Responding to Water Scarcity in Western Canada

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I. Introduction

In any comparative survey of responses to water scarcity, a contribution from Canada is usually met with a sense of incredulity. Canada has a reputation for enjoying abundant freshwater supplies. Canada's experience in dealing with water scarcity is less well-known than its potential role of providing a solution to water shortages in arid parts of the United States through sometimes fantastic water diversion schemes. Although many plans have been suggested for transferring water from Canada to the United States, the two most notorious are the 1963 scheme by the North American Water and Power Alliance to dam major rivers in British Columbia and take water south through the Rocky Mountain trench, and the 1985 GRAND Canal project to divert water from James Bay in northern Quebec through the Great Lakes to the western United States. Despite the economic infeasibility of both schemes, they are frequently resurrected in popular writing about water.[1] The impression of abundant Canadian water supplies suggested by such grandiose plans is fortified by the dubious distinction that Canadians are one of the most prolific consumers of water, per capita, in the world.[2]

This image of plenty is, however, misleading. Canada suffers regional water shortages, even in areas where water supply has traditionally been abundant.[3] In western Canada, the threat of water shortages is more well known and has inspired water legislation since the earliest days of European settlement.[4] This Article focuses on the experience of the prairie provinces of Alberta, Saskatchewan, and Manitoba, which stretch northward from the 49th parallel to the 60th parallel and extend eastward from the Continental

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1. MAUDE BARLOW & TONY CLARKE, BLUE GOLD, THE BATTLE AGAINST CORPORATE THEFT OF THE WORLD'S WATER 137–38 (2002); MARQ DE VILLIERS, WATER 259–60 (2000).

2. *Shrinking Glaciers Could Leave Cities Thirsty*, EDMONTON J., Apr. 22, 2004, at B5.

3. *See* Marcia Valiante, *The Future of Common Law Water Rights in Ontario*, 14 J. ENVTL. L. & PRAC. 293 (2004) (discussing recent periodic water shortages in Southern Ontario); Oliver M. Brandes & Lynn Kriwoken, Changing Perspectives—Changing Paradigms (Feb. 23, 2005) (unpublished manuscript) (discussing developing water shortages in the Okanagan region of British Columbia), *available at* http://www.waterdsm.org/Discussion%20Paper_files/CWRA_paper_feb05.pdf.

4. In British Columbia, the Gold Fields Act of 1859 was designed to regulate water rights in the British Columbia Gold Rush. The North-West Irrigation Act was a comprehensive attempt to address water shortages on the prairies. North-West Irrigation Act, S.C., ch. 30 (1894) (Can.); David R. Percy, *Water Law of the Canadian West: Influences from the Western States*, *in* LAW FOR THE ELEPHANT, LAW FOR THE BEAVER 278–83 (John McLaren et al. eds., 1992).

Divide to Hudson Bay and Lake of the Woods on the western boundary of Ontario.

The southern regions of the prairie provinces are known as Palliser's Triangle, in homage to the leader of a Royal Geographical Society expedition from 1857 to 1860, who maintained that their arid climate would constitute a barrier to settlement.[5] The area experiences annual precipitation of between 12 and 16 inches and suffers from chronic water shortages. The historical concern about lack of water in this region is exacerbated by the fact that most supplies in the area are drawn from the major glacier-fed river systems that have their source in the Rocky Mountains. The Athabasca glacier, which feeds the Saskatchewan River system, for example, has been receding at an accelerated rate since 1960 and is now shrinking at a rate equivalent to about 30 percent every century.[6] In recent times, long-standing concerns about present and future water supplies have been increased by the rapid growth in the population and economy of the area.[7]

In order to explore Canadian responses to water scarcity, Part II of this Article will set out the framework of water allocation law in the prairie provinces. Part III will examine two approaches to reforming water law that the provinces have adopted in the face of developing water shortages. Part IV will address some important environmental safeguards that accompanied the introduction of new water legislation in Alberta in 1996 and the need to protect the position of traditional water users, who are often threatened when legislation encourages the intensified use of water.

II. The Framework of Water Allocation Law on the Prairies

As European agricultural settlement pushed westwards into the arid regions of the Canadian plains, the need to provide a secure legal basis for irrigated farming quickly became apparent. The prevailing common-law doctrine of riparian rights did not allow either large-scale irrigation or the development of land that was distant from a watercourse. In the late 1880s, a substantial political movement began to support the development of a law of water allocation that was conducive to irrigation, and the federal government began a thorough study of legislative options. In 1892, William Pearce, the Superintendent of Mines for the Department of the Interior in Calgary, was recalled to Ottawa to begin work on legislation, and in 1893 and 1894, J.S. Dennis, Chief Inspector of Surveys for the Department of the Interior, was sent to examine irrigation systems and laws in operation in the western

5. REPORT OF THE SASKATCHEWAN-NELSON BASIN BOARD, WATER SUPPLY FOR THE SASKATCHEWAN-NELSON BASIN 9 (1972).

6. *The Big Melt*, NATIONAL (Aug. 19, 1998), *available at* http://www.tv.cbc.ca/national/pgminfo/glacier.

7. For example, in the Calgary region, Census Division 6, population grew by almost 16% between 1996 and 2001 and continues to grow at a rapid pace. ALBERTA INST. OF AGROLOGISTS, ENVIRONMENT FOR GROWTH 1 (2005).

