” he explained. “The purpose of DU (Canada),” he continued, “is to invest that cash in restoration work in the Canadian West – to put bigger crops of ducks on the wing.”

In its earliest years, DU had trouble raising money. The first year, fundraising efforts fell nearly $500,000 short of the target. Part of the problem was that not all potential donors “had a real conception of the breeding picture.” The expenditure of American money on Canadian projects was justified through an emphasis on efficiency: it was claimed that “at least five times as many ducks” would result from each dollar spent in Canada as would have resulted if the same dollar were spent in the United States. Those working for DU felt that reluctance to donate money stemmed from lack of understanding of the ecological principles underpinning all of this. In 1938, Harold W. Story, Chair of Ducks Unlimited (Canada), gave voice to the emerging consensus: “an educational program” was needed.

The capitalists behind DU were more than willing to accept the necessity of publicity and they used their privileged social positions to shape public relations strategies. One series of radio broadcasts on conservation was typical of the organization’s activity. The

---

82 AM, GR 43, G 64, file: Ducks Unlimited, Press release prepared by T.C. Main in conjunction with the 5 April 1941 opening of the Bracken Dam.
83 Leitch, Ducks and Men, 21.
84 Ibid., 27.
85 Report reproduced in Ibid., 19.
86 Ibid., 27.
series was conceived as a run of 15-minute talks to air on a number of networks, including that owned by James Richardson, who was one of four Canadian Ducks Unlimited (Canada) directors in 1938-39. The uniting theme was “Rebuilding our Canadian West – by Conservation.” The national significance of the west was emphasized, and organizers hoped that the series would build momentum that could be translated into an annual event such as National Conservation Week. Addresses were to be delivered by the premiers of the prairie provinces, other officials from the federal and provincial governments, and employees of Ducks Unlimited. All speakers were provided with an outline of approximately two pages in length that they were invited to augment with reference to their experience and expertise.

Although DU did not disguise its preoccupation with waterfowl (the name was a bit of a giveaway), their educational campaigns embraced a broader view of conservation. Thus the outline – titled “Turning Manitoba Resources into Wealth” – prepared for the talk given by J. S. McDiarmid, Manitoba Minister of Natural Resources, suggested that he emphasize how all resources are linked: “A marsh, developed as a wildlife production centre, will put birds in the air for miles around; yield fur crops; help replenish surface and ground waters; stabilize flowing rivers; check fires; attract tourists; and increase reservoirs for power development.” The prosperity of the west – and by extension of the nation – was seen to hinge on the management of natural resources from a perspective designed to ensure “the greatest good for the greatest number over the

87 Ibid., 199.

88 AM, GR 1600, G 4530, file: Game Branch, Ducks Unlimited, E.S. Russenholt to J.S. McDiarmid with attachments, 8 February 1939.
longest time.” In an introductory broadcast, William G. Ross, President of Ducks Unlimited (Canada), made clear why the organization agreed to do the “spade work” to put the series together. It was through conservation that its objective – “bumper crops of wild ducks” – could best be guaranteed. From the beginning, DU believed that fulfilling its mandate of putting bigger crops of ducks on the wing would require a deliberate effort to explain the waterfowl life cycle. Increasing public understanding of ecological relationships was seen as fundamental to its work.

Ducks Unlimited worked as hard in the marsh as on the airwaves. In 1968, William G. Leitch, the organization’s Chief Biologist, claimed that prior to its involvement, Big Grass Marsh had been “an ideal example of the misuse of land and water.” Although the Finlayson Commission of the 1930s proposed adjustments designed to improve conditions in drainage districts across Manitoba, it recognized that Big Grass Marsh required a different strategy. Given the extent of the environmental catastrophe in the area, the municipalities of Westbourne and Lakeview readily agreed in 1937 and 1938 to lease some of their lands to Ducks Unlimited for 20 years. After agreements were concluded with a number of private landowners in the vicinity, agents set to work

---

89 Ibid.

90 Ibid.


93 DU Office, E.B. Pitblado to Gurney Evans, 2 December 1958. See Map 5.2 for locations of these municipalities.
restoring the marsh. Their most important act was relatively simple: they dammed the drainage channels that had been dug with such a huge expenditure of time, money, and effort. In some instances, local farmers had already tried to erect dams and these were replaced by more permanent and effective structures. Some other improvements were made: ten acres were sown to barley, a patrol cabin was built, and an observation tower was erected. Due to both the diligent work of Ducks Unlimited and increased rates of precipitation, the transformation was remarkable. Between 1940 and 1942, the breeding population of ducks in Big Grass Marsh increased by 700%. For a new factory, this was an astounding increase in productive capacity. Duck hunters in the United States must have been pleased.

Ducks Unlimited was created to ensure the availability of waterfowl for sportsmen, but its success depended on its attention to the broader environmental conditions that favoured waterfowl as well as its ability to convince people that the concerns of its membership were in line with the broader public interest. Ducks Unlimited both transformed the physical landscape in Big Grass Marsh and worked toward a general shift in the perception of wet areas. Manitobans became more likely to value the marsh as they became aware of its multiple functions, some of which were of significance to

94 Leitch, Ducks and Men, 41.

95 AM, GR 1600, G 4530, file: Ducks Unlimited, C.H. Attwood to E.B. Pitblado, 7 December 1937. See also Wentz, ed. Return to Big Grass, 24.

96 Leitch, Ducks and Men, 40.


98 AM, GR 43, G 72, Minutes of Ducks Unlimited Annual Meeting held in Winnipeg, 1942.
continental waterfowl populations. Ducks Unlimited transformed both the marsh and the cultural context in which it was embedded.

6.4 Conclusion

The Dominion government became involved in the Roseau River situation because it was an international concern. Since 1870, Manitoba and Ottawa had often pulled against each other on matters related to land drainage. Even arrangements made cooperatively sometimes degenerated into antagonism through problems of implementation. With regard to the Roseau River, federal and provincial officials came together to present as convincing a case as possible, in hopes of countering American claims. Despite Canadian concern to present a united front, the international context fostered a more constructive discussion of drainage that moved beyond upstream/downstream conflict. Both Canada and the United States appreciated the need to negotiate a fair agreement, as advantages won along one river would amount to losses along another. The result was a more sophisticated approach to the challenges inherent in water management than had emerged from the Manitoba conflict between highlanders and lowlanders.

In Manitoba, wetland drainage is a provincial story: early drainage was a provincial initiative; municipalities took over with provincial encouragement and support; and the 1895 Land Drainage Act established a basic legislative structure for large scale drainage works. The roots of wetland restoration, however, require explanations that address international factors: conservation as a mode of thought; the drought of the 1930s as an
experience shared by many; and the transnational efforts of Ducks Unlimited. Clearly, locals had always had big dreams for Big Grass Marsh. In light of how developing concerns with conservation intersected with the drought of the 1930s, however, the marsh became significant to people who lived far from it and who were more attuned to emerging conservation ideas than were many Manitobans. Ducks Unlimited helped to change the perception of wetlands through their publicity efforts, by making apparent the role of marshes in the international waterfowl lifecycle. Manitobans and others came to appreciate the advantages to the conservation and restoration of certain wet areas.

Along the Roseau River and in Big Grass Marsh, thinking about water in Manitoba was pushed forward as wider contexts were brought into play and new modes of thought were introduced. But discussions of transboundary water management and marsh restoration did not directly intersect with local debates over drainage. There are multiple reasons for this. Even as DU’s publicity campaigns emphasized the value of all wet areas, efforts were primarily geared to building support for duck factories, not to altering how farmers managed their own flooded fields. In the productive landscape promoted by DU, with its emphasis on efficiency, it was not illogical for agricultural drainage and wetland restoration to occur side-by-side. And it was certainly not a coincidence that Duck Factory No. 1 was located in an area that, even when drained, was not productive farmland. 99 There was no more irony here than in the very nature of

an organization that sought to increase the population of ducks so its funders could
shoot them.

If the ironies of DU remained unresolved, so the insights of the Roseau River IJC
investigation remained unapplied. In the late 1920s, Canadian and American officials
approached an upstream/downstream dispute in a fairly cooperative manner in part
because of how one locality along the border could be compared with another. It was as
if Manitoba’s highlanders and lowlanders were obliged to live with the possibility that
their positions could be reversed and reversed again. However, while the environmental
situation between Americans and Canadians along the Roseau River was comparable to
that between highlanders and lowlanders in Manitoba’s drained landscape, the cultural
context was very different. There was little effort to extrapolate local lessons from the
more conciliatory method through which upstream/downstream conflicts were
adjudicated in the international sphere.

The case studies of this chapter examine important aspects of human and environmental
change in two corners of the wet prairie. They offer something akin to wetland
biographies, which Michael Williams has identified as a useful way of engaging with
such often-overlooked ecosystems.¹⁰⁰ In the larger context of the history of Manitoba
drainage however, the events in Big Grass Marsh and along the Roseau River are most
remarkable for what they failed to do: substantially alter the thinking of those most
concerned with the question of drainage. This was due in part to the accrued

¹⁰⁰ Williams, “Protection and Retrospection,” 349.

234
momentum of the drainage discourse. Change and compromise would not be easily achieved in what had become a landscape of entrenched disputes. Even as the smoke cleared from around Big Grass Marsh, new ways of thinking about surface water in Manitoba did not alter the pattern of contention that had long defined discussions of agricultural drainage.
7 A FLOOD OF CHANGE?

CATASTROPHIC FLOODING AND AGRICULTURAL DRAINAGE

7.1 Introduction

Water is often used as a metaphor for life. In its perpetual flow, cycling through rivers and oceans as well as all living beings, humanity finds inspiration, reassurance, perhaps a hint of the divine. The idea of the round river, though hardly representative of real-world flow patterns, has been proposed as an appropriate representation of ecological linkages, emphasizing the perpetual relation between rain and rebirth. The essential point is that water expresses the interconnections among all beings and things which inhabit the planet. Yet the same characteristic of water that is so beloved by poets—the way it links apparently distinct aspects of ecosystems—is often a challenge for environmental managers.

The first part of this chapter addresses the most dramatic catalyst to progressive surface water management the province has ever seen: the catastrophic Red River flood of 1950. It situates the flood in its historical context by considering how settlers coped with 19th century floods and how, in Manitoba's early days, governments decided not to modify settlement patterns to accommodate the risk of inundation. The events of 1950 are examined in detail, with particular attention to how the flood catalyzed federal

---

policy changes of national importance and engaged Manitobans in a search for solutions to what seemed a new water problem.

By the mid-twentieth century, multipurpose management was an established approach to environmental administration, distinguished by the key aim of accommodating various uses of a single resource (such as water) or a single structure (such as a dam). The multipurpose principle figured in the thinking of North American environmental managers by the late 19th century, though some have argued that its effect on government policy was not evident until decades later. The connection between the multipurpose principle and the watershed unit is significant, and these “related concepts” have been understood as “two of the most powerful and enduring intellectual

---


3 Samuel Hays, in his ground-breaking Conservation and the Gospel of Efficiency, saw multipurpose resource management as a hallmark of the progressive conservation movement. He argued that the ideal of multiple use was embraced by American government officials by the first decade of the 20th century, though it did not inform government practice until the New Deal era. Donald Pisani, author of the most comprehensive recent accounts of water administration in the United States, points to earlier precedents, even identifying late-19th century projects which exhibited something like the multiple use idea. Pisani, “A Conservation Myth,” 154-171.

The multiple use idea was also evident in 19th century Canada. For instance, an 1884 amendment to the Dominion Lands Act designed to protect timber in the upper watersheds of the eastern Rocky Mountains succeeded in part because the various purposes it would serve ensured a broad appeal. Dominion employee and irrigation advocate William Pearce supported the legislation largely because he believed safeguarding timber resources in the mountains would protect water supplies for irrigators lower in the watershed. R. Peter Gillis and Thomas R. Roach, Lost Initiatives: Canada’s Forest Industries, Forest Policy and Forest Conservation (New York: Greenwood Press, 1986), 46.
The flood of 1950 was massive, and it demanded government responses of equivalent magnitude. The Shellmouth Dam, one of three large-scale infrastructure projects undertaken in the wake of the flood, was designed to serve multiple purposes, including flood mitigation, flow stabilization, and recreation. The inherent drama of heavily-populated areas besieged by water over a period of weeks – so attractive to journalists equipped with new technology able to transmit striking images from the flood zone into homes across Canada and the United States, as well as overseas – attracted far more attention than restoration in Big Grass Marsh or flow management along the Roseau River. Like these less photogenic crises, however, the flood of 1950 had little impact on agricultural drainage practices. Even when Manitobans applied holistic approaches to resolving catastrophic flooding, agricultural drainage was not brought into the picture.

