The Case of Canadian Bulk Water Exports

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The Case of Canadian Bulk Water Exports*

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Executive Summary

Canada has twenty per cent of the planet's total fresh water supply. Canada's water wealth raises the possibility of shipping water in bulk, through tankers or pipelines, to regions suffering from drought. On the one hand, bulk water exports could be an economic boon for Canada and a possible solution to the rising concerns over global water security. On the other hand, bulk water exports could deplete Canada's water supplies and thereby impact the environment, while creating unsustainable water dependences in its trade partners who may be better served by conserving water, rather than importing water.

Canada can engage in sustainable and responsible bulk water exports if it implements necessary legal and regulatory reforms. First, Canada's treaties should characterize bulk water exports as a "good" for purposes of international trade and investment law. This will allow water pricing and international law to more effectively encourage sustainable management. Second, Canada can formalize already-existing bulk water export relationships through treaties that encourage localized transboundary cooperation. Third, Canada should include water embedded in its agricultural and energy imports and exports to more accurately account for possible water trade deficits.

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Le cas des exportations canadiennes d'eau en vrac*

Rhett Larson

Sommaire

Le Canada possède 20 pour cent de toutes les réserves d'eau douce de la planète. La richesse en eau du Canada soulève la possibilité d'exporter de l'eau en vrac par l'intermédiaire de navires-citernes ou de pipelines vers des régions qui souffrent de sécheresses. D'un côté, les exportations d'eau en vrac pourraient représenter un atout économique pour le Canada et constituer une solution possible aux inquiétudes grandissantes à l'égard de la sécurité hydrique mondiale. D'un autre côté, les exportations d'eau en vrac pourraient épuiser les réserves d'eau du Canada et avoir ainsi un impact sur l'environnement, tout en créant des dépendances à l'égard de l'eau non viables parmi ses partenaires commerciaux, qui pourraient être mieux servis par la conservation de l'eau plutôt que par son importation.

Le Canada peut s'engager dans des exportations d'eau en vrac soutenables et responsables s'il met en application les réformes judiciaires et réglementaires nécessaires. En premier lieu, les traités du Canada devraient caractériser les exportations d'eau en vrac comme étant un « produit » aux fins du droit international du commerce et de l'investissement. Cela permettra à la tarification de l'eau et au droit international d'encourager plus efficacement la gestion durable. Deuxièmement, le Canada peut officialiser les relations d'exportation d'eau déjà existantes grâce à des traités qui encouragent la coopération transfrontalière localisée. En troisième lieu, le Canada devrait inclure l'eau contenue dans ses importations et exportations agricoles et énergétiques afin de tenir compte avec plus d'exactitude de possibles déficits commerciaux à l'égard de l'eau.

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Water is unique amongst natural resources. Like oil or gold, water is a valuable and saleable commodity with a global market. But people do not playfully throw gold at each other in the winter, or squirt oil at each other in the summer, or baptize their children in petroleum. Water is unique among natural resources because of its aesthetic, cultural and ecological significance, as well as being essential to all life on earth. If you load a tanker full of oil or wheat and ship it away to a foreign country, it is a sign of open trade, natural resource wealth and economic development. On the other hand, if you load a tanker full of fresh water and ship it off to a foreign country, it can be perceived as environmentally irresponsible, culturally insensitive and a sacrifice of national security. As such, bulk water exports from Canada are controversial in ways that exports of oil or coal are not.

The Great Lakes illustrate the controversy over bulk water exports. The International Joint Commission (IJC), the organization that implements treaty obligations between Canada and the United States with respect to the Great Lakes, refers to the lakes as a "non-renewable resource" because less than one per cent of the lakes' waters are renewed annually by precipitation.[1] Furthermore, the IJC has concluded that the waters of the Great Lakes are fully allocated, meaning that if all interests in the Great Lakes are considered, "there is never a 'surplus' of waters in the Great Lakes system."[2] Nevertheless, in 1998, the Nova Group, a Canadian company based in Ontario, obtained a permit to export 600 million litres of Lake Superior water annually via tanker to Asian buyers.[3] Public outcry over the environmental and national security risks of this transaction resulted in the revocation of the permit, and prompted the IJC, in its 2000 report, to recommend against bulk water sales outside of the basin.[4] The Nova example is only one of many attempted or on-going bulk water transfers of Canadian water.

