Teaching Unit Number 2 - Wet Prairie

Network in Canadian History and Environment (NiCHE) - Environmental History
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This university-level teaching unit is designed to be easily scaled up or down regarding class time consumed, or difficulty, as appropriate for the individual course context. The material in this unit has a strict focus on Canada (specifically Manitoba), though instructors in other locations are encouraged to improvise on their own, using this module as a base, to insert a comparative element and make connections to other places or themes.

Learning goals.

- Introduce the theme of ecological commons
- Contextualize the emergence of the state in Canada's west, as an environmental manager in situations of uncertainty or debate.
- Familiarize the student with archival sources that inform bureaucratic historical narratives
- Encourage students to connect these concepts with their own experience of the world

This teaching unit is composed of five resources:

- An open source journal article, to be assigned as a reading
- Discussion questions focused on the reading
- A contextual essay, around which instructors can build their own lectures or share with Teaching Assistants working outside their area of expertise
- Primary sources, to be deployed as best suits the purposes of the instructor
- A podcast of an interview with the author, as well as a shorter video interview
- A glossary of “Canadian” terms and concepts, to support a non-Canadian, international audience

Resources


In addition to the article, the instructor might do well to consult Stunden Bower’s more recent book, Wet Prairie: People, Land, and Water in Agricultural Manitoba (Vancouver: UBC Press, 2011).
2) Article Discussion Questions
Q. Describe the fundamental topography of southern Manitoba.

Q. Explore the ideas involved in substituting the word “resettlement” for “settlement”.

Q. Contrast guiding legislation and the newcomer perceptions that informed the settlement process as it took place in Alberta and Saskatchewan to the west, with that of Manitoba.

Q. What is “foreign water”?

Q. How and why was agricultural progress in the highlands seen as detrimental for the lowlanders?

Q. Manitoba's Drainage Act of 1895 assigned financial responsibility for drainage infrastructure to the lowlanders of the province, through the creation of drainage districts. What was the rationale behind this decision and what were its oversights?

Q. What is a “topographically defined community of interest”? How did agricultural flooding across the lowlands of Manitoba, transform its human geography?

Q. In 1921, the Sullivan Commission found that “the greatest factor causing damage from flooding is the changed conditions since the districts were first formed.” What were these changed conditions and how did they inform the debate over watersheds, and the proposed reconfiguration of the drainage districts?

Q. Why did the model of watershed based drainage funding fail to be realized despite repeated reports that found in its favor? What role did the Dominions Land Act play in this outcome? How did it shape provincial residents' understanding of rights and responsibilities as they pertain to individual and community interests?

Q. Why did Lyons reject a watershed based drainage system in favor of a double dyke drain, which could separate “local” and “foreign” water, and what were the associated changes in funding? How was the new policy constrained by earlier decisions?

Q. Compare the distribution of costs and benefits in this Manitoba-based drainage scheme, with that of the WAC Bennett dam in British Columbia (explored in teaching unit 6). <http://environmentalhistory.net/teaching-eh/nr-6-environmental-justice/>

3) Contextual Essay
Stunden Bower’s focus is southern Manitoba at the turn of the twentieth century, specifically, the provincial government's attempts to adapt to the interplay between a mobile physical geography of excess water, and an emerging human geography of resettlement. The tension between private property and ecological commons is key to understanding how events unfolded and this theme could form the core of an associated lecture, bolstering students’ understanding of the reading. One useful
progression might be to introduce students to the traditional model of common pool resources, before complicating it with the notion that private property, too, can become common, when ecological processes intervene.

Private property is often imagined to be static, placing boundaries around nature and assigning exclusive rights to its use.¹ A commons, or common property resource, refers to a space or resource over which a group of people exercises collective rights. Access is restricted to group members and strict rules govern its use.² The literature on common pool resources can be traced to William Forster Lloyd (1794-1852), professor of political economy at Oxford. Lloyd disagreed with Adam Smith’s faith in “the invisible hand,” and described market failures via a thought experiment now popularly known as “The Tragedy of the Commons.” Pursuit of individual self-interest, Lloyd proposed, could result in shared disaster whereby benefits accrue to the individual, whereas costs are born by the collective. Lloyd’s thought experiment was re-articulated by economists in the 1950s, before being popularized by Garret Hardin in his influential 1968 editorial on “overpopulation” in the journal Science.

