ARTICLE

OWNERSHIP OF RAINWATER AND THE LEGALITY OF RAINWATER HARVESTING IN BRITISH COLUMBIA

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INTRODUCTION

In recent years, a growing number of individuals and municipalities have become interested in rainwater harvesting.[1] The practice is part of a larger shift towards sustainable building practices and stormwater management.[2] However, the legality of rainwater collection in British Columbia is uncertain. At the same time, freshwater resources in the province are increasingly under stress from heavy use and climate change.[3] As water scarcity increases, conflicts over rainwater harvesting may result. It is therefore pertinent that the legality of rainwater harvesting be considered so that possible conflicts can be anticipated and areas in need of law reform can be addressed. This paper addresses the issue of whether landowners or occupiers have the legal right to capture rainwater falling onto their property and the nature of that right.[4] Upon review of the relevant water-related legislation and applicable common law, it is most likely that rainwater is common property subject to the law of capture. Effectively, rainwater belongs to no one and everyone until it is captured. While landowners do not have a property interest in water until it is captured, their right to harvest rainwater is likely unrestricted and is not subject to concerns of downstream water users.

This inquiry into the right to capture rainwater is divided into four parts. Part one reviews the nature of rainwater harvesting, its benefits, and its potential impacts. While rainwater harvesting has many benefits, it also has the potential to adversely affect instream flows and other water users. Part two considers the statutory framework of water allocation in the province and whether it affects the legality of rainwater harvesting. Although the legislation is not unambiguous, the right to collect rainwater does not appear to be

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1 Khosrow Farahbakhsh, Christopher Despins & Chantelle Leidl, *Evaluating the Feasibility and Developing Design Requirements and Tools for Large-scale Rainwater Harvesting in Ontario* (Ottawa: Canada Mortgage and Housing Corporation, 2008) at 1.

2 *Ibid* at 1.

3 Oliver Brandes & Deborah Curran, *Water Licences and Conservation: Future Directions for Land Trusts in British Columbia* (Victoria: POLIS Water Project, 2008) at 4.

4 This paper addresses the legality of rainwater harvesting in British Columbia. For an excellent discussion of the right to harvest rainwater in the context of Alberta's and Ontario's water rights legislation, see Arlene J Kwasniak & Daniel R Hursh, "Right to Rainwater – A Cloudy Issue" (2009) 26 Windsor Rev Legal & Soc Issues 105.

affected by the *Water Act*[5] or the *Water Protection Act*.[6] Part three of this paper considers the historical common law position on water-related rights. While there is some support for the proposition that a landowner has a proprietary interest in rainwater before it is captured, the most likely common law position is that rainwater is common property and subject to the old common law concept of the law of capture. Since this common law framework provides no redress to those who are adversely affected by rainwater harvesting, part four briefly addresses possible avenues for legal reform of the right to capture rainwater.

I. THE POSSIBILITIES OF RAINWATER HARVESTING

Rainwater harvesting is re-emerging as a legitimate response to concerns surrounding water scarcity. Rainwater harvesting can capture water for a variety of different purposes, including domestic uses, irrigation, aquifer recharge, and stormwater reduction.[7] While there are a variety of different rainwater capture methods of varying complexity, at their core all methods involve a wide catchment surface and a device to store captured water.[8] Common forms include micro-catchment earthen dug-outs, rooftop systems, and artificial recharge pits that encourage percolation of rainwater into the aquifer below.[9] For the purposes of this paper, only the legality of rainwater harvesting that catches precipitation before or as it hits the earth's surface is considered.

Rainwater harvesting is an ancient practice. For thousands of years, indigenous cultures in arid regions around the world developed methods to capture, store, and use rainwater for agricultural and domestic uses.[10] In drought-prone areas of India, for example, rooftops and earthen pits were traditionally used to divert and store heavy monsoon rains in tanks and wells.[11] While modern-day western cultures have traditionally relied on government controlled surface and groundwater supplies, there has recently been a large increase in the number of rainwater projects around the world as the potential benefits of rainwater harvesting are being rediscovered.[12]

Generally recognized as a "green" water management practice,[13] there are numerous benefits to the implementation of rainwater harvesting systems.[14] Rainwater is free and since it can generally be captured on the same site as where it is needed, the distribution costs are low.[15] As well, it generally requires little treatment in order to meet drinking water quality guidelines.[16] In urban settings, rainwater harvesting can reduce the pressure on municipal utilities in peak summer months.[17] Rainwater is also a better source of water for landscape irrigation and can reduce the amount of water going into stormwater systems.[18] Additionally, in areas where water is scarce or groundwater extraction is not

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5 *Water Act*, RSBC 1996, c 483.

6 *Water Protection Act*, RSBC 1996, c 484.

7 Texas Water Development Board, *Texas Manual on Rainwater Harvesting*, 3d ed (Austin: Texas Water Development Board, 2005) at 5.

8 Troy L Payne & Janet Neuman, "Remembering Rain" (2007) 37 Envtl L 105 at 107-108.

9 *Ibid* at 108-111.

10 Texas Water Development Board, *supra* note 7 at 1.

11 Payne & Neuman, *supra* note 8 at 114.

12 *Ibid* at 106, 112.

13 Daniel Findlay, "Rainwater Collection, Water Law, and Climate Change: A Flood of Problems Waiting to Happen" (2008-2009) 10 NC JL & Tech 74 at 74-77.

14 Kwasniak & Hursh, *supra* note 4 at 108.

15 Texas Water Development Board, *supra* note 7 at 1.

16 *Ibid* at 1-2.

17 *Ibid* at 1.

18 Kwasniak & Hursh, *supra* note 4 at 108, citing Texas Water Development Board, *supra* note 7 at 1-2.

practical, rainwater harvesting provides an alternate source of water supply.[19] As climate change and population growth place increasing stress on surface and groundwater sources, rainwater harvesting is being increasingly promoted as a green alternative.[20]

Rainwater harvesting systems have the potential to divert and use significant quantities of water. With 6.5 acres of roof-surface, the United States' Army's Kilauea Military Camp in Hawaii collects about 11.5 million gallons of water every year.[21] Above-ground tanks are able to store three million gallons of water that provide water for the camp's needs.[22] Even more modest-sized buildings in more arid locations can collect significant amounts of water. A study of experimental residential rainwater harvesting systems in Guelph, Ontario found that a residential system could collect about thirty percent of the annual amount of water used by a five-person household.[23] Implemented on a larger scale, rainwater harvesting has the potential to significantly reduce demand on municipal water supply systems.

While the water diverted by a small number of residential users is unlikely to have a large effect on the hydrological cycle, larger rainwater harvesting systems have the potential to impact both environmental flows and downstream water users. Rainwater, surface water and groundwater are all interconnected within the hydrological cycle.[24] The potential effects of rainwater harvesting on a watershed are complex and not fully understood.[25] In some cases, rainwater evaporates before reaching streams or other watercourses.[26] However, cumulative effects of substantial rainwater harvesting for agricultural and other uses could be significant.[27] As Arlene Kwasniak and Daniel Hursh note, if rainwater was harvested for oil and gas activities, large quantities of water would be permanently removed from the hydrological cycle, since the water that is used for these activities is generally not returned to the water cycle.[28] The impacts on the hydrological cycle would compound if rainwater harvesting were to grow in popularity within a watershed.

An increase in rainwater harvesting has the potential to affect downstream water users. This is particularly true in systems where surface water and groundwater sources are already under stress. While most of British Columbia is not yet facing severe water scarcity issues, water scarcity in the province is likely to increase due to climate change and other factors.[29] The Okanagan region is already experiencing water shortages. In the Okanagan region, 89.5% of the surface water sources are currently subject to water licencing restrictions.[30] Many of these streams are already over-allocated, meaning that the Government of British Columbia has issued licences for more water than the volume

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19 Farahbakhsh, Despins & Leidl, *supra* note 1 at 12.

20 See e.g. Alexandra Dapolito Dunn, "Siting Green Infrastructure: Legal and Policy Solutions to Alleviate Urban Poverty and Promote Healthy Communities" (2010) 37 BC Envtl Aff L Rev 41.

21 Harley Diamond, "Schofield's rainwater harvesting project yields water, energy savings" (25 October 2010), online: US Army <http://www.army.mil/article/47134/>.

22 *Ibid*.

23 Farahbakhsh, Despins & Leidl, *supra* note 1 at iv.

24 Canada, *The Hydrological Cycle*, online: Environment Canada <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=23CEC266-1>.

