Freshwater Ecosystem Restoration in the Columbia River Basin: Three Canadian Perspectives

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Freshwater Ecosystem Restoration in the Columbia River Basin: Three Canadian Perspectives

Arlene J. Kwasniak*

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I. INTRODUCTION

My task—a pleasant and intriguing one—was to give a Canadian perspective on freshwater ecosystem restoration in the Columbia River Basin. The task description brought three preliminary questions to mind: (1) What is the Canadian portion of the Columbia River Basin? (2) What can “freshwater
ecosystem restoration” mean in respect to the basin? (3) What is a “Canadian perspective” in relation to the Canadian portion of the basin?

The first question is straightforward. The Columbia drainage basin covers about 260,000 square miles. Although only 15% of the basin—40,000 square miles—lies in British Columbia, the Canadian portion contributes about 30% of the runoff for the entire basin.2

The second question—what “freshwater ecosystem restoration” means in relation to the Columbia River Basin—poses some challenges. Does “ecosystem restoration” mean restoring degraded ecosystems to a higher degree of sustainability,3 or does it mean restoring an ecosystem back to a pre-human alteration state?4 What counts as “ecosystem restoration” will greatly differ depending on which interpretation is chosen. The basin has been subject to substantial human alteration. Damming, mainly for hydropower purposes, began in British Columbia in 1903. In the early 1900s, dams for power or water storage were small and built to serve local needs. Although only sixty-one power dams were registered in British Columbia, by 1951 the numbers and storage capacity increased steadily, such that by the 1980s there were 103 dams covering over 426,000 hectares of British Columbia valley bottom and riparian habitat.5

The damming and impounding severely impacted freshwater ecosystems in the Canadian portion of the basin. According to two experts:

The impounding of a stream or river has a great impact on the movement of riverine fishes, especially anadromous fish. The dams are barriers to fish moving upstream, and fry moving downstream are often sucked through the turbines to die. The impacts on terrestrial wildlife may not be so dramatic, except when a reservoir blocks a migration route, and the animals try to cross, then drown. The direct impact on wildlife is the loss of critical habitat. The lower valley slopes, terraces and floodplains are the most productive forage-producing areas within our mountainous province, they are often the most snowfree in a valley system; yet those are the places that may be flooded. The direct influence of a dam on a

river is not confined to the reservoir; the downstream flood regime is also greatly altered.\textsuperscript{6}

So how should this article interpret “ecosystem restoration”: restoration to pre-human contact, or restoration to a state of greater sustainability? Although recent attempts have been made to “backcast”\textsuperscript{7} and determine how ecosystems have been impacted by the surge of hydroelectric development, I will use “ecosystem restoration” in the latter sense. The Canadian legal and policy perspective on freshwater ecosystem restoration in the pre-human contact sense would both unduly complicate and limit the scope of this article. On the other hand, simply using “ecosystem restoration” in the latter sense is too encompassing and makes the undertaking unmanageable. Accordingly, I limit “freshwater ecosystem restoration” to mean intentional activities, primarily relating to government activity, aimed at restoration of the aquatic ecosystem to a higher degree of sustainability.

The third question—what is a Canadian perspective with respect to freshwater ecosystem restoration—is as perplexing as the second. There are countless Canadian perspectives relevant to the Canadian Columbia River Basin. These include: the purely legal point of view, perspectives of a more political nature, and scientific perspectives. Additionally, there are numerous specific government initiatives aimed at freshwater ecosystem restoration in the basin. Aboriginal-rights interests potentially have a unique impact on management of the Canadian portion of the basin as do the rights and interests of the individual Canadians who live in and rely on the basin. I decided to be selective in picking a perspective, to avoid writing an article that is not much more than a long list.

In selecting a perspective, I chose a Canadian legal perspective to contrast U.S. legal perspectives with regard to the basin. I consider three perspectives. The first is a broad perspective that goes to the root of the Canadian legal context. This perspective deals with constitutional jurisdiction to regulate aspects of the Canadian Columbia River Basin freshwater ecosystem restoration. The second focuses on the Canadian legal context \textit{vis-à-vis} the United States. This perspective looks at international arrangements that impact freshwater ecosystem restoration from within the Canadian legal context. The third is a mixed provincial/local perspective. This final perspective considers British Columbia legislation that is aimed at protecting fish and fish habitat at both a provincial and municipal level. In this context, the article draws comparisons between U.S. legislative regimes and Canadian legislative regimes.

\textsuperscript{6} Id.

\textsuperscript{7} Id. (characterizing backcasting as a fairly new procedure that uses “pre-flooding aerial photographs and BC Forest Service forest cover maps plus Columbia Basin topographical maps,” and a government terrestrial ecosystem mapping procedure that produces feasible pre-flood habitat capability maps for a large number of species).
Part II of this article addresses the first perspective, Part III addresses the second perspective, and Part IV addresses the third perspective. Part V concludes the article, with comments regarding the necessity for the United States and Canada to recognize and respect each other's legal perspectives, so that they may effectively work together to restore the basin freshwater ecosystem.

II. PERSPECTIVE #1: THE CONSTITUTIONAL RIGHT TO IMPOSE LEGAL CONTROLS OVER THE CANADIAN PORTION OF THE COLUMBIA RIVER BASIN

A. Freshwater Ecosystem Restoration and the Canadian Constitution's Division of Powers

The determination of who has the right to regulate and set policy for freshwater ecosystem restoration is no different from determining who has the right to regulate or set policy for any other Canadian matter. The place to start is with the Canadian Constitution as set out in the Constitution Act.8

The Canadian Constitution allocates legislative "heads of power" between the federal and the provincial governments. This allocation is exclusive in that if the Constitution gives one level of government the right to legislate a matter, it excludes the other level from legislating that matter. Accordingly, if one level of government passes a statute or regulation governing a matter over which the Constitution gives the other an exclusive power to legislate, a court may strike down the law as being ultra vires.