The controversy over bulk water exports compared to exports of other natural resources may not arise solely from water's unique sociocultural and ecological significance. It also arises from a narrow conception of water's role in the global market. There is water embedded in or required for the production of coal, oil, uranium and food exports, sometimes called "virtual water."[5] Why should that water be treated differently than water sold in bulk to thirsty nations? Understanding the rationale behind the controversy, and whether that rationale is sufficient to preclude bulk water exports, will become increasingly important as drought-ravaged countries look to nations like Canada to augment dwindling water supplies. Canada has twenty per cent of the planet's total fresh water supply.[6] Achieving global water security may be advanced if water-rich nations, like Canada, find responsible and sustainable ways to export water.

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[1] International Joint Commission, Protection of the Waters of the Great Lakes, Final Report 6 (2000) [hereinafter "IJC 2000 Report"].
[2] *Id.* at 43.
[3] Sandra Zellmer, *The Anti-Speculation Doctrine and its Implications for Collaborative Water Management*, 8 NEV. L.J. 994, 1001 (2008).
[4] IJC 2000 report, *supra* note 1, at 46.
[5] J.A. Allan, *Virtual Water – the Water, Food, and Trade Nexus: Useful Concept or Misleading Metaphor*, 28 WATER INTERNATIONAL 4 (2003).
[6] Anthony DePalma, *Free Trade in Fresh Water? Canada Says No and Halts Exports*, N.Y. TIMES, March 8, 1999 at A1.

BACKGROUND ON BULK WATER EXPORTS IN CANADA

The Nova Group's proposed export of Great Lakes water to Asia was not the first, last, or most significant attempt to export water from Canada to other countries. In the 1950s, the United States Army Corps of Engineers proposed the North American Water and Power Alliance (NAWAPA), which would have diverted Canadian rivers into the United States.[7] NAWAPA project water would feed the headwaters of the Colorado River, a major source of water for the large population of the southwestern United States, and stabilize the Ogallala Aquifer, a major source of water for farmers in the Great Plains.[8] Prime Minister Lester B. Pearson and several U.S. congressional representatives were quoted supporting the project.[9] However, concerns over costs and environmental impacts ultimately killed NAWAPA. Nevertheless, there have been periodic efforts over the years, including as recently as 2010, to revive the project.[10] In 1985, engineers recommended a project called the GRAND Canal, which would divert runoff in the James Bay to a new fresh water enclosure, and then pump that water to areas in the U.S. in need of additional water supplies.[11] Scholars, editorialists and government leaders opposed the plan on environmental grounds.[12]

More recently, the Canadian government issued licenses to Canadian companies in British Columbia authorizing the export of nearly 55.5 million cubic metres of water annually by ocean tanker.[13] The Canadian companies with these licenses would then award contracts to foreign companies to export water from Canada. A Canadian company called Snowcap received one such permit, and awarded a contract to a U.S. company, called Sun Belt, to export water from British Columbia to California.[14] However, due to public opposition to these bulk water exports based on environmental concerns, the government of British Columbia issued a ban on exports and rescinded the licenses.[15]

Not all Canadian bulk water exports have been large projects that were ultimately not implemented due to public opposition. Smaller transfers occur between U.S. and Canadian border communities, generally without federal-level oversight or diplomatic negotiations. These include ongoing water transfer relationships between Surrey, BC and Blaine, WA, and LaSalle, ON and Detroit, MI, to name only two.[16] If these transfers are already occurring, and larger

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[7] Peter Bowal, *Canadian Water: Constitution, Policy, and Trade*, 2006 MICH. ST. L. REV. 1141, 1150 (2006).
[8] Ludwik A. Teclaff, *Evolution of the River Basin Concept in National and International Law*, 36 NAT. RESOURCES J. 359, 369-70 (1996).
[9] Frédéric Lasserre, *Continental Bulk Water Transfers: Chimera or Real Possibility?* in WATER WITHOUT BORDERS? (Emma S. Norman, Alice Cohen & Karen Iakker eds., 2013) 88-98.
[10] Peter H. Gleick, Matthew Heberger, & Kristina Donnelly, *Zombie Water Projects*, in THE WORLD'S WATER (2014), pp. 123-146.
[11] R. Andrew Muller, *Some Economics of the GRAND Canal*, 14 CANADIAN PUBLIC POLICY 162-174 (1988).
[12] *Id.*
[13] Terry L. Anderson & Clay J. Landry, *Exporting Water to the World*, 118 WATER RESOURCES UPDATE 60, 62 (2001).
[14] Paul S. Kibel, *Grasp on Water: A Natural Resource that Eludes NAFTA's Notion of Investment*, 34 ECOLOGY L.Q. 655, 662 (2007).
[15] Christopher S. Maravilla, *The Canadian Bulk Water Moratorium and its Implications for NAFTA*, 10 SUM CURRENTS: INT'L TRADE L.J. 29, 31-32 (2001).
[16] Gabriel Eckstein & Renee Martin-Nagle, *Bulk Water Transfers: Panacea or Temporary Patch?*, presented at 2015 World Water Congress in Edinburgh, Scotland, abstract and presentation notes available at: http://aquadoc.typepad.com/waterwired/2015/06/gabriel-eckstein-renee-martin-nagle-presentations-bulk-water-transfers-un-watercourses.html.