United States.[8] The joint work of Pearce and Dennis led to the introduction in 1893 of a bill for the purposes of discussion and ultimately to the passage of the North-West Irrigation Act of 1894.[9] The influences of the American law of prior appropriation as it stood in the late 19th century are visible in the original structure of the Canadian legislation, although they became gradually obscured over the years as a detailed regulatory approach was superimposed on the original structure of the Act.

With the exception of the small area that constituted the province of Manitoba in 1894, the federal Irrigation Act governed water use across the vast area that now comprises the prairie provinces. In addition, by 1897 British Columbia had developed a system of water law that was similar in principle to the Irrigation Act, although there was little historical connection between the development of the respective statutory regimes.[10] As a result, by the end of the 19th century the enormous area of Canada that stretched from the Pacific Ocean to Hudson Bay was subject to broadly similar principles of water law.

In 1905, the prairie provinces of Alberta, Saskatchewan, and a much expanded Manitoba were carved out of the federal territories of Rupert's Land and the Northwest Territories. At that stage, however, the federal government retained ownership and control of all public lands and natural resources that had not been the subject of private grants, and the Irrigation Act remained in force in the newly created provinces. However, the original scheme of confederation had placed ownership and control over natural resources in the provinces rather than the federal government, so that the new prairie provinces were in an anomalous position.[11] In 1930, the Natural Resources Transfer Agreement placed all provinces on an equal footing by transferring, subject to certain exceptions, federally owned public lands and natural resources to the respective prairie provinces in which they were situated.[12] Although there were initial doubts as to whether the 1930 agreement included water resources,[13] each province immediately reenacted the provisions of the federal Irrigation Act as provincial law, with only minor

8. E.A. Mitchner, *William Pearce and Federal Government Activity in the West, 1874–1904*, 10 CAN. PUB. ADMIN. 240 (1967).

9. North-West Irrigation Act, S.C., ch. 30 (1894) (Can.). For a general discussion of the history of the legislation, see David R. Percy, *Water Rights in Alberta*, 15 ALTA. L. REV. 142, 142–46 (1977).

10. Percy, *supra* note 4, at 277–85.

11. For an exhaustive account, see G.V. LAFOREST, NATURAL RESOURCES AND PUBLIC PROPERTY UNDER THE CANADIAN CONSTITUTION 15–48 (1969).

12. Constitution Act, 1930, 20-21 Geo. V., c. 26, § 1 (Eng.). Eaeh provincial agreement is set out as a Schedule to the Act.

13. The intention to include water in the general transfer of natural resources was retroactively confirmed by joint federal and provincial legislation. *See* DAVID R. PERCY, THE FRAMEWORK OF WATER RIGHTS LEGISLATION IN CANADA 11 (1988).

changes.[14] As a result, even when water resources came under provincial jurisdiction in 1930, the prairie provinces remained governed by the same basic model of water allocation law.

The Irrigation Act and its provincial successors were based on four fundamental principles. They provided the foundations of the basic model of prairie water law and were universally recognized in provincial law until very recent times.

A. Government Ownership

As a cornerstone of the legislation, in order to secure control over water use, the Irrigation Act declared that the Crown owned all the water within the jurisdiction. Although some western American states declare that water belongs to the public or to the state, the Canadian formula was borrowed from the Australian state of Victoria.[15] The Water Rights Act of Manitoba closely parallels the original federal legislation by its declaration that "all property in, and all rights to the use, diversion or control of water in the province . . . are vested in the Crown."[16] In Alberta the declaration of Crown ownership of water was extended to include groundwater in 1962.[17] On this basis, these statutes each then prohibit anyone from using or diverting water without first obtaining a license from the government.[18]

B. Allocation of Water by License

All prairie legislation exempts the minor use of water for basic domestic and agricultural needs from the licensing requirement.[19] A person who wishes to use water in excess of the amount exempted under the Act, or for non-exempt purposes, must first obtain a license to divert and use water. When the license is granted, the licensee obtains the right to divert and use

14. Water Resources Act, S.A., ch. 71 (1931) (Can.); Water Rights Act, S.S., ch. 17 (1931) (Can.); Water Rights Act, S.M., ch. 47 (1930) (Can.).

15. C.S. Burchill, *The Origins of Canadian Irrigation Law*, 29 CAN. HIST. REV. 353, 359–60 (1948). The original North-West Irrigation Act stated simply that the right to the use of all waters was presumed to be vested in the Crown. North-West Irrigation Act, S.C., ch. 30, § 4 (1894) (Can.). In 1895, this section was changed to vest in the Crown both the property and the right to the use of the water. North-West Irrigation Act, S.C., ch. 33, § 2 (1895) (Can.).

16. Water Rights Act, R.S.M., ch. W80, § 2 (1988) (Can.).

17. Water Resources Amendment Act, S.A., ch. 99, § 2 (1962) (Can.). Manitoba and Saskatchewan now include groundwater in their Acts. *See* Water Rights Act, R.S.M., ch. W80, § 2 (1988) (Can.); Saskatchewan Watershed Authority Aet, S.S., ch. S-35.02, § 2(p) (2002) (Can.).

18. *E.g.*, Water Rights Act, R.S.M., ch. W80, § 5 (1988) (Can.).