25 Stephen N Ngigi, "What is the Limit of Up-scaling Rainwater Harvesting in a River Basin?" (2003) 28 Physics and Chemistry of the Earth, Parts A/B/C 943 at 954.

26 Findlay, *supra* note 13 at 86.

27 Ngigi, *supra* note 25 at 954.

28 Kwasniak & Hursh, *supra* note 4 at 110.

29 Brandes & Curran, *supra* note 3 at 4 (these other factors include increased usage of land for agricultural and industrial purposes as well as expanding urban communities).

30 Johannus Anthonius Janmaat "Parrying Water Conflicts in the Okanagan: The Potential of a Water Market" (2010) 168 BC Studies 21 at 22.

that actually flows in the stream.[31] A significant increase in rainwater harvesting could result in real reductions to the amount of water available to downstream licence holders.

It is therefore critical that the legality of rainwater harvesting be considered. Rainwater harvesting has the potential to be a sustainable response to water scarcity. However, it also has the potential to affect ecosystem flows, groundwater aquifers, and downstream water users. This raises some important questions regarding the regulation of rainwater harvesting. Does the current water licensing regime incorporate rainwater? Could the Government of British Columbia request that a person stop collecting rainwater if instream flows were being affected? Is there a remedy available to a surface water licence holder whose water entitlement is being negatively affected by rainwater collection upstream? These are all questions that are likely to become relevant as conflicts over water scarcity increase in the province. Indeed, certain American jurisdictions, such as Colorado, are already grappling with some of these considerations.[32] Before considering the common law position on the right to capture rainwater, the current legislative framework is considered below.

II. THE STATUTORY WATER LAW FRAMEWORK AND PROPERTY RIGHTS IN RAINWATER

The Crown in right of British Columbia asserts proprietary rights to water within two acts, the *Water Act* and the *Water Protection Act.* Pursuant to these acts, the Government of British Columbia regulates the effects of surface water withdrawals through a licensing regime. [33] Like the other western provinces, surface water in British Columbia is regulated through the principle of prior allocation.[34] Under the *Water Act*, the ownership and the right to use surface water is vested in the provincial government.[35] Those wishing to use water may apply for a licence to do so under the Act.[36] Licenses are assigned priority based on the date of issuance.[37] Thus older licenses receive priority over newer licenses. In times of shortage, a senior licence holder may divert all of the water to which that person is entitled before junior licence holders on the same watercourse may take any water.[38] The underlying ownership right to the water remains with the Crown.

Additionally, the *Water Act* requires that all diversions or uses of water have a licence,[39] provided however that a person may, without a licence, divert water for extinguishing fires, domestic use, and prospecting for a mineral.[40] Any unlicensed diversions for domestic or prospecting uses are only permitted if the water is unrecorded, meaning that there is no licence holder entitled to it.[41]

If property in rainwater were vested in the Crown pursuant to the *Water Act* and *Water Protection Act*, rainwater harvesting would fall under the same statutory regime as surface water. Non-domestic uses of rainwater would require a licence. In over-allocated basins,

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31 Janmaat, *supra* note 30 at 22 (The reason that there is still water in these streams is that licence holders are not withdrawing all the water to which they are entitled).

32 David Beaujon, "Rainwater Harvesting in Colorado", Legislative Brief (1 August 2009), online: Colorado Legislative Council <http://www.colorado.gov/>.

33 *Water Act*, *supra* note 5 at Part 2.

34 Brandes & Curran, *supra* note 3 at 9, citing *Water Act*, *supra* note 5, s 15.

35 *Water Act*, *supra* note 5, s 2(1).

36 *Ibid*, ss 7, 10.

37 *Ibid*, s 15.

38 *Ibid*.

39 *Ibid*, s 4.

40 *Ibid*, s 42.

41 *Ibid*, s 42(2).

licenses for rainwater collection might not be available. In times of shortage, rainwater harvesting could be prohibited in order to ensure sufficient water for downstream senior licence holders. Even domestic rainwater collection systems would be affected if someone else were already entitled to the water. As discussed below, however, the Crown does not explicitly claim ownership rights to rainwater in either act. Although there are a number of ambiguities in the *Water Act* and the *Water Protection Act*, rainwater does not appear to be implicitly included within the Crown's assertion of ownership in either act. Therefore the right to capture rainwater is likely governed by the common law.

When discussing Crown assertions of ownership of water in British Columbia, the issue of underlying aboriginal title cannot be ignored. In most of the province, the Crown's assertion of sovereignty has not yet been reconciled with unextinguished aboriginal title through either treaty or common law recognition.[42] The common law courts have not yet definitively recognized an aboriginal property right in water. However, there is dicta that suggests that this recognition may be coming. In *Halalt First Nation v British Columbia (Minister of Environment),* the British Columbia Supreme Court indicated that the Halalt First Nation had "an arguable case" for a proprietary interest in the groundwater aquifer underlying their territory.[43] However, the British Columbia Court of Appeal later overturned the decision on another point.[44] While it did not engage in an assessment of the strength of the Halalt Nation's claim, it cautioned that the Chambers judge should not have engaged in such a significant analysis of aboriginal title in the context of a judicial review.[45] Crown assertions of ownership over the territory comprising British Columbia and its water resources remain problematic because many indigenous nations have never ceded rights to their territory or the water within it.[46] As the case law on aboriginal rights to water develops, the claim of the Government of British Columbia to ownership of water may be called further into question.

A. The British Columbia *Water Act*

As referred to above, the Crown asserts ownership of surface water within the province by virtue of section 2(1) of the *Water Act*, which states:

> 2 (1) The property in and the right to the use and flow of all the water at any time in a stream in British Columbia are for all purposes vested in the government, except only in so far as private rights have been established under licences issued or approvals given under this or a former Act.[47]

Groundwater is explicitly excluded from this section pursuant to section 1.1 of the *Water Act*, which excludes groundwater from application of sections 2 – 50 of the Act.[48]

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42 British Columbia Treaty Commission, *Why Treaties?* (February 2014), online: BC Treaty Commission <http://www.bctreaty.net/files/pdf_documents/why_treaties_update_Aug08.pdf>; Government of British Columbia, "Treaty Frequently Asked Questions", online: Ministry of Aboriginal Relations and Reconciliation <http://www.gov.bc.ca/arr/treaty/faq.html>; Hamar Foster, "'We want a strong promise': The Opposition to Indian Treaties in British Columbia, 1850-1990" (2009) 18 Native Stud Rev 113 at 114-116.

43 *Halalt First Nation v British Columbia (Minister of Environment),* 2011 BCSC 945 at para 562, [2011] BCJ No 1343, rev'd 2012 BCCA 472, [2012] BCJ No 2419 (QL), leave to appeal to SCC refused, 35179 (July 11, 2013) [*Halalt First Nation* (BCSC)].

44 *Halalt First Nation v British Columbia (Minister of Environment),* 2012 BCCA 472, [2012] BCJ No 2419 (QL), leave to appeal to SCC refused, 35179 (July 11, 2013).

45 *Ibid* at para 126.

46 Merrell-Anne Phare, *Denying the Source: The Crisis of First Nations Water Rights* (Surrey, BC: Rocky Mountain Books, 2009) at 49-54.

47 *Water Act*, *supra* note 5, s 2(1).

48 *Ibid*, s 1.1.

On a superficial review, section 2(1) would not appear to extend to rainwater. However attention must be paid to the broad definition accorded to the word 'stream' within the Act. Section 1 of the *Water Act* defines 'stream':

> "stream" includes a natural watercourse or source of water supply, whether usually containing water or not, and a lake, river, creek, spring, ravine, swamp and gulch.[49]

The expansive meaning attached to the word 'stream' necessitates a more detailed examination of the provision. Specifically, the meaning of the words 'source of water supply' may be broad enough to encompass captured rainwater. As well, the word 'includes' indicates that the meanings listed are non-exhaustive. 'Stream' in the context of the *Water Act* may include other water bodies or sources of water than those that are listed.