The question of which level of government—federal or provincial—has the right to regulate management of freshwater ecosystem restoration obviously was not on the minds of the framers of the Constitution Act during the confederation process in the 1860s. The gentlemen who drafted that document would not have discussed regulation of freshwater ecosystem restoration since the importance of this endeavor was not apparent until the twentieth century. Indeed, the "heads of power" approach to legislative authority is not conducive to the kind of watershed management that is necessary to effect freshwater ecosystem restoration. At the time of confederation, only a few of the components of freshwater ecosystems—earth, water, air, fish and other wildlife, and plants—were even considered to be proper subjects of constitutional debate. As a result, Canada has the specific allocation of a few natural resource and management powers that are relevant to freshwater ecosystem restoration. The rest of the powers necessary to effect freshwater ecosystem restoration must be determined in accordance with interpretive rules that have evolved in law.

Regarding specific "heads of powers" relevant to aspects of freshwater ecosystem restoration:

Provinces may legislate:

- The management and sale of provincial public lands, including timber and wood thereon;\(^9\)
- Local works and undertakings;\(^11\)
- Property and civil rights in the provinces and local or private matters;\(^13\) and
- Penalties for violating provincial law.\(^14\)

The federal government may legislate:

- The public debt and federal public property;\(^15\)
- Trade and commerce;\(^16\)
- Raising money by taxation;\(^17\)
- Navigation and shipping;\(^18\)
- Seacoast and inland fisheries;\(^19\)
- Matters that regard Indians and lands reserved for Indians;\(^20\)
- The criminal law;\(^21\)
- Extra provincial works and undertakings;\(^22\)

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\(^9\) As a point of interest, in Canada, in contrast to the United States, public lands primarily are owned by provinces and not by the federal government. Consequently, most of the grazing, timber, and recreational resources in Canada are provincially owned and regulated. The federal government does, however, own numerous land throughout Canada, including significant national parks that were retained by the federal government upon provinces confederating, or in the case of the three prairie provinces, Manitoba, Saskatchewan, and Alberta, retained upon the transfer from the federal government of public lands and natural resources to these provinces in 1930 pursuant to natural resources transfer agreements. See Constitution Act, 1930, 20 & 21 George V., ch. 26, schedules 1, 2, 3 (U.K.).


\(^11\) Id. § 92(10).

\(^12\) Id. § 92(13).

\(^13\) Id. § 16.

\(^14\) Id. § 92(15).

\(^15\) Id. § 91(1)(A).

\(^16\) Id. § 91(2).

\(^17\) Id. § 91(3).

\(^18\) Id. § 91(10).

\(^19\) Id. § 91(12).

\(^20\) Id. § 91(24).

\(^21\) Id. § 91(27).

\(^22\) Id. § 92(10)(a)
• Works for the general advantage of Canada; 23
• To establish peace, order, and good government; 24 and
• To implement any international treaty which Great Britain entered on behalf of Canada. 25

Based on jurisprudence interpreting these heads of power, one may conclude that legislative jurisdiction relevant to freshwater ecosystem restoration is as follows:

• The federal government has the right to legislate over some freshwater ecosystem restoration, including:
  ▪ Freshwater ecosystem restoration on federal lands (e.g., freshwater ecosystem restoration in national parks or other federal reserved lands) and all resources on these lands (e.g., timber, water, range, wildlife and mines and minerals);
  ▪ Natural commercial, sport or recreational fishery habitat in freshwater ecosystem restoration, whether on federal or non-federal lands, and whether on privately owned or public lands;
  ▪ Ocean pollution and ocean mammals; and
  ▪ Migratory birds, and to a limited degree, migratory bird habitat (whether on federal or non-federal lands and whether on privately owned or public lands). 26

• Provincial governments have the right to legislate over some freshwater ecosystem restoration matters, including:
  ▪ Water courses and water bodies on provincial lands (e.g., in provincial parks or other provincial public lands) and all resources on these lands;

23. _Id._ § 92(10)(C).
24. _Id._ § 91.
25. See _id._ § 132; see also ARLENE KWASNIAK, Primer #1: Constitutional Matters, in ALBERTA WETLANDS: A LAW AND POLICY GUIDE (2001).
26. The federal government’s power relating to migratory birds, and to a limited degree, migratory bird habitat, (at least nests and eggs) arises under a treaty, the 1916 _Migratory Birds Convention_ between Great Britain, on behalf of Canada, and the United States. The federal government may through legislation implement this treaty throughout Canada under section 132 of the _Constitution Act_, which gives the federal government power to implement British Empire treaties. Now that the United Kingdom no longer enters into treaties on behalf of Canada, the federal government may no longer rely on section 132 to pass legislation applying throughout Canada to implement treaties. The current legislation implementing this treaty is the _Migratory Birds Convention Act_, 1994 S.C., ch. 22 (Can.).
Activities relating to the bed and shores of all natural water courses and naturally occurring permanent water bodies (including at least some wetlands); and

Wildlife, wherever it occurs in provinces, whether on public or private lands, with the exception of federal lands.

Although provinces have the right to legislate and set policy for air pollution, water pollution, and soil contamination within provincial borders, the federal government has the right to legislate some aspects of inter-provincial pollution, as well as the right to regulate toxic substances wherever they occur.\(^{27}\)

Municipalities also possess regulatory powers with regard to freshwater ecosystem restoration. However, municipalities do not directly derive the power to regulate from the Constitution Act. All of their powers must be delegated by a province, either expressly or by necessary implication. Unlike U.S. municipalities, Canadian municipalities possess police powers. Accordingly, Canadian municipalities do not have any greater constitutional authority than provinces to regulate matters, and may only regulate matters that are delegated to them. The third perspective of this article explores municipal controls over freshwater ecosystem restoration in the basin.

**B. Unclear Constitutional Jurisdiction**

When it is not clear which level of government—federal parliament or provincial legislature—has jurisdiction over a subject matter, Canadian courts have three alternatives.

