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Diverting Water From the Great Lakes: Pulling the Plug on Canada

Irma Urve Reinumagi

DIVERTING WATER FROM THE GREAT LAKES: PULLING THE PLUG ON CANADA

INTRODUCTION

The proposition of a diversion of water from the Great Lakes presents a controversial problem in international law. The Great Lakes basin[1] contains one-fifth of the world's surface fresh water supply[2] and ninety-five percent of the surface fresh water available in North America.[3] Two-thirds of Canada's population live in the Great Lakes basin.[4] In the United States, eight states border on the Great Lakes.[5] Within these states are such heavily populated cities as Buffalo, Chicago, Cleveland, Detroit, and Milwaukee.[6] The Lakes provide the residents of the region with water for drinking, agriculture, industry, recreation, and transportation.[7] While the Lakes' supply of water appears almost unlimited,[8] only a small percentage of the supply is renewed annually.[9] Thus, any diversion of water from the Lakes would

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1. The Great Lakes basin includes the five Great Lakes, the connecting rivers, channels, and canals, and the watershed area drained by these waterways. "The drainage, from the heads of the system in the Superior and Michigan basins, proceeds through Lakes Huron, St. Clair, Erie and Ontario to the St. Lawrence River and thence to the Atlantic Ocean. The entire system constitutes a waterway which extends nearly halfway across the North American continent." H. PINCUS, GREAT LAKES BASIN 4 (1962).

2. E. Schaeffer & M. Downs, Great Lakes Policy Issues and the 98th Congress 2 (June 1984) (unpublished policy paper, available from the Center for the Great Lakes, 433 North Michigan Avenue, Suite 1733, Chicago, IL 60611).

3. *Great Lakes Diversion*, 1 GREAT LAKES REP. 1 (Sept.-Oct. 1984), [hereinafter cited as *Great Lakes Diversion*].

4. D. PIPER, INTERNATIONAL LAW OF THE GREAT LAKES 5 (1967).

5. These states are Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. HAMMOND'S AMBASSADOR WORLD ATLAS 106 (1957).

6. *Id.*

7. "Today, thirty-seven million people live and work in the Great Lakes basin. The lakes, along with their tributaries and connecting channels, provide not only astonishing beauty, but also water for drinking, for industrial processing, for waste treatment, and for the transportation of raw materials and finished products." The Center for the Great Lakes 4 (1984) (informational pamphlet available from the Center for the Great Lakes, *see* mailing address, *supra* note 2).

8. The Great Lakes contain six quadrillion (6,000,000,000,000,000) gallons of fresh water. *Id.* at 3.

9. William G. Davis, Premier of the Province of Ontario, noted in 1984:

> What many do not realize is that only one percent of the volume of water in the Great Lakes is actually renewable through rain and snow. The rest of the water is a gift built up over several thousands of years since the glaciers receded. This volume of water cannot be replaced.

Davis, Durenberger & Matheson, *Water for a Thirsty World—Are the Great Lakes in Danger?*, 1 GREAT LAKES REP. 8 (Sept.-Oct. 1984).

cause a permanent drop in the level of the Lakes.[10] A drop in the level of the Lakes could seriously impair navigation and shipping on the Great Lakes—St. Lawrence Seaway system, as well as diminish the supply of water available for use in the Lakes basin.[11] Officials in the Great Lakes region fear that the federal government[12] may plan diversions of water out of the Lakes to other regions, seriously reducing the amount of water in the Lakes.[13] However, with coordinated planning efforts by the officials in the Great Lakes region, the region's water resources may be preserved; thus, the Great Lakes basin may remain water-rich,[14] avoiding any future shortages.

Recently, many areas of the United States, particularly those states in the West and Southwest,[15] have begun to be troubled by water shortages. Compared to the East, much of the west receives little precipitation.[16] Yet the West is an important agricultural area,[17]

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10. *Id.*

11. *Water Wars Predicted in a Thirsty Nation*, 68 A.B.A.J. 1066, 1067 (1982) [hereinafter cited as *Water Wars Predicted*].

12. An out-of-basin diversion from the Great Lakes would have to be undertaken by the federal government, as the individual states which wish to receive the water have no legal right to it. *See infra* note 31. The federal government could, if there was sufficient support in Congress, include the Great Lakes under the Reclamation Act of 1902, 43 U.S.C. §§ 371-600 (1983). This Act provides for the construction, operation, and maintenance of works for the storage, diversion, and disbursement of water for the arid lands in the West. By including the Great Lakes as a water source, the Act could be used to form a massive, nationwide reclamation project, much larger than the current regional projects. The federal government could also take control of a diversion under the power granted by the Commerce Clause over navigable waters. U.S. CONST. art. I, § 8, cl. 3. *See generally* Comment, *Great Lakes Water Diversion: Federal Authority over Great Lakes Water*, 1983 DET. COL. L. REV. 919 (1983) (discussing federal powers over the Great Lakes).

13. While it is impossible to predict exactly how much the level of the Lakes would be affected before an actual diversion takes place, it should be noted that current uses have already lowered the levels of the Lakes. For example, Lakes Huron and Michigan have been lowered by one-quarter inch, while Lake Erie has been lowered by four inches. Thus, it can be assumed that a significant diversion of water, in addition to current uses, would cause the levels of the Lakes to drop sharply. *Great Lakes Diversion, supra* note 3, at 3.

14. It has been suggested that Great Lakes water will become a valuable commodity, and that the Great Lakes region will become the "OPEC of water." *Id.* at 1.

15. These states are the states included in the Reclamation Act of 1902, 43 U.S.C. § 391 (1982). The Act names seventeen (17) states including: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

16. In the West, according to Scott Matheson, governor of Utah in 1984, "[a]n area of over one million square miles receives less than 20 inches of precipitation per year—much of it forming snowpack that rapidly runs off during the spring. By contrast, the eastern United States averages 45 inches per year." Davis, Durenberger & Matheson, *supra* note 9, at 9.

17. From 1973 to 1977, the West produced 55% of the fresh fruits and

and the population of many western states is rapidly increasing.[18] To provide the water necessary to support these increasing populations and agricultural needs, water is "mined" from aquifers;[19] in other words, water is pumped from the underground sources faster than it can be replenished.[20] The diminishing supply of groundwater has caused pumping to become more difficult and more expensive.[21] In addition, huge cracks and fissures have appeared, and large areas of ground have sunk or collapsed as the underground water beneath the land has been drained away.[22] While experts disagree as to when the water shortages will reach a crisis level,[23] by the year 2000, if current population and usage trends continue, much of the West will probably face serious water shortages.[24]

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vegetables marketed in the United States. In addition, the West produces grain and livestock. *Id.* at 10.

18. For example, Nevada's population grew 65%, and that of Arizona, 53% during the 1970s. *Great Lakes Diversion, supra* note 3, at 3. Recent Census Bureau reports indicate that during the period between 1980 and 1983, the growth trend continued. During these years, the population of Nevada increased by over 11%; that of Utah, over 10%; Texas, over 10%; Wyoming, over 9%; Arizona, 9%; Oklahoma, 9%; Colorado, over 8%; and New Mexico, over 7%. *Sun Belt Bulges with Population Gain*, Chicago Tribune, Nov. 22, 1984, § 1, at 16, col. 1.

19. An aquifer is an underground region of porous soil in which water is stored. Boslough, *Rationing a River*, SCIENCE '81 26, 35 (June 1981).

20. "The aquifer is replenished as the Earth's crust, like a giant sponge, soaks up rain and melting snows. But this is a slow process; some aquifer water is today in the same place that it was 25,000 years ago." *Id.*

21. Frazier & Schlender, *Running Dry: Huge Area in Midwest Relying on Irrigation is Depleting Its Water*, Wall Street J., Aug. 6, 1980, at 1, col. 6.

22. Schmidt, *Demand for Water in Arizona Causing Deep Ground Cracks*, N.Y. Times, June 25, 1982, at A1, col. 5; Reinhold, *Houston's Great Thirst is Sucking City Down into the Ground*, N.Y. Times, Sept. 26, 1982, § 1, at 19, col. 1.

23. One writer explains:

> Determining how long the water will last is complicated, too, and the answer can vary from county to county—or even from well to well on a single farm. In a few isolated areas, irrigation wells have already gone dry or lost so much efficiency that farmers have reverted to dryland farming. Other farmers measure their remaining water in terms of a few years.
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> In the Texas high plains, irrigated acreage is expected to drop 45% by the year 2000 even if conservation cuts water use by 20%. By then, irrigation in western Kansas will have all but dried up, an Interior Department study estimates. Nebraska officials worry about water mainly in a few southwestern counties, however; they even predict that irrigation will boom in some undeveloped areas where the Ogallala [the main aquifer stretching under eight midwestern and western states] is especially thick.

Frazier & Schlender, *supra* note 21, at 1, 9.

24. *Water Wars Predicted, supra* note 11, at 1066; Davis, Durenberger & Matheson, *supra* note 9, at 9; Boslough, *supra* note 19, at 35; Frazier & Schlender, *supra* note 21, at 1, 9; Schmidt, *supra* note 22, at A10; Reinhold, *supra* note 22, at

The expected water shortage in the West has become a source of concern for officials in the Great Lakes region.[25] As the largest source of fresh water in North America, the Great Lakes may become an attractive solution to the problem of a water shortage.[26] While there are no immediate proposals for large-scale diversions out of the Great Lakes basin, as a water crisis develops, diversions may be suggested.[27]

Although presently difficult to implement, a large-scale diversion of water from the Great Lakes may occur. Such diversions are technologically possible,[28] but at this time they may be prohibitively expensive.[29] In addition, current political pressures,[30] as well as legal

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19. *Contra* Rogers, *A Plentiful But Mismanaged Resource*, N.Y. Times, Oct. 12, 1982, at 28, col. 3.

25. Malcolm, *Great Lakes States Seek to Keep Their Water*, N.Y. Times, June 13, 1982, § 1, at 30, col. 1 (reporting on a meeting, held by the governors of the Great Lakes states and the premiers of the Canadian provinces of Ontario and Quebec, to formulate regional policy).

26. *Great Lakes Diversion, supra* note 3, at 1, 3.

27. "Ideas suggested include building a pipeline from Lake Superior or tripling the flow of water from the Chicago Diversion to meet western water needs in a variety of locations from the High Plains to California." *Id.* at 3.

28. The availability of the necessary technology is evidenced by the construction of the trans-Alaska oil pipeline. *See* Comment, *supra* note 12, at 921 n.13. In addition, the Chicago Sanitary and Ship Canal, completed in 1871, which diverts water from Lake Michigan into the Mississippi River, demonstrates the availability of the necessary technology.

> [The Chicago Diversion] raises complex international legal questions and in addition is a persistant irritant in Canadian–United States relations. Moreover, it is intertwined in matters of domestic policy with states far removed from the Great Lakes region interested in increasing the diversion. The unique factor of the Chicago diversion is not the amount of water involved, but the fact that the diverted water is not returned to the lake but enters the Mississippi watershed. Thus the diversion represents a withdrawal or net loss of water from the Great Lakes.

D. PIPER, *supra* note 4, at 90.

For a discussion of the building of the Chicago Diversion, see L. COOLEY, THE DIVERSION OF THE WATERS OF THE GREAT LAKES BY WAY OF THE SANITARY AND SHIP CANAL OF CHICAGO (1913); Herget, *The Chicago Sanitary and Ship Canal: A Case Study of Law as a Vehicle for Managing Our Environment*, 1974 U. ILL. L.F. 285.

29. One estimate of a diversion from the west end of Lake Superior into the Missouri River placed the cost of a 10,000 cfs (cubic feet per second) diversion at $26.6 billion. Davis, Durenberger & Matheson, *supra* note 9, at 8.

30. Five bills addressing interbasin transfers of water, three of which were Great Lakes specific, were introduced in the 98th Congress. The texts of these bills are reproduced in Diversions and Consumptive Uses of Great Lakes Water 1-20 (May, 1984) (unpublished information package, available from Great Lakes Commission, 2200 Bonisteel Blvd., Ann Arbor, MI, 48109) [hereinafter cited as Diversions and Consumptive Uses]. *See also* Taylor, *Water: The Nation's Next Resource Crises?*, U.S. NEWS &

obstacles,[31] would make approval of a diversion difficult. As the population continues to move to more arid regions and the water shortage reaches crisis levels, political attitudes are likely to change and legal obstacles may be more easily overcome. Thus, officials from the Great Lakes states are formulating policies which would make a large-scale out-of-basin water diversion difficult.[32]

In addition, foreign policy-makers as well as domestic officials are concerned with possible diversions from the Great Lakes. The Lakes are international waters: one-third of the waters are within the territorial boundaries of Canada.[33] Canadians fear a diversion from the Great Lakes, since many of them depend upon the Lakes as their greatest resource.[34] While Canadian officials are sympathetic to the

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WORLD REP., 64, 64-68 (Mar. 18, 1985) (discussing the potential crisis facing the United States due to pollution and consumption of water, and giving the views of several senators and representatives).

31. There are two theories of water ownership used in the United States: riparian ownership, followed primarily in eastern states, and prior appropriation, followed primarily in western states. Under the riparian system, title to land bordering a stream gives the holder a right to a reasonable beneficial use of the water, as long as the use does not interfere with the rights of other riparian owners. United States v. Willow River Power Co., 324 U.S. 499 (1944). Under the prior appropriation system, one who first diverts water and puts it to a particular beneficial use has a right to maintain that diversion for the duration of the use. Arizona v. California, 283 U.S. 423 (1931).