19. *Id.* § 3(2)(c). The Alberta Water Act exempts from the license requirement only the use of up to approximately one acre-foot per year for household purposes, although certain exempted agricultural users are entitled to divert a further five acre-feet per year without a license. Water Act, R.S.A., ch. W-3, §§ 21(1), 19(1), 1(y) (2000) (Can.).

the quantity of water stipulated in the license, and historically this right passed to the licensee's successors.[20] Early licenses, particularly those issued by the federal government at the beginning of the 20th century, typically granted the right to divert large quantities of water for irrigation purposes. For example, one such license authorized the total diversion of 627,178 acre-feet of water during the irrigation season.[21] The licenses were usually granted without a fixed term and were treated as permanent in nature. Licenses were also secure because they could be cancelled only if the licensee committed one of a limited series of offenses specified in the Act.[22]

C. *The Prior Allocation Principle*

Any system of water law that grants users secure rights to consume water and allows cancellation only in limited circumstances must deal with the problem that occurs as soon as there is insufficient supply to satisfy all recognized users. On the Canadian prairies, the law resolved that problem by borrowing from the American doctrine of prior appropriation. Under the basic Canadian model, the senior licensee is entitled to receive the entire allotment of water stipulated in the license before a junior licensee is entitled to receive any water. The Canadian law is thus functionally similar to the original doctrine of prior appropriation, though it is properly described as a system of prior allocation because the priority of a license depends on the date of the application, and the quantity of water allotted to the licensee has always been measured by an administrative decision rather than by the amount of water which an individual puts to beneficial use.[23]

D. *Nontransferability*

During most of the first century of the existence of prairie water law, allocations of water granted under a license were essentially nontransferable, except as part of a transaction that involved the conveyance of the land or the undertaking in respect of which the license was first granted. This rule was implicit under the original federal legislation because every water license was required to incorporate a particular source of supply and point of

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20. See, for example, the former Alberta Water Resources Act, R.S.A., ch. W-5, § 23 (1980) (Can.). The statement in the text remains valid, except in Manitoba, where the Water Rights Act provides in § 11 that where an estate or interest in land is transferred, any subsisting license expires automatically, unless the Minister, upon application, transfers the license to the transferee. Water Rights Act, R.S.M., ch. W80, § 5 (1988) (Can.).

21. Dept. of the Interior, License No. 111 in the Bow River Drainage Basin, License No. 19 on the Bow River (issued September 23, 1921) (on file with the author).

22. *See* PERCY, *supra* note 13, at 29.

23. Water Rights Act, R.S.M., ch. W80, § 8(1) (1988) (Can.); Water Act, R.S.A., ch. W-3, §§ 29, 30 (2000) (Can.). The major reform of Saskatchewan water law in 1984 omitted all reference to the priority principle, although the legislation preserves all existing rights. Presumably, the preservation of those rights also includes their priority. *See* Saskatchewan Watershed Authority Act, S.S., ch. S-35.02, § 79(1) (2002) (Can.).

diversion.[24] As a result of this incorporation, any removal of water from a different point of diversion or for a different purpose constituted a breach of the term of the license and thus a statutory offense. Amendments to the Irrigation Act in 1920 recognized the existence of a general rule against the transfer of water allocations, because they created an exceptional method of permitting the transfer of water rights apart from the land or undertaking to which they were otherwise attached.[25] This exception will be discussed in the following Part of this Article. The prohibition against the transfer of water allocations was made express when Alberta enacted its first provincial Water Resources Act in 1930. That legislation stated that licenses were appurtenant to the land or undertaking specified in the license and generally "inseparable therefrom."[26]

III. Western Canadian Water Law and Water Shortages

As its short title implies, the Irrigation Act was designed to encourage agricultural settlement by providing secure water rights as they were required. It fulfilled that objective successfully, but it did not take long for the fatal flaw in the original 1894 scheme to emerge. The legislation had only been in existence for a quarter of a century when it became evident that the policy of giving out secure long-term water licenses and prohibiting their transfer would soon exhaust the available water supplies on the southern prairies. In 1920, a concern arose in southern Alberta that the grant of large licenses for irrigation might have preempted the water supplies required by new and expanding municipalities.[27]

Although the fatal flaw in the original prior allocation system was pinpointed in 1920, its effect was disguised for most of the rest of the century. The immediate concern of ensuring that municipalities would have access to adequate water supplies was addressed by the creation of a safety valve in the Act which allowed the transfer of water from a lower priority to a higher priority use.[28] This scheme also had its origins in American water law and determined priorities in water use by reference to a statutory table. The outline of the 1920 scheme still exists only in Manitoba. Where water is fully allocated, the Manitoba Water Rights Act allows a higher priority user to buy the water rights of a lower priority user. If voluntary negotiations fail, the amount of compensation to be paid to the lower priority user can be fixed by arbitration.[29]

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24. Irrigation Act, S.C., ch. 55, § 5 (1920) (Can.).

25. *Id.* § 4.