The final portion of this chapter addresses how multipurpose resource management eventually came to bear on Manitoba drainage. Despite the national and international attention garnered by the 1950 flood, it was new concern over surface water erosion, a problem in many ways specific to the local topography of southern Manitoba, that

---


proved most important to a reconceptualization, however halting and tentative, of the drained landscape.

7.2 Early Catastrophic Flooding

Life was not easy for the European newcomers who settled at the forks of the Red and Assiniboine Rivers early in the 19th century. Along with harsh winters and grasshopper invasions, catastrophic inundation afflicted the Red River settlement on multiple occasions. The flood of 1826 remains the most severe recorded along the Red River in the last 352 years. Its results were devastating, even considering the limited extent of infrastructure development. Settler John Pritchard described how, as far as he could see, "the earth was covered with water carrying on its surface the wreck of a whole colony."

In spite of Pritchard's dire predictions and the difficult days that followed the water's retreat, the 1826 flood was a positive turning point. According to historian J. M. Bumsted, it led to the departure of social groups who were unwilling to adapt to the challenges of the northwest and to increased resilience among those who remained.

---

6 For attention to how the geography of the Red River settlement may have affected how settlers perceived flooding, see William Rannie, *A Survey of hydroclimate, flooding, and runoff in the Red River Basin prior to 1870* (Ottawa: Geological Survey of Canada, Open-File Report 3705), 31-38. There is a useful collection of archival extracts reflecting pre-1870 flood experiences in AM, GR 45, N 11316, Notes on Red River Floods with particular reference to the flood of 1950 by R. H. Clark, October 1950.


8 Pritchard's letter is quoted in Matheson, "Floods at Red River," 245.
The type of community that would manage the hay resource with ingenuity began to develop after 1826. By the time of the next catastrophic flood in 1852, the Red River settlement was an established community, with both civic culture and physical infrastructure. While residents had to abandon their homes and fields to the rising water, their community sensibility may have been reinforced by the flood experience. One means by which settlers coped with these floods was by taking refuge at higher elevations such as Bird's Hill, Grosse Isle and Stony Mountain. Time spent in these locations was remembered fondly by some. In the same way that haying encampments and duck hunts served to build community, seeking safety in high places brought people together both literally and figuratively.

After 1870, anticipating that newcomers would soon take possession of lands that previously had been available for common use, provincial officials petitioned to establish these high places as permanent public reserves for use in time of flood. "We feel it is to be feared from the inundations which have taken place in the past," they explained, "that in case of future inundations suffering would be caused to the population unless certain places be set apart as places of refuge." They recommended that "the ridges and highlands of the province already used for that purpose be declared

---


10 Matheson, “Floods at Red River,” 247-254; Bumsted, Floods of the Centuries, 22.


12 W. L. Morton, “Introduction” in London Correspondence Inward from Eden Colville.
the inalienable property of the Dominion.” However, no permanent areas of public refuge were established, and no alternative evacuation or flood management plan was proposed. Foreshadowing what was to come in Winnipeg and its suburbs, there was no adjustment of land use patterns to accommodate the possibility of catastrophic flooding.

The route of the transcontinental railway provided perhaps the best illustration of Dominion unwillingness to accommodate the risk of flooding. Chief Engineer Sanford Fleming was assigned the task of determining the best route across the prairies. After extensive study of the local landscape, he recommended that the line not be run through the fledgling metropolis of Winnipeg, but through the more northerly, less flood-prone town of Selkirk. “If, without due consideration, or regardless of the local experience which has been gained by many now living, we were to carry the Railway across Red River anywhere in the district subject to inundation,” Fleming warned, “we might any year find a dozen miles of the line for a month or more submerged, the bridges and approaches swept away, and traffic stopped until the whole be restored.” With the transcontinental railway seen as fundamental to the development of the northwest, such an outcome would have dire consequences.

---

13 Journals of the Manitoba Legislative Assembly, 1872, p. 36. The matter is noted in Russenholt, Heart of the Continent, 151.

14 Barry Potyondi, Selkirk: The First Hundred Years (Winnipeg: Josten’s/National School Services, 1981), 11.

Nevertheless, there were those who felt their personal interests depended on a rail line through Winnipeg. The business community opposed Fleming and launched a substantial campaign in favour of the Winnipeg route.\(^\text{16}\) This class-based lobby effort reflected what flood historian J. M. Bumsted has called the province’s “folk wisdom,” a belief that “somehow the extent of human development along the river banks had reduced the flood danger.”\(^\text{17}\) Some believed that widening of the river channel had lessened the risk.\(^\text{18}\) Though much uncertainty surrounded the relation between drainage and flooding, others maintained that agricultural drainage would protect against catastrophic flooding.\(^\text{19}\) The Dominion government was eager to downplay the risk, out of concern not to deter potential immigrants. With a rough consensus that the flood risk was diminishing, the railway was built through Winnipeg. The province’s high ridges were used for purposes other than flood refuges, including the construction of a prison at Stony Mountain. Riverbank property that was most vulnerable to flooding became the city’s most desirable real estate.\(^\text{20}\) Flooding had afflicted the Red River settlement, but early Manitobans and their governments did not modify their land use patterns to take account of this history.

\(^{16}\) Bumsted, *Floods of the Centuries*, 7-10.

\(^{17}\) Ibid., 9-10, 26.

\(^{18}\) *The Nor’wester*, 1 June 1861; quoted in A. A. Den Otter, “Irrigation and Flood Control,” 158; Matheson, “Floods at Red River,” 243-244; AM, MG7 Reel A83, Records of the Church Missionary Society, David Anderson, Notes of the Flood at Red River by the Bishop of Rupert’s Land, 1852.

\(^{19}\) Matheson, “Floods at Red River,” 243-244.

Numerous scholars have emphasized that the term ‘natural disaster’ is unfortunate, as “it gives the impression that disasters are the result of nature.” Hazards researchers David Etkin, C. Emdad Hague and Gregory R. Brooks explain that it is more accurate to understand natural disasters as in large part a result of “human-created vulnerability, as a consequence of the way in which we interact with our environment, design and locate our infrastructure, and concentrate our population.”

From this perspective, the patterns of growth established in Winnipeg’s early years created a natural hazard. But are catastrophic floods in Manitoba more natural than many natural disasters? Recent research has extended the Red River flood record backward in time by examining tree rings for the traces left by large floods. Through such studies, it has become apparent that the risk of flooding along the Red River varies over time. Between 1648 and 1746 and 1763 and 1825 there were no high-magnitude flood events; the mid-1700s and the mid-1800s produced multiple episodes of extreme flooding. The period between 1862 and 1949 was a prolonged interval with little extreme flooding. While this period of diminished risk was not a singular occurrence from an environmental perspective, it proved of particular consequence because of its coincidence with historical events. Extensive permanent settlement of the Red River Lowlands took place during this extended period of decreased risk of extreme flooding. While settlers and government

---


dealt with seasonal flooding that they perceived as problematic, most of the flood events from the creation of the province through the mid 20th century were of comparatively small magnitude. The flood risk in Winnipeg is best seen as neither entirely natural nor entirely cultural, but as the product of historically and geographically specific interactions between human and nonhuman processes. It is what Mark Fiege would call a hybrid, though the essential point is not the basic fact of interaction, but the particular factors at play.24

7.3 Extreme Floods Return
By the mid-20th century, after decades free of extreme flooding, there were signs in Manitoba that the flood regime was changing. Elevated water levels led to the investigation of flood control in a 1948 reference to the IJC pertaining primarily to water supply within the Souris-Red River region. But the most significant Canadian flood event of that year did not take place in Manitoba. The Red River flood of 1948 was dwarfed by events along British Columbia’s Fraser River. The Fraser flows some 1,368 kilometres (850 miles) from the Rocky Mountains to the Pacific Ocean, draining about 234,000 square kilometres (90,000 square miles). While moderate flooding was a frequent occurrence, 1948 brought a flood remarkable both in its magnitude and duration.25 About 70,000 acres (28,280 hectares) were flooded, and damage was substantial.26 This flood was unprecedented in modern Canada.27 While the Canadian

24 Fiege, Irrigated Eden, 9.
25 Matthew D. Evenden, Fish Versus Power: An Environmental History of the Fraser River (New York: Cambridge University Press, 2004). According to Evenden, the Fraser had flooded on average every four years since 1858.
Government was already sharing costs of flood protection with the provinces, these events had significant consequences for how the federal government participated in flood management. Following a United States precedent for federal contributions to alleviate devastating floods south of the border, Ottawa agreed to bear a substantial amount of the flood costs. The Fraser River flood of 1948 was a turning point in national disaster management in Canada.

Two years after the Fraser flood, the Red River flooded on a comparable scale. The Red River flood of 1950 has been called “one of the greatest natural disasters in Canadian history.” After 70 years of diminished incidence of catastrophic flooding, and in light of a dogged unwillingness to modify land use practices to accommodate flood risk, Manitoba was “singularly unprepared” to cope with this flood. The province was

26 Evenden, Fish Versus Power, 143.


“almost totally lacking the most elementary structural protection – such as dykes – and emergency planning measures.” During the winter of 1949-50, a few individuals saw ominous signs in the heavy snow pack throughout the Red River valley. By early April, officials were warning of a significant threat of substantial flooding. As flood waters moved northward, communities in southern Manitoba coped with high water, largely through emergency dyking and evacuation. Winnipeggers prepared for what was to come. By the end of April, government officials were acknowledging that the flood would far surpass that of 1948. By 14 May, a tenth of Winnipeg was underwater. Some 8,200 homes were flooded; in 5,500 of those the water rose above the first floor. More than fifty years after the flood, tales of canoeing down residential streets remain part of the Winnipeg’s urban mythology. In all, 1,664 square kilometres (640 square miles) of land north of the international border were flooded. Only extreme effort sustained over weeks along the hastily constructed sandbag dykes that snaked through the city saved parts of Winnipeg from inundation.

Even as efforts to safeguard people and property continued, public officials wondered how to pay for the emergency response. In the aftermath of the Fraser River flood, Victoria and Ottawa had agreed that the Province and the Dominion would provide compensation for those affected and share the cost of mitigation projects designed to


35 AM, GR 45, N-11-3-16, Notes on Red River Floods with particular reference to the flood of 1950, by R. H. Clark, October 1950.
prevent a recurrence.\textsuperscript{36} The Dominion assumed 75 percent of the cost of flood fighting and protective works and half the cost of immediate relief. In the end, the federal government committed approximately $22 million to reconstruction and flood protection works in British Columbia.\textsuperscript{37} In 1950, Manitoba politicians turned to Ottawa for assurances that they would receive similar assistance, making specific reference to the Fraser River case.\textsuperscript{38} For provincial representatives eager to secure a commitment from the federal government, the relation between one natural disaster and another seemed as useful as the relation between a disaster and its local context.

Early in May 1950, Prime Minister Louis St. Laurent responded to Manitoba, offering assurances that "the same principles would be followed that had governed assistance granted in respect of the Fraser Valley floods."\textsuperscript{39} But even as he did so, the federal Department of Finance was hurrying to make adjustments. As the Red River flood was a disaster "appalling in magnitude and unprecedented in Canadian history," payments to Manitoba based on the British Columbia rates threatened to reach astronomical sums.\textsuperscript{40} Manitoba's requests were based on the Fraser precedent, but it was in relation to the

\textsuperscript{36} Sewell, "Changing Approaches to Water Management in the Fraser River Basin," 106.

\textsuperscript{37} Shady, ed. \textit{Irrigation, Drainage and Flood Control in Canada}, 42; Bumsted, "Flooding in the Red River Valley of the North," 248-249.

\textsuperscript{38} AM, GR 43, G 179, file: Flood - Army, Telegram from Premier D. L. Campbell to Prime Minister Louis St. Laurent, 7 May 1950.

\textsuperscript{39} AM, GR 43, G 179, file: Flood - Army, Telegram from St. Laurent to Campbell, 8 May 1950; LAC, RG 2, Series A5a, Volumes 2636-5775, reel T-2366, Meeting 8 May 1950. Note that the Prime Minister only reluctantly made this commitment, and resisted using the term 'natural disaster.' Burton, "Flood-Damage Reduction in Canada," 80-81.

Red River flood that the federal government consciously engaged in precedent-setting. As Manitobans battled the flood waters, officials in the Department of Finance sought “to frame a definite emergency policy” that would guide what they termed “Dominion action in emergencies.”\textsuperscript{41} The flood of 1950 confirmed the relation between catastrophic events and federal intervention. It also underlined the need to manage carefully the financial implications of this connection.\textsuperscript{42} In this way, the events of 1950 helped shape a common understanding of the national disaster concept in Canada.\textsuperscript{43}

Recognizing that throughout the mid-twentieth century the American federal government was far more involved in flood mitigation than the Canadian government, geographer Ian Burton has argued that provincial control over natural resources helped ensure that the Canadian government took less interest “in flood problems than [was] expected from the United States government.”\textsuperscript{44} If questions of jurisdiction were important across Canada, their effects were exacerbated in Manitoba. J. M. Bumsted has explained that early in the spring of 1950, the Dominion attitude, evident in refusals to

\textsuperscript{41} LAC, RG 19, vol. 255, file: 101-29-1-14, Draft Memorandum, 2 June 1950. See also Bumsted, Floods of the Centuries, 52 and Den Otter, “Irrigation and Flood Control,” 162.