Contemporary scholars have categorized goods and services as variously excludable/non-excludable, and subtractable/non-subtractable. A good or service is excludable if one can prevent others from accessing it. A good or service is subtractable if use by one person diminishes the ability of use by another. The intersection of these categories can be visualized in the following table.

<table>
<thead>
<tr>
<th></th>
<th>Excludable</th>
<th>Non-excludable</th>
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<tbody>
<tr>
<td>Subtractable</td>
<td>Private property such as your lunch, or a private forest (in the US) or common property such as Crown Land (in Canada). I eat my lunch because it is mine, and I can prevent others from doing so.</td>
<td>Open access or common property resource, such as a fishery, or fresh water. It is much harder to prevent outsiders from accessing these goods or services, and use by one person diminishes the ability of another to do the same.</td>
</tr>
<tr>
<td>Non-subtractable</td>
<td>Club goods paid for by subscription such as cable TV or the postal service. I can access these goods by a fee or subscription, and my use of the good does not preclude your use of the good or service.</td>
<td>Public goods susceptible to the “free rider problem” such as the atmosphere, a lighthouse, pirated downloads, or public services such as pest/weed control, and the drainage schemes explored by Studden Bower. Hard (or impossible) to exclude outsiders, and my use does not diminish outsider’s ability to access these goods or services.</td>
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² Ibid.
An ecological commons, as expressed by American environmental historian Mark Fiege (who informed Stunden Bower’s work), is an extension of the above themes. This term refers to ecological conditions operating in the midst of private-property regimes. In doing so, ecological relationships can generate public space, where before was only private property.

As natural objects cross human-imposed property boundaries (say running water, mobile animals, or the spread of noxious weeds or diseases), they compel humans to view otherwise privatized landscapes in collective and public terms. Rather than the sum of many private parts, many (but not necessarily all) people come see the landscape as an ecological and social whole. Nature’s mobility creates a shared interest in managing the water/animals/weeds/disease. Property rights in the ecological commons must be qualified.  

A tension is thus created between the ideal of absolute ownership and the material reality of, in this particular case, the hyrdological commons.

Stunden Bower notes that scarce water in comparatively dry Alberta and Saskatchewan (to Manitoba’s west) lent itself to spatially expansive management regimes. Because prospective settlers had to get both land and water for irrigation, they tended to understand the environment through he Northwest Irrigation Act rather than the Dominion Lands Act.

In southern Manitoba’s moist, soupbowl-shaped topography, there emerged a human geography of highlanders (who had often paid a premium for their land), and lowlanders, who were subject to flooding. The 1872 Dominion Lands Act structured how many Manitoban settlers viewed land preemptions. The act solidified principles of private property among highlanders, which created resistance to the watershed idea of subsidizing drainage improvements, so desired by lowlanders who had often paid much less for their properties. Those less expensive properties, when drained, were more productive than the land of their highlander neighbors. This greater agricultural potential was yet another objection voiced by highlanders, to subsidies for drainage paid by highlanders. Land improvements via public drainage works would not benefit the highlanders, and it would also make them less competitive.

A second, though perhaps lesser theme that instructors may wish to pursue is the twentieth century emergence of the State in managing both nature and society. In this regard, Studen Bower’s work serves to undermine Scott’s critique as laid out in Seeing Like a State. In that book, Scott argued that central governments force legibility onto

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their subjects, losing local particularities in the process. Stunden Bower’s narrative argues exactly the opposite. Here in Manitoba, she argues, the provincial government was well aware of the local, and intervened to reduce conflict between topographic communities.