26. Water Resources Act, S.A., ch. 71, § 18 (1931) (Can.).

27. House of Commons Debates (June 17, 1920) at 3695.

28. Irrigation Act, S.C., ch. 55, § 5 (1920) (Can.).

29. Water Rights Act, R.S.M., ch. W80, §§ 9, 14 (1988) (Can.). The priorities established by the statutory table varied over the years. *See* PERCY, *supra* note 13, at 24–25. The surviving table

Initially, the inability of the Irrigation Act scheme to allow new users to obtain water allocations without acquiring the land to which they were attached, except under the table of statutory priorities, was disguised by a massive long-term effort to increase the available supply of water. As long ago as 1975, it was estimated that over $1 billion had been invested in water storage facilities in the Saskatchewan-Nelson River Basin.[30] During the 1980s, the planning of the Oldman River Dam, which was completed in 1992, aroused an unprecedented degree of controversy and litigation.[31] The degree of controversy emphasized that most of the available storage sites on the prairies had already been used and that it is now unlikely that new major dams will be built to alleviate perceived water shortages.[32] As the era of dam building began to recede, more radical proposals suggested the diversion of water into the southern prairies from the Mackenzie River Basin, which flows north into the Arctic Ocean.[33] These proposals were always highly controversial and in Alberta, where there had been some occasional indication of government interest, major interbasin transfers of water are now prohibited by legislation.[34]

In a pattern that was familiar in the American West, the role played by water law in creating shortages became the subject of examination only after all efforts at augmenting the natural supply of water had been exhausted. In Canada, it became apparent only in the last two decades that the basic model of prairie water law had never been designed to deal with water scarcity. The legislation had essentially granted secure water licenses of indefinite duration that were free of charge, once a modest initial application fee had been paid, and not readily transferable, except with the land or undertaking to which they were attached. The system created no incentives for the efficient use of water and could allow water use to adapt in the face of changing societal needs only in the most cumbersome manner.

As a result, fundamental changes began to creep into western Canadian water law. Manitoba undertook reforms in 1983 and Saskatchewan enacted radical changes in 1984. The Manitoba legislation has since undergone a further modernization. Alberta enacted a major reform of water law in 1996, and Saskatchewan reorganized its approach again in 2002. The following

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in Manitoba establishes the following order of priorities: domestic, municipal, agricultural, industrial, irrigation and other purposes. Water Rights Act, R.S.M., ch. W80, § 9 (1988) (Can.).

30. CANADA WATER YEAR BOOK 48 (1975).

31. *E.g.*, Friends of the Oldman River Soc'y v. Canada (Minister of Transp.), [1992] 1 S.C.R. 3.

32. A major report by the Alberta Institute of Agrologists notes that few major water projects are yet to be developed. The cost of storage in the Oldman River Dam was $913 per cubic decameter; in the most recent storage project, the cost has increased to $1,475. ALBERTA INST. OF AGROLOGISTS, *supra* note 7, at 2.

33. *See* A.H. Laycock, *Interbasin Transfers for Agriculture in the Canadian Prairies: The Non-Structural Factors*, *in* PROCEEDINGS OF THE SYMPOSIUM ON INTERBASIN TRANSFER OF WATER: IMPACTS AND RESEARCH NEEDS FOR CANADA 121 (National Hydrology Research Centre, 1987).

34. Water Act, R.S.A., ch. W-3, § 47 (2000) (Can.).

Part of this Article will examine the impacts of the reforms that have occurred since 1983.

IV. Modern Responses to Water Scarcity in Western Canada

All the provincial reform initiatives recognized that the basic model of water law had frozen water use in a pattern—dictated only by historical accident—that could not adapt to either economic or environmental changes.

Since 1983, the three prairie provinces have adapted water allocation law to deal with the new reality of water scarcity by characteristically different methods. Those methods involved two different broad policy approaches, each of which will be considered in turn.

A. Removal of Water from Existing Users

1. Manitoba and Saskatchewan's Approaches.—Manitoba and Saskatchewan addressed the defects in the basic model by adopting solutions which are legalistic and technocratic rather than practical. The reforms correctly identify the source of the problem because they recognize that the bulk of available water supplies are tied up in existing licenses. They seek to cure the problem by creating a legal mechanism to take water away from existing licensees and make it available to new users. The approach is technocratic because it leaves administrators to decide which licensees have "excessive" water rights and how much water should be removed from them and made available either to new users or to increase the natural flow of a river system.[35]

In evaluating the Manitoba and Saskatchewan reforms, it is necessary to make two essential contrasts to the American doctrine of prior appropriation. First, under the prior allocation system, only the government can grant the right to use and divert water by means of a water license. As a result, the water license almost certainly does not grant any form of property right.[36] Even if it could be argued that a licensee who has exercised a water right for perhaps a century holds a type of property right, the Canadian Charter of Rights and Freedoms specifically did not include property rights in the group of constitutionally-protected civil liberties.[37] Provincial legislatures thus have extensive powers to deal with existing water rights, fettered only by interpretive rather than substantive limitations.

Manitoba takes a modest approach to dealing with existing rights. The province adopted the principle that all water licenses should be issued for a

35. The powerful position of the administrator in the Manitoba and Saskatchewan statutes recalls the contrast pointed out in Frank J. Trelease, *The Model Water Code, The Wise Administrator and the Goddamn Bureaucrat*, 14 NAT. RESOURCES J. 207 (1974).

36. ALASTAIR R. LUCAS, SECURITY OF TITLE IN CANADIAN WATER RIGHTS 21 (1990).

37. P.W. HOGG, CONSTITUTIONAL LAW OF CANADA 705–06 (Student ed. 2004).

fixed term.[38] The Act emphasizes that the Minister has the power to decline an application to renew a license on the grounds that the water is required for a higher priority use. In this event, the new user is required to pay compensation to the original licensee, and the amount of compensation can be determined by arbitration if necessary.[39] However, the impact of the Manitoba changes is limited because the Act does not expressly impose a fixed term on licenses that were in existence prior to 1987. The principles of legislative interpretation strongly suggest that only licenses issued after 1987 are subject to a fixed term. Accordingly, Manitoba has not significantly increased its ability to transfer water from early, high volume licenses, to new users.