The current approach to statutory interpretation is Elmer Driedger's modern principle.[50] The wording of a provision must be considered within its entire context.[51] This is consistent with section 8 of the *Interpretation Act*, which requires legislation to be read in a purposive way, giving it the "fair, large and liberal construction and interpretation" necessary to obtain its purpose.[52] Driedger's modern principle suggests that while the ordinary and grammatical meaning attached to the phrase 'source of water supply' is relevant, it is not the only factor that must be considered. Attention must also be paid to the scheme and purpose of the act as well as the legislative intent informing both the provision in question and the act as a whole.[53] In the sections that follow, the meaning of "source of water supply" is analyzed in the *Water Act* in accordance with the above noted components of Driedger's modern principle.

i. Ordinary and Grammatical Meaning

Whether the ordinary meaning of 'source of water supply' includes rainwater is largely dependent on the context in which the words are assessed. "Ordinary meaning" is generally defined as the competent reader's first impression of the meaning of the words when read within their immediate context.[54] This meaning is presumed to be the correct interpretation, although this presumption may be rebutted when the words are considered within the entire context.[55]

In order for rainwater to be within the scope of s 2(1) of the *Water Act*, rainwater must be "in a stream."[56] Rainwater that is harvested before it reaches the ground can be 'in a' water supply source. Yet this interpretation does not seem consistent with the description of the other water sources listed as being included in the definition of 'stream.' A "lake, river, creek, spring, ravine, swamp and gulch"[57] are typically all natural water-holding formations. However, a rainwater harvesting system is an artificial water storage device.[58] In addition, it is ambiguous whether the word "natural" in the definition

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49 *Water Act*, *supra* note 5, s 1.

50 *Re Rizzo & Rizzo Shoes Ltd*, [1998] 1 SCR 27, 154 DLR (4th) 193, 1998 CarswellOnt 1 (WL Can) at 21.

51 *Ibid,* citing Elmer Driedger, *Construction of Statutes* 2 ed (Toronto: Butterworths, 1983) at 87.

52 *Interpretation Act*, RSBS 1996, c 238, s 8.

53 Ruth Sullivan, *Sullivan on the Construction of Statutes*, 5th ed (Markham, Ont: LexisNexis, 2008) at 1-3.

54 *Ibid* at 25-26.

55 Ruth Sullivan, *Statutory Interpretation,* 2d ed (Toronto: Irwin Law, 2007) at 49 [Sullivan, *Statutory Interpretation*].

56 *Water Act*, *supra* note 5.

57 *Ibid*, s 1.

58 See Payne & Neuman, *supra* note 8 at 107-108; Texas Water Development Board, *supra* note 7 at 5-19.

modifies "watercourse" *and* "source of water supply," or whether it only is relevant to the interpretation of "watercourse."[59] Rain falling from the sky might qualify as a natural source of water supply. Rainwater is 'in' airspace, but it does not make sense to say water is 'in' this source of water supply (airspace), the way one could say that water is 'in' a stream. Although there is considerable ambiguity, the ordinary meaning of water found in a 'source of water supply' does not seem to include rainwater.

ii. Scheme of the Act

A review of the entire scheme of the *Water Act* suggests that rainwater is not included. There is no express reference to rainwater in the entirety of the Act. In contrast, some parts of *Water Act* do apply to groundwater.[60] As well, the *Ground Water Protection Regulation* prescribes requirements for groundwater wells and is authorized under the *Water Act*.[61] No other provisions in the Act suggest that the Legislature intended rainwater to be captured within the realm of the *Water Act*'s application.

iii. Purpose of the Act

According to the modern approach to statutory interpretation, the purpose of the *Water Act* must be considered. Consistent with section 8 of the *Interpretation Act*,[62] this factor is given significant weight in any exercise of statutory interpretation by the courts.[63] While there is no stand-alone purpose section within the *Water Act*, upon review of the Act as a whole it is fairly clear that one of the primary purposes of the *Water Act* is to establish a prior allocation licensing system to facilitate the beneficial use of surface water. This is consistent with the listed purposes for which a water licence may be granted. These listed purposes include conservation purposes, domestic purposes, industrial and irrigation purposes, energy generating purposes, and mining purposes, among others.[64] As noted above, rainwater is integrated within a complex hydrological cycle.[65] It is therefore possible to argue that the purpose of the *Water Act* implies that the Crown claims ownership in rainwater in order to effectively regulate the use of water resources in the province.

This argument is rebuttable by way of analogy to the lack of regulation of groundwater in the *Water Act*. Significantly, the licensing scheme contained within Part 2 of the Act explicitly does not apply to groundwater.[66] The Act was amended to regulate groundwater in 1960.[67] However, these provisions have never been brought into force.[68] By explicitly not regulating groundwater withdrawals, it is unlikely that the purpose of the *Water Act* is to enable the beneficial use of water in the province through Crown ownership of all water resources, including rainwater.

As part of a purposive approach to statutory interpretation, the implications of possible interpretations may also be considered.[69] Considering the importance of rainwater to the hydrological cycle and the interconnection between surface water, groundwater and

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59 *Water Act, supra* note 5, s 1.

60 *Ibid*, ss 51-101.

61 *Ground Water Protection Regulation*, BC Reg 299/2004.

62 *Interpretation Act, supra* note 52, s 8.

63 Sullivan, *Statutory Interpretation*, *supra* note 55 at 194-195.

64 *Water Act*, *supra* note 5, ss 1, 4.

65 Canada, *supra* note 24.

66 *Water Act*, *supra* note 5, s 1.1.

67 British Columbia, *A Water Sustainability Act for B.C.: Legislative Proposal* (October 2013), online: Water Sustainability Act <http://engage.gov.bc.ca/watersustainabilityact/files/2013/10/WSA_legislative-proposal_web-doc.pdf> at 3.

68 *Ibid*.

69 Sullivan, *Statutory Interpretation*, *supra* note 55 at 209.

rainwater, it could be judged absurd that the water licensing system contained within Part 2 of the Act does not also apply to rainwater.[70] However, British Columbia remains the only Canadian jurisdiction to not impose licensing requirements for groundwater use above a certain amount.[71] Heavy, unregulated use of groundwater in some densely populated areas of the province is already causing concern over decreasing groundwater levels.[72] In practical terms, the lack of regulation over rainwater cannot be more absurd than the lack of regulation over groundwater.

One could argue that the express exclusion of groundwater indicates an intention to regulate, and by implication claim ownership of, rainwater. Known as the implied exclusion rule, this argument suggests that when some members of a category are set out explicitly, all other members of that category are necessarily excluded from the provision.[73] Following this line of reasoning, the express exclusion of groundwater in section 1.1 of the *Water Act* necessarily implies that the Legislature intended all other forms of water within the province to fall within Part 2, and therefore section 2(1), of the *Water Act*. It is therefore arguable that the *Water Act*'s purpose includes an intention to regulate rainwater falling within British Columbia.

iv. Legislative Intent

Legislative intent is a valid tool for discerning a statute's purpose, and can be determined by considering the "mischief" or problem that a statute was designed to address.[74] In light of the legislative history of the *Water Act,* the argument that rainwater is implicitly included within the *Water Act*'s statutory scheme is questionable. Although the early colonial government had imported the common law doctrine of riparian rights into British Columbia, it was soon realized that the doctrine was ill-suited to the achievement of widespread colonization and settlement.[75] Under the riparian rights doctrine, water rights are restricted to those owning property that borders water.[76] The riparian rights doctrine was therefore incompatible with the expansion of mining and agriculture in drier areas of the province, which often required water to be diverted from elsewhere.[77] Beginning in 1859, the colonial government began altering the common law doctrine in order to facilitate expansion of the Gold Rush.[78] Pursuant to the *Water Privileges Act* of 1892, which was the precursor of the *Water Act*, the Crown first declared that "[t]he right to the use of all water at any time in any river, water-course, lake or stream," other than those waters that were under the jurisdiction of the federal government, was vested in the Crown in right of British Columbia.[79] None of these terms were defined, and considering the usual meaning of the words 'river,' 'water-course,' 'lake,' and 'stream,' it appears that the section did not intend to capture rainwater.

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70 Noting the potentially significant impact that unregulated rainwater collection could have on the hydrological cycle in Alberta, Arlene Kwasniak and Daniel Hursh argue that the exclusion of rainwater from the water-licensing scheme undermines the purpose of a legislative scheme that purports to sustainably manage water resources (Kwasniak & Hursh, *supra* note 4 at 119).

71 Linda Nowlan, "Out of Sight, Out of Mind? Taking Canada's Groundwater for Granted" in Karen Bakker, ed, *Eau Canada: The Future of Canada's Water* (Vancouver: University of British Columbia Press, 2007) at 64.

72 *Ibid* at 58.