\textsuperscript{42} Bumsted, Floods of the Centuries, 77.


\textsuperscript{44} Burton, “Flood-Damage Reduction in Canada,” 80-81; Platt, Disasters and Democracy, 2; Visvader and Burton, “Natural Hazards and Hazard Policy in Canada and the United States,” 219-230. For analysis of the consequences of Canadian federalism for environmental policy since the 1970s, see Kathryn Harrison, Passing the Buck: Federalism and Canadian Environmental Policy (Vancouver: UBC Press, 1996).
open St. Andrew's locks to relieve pressure along the Red or to extend the deadline for filing income tax returns for flood victims, was that "Manitoba had wanted to have full control of its own natural resources, and would have to live with the consequences." Drawing a parallel between events in British Columbia and events in Manitoba may have been a strategy to overcome Dominion reluctance to assist with a natural disaster in a province that had only two decades earlier won control over its natural resources after an extended battle. Because the natural resources question was less controversial in BC, Manitoba's portrayal of the flood within a national geography of risk served to deflect attention from a provincial history of resource management that may have otherwise proven problematic.

Though money preoccupied provincial and federal civil servants, federal involvement along the Fraser went beyond the provision of funds. Scholars have emphasized that disasters precipitate change by contributing to the creation of post-disaster intellectual climates conducive to innovation. Both creative thinking at the policy level and public support for new initiatives often hinge on the impetus of a catastrophic event. After the Fraser River flood of 1948, the Dominion and the British Columbia governments began

---

45 Bumsted, *Floods of the Centuries*, 47; Bumsted, "Flooding in the Red River Valley of the North," 245.

46 It should be noted that the national scale was consistent with the approach favoured by researchers working in the subfield of hazards geography which emerged after the Second World War from the work of Gilbert White and his students and colleagues. Generally, hazards geography encouraged the comparison of the social, political, and economic effects of disasters across space rather than the contextualization of particular events in one location through time. In this way, hazards geography contributed to the perpetuation of the national scale that was produced in part through the conceptualization of the Red River flood of 1950 as a national event. For a discussion of why White and other researchers favoured such an approach, see Gilbert F. White, "Natural Hazards Research: Concepts, Methods, and Policy Implications," in *Natural Hazards: Local, National, Global* ed. Gilbert White (New York: Oxford University Press, 1974), 3-16. Note also that James Wescoat has argued that hazards geographers were among the first to advocate an integrated approach to water resources management; see Wescoat, *Integrated Water Development*, 4.
to see flooding within larger environmental, social, and political contexts. The Dominion-Provincial Board, Fraser Basin, brought together civil servants from several departments within both levels of government to investigate how to manage the Fraser. While the flood was the impetus, the board took a comprehensive approach, considering power, fisheries, water supply and recreation in addition to flood mitigation. As geographer Derrick Sewell has explained, the Board was an early attempt at multipurpose water resource planning in Canada.

Public investigations also were launched in Manitoba to prevent a repeat of the 1950 disaster. The work of the Royal Commission on Flood Cost Benefit has been called “a real breakthrough for Canadian social science,” illustrating through its application of cost-benefit analysis that Canadian practitioners were able to keep pace with their American counterparts. The Commission reported in December 1958. Its major recommendations included the construction of several large-scale mitigation projects: the Winnipeg Floodway, the Portage Diversion, and the Shellmouth Dam. As an infrastructure project of a similar scale to the Panama Canal, the Winnipeg Floodway attracted substantial attention locally, nationally, and internationally, although it addressed only the problem of catastrophic flooding. The floodway was also limited in

47 Evenden, Fish Versus Power, 145-146.


50 Donald Tate has described the Winnipeg Floodway as a preeminent example of a “single-purpose public construction project,” one exhibiting a typically “narrow focus in terms of alternatives considered
the population it served. By directing flood waters around the city of Winnipeg, it offered security to urban residents without addressing rural flooding. From one angle, the project was a delayed answer to the concerns regarding Winnipeg’s vulnerability to flooding expressed by City Solicitor Prudhomme before the IJC in the late 1920s. From another, it was as an early physical manifestation of perimeter vision: a provincial focus on Winnipeg to the detriment of outlying areas.  

The Portage Diversion allowed excess flow on the Assiniboine to be turned north toward Lake Manitoba, providing flood relief from the Diversion to the City of Winnipeg. The Shellmouth Dam, situated near the Saskatchewan border, enabled further regulation of the Assiniboine. It also served other purposes, ensuring water supply in Manitoba’s drier westerly region and creating new recreational opportunities. The Shellmouth Dam was designed as a multiple-use project. Its construction both reflected and confirmed the importance of the multiple-use principle for provincial and federal administrators (See Map 6.1 for locations of the Winnipeg Floodway, Portage Diversion, and Shellmouth Dam).

---


In the development of the concept of national disaster and in the application of the multiple-use idea, the Manitoba flood of 1950 became a catalyst to the development of nationally significant ideas, policies, and projects. After decades as the sore thumb prairie province, unusual because of its wet prairie environment and its exclusion from the *Northwest Irrigation Act*, flooded Manitoba prompted federal administrators to consolidate government practices regarding catastrophic floods in particular and natural disasters in general. The administration of a province long distinguished by both environment and politics was not so much regularized as established near the policy vanguard through the creation of a national geography of risk.

### 7.4 Flooding, Erosion and Drainage

How did these developments relate to the experiences of Manitobans who relied on agricultural drainage? From a settler perspective, the problems of catastrophic flooding and inadequate drainage looked quite different from each other. In the one case, water took too long to make its way to the rivers; in the other, water rushed out over the riverbanks. By 1950, drainage problems had a long history of local and provincial administration. The problem of catastrophic flooding came to the forefront fifty-five years after the passage of *The Land Drainage Act*, and immediately prompted involvement by the federal government. While the Shellmouth Dam was to protect against both scarcity and flooding in Manitoba’s drier westerly region, any link between

---

53 Donald Tate has explained that the 1970 *Canada Water Act*, federal legislation which broke new ground by defining federal authority on an environmental issue, was predicated on the multiple use principle. See Tate, “River Basin Development in Canada,” 155.
agricultural drainage and catastrophic flooding remained largely unaddressed. The connection between the development of progressive ways to cope with catastrophic flooding and the longstanding debates over drainage was oblique at best.

In contrast, drainage advocates in the neighbouring province of Ontario were incorporating the concept of multipurpose management. Drawing on international trends and building on lobby efforts by private citizens, in 1946 Ontario passed the Conservation Authorities Act. This legislation supported the creation of local authorities to facilitate the multipurpose management of land and water on a watershed basis. While drainage was a key concern in many areas, the advantages and disadvantages of any undertaking were to be considered in a holistic manner. Scholars have lauded the success of this legislation, seeing it as at the forefront of progressive environmental management.

Hurricane Hazel roared across southern Ontario in 1954, causing massive flooding in the area served by conservation authorities. Based in part on the precedent of the 1950


Red River flood, the federal government extended substantial assistance. Funds were funneled through the infrastructure of conservation authorities that had been established over the previous eight years.\textsuperscript{57} The money was spent in a variety of ways. Some conservation authorities began to purchase the lands that were most vulnerable to flooding, as a nonstructural means of damage reduction. A hydrometeorologist was hired, in hopes of improving flood forecasting.\textsuperscript{58} In the wake of the hurricane, Ontario officials built on the conservation authority infrastructure, illustrating a commitment to multipurpose watershed management.\textsuperscript{59}

This is in stark contrast to how things played out in Manitoba. Ontario passed the \textit{Conservation Authorities Act} just as M.A. Lyons concluded his investigation into Manitoba drainage by confirming that the watershed concept was of limited utility. In subsequent years, the provincial government adopted many of his recommendations.\textsuperscript{60} In 1951, J. A. Griffiths, the new chair of Manitoba’s drainage maintenance board, anticipated that Lyons’ proposals would enable drainage maintenance districts to “meet both physical and economic changes in the future.”\textsuperscript{61} In the focus on the drainage maintenance district, still conceived in relation to drainage problems rather than watershed linkages, and in the focus on drainage as a single problem rather than as one

\textsuperscript{57} Mitchell and Shrubsole, \textit{Ontario Conservation Authorities}, 69; Richardson, \textit{Conservation by the People}, 29-52, 93.

\textsuperscript{58} Mitchell and Shrubsole, \textit{Ontario Conservation Authorities}, 200-204.

\textsuperscript{59} Ibid., 69.

\textsuperscript{60} Carlyle, “Agricultural Drainage in Manitoba,” 285; AM, GR 589, Order-in-Council # 1784/51 and # 1785/51, 13 November 1951.

\textsuperscript{61} AM, GR 43, G 208, file: Department of Public Works, Annual Report Prepared by J. A. Griffiths and Submitted to George Collins, Deputy Minister of Public Works, 31 December 1951.
of a collection of issues to be addressed in relation to each other, drainage administration in Manitoba did not deviate substantially from a trajectory traceable in large measure to the 1895 *Land Drainage Act*. Unlike in Ontario, there was no move to multipurpose, watershed-based administration in the wake of a catastrophic flood.

If a flood confirmed the institutionalization of multipurpose watershed management in Ontario, it was soil erosion that catalyzed a similar process in Manitoba. Within the province as around the world, agricultural cultivation had altered soil structures, reducing the organic component. Degraded soils were finer in grain and thus more likely to crust or drift. In combination with dry, windy weather, it was the breakdown of soil structures that resulted in the dust clouds noted across the North American plains in the 1930s. While governments and farmers had long been aware of the risk to the soil, this difficult decade prompted new efforts to find solutions to what had become a chronic problem.

Like Alberta and Saskatchewan, Manitoba suffered from wind erosion. But the province’s soup bowl topography and higher average precipitation also contributed to a significant problem with surface water erosion. Runoff swept degraded soils from upland areas, with consequences for field fertility and, in steeper areas along the Manitoba Escarpment, slope stability. The transport of material from upper to lower

---


watershed was not a new problem. Indeed, it was a key aspect of the degradation that, particularly in the absence of effective provisions for maintenance, had impaired the drainage infrastructure in the lowlands. In large measure, the sediment that clogged lowland drains was the material lost from highland areas. Both the greater attention to soil conditions that grew out of the 1930s crisis and the increased runoff that followed the end of the drought contributed to a change in perception. What had once been conceptualized primarily as the problem of sedimentation in drains was increasingly viewed as a problem of erosion. By 1950, it was estimated that almost 2,000,000 acres (808,000 hectares) of Manitoba’s agricultural land was subject to significant erosion. In this changed context, the matter was a concern not only to lowlanders vulnerable to inundation but also to highlanders concerned about soil loss.

In the 1950s, officials in municipalities southwest of Lake Manitoba began to recognize the importance of cooperative action on their land and water problems. 1956 was a particularly difficult year for the area, with significant erosion in the highland municipalities of Lansdowne and Rosedale and severe flooding in the neighbouring municipality of Westbourne. Representatives from these and other afflicted areas began to consider whether a watershed-based approach might lead to more satisfactory environmental management. Through meetings over the summer and fall, the Riding Mountain-Whitemud River Watershed Committee was developed to promote the watershed idea among local residents and to pressure the provincial government to

---

64 J. H. Ellis, *Manitoba Agriculture and Prairie Farm Rehabilitation Activities* (Manitoba: Department of Agriculture, 1944), 7-8.

develop appropriate institutional supports. The activities of the Committee were consistent with a tradition of locally-based lobby groups (such as the Red River Valley Drainage and Improvement Association and the Union of Municipal Drainage Maintenance Districts) that in the past had succeeded in influencing the Manitoba government. However, this Committee was different because it united areas suffering from erosion and areas suffering from flooding. Given longstanding opposition by highlanders to watershed management, this was remarkable. In the eroding fields and slopes of the highlands, the watershed idea found purchase.

In the past, highlanders had seen watershed management as a scandalous infringement on their rights by a provincial government working on behalf of the lowlanders. More generous provincial funding for drainage as recommended by Finlayson in the mid-1930s and confirmed by Lyons in the late 1940s had proven a tolerable compromise, as highlanders unwilling to accept any liability for lowland flooding were ready to consider that all Manitobans had an interest in the agricultural prosperity that depended on improved drainage. In light of new recognition of erosion as a highland problem connected to surface water flow, some highlanders began to rethink their position. Watershed management seemed a means to enlist government support and local cooperation in combating a serious threat to agricultural progress on highland farms.