Saskatchewan took a much more Draconian approach when it established a power to cancel or curtail all existing water rights. The original version of the legislation in 1984 created a remarkable power which enabled the Saskatchewan Water Corporation, the body then charged with the administration of the Act, to cancel any existing water right. The holder of the cancelled right was entitled to compensation, based only on the actual value of any works that were rendered redundant by the cancellation.[40] The existence of this arbitrary power was without precedent in North American water law, but it existed for eighteen years until it was modified in the province's most recent reform.

Under Saskatchewan's latest version of water law, the Saskatchewan Watershed Authority (the Authority), is now responsible for the administration of the Act.[41] The Authority has the express power to issue a water rights license for any term and subject to any conditions that it considers appropriate,[42] and it may cancel the right to the use of any water that it has granted. If it cancels a right, the measure of compensation remains the same as it was under the 1984 legislation. However, the 2002 legislation means that the Authority almost certainly no longer has the power to cancel water licenses granted before 1984. The cancellation power under the new legislation applies only to water rights granted by the Authority or its immediate predecessor, the Saskatchewan Water Corporation.[43] Prior to 1984, water

38. Under Manitoba Regulations 126/87, § 5, licenses were to be issued for a fixed term of twenty years and renewable for any number of further periods of twenty years each. In 1990, the Regulation was amended to state that licenses are to be issued for a term determined by the Minister, not exceeding twenty years. *See* Water Rights Regulation, Man. Reg. 126/87, § 5, as am. Man. Reg. 19/90 and 107/90.

39. Water Rights Act, R.S.M., ch. W80, § 14(4)–(5) (1988) (Can.). The determination of a higher priority use is determined by the table of statutory priorities. *Id.* § 9.

40. Water Corporation Act, S.S., ch. W-4.1, § 42 (1983–1984) (Can.). The power to curtail (rather than cancel) an existing water right was found in § 41 (5). *Id.* § 41(5).

41. Saskatchewan Watershed Authority Act, S.S., ch. S-35.02, § 6(1)(b) (2002) (Can.).

42. *Id.* § 38(2).

43. *Id.* § 95(2).

licenses were granted by the Crown, rather than the Authority or the Water Corporation, and thus now appear to be exempt from the cancellation power.

The statutory changes in Saskatchewan and Manitoba provide a solution to the rigidity of the allocation of prairie water rights that is legalistic rather than useful. It is true that water rights in these provinces are no longer completely inflexible and unable to accommodate changing patterns of water use. In Manitoba, the Minister can refuse to renew an existing license, and in Saskatchewan, the Authority may refuse to renew or cancel an existing license. The Minister in Manitoba or the Authority in Saskatchewan can reallocate water that was formerly granted to an existing licensee to another user or for a social purpose, such as increasing instream flows.

Although the powers granted to administrators in Manitoba and Saskatchewan are legally valid, it is extremely unusual in water law to find cases in which water licenses (except those that were issued for temporary purposes) are not renewed or in which the powers to cancel water rights are actually exercised, except in cases of non-use by the existing licensee. This is not surprising because, despite the fact that water licenses do not convey property rights, licensees in water-short regions in western Canada tend to view their water rights as entitlements. Any attempt by an administrator to remove or limit those rights is met with a degree of outrage that makes it politically difficult or impossible to exercise the statutory powers.

The Saskatchewan and Manitoba solutions are equally ineffective in policy because they tend to perpetuate the wasteful use of water. Although the powers of non-renewal and cancellation would be effective in allocating water to new users if they were exercised, they create no incentive for water users in general to reduce the amount of their consumption. Because the powers are likely to be brought to bear only in extreme cases, they also fail to allow for day to day adjustments to water use throughout both provinces. In addition, the effect of the entire scheme in both provinces depends on the ability of the administrator to make correct decisions as to which uses of water are "more important" than others. Rapid urbanization suggests that the type of compulsory reallocation that is likely to occur in western Canada (and which is expressly contemplated by the table of priorities in Manitoba) would be from an irrigation user to a city. An administrator might find it difficult to deny an application when a city seeks more water to satisfy the needs of its inhabitants, but the city's need may arise precisely because its existing use of water is inefficient.[44] Compulsory reallocation under the statutes in both provinces creates a safety valve which will enable cities to obtain increased water rights if they can demonstrate a need, without necessarily exploring measures to reduce existing consumption.

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44. *Drop by Drop: Urban Water Conservation Practices in Western Canada*, WESTERN CITIES PROJECT REPORT #29 (Canada West Foundation Publication, Calgary, Canada), Feb. 2004.

The provisions for the compulsory reallocation of water in Saskatchewan and Manitoba thus create a heavy-handed cure for the inflexibility of water rights, while failing to address the real problems that underlie water shortages on the Canadian prairies.

2. The Alberta Water Act: A Market-Based Approach.—In contrast to its neighbouring provinces, Alberta showed no appetite for the compulsory reallocation of water from existing to new users during a seven-year examination of its water allocation law. The 1996 Alberta Water Act takes a more market-based approach to the twin problems of a rigid pattern of water rights and inefficient water use.