73 Sullivan, *Statutory Interpretation, supra* note 55 at 190.

74 *Reference re Firearms Act (Can),* 2000 SCC 31 at 17, [2000] 1 SCR 783.

75 David R Percy, *The Framework of Water Rights Legislation in Canada* (Calgary: Institute of Resources Law, 1998) at 3-5.

76 *Ibid* at 3.

77 *Ibid* at 3-5.

78 *Ibid* at 5-6.

79 *Water Privileges Act*, SBC 1892, c 47, s 2.

The first *Water Act* was enacted in 1909. In section 2 of the Act, "water" or "stream" was defined as including "all natural water-courses or sources of water supply, whether usually containing water or not, and all rivers, lakes, creeks, springs, ravines and gulches, and all water-power."[80] The Preamble included the broad claim that all unappropriated or unrecorded water in the Province, not subject to the exclusive jurisdiction of Parliament, was vested in the Crown in the right of British Columbia on April 23, 1892 (the date that the earlier *Water Privileges Act* was declared law).[81] This could be read as suggesting that the province was making a broad claim to all water, including rainwater, in the province. However, the Preamble goes on to state that the new *Water Act* was motivated by confusing and mistake-filled water rights records, and a desire to consolidate and expedite the licensing process.[82]

Since the *Water Act* was a response to the inadequacies with the common law and earlier government efforts to regulate surface water rights, it is unlikely that the drafters intended to also include rainwater within the meaning of 'sources of water supply.' The Legislature's approach to groundwater was similar. As the elements of the riparian doctrine that were inhibiting settlement of the province did not involve groundwater, the initial *Water Act*'s purpose did not involve the regulation of groundwater. This suggests that the Act's purpose, and in particular the purpose of the phrase 'sources of water supply,' was not to regulate all water in the province but rather was a reactive response to the issues surrounding surface water use in British Columbia at the beginning of the 20th century.

Considering both the entire context and the ordinary meaning of the words 'source of water supply,' it does not appear that rainwater is included within the definition of "stream" in section 1 of the *Water Act*. By implication, it appears that the government has not asserted proprietary rights in rainwater pursuant to section 2(1) of the Act.

B. The *Water Protection Act*

The *Water Protection Act* reinforces the proposition that rainwater is excluded from the government's water regulation scheme by virtue of the implicit exclusion of rainwater from subsection 2(1) of the *Water Act.* Similar to its claim in subsection 2(1) of the *Water Act*, the province also claims ownership rights to water in section 3 of the *Water Protection Act*:

> 3 (1) The property in and the right to the use and flow of all the water at any time in a stream in British Columbia are for all purposes vested in the government, except only in so far as private rights have been established under this Act or under licences issued or approvals given under the *Water Act* or a former *Water Act*.
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> (2) The property in and the right to the use, percolation and any flow of ground water, wherever ground water is found in British Columbia, are for all purposes vested in the government and are conclusively deemed to have always been vested in the government.[83]

Subsection 3(1) essentially reaffirms the Crown's ownership claim to water made pursuant to the *Water Act*. While 'stream' is not defined within the *Water Protection Act*, there is a strong case for application of the *in pari material* principle. This principle implies that statutes addressing the same subject matter may sometimes be read as an

80 *Water Act*, SBC 1909, c 48, s 2.
81 *Ibid*.
82 *Ibid*.
83 *Water Protection Act*, *supra* note 6, s 3.

integrated legislative scheme.[84] The proposition that the word 'stream' in subsection 3(1) of the *Water Protection Act* should be accorded the definition attributed to the word 'stream' in the *Water Act* is strengthened by the similarity in wording of subsection 3(1) of the *Water Protection Act* to subsection 2(1) of the *Water Act*, and the express reference to the *Water Act* in subsection 3(1) of the *Water Protection Act.* Further, the inclusion of a separate ownership claim to groundwater in subsection 3(2) suggests that the intention of the Legislature was not to assert ownership of *all* water in the province, but rather to expand ownership from the limited claim in the *Water Act* to also include groundwater.[85]

It is arguable that the stated purpose of the *Water Protection Act* captures all water in the province. Section 2 of the *Water Protection Act* states that the Act's purpose "is to foster sustainable use of British Columbia's water resources in continuation of the objectives of conserving and protecting the environment."[86] The inclusion of rainwater, groundwater, and surface water within the government's water protection scheme would align with the stated purpose. Upon reviewing the entire context, however, it does not appear that rainwater is included within the ambit of the *Water Protection Act*. The Act was enacted following public outcry over a plan by several corporations to use a *Water Act* licence to export large amounts of water from Canada via marine transport vessels.[87] The remainder of the Act is calibrated to prevent large-scale bulk water removal from the province or the major watersheds. When introducing the bill in the British Columbia Legislature, the Minister characterized one of its purposes as confirming the Government's "ownership of surface water and groundwater in the province."[88] There is nothing to suggest that the *Water Protection Act* contemplates a more expansive meaning of the word 'stream' than what is already included in the definition contained within the *Water Act.*

Considering both the entire context and the ordinary meaning of the words 'source of water supply,' it does not appear that rainwater is included within the definition of "stream" in section 1 of the *Water Act*. By implication, it appears that the government has not asserted proprietary rights in rainwater pursuant to subsection 2(1) of the Act. As there are a number of ambiguities, however, this conclusion is far from certain.

III. THE COMMON LAW POSITION ON THE RIGHT TO USE AND MANAGE RAINWATER

Assuming that the right to harvest rainwater is not addressed by statute, the common law on the issue continues to apply. Although dicta on the subject is sparse, it appears that the common law position regarding rainwater is that it is a common resource subject to the law of capture. With regards to whether a landowner has a proprietary interest in the rainwater falling on his or her property, the likely common law position in Canada is that the landowner does not have a property interest in the rainwater before it is captured. However, the law is uncertain, as the issue has not yet been directly considered in Canada. In jurisdictions in the United States that continue to follow the riparian rights doctrine of water entitlements, the topic has rarely been considered.[89] Although legal reasoning on the issue is sparse, the American legal academic Joseph Dellapenna

84 Sullivan, *Statutory Interpretation*, *supra* note 55 at 149.

85 *Water Protection Act*, *supra* note 6.

86 *Ibid*.

87 David R Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy* (Vancouver: University of British Columbia Press, 2003) at 56.

88 British Columbia, Legislative Assembly, *Debates of the Legislative Assembly,* 35th Parl, 4th Sess, Vol 19, No 9 (27 Aprl 1995) at 13757 (M Sihota).

89 Joseph W Dellapenna, "Related Systems of Water" in Amy K Kelley, ed, *Water and Water Rights,* 5th ed, loose-leaf (consulted on 18 December 2012), (New Providence, NJ: LexisNexis/Matthew Bender, 2011), vol 1 at 10-109-110.

suggests that the right to exploit diffused surface waters in these jurisdictions is likely governed by the law of capture.[90] The issue is complicated by the fact that despite the interconnectivity of the hydrological cycle, the law surrounding water entitlements has developed differently for different forms of water. Historically, legal doctrines have developed separately for flowing surface water, other surface water, and groundwater percolating under the earth.

When classifying rainwater into a legal category, it is not necessary to distinguish between rainwater that is collected before it touches the earth's surface, and diffuse surface water running on the ground before it reaches any sort of defined channel or body of water. At common law, ownership of a piece of land also confers rights to the air space above it, although property rights in airspace do not extend indefinitely.[91] They are limited to a certain level above the ground where a property owner can no longer usefully occupy the space.[92] Therefore, absent any legal doctrine that has developed to separate them, rainwater within a property owner's airspace and rainwater freely flowing outside of any defined channel on the surface can be considered together.

The case law concerning rights over rainwater in British Columbia is limited. In the 1906 case of *Graham v Lister* ("*Graham*"), in a judgment of the BC Supreme Court (Full Court), Justice Irving stated that "[b]y the common law the water falling from Heaven on the surface of the earth, so long as it does not flow in some defined natural watercourse, is the property of the owner of the soil it falls on."[93] Justice Irving took this proposition to inform his decision that a lower proprietor owes no duty to an upper landowner to receive the natural flow of diffuse surface water.[94] A lower proprietor may block the natural flow of rainwater runoff to the detriment of the upper proprietor.[95] The other two judges hearing the appeal also reached the same conclusion, although based on different reasoning.[96] In *Scott (Rural Municipality) v Edwards* ("*Scott v Edwards*"), the Supreme Court of Canada confirmed that property owners may prevent rainwater runoff from entering their property to the detriment of a neighbour.[97] This rule from *Graham* and *Scott v Edwards* remains the law in British Columbia.[98]

It is unclear, however, whether the statement in *Graham* concerning absolute ownership of water on a landowner's property is an accurate reflection of the current law in British Columbia, or whether it was only *obiter dicta* that should be disregarded. Certainly as *Graham* was decided before the enactment of the *Water Act,* the statement is limited by the expanded definition of 'stream' contained in the Act.[99] Whether the assertion of absolute ownership applies to rainwater, or whether rainwater is owned in common before it is captured, necessitates a more fulsome inquiry into the history of water-related rights at common law.