The western and southwestern states which would wish to receive waters from a Great Lakes diversion are not riparian owners of the Lakes; thus, they have no right to the water under riparian law theories. Nor do they have a right to the water under the theory of prior appropriation, as they do not have any appropriations from the Lakes. Therefore, under the two theories of water ownership followed in the United States, riparian rights and prior appropriative rights, the western and southwestern states have no legal right to Great Lakes water.

32. In addition to the bills pending in Congress, *supra* note 30, there are resolutions and bills pending in several state legislatures. The states considering such bills and resolutions are Illinois, Indiana, Michigan, New York, Ohio, and Wisconsin. The texts of these bills and resolutions are reproduced in Diversions and Consumptive Uses, *supra* note 30, at 26-57. These bills and resolutions clearly demonstrate the concern with which lawmakers in the Great Lakes states view possible diversions from the lakes.

Likewise, the governors of the Great Lakes states have demonstrated concern over possible diversions from the Great Lakes. The Council of Great Lakes Governors resolved, during a November, 1983, meeting to allow feasibility studies of diversions, or actual diversions, only with the consent of the International Joint Commission and each of the Great Lakes states. These resolutions led to a compact among the Great Lakes states, signed on February 12, 1985. *Lakes Spawn Regional Cooperation*, Post Tribune, Feb. 20, 1985, at B2, col. 1.

33. D. PIPER, *supra* note 4, at 5.

34. One commentator contends:

problems of a water shortage, it is doubtful that they would be willing to agree to a diversion from the Great Lakes.[35] Canada's consent to any diversion from the Great Lakes is necessary under the Boundary Waters Treaty of 1909.[36]

The Boundary Waters Treaty of 1909 was designed to settle disputes between the United States and Canada over uses of boundary waters.[37] The Treaty created the International Joint Commission as a mechanism with which to settle disputes and work out agreements beneficial to both countries.[38] Thus, if either country

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> If to the United States the basin is important, to Canada, as a politically and economically viable nation, it is indispensable. . . .[T]he position of the Canadian part of the basin is more important to Canada than the American sector is to the United States. If Canadians are a little less detached than Americans about the seaway, levels of lake water, or freight rates on and around the lakes, we can readily understand it.
>
> Historically the basin is the heart of the Canadian nation in a way that has never been true of the United States.

H. PINCUS, *supra* note 1, at 142.

Lowering the levels of the Great Lakes would have a significant economic impact on Canadian interests. For example, it is estimated that a six-inch drop in the surface levels of the Lakes would cost Canadians at least $20 million annually in hydropower generation, while each one-inch drop in water levels in the shipping channels would reduce the amount of cargo shipped through the seaway system by a million tons annually. In addition, lower water levels would necessitate the building of new docks and the dredging of harbors. Wildlife and fisheries would suffer an adverse impact as well. Davis, Durenberger & Matheson, *supra* note 9, at 8.

35. It has been the long-standing position of the Canadian government to oppose unilateral diversions from the Great Lakes basin. Address by David Lysne, Canadian Consulate General, Chicago, to the Legislative Conference on Great Lakes Natural Resources Management Issues, Chicago, June 8-9, 1984. (A summary of the proceedings is available from the Center for the Great Lakes, *see* mailing address, *supra* note 2.) As an example, Canada has objected to increasing the amount of water used in the Chicago Diversion in a series of diplomatic notes. *See* 3 M. WHITEMAN, DIGEST OF INTERNATIONAL LAW 789-805 (1964).

The Canadian position was repeated by William G. Davis, Premier, Province of Ontario: "We are aware in Ontario of the growing interest in the southwestern and midwestern United States to divert Great Lakes water to augment their supplies. We realize these needs are real, but we simply cannot afford the economic consequences of further diversions out of the Great Lakes basin." Davis, Durenberger & Matheson, *supra* note 9, at 8.

36. Treaty Between the United States and Great Britain Relating to Boundary Waters Between the United States and Canada, Jan. 11, 1909, 36 Stat. 2448 (1910), T.S. No. 548 [hereinafter cited as *Boundary Waters Treaty*], *reprinted in* Appendix.

37. *Id.* at preamble. For a discussion of the disputes leading to the Treaty, and of the Treaty itself, see *infra* notes 40-94 and accompanying text.

38. *Boundary Waters Treaty, supra* note 36, at art. VII, *reprinted in* Appendix. For an explanation of the International Joint Commission and its work, see *infra* notes 95-131 and accompanying text.

wished to divert water from the Great Lakes, it would have to receive the consent of the Commission.[39]

This note will explore the development of the relationship between the United States and Canada concerning the Great Lakes, focusing on the Boundary Waters Treaty and the role of the International Joint Commission. It will then survey the development of international water law, focusing particularly on the law of international drainage basins. The note will then show how the Commission, if faced with a proposal for a large-scale diversion out of the Great Lakes basin, might use the principles of international water law to rule upon a request for a diversion, and it will explore the probable results of such a request.

HISTORY

The United States and Canada share a common border stretching for more than 3,500 miles from the Atlantic Ocean to the Pacific.[40] Of this length, at least 2,000 miles are marked by navigable and non-navigable lakes, rivers, and streams.[41] The use of these waters for domestic and sanitary purposes, navigation, irrigation, and power production has been a matter of concern to both nations.[42] Controversies over the uses of these waters frequently arose between Great Britain and the United States, and between Canada and the United States.[43]

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39. *Boundary Waters Treaty, supra* note 36, at art. VIII, *reprinted in* Appendix.

40. The two nations also share a boundary between British Columbia, Yukon, and Alaska, extending for approximately 1,450 miles, which is crossed by a number of rivers. L. BLOOMFIELD & G. FITZGERALD, BOUNDARY WATERS PROBLEMS OF CANADA AND THE UNITED STATES 1 (1958).

41. *Id.*

42. *Id.*

43. Great Britain ruled Canada until the early twentieth century. It should be remembered that it was not until 1923 that Canada obtained full powers in treaty-making. Until that time treaties were concluded by the United Kingdom on behalf of the Dominion. Accordingly, many of the conventional rules relative to the Great Lakes and Canadian-United States relations in general were concluded with the United Kingdom and have devolved upon Canada following its attainment of full political independence. Throughout the nineteenth century the United States apparently took the position that since Canada did not enjoy full independence, the United States could not have any direct diplomatic relations with Canadian representatives. In this regard it is instructive to mention a minor incident that occurred in 1895 regarding the formulation of common rules of the road to govern navigation on the Great Lakes. When differences arose over the substance of the rules, the British Ambassador suggested the advisability of "direct intercommunication between

The Boundary Waters Treaty of 1909,[44] which created the International Joint Commission,[45] was the culmination of over a century and a quarter of negotiations and treaties designed to avoid boundary controversies.

During the eighteenth and nineteenth centuries, the primary concern for both the United States and Britain in their boundary treaty negotiations was to preserve their navigation rights in boundary waters. The 1783 Treaty of Paris, the first to be concluded between the parties, included an assurance of territorial jurisdiction over boundary waters up to the boundary line for each party-nation, and opened up navigation on the Mississippi River to citizens of both nations.[46] This principle of free navigation for citizens of both nations was extended to all boundary waters by article III of the Jay Treaty of 1794.[47] The Jay Treaty did not, however, grant a right of navigation by foreign citizens on the non-boundary portions of the rivers. Thus, American citizens did not have the right to navigate on portions of the St. Lawrence River.[48]

> the United States Government and the Canadian government." Secretary of State Olney replied he has unable to regard the suggestion "as seriously proposing that the Government of the United States shall enter into diplomatic negotiations with the Dominion of Canada upon the subject referred to." He was willing, however, to appoint experts to investigate the matter and pave the way for negotiations through regular channels.

D. PIPER, *supra* note 4, at 6.

44. *See supra* note 36. This treaty was an important step in the development of Canada's independent international status. While it was concluded with the United Kingdom and signed by the British Ambassador, the Treaty was negotiated by a Canadian, George Gibbons. D. PIPER, *supra* note 4, at 6-7.

45. The International Joint Commission represented the first time that Canada had enjoyed equal status with the United States on a permanent international board. It was also the first time that the British were not involved in Canadian-United States relations. "To Gibbons and other Canadians the prospect of dealing directly with the United States was welcome because it was believed that the United States would no longer bully Canada once the British were out of the way." D. PIPER, *supra* note 4, at 7.

46. Treaty of Paris 1783, Definitive Treaty of Peace, Sept. 3, 1783, 8 Stat. 80, 82 (1784), T.S. 104.

47. Treaty of Amity, Commerce and Navigation, Nov. 19, 1794, 8 Stat. 116, 117 (1795), T.S. 105 (commonly referred to as the Jay Treaty).

48. An exception to this general prohibition on navigation by American ships on the St. Lawrence River was granted to "small vessels trading *bona fide* between Montreal and Quebec." *Id.* at art. III. This privilege was abrogated by the War of 1812. Thus, navigation on the St. Lawrence River as a whole remained in contention for many years. Bourne, *Canada and the Law of International Drainage Basins*, in CANADIAN PERSPECTIVES ON INTERNATIONAL LAW AND ORGANIZATION 468 (1974).

Navigation of the entire St. Lawrence River was eventually granted to American citizens by the Reciprocity Treaty of 1854, in exchange for permitting British ships open navigation on Lake Michigan.[49] Although this treaty was terminated in 1866, the same navigation rights were reestablished by the Treaty of Washington of 1871.[50] That treaty also granted both parties navigation rights for the full lengths of the Rivers Yukon, Porcupine, and Stikine, which had their sources in British territory but flowed through Alaska before reaching the sea.[51] Thus, free navigation on boundary waters, a primary concern for both Britain and the United States, was substantially assured by 1871.

As free navigation became a settled question, the Americans and the British focused their attention on other boundary issues. Advancing technology and a growing population led to increasing consumptive uses of the boundary waters.[52] In addition, the boundary waters became increasingly polluted, as these waters were a convenient dumping place for the wastes of the cities located nearby.[53] These competing uses, as well as proposed and actual diversions of water by both the Americans and the British, led to disputes between the two nations over the boundary waters.[54] Both Britain and the United States

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49. Treaty as to Fisheries, Commerce, and Navigation in North America, June 5, 1854, 10 Stat. 1089 (1854), T.S. 124 (commonly referred to as the Reciprocity Treaty).

50. Treaty of Claims, Fisheries, Navagation of the St. Lawrence, etc.; American Lumber on the River St. John; Boundary, May 8, 1871, 17 Stat. 863, 872 (1871), T.S. 133 (commonly referred to as the Treaty of Washington which calls for a settlement of all differences between the two countries).

51. *Id.*

52. Consumptive uses are those which withdraw water from a lake or stream and do not return the water to that lake or stream. Common consumptive uses include domestic uses, sanitation, industry, and irrigation. Bourne, *supra* note 48, at 469.

53. *Id.* The use of boundary waters as a dumping ground for sewage also interfered with the use of these waters for recreation and hydro-electric power production. *Id.*

54. For example, an early dispute occurred in 1841, when the waters of the Allegash River in Maine were diverted from their natural course through a new canal into the Penobscot River. The Allegash had previously flowed into the St. John River and thus into Canada. Great Britain instructed its ambassador to protest the diversion; however, as the impact of the diversion was insignificant, the matter was not pressed further.

A more serious dispute occurred when the waters of the St. Mary and Milk Rivers, which flow through Montana, Alberta, and Saskatchewan were diverted for irrigation. Both the United States and Canada had made large diversions and were proposing further withdrawals. The supply of water in the two rivers was inadequate for all the uses both nations had planned. The two rivers became an issue of conflict between the United States and Great Britain.

began to feel that an established mechanism, which would not directly involve the two governments, was necessary to settle these water disputes equitably.[55]

The first substantial step towards establishing a mechanism for settling disputes occurred at the International Irrigation Congress in 1895 when representatives of the United States, Canada, and Mexico unanimously passed a resolution calling for the establishment of an international commission.[56] This commission was to have the duty of "adjudicating the conflicting rights which have arisen, or may arise, on streams of an international character."[57] While the Canadian government immediately approved formation of the commission, the British government was unwilling to proceed at that time.[58] Thus, it was not until 1905 that the International Waterways Commission, the forerunner of today's International Joint Commission, was formed.[59]

The two nations also had conflicting plans for diverting water at Niagara Falls to generate hydro-electric power. While there was enough water for both nations to utilize in generating power, a coordinated plan of use was needed to ensure that plans of the two nations did not conflict.

Finally, the Chicago Diversion, which used water diverted from Lake Michigan to carry away Chicago's sewage, was being built during the late nineteenth century. This diversion, as proposed by the planners, would withdraw increasing amounts of water from Lake Michigan, lowering the lake's surface level. Canadian and British officials expressed concern over the amount of water being withdrawn from the lake.

Thus, as the boundary waters between the United States and Canada were increasingly utilized for non-navigational purposes, the number of disputes between the two nations about these uses also increased. Bourne, *supra* note 48, at 469-70.

55. Canada favored the establishment of a permanent commission for this purpose, while the United States favored *ad hoc* commissions made up of politicians. Note, *A Primer on the Boundary Waters Treaty and the International Joint Commission*, 51 N.D.L. REV. 493, 496 (1974) (discussing remedies under the Boundary Waters Treaty for individuals injured by the Garrison Diversion Project in North Dakota).