First, they could find that the matter truly falls within the power of only one of the two levels. In determining this, courts will apply interpretational rules developed through the years. Generally, courts first try to characterize the essence of the regulated subject matter, and then consider whether it falls under provincial or federal constitutional authority. To illustrate, assume a provincial law prohibiting timber imports into a province was challenged. In this case, a court would ask whether the essence of the law is really the regulation of provincial timber resources (a matter within provincial authority), or whether its essence lies within trade and commerce (a matter within federal authority). If the essence of the law is the former, it will find the provincial law to be valid; but if it is the latter, it will declare the law to be *ultra vires* the Constitution.\(^{28}\)

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Second, where neither level of government has exclusive legislative jurisdiction, courts could find that both levels may validly legislate some aspect of that matter. For example, in the case of water pollution, provinces may pass legislation regulating water pollution, since provinces have the constitutional right to legislate for the protection of provincial property, private property, and civil rights. Federal parliament may also pass legislation regulating water pollution that interferes with fish habitat, since it has the constitutional right to legislate over inland and coastal fisheries. Both levels of laws may operate concurrently. However, if there is direct conflict among the laws, Canadian courts will apply the doctrine of paramountcy to confirm the operation of the federal law, and order the provincial law inoperative to the extent that it conflicts with federal law.

Third, courts may find that the Constitution does not confer either exclusive or shared legislative authority. In this case, the federal government should have legislative authority since the Constitution gives it the right to regulate residual matters.  

C. Illustration Relevant to Freshwater Ecosystem Restoration

An example will help illustrate how the constitutional division of powers in Canada operates in respect to freshwater ecosystem restoration. This example concerns fish, which is the main indicator species for the health of a freshwater ecosystem. This example illuminates the uniqueness of the Canadian legislative regime.

Subsection 91(2) of the Canadian Constitution gives federal parliament exclusive jurisdiction to legislate all matters concerning seacoast and inland fisheries. This head of power is the constitutional basis for the Federal Fisheries Act. Although the federal parliament possesses this exclusive legislative jurisdiction, provinces may exercise some legislative control over matters that concern fish. For example, in a foundational Canadian case—the Fisheries case—the Privy Council made it clear that the legislative powers given by subsection 91(2) do not imply proprietary rights. Fish can be provincial property, and
subsection 92(5) gives provincial legislature the exclusive right to create laws that govern provincial public lands and resources. Accordingly, under the British Columbia’s *Fisheries Act,* provinces may pass laws relating to proprietary aspects of fish, such as fishing regulations and sale and licensing laws because they own the fish.

Provinces may also pass laws that affect fish habitat. For example, by virtue of having constitutional legislative jurisdiction over property and civil rights, provinces may legislate in many areas that are relevant to the maintenance of fish habitat, such as the regulation of water pollution. In addition to acting as owner or administrator of water, provinces have the right to control water allocations and use. Provinces may regulate proprietary rights relating to bed and shores that could affect fish habitat. Further, municipalities—as provinces’ statutory delegates—regulate land subdivision and development, which could also impact fisheries.

In the end, provinces, municipalities, and the federal government all have a role in regulating fish and fish habitat. Although there is a nugget of exclusive legislative authority in the federal government granted by the Constitution, in my experience, it appears that the federal government hesitates to seize the authority necessary to vigorously protect fish habitat, lest it trod on provincial rights to regulate aspects relevant to the protection of fish as property, and the water and water bodies in which they live. Similarly for the most part, provinces carefully respect the exclusive federal jurisdiction over fisheries. Typically, when provinces exercise provincial legislative authority over water, bed and shores, wildlife, and property and civil rights, and delegate powers over land use to municipalities, they are mindful not to regulate fisheries and fish habitat *per se,* lest judicial review strike down legislation as *ultra vires.* Consequently, fisheries are left—sometimes gasping—in a legal quagmire.

This situation differs from that in the United States (where different but perhaps equally complex jurisdictional orders of command) because one level of government—the federal government—is able, and even sometimes willing, to aggressively step to the helm. It is highly unlikely that the Canadian federal

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35. In 1885, in an effort to amend the North-west Irrigation Act, 1895 S.C., ch. 33, §2, the federal government claimed ownership of all water in respect to the area that now comprises the Prairie Provinces. In 1925, the *British Columbia government claimed ownership by the Water Act Amendment Act,* S.B.C., ch. 61, §3 (1925). The original provinces, Ontario, Quebec, New Brunswick and Nova Scotia retained water rights by virtue of sections 109 and 117 of the Constitution Act, 1867, 30 & 31 Vict. Ch. 3 (U.K.). Section 109 states that all “Lands . . . belonging to the original provinces remain with them following confederation.” The Privy Council, in *Burrard Power Co. Ltd. v. R.*, [1911] A.C. 87, found that incidents of land including water rights are included with the land. Newfoundland entered confederation in 1949 on the same footing as that set forth in section 109 of the Constitution Act, 1867, 92/12 & 13 Geo. VI, ch. 22 (Imp.), (term 37 of terms of union).
36. *See infra* Part IV for an exploration of a significant exception.
government would deign to attempt to pass legislation comparable to the U.S. Northwest Power Act\textsuperscript{37} or the Endangered Species Act.\textsuperscript{38}

The Northwest Power Act is intended to address the impact on fish and wildlife from hydroelectric dams on the Columbia River. The Northwest Power Act establishes the Pacific Northwest Electric Power and Conservation Planning Council. It requires that the Conservation Planning Council develop and implement a program to protect, mitigate, and enhance fish and wildlife on the Columbia River and its tributaries. The Canadian federal government would not likely attempt to develop comparable legislation, because of provincial ownership of fish and wildlife, and provincial jurisdiction over wildlife habitat.