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90 *Ibid.*

91 Bruce Ziff, *Principles of Property Law*, 5th ed (Toronto: Thomson Reuters, 2010) at 92.

92 *Didow v Alberta Power Ltd*, 60 Alta LR (2d) 212, [1988] AJ No 620 (QL) (CA), leave to appeal to SCC refused, 21199 (October 28, 1988) [*Didow*].

93 *Graham v Lister*, 14 BCR 211, [1908] BCJ No 70 (QL) at para 1 (Full Court) [*Graham*].

94 *Ibid* at para 2.

95 *Ibid*.

96 *Ibid* at paras 9, 16.

97 *Scott (Rural Municipality) v Edwards*, [1934] SCR 332, aff'g [1934] 3 DLR 793, [1933] SJ No 76 (QL) at para 22 (SKCA) [*Scott v Edwards*].

98 *Caplin v Gill*, 84 DLR (3d) 765, [1977] BCJ No 1268 (QL) at para 8; *Nyffenegger v Chand*, 2011 BCSC 1857 at para 79, [2011] BCJ No 2691 (QL).

99 *Water Act*, *supra* note 5, s 1.

A. The Doctrine of Riparian Rights

The development of the riparian rights doctrine suggests that at common law, rainwater is a common pool resource, meaning that it is owned by no one until it is captured.[100] This is in contrast with Justice Irving's statements in *Graham*, which suggest that uncaptured rainwater is owned absolutely by the particular owner of the land on which the rain falls.[101] The doctrine of riparian rights, which at common law governs entitlements to flowing surface water, is unlikely to directly apply to rainwater. This is because riparian rights have always been restricted to land owners or occupiers occupying land adjacent to inland watercourses or other defined bodies of water.[102]

In the 18th century, the influential legal theorist William Blackstone provided a theoretical framework for English law concerning water rights.[103] Drawing from old Roman law concepts of communal property, Blackstone theorized that certain elements, including light, air, and water, were common property.[104] Similar to the law regarding wild animals, Blackstone argued that an individual possessing water had a qualified property interest in the water.[105] The individual may possess water and may enjoy and use it without interference, but once the water escapes and possession is lost, the water returns to the common pool and is owned communally until captured once again.[106]

Rainwater appears to fit within Blackstone's category of common property. The transient nature of rainwater places it in what Blackstone saw as the category of common things that were of a "vague and fugitive nature."[107] Rainwater is even more transient than flowing water in a stream, as the timing and quantity of its arrival is not always predictable and it is generally not present within the boundaries of a landowner's property for long before it enters a watercourse or water body, percolates into groundwater, or evaporates into the atmosphere.

With regards to the common law position on rights to flowing surface water, Blackstone's theory of water rights was largely supplanted by the riparian rights doctrine. One of the founding cases of the riparian rights doctrine is *Mason v Hill*.[108] In this decision Lord Denman distinguished a number of the earlier cases that had relied on Blackstone's theory of water as common property subject to usufructuary property rights.[109] Under the riparian rights doctrine, appropriation and use of water could now no longer establish a

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100 Anthony Scott uses the term "common pool resources" to refer to resources that are "fluid" or "fugacious," meaning that they are not easily "bounded spatially" (*The Evolution of Resource Property Rights* (Oxford: Oxford University Press, 2008) at 55 [Scott, *Resource Property Rights*]). Common law courts generally treated natural resources falling into this category as being owned by no one until they were physically constrained (Scott, *Resource Property Rights, Ibid* at 55).

101 *Graham, supra* note 93 at 1.

102 Kwasniak & Hursh, *supra* note 4 at 120; Percy, *supra* note 75 at 3.

103 Scott, *Resource Property Rights, supra* note 100 at 74-76; see e.g. *Liggins v Inge* (1831), All ER Rep 754, 7 Bing 682 (QL).

104 Sir William Blackstone, *Commentaries on the Law of England*, vol 2, 15th ed by E Christian (London: 1809) at 14, cited in Joshua Getzler, *A History of Water Rights at Common Law* (Oxford: Oxford University Press, 2004) at 173.

105 Blackstone, *supra* note 104 at 395, cited in Getzler, *supra* note 104 at 176.

106 Blackstone's category of common property differs somewhat from the Roman category of *res communes*. Roman law conceptualized flowing water as a common good, but generally considered elements in the category of *res communes* as being incapable of ownership (Getzler, *supra* note 104 at 67). Unlike the Roman category of *res communes,* Blackstone categorized flowing water as subject to a qualified form of corporeal property that could be acquired through appropriation (*Ibid* at 177).

107 Blackstone, *supra* note 104 at 395, cited in Getzler, *supra* note 104 at 176.

108 *Mason v Hill* (1833), 110 ER 692 (KB), cited in Scott, *Resource Property Rights, supra* note 100 at 80.

109 Scott, *Resource Property Rights, supra* note 100 at 74-76, 80-82, citing *Mason*, *supra* note 108.

right to water.[110] Instead, usufructuary rights in flowing water, beyond the "public" right to use water for domestic purposes, became land-based rights.[111] As well, the riparian doctrine is limited to water flowing in defined channels. The 1843 case of *Acton v Blundell* ("*Acton*")[112] is traditionally cited as authority for the proposition that the riparian doctrine does not apply to groundwater unless it flows in defined underground channels.[113]

In the 1856 case of *Broadbent v Ramsbotham* ("*Broadbent*"), the Court also held that the riparian doctrine did not extend to limit the actions of property owners when dealing with rainwater runoff that had not yet reached a defined watercourse.[114] The plaintiff in *Broadbent* was the owner of a mill that used water from a stream called Longwood Brook.[115] Before one of the defendants constructed drainage works, a heavy rainfall would cause water to overflow from a basin on the defendant's land and to run down a hill into Longwood Brook.[116] The Court dismissed the plaintiff's claim that his riparian rights extended to the runoff water.[117] Writing for the Court, Baron Alderson stated:

> No doubt, all the water falling from heaven and shed upon the surface of a hill, at the foot of which a brook runs, must, by the natural force of gravity, find its way to the bottom, and so into the [brook] but this does not prevent the owner of the land on which this water falls from dealing with it as he may please and appropriating it. He cannot, it is true, do so if the water has arrived at and is flowing in some natural channel already formed. But he has a perfect right to appropriate it before it arrives as such a channel.[118]

Despite the acknowledgment that the natural flow of water in the stream would be diminished through the efforts of the defendants to drain their property,[119] the right of property owners to improve their lands through the drainage of standing water bodies was prioritized over the rights of a riparian landowner. While the Court held that landowners have the right to use and divert diffuse surface water as they please,[120] the case does not go so far as to stand for the proposition that a landowner has a proprietary interest in the water before it is appropriated. This is consistent with Blackstone's theory of common property, which only enabled a person to acquire a qualified property interest in water through use and possession, and not before.[121] Therefore, while Justice Irving relied on *Broadbent* in his reasoning in *Graham,*[122] it is arguable whether the reasoning in *Broadbent* is authority for Justice Irving's statement that a landowner has a proprietary interest in rainwater that is on his or her property.

Broadbent does suggest, however, that entitlements to rainwater are probably not restricted by the doctrine of riparian rights and are more likely governed by the common law position on the right to extract and use groundwater. Just as a landowner's property

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110 Scott, *Resource Property Rights, supra* note 100 at 82, citing *Mason*, *supra* note 108 at 699.

111 *Ibid*.

112 *Acton v Blundell* (1843), 12 M & W 324; 152 1223 (Ex CH) [*Acton*], cited in Getzler, *supra* note 104 at 261.

113 Getzler, *supra* note 104 at 261-264.

114 *Broadbent v Ramsbotham* (1856), 11 Exch 602, 156 ER 971 at 976 (available on CommonLII).