The Water Act allows the voluntary transfer of all or part of a licensed allocation from an existing licensee to a new user.[45] The idea of transferable water allocations was controversial during the reform process, with the result that the Act subjects transfers to an important political safeguard. The Act allows the consideration of the transfer of an allocation of water only if the ability to do so has been authorized in either an approved water management plan or by an Order of the Lieutenant Governor in Council,[46] which can be issued only on the advice of the provincial Cabinet. As a water management plan must also be "approved" by the Cabinet,[47] the Act ensures that strong political oversight will occur before a decision is taken to allow transfers in any region. However, the pressure to accommodate changes in water use quickly became irresistible. Although the Water Act was passed in 1996, it was not proclaimed into force until 1999. In 2002, the Cabinet removed any potential obstacle to water transfers in the areas where they were most needed. The South Saskatchewan Basin Water Management Plan, which covers the water-short regions of southern and south-central Alberta, authorizes the plan Director to consider applications to transfer water allocations within the entire basin.[48]

The philosophy of the Act was to subject applications for the transfer of a water allocation to the same scrutiny as applications for new licenses. It essentially requires the Director to apply the principle that a transfer must result in no net harm, in much the same way as required by modern water law in the western United States. The Director must ensure that the amount of water to be transferred does not exceed the amount of water allocated under the original license and that the transfer does not impair the right of other water users. In addition, in recognition of the fact that a transfer may have external effects on the river system, the transfer must not cause a significant adverse effect on the aquatic environment.[49]

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45. Water Act, R.S.A., ch. W-3, § 82(1) (2000) (Can.).

46. *Id.* § 81(7).

47. *Id.* § 11(1).

48. ALBERTA ENV'T, SOUTH SASKATCHEWAN RIVER BASIN WATER MANAGEMENT PLAN PHASE I: WATER ALLOCATION TRANSFERS 7 (2002).

49. Water Act, R.S.A., ch. W-3, § 82(3) (2000) (Can.).

Alberta has thus introduced an element of flexibility in water allocation in the large region that is covered by the Saskatchewan Basin plan. It is a huge improvement on the compulsory reallocation schemes adopted in Saskatchewan and Manitoba. It creates a practical and workable method for accommodating new users, and it provides an incentive for all water users to reduce wasteful use by allowing the marginal value of their water to be recognized. The Act also encourages the many changes in water use that can occur without raising serious issues of water policy. It allows both temporary and permanent transfers,[50] as well as short-term assignments of water. An assignment of water merely requires the parties to file a copy of a written assignment agreement with the Director, who may intervene in the assignment only if it harms the rights of other users or has an adverse effect on a water body or the aquatic environment.[51]

The implementation of transferable water allocations has enormous potential benefits in western Canada. However, transferability does have implications for water and environmental policy. Transferability tends to intensify water use, as licensees have incentives to save and transfer water that, for example, might otherwise return to the river or seep into wetlands.[52] Recent Canadian legislation contains three initiatives which deal with aspects of these problems and which deserve separate consideration.

V. Environmental Safeguards in Water Allocation Regimes

Traditionally, water legislation in western Canada operated almost as an adjunct to agricultural development. The legislation was broad enough to permit environmental factors to be taken into account in allocation decisions, but in practice administrators were concerned with the impact of a license application on the rights of other water users rather than the broader environmental implications of their decisions.

The close relationship between water allocation and environmental priorities emerged with dramatic judicial decisions dealing with the authorization of major dams in Saskatchewan and Alberta.[53] The increasing scarcity of water makes the inextricable connection between water allocation decisions and the environment even more important. However, most water legislation in the prairie provinces fails to give any explicit recognition to environmental factors in the water licensing process.

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50. *Id.* § 82(2)(b).

51. *Id.* § 33.

52. ALBERTA INST. OF AGROLOGISTS, *supra* note 7, at 12. The Alberta Water Act does allow the Director, prior to approving the transfer, to consider the historical rate of diversion under the existing license, as well as the volume of water allocated under the license. Water Act, R.S.A., ch. W-3, § 82(5)(c)(iii) (2000) (Can.).

53. *See, e.g.*, Friends of the Oldman River Soc'y v. Canada (Minister of Transp.), [1992] 1 S.C.R. 3; Canada (Attorney Gen.) v. Saskatchewan Water Corp. [1993], 106 D.L.R. (4th) 250 (Sask. C.A.).

Legislative provisions requiring the consideration of environmental factors in water allocation decisions vary across the prairie provinces. In Saskatchewan, there are no formal requirements. The Watershed Authority Act authorizes potential water users to apply for a license and gives the Authority complete discretion on whether to issue a license and, if so, on setting the terms of the license.[54] The Saskatchewan approach is unusual in modern Canadian water legislation because it fails to even contemplate the possibility of environmental input into decisionmaking and creates no basic procedural safeguards which would allow environmental issues to be raised.

In contrast, Manitoba does not formally require the consideration of environmental factors, but it creates a number of procedural steps that allow environmental issues to be raised. The Water Rights Act authorizes the Minister to require the publication of an application for license. Where publication is required, members of the public may file objections and the Municipal Board is then required to hold a public hearing.[55] Although these provisions are not extensive, they create a mechanism which allows environmental concerns to be aired and a forum in which they can be discussed.