The U.S. Endangered Species Act provides considerable protection for listed species, including fish. This is partly because in the United States, the federal government wields considerable control over activities within its borders that may impair environmental quality. Polluting activities, wetland alteration and damage, and resource development permits are primarily under federal control in the United States. The Endangered Species Act requires the federal government to ensure that its actions—including the authorization of projects or undertakings that can affect the environment—do not jeopardize listed species. In contrast, regulating the lion’s share of activities that may impair environmental quality falls to provinces in Canada. Accordingly, it may be no surprise that the Canadian Species at Risk Act\textsuperscript{39} pales in comparison to its U.S. cousin, with respect to the scope of its potential impact on the actual protection of listed species. Surprisingly, however, the Canadian Species at Risk Act does not require the federal government to ensure that its actions will not jeopardize listed species—scant as those federal actions may be. In Canada, effective protection of ecosystems and the species they contain is primarily a provincial concern. However, because of federal interests—fisheries, migratory birds, and species on federal lands (primarily federal parks and Indian reserves)—the protection of ecosystems requires federal cooperation.

The U.S./Canada comparison in this part of the article is not meant to suggest that one country’s protection or potential to protect freshwater ecosystem in the Columbia Basin is better than the other.\textsuperscript{40} Rather, it is to point out that each country by necessity has its own legal perspective because of constitutional requirements and constraints.

\textsuperscript{39} 2002 S.C., ch. 29 (Can.).
\textsuperscript{40} See MICHAEL C. BLUMM, SACRIFICING THE SALMON 129-160, 173-232 (2002) (providing an excellent account on how the U.S. legislation has not lived up to its promise to protect salmon in the Columbia River Basin).
D. A Note on Aboriginal Right and Title over Freshwater Ecosystem Restoration in the Canadian Columbia River Basin

Aboriginal right and title issues are critical to freshwater ecosystem restoration in the Canadian portion of the Columbia River Basin. The aboriginal groups with claims to the Canadian Columbia River Basin are: the Ktunaxa/Kinbasket, the Shuswap Nation, and the Okanagan Nation. The Canadian Columbia River Inter-Tribal Fisheries Commission represents these aboriginal groups. Given the lack of existing treaties covering the Canadian area of the basin and lack of definitive case law, it is difficult to say with precision the extent of managerial rights involved. Nevertheless, readers should keep in mind that any of the governmental perspectives set out in this article could be affected through a successful assertion of aboriginal right or title over Canadian Columbia River Basin aquatic ecosystem resources.

III. PERSPECTIVE #2: INTERNATIONAL AGREEMENTS AND INTERNATIONAL COMMITMENTS

A. Canadian Constitution and Treaties

Under the Canadian Constitution, only the federal government has the right to enter into international agreements, such as treaties and other conventions. But that does not mean that the federal government may always implement treaties through laws. Where the treaty subject falls only under federal parliament’s jurisdiction, the treaty is implemented through federal law. The situation is not as simple when treaty implementation involves matters that fall under provincial jurisdiction. Some have argued that there are good grounds to conclude that federal parliament has the power to implement all treaties provided that federal legislation explicitly states that the federal government exclusively implements the treaty and does not go beyond the treaty’s requirements. However, most legal scholars would disagree. In any event, one can safely conclude that in this political climate, it is unlikely that the federal government will aggressively pursue a constitutional interpretation that secures implementation rights across Canada if provinces would object. Instead, the federal government will seek provincial buy-in and cooperation where treaty implementation involves matters within provincial jurisdiction. Accordingly, the federal government would encourage provinces to make laws within their jurisdiction to implement treaties, rather than push federal jurisdiction. Hence, given that some matters concerning


freshwater ecosystem restoration in the basin fall under federal jurisdiction and some fall under provincial jurisdiction, protecting the basin on an international level is a complex endeavor that requires both federal and provincial cooperation.

B. Key International Agreements

1. The Columbia River Treaty

Dams built in the basin have unquestionably been the single most destructive force to freshwater ecosystems in the Canadian portion of the Columbia River Basin. There are 400 dams on the U.S. side, and 12 on the Canadian side. Historically, salmon and steelhead were distributed throughout the mainstream of the basin.43 Dams, in particular the Grande Coulee Dam, destroyed these resources. The Columbia River Treaty ("Treaty") resulted in further impact to the freshwater ecosystems in the basin.

The purpose of the Treaty, signed in 1961 and implemented in 1964, is to provide a structure and mechanisms for the United States and Canada to engage in "cooperative measures for hydroelectric power generation and flood control, which will make possible other benefits as well." 44 The Treaty's life is a minimum of sixty years, after which time it may be terminated by either party. 45 Canada built three dams pursuant to the Treaty requirements. The first is the Mica Dam, which is located on the mainstream of the Columbia about 150 kilometers north of Revelstoke, British Columbia. The second is the Keenlyside Dam (also known as the "Arrow") on the outlet of Arrow Lakes near Castlegar, British Columbia. The third is the Duncan Dam, which is located about 150 kilometers south of Golden, British Columbia. In total, the three dams have about 29 million acre feet ("MAF") of storage capacity. Only Mica has an electricity generating facility.

After construction, when the water started rising behind these three dams, Canada suffered serious ecological and social impacts. Approximately 2300 people along the Arrow Lakes, Duncan, and other reservoirs were displaced. Six hundred square kilometers of ecologically and economically valuable valley bottom were flooded. Numerous aboriginal archaeological sites were submerged or buried. 46 Although these areas are under water, surviving riparian areas and water courses now need water to replenish and maintain aquatic ecosystem values in the Canadian Columbia River Basin. It would be advantageous for

43. BANKES, supra note 1, at 8. Bankes refers to A. Scholtz et al., Compilation of information on salmon and steelhead total run size, catch and hydropower losses in the Upper Columbia River Basin, above Grand Coulee Dam, Fisheries Technical Report No. 2, Upper Columbia Tribes Fisheries Center, at 62-66.
45. Id. Article XIX(2).
Canada if Treaty water could now be used to address the aquatic ecological challenges facing the Canadian Columbia River Basin. However, the water tied up under the Treaty cannot be used for these purposes. Canadian storage subject to the Treaty must be operated to ensure flood control and power benefits, and no other purposes. Accordingly, the use of Canadian Treaty storage water for freshwater ecosystem restoration is unlikely.