---

66 J.C. MacPherson, “A Brief History of the Whitemud Watershed Committee,” (Manitoba: Department of Mines, Resources and Environmental Management, 1971), 9. Riding Mountain is situated directly to the east of the Whitemud Conservation District, as indicated on Map 6.1. It is part of the Manitoba Escarpment, as illustrated by Map 1.1.

257
The provincial government was receptive to the Committee's concerns, and a series of consultations culminated in the 1958 passage of *The Watershed and Soil Conservation Districts Act*. The legislation mimicked Ontario's 1946 *Conservation Districts Act* in many respects. The Manitoba statute provided for the creation of a local authority to "promote the conservation and control of the water resources and other related resources," and recognized the value of defining districts on a watershed basis. As explained by W. R. Newton, Director of Operations for Manitoba Water Resources, the impetus behind the legislation was the recognition that Manitoba's watersheds were "sick and getting sicker," with erosion and flooding as related afflictions. Lobbying by a local group that had moved beyond entrenched highlander-lowlander disputes prompted the Manitoba government to do what it had long resisted - pass legislation to enable environmental management on a watershed basis. The transport of soil by surface water catalyzed the development of an institutional mechanism for watershed management in a way that flows of water had not, whether in the form of seasonal flooding or catastrophic inundation.

---


But in contrast with both the rapidity with which drainage districts were formed in turn-of-the-century Manitoba and with which conservation authorities were formed in mid-twentieth century Ontario, watershed conservation districts were slow to develop in Manitoba. 71 Despite the enthusiasm of at least some highlanders and the concerted efforts of some provincial administrators, no districts were formed in the 1960s. For officials moved to action by the efforts of the Riding Mountain-Whitemud River Watershed Committee, it must have been especially frustrating that no district was formed in the area the Committee represented.

Such disappointment, however, was not shared by all government officials. J. A. Griffiths, Assistant Deputy Minister of Public Works and much involved in drainage matters, made clear during a 1957 meeting with the Riding Mountain-Whitemud River Watershed Committee that he supported new water management legislation only if “the present efficiency of drainage district operations be not impaired.” 72 In 1960, Griffiths confirmed that that the drainage maintenance district was a “very satisfactory way of ensuring properly co-ordinated maintenance of a reasonably extensive system of drainage works.” 73 It is striking that such effusive praise – rare in and of itself, given the contentious nature of all matters pertaining to drainage – came so shortly after the passage of the watershed legislation, which proposed an alternative district structure.

As inadequate drainage was a key reason (along with erosion) to create watershed


conservation districts, the successful operation of the drainage maintenance districts undermined a major justification for district formation under the new legislation.\textsuperscript{74}

Griffiths and his colleagues in the Department of Agriculture and Conservation certainly recognized the intellectual shift away from single-issue environmental management.\textsuperscript{75} Affinity for the old system – even in the face of progressive alternatives – suggests the significance of something like the accrued momentum that contributed to M. A. Lyons' rejection of the watershed approach in the late 1940s. The reconceptualization of the lowland problem of sedimentation as the highland problem of erosion was a significant shift. But it came at a point when lowlander dissatisfaction with drainage was at a relatively low ebb. With the minor adjustments proposed by Lyons proving relatively successful in the short term and with public and political attention directed at flood mitigation, long-besieged drainage officials were enjoying a welcome respite. Promoting the \textit{Watersheds Conservation Districts Act} would have amounted to rocking the boat, which administrators were keen to avoid.\textsuperscript{76} Watershed management was introduced at a moment when those concerned with lowland conditions were less likely to embrace it as fervently as they might have in the past. The history of contention over drainage in Manitoba had generated a momentum of its own that amounted to a conceptual rigidity evident in reluctance to adopt the watershed approach during a lull in drainage district disputes.

\textsuperscript{74} Ellis, \textit{The Ministry of Agriculture in Manitoba}, 531.

\textsuperscript{75} Griffiths, “Drainage Problems in Relation to Manitoba Municipalities,” 26-27.

\textsuperscript{76} MacPherson, “A Brief History of the Whitemud Watershed Committee,” 19.
There was also some reluctance among members of the Riding Mountain-Whitemud River Watershed Committee, the very group that had lobbied for enabling legislation. By the mid-20th century in many rural municipalities, the tax base was in decline.77 While watershed management could operate as a means to leverage government funding for local projects, some of the associated costs would have to be borne locally. Particularly in light of an impending hike in school taxes, the increased assessment associated with any form of district management operated as a disincentive.78 Economic pressures ultimately led to a more immediately consequential change in drainage administration than did the adoption of watershed legislation. In 1964, largely in response to the financial difficulties still plaguing rural municipalities, the Manitoba Royal Commission on Local Government Organization and Finance proposed that drainage maintenance districts be dissolved, and that the provincial government assume complete responsibility for drains of a certain magnitude, with municipalities looking after smaller waterways.79 In anticipation that it would allow for more efficient management, the recommendation was accepted and implemented.80


adjustments eliminated the administrative level that had been created by the 1895 Land Drainage Act.

With drainage maintenance districts dissolved and no watershed conservation districts created, provincial-municipal relations became the key dynamic bearing on drainage, as they had been prior to 1895. But circumstances were now more complex, because the drainage ditches that had been dug under The Land Drainage Act often crossed municipal borders. Even as drainage districts adapted the wet prairie region to the private property agricultural landscape, the drains themselves required cooperative management. In the post-drainage district era after 1964, the existence of this imperfectly-functioning techno-ecological commons meant that inter-municipal cooperation was necessary in a way it had not been before 1895. Donald Pisani has identified “the proliferation of special districts” such as drainage districts as “the untold story” of natural resources administration in the 20th century. The Manitoba government sought to counter the trend only briefly, as the challenge of administering drainage without a dedicated infrastructure soon became apparent. The 1967 creation of the Manitoba Water Commission, an independent body formed to investigate various problems related to water management, reflected renewed appreciation for the advantages of government agencies geared to environmental administration.

81 This is the case with any drainage infrastructure. On this, see Williams, “Agricultural Impacts in Temperate Wetlands,” 216.


83 Manitoba Water Commission, A Review of Agricultural Drainage in Manitoba, 41-43.
The Watershed Conservation Districts Act (which in 1959 had replaced the 1958 Watersheds and Soil Conservation Districts Act) was succeeded in 1970 by The Resource Conservation Districts Act, in part as an attempt to prompt greater interest on the part of municipalities. In 1972, the long-anticipated Whitemud Watershed Conservation District was formed. District boundaries approximated a “natural catchment area” that was to be governed by “a single authority” concerned with establishing “a unified, co-ordinated approach to the development of schemes and systems for managing and controlling the water resources of a district and in conjunction with this, the land, forest, wildlife, and recreational resources” of the area.

The establishment of the Whitemud Watershed Conservation District was seen as “a major step forward in this Province towards wise management of our soil and water resources.” The hope was that it might prove “a turning point in the preservation of our precious natural resources” by setting a precedent that other areas would emulate.

Formation of the Turtle Mountain and Turtle River Watersheds followed in 1973 and 1975 respectively, both in areas vulnerable to erosion (see Map 6.1). Yet despite such hopeful signs, there was still no rush to district formation. In the absence of any form of special district government, inter-municipal problems proliferated, and provincial government concern increased.

---


87 Newton, Resources Management and the Watershed Conservation Districts Act, 9.

In the mid-1970s, the Manitoba Water Commission was instructed to review agricultural drainage in the province. After assessing physical infrastructure, governing legislation, and public opinion, Commissioners endorsed a return to special district government. They argued that the 1970 Resource Conservation Districts Act should “be used as a mechanism to ensure the adequate maintenance, upgrading and expansion of agricultural drainage systems.” Some amendments were proposed, but the existing legislation was seen as satisfactory in its major aspects. Commissioners emphasized that the provincial government should actively promote the formation of conservation districts. While the Alonsa Conservation District was established in 1978 (see Map 6.1), it was very clear by this time that the formation of watershed conservation districts would be a slow process. There were only six until the mid-1990s, but there were 17 by 2006.

The factors that stood in the way of conservation district formation were varied. Within the provincial administration, inherited departmental divisions of responsibility (for instance, that between the Department of Agriculture and the Department of Mines and Natural Resources) resulted in internal tensions. On the municipal side, concerns about increased financial burdens were compounded by fears about diminished

---

89 Manitoba Water Commission, A Review of Agricultural Drainage in Manitoba, 56.
90 Ibid., 56-59.
municipal autonomy. Further, and most importantly, contention over surface water management continued to bear on all parties. Even as Manitobans were exposed to new ideas about environmental management, and even as highlander interest in watershed management reshaped longstanding patterns of dispute, dissatisfaction and disappointment persisted.

W. R. Newton, Director of the Manitoba Water Resources Branch, provided a vivid description of the prevailing contention in an April 1973 presentation to a meeting of forest engineers. Newton explained how every year, on visiting afflicted areas, he had very little difficulty in finding people who will tell me exactly what the problem is – what the solutions are – people who will be quite specific about who is to blame. I am told that the upstream municipalities are draining off their waters too fast. I hear that neighbouring municipalities are building too many roads, or are building up roads to act as dykes to hold the water on the lands of another…. I am told by one group that the Water Resources Branch are building too many drains or that the drains they are building are too big or too small; by another that drainage is being neglected. As far as who is responsible it always seems to be someone else and it always seems that the solution rests with the Province or with the engineer.93

93 Newton, Resources Management and the Watershed Conservation Districts Act, 3-4. While this document is not dated, it is clear from the content that it was prepared after the creation of the Whitemud Watershed Conservation District in 1972 but before the creation of the Turtle Mountain Watershed Conservation District in 1973. A newspaper report containing extensive quotations that correspond to the text in the Winnipeg Free Press is dated 14 April 1973.

265
Newton knew the benefits of watershed conservation districts. Unlike J. A. Griffiths, whose 1960 endorsement of the drainage maintenance district amounted to a dismissal of the watershed conservation district, Newton advocated the immediate and enthusiastic embrace of watershed management. Most of his text was a description of the advantages of such an approach. But his description of the current situation recognized the importance not only of the specific “comments and criticisms” of the public, but also of how all expressions of dissatisfaction became part of what he called a “dialogue” – what historians today might call a discourse.  

Manitoba farmer Allan Chambers confirmed in 1984 that “not many of us are prepared to discuss drainage calmly and rationally.” He went on to explain that, in afflicted regions, drainage could be added “to religion and politics as topics to avoid in polite company.” Though curious about new approaches to persistent problems, public frustration at what were perceived as past government failures contributed to pessimism toward new water management strategies. While such sentiments were certainly more entrenched among lowlanders, confusion over how and why the 1958 statute had replaced that of 1959 had opened what one Manitoba government employee termed a “credibility gap” between municipal advocates and provincial administrators.  

Highlanders and lowlanders were united in their distrust of provincial initiatives. The public hearings conducted by the Manitoba Water Commission made clear that

94 Newton, Resources Management and the Watershed Conservation Districts Act, 4.
95 Allan Chambers, “A Farmer’s Viewpoint of Agricultural Land Drainage,” Third Annual Western Provincial Conference: Rationalization of Water and Soil Research and Management (Winnipeg: Manitoba Water Resources Branch, 1985), 149.
problems existed “between all possible combinations of individuals, municipalities and the Provincial Government.” After decades of protracted dispute, surface water management in Manitoba was as much the management of contention as the management of water. The discourse of contention over drainage had become an environmental problem in its own right. It was a problem that the government failed to address adequately, let alone resolve.

Scholars have noted that the idea of multipurpose watershed management has not often translated into effective management practices. Geographer Derrick Sewell suggested in 1965 that multipurpose river basin management remained “an ideal to which planners have aspired rather than a principle which has been firmly established in water management policies anywhere in the world.” A number of scholars have noted that attempts at multipurpose resource management have rarely achieved their goals, citing environmental challenges, inadequate economic investment, and insufficient political commitment as contributing factors. The history of surface water in Manitoba

97 Manitoba Water Commission, A Review of Agricultural Drainage in Manitoba, 33.


99 Water Management and Floods in the Fraser River Basin, x.

suggests another factor bearing on the success of multipurpose management. The contention that dominated public discourse over drainage for more than 70 years complicated the deployment of new ideas. Many people formed opinions based on past frustrations as much as new proposals. By the late 20th century, contention had proven every bit as persistently problematic as surface water in Manitoba’s wet prairie.