56. The International Irrigation Congress was held in Albequerque, New Mexico. Its primary purpose was to discuss the effects of irrigation on the international rivers of North America, and to propose solutions for the difficulties presented by conflicting uses. Bourne, *supra* note 48, at 470.

57. This commission was to act in conjunction with the authorities of Mexico and Canada to resolve disputes over conflicting rights. *Id.*

58. *Id.* In addition, the American Secretary of State informed the British ambassador that the United States could not implement in any way the wishes of Canada to form a commission at that time. L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 9.

59. In 1902, the United States Congress passed a Rivers and Harbors Act which contained a provision requesting the President to invite the British government to . . .

> join in the formation of an international commission, to be composed of three members from the United States and three who shall represent

The International Waterways Commission, composed of three American representatives and three Canadian representatives, accomplished several tasks during its seven year existence. The Commission investigated and reported on such subjects as the division and diversion of waters on the Niagara River and the division of waters at Sault Ste. Marie and at Chicago.[60] When, in 1906, it was discovered that British and United States charts did not agree as to the boundary line through Lake Erie, the matter was referred to the Commission.[61] However, the Commission soon realized that it was hampered by a lack of principles to guide its decisions and by an inadequate grant of powers to make decisions concerning the boundary waters.[62] Thus, the Commission recommended that a treaty be negotiated between Britain and the United States and that a permanent commission be set up to enforce the principles of this treaty.[63]

The negotiations leading to the Boundary Waters Treaty were difficult, as the Canadians and the Americans had conflicting goals. The major difficulties in the negotiations centered on the establishment of a mechanism for resolving disputes and on the possibilities of unchecked diversions of boundary waters by their territorial

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> the interests of the Dominion of Canada, whose duty it shall be to investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada, including all the waters of the lakes and rivers whose natural outlet is by the River St. Lawrence to the Atlantic ocean; also upon the maintenance and regulation of suitable levels, and also upon the effect upon the shores of these waters and the structures thereon, and upon the interests of navigation by reason of the diversion of these waters from or change in their natural flow; and further, to report upon the necessary measures to regulate such diversion, and to make such recommendations for improvements and regulations as shall best subserve the interests of navigation in said waters.

Rivers and Harbors Act of 1902, ch. 1079, 32 Stat. 331, 373 (1902).

The Canadian government did not act on this proposal until 1905. L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 9-10.

60. Bourne, *supra* note 48, at 470-71.

61. D. PIPER, *supra* note 4, at 5.

62. The Commission was primarily an investigative body; its decisions on cases before it were not considered final by the two nations. L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 10.

63. The Commission made this recommendation in a 1906 report dealing with the application of the Minnesota Canal and Power Company to divert certain waters in Minnesota from the boundary area. The Commission recognized that it had an inadequate grant of power to decide the question. Thus, it recommended that another commission be formed, which would have greater powers, and that a treaty be entered into to "settle the rules and principles upon which all such questions may be peacefully and satisfactorily determined as they arise." Bourne, *supra* note 48, at 471.

owners.[64] The Canadians wished to establish a permanent commission to deal with boundary problems as they arose, while the Americans preferred *ad hoc* commissions with the authority to resolve only particular problems.[65] Additionally, the Americans wanted to have the Harmon Doctrine[66] incorporated into the treaty. This doctrine permitted each state to do as it pleased with the waters within its territory, regardless of possible damage to other riparian states. The Harmon Doctrine exemplified an extremely nationalistic view of international water law, which conflicted with established principles of international law.[67] Conversely, the Canadians were in favor of following principles

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64. *Id.*

65. L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 11-12.

66. The Harmon Doctrine derives its name from an opinion issued by United States Attorney General Judson Harmon in connection with a complaint by Mexico charging interference with the flow of the Rio Grande by the United States in violation of international law. The opinion states, in part:

> The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own territory. Of the nature and scope of sovereignty with respect to judicial jurisdiction, which is one of its elements, Chief Justice Marshall said . . . :
>
> > The jurisdiction of the nation within its own territory is necessarily exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it, deriving validity from an external source, would imply a diminution of its sovereignty to the extents of that restriction, and an investment of that sovereignty to the same extent in that power which could impose such restriction.
> >
> > All exceptions, therefore, to the full and complete power of a nation within its own territories must be traced up to the consent of the nation itself. They can flow from no other legitimate source.
>
> . . . .
>
> The case presented is a novel one. Whether the circumstances make it possible or proper to take any action from considerations of comity is a question which does not pertain to this Department; but that question should be decided as one of policy only, because, in my opinion, the rules, principles, and precedents of international law impose no liability or obligation upon the United States.

21 Op. Atty. Gen. 274, 281-83 (1895) (quoting Schooner Exchange v. McFaddon, 2 U.S. (7 Cranch) 478 (1812)).

Thus, the Harmon Doctrine represents a theory of absolute territorial sovereignty, in which a riparian nation can freely use any or all of the waters of an international river which flows within its territory. Other riparian nations have no right to demand a continued flow of the river; likewise, the diverting state has no right to a continued flow if the river passes through another nation's territory before passing through the diverting nation's. Lipper, *Equitable Utilization*, in THE LAW OF INTERNATIONAL DRAINAGE BASINS 15, 18 (1967).

67. To establish the existence of a rule of international law, affirmative evidence must be shown. Little concrete evidence has been found regarding the Harmon Doctrine. Lipper, *supra* note 66, at 22.

which would permit either state to make diversions within its own territory only to the extent that public or private interests in the other state would not be injured.[68] Each side made concessions; thus, the treaty as it was finally adopted provided for the establishment of a permanent commission and incorporated the Harmon Doctrine.[69]

THE BOUNDARY WATERS TREATY OF 1909

The Boundary Waters Treaty proposed to enunciate the rights, obligations, and interests of the United States and Canada in their shared waters.[70] The purpose of the Treaty was two-fold: 1) to settle existing questions about the boundary waters;[71] and 2) to provide a mechanism for settling future disputes over the waters.[72] To further these purposes, the Treaty set forth solutions to specific disputes, gave general principles to govern the settlement of future disputes, and provided for the formation of the International Joint Commission to settle disputes and questions.[73]

The Treaty settled several troublesome questions involving conflicting uses of water by the two nations. Article V provided for the diversion of specified amounts of water above the Falls on the Niagara River by both the United States and Canada.[74] These diversions, which were to be used by power plants licensed by the parties, had not been regulated previously.[75] It was a matter of concern for both countries that unregulated diversions would adversely affect the level of Lake Erie and the stream flow of the Niagara River.[76] The Treaty provided both nations with a sufficient amount of water to divert for power plants, while ensuring adequate levels in the lake and river. The continuing dispute concerning the St. Mary and Milk Rivers was settled by article VI, which provided that the two rivers be treated as one for the purposes of irrigation and power.[77] In addition, the article specified that the waters of the rivers were to be equally apportioned between the two countries, designating specific amounts which

68. L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 13.

69. The Treaty was signed at Washington on January 11, 1909, ratified by both parties, and entered into force on May 5, 1910. *Id.*

70. *Boundary Waters Treaty, supra* note 36, at preamble, *reprinted in* Appendix.

71. *Id.*

72. *Id.*

73. *Id.* at articles V, VI, VII, and VIII.

74. The United States was authorized to divert a daily amount of not more than twenty thousand (20,000) cubic feet of water per second (cfs), while Canada was authorized to divert a daily amount of not more than thirty-six thousand (36,000) cfs. *Id.* at art. V.

75. *See supra* note 54 and accompanying text.

76. *Boundary Waters Treaty, supra* note 36, at art. V, *reprinted in* Appendix.

77. *Id.* at art. VI.

could be diverted as well as providing for periodic measurement and reapportionment. Finally, article II provided that all other uses, obstructions, and diversions which had existed prior to the Treaty would be allowed to continue.[78] Thus, the Boundary Waters Treaty achieved the first of its stated purposes: settling existing questions concerning boundary waters.

The Treaty also presented principles to settle future questions over the boundary waters. First, those waters to be considered "boundary waters" were defined in the preliminary article.[79] Next, article I reaffirmed that navigation on all navigable boundary waters, Lake Michigan, and all canals connecting boundary waters, would "forever continue free and open" for inhabitants of both countries.[80] Article II contained a statement of the Harmon Doctrine,[81] which Canada had reluctantly allowed to be included. Thus, article II allowed each country to retain exclusive jurisdiction and control over diversions and uses within its own territory; however, each party also reserved the right to object to any interference with or diversion of water by the other which would produce "material injury"[82] to navigational interests.[83] Finally, articles III and IV provided that neither country should make any obstruction or diversion of waters which would materially affect the natural level or flow of boundary waters of the

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78. Article II provides a cause of action for citizens of one country injured by a use of the boundary waters by the other nation in the offending nation's courts. Expressly excluded from this provision, and, thus, from the scope of the Treaty are "cases already existing or cases expressly covered by special agreement between the parties hereto." *Id.* at art. II. Thus, the Chicago Diversion was excluded.

79. *Boundary Waters Treaty, supra* note 36, at preliminary article, *reprinted in* Appendix.

80. This right of free navigation is subject to any laws and regulations which either country might make. However, these laws must be "not inconsistent with such privilege of free navigation and applying equally and without discrimination to the inhabitants, ships, vessels, and boats of both countries." *Id.* at art. I.

81. *See supra* note 66 and accompanying text. In the Treaty, the Doctrine is stated as:

> Each of the High Contracting Parties reserves to itself or to the several State Governments on the one side and the Dominion or Provincial Governments on the other as the case may be, subject to any treaty provisions now existing with respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into the boundary waters. . . .

Boundary Waters Treaty, supra note 36, at art. II, *reprinted in* Appendix.

82. "Material injury" is not defined in the Treaty; it would seem that what constitutes material injury could vary from case to case.

83. *Boundary Waters Treaty, supra* note 36, at art. VII, *reprinted in* Appendix.

other country, including any raising of those levels, without the authorization of both the United States and Canada and the approval of the International Joint Commission.[84] These principles were general guidelines for the International Joint Commission to follow; such general guidelines were to aid in accomplishing the second purpose of the Treaty: avoiding future disputes.

Perhaps the most important step which the Boundary Waters Treaty took to avoid future disputes was to set up the International Joint Commission. The Commission, authorized by article VII, consists of six members, three from each country.[85] Article VIII granted the Commission jurisdiction over cases involving the use of, or the obstruction or diversion of, boundary waters, where such uses would affect the levels or flows of the waters.[86] This article also set out the principles which the Commission was to follow in reaching its decisions: 1) the contracting parties were to have equal and similar rights in the use of the waters; 2) certain uses were to be preferred over others;[87] 3) the equal division requirement was to be temporarily suspended when, in the Commission's opinion, such suspension was necessary; 4) conditioning approval and/or requiring the posting of an indemnification bond was within the discretion of the Commission; and 5) decision of the Commission was to be by majority vote.[88] Thus, the Commission, given the necessary jurisdiction and guidelines of decision, was set up as a judicial body to settle future disputes.

The Commission was granted more than mere adjudicative powers by the Treaty. Article IX grants the Commission investigative powers for questions referred by the two governments.[89] The administrative powers of the Commission are granted by article VI.[90]

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84. Article III provides for obstructions and diversions which lower the level or flow of the boundary waters, while article IV provides for dams and remedial works which raise the level of the waters. In addition, article IV states that boundary waters "shall not be polluted on either side to the injury of health or property on the other." *Id.* at articles III and IV.

85. *Boundary Waters Treaty, supra* note 36, at art. VII, *reprinted in* Appendix.

86. *Id.* at art. VIII.

87. The order of uses given is: 1) for domestic and sanitary purposes; 2) for navigation, including the service of canals for the purposes of navigation; and 3) for power and irrigation purposes. *Id.*

88. *Id.*

89. These questions may be referred by either government or by the two governments jointly. *See infra* notes 109-16 and accompanying text.

90. Article VI grants the Commission the power to act as an administrative board, overseeing the use of the St. Mary and Milk Rivers. *See infra* notes 117-19 and accompanying text.

Article X grants the Commission a further type of power: that of an arbitral body in case of disagreement between the two nations.[91] These arbitral, administrative, and investigative powers were tailored to give the Commission enough authority to resolve any boundary questions which might arise, thus helping to further the Treaty's goal of avoiding disputes.

The remaining articles of the Treaty are procedural. Article XI specifies that all the Commission's decisions and reports must be rendered with copies for each government.[92] Article XII gives the Commission the power to choose meeting places, hold meetings, appoint secretaries, administer oaths to witnesses, take evidence, and to adopt such procedure as is necessary.[93] Finally, article XIII provides that special agreements between the United States and Canada must be approved by the Congress and Parliament.[94] Thus, the Boundary Waters Treaty provides the International Joint Commission with the necessary procedures to settle disputes, as well as giving it the powers to do so.

The Boundary Waters Treaty of 1909 has proven effective in reaching its stated purposes and goals. Then existing boundary questions were settled, and, through the work of the International Joint Commission, other disputes have been avoided. In the decades following the ratification of the Treaty, the Commission has played an important role in managing the boundary waters, including the Great Lakes.

THE INTERNATIONAL JOINT COMMISSION

The International Joint Commission, formed under the authorization of the Boundary Waters Treaty of 1909, began operations in 1912. The Commission consists of six members, three Canadians and three Americans.[95] The Commission is directed by Canadian and American

91. *See infra* notes 120-24 and accompanying text.