2. **Non-Treaty Storage**

The Treaty required Mica Dam to hold at least 7 MAF, but the dam was built to hold an additional 5 MAF. While storage must be operated in accordance with the Treaty, there is flexibility with respect to the additional 5 MAF. Commencing in 1983, the administrators of the Treaty, the Bonneville Power Authority for the United States, and B.C. Hydro for Canada managed the additional 5 MAF under non-treaty storage agreements. Although operation of the 5 MAF must be consistent with operation under the Treaty, it is not subject to its strict terms. Consequently, non-treaty storage water may be used for purposes other than flood control and hydroelectricity. These purposes may include freshwater ecosystem restoration.

The Non-Treaty Storage Agreement expired in June 2004, and has not yet been renewed. Accordingly, British Columbia now has full legal control over the 5 MAF of non-treaty water, subject to fulfilment of any remaining responsibilities under the Non-Treaty Storage Agreement.

3. **The Boundary Waters Treaty**

The Boundary Waters Treaty\(^4\) of 1909 ("BWT") establishes legal rules and processes, regarding some Canada/U.S. water. The BWT created the International Joint Commission ("IJC"), an independent binational organization to help prevent and resolve disputes relating to the use and quality of boundary waters, and to advise the two governments on matters relating to shared water resources. Although the Treaty supplants the BWT during its term with respect to the operation of facilities covered by the Treaty, Articles IV and IX of the BWT can still be relevant to freshwater ecosystem restoration in the basin.

The BWT defines "boundary waters" as waters of the "lakes and rivers and connecting waterways, or the portions thereof, along which the international boundary between the United States and the Dominion of Canada passes [including bays, arms and inlets]... but not including... waters of rivers

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\(^{47}\) Columbia River Treaty, supra note 28, Article IV. See also Nigel Bankes, *River Treaties and Changing Values*, LAW NOW 16 (June/July 2004).

flowing across the boundary."[49] Hence, because the Columbia River flows across the boundary—a transboundary water—it is not a boundary water for the purposes of the BWT. However, Article IV of the BWT applies to both boundary waters and to “waters of rivers flowing across the boundary.” In other words, Article IV applies to transboundary waters such as the Columbia River. Article IV requires IJC approval prior to the construction of any works that would raise the level of water on the other side of the border. Because the Treaty supplants the BWT during the term of the Treaty, this part of the article does not apply to the operation of facilities covered by the Treaty, but it does apply to any non-Columbia River Treaty works within the basin.[50] Any IJC approval process could include consideration of the impacts on freshwater ecosystem restoration.

In Article IV, each party agrees that boundary and transboundary waters “shall not be polluted on either side to the injury of health or property on the other.” Unlike the first part of the article, this provision does not require IJC approval prior to any such pollution. However, the provision constitutes a rule of law to be taken into consideration in any relevant reference under Article IX. This means that Article IX gives either country the right to request an IJC investigation, and to issue an advisory report in relation to boundary and transboundary water disputes. Although IJC reference reports under Article IX are not binding, most have been implemented.[51] From a Canadian perspective, this gives Canada the right to direct an IJC investigation if polluting activities in the United States would damage fisheries or other freshwater ecosystem elements that may be considered property; and then report on whether Article IV of the Treaty has been violated, and if so, to make recommendations as to how to deal with the violation.[52]

IV. PERSPECTIVE #3: PROVINCIAL/LOCAL PERSPECTIVE

A. Introduction

This part of the article considers specific British Columbia legislation that is aimed at the protection of key Canadian Columbia River Basin freshwater aquatic ecosystem components: fish and fish habitat. Vigorous implementation

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49. Id., Preliminary Article.
50. BANKES, supra note 1, at 35-36 (noting that non-CRT facilities would include the Grand Coulee (constructed prior to the CRT), Waneta, and various other facilities that affect the levels of Kootenay Lake and Osoyoos Lake).
51. Id. at 28.
52. See INTERNATIONAL JOINT COMMISSION, IMPACTS OF A PROPOSED COAL MINE IN THE FLATHEAD RIVER BASIN 11 (1988), available at http://www.ijc.org/php/publications/pdf/1D590.pdf. The United States invoked this procedure in the Flathead Reference in 1984. There, the IJC found that a proposed open pit coal mine on Cabin Creek, a tributary of the Flathead River in British Columbia, could damage a U.S./Canada shared fishery. The IJC recommended a disapproval of the mine until it could be demonstrated that the damage would be avoided. Id.
and enforcement of this legislation may have a significant, positive impact on the restoration of the freshwater ecosystem of the Canadian portion of the basin. However, legal questions surround this legislation. One question is whether private land use restrictions imposed by the legislation may be considered regulatory takings. Another question is whether a court might find the legislation to be *ultra vires*, thus calling into question the constitutional legislative competency of the province.

**B. British Columbia Fish Protection Act and the Streamside Protection Regulation**

In 1997, British Columbia passed the Fish Protection Act\(^53\) ("FPA") in reliance on a combination of the numerous provincial constitutional authorities, coupled with legislative managerial powers that follow from the ownership of inland fish.

A key way that the FPA provides protection to fish is by prohibiting bank-to-bank dams on designated protected rivers,\(^54\) and prohibitions of the issuance of water approvals under the provincial Water Act\(^55\) for these bank-to-bank dams. The FPA designates fifteen rivers as protected. Although none of them are in the basin, the FPA would not prevent government designation of the Canadian rivers in the basin (the Columbia River, Kootenay River, Okanagan River, Similkameen River, and Kettle River) to prevent damming or further damming.