7.5 Conclusion

Drainage has been a more enduring problem than catastrophic flooding in Manitoba, but in the mid-twentieth century the latter was the more effective catalyst of ambitious and innovative environmental management. In some ways, the 1950 flood circumvented the hydraulic trap of extensive infrastructure investment, as the seemingly new problem of extreme flooding prompted a search for new environmental management solutions. The flood brought about significant changes as water problems in the province were reframed within a national geography of risk and as the multipurpose principle influenced flood mitigation works such as the Shellmouth Dam. But the nationally significant flood did not substantially affect how the local problem of drainage was managed. The reconceptualization of the lowlander problem of sedimentation as the highlander problem of erosion did more to illustrate the need to adopt watershed management. Yet some Manitobans remained doubtful, unconvinced that administrative adjustments would resolve decades of disappointment and dissatisfaction. In this sense, they remained caught in a trap made up as much of failed efforts as of physical infrastructure.

Conceptual rigidity has been an important factor bearing on the how the drained landscape has been perceived. But the wry humor that accompanied Manitoba farmer Allan Chambers’ description of his experiences may suggest that it was not the end of the story. Having had carp spawning in his wheat field and having dealt with drainage as municipal official, Chambers knew the discourse of contention from various angles. Before delegates at the 1985 Western Provincial Conference on water and soil research, he spoke about what was needed to improve the Manitoba situation. His presentation summarized lessons he had learned in his own district, and emphasized the need for more effective cooperation between farmers, municipalities, and the province. More important than the substance of his recommendations was Chambers’ contribution to a discourse, one that was heavily influenced by, but not entirely limited to contention. Drainage could not be discussed in polite company, but it is significant that people kept talking at all. Implicit in his presentation was an optimistic assessment of what, despite the spawning carp and his discontented constituents, Chambers still saw as a landscape of promise. 101

101 Chambers, Allan. “A Farmer’s Viewpoint of Agricultural Land Drainage,” 149-159.
In his monumental work *Rivers of Empire: Water, Aridity, and the Growth of the American West*, environmental historian Donald Worster interprets the hydraulic society of the arid western region of the United States as a techno-economic order imposed for the purpose of mastering a difficult environment. Irrigation north of the international border differed for various environmental, economic, and political reasons, and provides a useful counterpoint to the American experience. A key difference is that, in contrast with the “uneven patchwork of local traditions, differing state policies and contested applications of federal power” that bore on early irrigation in the US, the federal government in Canada cancelled riparian rights and established its authority prior to extensive settlement.¹ This was achieved largely through the *Northwest Irrigation Act* of 1894 and its subsequent amendments. It was not until 1902, with the *Reclamation Act*, that the American federal government became extensively engaged in irrigation. Once involved, however, American government intervention vastly overreached that in Canada.² National authority shaped irrigation in both countries, but in different ways.


Sub-humid southern Manitoba was significantly wetter than the semi-arid areas of the Canadian prairies or the arid American great plains. The widespread problem was not how to secure sufficient water, but how to get rid of excess. Because the *Northwest Irrigation Act* was not applied to southern Manitoba and the Dominion government had very little involvement in the practical work of drainage, there was no national anchor to water management in this area as there was on the semi-arid prairies or on the American great plains. Despite these important differences, similar strategies were applied to the tasks of irrigation and drainage. Government legislation, the formation of districts, and contributions by experts were significant to both. These common elements in efforts to alter the distribution of water make it useful to compare wet Manitoba prairie to drier areas further west.

A study of Manitoba’s wet prairie also provides a useful Canadian counterpoint to what Worster proposes as the key outcome of irrigation in the arid American west: local alienation resulting from centralization of political power and domination by powerful capitalists. Manitobans were intensely engaged with problems of surface water management throughout the period under study. In the first chapter, we examined how hay cutters in the Red River settlement succeeded in having the Council of Assiniboia adapt regulations governing the haying economy to accommodate their harvest practices. While the patterns of interaction became less immediate as population and bureaucracy increased and administration became more formal and political, Manitobans continued to participate in public dialogue on wetland management – even if, for many years, this amounted to debate over how to drain most effectively.
Early drainage projects were small in scale, a moderate extension of the type of work a farmer would undertake on a homestead. As time passed and population increased, municipal development and drainage were intertwined, with local government increasingly serving as a channel through which settlers could seek provincial support for the construction of more substantial ditches. Passage of The Land Drainage Act in 1895 introduced the drainage district, formalizing the roles of the provincial government, the municipality, and the settler in relation to drainage. Districts were as much a response to local demand as an imposition from above. As geographer William Carlyle explained, "throughout the history of agricultural drainage in Manitoba, Drainage Districts have only been formed where there has been a strong local demand for them." Although outcomes provoked more frustration than satisfaction, it is clear that Manitobans were reasonably successful not only in shaping the dialogue, but also in conditioning government action. The moderate pace at which they took up the idea of the conservation district after enabling legislation was passed in 1958 suggests that they continued to define how government policy was applied to their landscape.

Is there a connection between the absence of national authority and greater public accessibility? Strikingly, the aspects of drainage in Manitoba most similar to the "techno-economic order" of Worster's hydraulic society are those connected in some way with Dominion-Provincial agreements bearing on drainage and swamp lands. As we saw in chapter four, these were legislative incentives by the Dominion government

---

2 Carlyle, "Agricultural Drainage in Manitoba: The Search for Administrative Boundaries," 293.
to encourage drainage in the Province. They made arrangements for drainage that affected land availability, but proved largely impenetrable to all but well-heeled capitalists. In Big Grass Marsh, for instance, clothing importer and future senator W. E. Sanford contracted with the government to undertake the drainage, in cooperation with other well-placed Manitobans including Minister of Public Works C. P. Brown. As a result of the deal, Sanford acquired both land and profit.\(^4\) Outraged residents of the area surrounding Big Grass complained that “the whole scheme was forced on the people in order that certain friends of the government who had bought large tracts of swamp lands, might be able to sell at greatly advanced figures before making their payments to the government.”\(^5\) It would be going too far to posit a direct connection between national government intervention in land management and the alienation of the local citizenry. As the scandal associated with the construction of the Manitoba Legislative Building in the early 1900s made abundantly clear, provincial governments were entirely capable of entering into ethical tangles without the assistance of the Dominion.\(^6\) However, it is worth noting that drainage in the Province generally remained on a logistical scale that was accessible to many Manitobans, and that a striking exception to this was associated with the exercise of national authority.

Active engagement between government and citizens did not, however, add up to successful drainage. Indeed, the ways in which citizens thought about drainage may


have contributed to problems. The specific shape of districts, as well as their general location, depended in large part on what residents wanted. In the pre-1920 period, when most drainage districts were formed, the notion of the watershed was not widely familiar in Manitoba. Those who were flooded quickly became advocates for drainage, but solutions to flooding problems were far from obvious. Government experts – often engineers – were involved in drainage schemes, but their influence was greater in the implementation of agreed-on undertakings than in the conceptual stages of project design. Drainage initiatives were to respond to the immediate problem of surplus water on agricultural fields, rather than to address the environmental linkages inherent in the watershed idea. People focused on too much water in the wrong place, without worrying about how or why it got there.

In the semi-arid Canadian prairies, by contrast, questions of insufficiency were directly connected to the availability of water within the watershed. Following the lead of progressive American thinkers, the Dominion government’s 1894 *Northwest Irrigation Act* included references to drainage basins. Historian Alyn Mitchener has argued that the concept was imported from the United States, largely through personal connections between Dominion agent William Pearce and Major J. W. Powell of the United States Geological Survey.7 Solving irrigation problems required looking around for water, involving attention to the larger environmental context that was not as immediately necessary with drainage. Nevertheless, and particularly in light of how connections between national governments have proven significant to the diffusion of progressive

7 Mitchner, *The Development of Western Waters*, 50-53.
environmental thinking, the extent to which Manitoba, relatively untouched by Dominion authority, remained comparatively isolated from the watershed idea in the pre-1920 period takes on additional significance. Intergovernmental tension between the Province and the Dominion may have cut off Manitoba from the North American idea-shed, with consequences for environmental management in the province. It is telling that C.H. Attwood, a Dominion official transferred to the Province to ease the administrative challenges of the transfer of natural resources in 1930, became one of the foremost Manitoba advocates for multipurpose watershed management. Jurisdictional squabbles may have inclined Provincial officials to resist ideas that came from the Dominion government or to favour those from jurisdictions with which they had easier relations. Without losing track of the decades that separate the two events, it is noteworthy that in 1958 Manitoba imported from Ontario what it would not take earlier from the Dominion: a model for water management legislation informed by the watershed concept.

Though drainage districts were formed in response to localized flooding, unsatisfactory outcomes prompted lowlanders to make a connection between the pools on their fields and changes on the highlands. They found themselves in alliance with the experts

---

8 In addition to the works cited with reference to this matter in chapter four, see also Gillis and Roach, *Lost Initiatives: Canada's Forest Industries, Forest Policy and Forest Conservation*. Graeme Wynn refers to Roach and Gillis on this matter in his “‘Shall We Linger Along Ambitionless?’ Environmental Perspectives in British Columbia,” *BC Studies* 142/143 (2004): 5-67.

9 Attwood, *The Water Resources of Manitoba*. Interestingly, prior to his transfer to the Province, Attwood represented the Department of Interior of Canada at the International Joint Commission hearings on the Roseau River matter. LAC, RG 89, file 2339, *International Joint Commission Hearings re the Roseau River Reference*, 6-7 June, 1929. In Manitoba, Attwood became the Deputy Minister of the Department of Mines and Natural Resources. AM, GR 174, G 8340, File 1, Department of Mines and Natural Resources Annual Report, 1931.
(many of whom were American, including the influential C. G. Elliot) consulted by the
Sullivan Commission. Highland settlers reacted with anger and dismay to the more or
less explicit embrace of the watershed idea that this entailed, and pointed to experts'
conflicting views, inconsistency with the original basis of settlement, and accumulated
financial and infrastructure deficits as reasons they should not be held responsible for
lowland problems. Detecting authoritarianism in the idea of watershed management,
highlanders made connections between the proposals of the Sullivan Commission and
the actions of the undemocratic governments that Canadians had recently helped defeat
in World War I. Representatives found it “incredible that any legislative body should
attempt to put across such a despotic and arbitrary matter as this.” The report of the
Sullivan Commission seemed a “diabolical plot,” and those opposed vowed to fight
against it “until the last ditch.”10 This was powerful language, and it may have served
to sway lowlanders who had much to gain from management by watershed. It certainly
made it more difficult for anyone to advocate the adoption of any administrative
arrangement that seemed to impinge on individual or community will. Manitobans had
a keen nose for domination and sniffed it out early.

But was it really the displacement of local knowledge by external experts that was in
the air? Two aspects require further consideration. First, the conflict between local (the
highlanders) and government (as represented by the Sullivan Commission) perspectives
is recast when government policy is seen to underpin the vision of settlement articulated
in opposition to the idea of watershed management. Arguments used before the

10 AM, GR 1609, G 8019, file: Drainage Commission, Drainage Committee Report, pp. 20, 33, 48, 55.
Legislative Committee on Drainage stressed the importance of the concept of private land ownership legitimized through agricultural improvement that was embodied in the *Dominion Lands Act*. This accorded with internationally-significant liberal principles and was derived in large part from an American precedent, but it was a mode of settlement prescribed by the Dominion government.\(^\text{11}\)

Once on the land, settlers were confronted with the contrast between the varied nature of prairie geography and the straight lines of the survey. As geographer Hildegard Binder Johnson makes clear in her analysis of an American township, settlers tried to mitigate the consequences of the awkward relation between the survey and the landscape.\(^\text{12}\) But having taken up a homestead, they were also fully invested in doing all they could to meet the requirements to earn title to the land they had occupied. In Manitoba as in Johnson’s Minnesota, settlers recognized that they had to abide by the terms of the land legislation. Their arguments before the Sullivan Commission were deeply felt – there is no question that settlement by individual quarter-section had become associated with a way of life that many held dear – but these were also strategic affirmations of government policy. The conflict at the heart of the confrontation

\(^\text{11}\) In “The Liberal Order Framework,” historian Ian McKay has recently emphasized the relation between the ideology of liberalism that pervaded many aspects of Canadian society in the late 19\(^\text{th}\) and early 20\(^\text{th}\) century and the settlement of the prairies by quarter-section. Donald Worster in “Two Faces West” argues that behind settlement in both Canada and the United States was what he calls “the development myth.” W. L. Morton suggests in “Seeing an Unliterary Landscape,” that it is appropriate to see the Manitoba landscape as to some extent typical of landscapes remade by “the farm culture of North America.” A number of scholars have approached settlement from an international perspective, building on what they see as essential similarities among settler societies. Examples include Thomas R. Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia and New Zealand* (Cambridge: Cambridge University Press, 1999); John C. Weaver, *The Great Land Rush and the Making of the Modern World* (Montreal: McGill-Queen’s University Press, 2003).

between highlanders and J. G. Sullivan before the Legislative Committee on Drainage was multilayered: partly local versus expert knowledge, and partly one government’s vision versus another’s.