92. In addition, the article directs that all communication of the Commission to the governments shall be through the Secretary of State of the United States and the Governor General of Canada. *Boundary Waters Treaty, supra* note 36, at art. XI, *reprinted in* Appendix.

93. Article XII also provides that the salaries of the Commissioners and their secretaries shall be paid by their respective governments, while joint expenses of the Commission shall be divided between the two governments. *Id.* at art. III.

94. These special agreements include concurrent or reciprocal legislation by Congress and the Parliament. *Id.* at art. XIII.

95. The Canadian Commissioners are appointed by the Governor in Council, while the American Commissioners are appointed by the President with the advice and consent of the Senate. 1980 INTERNATIONAL JOINT COMMISSION ANN. REP. 5 [hereinafter cited as 1980 I.J.C. ANN. REP.].

Co-Chairmen, who serve full-time, while the other Commissioners serve part-time.[96] The Commission maintains two offices: one in Ottawa, the other in Washington, D.C.[97] The Commissioners act as a unitary body, not as representatives of the governments.[98] Thus, they attempt to arrive at impartial solutions which will benefit both nations, while carrying out their duties as a judicial, investigative, administrative, and arbitral body.

Under the jurisdiction granted by the Boundary Waters Treaty, the International Joint Commission functions predominantly as a quasi-judicial body.[99] In practice, the workings of the Commission closely resemble those of an administrative agency. Generally, the Commission takes jurisdiction over an application submitted by either government.[100] Notice of hearings is published in newspapers, and written notice is sent to all parties involved.[101] All hearings are open to the public.[102] Time is provided for counsel to submit briefs.[103] Testimony need not be under oath, but the opportunity for cross-examination is mandatory.[104] The Commission decides questions as to the admissibility of evidence.[105] The Commission then uses general principles

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96. *Id.*

97. INTERNATIONAL JOINT COMMISSION RULES OF PROCEDURE. 22 C.F.R. § 401.4 (1984) [hereinafter cited as I.J.C. R.P.]. In addition, there is a regional office located in Windsor, Ontario, which is responsible for assisting the Commission in administering the Great Lakes Water Quality Agreement. 1980 I.J.C. ANN. REP., *supra* note 95, at 5.

98. 1980 I.J.C. ANN. REP., *supra* note 95, at 5.

99. Jordan, *The International Joint Commission and Canada-United States Boundary Relations*, in CANADIAN PERSPECTIVES ON INTERNATIONAL LAW AND ORGANIZATION 523, 526 (1974).

100. The application may be by the government itself, or may be on behalf of a private citizen. A private person must request his or her government to make an application to the Commission. I.J.C. R.P., *supra* note 97, at § 401.6(b). An American citizen, for example, applies to the Secretary of State.

> After applying to the Secretary of State, an applicant may concentrate on preparing for the hearing ultimately to be held on his application. The actual filing of the application with the Commission is done by the Secretary of State, and the Commission itself gives notice to the other government and to interested parties, schedules and gives notice of a hearing.

Waite, *The International Joint Commission—Its Practice and Its Impact on Land Use*, 13 BUFF. L. REV. 93, 103 (1963) (discussing what is necessary for a planner to make a presentation to the Commission regarding a proposed development on a lakeshore).

101. I.J.C. R.P., *supra* note 97, at § 401.9.

102. *Id.* at § 401.23.

103. The time period in which to submit briefs is thirty days, after which thirty days is provided for reply briefs to be submitted. *Id.* at §§ 401.10–401.11.

104. *Id.* at §§ 401.23(e)–401.23(f).

105. *Id.* at §§ 401.23(g)–401.23(h).

of international law, as well as the guidelines given in the Boundary Waters Treaty, in reaching its decisions.[106]

Once the Commission has rendered a decision, its conditions are binding on all parties involved, including both governments.[107] The Commission usually appoints an international board of control to oversee compliance with its conditions.[108] Thus, the Commission is assured that the decisions which it reaches in carrying out its judicial function under the Boundary Waters Treaty are enforced.

The second function of the Commission under the Boundary Waters Treaty is that of an investigative body. The Commission is authorized to examine and report upon questions received from the two governments.[109] These questions have usually been referred jointly by the two governments, after consultation on the terms of the request.[110] The Commission then appoints a board, usually consisting of engineers, scientists, and others from government agencies who have expertise in the areas to be investigated.[111] The board investigates the matter[112] and reports back to the Commission, which makes the reports public and holds hearings to gather comments on the reports.[113] After holding these public hearings, the Commission draws together the board's reports and any findings from the hearings to formulate its recommendations, which are submitted to both governments.[114] Im-

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106. D. PIPER, *supra* note 4, at 81.

107. *Id.*

108. Among these boards of control are those overseeing projects on the St. Lawrence River, Niagara River, Lake Superior, St. Croix River, Rainy Lake, Lake of the Woods, Stouris River, St. Mary–Milk Rivers, Kootenay River, Osoyoos River, Skagit River, and Lake Champlain. In addition, the Commission has appointed Pollution Advisory Boards for the St. Croix River, Rainy River, and Red River. 1980 I.J.C. ANN. REP., *supra* note 95, at 42.

109. *Boundary Waters Treaty*, *supra* note 36, at art. IX, *reprinted in* Appendix.

110. 1980 I.J.C. ANN. REP., *supra* note 95, at 6. Article IX, however, allows either party to request an investigation by itself. *Boundary Waters Treaty*, *supra* note 36, at art. IX, *reprinted in* Appendix.

111. 1980 I.J.C. ANN. REP., *supra* note 95, at 6-7. This practice has been met with approval by at least one commentator. *See* Waite, *supra* note 100, at 100 ("Using personnel of existing government agencies avoids creation of a new bureaucracy with its attendant risk of hobbling, interbureau rivalries.").

112. The subsidiary board's work is not public. "The board, once appointed, works unobtrusively, without public hearings, possibly to free them from public pressure. The principle of protecting advisory boards from public pressure is long established in international practice." Note, *supra* note 55, at 504.

113. *Id*; 1980 I.J.C. ANN. REP., *supra* note 95, at 7.

114. 1980 I.J.C. ANN. REP., *supra* note 95, at 7.

plementation of the Commission's recommendations on these referrals by the respective governments is not compulsory.[115] Generally, the governments implement the Commission's recommendations after bilateral consultation.[116] The investigative function of the International Joint Commission has enabled the two governments to explore questions which would be difficult for either government to explore alone, thus strengthening cooperation between the United States and Canada.

The International Joint Commission was given a third function by the Boundary Waters Treaty, that of an administrative body. The Treaty specifically gives the Commission the duty to measure and apportion the waters of the Milk and St. Mary Rivers and sets out rules for it to follow.[117] In addition, later treaties and agreements have given the Commission the responsibility of management over other sections of the boundary waters.[118] The Boundary Waters Treaty itself, however, gave the Commission only a limited administrative function.[119]

In what could almost be termed a residuary clause of the Boundary Waters Treaty, article X grants the International Joint Commission an arbitral function.[120] This is clearly not a mandatory function for the governments to use; indeed, this arbitral function has never been used during the seventy-three year history of the Commission.[121] Article X states that the governments may jointly refer any question or dispute to the Commission for a binding decision. Under the wording of article X, it appears that such a referral may be on any subject and need not concern the boundary directly.[122] If

115. *Boundary Waters Treaty, supra* note 36, at art. IX, *reprinted in* Appendix.

116. 1980 I.J.C. ANN. REP., *supra* note 95, at 6.

117. *See supra* note 70 and accompanying text.

118. For example, the Commission was given administrative jurisdiction over the Lake of the Woods in 1925. Treaty between Canada and the United States to Regulate the Level of the Lake of the Woods, Feb. 24, 1925, 44 Stat. 2108 (1925), T.S. 721. Later agreements gave the Commission administrative jurisdiction over other boundary rivers and lakes. For a listing of the boards created by these agreements *see supra* note 108.

119. In it, the Commission was given administrative jurisdiction only over the St. Mary and Milk Rivers. *Boundary Waters Treaty, supra* note 36, at art. IX, *reprinted in* Appendix.

120. *Id.* at art. X.

121. 1980 I.J.C. ANN. REP., *supra* note 95, at 6.

122. This conclusion can be drawn from the lack of restrictive words in this article. "In defining the arbitral jurisdiction of the Commission, Article X does not contain the restrictive words 'along the common frontier' used in defining the investigative jurisdiction of the Commission under Article IX." L. BLOOMFIELD & G. FITZGERALD, *supra* note 40, at 55.

the Commissioners are unable to reach a decision, the matter must then be referred to an umpire for a decision in accordance with the Hague Convention for the Pacific Settlement of International Disputes.[123] While the two governments seem unwilling to commit themselves to such binding arbitration,[124] article X remains as an option for the governments, through the International Joint Commission, to use in settling disputes.

The International Joint Commission, with its adjudicatory, investigative, administrative, and arbitral powers, is a unique body created by the Boundary Waters Treaty. It enjoys a broad mandate of power and significant freedom from political interference.[125] The Commission created a mechanism by which disputes could be settled without the direct involvement of either government; thus, it aided in avoiding confrontations between the governments. The Commission has had an impressive record of success. In only a few instances has it been deadlocked or has it failed to provide a settlement to a dispute.[126] Through its recognition of common goals and problems for both countries, the International Joint Commission has aided in the development of the boundary regions.

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123. Hague Convention for the Pacific Settlement of International Disputes, July 29, 1899, 32 Stat. 1779 (1900), T.S. 392.

124. One writer speculates, "It appears that neither country wishes to bind themselves to a procedure that might work to their disadvantage. For Article X to have any 'teeth' it would have to make arbitration possible at the request of one of the countries, not both." Note, *supra* note 55, at 505.

125. As one commentator has stated:

> The commission, whether applying rules established by the Boundary Waters Treaty or formulating principles for co-operative action, brings to bear techniques and practices that would be difficult to duplicate in the traditional institutions of diplomatic intercourse. It not only ensures a degree of continuity and consistency in dealing with a series of similar problems but also because of its detachment from political involvement, achieves an important element of objectivity in evaluating the issues involved in each case. As a result, matters that might otherwise exacerbate the relations between Canada and the United States are dealt with in an informed and dispassionate manner calculated to ensure a full consideration of the interests of both nations.

Jordan, *supra* note 99, at 539.

Contra McDougall, *The Development of International Law with Respect to Trans-Boundary Water Resources: Co-operation for Mutual Advantage or Continentalism's Thin Edge of the Wedge?*, 9 OSGOODE HALL L.J. 261 (1971) (contending that the Commission's rulings are often politically biased and work to the advantage of the United States).

126. In the 1948 Waterton and Belly Rivers Reference, studies were completed, but the Commission divided on national lines in making a recommendation, and only the Canadians reported to their government. I.J.C. Docket No. 57, Waterton and Belly Rivers, 1948.

The International Joint Commission, with its system of two nations working together to develop guidelines for the use of a common area, has also presaged the development of international water law. The law of international drainage basins[127] has gradually developed from nationalistic ownership policies into a system of regional cooperation for the development of entire basins.[128] In addition, the rule of equitable apportionment[129] in the use of common waters has gradually developed into an international rule.[130] As international waters, the Great Lakes are governed by general customs of international law, as well as by the Boundary Waters Treaty.[131] Thus, an understanding of the principles of international water law is necessary for the determination of possible results in a dispute involving the Great Lakes.

INTERNATIONAL WATER LAW

Several basic trends have emerged in the rapidly developing area of international water law.[132] These trends include: consulting with co-riparian nations before beginning water projects which will affect

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The Commission was also unable to reach decisions in two references having to do with the Columbia River. I.J.C. Docket No. 51, Columbia River (1944) and I.J.C. Docket No. 69, Libby Dam and Reservoir (1954) both led to stalemates between the two nations. For a discussion of the Columbia River controversy, see Martin, *International Water Problems in the West*, in CANADA-UNITED STATES TREATY RELATIONS 51 (D. Deener ed. 1963).

127. An international drainage basin has been defined as "a geographical area extending to or over the territory of two or more states and is bounded by the watershed extremities of the system of waters, including surface and underground waters, all of which flow into a common terminus." Olmstead, *Introduction* in THE LAW OF INTERNATIONAL DRAINAGE BASINS 1, 4 (1966).

128. *See infra* notes 138-59 and accompanying text.

129. *See infra* notes 160-65 and accompanying text.

130. *See infra* note 166.

131. The International Joint Commission applies principles of international law in its decision-making roles. D. PIPER, *supra* note 4, at 81. In addition, the actions of the Commission have contributed to the formation of international water law, as the former chairman of the United States delegation has pointed out. "[T]he Commission has enunciated interpretations and views which represent modest but independent evolution of international legal principles." Sugarman, *The International Joint Commission and Principles of International Law*, in COMMON BOUNDARY/COMMON PROBLEMS 48 (1981).