The FPA also authorizes the Lieutenant Governor in Council (the "Cabinet") to designate streams as sensitive streams where it considers that the "designation will contribute to the protection of a population of fish whose sustainability is at risk because of inadequate flow of water within the stream for degradation of fish habitat."\(^56\) The FPA provides for the development of recovery plans for sensitive streams, and protects minimum stream flows by giving fish habitat protection in designated streams priority over uses inconsistent with habitat protection.\(^57\) Recovery plans may allow nongovernmental organizations to hold instream licenses to bolster habitat requirements.\(^58\)

To date, the Cabinet has designated fifteen streams under this regulation.\(^59\) Although none of them are in the basin, the Cabinet could designate streams in the basin in the future. Although meeting the requirements of the Treaty would not facilitate the recovery of streams in the basin, the Treaty does not prohibit such legislated recovery plans. Any provincial regulatory requirements as a result

\(^{53}\) 1997 S.B.C., ch. 21 (Can.) [hereinafter *Fish Protection Act*].

\(^{54}\) Id. § 4.

\(^{55}\) 1996 R.S.B.C., ch. 483 (Can.).

\(^{56}\) *Fish Protection Act*, § 6(2).

\(^{57}\) Id. §§ 6 & 7.

\(^{58}\) *Fish Protection Act*, § 7(4).

\(^{59}\) *Sensitive Stream Designation and Licensing Regulation* under the Act, B.C. Reg. 89/2000 (Can.).
of the designation would be subject to the Treaty, and hence could not be at the expense of its requirements of power and flood control capabilities.\(^6\)

In addition, the FPA gives the Cabinet authority to develop policy directives that require local governments to achieve streamside protection of riparian areas.\(^6\) When a policy directive has been established, local governments must include riparian area protection in their zoning and land use bylaws provisions in accordance with the directive. They must ensure that the bylaws and permits they issue under municipal legislation “provide a level of protection that, in the opinion of the local government, is comparable to or exceeds that established by the directive.”\(^6\)

Pursuant to this statutory authority, the Cabinet passed the Streamside Protection Regulation (“Regulation”).\(^6\) This Regulation applies to the Canadian Columbia River Basin. The purpose of the Regulation is “to protect streamside protection and enhancement areas from residential, commercial, and industrial development so that the areas can provide natural features, functions, and conditions that support fish life processes.” The Regulation defines “streamside protection and enhancement areas” as an “area adjacent to a stream that links aquatic to terrestrial ecosystems and includes both the riparian area vegetation and the adjacent upland vegetation that exerts an influence on the stream.” It broadly defines “stream” to mean “a watercourse or source of water supply, whether usually containing water or not, a pond, lake, river, creek, brook, ditch, and a spring or wetland that is integral to a stream and provides fish habitat.”

The Regulation requires local governments to establish streamside protection and enhancement areas (“SPEAs”) within five years of enactment of the Regulation. SPEAs must be factually determined, with reference to existing or potential vegetation conditions, by measuring vegetation perpendicularly away from the top of the bank, ravine, or side of a stream.\(^6\) The calculation of a SPEA is determined on the basis of a regulatory formula, which differs depending on whether a stream is fish bearing, nonfish bearing, permanent, or nonpermanent, and in response to the type and width of vegetation.\(^6\)

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60. This conclusion is based in part on an analogous analysis relating to what extent treaty and other obligations could impact the management of dissolved gas in the Columbia River Basin. See Goldschmid, supra note 25, at 19.

61. Fish Protection Act, §12(1).

62. Id. § 12(4).

63. B.C. Reg. 10/2001 [hereinafter Streamside Protection Regulation].

64. Id. § 6.

65. A “fish bearing stream” is “a stream in which fish are present or potentially present if introduced barriers or obstructions are either removed or made passable for fish.” A “non fish bearing stream” is “a stream that: (a) is not inhabited by fish, and (b) provides water, food, and nutrients to a downstream fish bearing stream or other water body.” A “nonpermanent stream” is a “stream that typically contains surface waters or flows for periods less than 6 months in duration.” A “permanent stream” is a “stream that typically contains continuous surface waters or flows for a period more than six months in duration. Id.

66. In a legal viewpoint available at http://www.expropriationlaw.ca/articles/art02900.asp, J. Martin Kyle, of Lawson Lundell, Barristers and Solicitors, British Columbia, summarizes the calculation as follows:
The Regulation requires that local governments protect SPEAs when exercising their powers with respect to "residential, commercial or industrial development." Subject only to limited exceptions, local governments must amend their bylaws to require development permits for activities that could disturb SPEAs, and they cannot permit development that would harm SPEAs. In addition, local government may not authorize subdivisions that would harm SPEAs in exercising authority over subdivision of land.

The area of a particular SPEA [Streamside protection and enhancement area] depends on the area of the existing or potential vegetation conditions at a stream (section 6(1)). "Potential vegetation" is "considered to exist if there is a reasonable ability for regeneration either with assistance through enhancement or naturally, and is considered to not exist on that part of an area covered by a permanent structure" (section 1). The starting point for the measurement of such vegetation conditions is the “top of the bank” (a defined term) or the “top of the ravine bank” (also a defined term) on either side of a stream.

1) The area of the SPEA will then depend on two general criteria: the width of the existing or potential vegetation areas; and the type of stream. Section 6(1) describes how the width of vegetation areas is to be determined. There are seven different categories. Vegetation (whether existing or potential) that is:

(1) Intact and continuous and fifty meters wide or more; or
(2) limited but continuous and thirty meters wide; or
(3) discontinuous, but occasionally wider than thirty meters, between thirty and fifty meters wide; or
(4) narrow but continuous and fifteen meters wide; or
(5) discontinuous, but occasionally wider than fifteen meters, between fifty and thirty meters wide; or
(6) very narrow but continuous up to five meters wide; or
(7) discontinuous, but occasionally wider than five meters, between five and fifteen meters wide interspersed with permanent structures.

Having first determined the width of the existing or potential vegetation at a stream, the applicable width of the SPEA can be calculated based on the type of stream involved.