If environmental concerns do arise in Saskatchewan and Manitoba, the Minister (in Manitoba) and the Authority (in Saskatchewan) have complete discretion in evaluating those concerns and deciding whether to issue a license or to insert protective conditions in the license. The recent history of major water allocations in the prairie provinces suggests that in the absence of statutory requirements, the decisionmaker is unlikely to pay serious attention to environmental considerations. The decisions in both the *Oldman River Dam* and the *Saskatchewan Water Corporation* cases suggest that water rights for those controversial projects were granted on purely technical criteria, in the absence of any requirement that some level of attention should be paid to environmental concerns.[56]

In contrast, the new Alberta Water Act makes a break from traditional water allocation statutes by integrating the evaluation of applications for water licenses with the provincial environmental protection and environmental assessment regimes.[57] In ordinary circumstances, an applicant is required to provide public notice of the application and "any person who is directly affected" is permitted to submit a statement of concern.[58] A person

54. Saskatchewan Watershed Authority Act, S.S., ch. S-35.02, §§ 39, 38(2) (2002) (Can.).

55. Water Rights Act, R.S.M., ch. W80, § 6(3)-(4) (1988) (Can.).

56. *Friends of the Oldman River Soc'y*, 1 S.C.R. 3; *Saskatchewan Water Corp.*, 106 D.L.R. (4th) 250 (Sask. C.A.).

57. Water Act, R.S.A., ch. W-3, §§ 5, 10 (2000) (Can.).

58. In order to meet this definition, the court has stated that a person must demonstrate a "personal interest that is directly impacted by the approval granted." Kostuch v. Alberta (Director, Air & Water Approvals Division, Environmental Protection) [1996], 21 C.L.R. (N.S.) 257 (Q.B.), para. 25. The same test applies to appeals under the Water Act. *See* Re Schaefer, [2001] A.E.A.B.D. No. 44, para. 18.

who submits a statement of concern may bring an appeal to the Environmental Appeal Board if the Director decides to issue a license.[59]

The procedural requirements of the Water Act increase the possibility that environmental concerns will be properly aired in water licensing decisions. Once the concerns are raised, the legislation seeks to guide the Director's discretion in dealing with environmental factors. In making a decision on a license application, the Director is required to consider any matters and factors specified in any applicable approved water management plan for the region in question. The Director is also authorized to consider the effect of the proposed license on the aquatic environment and to consider its hydrological effects.[60]

The Alberta Water Act provides a mechanism for integrating water licensing decisions with environmental objectives. It does not guarantee that the objectives will be fully addressed, unless they are contained in an approved water management plan. However, the Act brings water allocation issues out of their traditional isolation and provides a defensible basis for any decision by the Director to deny an application for license or to add protective conditions on environmental grounds.

A. The Restoration of Instream Flows

The water law of most western jurisdictions on both sides of the international boundary is based on either the prior allocation or the prior appropriation model. These jurisdictions face problems with maintaining a level of minimum flows sufficient to ensure that river systems function at a level consistent with environmental objectives.[61] Once the water in a river basin is fully allocated, it has traditionally been difficult to restore flows to an adequate level because any initiative to do so threatens the vested rights of existing users.

Manitoba and Saskatchewan have both created the power to take water from existing users and to devote it to other public purposes, such as maintaining river systems. However, both provinces face the reality that it would be politically difficult—if not impossible—to exercise this power by telling a licensee that water that was formerly put to viable economic use is now required for environmental purposes.

The introduction of transferable water allocations can easily make the maintenance of minimum flows even more difficult because they create

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59. Water Act, R.S.A., ch. W-3, § 115(1)(e) (2000) (Can.). The appeal mechanism proved effective in raising concerns about the use of fresh water for oilfield injection in *Mountain View Regional Water Services Commission v. Director, Central Region, Regional Services, Alberta Environment re: Capstone Energy* (26 April 2004), Appeal Nos. 03-116 and 03-118-121-R, Alberta Environmental Appeal Board.

60. Water Act, R.S.A., ch. W-3, § 51(4) (2000) (Can.).

61. *See* ANNEAR ET AL., INSTREAM FLOWS FOR RIVERINE RESOURCE STEWARDSHIP 2 (rev. ed. 2004).

incentives to put to use water that might previously have been available to the river system through return flows. The Alberta Water Act addresses this problem by allowing the Director to withhold water for environmental purposes when a transfer is approved. It provides that, where authorized in an approved water management plan or by order of the Lieutenant Governor in Council, the Director may withhold up to 10 percent of the water allocation that is subject to the transfer in order to protect the aquatic environment or to implement a water conservation objective.[62]

This requirement of Cabinet approval of holdbacks was removed at the same time that transfers were allowed by the South Saskatchewan River Basin Water Management Plan, which authorizes the use of water conservation holdbacks in transfers in that region.[63] The operation of the transfer system thus creates a rare win-win situation. In exchange for granting the right to transfer water allocations that were previously tied to the land and for creating the ability for new users to acquire water that was previously unavailable, the Act permits progress towards important environmental objectives.

The explicit use of the transfer process to restore instream flows is unique in Canada. Although the holdback provision is modest and unlikely to restore large quantities of water to a river system, it provides a key to unlock an otherwise intractable problem. Where the Director withholds water from a transfer, the Act creates three options: the withheld water may remain in the natural water body for the purpose of providing or maintaining minimum flow requirements, the water may be reserved from the general allocation scheme, or it can be allocated to the government under a license. If the Director follows the third option, the government license provides an important protection, as it must hold the same priority as the original license from which the holdback was taken.[64] This option creates the possibility of devoting water to instream flows with a senior licensed priority.