115 *Ibid* at 976.

116 *Ibid* at 973-74, 977.

117 *Ibid* at 976.

118 *Ibid*.

119 *Ibid*.

120 *Ibid*.

121 Getzler, *supra* note 104 at 176, citing Blackstone, *supra* note 104 at 391, 393, 395.

122 *Graham, supra* note 93 at para 4.

extends into the airspace above it, a grant of land also includes the earth beneath it (although it is unclear to what depths).[123] Parallels between rainwater and groundwater can be drawn as they are both excluded from application of the riparian doctrine when they travel in undefined channels. With regards to non-domestic water uses, the doctrine of riparian rights requires riparian owners to maintain the quantity of the water flow for downstream users.[124] However, at common law those extracting groundwater are under no requirement to consider the effect of their actions on the water supply of their neighbours. At common law, it appears that those harvesting rainwater are also under no compulsion to consider the impact of their actions on others.

B. Groundwater and the Law of Capture

At common law, entitlement to rainwater, like most groundwater resources, is likely governed by the law of first capture. The riparian rights doctrine does apply to underground water moving in defined channels.[125] However, most groundwater sources are excluded from the riparian doctrine since groundwater does not typically travel in defined underground watercourses.[126] In *Chasemore v Richards* ("*Chasemore*"), Lord Chelmsford reasoned that because groundwater "has no certain course and no defined limit," it was "of a very uncertain description" and the riparian doctrine was not applicable.[127] Therefore, the owner of the land above ground had the right to appropriate groundwater beneath the surface even if doing so would deprive a neighbour of water.[128] The rule of capture has its origins in even older common law rules regarding the capture of wild animals.[129] This rule gave a landowner the right to take any amount of water or animals as they passed through his or her land without regard for the interests of others.[130] If the water or the animal crossed property boundaries before it was captured, the right to take it was lost to the adjacent landowner.[131] In many ways, rainwater may be analogized to wild animals, the original resource to which the law of capture was applied.[132] Like wild animals, the appearance of rainwater within a property owner's land boundaries may occur regularly but with what exact timing and what frequency it cannot be known.

Until the provincial government claimed ownership in groundwater pursuant to subsection 3(2) of the *Water Protection Act,* the traditional common law approach to groundwater continued to operate in British Columbia.[133] In *Steadman v Erickson Gold Mining Corp,* the British Columbia Court of Appeal cited *Chasemore* with approval.[134] Anyone had the right to appropriate groundwater from what was a common pool beneath the earth's surface.[135] Although liability in nuisance could be found against a person found to have contaminated the common pool, a landowner could withdraw an unlimited amount of groundwater, even if it would cause their neighbour's well to run dry.[136]

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123 Ziff, *supra* note 91 at 94.

124 Percy, *supra* note 75 at 3-4 (there are two versions of the riparian rights doctrine, earlier cases speak of a duty to maintain the "natural flow" of the stream, while later cases discuss a theory that riparian owners are entitled to "reasonable use" of the watercourse).

125 Nowlan, *supra* note 71 at 59.

126 *Ibid.*

127 *Chasemore v Richards* (1859), All ER Rep 77 at 82, 29 LJ Ex 81 (QL).

128 *Ibid.*

129 Scott, *Resource Property Rights, supra* note 100 at 367.

130 Blackstone, *supra* note 104 at 395, cited in Getzler, *supra* note 104 at 176.

131 Blackstone, *supra* note 104 at 367.

132 Scott, *Resource Property Rights, supra* note 100 at 55.

133 *Halalt First Nation* (BCSC), *supra* note 43 at paras 507-508.

134 *Steadman v Erickson Gold Mining Corp*, 56 DLR (4th) 577, 1989 CarswellBC 34 at para 5 (WL Can) (CA).

135 *Ibid* at paras 7-10.

136 *Ibid* at para 6.

If applicable to rainwater harvesting, the common law rule of capture and Justice Irving's statements in *Graham* would both confirm an unlimited right on behalf of landowners to capture and use rainwater. The distinction between the law of capture and the principles cited in *Graham* is whether the property owner has a proprietary interest in uncaptured rainwater or whether the water is more properly conceptualized as common property where the right to take is limited to those who can capture it. The statements of Justice Irving suggest that it is a case of absolute ownership where all water on a property or in its airspace that is not in a defined watercourse is owned by the landowner while it is present on his or her land.[137] However, the weight of authority with regards to other fugacious resources suggests otherwise.

Besides water, the law of capture has also been applied to other fugacious resources, such as oil.[138] Under the law of capture in this context, no ownership interest is gained until the item or resource is possessed.[139] As the English common law was unfamiliar with oil resources, North American courts applied the rule of capture, as it existed in relation to groundwater, to this previously unknown migrating and transitory resource.[140] In *Berkheiser v Berkheiser* ("*Berkheiser*"), the Supreme Court of Canada confirmed that at common law, an oil and gas lease is best characterized as a profit à prendre.[141] In a concurring judgment, Justice Rand commented on the fugacious and "fugitive" nature of oil and the conceptual difficulty with assigning ownerships rights to it while it remained in a common pool beneath the earth's surface.[142] He stated: "[t]he proprietary interest becomes real only when the substance is under control, when it has been piped, brought to the surface and stored."[143] Previously, it was unclear whether under the law of capture a landowner gained a temporary proprietary interest in a resource while it was located, but not captured, on his or her property, or whether no proprietary interest in the resource could be gained until the resource was captured.[144]

This principle from *Berkheiser*, that no proprietary interest in an underground, fugacious resource is gained until the resource is captured, is likely applicable to groundwater and can thus be analogized to rainwater as well. As discussed above, the law surrounding surface water flowing in defined channels developed separately from the law of other water resources.[145] Although in some ways rainwater is more "knowable" than groundwater or oil since it can be seen, its appearance is uncertain and a consequence of weather patterns that cannot be predicted with certainty.[146] Although rainwater is above the surface, it is still more properly grouped with groundwater and oil resources rather than flowing surface water above-ground.

C. Absolute Ownership Theory

Graham, as noted above, could be read as meaning that landowners have an absolute proprietary interest in rainwater as soon as it reaches their airspace. This reasoning has not been directly considered by other Canadian courts. There is also American authority for the proposition that the right to take rainwater landing on a landowner's property is a private property right that accompanies a grant of land. In *Turner v Big Lake Oil*

137 *Graham*, *supra* note 93 at 1.
138 Scott, *Resource Property Rights*, *supra* note 100 at 367-68.
139 *Berkheiser v Berkheiser*, [1957] SCR 387, 1957 CarswellSask 60 at 10 (WL Can) [*Berkheiser*].
140 Scott, *Resource Property Rights*, *supra* note 100 at 367-68.
141 *Berkheiser*, *supra* note 139 at 11-12, 32.
142 *Ibid* at paras 9-11.
143 *Ibid* at para 10.
144 Scott, *Resource Property Rights*, *supra* note 100 at 368.
145 Nowlan, *supra* note 71 at 59.
146 See Findlay, *supra* note 13 at 83.

Company, the Supreme Court of Texas stated "[n]o citation of authority is necessary to demonstrate that the right of a land owner to the rain water which falls on his land is a property right which vested in him when the grant was made."[147] Presumably, this would also extend to rainwater within a landowner's airspace, since airspace would also be included in the grant of land. This reasoning implies that a property owner has a right to expect a certain quantity of rainwater and has a claim in it before the water reaches the ground. It therefore goes farther than the conception of rainwater as common property and claims an ownership right, not merely a usufructuary right, to rainwater if it happens to enter a property owner's land.