If the vegetation falls within categories 1, 2, or 3, as referred to above, and the stream is either fish bearing or permanent (even though nonfish bearing), the SPEA must be at least thirty meters wide, measured from the top of the bank. If the vegetation falls within categories 1, 2, 3, 4, or 5 and the stream is nonfish bearing or nonpermanent, the SPEA must be at least fifteen meters wide. If the vegetation falls within categories 4 or 5 and the stream is permanent but nonfish bearing, the SPEA must also be at least fifteen meters wide.

If the vegetation falls within categories 4, 5, 6, or 7 above and the stream is fish bearing (whether permanent or not), the SPEA must be the greater of the widths determined in accordance with those categories and fifteen. As I understand it, this means that if, for instance, there is discontinuous vegetation beside a fish bearing stream—whether that vegetation exists or is potential—and that vegetation occasionally is (or could be) wider than fifteen meters, the width of the SPEA will be at least fifteen meters and could be as much as thirty meters. Finally, if the vegetation falls within categories 6 or 7 and the stream is nonfish bearing, the SPEA must be at least five meters wide and can be up to fifteen meters wide.


68. Section 492 of the Regulation exempts variances for nonconforming buildings and for restoration or repair of buildings on their original foundations that are damaged or destroyed to the extent of at least 75% of their value.
C. Regulatory Takings?—The Canadian Perspective

As might be expected, the development industry and property rights advocates are not thrilled with the Regulation. The Urban Development Institute, a Canadian nonprofit development advocacy organization with chapters throughout Canada and elsewhere in the world, consistently claims that the setback requirements amount to a regulatory taking. Real estate owners in British Columbia who are affected by the Regulation have demanded compensation equal to the market value of their loss. Perhaps because of these and other forcefully voiced concerns, the British Columbian government has not yet aggressively pursued implementation of the Regulation. For example, it has not pressured municipalities to bring their land use plans and bylaws into compliance.

In my view, this chilling effect is not warranted. In Canada, which is contrast to the United States, it is unlikely that implementation of legislation like the Regulation would result in a successful compensation claim. That is because the question of “how far can the government go in regulating property rights without having to pay compensation?” is answered quite differently in Canada from the way it is answered in the United States. U.S. courts have a lengthy history of finding that state action limiting land use can be confiscatory, even where the state did not actually expropriate an interest in land. Although many Canadian landowners and even some regulators assume that similar rules apply in Canada, it is not so.

U.S. courts recognize regulatory takings on the basis of constitutionally protected property rights by virtue of the Fifth and Fourteenth Amendments to the U.S. Constitution. A critical difference between Canada and the United States is that property rights are not enshrined in the Canadian Constitution or in the Charter of Rights and Freedoms. Consequently, in Canada there are no individual rights comparable to those guaranteed by the U.S. Fifth or Fourteenth Amendment rights. Not surprisingly, although there is ample Canadian case law dealing with explicit expropriations, there is no body of jurisprudence dealing with alleged regulatory takings as there is in the United States. Nevertheless, Canadian litigants occasionally ask courts to order compensation where government action has restricted or

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69. See, for example, the Urban Development Institute News and Views, Feb. 2001, at 1, available at http://64.233.167.104/search?q=cache:yipHxjTJO64J:www.udi.bc.ca/Files/Publications/ArchNewsletters/Vancouver/2001/UDI%25202001%2520Newsletter1.PDF+Streamside+Protection+Regulation&hl=en.


71. The Fifth Amendment reads: “No person shall be... deprived of life, liberty or property without due process of law; nor shall private property be taken for public use, without just compensation.” U.S. Const. amend. V. The Fourteenth Amendment states that “[n]o state shall make or enforce any law which shall abridge the privileges or immunities of the citizens of the United States; nor shall any State deprive any person of life, liberty or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of its laws.” U.S. Const. amend. XIV.
prohibited land uses. However, with only one possible noteworthy exception, these attempts have been unsuccessful.

*The Queen in Right of British Columbia v. Tener et al.* is one of the leading “takings” or as it is often called in Canada, “de facto expropriation” cases. The plaintiffs, David and Gertrude Tener, were the registered owners of sixteen mineral claims granted by the Province of British Columbia. The sixteen mineral claims were granted by the Crown in Right of British Columbia to the respondents’ predecessors in title in 1934. In 1939, the Province of British Columbia created Wells Gray Park, which encompassed the land subject to the respondents’ mineral claims. The underlying title to the minerals as well as the right to access them remained in the provincial Crown in Right. The Teners paid $100,000 for their rights. Statutory protection for the park was upgraded through the years, and in 1973 a legislative amendment required anyone with a mineral claim within the park to obtain a permit from the Cabinet in order to develop. Each year from 1973-1978, the Teners asked for a permit. Finally in 1978, the government decisively denied the permit. The Teners sued for about $5.5 million claiming an expropriation. The trial court denied their claim, but the appellate division allowed compensation. The Crown appealed to the Supreme Court of Canada.

The Supreme Court of Canada dismissed the appeal and let the compensation award stand. The importance of this case lies in the burden of proof a plaintiff must demonstrate to establish a *de facto* expropriation. According to this case, the plaintiff must establish:

- The existence of a property interest that was extracted by virtue of government legislation;
- The deprivation of the interest by government action;
- The acquisition of the interest by the government; and
- That legislation explicitly or implicitly provides for compensation for the taking of the right.  