transfers are repeatedly proposed and considered, it is essential to evaluate their implications for Canada.

THE IMPLICATIONS OF BULK WATER EXPORTS IN CANADA

If water is exported faster than it is naturally recharged, then despite the renewing effects of the hydrologic cycle, water is being depleted. This is particularly true of inter-basin transfers, which occur when water is moved outside of the geographic basin into which it drains.[17] If laws allow water to be removed from one basin and sent to another, the water is less likely to recharge its original basin and the total amount of water may deplete over time.[18] This depletion will impact not only stream flow, but also overall runoff, thus depriving soil, animals and vegetation of water across the entire basin. This is perhaps the greatest sustainability concern associated with bulk water exports, and ultimately the reason such exports meet public opposition based on national security and environmental grounds.

Canada is often perceived as having such immense water reserves that bulk water exports, even inter-basin transfers, could not meaningfully impact Canada's water security.[19] As such, Canada should arguably treat water the same way it treats oil or gold – a valuable commodity on the international market with benefits from exportation outweighing the costs of depletion. Furthermore, Canadian opposition to bulk water exports could be seen as drawing an irrational distinction between water and other commodities that require water for their production. What is the difference between the water embedded in Canada's industrial and agricultural exports and raw water exported in bulk in tankers or pipelines? Either way, enormous quantities of water are being exported from Canada.

On the other hand, perhaps water is simply different than oil or gold. It has unique cultural, environmental and human health values. Despite Canada's immense fresh water resources, the nation's water distribution (most of its population is in the south, while most of its water is in the north), along with water pollution nevertheless makes bulk water exports a potential threat to Canada's water security.[20] Shouldn't Canada be able to protect such a precious, unique and strategically significant national resource from short-sighted incentives leading to overexploitation?

The difficult questions Canada faces with regard to bulk water exports are reflected in the still-developing laws of international trade in water. In the case of Sun Belt and Snowcap, both companies sued the government of British Columbia for rescinding the export permit.[21] The provincial government settled with the Canadian Snowcap company.[22] Sun Belt, however, pursued a claim in Canadian federal court under Chapter 11 of the North American Free Trade

[17] Noah D. Hall & Benjamin L. Cavataro, *Interstate Groundwater Law in the Snake Valley: Equitable Apportionment and a New Model for Transboundary Aquifer Management*, 2013 UTAH L. REV. 1553, 1574 (2013).
[18] *Id.* at 1568; *see also* Kirt Mayland, *Navigating the Murky Waters of Connecticut's Water Allocation Scheme*, 24 QUINNIPIAC L. REV. 685 (2006).
[19] *See, e.g.*, James L. Huffman, *Water Marketing in Western Prior Appropriation States: A Model for the East*, 21 GA. ST. U. L. REV. 429, 430 (2004).
[20] C.W. King, A.S. Stillwell, K.M. Twomey & M.E. Webber, *Coherence Between Water and Energy Policies*, 53 NAT. RESOURCES J. 117, 193 (2013).
[21] *See* Anderson & Landry, *supra* note 12, at 60-62.
[22] *Id.*

Agreement (NAFTA).[23] Sun Belt sought $10.5 billion in damages, claiming that the provincial government violated NAFTA Chapter 11, which prohibits signatory states from treating domestic companies more favourably than companies from neighbouring states and prohibits signatory states from limiting the free flow of goods between them.[24] Sun Belt claimed that the government of British Columbia treated it less favourably than Canadian companies that bottled and exported water, and that government bans on bulk water exports interfered with the free flow of goods between countries.[25] The Sun Belt case remains in arbitration.