Some American legal scholars have also determined that rainwater in clouds belongs to the landowner beneath them.[148] It has been argued that landowners have an absolute right to the natural amount of rainwater that falls on their property.[149] As well, in the 1940s and 1950s, some American courts adopted this assumption in order to adjudicate the claims of landowners who asserted damages from weather modification.[150] Various legal questions follow from this line of reasoning, including whether one can sue a landowner for damage caused by flooding from rainwater.[151] Due in part to the legal implications that follow from this approach, this line of reasoning has receded in popularity.[152] The concept of absolute ownership in rainwater by those owning land beneath the clouds is also inconsistent with the common law principle that a landowner's airspace only extends to a level that could be enjoyed by the landowner, and does not extend indefinitely into space.[153] Therefore this position is likely inconsistent with Canadian law.[154]

Overall, while dicta in *Graham* and *Broadbent* could be read to mean that at common law a landowner has a proprietary interest in the water itself, this reading likely extends too far. The fugacious nature of rainwater means that rainwater is more appropriately characterized as common property. Before legislative intervention, the common law, principal was that although rights to use flowing water were restricted to riparian owners,[155] no one had actual proprietary rights in the water.[156] Similarly, at common law groundwater is a common pool resource until it is captured.[157] *Graham* and *Broadbent* should also be read in light of *Berkheiser*, which confirms that no ownership interest in a common pool resource is established until the resource is captured and possessed.[158]

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147 *Turner v Big Lake Lake Oil Company*, 128 Tex 155 at 169-170, 96 SW 2d 221, 1936 Tex LEXIS 398 (QL).

148 Tarek Majzoub et al, "'Cloud Busters': Reflections on the Right to Water in Clouds and a Search for International Law Rules" 20 Colo J Int'l Envtl L & Pol'y 321 at 328.

149 "Rainmaking Part One: Who Owns the Clouds" (1948) 1 Stan L Rev 43 at 56.

150 Majzoub et al, *supra* note 148 at 328.

151 *Ibid* at 331.

152 *Ibid* at 329.

153 Ziff, *supra* note 91 at 92-93; *Didow, supra* note 92.

154 While *Graham* and *Broadbent* discuss an absolute right to appropriate water that has not yet reached a stream or percolated into the ground, neither case suggests that a property owner's interest in water extends into the clouds. See *Graham, supra* note 93 and *Broadbent, supra* note 114.

155 Percy, *supra* note 75 at 3.

156 *Ibid* at 13.

157 *Halalt First Nation (*BCSC), *supra* note 43 at 50.

158 *Berkheiser*, *supra* note 139 at paras 9-12 (while in his concurring jugdment these statements by Justice Rand were made in the context of a dispute over underground mineral resources, his reasoning may be extended to other common law resouces as it is based on the "fugitive nature" (para 9) of mineral resources, which are are "fluild substances," "something by its nature generally ready for flight" (para 12)—all typical characteristics of common pool resources more generally).

D. The Public Trust Doctrine

The potential applicability of the public trust doctrine to Canadian natural resources has received much attention as of late.[159] Therefore its potential applicability to rainwater merits some consideration. The public trust doctrine has its origins in Roman law and has been revived and modified by American law.[160] Although the public trust doctrine has not been applied in Canada, the Supreme Court of Canada has signified it may be open to recognizing a version of the doctrine.[161] While the exact origins and character of the doctrine are debatable, at its core is the concept that the state holds certain natural resources in trust for the public interest.[162] Although the distinctions between the Roman concepts of *res publicae* and *res communes* have been blurred in the American doctrine, the public trust doctrine is dependent on both the state and the public holding rights-based interests in the resource.[163] The distinction between public resources and common pool resources is important. With public property, even if ownership of the resource ultimately belongs to the public, the state has the ability to manage it and exclude others.[164] In contrast, no one owns or has the ability to exclude others from pure common property.[165] Therefore, as rainwater at common law is likely a common pool resource until it is captured, even if the public trust doctrine was recognized in Canada, rainwater is not a likely candidate for application of the public trust doctrine. While recognition of rainwater as public property managed by the state in the public interest may be a positive step towards sustainable water laws, it would likely require legislative intervention to transform rainwater from a resource held in common, to one held by the state on behalf of the public.

In summary, at common law, rainwater is likely considered a common pool resource subject to the law of capture. Rights to its use are not governed nor constrained by the riparian rights doctrine. Therefore, although property owners have no proprietary interest in rainwater until it is collected, they appear to have an uninhibited right to appropriate it while it is on their property. The right to capture rainwater is therefore only limited by access to the property in which it happens to be located.

IV. POSSIBLE AVENUES FOR RAINWATER MANAGEMENT

The law of capture is generally recognized as a poor system for sustainable resource management.[166] When it operates in the context of a valued resource, such as oil, it inevitably leads to the resource's overexploitation.[167] Those wishing to exploit the

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159 See e.g. Jane Matthews Glenn, "Crown Ownership of Water in situ in Common Law Canada: Public Trusts, Classical Trusts and Fiduciary Duties" (2010) 51 C de D 493 (QL); Matthew Aragorn Park, *The Public Trust Doctrine: Ensuring the Public's Natural Right of (Perpetual) Access to Common Resources* (LLM Thesis, Faculty of Law, University of Victoria, 2007) [unpublished]; Sarah Jackson, Oliver M Brandes & Randy Christensen, "Lessons from an Ancient Concept: How the Public Trust Doctrine will meet obligations to protect the environment and the public interest in Canadian water management and governance in the 21st Century" (2012) 23 JELP 175.

160 Glenn, *supra* note 159 at 502-503.

161 *British Columbia v Canadian Forest Products Ltd,* 2004 SCC 38 at paras 72-84, [2004] 2 SCR 73 (the Court held that the case before them was not the appropriate case to determine the applicability of the public trust doctrine in Canada, as the issue had not been fully argued in the courts below).

162 Glenn, *supra* note 159 at 501-502.

163 *Ibid* at 504-506.

164 Scott, *Resource Property Rights, supra* note 100 at 56.

165 *Ibid* at 56-57.

166 See e.g. Scott, *Resource Property Rights, supra* note 100 at 368; Nowlan, *supra* note 71 at 59-60; Cecilia A Low, "The Rule of Capture: Its Current Status and Some Issues to Consider" (2009) 46 Alta L Rev 799 at 800.

167 Scott, *Resource Property Rights, supra* note 100 at 368.

resource compete with each other to exploit as much as they can before somebody else takes it.[168] In response to the waste and environmental degradation brought on by the doctrine in the context of oil and gas exploration, the law of capture has been modified and restricted in Canada through legislation.[169] Canadian legislation has introduced the concept of correlative rights in order to preserve resources and reduce waste.[170] Although its mechanisms of implementation vary across provinces, correlative rights offer some protection to neighbours sharing rights to a common pool resource from indiscriminate drilling by another oil-rights holder.[171] Many of these mechanisms, such as those that establish buffer zones around wells or take orders that apportion production, are inapplicable to rainwater, where the common pool is much larger.[172] However, the concept of correlative rights, which states that those with shared-access to a resource must consider the rights of others, is a useful starting point for considering how entitlements to rainwater harvesting are best determined.

The concept of correlative rights in fugacious resources is already well established in the United States for groundwater.[173] The doctrine was first developed in a dispute over groundwater extraction.[174] In *Katz v Walkinshaw*, the Supreme Court of California considered the English law of capture as set down in cases such as *Chasemore* and *Acton*.[175] However, the Court held that the law of capture was inapplicable to California.[176] Instead, a doctrine of reasonable use emerged, which limited a landowner's right to extract groundwater to an "ordinary" or "reasonable share" of the resource.[177] Although it may be difficult to determine what is a 'reasonable share' in the context of such a large and uncertain pool as rainwater, a system of resource allocation premised on the doctrine of reasonable use is a more equitable approach than a strict application of the law of capture. Under this approach, any individual user is prohibited from monopolizing the common pool resource to the exclusion of others.[178] Conservation focused legislation that recognizes correlative rights in all those sharing the common resource of rainwater would provide more certainty as to what amount of private use is reasonable than judge-made law.

The regulation of rainwater in Colorado provides a cautionary tale regarding the dangers of including all types of rainwater harvesting within the general water rights framework. Colorado operates under a presumption that all rainwater is presumed to be tributary to a stream.[179] This presumption has been applied to rainwater that is collected off a roof, even where the rainwater would likely have evaporated or percolated into the ground before reaching a stream.[180] As most streams in Colorado are over-appropriated,[181] until

168 Scott, *Resource Property Rights*, *supra* note 100 at 368.

169 Low, *supra* note 166 at 816-17.

170 *Ibid* at 817-18.

171 *Ibid*.

172 *Ibid* at 818.

173 Dellapenna, *supra* note 89, vol 1 at 10-97.

174 Scott, *Resource Property Rights, supra* note 100 at 369.

175 *Katz v Walkinshaw*, 141 Cal 116 at 147-148, 1903 Cal LEXIS 486 (QL) (SC) [*Katz*].

176 Scott, *Resource Property Rights, supra* note 100 at 369, citing *Katz, supra* note 175.

177 Scott, *Resource Property Rights, supra* note 100 at 370.

178 *Ibid*.