132. International water law has changed and developed as water has been put to new uses. Until recently, the main use of most waterways was for navigation; thus, most treaties concerning shared waterways provided for navigational rights. *See supra* notes 46-51 and accompanying text for examples of navigational treaties between the United States and Great Britain. As population grew and technology developed, however, consumptive uses of international waterways increased. Rivers

them; planning the development of drainage basins through international or joint commissions instead of nations acting individually; and dividing available water for use among nations by the principles of equitable apportionment. An examination of the traditional sources of international law,[133] such as treaties and conventions,[134] custom,[135]

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which had been used primarily for navigation were needed to provide water for cities and industries as well as for increased irrigation and sanitation needs. Nations which had made little use of shared waterways began diverting and consuming large amounts of water. L. HENKIN, R. PUGH, O. SCHACHTER & H. SMIT, INTERNATIONAL LAW 411 (1980). As co-riparian nations extended their consumptive uses, those uses began to affect other nations' possible uses. It became apparent that new principles governing uses of international waters would be necessary to avoid conflicts. *Id.*

133. The sources of international law, as listed in the statute of the International Court of Justice, are:

> a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
> b. international custom, as evidence of a general practice accepted as law;
> c. the general principles recognized by civilized nations;
> d. judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

Statute of the International Court of Justice, art. 38, 59 Stat. 1055 (1945), T.S. 993.

134. Treaties and conventions are law for the parties to the treaties; in addition, they may be used as evidence of general international law.

> That existing general international law in a given field may be traceable to the rules of a universally or virtually universally adhered to "law-making" multilateral treaty is known to all. It is usually conceded that such "international legislation" makes a quite direct contribution to general international law. In addition, a widely adhered to treaty might openly purport to be merely, or primarily declaratory of the existing customary law. Such formal codification or restatement may be limited legally speaking to the role of "some evidence" in the process of the proof of the law; however, sociologically speaking, the individual and collective state activity that brought forth the declaratory treaty is itself state practice, reinforcing (in this instance) the customs—not just providing proof of them. Even bilateral agreements can serve these functions of evidencing and strengthening the customary rules, by manifesting the intention of the framers to affirm, on the whole, the existing law.

Hayton, *The Formation of the Customary Rules of International Drainage Basin Law*, in THE LAW OF INTERNATIONAL DRAINAGE BASINS 834, 861-62 (1967).

135. Custom in international law has a meaning which differs from its meaning in ordinary usage.

> Custom in its legal sense means something more than mere habit or usage; it is a usage felt by those who follow it to be an obligatory one. There must be present a feeling that, if the usage is departed from, some form of sanction will probably, or at any rate ought to, fall on the transgressor. Evidence that a custom in this sense exists in the international sphere can be found only by examining the practice of states; that is to say,

judicial decisions,[136] and the writings of publicists,[137] shows that these concepts are becoming a part of general public international law.

The obligation to consult with co-riparian nations before beginning a project which would affect shared waters has become widely recognized during the twentieth century. This obligation ensures that a state will not utilize the waters of an international drainage basin without examining all the factors involved. By consulting with other states, a nation may discover another course of action which is more beneficial to all the parties affected, or, at the very least, ascertain the legal ramifications of its proposed actions.[138] While international law requires consultation and good faith negotiation with co-riparian states, there is no duty to accept terms proposed by other states,[139] nor is there a duty to reach an agreement.[140] However, consultation and negotiation will strengthen a nation's position in an adjudication

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> we must look at what states do . . . and attempt to understand why they do it, and in particular whether they recognize an obligation to adopt a certain course or, in the words of Article 38 [of the Statute of the International Court of Justice], we must examine whether the alleged custom shows "a general practice accepted as law."

J. BRIERLY, THE LAW OF NATIONS 59-60 (6th ed. 1963).

136. These decisions may be those of national courts or of the International Court of Justice.

> Decisions and opinions by courts and quasi-judicial bodies of a particular state frequently are the most accessible and legally sufficient manifestations of that state's legal position on many technical international or foreign relations matters and are often resorted to.
>
> . . . International tribunal "precedent" and legal grounds announced by international tribunals for their decisions may themselves be admissible as some evidence of customary state practice, at least in the absence of widespread state criticism of, or objection to the Court's or other tribunal's formulations.

Hayton, *supra* note 134, at 845, 854.

137. Publicists' writings are used in international law to identify recognizable trends. As international law has no legislation and little codification, the works of scholars have been accepted as a source of evidence of the law.

> The actual influence of any given writer aside, what justifies use of commentators . . . is the assistance their works can render in analysis of the problem, in making available more of the voluminous, equivocal and inaccessible record of state practice, and in articulating concisely the recognized or developing legal principles and rules involved.

Id. at 860.

138. Bourne, *Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate*, 10 CAN. Y.B. INT'L L. 212, 230 (1972).

139. *Id.* at 233.

140. *Id.* at 231.

over a proposal, as the nation will have demonstrated good faith.[141] Thus, the obligation to consult with co-riparian nations before implementing a proposal for water utilization has been a useful development in international water law.

The obligation to consult with co-riparian states can be seen in treaties, conventions, judicial decisions, and publicists' writings.[142] Of the over 250 treaties on the non-navigational uses of international rivers compiled by the Secretariat of the United Nations,[143] almost half included some type of provision for negotiation or agreement before the development of the basin is undertaken.[144] The International Court of Justice, in the *Lake Lanoux Arbitration*,[145] and the *North Sea Continental Shelf Cases*,[146] has held that an obligation to consult and negotiate arises out of customary international law.[147] Many noted publicists agree.[148] Thus, the obligation to consult with co-riparian states before undertaking a development project can be found in the traditional sources of international law.

The use of an international or joint commission in the planning and development of international basins has also gained acceptance

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141. *Id.* at 227.

142. *See supra* notes 133-37 and accompanying text.

143. United Nations Legislation Series, *Legislation, Texts and Treaty Provisions Concerning the Utilization of International Rivers for Other Purposes than Navigation*, U.N. Doc. No. ST/LEG/SER.

144. Sixteen treaties contain an explicit provision to consult and negotiate, eighteen treaties contain provisions whereby the parties undertake to solve water disputes by agreement, and eighty contain provisions promising not to make changes in the regime of the basin without the consent of the other party. *Id.*

145. (France v. Spain) 1957 Int'l L. Rep. 101.

146. (Fed. Rep. of Ger. v. Neth., Fed. Reg. of Ger. v. Den.) 1969 I.C.J. 3.

147. In *Lake Lanoux*, the Court concluded:

> International practice reflects the conviction that States ought to strive to conclude . . . agreements: there would thus appear to be an obligation to accept in good faith all communications and contacts which could, by a broad comparison of interests and by reciprocal good will, provide States with the best conditions for concluding agreements.

1957 Int'l L. Rep. at 129-30.

Likewise, in the *North Sea Continental Shelf Cases*, the Court found that the parties were under an obligation to negotiate with a view to arriving at an agreement delimiting areas of the North Sea continental shelf. 1969 I.C.J. 1 at 46-47, 53-54.

148. Bourne, *supra* note 138; H.A. SMITH, THE ECONOMIC USES OF INTERNATIONAL RIVERS 152-53 (1931); Sevette, *Legal Aspects of Hydro-Electric Development of Rivers and Lakes of Common Interest*, U.N. Doc. No. E/ECE/136, at 211 (1952); Griffin, *Legal Aspects of the Use of Systems of International Waters, Memorandum of the State Department*, S. Doc. No. 118, 85th Cong., 2d Sess. 91 (1958).

as a part of international law. While the structure of these commissions varies with the drainage basins involved,[149] the commissions share some common characteristics. Among these characteristics are: the authority to undertake studies or investigations; the ability to make advisory decisions or recommendations to the governments involved; long-term or indefinite duration; members who are usually engineers or other professionals; and jurisdiction which covers the entire basin within the territories of the member nations.[150] These international commissions are designed to facilitate development of the shared basins by making investigation of potential projects easier, as well as providing a mechanism for the nations involved to consult with each other before development.[151] Thus, protests and delays may be avoided. In addition, once the development of a basin is completed, the international commission may be used as an administrative board empowered to oversee the river system.[152] International commissions have eased problems involved in the development and administration of international basins; thus, these commissions have gained acceptance in customary international law.

The growing acceptance of international commissions as a mechanism for shared basin development can be seen by the increasing number of treaties and conventions which provide for such commissions, as well as by the support given them by publicists. While only two international commissions administering shared river systems existed before 1900,[153] almost two dozen such commissions have been created since then.[154]

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149. As publicists have stated, "[N]o two rivers are alike, and . . . the social, economic and political environments within each river basin impose different demands on organization for development." Ely & Wolman, *Administration*, in THE LAW OF INTERNATIONAL DRAINAGE BASINS 124, 146 (1967).

150. *Id.* at 137.

151. *Id.*

152. For example, the Commission for the Iron Gates Project, formed by a 1956 agreement between Romania and Yugoslavia, provides for a "mixed commission" to oversee the planning, construction, and operation of a development project on the Danube. *Id.* at 127.

153. The European Commission on the Danube was created by treaty in 1815. The present parties to the treaty are Romania, Bulgaria, Czechoslovakia, Hungary, Austria, Yugoslavia, the U.S.S.R., and the Ukraine. *Id.* at 126.

The Central Commission for Navigation on the Rhine was created in 1816. The present members are France, the Federal Republic of Germany, the Netherlands, Switzerland, Belgium, and Great Britain. *Id.* at 127.

154. A partial listing of these commissions includes: the International Joint Commission, United States and Canada, created in 1909; the International Commission for the Elbe River, Germany and Czechoslovakia, 1919; the Frontier Water Commission, Denmark and Germany, 1922; the Kunene River Commission, Portugal and South

In addition, both the Helsinki Rules[155] and the Institute of International Law Resolution of 1961[156] recommend that joint commissions be created in international water basins. The United Nations Water Conference[157] adopted similar recommendations, calling for the establishment of joint committees of cooperation between co-riparian states.[158] Several publicists have stressed the importance of joint commissions, calling for their establishment in basins which do not have plans for cooperative development.[159] Thus, the trend is toward the creation of international commissions to plan, develop, and administer international basins.

Africa, 1926; the Douro River Commission, Spain and Portugal, 1927; the International Boundary and Water Commission, United States and Mexico, 1944; the Roya River Commission, France and Italy, 1952; the Committee for Coordination of Investigations of the Lower Mekong Basin, Cambodia, Laos, Thailand, and Vietnam, 1957; the Permanent Joint Technical Commission (Nile River), Republic of Sudan and United Arab Republic, 1959; the Permanent Indus Commission, India and Pakistan, 1960; the Intergovernmental Committee for the Senegal River Basin, Guinea, Mali, Mauritania, and Senegal, 1963; the River Niger Commission, Cameroon, Ivory Coast, Dahomey, Guinea, Upper Volta, Niger, Nigeria, and Chad, 1964; and the Commission of the Lake Chad Basin, Cameroon, Niger, Nigeria, and Chad, 1964. *Id.* at 128-33, 147 n.1. For a discussion of the workings of these and other joint commissions, *see generally* Kenworthy, *Joint Development of International Waters*, 54 AM. J. INT'L L. 592 (1960).

155. Article 31 of the Helsinki Rules recommends "that the basin States refer the question or dispute to a joint agency and that they request the agency to survey the international drainage basin and to formulate plans or recommendations for the fullest and most efficient use thereof in the interests of all such States." *Helsinki Rules on the Uses of the Waters of International Rivers*, International Law Association, Report of the Fifty-Second Conference, Helsinki (1966) [hereinafter cited as *Helsinki Rules*].

156. Article 9 of the Resolution states, "It is recommended that States interested in particular hydrographic basins investigate the desirability of creating common organs for establishing plans of utilization designed to facilitate their economic development as well as prevent and settle disputes which might arise." Resolutions Adopted by the Institute of International Law at its Session at Salzburg, Article 9 (1961) [hereinafter cited as Salzburg Resolutions].

157. The Water Conference was held in Mar del Plata, Argentina, during March, 1977. 31 U.N.Y.B. 553 (1977).

158. The Conference recommended . . .

> that in situations in which countries lay upstream or downstream from one another on a river, bordered on a common lake or exploited a groundwater reserve extending into their neighbour's territory, they should establish joint committees, as appropriate and by agreement, to co-operate [sic] in such areas as data collection, management, pollution control, disease prevention, flood and drought control, and river improvement. In the absence of an agreement on how to use shared resources, countries which shared them should exchange information on which the future management of these resources could be based, to avoid future foreseeable damages.

31 U.N.Y.B. 553, 557-58 (1977).

159. Ely & Wolman, *supra* note 149, at 146; Kenworthy, *supra* note 154; Fox & Craine, *Organizational Arrangements for Water Development*, 2 NAT. RES. J. 1 (1962); Ostrom, *The Water Economy and its Organization*, 2 NAT. RES. J. 55 (1962).

Another trend emerging in international water law is the use of the principles of equitable apportionment in the division of shared waters. Equitable apportionment, or equitable utilization, recognizes the equality of right of co-riparian nations; in other words, the theory of equitable apportionment recognizes that riparian nations have an equal right to use shared waterways in accordance with their needs.[160] Equitable apportionment of a shared waterway calls for a determination of the rights of each nation involved by either negotiation and agreement[161] or third-party tribunal.[162] In determining each nation's equitable share of a common water system, several factors must be considered: 1) each nation's right to a "reasonable" use of the water; 2) each nation's dependence on the waters of that particular system; 3) the comparative gains to each nation, and the entire riparian community, by a proposed use; 4) the existing agreements between the nations concerned; and 5) any pre-existing appropriations by the nations involved.[163] By weighing these factors, a determination of the most equitable use of the shared waters of a particular system may be made. Equitable apportionment is not a static doctrine; uses and rights will vary from one river system to another[164] and may change in one river system over a period of time.[165] However, equitable apportionment, with its balancing of factors for each river system, has

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160. In explanation, one commentator states:

> What is the concept of equality of right? It means in the first place, that all states riparian to an international waterway stand on a par with each other insofar as their right to utilization of the water is concerned. Factors unrelated to the availability and use of the waters are irrelevant and should not be considered. For example, the size of a particular state in relation to a co-riparian or the fact that the river flows for a greater distance through one state than another is not in itself a factor to be considered in determining what is an equitable utilization . . . .