The watershed concept advocated by the Sullivan Commission is the second aspect of the confrontation between highlanders and commissioners that requires further consideration. Reflective of his analytical emphasis on government policy rather than cultural context, William Carlyle called the Sullivan Commission “farsighted in its recognition that water...should be managed cooperatively on a watershed basis.”¹³ He portrays the events of subsequent decades as something of a falling away. Had Carlyle considered the change of heart behind M.A. Lyons’ report from the 1940s, he might have accounted for Lyons’ shift away from watershed management along similar lines: as a missed opportunity to adopt a potentially successful approach. Carlyle does not bemoan the Manitoba government’s failure to establish a drainage empire, but he is unequivocal in attributing many of the failures of drainage in Manitoba to inadequate leadership by the provincial government. His argument implies that the government should have imposed watershed management – the environmental equivalent of benevolent domination. Today, when the watershed remains to the fore in contemporary studies of environmental management, this might seem sensible. Further, the basic premise of the watershed idea – that land should be administered in relation to its environmental condition – shares key elements with the management system proposed for Manitoba by Molyneux St. John in the early 1870s. Had the provincial government

imposed watershed management, it would have been adopting a policy both farsighted and in tune with indigenous ideas. Such action might be considered an act of decolonization as much as benevolent domination.

In his recent biography of John Wesley Powell, Donald Worster's admiration for his subject is obvious. Powell's notion of the watershed democracy is in tune with Worster's personal belief in responsible environmental decision making at the local level. Throughout this dissertation, I have documented a discourse of contention over drainage. The phrase signifies how, beyond the specifics of individual disputes, consequences ensued from the basic fact of contention sustained over a lengthy period. These consequences, I have tried to make clear, were not all bad. Strife brought some Manitobans together, causing them to engage with each other in the public sphere. To be sure, certain people had advantages in this process: male property-owners, with those fluent in English and familiar with British cultural norms outnumbering those requiring translation and explanation. In this way, debate perpetuated cultural divisions. Nevertheless, these were expressions of local participation in the political process, a grass-roots engagement that deserves acknowledgement, even as its exclusionary elements are recognized. While it might be argued that farmers' insistence on their right to improve their own quarter-section without regard for their neighbours derived entirely from the system of settlement established by the Dominion government, I am not convinced that this reflects the settler experience or that the significance of contention over drainage is adequately explained in this way. In Manitoba, I believe, something not entirely unlike democracy stood in the way of the watershed
management that many contemporary commentators would see as more environmentally-attuned than the practices that prevailed. What, I wonder, would Donald Worster make of Manitoba, where a local and public discourse of contention is part of the explanation for the rejection of watershed management?

I also wonder what to do with this. How to bring together two lessons of history, one well-known to environmental historians and derived from analysis of the mythic landscape of the American west and another emerging from a province that, though possessed of an early history that has earned it the label ‘the Canadian crucible’, remains in large part an unliterary landscape? How to reconcile the clear danger of concentrated authority and what were, in Manitoba, the limitations of a public process? The answer seems no more obvious today than it did 50 years ago. In the late 1930s, the provincial government launched a training programme designed to familiarize municipal officials with some of the basic techniques and challenges of local government. The seminar operated for three years, 1937 through 1939. The first post-war seminar was not held until 1951, but it then ran until the mid 1970s. The topics were varied, ranging from budget preparation to personnel management. Generally, the programme consisted of talks by politicians, managers, or academics, followed by question and answer periods. There were also workshops and role-playing exercises. A number of talks addressed aspects of the drainage question. In 1958, the watershed approach came up for discussion. E. H. Poyser of the Department of Agriculture offered

---


an introduction to the concept of the watershed and an overview of what might be involved in management by watershed. He emphasized the importance of addressing drainage basins in a manner attentive to the possibility of excess in wet years and scarcity in dry. The session was timely, as it occurred around the time the Manitoba Legislature passed legislation providing for the establishment of conservation authorities on a watershed basis.

The questions following Poyser’s presentation had as much to do with the history of water management in the province as with the new statute. They were in striking contrast to the objections to the Sullivan Report aired before the Legislative Committee on Drainage some 35 years before. Municipal representatives were looking for legislation that had, in their words, some “teeth.” Speakers argued that there was “something wrong with democracy” when the objections of the few or a lack of consensus among many could derail projects conceived in the public interest. Shouldn’t government, they asked, impose expertly-engineered solutions to water problems? In light of the problem of erosion, the matter seemed pressing. A participant from Dauphin was especially blunt: “I think the government should put its foot down and say now we are going to direct the use of your land....”

Poyser was sympathetic to such frustration. He noted the long history of contention over water management, indicating that the problems had been apparent for more than fifty

---


17 Ibid., 54.
years but effective solutions had proven elusive. But he did not agree with the suggestion that the provincial government should take control, remaining firm in his conviction that authority over land use should remain in the hands of the local people. However, it was possible that the government should extend its role – not through the imposition of authority, but through the dissemination of information. “Perhaps,” Poyser mused, “our whole educational programme in conservation in Manitoba has been inadequate.” His suggestion was well-received and echoed in subsequent contributions to the discussion. “You cannot,” one municipal representative commented, expect an easy reception for watershed management “without the people knowing all the facts.”

In this discussion, among a small group of select individuals in the early-1950s, there is inspiration for a new perspective from which to evaluate the history of drainage in Manitoba. In chapter five we examined Ducks Unlimited, an organization that won adherents to its cause through a carefully-conceived and expertly-executed educational campaign. Clearly, DU was broadcasting ideas whose time had come: in the 1930s, the accumulated failures of drainage and the drought crisis made ready listeners of Manitobans. DU was grounding its ideas in the local environment and making them available to Manitobans, albeit in a manner that served the interests of its membership. In this way, the organization contributed to a significant reversal in people’s conception of wetlands. The notion of water management by drainage basin was in circulation long before swamps were recognized as of environmental value. But neither the Sullivan

---

18 Ibid., 55-56.
Commission nor any other party succeeded in rooting the concept in Manitoba soil. In the absence of an effective effort to communicate the idea to Manitobans, it is not surprising that management by drainage basin did not disrupt the longstanding discourse of contention.

This is not to suggest that educational efforts designed to explain the watershed idea would have resolved the disputes over drainage in Manitoba. The fact that many 21st century environmental scholars see advantages in watershed management does not mean that all Manitobans would have agreed it was a good idea. Even highlanders concerned about erosion may have resisted making any contribution toward the cost of lowland drainage. The problem in Manitoba is comparable in some respects to the situation in the irrigated areas of the United States, where persistent conflict has been linked to the establishment of private claims to water before riparian rights were abrogated. The wet prairie is a landscape of vested interests. But at the very least, education might have served to reshape the discourse of contention. It might have helped Manitobans to understand drainage and its consequences.

In a recent book on water management in the Malheur Basin of southeastern Oregon, environmental historian Nancy Langston has argued that one means of addressing environmental management is by instituting "a democratic process that creates a structure for useful conflict."19 Langston's model for useful conflict turns on the careful, productive exchange of knowledge between all participants. She emphasizes the

---

importance of government officials structuring the process so as to ensure, as far as possible, that different groups are able to bring their concerns to the table. If this enlarged vision of the public sphere were to take hold in Manitoba, it is likely that Aboriginal claims would seem the most pressing. Jurisdictional disputes bearing on flooding and drainage continue to affect life on Manitoba reserves, small pockets of federally-administered territory within a landscape managed by the Province. Jurisdictional boundaries mean that Native land and people may be differentially affected by surface water problems. The distinct impediments confronting Aboriginal communities seeking to manage drainage or flooding are manifestations of the environmental injustice that persists in the treated landscape.\textsuperscript{20} This matter deserves further investigation.

Another outcome of useful conflict might be a greater recognition of the long shadow cast by the \textit{Dominion Lands Act}. The idea of the watershed conflicted with the quarter-section more than with the sort of locally-derived perspective articulated by Molyneux St. John, though newcomers became invested in the \textit{Dominion Lands Act} through the homestead process and their views should not be brushed aside. While the survey was

\textsuperscript{20} In a review of how the Red River flood of 1997 affected the Roseau River reserve, scholars Donna Epp, C. Emdad Haque and Beth Peers concluded that, with this disaster as in many other instances, hardship was exacerbated because the reserve was “caught between jurisdictions.” See Donna Epp, C. Emdad Haque, and Beth Peers, “Emergency Preparedness and First Nations Communities in Manitoba,” Emergency Preparedness Canada, March 1998. PDF file available online at \url{http://dsp-psd.pwgsc.gc.ca/Collection/D82-52-1998E.pdf} . (Retrieved 9 December 2005).

On the Peguis Reserve (discussed in chapter one), aboriginal leaders attribute chronic flooding to drains constructed by the federal and provincial governments in proximity to the reserve. See Peguis First Nation, “30 Years of Flooding: Wading for a Solution,” Presented to the Environmental Studies Association of Canada, 3 June 2004, St. John’s College, University of Manitoba. PDF file available online at \url{http://www.crlnet.ca/docs/presentations/Earl-Stevenson-River-Basin-Panel.pdf} . (Retrieved 9 December 2005).
environmentally arbitrary, the watershed – unceremoniously plunked down in 1920s Manitoba by the Sullivan Commission – seemed socially and politically arbitrary. The lack of public education on the watershed may be contrasted with the extensive publicity efforts designed to lure settlers to the Canadian prairies. In the years after passage of the *Dominion Lands Act* in 1872, and especially under Clifford Sifton’s stewardship in the post-1896 period, the federal government invested substantial resources in promoting immigration to the Canadian prairies.\(^{21}\) These efforts spawned a particular type of relationship between the newcomer and the environment, based on the belief that small parcels of land could be improved through individual effort. In effect, this was education against the watershed. With such publicity efforts understood as a prescription for landholding, it is hardly surprising that watershed management failed to catch on. There was no comparable publicity effort, and no reward for lessons learned beyond the fertile land already promised (albeit fallaciously, in many areas) by the *Dominion Lands Act*.

This is not to suggest that Sullivan should have mounted a campaign to match that undertaken by the Dominion government. Or even one on a more moderate scale, comparable to that of DU. The notion of public education, particularly when undertaken by government, is hardly unproblematic. But governments have long been involved in such efforts, although generally they have not been recognized as such. Both the Dominion government and DU had specific objectives: the colonization of the west and the production of more ducks. But what if the aim was simply the production of a

\(^{21}\) For a suggestive discussion of some of these efforts, see Rees, *New and Naked Land: Making the Prairies Home*. 

285
citizenry informed about its environment, with an emphasis on how the watershed idea helps to make sense of the Manitoba environment? How would this affect arguments over drainage?

A key factor preventing contention over drainage in Manitoba from becoming what Nancy Langston calls useful conflict was the depth of anger and frustration felt by many Manitobans because of what they regarded as the futility of many drainage projects. They measured the environment they hoped for – the environment they felt had been promised by Dominion government agents – against the environment that materialized, and the latter almost invariably came up wanting. In an address to the annual meeting of the Trustees of the Drainage Maintenance Boards in 1946, Chairman F. E. Umphrey described a scenario that would have been familiar to anyone involved in drainage in Manitoba:

The man who sees his years' earning power floating away is certain to be annoyed, and being annoyed he is most likely to be unreasonable, (or we might think so), and in the heat of argument, he becomes also personal, which in turn creates friction with the result that reasonable discussion leading to a remedy is in many cases out of the question.\(^22\)

As Umphrey knew well, the fear and frustration that resulted from flooding was only exacerbated in situations where time and energy had been invested in unsuccessful efforts to resolve the matter through drainage and flood protection. Compounded

---

\(^22\) AM, GR 7784, Q 032694, File: General, Text of an Address delivered at annual meeting of Union of Municipal Drainage Districts by F. E. Umphrey, April 1946.
frustration – every bit as real a barrier to effective drainage as Manitoba’s troublesome
topography – was one of the consequences of futility.