Regarding the first requirement, the fact that the mineral interest was an interest in land was not contested. It was either a property interest in the nature of a *profit a prendre* that consisted of an access right and exploitation right, or a simple mineral title interest. With respect to the second requirement, the Supreme Court found that the government’s absolute refusal to issue a permit amounted to a total extraction of the interest. The Teners were left with nothing. On the third requirement, the Supreme Court noted that once the Crown *de facto* extinguished the Teners’ interest, the interest was, in effect, absorbed back into the Crown’s fee title. The Court stated that the only way of extinguishing a *profit a prendre* is

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73. See Alberta v. Nilsson, [1999] 70 Alta. L.R.3d 267 (interpreting this requirement liberally to mean that normally there is a right to compensation for expropriation unless legislation explicitly denies the right).
by its being absorbed in the fee title. Lastly, on the final requirement, the Supreme Court found that there was an explicit right to compensation under the British Columbia Parks Act.\textsuperscript{74}

Although a taking was found in the Tener case, subsequent jurisprudence indicates how strictly courts apply the Tener rules, and how unlikely it is that legislation limiting land uses will result in a compensable taking in Canada. For example, in the decision by Nova Scotia Court of Appeal in Mariner Real Estate Ltd. v. Nova Scotia,\textsuperscript{75} the court found no \textit{de facto} expropriation when beachfront sand dune property was designated under provincial beach protection legislation,\textsuperscript{76} and because of the designation, the owners were denied a building permit to build a house. Indeed, the legislation was so restrictive that it was unlikely that the owners would be able to build anything on the property. Nevertheless, the court found no \textit{de facto} expropriation on several grounds when applying the Tener rules.

Regarding the first requirement from Tener, the owners lost no property interest by virtue of the legislation—their interest was only regulated. The court suggested that to find a \textit{de facto} loss of a property interest where no real property interest was extracted, a plaintiff would have to show a loss of all reasonable uses of the land. On the facts of that case, the owners could have carried on “traditional dune uses,” whatever they might be. With respect to the second requirement, since no property interest was proven, government action by virtue of the legislation did not take it. Next, on the third requirement from Tener, the court found that even though provincial public land (the bed and shore) was enhanced by the restrictions, the government acquired nothing tangible by the legislation. By contrast, in the Tener case, a property interest—probably a \textit{profit a prendre}—re-vested in the Crown. Lastly, regarding the fourth requirement, the court acknowledged that the legislation in question impliedly gave a right to compensation, but it found no taking, and therefore it did not matter.

In light of these strict rules, it seems highly unlikely that a challenge to an implementation of the Regulation would result in a court finding a \textit{de facto} expropriation, except in the improbable scenario that all that a person owned was a streambank, and the regulation prohibited all development of that streambank. Even then, it would be difficult to demonstrate that the government acquired an interest by virtue of the restrictions. Consequently, on at least one level, Canada’s ecosystem restoration appears easier than it is in the United States. Municipal governments in British Columbia (and elsewhere in Canada) have more leeway to regulate land uses, and consequently may require protection of some freshwater ecosystem elements where their counterparts in the United States may not.

\textsuperscript{74} [1965] B.C., ch. 31, §§ 6, 9, 11, & 18 (Can.).
\textsuperscript{75} [1999] N.S.J. No. 283.
\textsuperscript{76} The Beaches Act, R.S.N.S., ch. 32, (1989) (Can.).
D. The Fish Protection Act, the Streamside Protection Regulation, and the Canadian Constitution

Although implementation of the Regulation might not result in a *de facto* expropriation, the Regulation is possibly challengeable on other grounds. The FPA and the Regulation push the envelope regarding the limits of valid provincial constitutional authority. By directly regulating fish habitat protection, the legislation might be challenged as constitutionally *ultra vires*. This is because provinces exercising legislative powers that directly or indirectly impact fisheries are always subject to the federal government’s exclusive jurisdiction over inland and coastal fisheries. If a provincial law is, in pith and substance, directed at protecting or otherwise impacting inland or coastal fisheries, a court should find the law to be *ultra vires*. To illustrate by analogy, in *Mullany v. Red Deer (County No. 23)*, the Alberta Court of Queen’s Bench declared aspects of a Red Deer County land-use bylaw that limited development around the airport to accommodate future airport expansion to be *ultra vires*, and therefore inoperative since, in pith and substance, they were aimed at regulating aeronautics, which is exclusively within federal jurisdiction. The court held that the bylaw was not in pith and substance aimed at regulating land uses, which is a power delegated to them from the province. Since aeronautics is exclusively within federal jurisdiction, it did not matter whether the federal government had regulated this matter. Only the federal government may legislate in the area. Similarly, it is possible that the Regulation could be challenged in that it is, in pith and substance, aimed at protection of fisheries—a matter within exclusive federal jurisdiction—and accordingly is *ultra vires* according to the Constitution.

The Regulation appears to try to shield itself from a constitutional challenge by contemplating “intergovernmental cooperation agreements” including the Federal Fisheries and Oceans Canada. However, agreements that sort out the responsibilities cannot trump constitutional limitations on appropriate assignment of responsibility. I would be more comfortable with the Regulation and the FPA
if they focused on protecting riparian areas, bed and shores, wildlife, water and water quality, and other matters clearly within provincial jurisdiction.

V. CONCLUSION

The United States and Canada may have identical constraints to freshwater ecosystem restoration by virtue of the Columbia River Treaty's focus on using water for hydroelectric power generation and flood control. Also, they may have very similar ideas on how to deal with geological, hydrological, biological, and ecological states of affairs in order to effect freshwater ecosystem restoration. But political and legal dissimilarities make decisionmaking and legal processes necessary to effect freshwater ecosystem restoration very different. Although the United States and Canada share the Columbia River Basin, by virtue of the nature of each country's constitution and judicial interpretation of constitutional authority, they do not have the same perspectives with regard to legal aspects of freshwater ecosystem restoration. These differences permeate aspects of management of the Canadian portion of the Columbia River Basin, from the federal to the local level.

In my view, it is critical that all governments involved—federal, state, provincial, and local—understand and respect each other's jurisdiction and processes, and their strengths and weaknesses, so that the job that needs to be done gets done. Having the requisite knowledge regarding each other in this manner is a fundamental step in achieving freshwater ecosystem restoration in the Columbia River Basin. Hopefully, my article helped to illuminate the path necessary to take this step—from the Canadian perspective.