Lipper, *supra* note 66, at 44-45.

161. This appears to be the most common, and preferred, method of determining rights. *See* 31 U.N.Y.B. 553, 557 (1977); Salzburg Resolutions, *supra* note 156, at articles 6, 7; Scott, *Kansas v. Colorado Revisited*, 52 AM. J. INT'L L. 432, 454 (1958).

162. Resort to a third-party tribunal, either through arbitration or adjudication, is recommended if negotiations become deadlocked. *See Helsinki Rules*, *supra* note 155, at art. 34; Salzburg Resolutions, *supra* note 156, at art. 8; Laylin, *The Role of Adjudication in International River Disputes*, 53 AM. J. INT'L L. 30 (1959).

163. These factors were originally formulated by the International Law Association at its Dubrovnik Conference in 1956. The factors are discussed in some detail in Lipper, *supra* note 66, at 42-44.

164. Uses and rights will vary as co-riparian nations in different basins may be at different stages of development; thus, they have different uses for available water. *Id.* at 63.

165. As Lipper points out, "Nor is the determination of an equitable utilization final for all times. Changing circumstances may require revaluation and a new determination." *Id.* at 66.

led to a system of determining rights which has become a part of international law.[166]

International water law is composed of concepts that are evolving to suit the new uses to which international waterways are submitted. The previous strong nationalistic and territorial concepts of riparian ownership, suitable when waterways were used primarily for navigation, became inappropriate as consumptive water uses increased.[167] New concepts were needed to allow maximum beneficial use of shared waterways with a minimum of detrimental impact on each riparian nation. Thus, the obligation to consult with co-riparian states before beginning development of waterways, the use of joint commissions to develop and administer waterways, and the equitable apportionment of shared waterways were adopted into international law. These concepts are also dynamic; each changes to suit a particular water system at a particular time. These flexible concepts allow international water law to adapt to new uses of waterways.

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166. The adoption of equitable apportionment as a rule of international law is apparent in treaties, conventions, customs, and judicial opinions. There are dozens of treaties regulating the use of boundary waters which limit the rights of the signatories in respect to one another and expressly recognize the equality of right of the parties. Examples of such treaties include those between Italy and Switzerland, Sept. 17, 1955, 291 U.N.T.S. 213 (1958); Iraq and Iran, July 4, 1937, 190 L.N.T.S. 241 (1938); Russia and Estonia, Feb. 2, 1920, art. XVI, Annex (2), 11 L.N.T.S. 29, 46 (1922). For a more complete listing of such treaties, see Lipper, *supra* note 66, at 70-71 n.31. In addition, multilateral conventions, such as the 1923 Geneva Convention, provide for apportionment based on equality of right. Convention of Geneva Relating to the Development of Hydraulic Power Affecting More than One State, Dec. 9, 1923, 36 L.N.T.S. 75 (1925). As evidence of the existence of a perceived international custom, governmental pronouncements since the mid-nineteenth century have acknowledged the existence of equality of right and the consequent duty to apportion waters equitably. *See* Lipper, *supra* note 66, at 25-28. International tribunal adjudications, while relatively few in number, have also recognized the principles of equitable apportionment. *See* Lake Lanoux Arbitration (France v. Spain), 1957, Int'l L. Rep. 101; International Commission of the River Oder Case, P.C.I.J., ser. A, No. 23 (1929). Finally, United States Supreme Court, which applies principles of international law when deciding cases between states, has applied equitable apportionment when deciding interstate water rights. Colorado v. New Mexico, 103 S. Ct. 539 (1982) (principles of equitable apportionment apply between states disputing water rights); New Jersey v. New York, 283 U.S. 336 (1931) (both states have real and substantial interests in the Delaware River which must be reconciled); Kansas v. Colorado, 185 U.S. 125 (1902) (on demurrer), 206 U.S. 46 (1907) (on merits) (the right to use water flowing across state lines must be adjusted on the basis of equality of rights between states). Thus, an examination of the sources of international law leads to the conclusion that equitable apportionment is a principle accepted in international law.

167. *See supra* note 132.

The Boundary Waters Treaty of 1909 is an important document in international water law, as it contained early statements of the flexible concepts of the law. The Treaty illustrates the obligation to consult with co-riparian nations before beginning development of shared waters, as both parties to the Treaty are required to inform the International Joint Commission, and each other, of any proposed plans.[168] The use of an international commission to plan, develop, and administer a shared waterway is clearly present in the Treaty's International Joint Commission;[169] indeed, the Commission was one of the first of such international bodies formed.[170] While the Treaty's incorporation of the Harmon Doctrine may seem to violate the principles of equitable apportionment,[171] the Treaty also provides that both parties have "equal and similar" rights in the boundary waters.[172] In practice, the Harmon Doctrine as incorporated in article II has never been applied; the United States repudiated the doctrine as contrary to international law when Canada attempted to invoke article II in the Columbia River dispute.[173] Thus, it appears that the Treaty's statement of the parties' equal and similar rights predominates. Clearly,

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168. The approval of the Commission is necessary to begin any development of the boundary waters. *See supra* notes 99-108 and accompanying text.

169. *Boundary Waters Treaty, supra* note 36, at art. VII, *reprinted in* Appendix.

170. *See supra* notes 153-54 and accompanying text.

171. The Treaty's statement of the Harmon Doctrine is contained in article II. *See supra* notes 66-67 and accompanying text.

172. *Boundary Waters Treaty, supra* note 36, at art. II, *reprinted in* Appendix.

173. The Columbia River dispute arose when the United States and Canada proposed mutually exclusive plans for the portions of the Columbia basin within each nation's territory. In 1955, the Chairman of the Canadian Section, General McNaughton, asserted that the Canadian development plans were within the scope of the Harmon Doctrine as incorporated in article II of the 1909 Treaty. In replying through the American Chairman, Len Jordan,

> The United States Department of State took the position that Article II was merely a restatement of customary international law and that the latter rejected absolute sovereignty and embraced limited sovereignty; further, the Department denied that the Harmon Doctrine has *ever* been a part of international law, rejecting it as a prime example of "special pleading."

Lipper, *supra* note 66, at 26.

Negotiations over the Columbia River were stalled for several years. Finally, a solution was reached wherein Canada allowed part of its territory to be flooded by American dams in return for receiving electricity from downstream power projects. A treaty dealing specifically with the development of the Columbia River was drafted and signed in 1961. Martin, *supra* note 126, at 51.

For a more detailed discussion of the Columbia River controversy, *see* Austin, *Canadian—United States Practice and Theory Respecting the International Law of International Rivers: A Study of the History and Influence of the Harmon Doctrine*, 37 CAN. B. REV. 393 (1959); Bourne, *The Columbia River Controversy*, 37 CAN. B. REV. 444

the Boundary Waters Treaty stands as an early statement of the trends of contemporary international law.

The Boundary Waters Treaty and international water law provide principles to guide the International Joint Commission in making a decision on any proposed development in the Great Lakes. Thus, if the United States were to propose a diversion out of the Great Lakes[174] to benefit the west and southwest, the Commission would grant or deny the proposal on the basis of the Treaty and international law. The Treaty also gives the Commission different and separate roles in which to function in ruling on a proposal, depending on the manner in which the proposal is referred to the Commission. The next section will examine how the Commission might act in its investigative, adjudicative, and arbitral roles[175] in applying the principles of the Treaty and customary international law to a proposed diversion.

THE ROLE OF THE COMMISSION IN A PROPOSED DIVERSION

The United States and Canada have a mechanism for settling disputes over diversions from boundary waters in the International Joint Commission. Thus, if the United States proposed to divert water from the Great Lakes, the matter would go before the Commission. The proposal to divert water could go before the Commission in one of three ways: as an investigative referral, as an adjudicative referral, or as an arbitral referral. In any type of a reference, the Commission would apply the principles of international law; yet, because of the difference between the types of references, those principles would be applied differently and could lead to disparate results. Each type of reference, with its benefits and detriments, must be considered to determine which type of reference would allow the Commission to render a decision beneficial to both nations. In addition, the alternative of bypassing the Commission by direct negotiation between the United States and Canada must also be considered. Such direct negotiation could lead to a new treaty between the two nations dealing specifically with diversions from the Great Lakes. In this way, the most beneficial method of settling a dispute over large-scale diversions from the Great Lakes can be determined.

(1959); Cohen, *Some Legal and Policy Aspects of the Columbia River Dispute*, 36 CAN. B. REV. 25 (1958).

174. *See supra* notes 25-27 and accompanying text.

175. A diversion proposal would not involve the Commission in its administrative role, as the Commission only takes administrative jurisdiction over a project once it has been approved and development begun. *See supra* notes 117-19 and accompanying text.

Either the United States or Canada may refer a matter to the Commission for investigation under article IX,[176] although past referrals have usually been made by the two governments acting jointly.[177] In an investigative referral, the jurisdiction of the Commission is limited to an examination of the question referred. This examination is followed by a report and recommendation on the matter to the government or governments which made the referral.[178] The Commission may take no action beyond investigation unless requested to do so, and its decisions or recommendations are not binding.[179] In conducting an investigation, the Commission may appoint boards and committees of professionals and other individuals, who have expertise in the matter referred, to study the proposal.[180] Thus, the Commission has the discretion to conduct investigations in the manner best suited for the particular referral, but once the investigation is completed, its findings are not binding on the parties.

After receiving an investigative referral from Canada and the United States, concerning a diversion from the Great Lakes, there are several steps which the Commission would take. First, it would establish a subsidiary board to investigate the diversion proposal. The board would probably consist of engineers,[181] scientists,[182] economists,[183] and lawyers,[184] drawn from both governments, to study a diversion plan in all its aspects. After making its investigations,[185] the subsidiary board would report back to the Commission. The Commission would then make the board's report public, and hold public meetings in a number of locations around the Great Lakes area.[186] In order to form-

176. Article IX allows a referral by "either the Government of the United States or the Government of the Dominion of Canada." *Boundary Waters Treaty*, *supra* note 36, at art. IX, *reprinted in* Appendix.

177. 1980 I.J.C. ANN. REP., *supra* note 95, at 6.

178. *Boundary Waters Treaty*, *supra* note 36, at art. IX, *reprinted in* Appendix.

179. *Id.*

180. 1980 I.J.C. ANN. REP., *supra* note 95, at 6-7.

181. Engineers would study the technological feasibility of a proposed diversion.

182. Scientists would be appointed to study the environmental impacts of a proposed diversion.

183. Economists would be necessary to study the financial and economic impact of a proposed diversion, both on the Great Lakes region and on the region which would receive the water.

184. Lawyers would probably be appointed to determine whether such a diversion is within the scope of the federal government's power, and thus permissable under United States law, and whether the diversion is permissable under international law.

185. The work of the subsidiary board would not be public. *See supra* note 112.

186. It is probable that this proposal would be considered controversial; thus, several of these meetings, held in various locations, would be necessary to gather a representative number of opinions from the public.

ulate its recommendations, the Commission would evaluate the opinions voiced by the public and the reports of the subsidiary board.[187] A situation such as a proposed diversion from the Great Lakes to the southwest, which would benefit only the United States, would likely divide the Commission along national lines, although the Commission has split this way only twice in the past.[188] If the Commission disagrees, both sides' opinions may be given to both governments, or each side may submit its recommendations to its own government.[189] Thus, after an investigative referral of a Great Lakes diversion proposal, the Canadian and American governments could receive one recommendation from the entire Commission, two conflicting recommendations from a split Commission, or one recommendation from part of a split Commission.

An investigative referral to the Commission is clearly not the best method of settling a dispute over a diversion from the Great Lakes. While an investigation is useful for researching the benefits and detriments of a proposal, this type of referral does not lead to a final decision on the matter. In this function, the Commission acts as an advisory board, making recommendations to the two governments. This advisory function is an important one; an investigative referral has been used as a preliminary step in deciding at least one past controversial water use proposal.[190] Yet, an investigative referral cannot lead to a decision by the Commission under the terms of the Boundary Waters Treaty. Thus, such a referral is most useful as a preliminary step toward decision-making through another means by the Commission.

One means by which the Commission may be allowed to make a decision on a diversion proposal is through an adjudicative referral. The Commission, in carrying out this function, closely resembles an administrative agency.[191] Canada and the United States would not be adversarial parties before the Commission,[192] but merely parties seek-

187. This is the Commission's usual procedure in an investigative referral. 1980 I.J.C. ANN. REP., *supra* note 95, at 7.

188. *See supra* note 126. The splits occurred over the Waterton and Belly River Reference, and at two points during the Columbia River References.

189. *Boundary Waters Treaty, supra* note 36, at art. IX, *reprinted in* Appendix.

190. A 1944 investigative reference was a first step in the seventeen-year process of dispute and negotiation leading to the Columbia River Treaty. I.J.C. Docket No. 51, Columbia River (1944). *See also* Austin, *supra* note 173, at 435.

191. *See supra* notes 99-106 and accompanying text.

192. One writer has suggested the reason that parties appearing before the Commission are styled as adversaries is because the courtroom model was the only

ing a determination of their respective rights in the Great Lakes. The Commission would use the principles given by the Boundary Waters Treaty and international water law, namely equitable apportionment principles,[193] in determining each nation's rights in the Great Lakes. Under the Treaty, such a decision by the Commission is final and binding on the parties involved;[194] thus, the Commission in its adjudicative capacity can provide a final settlement to a dispute over Great Lakes' water diversions.