After passage of the 1959 Watershed Conservation Districts Act, the provincial
government made some efforts to promote the watershed idea, but did not address the
anger and discontent resulting from what settlers saw as futile attempts at drainage.
Dissatisfaction was understandable among those whose livelihoods hinged on farming,
but real landscape change often went unrecognized amidst unmet expectations.
Comparison with the pre-drainage landscape makes clear that the land has been made
more amenable to agriculture, even when hopes were not fully realized. For a
government besieged by flooded Manitobans, there may have been concrete advantages
to tracking environmental change. Aldo Leopold knew that the wet prairie landscape
was being forgotten. Had the government sought to create a community memory of the
wet prairie, this might have provided a foil for the drained landscape. The comparison
would have made clear that drainage was not futile, though it was more challenging
than anyone had expected. Manitoba’s drainage problems have been administrative as
much as environmental. Along with too much water in the wrong place, there has been
too great an emphasis on environmental transformation at the expense of understanding.
The southern Manitoba case suggests that perhaps governments should be as involved
in public education about the environment as in public works to change the
environment. Indeed, the former may be essential, if the latter is ever to be judged a
success in an environment as dynamic as that of Manitoba.
What many Manitobans have failed to understand is that recurring problems with drainage or flooding are not, in most instances, evidence of incompetence or failure, but of the nature of the province's environment. Manitobans have long been seeking to solve the water problems of the province. And, as F. E. Umphrey made clear, drainage has been "unsatisfactory and insufficient ever since it was introduced." After such a lengthy period of searching for solutions, frustration is understandable. But the water problem in Manitoba is not the sort of problem that can be solved. Living in the region will inevitably be an ongoing process of adjusting to changing conditions. From a contemporary perspective, educational efforts about water management in Manitoba would need to explain that there is no solution to the challenge of water management in the province. The increased frequency of catastrophic flooding in the second half of the 20th century underlines that the problem is enduring in its complexity and unpredictable in its manifestations. The great adaptation must continue.

Pragmatic Manitobans would be quick to point out that this does little to address the immediate problem of water in the wrong quantities in the wrong places. But it might serve to moderate the tenor of discussion over surface water. Nancy Langston has discussed how a key barrier to useful conflict in the Malheur Basin was polarization among participating interest groups. Her research makes clear that "people in the basin constructed their own identities in relationship to the riparian landscapes, partly out of the work they did, partly out of their conflicts with other groups, and partly out of the

23 AM, GR 7784, Q 032694, File: General, Text of an Address delivered at annual meeting of Union of Municipal Drainage Districts by F. E. Umphrey, Chairman of the Drainage Maintenance Boards, April 1946.
stories they told that defined their justification for being there.” But the power of these identities did not derive from their fixed nature: “these constructed identities shifted frequently, as the social and ecological landscapes shifted.” Langston suggests that reminding groups of their dynamic identities can help move through polarization, by reminding all parties of their shared and shifting interests in a common landscape.

There is remarkable synchronicity here with how the Roseau River reference to the IJC offered a new way of thinking about water management in Manitoba by making clear the need to manage upstream/downstream conflicts with care. With so many rivers running both northward and southward across the international border, both nations were both downstream and upstream, which changed how the relation between localities was conceptualized. In Langston’s work the broader context that precluded polarization depended on history; my examination of the Roseau River reference indicates that a similar contextualization can derive from geography. Further, without straying too far from my emphasis on historical analysis, I wonder if the notion of the watershed, if carefully explained and willingly embraced, might allow for the achievement of something similar to the mutual sympathy created by historical and geographical reversals by making clear how highlander and lowlander problems are two sides of the same coin. The essential shared interest that Langston identifies might derive from water management conceived as one problem composed of multiple facets, including flooding, drought and erosion. If the challenge was to ensure appropriate quantities of water, with ‘appropriate’ defined in relation to other resources including

24 Langston, Where Land and Water Meet, 163.
land, lowlanders and highlanders might find much in common. In a 1935 request from some Drainage Districts that the Province investigate whether an approach comparable to multipurpose water management might address both highland and lowland problems, there is a suggestion of popular willingness to at least consider how the concerns of geographically-defined communities intersect.  

In Manitoba, common interest might flow from greater understanding of a dynamic landscape.

Mutual sympathy is not likely to come from the undemocratic imposition of management by watershed. It is hard to see how domination could ever be benevolent, as it disregards the importance of the social aspect. As Thomas Adams made clear in his report to the federal Commission of Conservation in the late 1910s, land use systems have cultural consequences.  

We have seen how, in Manitoba, attempts to address the environmental problems that derived from the township survey may have mitigated its negative social effects, by forcing settlers to work together. As environmental problems snowballed, social intercourse gathered momentum. A strategy that addressed the former without perpetuating the latter would not enrich the province. Government intervention likely figures in any improvement of Manitoba water management, but E. H. Poyser was right to resist the suggestion that the government should put its foot down over land use in Manitoba.

---

25 AM, GR 1609, G 8046, file: Summary of Drainage Districts, Copies of Resolutions Passed at a Meeting of the Drainage Districts Committees and Representatives of 21 Municipalities in Drainage Districts, 22 February 1935.

26 Adams, Rural Planning and Development, 11-14.

27 Perhaps it is not surprising that Poyser was the author of a 1958 pamphlet titled Your Watershed. Produced by the Government of Manitoba, this early publication was a sign of growing awareness of the
From a perspective that values the continued engagement necessary for ongoing adjustments and without disregarding the hardship it has imposed on many, the dynamic nature of Manitoba's environment may be seen as an advantage. Historically, when drain construction was portrayed as permanent or nearly permanent, the idea of altering the drainage district to reflect the watershed was especially daunting. The same way of thinking about drainage that heightened dissatisfaction by establishing unrealistic expectations contributed to a social context resistant to change. Ways of thinking moderated over time, first with greater acceptance of the need to ensure effective maintenance and then with the understanding that necessary infrastructure adjustments were not always significantly less substantial than new construction. From John Norquay's description of drainage as permanent improvement, through early government grants for maintenance, to Finlayson's emphasis on a fixed annual government contribution in support of maintenance, through Lyons' demand that the amount of the contribution be tied entirely to maintenance needs, there was growing understanding of the need for maintenance and adjustment. Indeed, the distinction between initial construction and ongoing maintenance was gradually eroded. Over time, less emphasis has been placed on the state of the infrastructure and more on the changing condition of the environment. There has been a move toward land management that recognizes the dynamic nature of the provincial hydroclimate, a need to explain the watershed idea. E. A. Poyser, *Your Watershed*. Manitoba Department of Agriculture and Immigration, Soils and Crops Branch. (Queen's Printer: Publication no. 298, 1958).

Geographer James Wescoat has attempted to flesh out general principles through which multipurpose watershed management might be reconceptualized to incorporate more meaningful participation by all interested parties. See James L. Wescoat, *Integrated Water Development: Water Use and Conservation Practice in Western Colorado* (The University of Chicago Department of Geography Research Paper no. 210, 1984), 14, 21, 183-192. My focus remains on the specific situation in Manitoba.
trajectory evident in how multipurpose watershed management implied deliberate attention to the diverse functions of component ecosystems. The Manitoba Water Commission recognized this in its assertion that “to be viable in the long run drainage policies must be flexible and able to change with changing needs.” Environmental management in Manitoba must be tailored to change in a variety of forms and at a variety of scales, with meaningful public engagement recognized as part of the process of adaptation. Dynamic environments are no guarantee of democracy, any more than arid environments ensure domination. As Donald Worster made clear in his conclusion to *Rivers of Empire*, there are always choices. But the number of management decisions to be made in Manitoba is high and each presents an opportunity for social engagement.

In Manitoba, knowledge of the history of surface water management from the 19th century onward may make good choices more likely. Throughout much of the semi-arid Canadian prairies and the arid American great plains, water is the primary resource. In the wet prairie, it is memory that is the most valuable commodity and this has often been in short supply. Manitoba needs a collective memory, both political and public,

---


29 Note, however, that geographer Michael Williams has made claims that could be taken to indicate that wetter environments are more conducive to ongoing social engagement. In his view, drainage works “require a remarkable degree of cooperative action in a society in order to create and, more importantly, to maintain the works, and a clear vision and commitment to the benefits to be gained. Without this constant vigilance, the carefully controlled agricultural landscape could soon become wetland again.” Williams, “Agricultural Impacts in Temperate Wetlands,” 216.

30 Worster suggests, albeit in a tentative and measured manner, that arid environments might be more conducive to domination. Worster, *Rivers of Empire*, 19-21.
of the history of wetlands, drainage, and flooding in the province. There are particular challenges to cultivating this community resource in a place where alternating periods of exacerbated or diminished flood risk occur in time frames that span several generations and where, in any particular year, some may want for water as others drown in it. Nevertheless, this is the most effective way to manage the consequences of what many have seen as the futility of drainage in the province.

Clearly, I have a lot of sympathy for the notion of multipurpose watershed management and an optimistic view of its social as well as environmental potential. But it should be as clear that I have equal sympathy for self-determination at the local and, I would add, the national level. Exploring the latter can help to illuminate the problematic role of the watershed in this study. As environmental historian Mark Fiege has made clear in his discussion of seepage in Idaho’s irrigated landscape, patterns of flow best expressed through the watershed idea bear on human interaction. The watershed remains at the fore of the environmental sciences, and I draw on it to explain what happened in Manitoba. I am thus contributing to the inscription of the watershed on the Manitoba landscape and aligning myself with those, like geographer William Carlyle, who


32 St. George and Nielsen, “Paleoflood Records for the Red River,” 547-555; Krenz and Leitch, A River Runs North, 2. Krenz and Leitch assert that “the Red River Basin always has a water supply problem...either too much or not enough!”

33 Fiege, Irrigated Eden, 34-35.

associate the watershed with progress. But my embrace of the watershed is not
complete, and my reservations are evident in basic choices about how to define my
study. In my introduction, I discussed why I was not studying the entire Red River
valley, though the region can be seen as a large watershed. From one perspective, the
distinction can seem purely one of scale. Given that there may be an association
between high level (national) administration and management practices impenetrable to
most citizens, this is not a question to be brushed aside. But at this point I am less
concerned about the historical association between administrative scale and
management systems and more concerned about the historiographical implications of
structuring inquiry in a way that diminishes the importance of the Canada-United States
border.

In my work, the international border through the Red River valley is as significant as a
dividing line between drainage basins. This is in keeping with how some Canadians
have seen the matter. For those involved in preparing the Canadian submission to the
Roseau River reference before the IJC, it seemed “fairly obvious” that along the
international border “if economic considerations were to govern, irrespective of the fact
that the lands are in two entirely separate political jurisdictions, a single coordinated
project would be developed to serve lands on both sides of the boundary.”

35 In “‘Watersheds’ in Regional Planning,” James Wescoat identified a distinction between local, bottom
up watershed management and top down administration by river basin. The difference is one of scale, and
in light of how large scale administration (national authority) seems associated with domination, this is
worthy of consideration. See also Gilbert White, “Watershed and Streams of Thought,” in Reviews in
Ecology: Desert Conservation and Development, eds. H. N. Barakat and A. K. Hegazy (Cairo:
were aware of environmental factors that stretched across the border, but political divisions remained pre-eminent. Dan Flores has argued that watersheds are history’s "natural nations." The works of numerous commentators who have taken the Red River valley as a holistic unit would seem to establish the valley as one of the most natural of the natural nations. But while environmentally credible, such a reading is culturally problematic. No less than the watershed, the bioregion can seem socially and politically arbitrary. In southern Manitoba and northern Minnesota and North Dakota, this is most clearly signaled by catastrophic flooding: though communities on both sides of the international border are afflicted, flood events are often described as national disasters. The natural nation of the Red River valley is inconsistent with how many Manitobans understood their lives and with how, through drainage conducted under provincial legislation, political divisions became inscribed on the landscape. A lesser emphasis on the state would diminish our capacity to understand what happened in Manitoba. The 49th parallel, it seems evident, had environmental consequences. Surely it is only appropriate that environmental historians pay attention to how natural nations have been sundered by history.

Insofar as the watershed has been embraced by advocates of bioregional history, drainage in Manitoba might contribute to an ongoing historiographical debate.37


Canadian environmental historian Neil Forkey has connected the bioregional approach to Canada’s vibrant historical geographical tradition and illustrated its utility through his engaging study of Ontario’s Trent Valley.\textsuperscript{38} To my mind, it is not irrelevant that Forkey’s area of concern does not span the international border. While there are precedents in history as well as in historical geography for environmentally-attuned historical inquiry in Canada, it is only relatively recently that scholarship engaged with the themes and techniques that distinguish recent American and international environmental history has achieved something of a critical mass in Canada. If American environmental history is maturing, Canadian environmental history is emerging from infancy.\textsuperscript{39} At a time when there is such a marked distinction between the environmental historiography of the two countries, advocating an approach that minimizes the significance of the nation seems risky. In the long term, as Canadian environmental history matures, the environmental significance of the Canadian-American border may come into focus.\textsuperscript{40} In the interim, it is judicious to assume, until it has been demonstrated otherwise, that national differences do exist. Analytic scale must always be explained and defended. But because of the current historiographical context, caution demands that, among those who work on topics or places that could be cast across the


\textsuperscript{40} Matthew Evenden and Graeme Wynn have made the point that the national scale has not received much attention in Canadian Environmental History. Matthew Evenden and Graeme Wynn, “Is there, was there, should there be a Canadian Environmental History?” Paper presented at the Annual Meetings of the Canadian Historical Association, June 2005.
Canada-United States border, the onus should rest on those who define their work in bioregional rather than national terms.