B. Protection of Unlicensed Traditional Use

Transferable water rights have become the norm in the western United States and Australia, and they are now recognized in Canada through legislation in Alberta, as well as in British Columbia.[65] Most modern water allocation law deals successfully with issues surrounding those who hold water rights that are defined and registered within the system of a particular jurisdiction. The intensification of water use that occurs when transfers are introduced can, however, threaten those who depend on water but who have no statutorily recognized rights. This risk means that great care must be taken when modern water law is applied, in Canada and Australia, to areas in

62. Water Act, R.S.A., ch. W-3, § 83(1) (2000) (Can.).
63. ALBERTA INST. OF AGROLOGISTS, *supra* note 7, at 11.
64. Water Act, R.S.A., ch. W-3, § 83(3)(4) (2000) (Can.).
65. *See* Water Act, R.S. B.C., ch. 483, § 19 (1996) (Can.).

which indigenous people rely on access to water supplies but hold no license or permit for water use, and in the developing world when reforms that incorporate concepts of western water law are under consideration.

Water law reforms in the prairie provinces do not address the problem of unregistered water use, especially by indigenous people, in a particularly innovative fashion. Provinces protect unlicensed domestic or household use,[66] and Saskatchewan declares that Indian bands have common law riparian rights on lands set aside for Indian reserves under modern land claims settlement agreements.[67] However, Canada's three northern territories of Nunavut, Yukon, and the Northwest Territories all deal explicitly with the problem of those who are dependent on water but who lack legally recognized rights to water use.[68]

The system for the protection of traditional users in northern Canada is best illustrated by the Northwest Territories Waters Act. The Northwest Territories Water Board may issue a license only if the applicant shows either that the proposed use of water would not adversely affect in a significant way the use of water by others with prior rights or that compensation has been paid to a listed group of affected water users. The listed group includes domestic users, instream users and the holders of outfitting concessions, registered traplines, and other rights of a similar nature. In the Northwest Territories, most users of these types are likely to be aboriginal people and almost certainly will not hold licenses, although they may be heavily dependent on the existence of water.

The Northwest Territories Waters Act is important because it deals with the impact of water legislation on those whose dependence on water is not legally recognized. However, the statutory solution is far from ideal. In order to be effective, it depends entirely on the identification of affected water users at the time a license application is made because only those so identified are entitled to compensation.[69] In addition, the Act states only general criteria for the determination of compensation, and it is vague on the important question of how the compensation should be measured. However, legislation of this type is unique in recognizing the importance of dealing with unregistered water users. It provides at least a rudimentary model for

66. Water Rights Act, R.S.M., ch. W80, § 3(2) (1988) (Can.); Saskatchewan Watershed Authority Act, S.S., ch. S-35.02, § 45(2) (2002) (Can.); Water Act, R.S.A., ch. W-3, § 21 (2000) (Can.).

67. *See* Saskatchewan Watershed Authority Act, S.S., ch. S-35.02, § 80(c) (2002) (Can.).

68. Until recently, essentially uniform legislation governed all three territories until the creation of Nunavut in 1999 and the devolution of federal powers to the Yukon in 2002. Provisions for the compensation of existing users remain in the Nunavut Waters and Nunavut Surface Rights Tribunal Act, S.C., ch. 10, § 60 (2002) (Can.) and the Yukon Waters Act, S.Y., ch. 19, § 28 (2003) (Can.). For the purpose of illustration, this Article will rely on the Northwest Territories Waters Act, S.C., ch. 39 (1992) (Can.), which still applies to the Northwest Territories.

69. Northwest Territories Waters Act, S.C., ch. 39 § 14(5) (1992).

consideration when western water allocation systems are considered for adoption in the developing world.

VI. Conclusions

For almost a century, there was little activity in the water allocation law of the prairie provinces of Canada. The last twenty years have seen the implementation of radical new approaches in Saskatchewan and Alberta and modest reforms in Manitoba. The recent vintage of this legislative activity has allowed the provinces to take advantage of their experience with modern environmental legislation and to reflect on reform initiatives in the rest of the world.

Manitoba and Saskatchewan have adopted a traditional regulatory response to the new reality of water scarcity that is typical of much Canadian environmental legislation. Saskatchewan in particular places heavy reliance on the strong discretionary powers of its responsible administrative authority, and both provinces now have a legal mechanism to allow new users access to water. The effectiveness of this model depends heavily on the exercise of administrative discretion, and it is limited by the practical difficulty of wresting water allocations from existing licensees to supply new users or to satisfy environmental needs.

Alberta's new legislation is far more comprehensive, and it, too, contains regulatory powers that are both broad and discretionary. It includes important elements of more recent environmental legislation by relying on the economic self-interest of water users, both to reduce the wasteful use of water and to restore depleted instream flows.

It is often dangerous to simply transplant legal innovations into new surroundings. The recent legislation in the prairie provinces of Canada does not deal well with those who are dependent on water but lack legally recognized rights. In this respect, jurisdictions, particularly in the developing world, may well wish to pay heed to the modest level of protection of unrecognized water rights found in legislation in northern Canada. For jurisdictions faced with the problem of restoring instream flows, the Alberta legislation provides a useful model which allows the transfer system to address this problem, and it contains provisions that address the wider environmental implications of water allocation decisions.

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