In an adjudicative referral, the Commission would hear each party's arguments as to its rights in an out-of-basin diversion from the Great Lakes. In proposing such a diversion, the United States may raise several arguments, under the Treaty and under the general principles of international law. Under the Treaty itself, the United States may argue that: 1) article III does not permit the Commission to interfere with the ordinary use of boundary waters for domestic and sanitary purposes, thus, as this diversion will be for domestic and sanitary purposes, the Commission may not interfere; 2) as domestic and sanitary purposes have the highest priority under article VIII, a diversion for these purposes should also be given high priority; and 3) while both countries have equal and similar rights in the boundary waters, article VIII grants the Commission discretion to suspend the equal division requirements, and, in a situation of acute water shortage in one nation, the requirement should be suspended. Under the principles of equitable apportionment, the United States may argue that: 1) each country has the right to a "reasonable" use of shared waters, and, as a diversion to ameliorate an acute water shortage in one country must be considered reasonable, the use should be allowed; 2) as water supplies in other parts of the country dwindle, the United States has come to depend on the Great Lakes to a greater extent, and thus should be allowed a greater use of the water; 3) the social and economic gains in allowing a diversion would be great, as a diversion to the Southwest would allow the

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system with which the drafters of the Treaty were familiar. As administrative law was not yet highly developed in the early twentieth century, the drafters had no model of non-adversarial adjudication upon which to draw. In present practice, the Commission has tended towards nonadversarial, rather than courtlike, proceeding. Note, *supra* note 55, at 501-03.

193. *See supra* notes 160-66 and accompanying text.

194. As one commentator points out, "[T]he Commission is in effect a final court. Only the agreement of both countries can override its decision." La Forest, *Boundary Water Problems in the East*, in CANADA—UNITED STATES TREATY RELATIONS 28, 36 (D. Deener ed. 1963).

agriculture, industries, and cities now located there to continue to exist and flourish; and 4) as the United States has a prior appropriation from the Lakes,[195] at the very least, it should be allowed to increase the amount of water appropriate to meet its increased needs. These arguments would establish the American position, in hearings before the Commission, that the United States has a right and a need to make a diversion.

To refute the American arguments of having a right to make a diversion, Canada would claim paramount rights in the Great Lakes. Under the Treaty, Canada would argue that: 1) an out-of-basin transfer of water has never been considered, and is not, an ordinary use of water, and thus does not fall under article III; 2) while article VIII accords domestic and sanitary uses highest priority, Canada also uses the Great Lakes for such purposes, and these uses would be harmed by a diversion; 3) article VIII allows a suspension of the equal and similar water rights only for temporary diversions, not for permanent diversions such as the one proposed; and 4) article VIII provides for equal and similar rights between the parties, thus, a use which benefits one party and harms the other must not be permitted. Canada may also make arguments under equitable apportionment that: 1) as to each party having the right to a reasonable use of shared waters, an out-of-basin transfer of large amounts of water on which Canada depends for much of its livelihood can scarcely be considered reasonable; 2) while the United States has other actual and potential sources of water,[196] Canada depends almost entirely on the Great Lakes to support much of its population's needs; 3) Canada's social and economic structure depends heavily on the Great Lakes to support its industry and its largest cities; and 4) while a prior diversion by the United States exists, it is relatively small, and neither party has provided for its enlargement. Thus, Canada could argue that the United States has no right under either the Boundary Waters Treaty of 1909 or international law to make a large-scale diversion from the Great Lakes. Indeed, as such a diversion would be to Canada's detriment, Canada could argue that it has the right to prevent a diversion.

Having heard the arguments of both Canada and the United States, the Commission could come to a decision on the merits of the

195. Illinois maintains the Chicago Diversion, which is an appropriative use. *See supra* note 28.

196. Actual sources of water include diversions from rivers entirely within the United States, such as the Snake River or the Missouri–Mississippi River systems. One potential source would be desalinization of Pacific Ocean water. Conservation must also be considered as a source of water. Davis, Durenberger & Matheson, *supra* note 9, at 10.

nations' claims. Under the Boundary Waters Treaty, the right to divert water from the Great Lakes would probably fail. The right to divert water out-of-basin has not been held to be an ordinary use in the past,[197] and the use of boundary waters for out-of-basin domestic and sanitary purposes was probably not a use contemplated by the Treaty.[198] In addition, as the proposal would probably be for a permanent diversion, the Commission would not be authorized to suspend the "equal and similar rights" requirement of article VIII.[199] Thus, the arguments of the United States under the Treaty would fail.

Likewise, the United States would probably fail on its international law arguments. Equitable apportionment requires a balancing between the competing interests of nations. In this instance, a water crisis in the United States would be balanced against Canada's dependence on the Great Lakes. While diverting water from the Lakes may be the most convenient solution for the United States, other solutions to a water shortage would probably be available.[200] The convenience to the United States would not outweigh the detriment to Canada. Under the principles of equitable apportionment, the United States would probably not be allowed to divert large amounts of water.[201]

A referral to the Commission in its adjudicative role, in which the principles of international law must be applied relatively strictly, would lead to the final settlement of a dispute over the Great Lakes. There is no provision for an appeal from the Commission's decision in an adjudication;[202] thus, the only recourse to an adverse decision would be to ignore it. This, of course, would be a violation of the

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197. Indeed, when the issue arose in the context of Canada's wishing to divert water out-of-basin during the Columbia River dispute, the United States protested that an out-of-basin diversion was an unreasonable use of boundary waters, not a normal or ordinary use. On this point, the Commission apparently agreed with the United States. Lipper, *supra* note 66, at 27.

198. As the level of technology at the time the Treaty was drafted would not allow a large-scale out-of-basin diversion for any purpose, the drafters probably did not contemplate such a use.

199. *Boundary Waters Treaty, supra* note 36, at art. VIII, *reprinted in* Appendix. As the proposed diversion would be permanent, and the amount of water available for use on the other side would be diminished, the diversion would not fall within the discretionary suspension of the equal division requirement by the Commission.

200. *See supra* note 196.

201. The United States might be allowed to increase its prior appropriation at Chicago, but only to the extent that Canada's interests would not be harmed.

202. Article VIII does not provide any type of appeal from a majority opinion of the Commission. If the Commissioners are deadlocked, however, the article states that each side is to report to its own government. The two governments then shall

Treaty.[203] As nations generally do not wish to violate international law,[204] the United States would probably try to abide by the Commission's decision. Thus, an adjudication would be beneficial to Canada, but not beneficial to the United States as a whole.[205] To reach a decision beneficial to both parties, a different function of the Commission must be used.

A reference to the Commission, calling for a compromise between the two parties, could be made under its function as an arbitral body. A reference to the Commission for arbitration must be made jointly by the two governments. This reference, or *compromis d'arbitrage*,[206] must contain the question or questions which the Commission is to consider. The *compromis* may also contain the rules of law which the parties have agreed are to govern the decision, as well as an agreement as to whether the Commission may consider the matter *ex aequo et bono*,[207] foregoing rules of law if necessary. Under article X of the Treaty, the decision of the Commission is final and binding, but,

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"endeavor to agree upon an adjustment of the question or matter of difference." No provision is made for a situation in which the governments are unable to agree. *Boundary Waters Treaty, supra* note 36, at art. VIII, *reprinted in* Appendix.

203. This would not necessarily terminate the Treaty, as one publicist has shown.

> Mere breach by a party does not of itself terminate a treaty. But it may give to another or to the other parties a right to consider it at an end. Alternatively, it may give a right to that other or those others to suspend performance on their part; or it may provide a justification for some other form of retaliatory action. Further it may, and perhaps in all cases does, constitute the basis of a legal claim to reparation, monetary or otherwise.

Parry, *The Law of Treaties*, in MANUAL OF PUBLIC INTERNATIONAL LAW 175, 239 (M. Sorenson ed. 1968).

204. As one author explains, "Nations recognize that the observance of law is in their interest, and that every violation may also bring particular undesirable consequences. It is the unusual case in which policymakers believe that the advantages of violation outweigh those of law observance, or where domestic pressures compel a government to violation . . . ." L. HENKIN, HOW NATIONS BEHAVE 320-21 (1979).

205. Officials in the Great Lakes states would probably consider a denial of a diversion proposal to be beneficial to the region. *See supra* notes 10-28 and accompanying text.

206. The *compromis d'arbitrage* is an agreement between the parties to an arbitration, which contains a statement of the exact question to be settled, as well as an indication of the method of constituting the arbitral tribunal. In addition, the *compromis* generally contains the rules of law and procedure which the tribunal is to follow in reaching its decision. International Law Commission, Model Rules on Arbitral Procedure, Art. 2, 2 I.L.C.Y.B. 83 (1958).

207. The term, as used in international law, means to settle a dispute equitably, in disregard, if necessary, of existing law. Sorensen, *Latin Terms*, in MANUAL OF PUBLIC INTERNATIONAL LAW lvii (M. Sorenson ed. 1968).

if the Commission is unable to render a decision, the matter will be referred to an umpire chosen by the parties.[208] Thus, an arbitral reference would provide a final decision in a dispute over a Great Lakes diversion, as well as provide an alternate means of settlement in case of an impasse.

In an arbitral reference, the Commission's actions are governed by the terms of the *compromis* given it by the governments. Thus, if the *compromis* allows the Commission to consider the proposal *ex aequo et bono*, the Commission may give the weight it considers necessary to the severity of the water shortages in the United States. It may give these shortages more consideration than a strict interpretation of the doctrine of equitable apportionment would allow. The Commission may also consider concessions which the United States would be willing to make in exchange for a water diversion,[209] if the *compromis* allows such consideration. A *compromis* can allow considerable flexibility in dealings between the two nations, as rules of law need not be strictly followed. Thus, in an arbitral reference, the United States could be allowed a limited diversion from the Great Lakes, which would not cause too great an injury to Canada's interests, if Canada were willing to accept benefits in exchange.

An arbitral reference to the Commission allows a flexibility and balance in decision-making which is not available to the Commission in its other functions. Arbitration also provides a mechanism for the settlement of disputes if the Commission is unable to reach a decision. The matter could be referred to an umpire, who would be a neutral third party,[210] to provide a resolution. In addition, the ability to consider concessions given in other areas in reaching a decision allows the Commission a flexibility to render a decision beneficial to both the United States and Canada.

While using the Commission to render a decision concerning boundary waters is perhaps the most obvious solution to a dispute involving a diversion from the Great Lakes, the option of direct negotia-

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208. The umpire is to be chosen in accordance with the Hague Convention for the Pacific Settlement of International Disputes. *See supra* note 123.

209. Among the concessions which the United States might consider offering are controlling acid rain and other trans-boundary pollution to a greater extent, or favoring Canada in trade and tariff practices. Another possibility is monetary compensation.

210. Under the terms of the Hague Convention, the parties to the arbitration choose an umpire together, and are thus ensured of the umpire's acceptability. Hague Convention for the Pacific Settlement of International Disputes, art. XXXII, July 29, 1899, 32 Stat. 1779, 1793 (1900), T.S. 392.

tions between the two governments must also be considered. Negotiation leading to a treaty is a common method of international dispute resolution.[211] It allows flexibility between the parties: they are free to change their positions if a change is advantageous. Negotiation between diplomats or statesmen representing each government brings the governments into direct contact with each other, and is especially useful when a new treaty or agreement is necessary.[212]

In the case of a proposed diversion from the Great Lakes, however, a treaty covering the situation and a Commission with expertise in the area already exists. The Boundary Waters Treaty was concluded, and the Commission formed, so that further dispute settlement need not take place between the two governments directly.[213] It was felt that the interests of both nations would be best served by a joint board which would be relatively free of governmental and political interference. Free of such political concerns, the Commission has generally made settlements which are in the best interests of both nations.[214] In direct negotiation, political interests are important, as each nation attempts to gain as much as possible for itself. In addition, direct negotiation tends to be time-consuming, while the Commission has generally made its decisions relatively quickly. Thus, while direct negotiation is an option, it may not be the most beneficial option for both nations.

The International Joint Commission can be used to settle a dispute over a diversion from the Great Lakes, making direct negotiation between Canada and the United States unnecessary. In its various functions, the Commission may serve the interests of the two nations differently. In its investigative role, the Commission may gather the information necessary to delineate the matters involved in the dispute, but cannot make a binding decision in the matter. Thus, its investigations may be, at best, a preliminary step in dispute settlement. In

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211. Murty, *Settlement of Disputes*, in MANUAL OF PUBLIC INTERNATIONAL LAW 674, 679 (M. Sorenson ed. 1968).

212. *Id.*

213. *See supra* notes 52-55 and accompanying text.

214. One writer claims:

> No difference has arisen that has not yielded to amicable solution; no instance has arisen in which one tried to outmanuever the other; no hard bargains have been sought and no sharp practices have fettered the sense of fairness that has prevailed. The principle of reasonableness and of friendly co-operation has been the guiding star.

Hackworth, *General Aspects of Canadian—United States Treaty Relations*, in CANADA—UNITED STATES TREATY RELATIONS 123, 124 (D. Deener ed. 1963).

an adjudicative role, the Commission may come to a binding decision, but it must apply the principles of international law relatively strictly. This would put the United States into a weak position, as a diversion of the magnitude necessary to provide water for arid areas would not be possible under traditional international water law. A solution in which the rules of law may be modified somewhat to balance concessions given in other areas is called for.