179 Beaujon, *supra* note 32 at 2.

180 Findlay, *supra* note 13 at 86, citing Dan Fitzgerald, "Who Owns the Rain that Falls on Your Roof?" (May 2008), online: Colorado Central Magazine <http://cozine.com/2008-may/who-owns-the-rain-that-falls-on-your-roof/>; Stephen N Bretsen, "Rainwater Harvesting under Colorado's Prior Appropriation Doctrine: Property Rights and Takings" (2010) 22 Fordham Envtl L Rev 159, at 170; Beaujon, *supra* note 32 at 2.

181 Beaujon, *supra* note 32 at 2.

recently all individuals wishing to collect rainwater had to rebut the presumption that rainwater collection would cause injury to prior water right holders by assuring a court or the State Engineer that there would be no impact.[182] Since this would likely involve a costly hydrological assessment, the cost and effort involved makes legal rainwater harvesting impractical for most people.[183] In response to the widespread public outcry over the realization that rainwater harvesting was effectively illegal, in 2009 the Colorado General Assembly passed two bills that provide limited exceptions to this rule.[184] However, because of concerns that wider acceptance would lead to claims of regulatory takings, the exceptions are limited.[185] Applicants applying for an exception must not already be connected to a water supply system that serves more than three households and must already be entitled to extract groundwater.[186] The second exception allows for up to ten residential or mixed-use developments to incorporate rainwater capture systems as part of a pilot project.[187]

A legislative response to rainwater harvesting in British Columbia would not need to be as concerned about claims of regulatory takings. In Canada, individuals are not protected from the indirect extinguishment of property rights to the same degree as they are in the United States.[188] As well, commenters generally consider water licence entitlements in prior allocation provinces to be statutory rights rather than true property rights.[189] Water entitlements issued under the *Water Act* are already limited by other provisions of the Act, regulations, and orders issued under it.[190] The Colorado example is, however, a reminder of the difficulty involved in crafting legislation concerning rainwater harvesting that effectively considers and balances the interests of different groups of water users. While an individual rain barrel is unlikely to impact other water users, rainwater harvesting does have the potential to have adverse cumulative impacts on other water users.

While a legal framework for rainwater harvesting should support and encourage this practice, limits should be placed on the law of capture. The justification for treating different parts of the same hydrological cycle separately is eroding in light of increasing scientific understanding of the interdependency of the hydrological cycle.[191] The law of capture is at present likely preferable to the highly regulated system in Colorado, since water scarcity in British Columbia is not yet a widespread concern.[192] Therefore, the environmental degradation and waste that usually accompanies application of the law of capture to scarce resources has not yet occurred.[193] However, water scarcity in the province is increasing.[194] While water in British Columbia is currently available for not much more than a nominal cost,[195] it is integral to life. If its availability is scarce, it is of a

182 *Ibid*.

183 Bretsen, *supra* note 180 at 171; Beaujon, *supra* note 32 at 2.

184 Bretsen, *supra* note 180 at 160.

185 *Ibid* at 189.

186 *Ibid* at 172-173.

187 *Ibid* at 173-174.

188 Ziff, *supra* note 91 at 86-7.

189 Kwasniak & Hursh, *supra* note 4 at 112-13.

190 Deborah Curran, *When the Water Dries Up: Lessons from the Failure of Water Entitlements in Canada, the US and Australia*, (Victoria: POLIS Project on Ecological Governance, University of Victoria, 2012) at 4.

191 Nowlan, *supra* note 71 at 59.

192 Canada, "Water Availability," (February 2014), online: Environment Canada <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=2DC058F1-1>.

193 Scott, *Resource Property Rights, supra* note 100 at 367-369.

194 Brandes & Curran, *supra* note 3 at 4.

195 See British Columbia, *Annual Rental Rates for Water Licence Purposes by Sector*, online: Ministry of Environment – Water Stewardship Division: Water Rental Rates <http://www.env.gov.bc.ca/wsd/water_rights/water_rental_rates/cabinet/new_rent_structure%20_revised_feb-2013.pdf>.

fundamentally greater value than other natural resources can ever be. British Columbia is not the only jurisdiction that will need to address this issue in the coming years. As water scarcity becomes a reality across the globe, the question "who owns the rain?" is one of future international relevancy.[196]

The provincial government has recently released a legislative proposal to replace the *Water Act* with new proposed legislation titled the *Water Sustainability Act*.[197] The proposed legislation includes a number of proposals that support sustainable use of water in the province, such as regulating large-scale groundwater extraction[198] and a requirement that licence holders use water efficiently.[199] However, the Government intends to incorporate Parts 1 and 2 of the *Water Act*, which address ownership of water and the surface water licensing scheme, into the legislation with few changes.[200] The legislation does not fundamentally shift the prior allocation system towards an ecosystem-based approach. In addition, the current proposal does not clarify the ambiguity surrounding the legality of rainwater harvesting.

An ideal system of water management would incorporate all forms of water in the province, including groundwater, surface water, and rainwater. While rainwater should be incorporated into the management framework of the *Water Sustainability Act*, sufficient exemptions for rainwater harvesting systems would need to be included to allow for small-scale, sustainable collection. However, since rainwater harvesting has the potential to adversely affect instream flows and other water users, limits should be placed on rainwater appropriation. A possible solution would involve requiring licences for rainwater capture systems that exceed a certain size. Ideally, the licencing threshold sizes would be tailored to the hydrology of different watersheds. In addition, a sustainable water law framework would prioritize ecosystem flow needs over other water uses.[201] Sarah Jackson, Oliver Brandes, and Randy Christensen argue that the public trust doctrine should be explicitly included in water-related legislation.[202] This approach would be able to respond flexibly to the uncertain nature of water resources while prioritizing public uses and the protection of the resource for future generations.[203] Although a more fulsome discussion of the attributes of an ideal system of water management are outside the scope of this paper, this system would involve an ecosystem-based approach that prioritizes sustainability and considers all aspects of the hydrological cycle.

CONCLUSION

Use of rainwater harvesting methods is on the rise as knowledge of the beneficial impacts of rainwater harvesting spreads.[204] As the legal framework of rights to capture rainwater has received little judicial or statutory attention, the legality of a property owner's ability to capture rainwater is somewhat uncertain. However, a review of the statutory and

196 In his review of future challenges to water scarcity in the international context, Professor Falkenmark, a scholar in the field of hydrology, identifies the question "who owns the rain?" as a question that the global community will need to address ("Water Scarcity – Challenges for the Future" in Edward HP Brans et al, eds, *The Scarcity of Water: Emerging Legal and Policy Responses* (London: Kluwer Law International, 1997) at 38-39).

197 British Columbia, *supra* note 67.

198 *Ibid* at 33.

199 *Ibid* at x.

200 *Ibid* at 16-17.

201 Oliver Brandes et al, *At a Watershed: Ecological Governance and Sustainable Water Management in Canada* (Victoria: POLIS Project on Ecological Governance, 2005) at 34.

202 Jackson, Brandes & Christensen, *supra* note 159 at 192.

203 *Ibid* at 192-9.

204 Heather Kinkade-Levario, *Design for Water: Rainwater Harvesting Stormwater Catchment and Alternate Water Reuse* (Gabriola Island, BC: New Society Publishers, 2007) at 7.

common law frameworks informing water-related rights in British Columbia suggests that the most likely common law position is that rainwater is common property subject to the law of capture. While those capturing rainwater in the province may be pleased that their ability to harvest rainwater is not fettered by the rights of other water users, this is not the best method of ensuring that rainwater harvesting continues to be practiced sustainably. As rainwater is likely not included in the *Water Act*'s system of prior allocation, the Government and downstream senior surface water licence holders likely have no remedy if the cumulative impacts of rainwater harvesting adversely affect stream flows. The likely common law position does not recognize correlative rights of other users to share equitably in the common resource of rainwater, which is only one part of a complex and increasingly scarce systems of water resources. Since rights over rainwater collection have not yet become controversial in British Columbia, now is the ideal time to enact statutory change.[205] Although it may involve difficult determinations concerning the relative hierarchy among rainwater and surface water users, a sustainable *Water Modernization Act* would anticipate that future conflicts over rainwater harvesting are likely to ensue, and implement a framework for balancing the rights of rainwater harvesters with other water users.

205 Kwasniak & Hursh, *supra* note 4 at 128.