This case illustrates two fundamental legal questions associated with bulk water exports. First, is water a "good" for purposes of international trade and investment law? Goods are defined under NAFTA with reference to how the term is understood under the World Trade Organization's (WTO) General Agreement on Tariffs and Trade (GATT).[26] GATT, however, does not define a "good," though it does provide that a good must also be a "product." A product, in turn, is "[s]omething produced by human or mechanical effort or by a natural process." According to the nations of North America, water flowing in natural streams, channels or geologic formations is generally not a "good" for purposes of international trade and investment law.[27] Water embedded in products, including lettuce, oil and even bottled water, however, is a "good."[28] There is an ongoing debate as to whether bulk water transported by tanker or pipeline should be treated as a good or product under international trade and investment law.[29]

Second, if water is a "good," may nations be protectionist when it comes to trade in water in ways that they cannot when it comes to trade in other commodities? NAFTA incorporates many aspects of international trade law, including provisions of GATT.[30] Under GATT and NAFTA, nations generally may not discriminate against the goods of other nations or prohibit or impose restrictions on the import or export of goods.[31] The obligations assumed under GATT and NAFTA are broad in scope, and narrowed only in exceptional circumstances such as "critical shortage" or "environmental measures necessary to protect human, animal or plant life or health [or]… measures relating to the conservation of living and non-living exhaustible natural resources."[32] It is possible that a nation could claim one of these exceptions as applicable to bans on bulk water exports.

The legal treatment of bulk water exports has enormous implications for global water management. If bulk water is a good, then nations will generally not be able to ban its export unless it avails itself of one of these narrow exceptions. This could allow water-rich countries to

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[23] *Id.*; *see also* North American Free Trade Agreement, Dec. 8, 1993, 107 Stat. 2057, 32 I.L.M. 289, Chapter 11 [hereinafter "NAFTA Chapter 11"].
[24] NAFTA Chapter 11.
[25] David A. Gantz, *Potential Conflicts Between Investor Rights and Environmental Regulation under NAFTA's Chapter 11*, 33 GEO. WASH. INT'L L. REV. 651, 670 (2001).
[26] NAFTA, art. 201; General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT]; incorporated into NAFTA under NAFTA Article 309.
[27] Edith Brown Weiss, *Water Transfers and International Trade Law* in FRESH WATER AND INTERNATIONAL ECONOMIC LAW 61-92 (Edith Brown Weiss, Laurence Boisson de Charzournes & Nathalie BErnasconi-Osterwalder eds., Oxford University Press 2005).
[28] *Id.*
[29] *Id.*
[30] *See* GATT, *supra* note 25.
[31] *Id.*
[32] *Id.* at art. XI.1 & art. XX; NAFTA art. 2101.

reap enormous economic benefits while at the same time improve the water security of importing nations. However, it could also create unsustainable water exports, damaging both the national environment and the national security of exporting nations by shipping out water faster than nature can replenish it. Such bulk water exports may alleviate water scarcity in other nations, but at the same time create or support industries, ecosystems and communities dependent upon foreign sources of water. As such, importing nations could ultimately trade national security for water security. Furthermore, water as an economic good must be reconciled with the idea of water as a fundamental human right and a critical ecological resource. Is it possible for Canada to engage in bulk water exports without threatening its own environment and national security, while at the same time helping other nations without creating unsustainable dependencies?

CAN CANADIAN BULK WATER EXPORTS BE RESPONSIBLE, SUSTAINABLE AND EQUITABLE?

As climate change increases water variability in many parts of the world, Canada will face increasing economic and political pressures to commoditize its abundant freshwater supplies. Currently, 2.3 billion people live without access to adequate water supplies, and two-thirds of the world's population (5.5 billion people) lives in areas predicted to be in "water stress" by 2025.[33] Allowing the world to access Canada's vast water supplies in a way that is sustainable, responsible and even profitable for Canada may be part of solving the global water crisis. If Canada moves forward with water exports, three reforms could help protect Canadian water from over-exploitation.

First, Canada could treat water as a "good" under international trade and investment law. Distinguishing bulk water transfers from bottled water transfers or transfers of water embedded in agricultural products is arguably arbitrary. Water is moving between countries either way, and placing it under international trade and investment law eliminates an otherwise poorly-drawn distinction while acknowledging the reality that bulk water exports already exist and should be subject to the regulation of international law.