To some extent, the limitations of the bioregional approach correspond to the advantages of a cultural perspective. In Richard White’s recent identification of a cultural turn in environmental history, he is noting a move, evident in the works of scholars such as Nancy Langston, toward the investigation of layered and competing discourses pertaining to particular places. In my own work, contention has hinged on mismatches between patterns of flow and administrative units (such as the quarter-section, the drainage district, the municipality, and the province) and has been maintained in part through the dynamic nature of southern Manitoba’s environment. The reception of the watershed idea was defined in part by how it was situated within the context of persistent disputation. In what is largely taken as the foundational text of cultural history, Clifford Geertz explained that, in his view, human beings are best understood as suspended in webs of significance of their own devising. For environmental historians, Mark Fiege’s hybrid landscape is the symbolic equivalent of Geertz’s web of significance. Manitobans were mired in patterns of flow not entirely of their own devising. Nevertheless, out of the various raw materials at their disposal, meaning was crafted.

41 White, “From Wilderness to Hybrid Landscapes,” 557-564.

42 Clifford Geertz, The Interpretation of Cultures: Selected Essays (New York, 1973), 24, 452. The enduring importance of this concept is illustrated by its use by Victoria Bonnell and Lynn Hunt in their introduction to a recent collection of works by prominent cultural historians; see Bonnell and Hunt, “Introduction,” 3.
If environmental memory is indeed of primary importance in Manitoba, then historiographical questions are significant to many who are not historians. Manitobans have long adapted to change by managing their relation to their environment and their neighbours, in large part through engagement with their governments. A bioregional emphasis that foregrounds environmental at the expense of political boundaries would cause the history of drainage in Manitoba to further recede from view. The lessons of the past would become less available as they became more remote from how people conceived of their lives. A heritage of ongoing adaptation — modeled for newcomers by Aboriginal people, adopted by Samuel Taylor and Jemima Bunn — and energetic engagement — evident in the actions of generations of Manitobans — should be remembered and preserved. In a landscape so changeable, it provides a solid foundation for the future.
SELECTED BIBLIOGRAPHY

Archival Sources

Adams Archibald Fonds: Archives of Manitoba (hereafter AM) MG 12 A1

Alexander Morris Fonds: AM MG 12 B1 and 2

Canada. Privy Council Office Records: Library and Archives of Canada (hereafter LAC) RG 2

Department of Finance Records: LAC RG 19

Department of Indian Affairs Records: LAC RG 10

Department of Interior Records: LAC RG 15

Department of Justice Records: LAC RG 13

Department of Public Works Records: LAC RG 11

Water Resources Branch Records: LAC RG 89

International Joint Commission Records: LAC RG 51

Church Missionary Society Records. David Anderson, Notes of the Flood at Red River, 1852, by the Bishop of Rupert’s Land: AM MG7 B2 Reel A 83

District of Assiniboia, General Quarterly Court Records: AM MG 2 B4

Ducks Unlimited, Manitoba Office Files, Brandon, Manitoba.


John C. Schultz Fonds: AM MG 12 E1

John Walter Harris Fonds: AM MG 14 C74

Manitoba. Executive Council Office, Premier’s Office Files: AM GR 553 (John Norquay); GR 1662 (Thomas Greenway); GR 43 (John Bracken, Stuart Garson, Douglas Campbell); GR 45 (Douglas Campbell).
Executive Council Office, Clerk’s Office, Orders-in-Council: AM GR 589; GR 1530.

Executive Council Office, Clerk’s Office, Minutes: AM GR 1659.

Department of Natural Resources, Deputy Minister’s Files: AM GR 1600.

Department of Natural Resources, Dominion Land Surveyors’ Notebooks: AM GR 1601.

Department of Natural Resources, Miscellaneous Land Files: AM GR 7700; GR 7721; GR 7634; GR 7637; GR 7719; GR 7720.

Department of Public Works, Minister’s Office Files: AM GR 1607; GR 1609.

Department of Public Works, Deputy Minister’s Office Files: AM GR 1610; GR 1611.

Drainage Maintenance Boards, Minutes and Office Files: AM GR 1617; GR 7784.

Legislative Assembly, Unpublished Sessional Papers: AM GR 174; GR 646.

Red River Settlement Minute Book, Executive Relief Committee, Minute Book: AM MG 2 B6-1


Rural Municipality of Springfield and Sunnyside Records: AM GR 1670

Rural Municipality of Westbourne Records: AM GR 1671

Samuel Taylor Fonds: AM MG 2 C13

William Pearce Fonds: AM MG 9 A40

**Government Reports and Publications**


________. *Description of the Province of Manitoba*. Ottawa: Department of the Interior, 1893.


________. *Census of Canada*.


________, *Manitoba Agriculture and Prairie Farm Rehabilitation Activities*. Winnipeg: Department of Agriculture, 1944.


Lyons, M. A. Report and recommendations on “foreign water” and maintenance problems in drainage maintenance districts constituted under the Land Drainage Arrangement Act, 1935, Province of Manitoba. Winnipeg: King’s Printer, 1950.


Manitoba. Annual Reports of the Department of Agriculture. Winnipeg: Queen’s Printer.


**Newspapers**

Emigrant

Gladstone Age

New Nation


Unpublished Theses and Manuscripts


Waggenhoffer, Nickolaus. "Some Socio-economic Dynamics in South-eastern


Published and Unpublished Articles


306


Evenden, Matthew and Graeme Wynn. “Is there, was there, should there be a Canadian Environmental History?” Paper presented at the Annual Meetings of the Canadian Historical Association, June 2005.


Hochbaum, H. Albert. “Contemporary Drainage Within the True Prairie of the Glacial


Landon, C. S. “A Short History of the Association of Professional Engineers of the


Ostergren, Robert C. “Concepts of Region: A Geographical Perspective.” In


Timmerman, Janet. “Draining the Great Oasis.” In *Draining the Great Oasis: An*


Walsh, John C. and Steven High. “Rethinking the Concept of Community,” Histoire Sociale/Social History 32, no. 64 (1999): 255-274.


Weaver, John C. “Concepts of Economic Improvement and the Social Construction of


Books


________. *Aboriginal People and Colonizers of Western Canada*. Toronto: University of Toronto Press 1999.


Cullingworth, J. Barry. *Urban and Regional Planning in Canada*. New Brunswick:


324


______. *Ethnic Farm Culture in Western Canada.* Canadian Historical Association: Canada’s Ethnic Group Series Booklet no. 29, 2002.


Lux, Maureen K. *Medicine that Walks: Disease, Medicine, and Canadian Plains Native

Macbeth, R. G. The Selkirk Settlers in Real Life. Toronto: W. Briggs, 1897.


Stetzer, Donald Foster. *Special Districts in Cook County: Toward a Geography of Local Government*. The University of Chicago Department of Geography Research Paper no. 169, 1975.


# APPENDIX I

**ANNUAL CAPITAL EXPENDITURES ON DRAINAGE, APPROXIMATE TO NEAREST THOUSANDS, 1896-1932**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>EXPENDITURE $</th>
<th>YEAR</th>
<th>EXPENDITURE $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1896</td>
<td>42,000.00</td>
<td>1914</td>
<td>352,000.00</td>
</tr>
<tr>
<td>1897</td>
<td>47,000.00</td>
<td>1915</td>
<td>288,000.00</td>
</tr>
<tr>
<td>1898</td>
<td>56,000.00</td>
<td>1916</td>
<td>42,000.00</td>
</tr>
<tr>
<td>1899</td>
<td>132,000.00</td>
<td>1917</td>
<td>75,000.00</td>
</tr>
<tr>
<td>1900</td>
<td>72,000.00</td>
<td>1918</td>
<td>19,000.00</td>
</tr>
<tr>
<td>1901</td>
<td>85,000.00</td>
<td>1919</td>
<td>4,000.00</td>
</tr>
<tr>
<td>1902</td>
<td>89,000.00</td>
<td>1920</td>
<td>128,000.00</td>
</tr>
<tr>
<td>1903</td>
<td>357,000.00</td>
<td>1921</td>
<td>246,000.00</td>
</tr>
<tr>
<td>1904</td>
<td>230,000.00</td>
<td>1922</td>
<td>141,000.00</td>
</tr>
<tr>
<td>1905</td>
<td>339,000.00</td>
<td>1923</td>
<td>214,000.00</td>
</tr>
<tr>
<td>1906</td>
<td>315,000.00</td>
<td>1924</td>
<td>306,000.00</td>
</tr>
<tr>
<td>1907</td>
<td>344,000.00</td>
<td>1925</td>
<td>225,000.00</td>
</tr>
<tr>
<td>1908</td>
<td>120,000.00</td>
<td>1926</td>
<td>228,000.00</td>
</tr>
<tr>
<td>1909</td>
<td>142,000.00</td>
<td>1927</td>
<td>249,000.00</td>
</tr>
<tr>
<td>1910</td>
<td>299,000.00</td>
<td>1928</td>
<td>391,000.00</td>
</tr>
<tr>
<td>1911</td>
<td>249,000.00</td>
<td>1929</td>
<td>416,000.00</td>
</tr>
<tr>
<td>1912</td>
<td>178,000.00</td>
<td>1930</td>
<td>179,000.00</td>
</tr>
<tr>
<td>1913</td>
<td>389,000.00</td>
<td>1931</td>
<td>73,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1932</td>
<td>41,000.00</td>
</tr>
</tbody>
</table>

**APPROXIMATE TOTAL $7,000,000.00**

---

1 All figures from AM, GR 1609, G 8046, file: Union of Municipal Drainage Maintenance Districts, Text of an Address delivered by F. E. Umphrey, Chairman of Drainage Maintenance Boards, at annual meeting of Union of Municipal Drainage Districts, 27 November 1945
APPENDIX II

THE STATUS OF DRAINAGE DISTRICTS IN 1934

<table>
<thead>
<tr>
<th>DISTRICT NUMBER</th>
<th>LANDS BENEFITED (ACRES)</th>
<th>DRAINS CONSTRUCTED (MILES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>62,760</td>
<td>70.00</td>
</tr>
<tr>
<td>2</td>
<td>449,591</td>
<td>1,181.36</td>
</tr>
<tr>
<td>3</td>
<td>36,364</td>
<td>120.75</td>
</tr>
<tr>
<td>4</td>
<td>80,508</td>
<td>160.50</td>
</tr>
<tr>
<td>5</td>
<td>130,206</td>
<td>92.20</td>
</tr>
<tr>
<td>6</td>
<td>21,270</td>
<td>92.49</td>
</tr>
<tr>
<td>7</td>
<td>8,400</td>
<td>6.00</td>
</tr>
<tr>
<td>8</td>
<td>393,981</td>
<td>461.67</td>
</tr>
<tr>
<td>9</td>
<td>140,059</td>
<td>173.50</td>
</tr>
<tr>
<td>10</td>
<td>43,610</td>
<td>68.00</td>
</tr>
<tr>
<td>11</td>
<td>70,094</td>
<td>62.50</td>
</tr>
<tr>
<td>12</td>
<td>132,776</td>
<td>276.59</td>
</tr>
<tr>
<td>13</td>
<td>7,232</td>
<td>6.20</td>
</tr>
<tr>
<td>14</td>
<td>67,088</td>
<td>109.75</td>
</tr>
<tr>
<td>15</td>
<td>32,642</td>
<td>30.00</td>
</tr>
<tr>
<td>16</td>
<td>64,045</td>
<td>151.20</td>
</tr>
<tr>
<td>17</td>
<td>34,006</td>
<td>20.60</td>
</tr>
<tr>
<td>18</td>
<td>39,192</td>
<td>34.00</td>
</tr>
<tr>
<td>19</td>
<td>162,898</td>
<td>299.34</td>
</tr>
<tr>
<td>20</td>
<td>107,414</td>
<td>177.05</td>
</tr>
<tr>
<td>21</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>22</td>
<td>9,390</td>
<td>10.75</td>
</tr>
<tr>
<td>23</td>
<td>9,828</td>
<td>29.45</td>
</tr>
<tr>
<td>24</td>
<td>4,800</td>
<td>8.75</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,109,154</strong></td>
<td><strong>3,642.65</strong></td>
</tr>
</tbody>
</table>

1 William P. Elliot, “Artificial Land Drainage in Manitoba: History – Administration – Law,” (M.R.M. thesis, University of Manitoba, 1977). Elliot is drawing on Government of Manitoba Department of Public Works Annual Report for 1934. Drainage District No. 21 was proclaimed, but no construction was undertaken.