In an article X arbitral referral, the Commission may modify legal rules somewhat, if the *compromis* of the reference allows such modification. Thus, a *compromis* which would allow a limited diversion to occur in exchange for concessions given elsewhere might be most beneficial to both parties, while allowing the least harm to occur to each party. While this is not a perfect solution,[215] an arbitral award in which each side receives benefits may be the best possible solution.

Yet the United States should consider its options carefully before planning diversions from the Great Lakes. The Lakes are a valuable resource for the United States as well as for Canada. As they are nonrenewable resources, which support shipping, industry, and agriculture, as well as provide water for several cities, a large-scale diversion may do harm to the United States' interests, as well as Canada's interests. Thus, the United States should consider other options for providing water to its arid areas before diverting water from the Great Lakes.

CONCLUSION

A proposal for a diversion from the Great Lakes has the potential to become a source of controversy between the United States and Canada. While historically there has been controversy between the two nations concerning the use of their boundary waters, these disputes were largely settled by the Boundary Waters Treaty of 1909. The Treaty set up the International Joint Commission as a mechanism for settling disputes concerning boundary waters and gave the Commission powers of adjudication, investigation, administration, and arbitration.

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215. Canada may refuse to arbitrate under article X. If Canada chose not to arbitrate, but instead chose to continue to attempt to prevent a diversion, the United States could be left facing a water shortage with no remedy except to make diversions in violation of international law.

On a referral from the two governments, the Commission could settle the question of a diversion from the Great Lakes by adjudication or arbitration. Because it calls for a strict application of international water law and the Boundary Waters Treaty, adjudication would not be advantageous to the United States; a large-scale diversion benefitting only one nation would not be possible under these principles. Arbitration, as provided for under the Boundary Waters Treaty, is probably the best method of settling a dispute over Great Lakes water diversions, as it provides both an opportunity for compromise and a final determination of each nation's rights. In an arbitral award, the United States might be permitted to make a diversion, if it is willing to give concessions in return. Thus, arbitration would seem to be the best method of settling a dispute over a diversion from the Great Lakes.

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APPENDIX

TREATY BETWEEN THE UNITED STATES AND GREAT BRITAIN RELATING TO BOUNDARY WATERS BETWEEN THE UNITED STATES AND CANADA, January 11, 1909, 36 Stat. 2448 (1910), T.S. No. 548. The United States of America and His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, being equally desirous to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along their common frontier, and to make provisions for the adjustment and settlement of all such questions as may hereafter arise, have resolved to conclude a treaty in furtherance of these ends, and for that purpose have appointed as their respective plenipotentiaries:

The President of the United States of America, Elihu Root, Secretary of State of the United States; and

His Britannic Majesty, the Right Honorable James Bryce, O.M., his Ambassador Extraordinary and Plenipotentiary at Washington;

Who, after having communicated to one another their full powers, found in good and due form, have agreed upon the following articles:

PRELIMINARY ARTICLE

For the purposes of this treaty boundary waters are defined as the waters from the main shore of the lakes and rivers and connecting waterways, or portions thereof, along which the international boundary between the United States and the Dominion of Canada passes, including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.

ARTICLE I

The High Contracting Parties agree that the navigation of all navigable boundary waters shall forever continue free and open for the purposes of commerce to the inhabitants and to the ships, vessels, and boats of both countries equally, subject, however, to any laws and regulations of either country, within its own territory, not inconsistent with such privilege of free navigation and applying equally and without discrimination to the inhabitants, ships, vessels, and boats of both countries.

It is further agreed that so long as this treaty shall remain in force, this same right of navigation shall extend to the waters of Lake Michigan and to all canals connecting boundary waters, and now existing or which may hereafter be constructed on either side of the line. Either of the High Contracting Parties may adopt rules and regulations governing the use of such canals within its own territory and may charge tolls for the use thereof, but all such rules and regulations and all toll charges shall apply alike to the subjects or citizens of the High Contracting Parties and the ships, vessels, and boats of both of the High Contracting Parties, and they shall be placed on terms of equality in the use thereof.

ARTICLE II

Each of the High Contracting Parties reserves to itself or to the several State Governments on the one side and the Dominion or Provincial Governments on the other as the case may be, subject to any treaty provisions now existing in respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary waters; but it is agreed that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury to the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs; but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

It is understood, however, that neither of the High Contracting Parties intends by the foregoing provision to surrender any right, which it may have, to object to any interference with or diversions of water on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary.

ARTICLE III

It is agreed that, in addition to the uses, obstructions, and diversions heretofore permitted or hereafter provided for by special agreement between the parties thereto, no further or other uses or obstructions or diversions, whether temporary or permanent, of boundary waters on either side of the line, affecting the natural level or flow of boundary waters on either side of the line, shall be made except

by authority of the United States or the Dominion of Canada within their respective jurisdictions and with the approval, as hereinafter provided, of a joint commission, to be known as the International Joint Commission.

The foregoing provisions are not intended to limit or interfere with the existing rights of the Government of the United States on the one side and the Government of the Dominion of Canada on the other, to undertake and carry on governmental works in boundary waters for the deepening of channels, the construction of breakwaters, the improvement of harbors, and other governmental works for the benefit of commerce and navigation, provided that such works are wholly on its own side of the line and do not materially affect the level or flow of the boundary waters on the other, nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes.

ARTICLE IV

The High Contracting Parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of the waters on the other side of the boundary unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission.

It is further agreed that the waters defined herein as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.

ARTICLE V

The High Contracting Parties agree that it is expedient to limit the diversion of waters from the Niagara River so that the level of Lake Erie and the flow of the stream shall not be appreciably affected. It is the desire of both parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the United States side of the river under grants of authority from the State of New York, and on the Canadian side of the river under licenses authorized by the Dominion of Canada and the Province of Ontario.

So long as this treaty shall remain in force, no diversion of the waters of the Niagara River above the Falls from the natural course and stream thereof shall be permitted except for the purposes and to the extent hereinafter provided.

The United States may authorize and permit the diversion within the State of New York of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of twenty thousand cubic feet of water per second.

The United Kingdom, by the Dominion of Canada, or the Province of Ontario, may authorize and permit the diversion within the Province of Ontario of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of thirty-six thousand cubic feet of water per second.

The prohibitions of this article shall not apply to the diversions of water for sanitary or domestic purposes, or for the service of canals for the purposes of navigation.

ARTICLE VI

The High Contracting Parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purposes of irrigation and power, and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment more than half may be taken from one river and less than half from the other by either country so as to afford a more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of the St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of waters diverted from the St. Mary River. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance of such waters through the Milk River.

The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission.

ARTICLE VII

The High Contracting Parties agree to establish and maintain an International Joint Commission of the United States and Canada composed of six commissioners, three on the part of the United States appointed by the President thereof, and three on the part of the United Kingdom appointed by His Majesty on the recommendation of the Governor in Council of the Dominion of Canada.

ARTICLE VIII

This International Joint Commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters with respect to which under Articles III and IV of this treaty the approval of the Commission is required, and in passing upon such cases the Commission shall be governed by the following rules or principles which are adopted by the High Contracting Parties for this purpose:

The High Contracting Parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

(1) Uses for domestic and sanitary purposes;

(2) Uses for navigation, including the service of canals for the purpose of navigation;

(3) Uses for power and irrigation purposes.

The foregoing provisions shall not apply to or disturb any existing uses of boundary water on either side of the boundary.

The requirement for an equal division may in the discretion of the Commission be suspended in cases of temporary diversions along boundary waters at points where such equal division cannot be made advantageously on account of local conditions, and where such diver-

sion does not diminish elsewhere the amount available for use on the other side.

The Commission in its discretion may make its approval in any case conditional upon the construction of remedial or protective works to compensate so far as possible for the particular use or diversion proposed, and in such cases may require that suitable and adequate provision, approved by the Commission, be made for the protection and indemnity against injury of any interests on either side of the boundary.

In cases involving the elevation of the natural level of waters on either side of the line as a result of the construction or maintenance on the other side of remedial or protective works or dams or other obstructions in boundary waters or in waters flowing therefrom or in waters below the boundary in rivers flowing across the boundary, the Commission shall require, as a condition of its approval thereof, that suitable and adequate provision, approved by it, be made for the protection and indemnity of all interests on the other side of the line which may be injured thereby.

The majority of the Commissioners shall have the power to render a decision. In case the Commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the Commissioners on each side to their own Government. The High Contracting Parties shall thereupon endeavor to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them, it shall be reduced to writing in the form of a protocol, and shall be communicated to the Commissioners, who shall take such further proceedings as may be necessary to carry out such agreement.

ARTICLE IX

The High Contracting Parties further agree that any other questions or matters of difference arising between them involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along the common frontier between the United States and the Dominion of Canada, shall be referred from time to time to the International Joint Commission for examination and report, whenever either the Government of the United States or the Government of the Dominion of Canada shall request that such question or matters of difference be so referred.

The International Joint Commission is authorized in each case so referred to examine into and report upon the facts and cir-

cumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

Such reports of the Commission shall not be regarded as decisions of the questions or matters so submitted either on the facts or the law, and in no way shall have the character of an arbitral award.

The Commission shall make a joint report to both Governments in all cases in which all or a majority of the Commissioners agree, and in case of disagreement the minority may make a joint report to both Governments, or separate reports to their respective Governments.

In case the Commission is evenly divided upon any question or matter referred to it for report, separate reports shall be made by the Commissioners on each side to their own Government.

ARTICLE X

Any questions or matters of difference arising between the High Contracting Parties involving the rights, obligations, or interests of the United States or of the Dominion of Canada either in relation to each other or to their respective inhabitants, may be referred for decision to the International Joint Commission by the consent of the two Parties, it being understood that on the part of the United States any such action will be by the advice and consent of the Senate, and on the part of His Majesty's Government with the consent of the Governor General in Council. In each case so referred, the said Commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

A majority of the said Commission shall have the power to render a decision or finding upon any of the questions or matters so referred.

If the said Commission is equally divided or otherwise unable to render a decision or finding as to any questions or matters so referred, it shall be the duty of the Commissioners to make a joint report to both Governments, or separate reports to their respective Governments, showing the different conclusions arrived at with regard to the matters or questions so referred, which questions or matters shall thereupon be referred for decision by the High Contracting Parties to an umpire chosen in accordance with the procedure prescribed in

the fourth, fifth, and sixth paragraphs of Article XLV of the Hague Convention for the pacific settlement of international disputes, dated October 18, 1907. Such umpire shall have power to render a final decision with respect to those matters and questions so referred on which the Commission failed to agree.

ARTICLE XI

A duplicate original of all decisions rendered and joint reports made by the Commission shall be transmitted to and filed with the Secretary of State of the United States and the Governor General of the Dominion of Canada, and to them shall be addressed all communications of the Commission.

ARTICLE XII

The International Joint Commission shall meet and organize promptly at Washington after the members thereof are appointed, and when organized the Commission may fix such times and places for its meetings as may be necessary, subject at all times to special call or direction by the two Governments. Each Commissioner, upon the first joint meeting of the Commission after his appointment, shall, before proceeding with the work of the Commission, make and subscribe a solemn declaration in writing that he will faithfully and impartially perform the duties imposed upon him under this treaty, and such declaration shall be entered on the records of the proceedings of the Commission.

The United States and Canadian sections of the Commission may each appoint a secretary, and these shall act as joint secretaries of the Commission at its joint sessions, and the Commission may employ engineers and clerical assistants from time to time as it may deem advisable. The salaries and personal expenses of the Commission and of the secretaries shall be paid by their respective governments, and all reasonable and necessary joint expenses of the Commission, incurred by it, shall be paid in equal moieties by the High Contracting Parties.

The Commission shall have power to administer oaths to witnesses, and to take evidence on oath whenever deemed necessary in any proceeding, or inquiry, or matter within its jurisdiction under this treaty, and all parties interested therein shall be given convenient opportunity to be heard, and the High Contracting Parties agree to adopt such legislation as may be appropriate and necessary to give the Commission the powers above mentioned on each side of the boundary, and to provide for the issue of subpoenas and for compelling

the attendance of witnesses in proceedings before the Commission. The Commission may adopt such rules of procedure as shall be in accordance with justice and equity, and may make such examination in person and through agents or employees as may be deemed advisable.

ARTICLE XIII

In all cases where special agreements between the High Contracting Parties hereto are referred to in the foregoing articles, such agreements are understood and intended to include not only direct agreements between the High Contracting Parties, but also any mutual agreements between the United States and the Dominion of Canada expressed by concurrent or reciprocal legislation on the part of Congress and the Parliament of the Dominion.

ARTICLE XIV

The present treaty shall be ratified by the President of the United States of America, by and with the advice and consent of the Senate thereof, and by His Britannic Majesty. The ratifications shall be exchanged at Washington as soon as possible and the treaty shall take effect on the date of the exchange of ratifications. It shall remain in force for five years, dating from the day of exchange of ratifications, and thereafter until terminated by twelve months' written notice given by either High Contracting Party to the other.

IN FAITH WHEREOF the respective plenipotentiaries have signed this treaty in duplicate and have hereunto affixed their seals.

DONE at Washington the 11th day of January, in the year of our Lord one thousand nine hundred and nine.

ELIHU ROOT [SEAL]

JAMES BRYCE [SEAL]