4) Parallel resources, to be deployed as best suits the instructor
A 34-minute Podcast of an interview with Stunden Bower (available in two locations).
<http://archive.org/details/NaturesPastAPodcastOfTheNetworkInCanadianHistoryEnvironment--459>


A 13-minute video interview with the author. This episode will be particularly useful for those instructors wishing to bring this story up into the present.
<http://archive.org/details/Ehtv-Episode15InTheOakHammock>

The Red River Basin Board produced a background document that details a comparative history of water management in Manitoba and in North and South Dakota. This text will be useful for instructors wishing to highlight a comparative Canada/US theme in a lecture.
<http://www.redriverbasincommission.org/Drainage_Report.PDF>

5) Primary Sources with Discussion Questions
Floods long pre-date the era that Stunden Bower describes in her article. The Manitoba Historical Society has posted an account of the 1826 flood, documenting both the flood itself and the varied reactions of local settlers to the event once the waters had subsided. This extract is drawn from Alexander Ross' book *The River Settlement of 1856*. The embedded photographs, taken in a much later period, do not correspond to the events described in the text.
<http://www.mhs.mb.ca/docs/pageant/11/redriverflood1826.shtml>

The Hudson's Bay Company archives provides a parallel account, by Francis Heron, of the same 1826 flood. It can be found at:

Q. Compare the shared experience of the 1826 flood as described by Ross and/or Heron in the two above primary sources, and the varied responses to it, with those of later floods described in the article by Stunden Bower.

Stunden Bower extends her work from the 1960s to the turn of the century in this short editorial.

Q. Compare the conflicting interests of Winnepegers and those in outlying areas,
created by the Red River Floodway. Does this conflict between urbanites and farmers parallel that of an earlier era, described in the journal article, between highlanders and lowlanders? If yes, then how? If no, then what are the differences?

Robert W. Passfield of Parks Canada also explores the floodway's construction, although in much more heroic terms, in his Manitoba Historical Society piece "Duff's Ditch': The Origins, Construction, and Impact of the Red River Floodway." This short article is useful for providing an easily accessible, broad context to the issue of flooding in Manitoba.

Q. Passfield presents a positive view of the Red River Floodway. Undertake some research of your own to explore the more controversial aspects of the 1997 flood.

6) Glossary
Dominion: This is an older term, often used as a synonym for federation. In the text "Dominion" refers to the federal government of Canada. Specifically, it alludes to autonomous polities nominally under British sovereignty. The phrase "Dominion of Canada" was employed as the country's name after 1867. The fathers of Confederation had originally wanted to use the term "Kingdom of Canada" but the British Government feared the phrase would offend the Americans in the wake of their Civil War. Dominion was intended to give dignity to the federation and pay tribute to the monarchical principle.

Dominion Land Survey: This method was used to divide much of Western Canada into square mile sections (2.6 km²). It was adapted from the American Public Lands Survey System, but differed in that individual sections included allowances for public roads. Begun in 1871, the Dominion land survey was an assertion of Canadian sovereignty at a time when the United States was undergoing massive expansion. Paired with the construction of railroads, these surveys were meant to discourage American encroachment.

1872 Dominion Lands Act: The short form of "An Act Respecting the Public Lands of the Dominion," this was a Canadian law that applied to all western lands that the federal government acquired from the Hudson’s Bay Company in 1870. It set out rules to encourage, and govern, the orderly settlement of the prairie provinces and thus prevent American encroachment. This nationalistic policy invited European and American settlers to populate an agrarian western region that would sustain an urbanized central Canada (Ontario and Québec). The two regions were to be linked by a railway, paid for in part by public subsidies. More info:

Manitoba: Located in the center of Canada, it was a small province created in 1870. Through federal provincial negotiations, the boundaries were extended in 1881 and
1884 before finally being set in 1912.

Manitoba escarpment (known in the United States as the Pembina escarpment): A long steep, slope or cliff found in Manitoba and the Dakotas that marks the historical boundary of glacial lake Aggasiz.

Lake Agassiz/Red River lowlands: An immense glacial lake located in the center of North America. Greater in extent than all of the Great Lakes of today, it formed about 13,000 years ago from meltwater derived from the retreating continental glaciers.

Precambrian Shield: A physiographic region, also known as the Canadian Shield, or the Laurentian Plateau, being a very large area of exposed igneous and metamorphic rock, the oldest part of the North American crustal plate. It was the first part of the continent to be permanently raised above sea level, and represents half of Canada, most of Greenland, and part of the northern United States. Over much of the Shield there is only a thin layer of soil, and much exposed bedrock, caused by severe repeated glaciation that flattened mountains and scraped the rock clean.

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