While categorizing water as a good has risks associated with commodification of a critical resource, commodification can be an important way to better value water. A market that facilitates internalizing the costs of water consumption is an important tool toward advancing sustainable water management. When consumers do not internalize the costs of water consumption, water is often wasted.[34] Water can be both a valuable commodity and a human right when it is appropriately valued, and when that value is reflected in affordable rates for basic human consumption and adequately accounts for the value of in-stream water to the environment.

Second, law could distinguish between inter-basin and intra-basin bulk water transfers. Small scale intra-basin transfers, like those that occur between border municipalities in the U.S. and Canada, could be formalized by a treaty between the federal governments of both nations.

[33] Meredith Giordano, Mark Giordano, & Aaron Wolf, *The Geography of Water Conflict and Cooperation: Internal Pressures and International Manifestations*, 168 THE GEOGRAPHICAL JOURNAL 293-312 (2002).
[34] Rhett B. Larson, *The New Right in Water*, 70 WASH. & LEE L. REV. 2181, 2228 (2013).

Europe already takes a similar approach, ratifying multiple transboundary groundwater sharing agreements between subnational governments in one broad treaty.[35] This approach may have significant initial diplomatic and political costs. But it may help avoid the uncertain legal status of these small exchanges absent ratification at the federal level, while preserving basin-level governance managed by local stakeholders. For large, inter-basin bulk water transfers, the provisions of GATT and NAFTA could apply. In those cases, Canada could legally restrict bulk water transfers in cases of "critical shortage" or for protection of human health or the environment. This would mean limiting bulk water exports of groundwater that exceeded the rate of natural recharge of the aquifer. Bulk water transports of surface water should be limited so as to preserve a specified minimum in-stream flow.

Third, Canada could integrate both bulk water and virtual water in accounting for water exports. For example, Canada should include the water embedded in agricultural imports and exports in water management accounting. This will give a more accurate picture of how much water Canada actually exports, how those exports might be offset through trade, and provide information on whether water trades are creating unsustainable dependencies for Canada's trading partners. If virtual water from Canada becomes another country's major water source, Canada could then contemplate investments that would improve the water security of its trading partners so as to avoid that kind of foreign dependency on Canadian water exports. Provincial governments would auction permits for inter-basin bulk water transfers. The permitted amounts should be limited to preserve in-stream flows and natural recharge rates, and not exacerbate water trade deficits created by virtual water exports. This goal would promote water sustainability in all sectors, avoid overconsumption and facilitate global water security. Part of avoiding overconsumption should be effective water pricing across industrial sectors to encourage conservation, so that goods are produced with the most water-efficient methods and thus a minimum amounts of both actual and virtual water.

Canada should implement these three reforms – characterizing water as a "good" in international trade and investment treaties, create legal distinctions between intra-basin and inter-basin bulk water transports, and include virtual water in its water trade accounting. With these reforms, Canada could promote a robust global water market aimed at addressing water insecurity and limiting the global economic and ecologic impacts of drought. These reforms could advance Canada's leadership in global water markets as one exemplified by respect for the role water plays in the environment and in the community, and potentially assuage legitimate public concerns about whether water exportation results in over-exploitation.

[35] European Outline Convention on the Transfrontier Cooperation between Territorial Communities or Authorities, (Madrid, May 21, 1980), 20 I.L.M. 315 (1981).

About the Author

Rhett Larson is an Associate Professor of Law at Arizona State University's Sandra Day O'Connor College of Law. His research and teaching interests are in property law, administrative law, and environmental and natural resource law, in particular, domestic and international water law and policy. Larson graduated from the University of Chicago Law School, and received his Master of Science in Water Science, Policy, and Management from Oxford University, where he was a Weidenfeld Scholar.

Professor Larson's recent research focuses on the impact of technological innovation on the law governing transboundary waters, as well as on the sustainability implications of a human right to water. His past research has dealt with corporate governance reform to facilitate remediation of contaminated rivers and the water rights of indigenous people based on religious water uses.

Professor Larson previously taught at the University of Oklahoma College of Law, where he led courses in water law, energy law, property, and administrative law. Prior to that, he was a visiting assistant professor at the Sandra Day O'Connor College of Law. Larson also practiced environmental and natural resource law with law firms in Arizona, focusing on water rights, water quality, real estate transactions, and climate change. His work has been published in academic journals, including the *Utah Law Review*, *Washington and Lee Law Review*, *Duke Environmental Law and Policy Forum*, and the *UCLA Law Review*.