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COMMON LAW GROUNDWATER RIGHTS UNDER VIRGINIA LAW

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I. INTRODUCTION

Groundwater use in Virginia has been subject to state regulation since 1973,¹ and warnings that unrestricted groundwater pumping could have serious negative consequences date back years or decades earlier than that.² State management may at least have slowed the rate of deterioration, but regulators continue to issue dire warnings.³ In its most

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¹ Virginia has two major statutes that regulate groundwater use and quality. The Ground Water Management Act of 1992, VA. CODE ANN. §§ 62.1-254 to 62.1-270 (2015) (replacing the Groundwater Act of 1973), gives the State Water Control Board (whose authority is largely delegated to the Department of Environmental Quality (“DEQ”)) the power to regulate groundwater withdrawals in designated groundwater management areas. Those areas include nearly all of Virginia east of Interstate 95, including the Eastern Shore. *See* 9 VA. ADMIN. CODE § 25-600-20. The State Water Control Law, VA. CODE ANN. §§ 62.1-44.2 to 62.1-44.34:28, authorizes the Water Control Board to establish groundwater quality standards. Neither of those statutes deals with disputes between property owners over rights to use groundwater. *Cf.* Zappulla v. Crown, 391 S.E.2d 65, 68 (Va. 1990) (issuance of a Virginia Marine Resources Commission permit for construction in state-owned subaqueous beds “determines only the rights of an applicant *vis-a-vis* the Commonwealth and the public” and “does not amount to an adjudication of conflicting private property claims”). *See also, e.g.*, Volkman v. City of Crosby, 120 N.W.2d 18 (N.D. 1963) (holding that rights acquired by the City under a State Water License “granting and confirming . . . ‘a perpetual right . . . to the use of ground water’” are inferior to plaintiff’s “vested rights” acquired by appropriation).

² *See, e.g.*, VIRGINIA STATE WATER CONTROL BOARD, PLANNING BULLETIN 261-A, GROUNDWATER OF SOUTHEASTERN VIRGINIA (1974), and sources cited therein.

³ *See* OFFICE OF WATER SUPPLY, VA. DEPT. OF ENVTL. QUALITY, STATUS OF VIRGINIA’S WATER RESOURCES: A REPORT ON VIRGINIA’S WATER RESOURCES MANAGEMENT ACTIVITIES 58 (2014).

recent annual report to the Governor and General Assembly, for example, the Department of Environmental Quality (“DEQ”) reported that “[g]roundwater levels along the fall line have, in some locations, fallen below the elevation of the top of the confined aquifers” and that “[g]roundwater levels in portions of southeastern Virginia continue to fall below critical surface elevations.”⁴ Continuing, the DEQ stated that

[i]n several locations, current local demands for groundwater to support desired growth in established Groundwater Management Areas can no longer be sustained by the coastal plain aquifer system at total permitted amounts. Model scenarios using the recently revised Virginia Hydro Groundwater Model indicate that withdrawals at or near total permitted rates would result in groundwater levels dropping below critical thresholds over wide areas. Field observations also indicate that in some areas measured water levels are even lower than those predicted by the improved model.⁵

The confined aquifers of the Coastal Plain Aquifer System “have historically yielded high rates of groundwater satisfying much of the area’s industrial, commercial, municipal, and agricultural demands,” but

[l]arge withdrawals from these aquifers produce overlapping cones of depression and some have resulted in interference among wells. In addition, decades of water level observations in these aquifers indicate a declining trend in water levels: water levels have fallen at a rate of about 2 feet per year in the Potomac aquifer.⁶

In addition, recent water supply planning analyses (detailing groundwater demand in millions of gallons per day, or “mgd”) have “indicated that 23% of the 2040 demand (445 mgd) is expected to come from groundwater resources. This demand is equivalent to approximately 300 mgd of new groundwater withdrawals across the Commonwealth, relative to average 2009–2013 withdrawal totals.”⁷

⁴ *Id.*

⁵ *Id.* at 59.

⁶ *Id.* at 14.

⁷ *Id.* at 59. Manufacturing accounts for approximately half of all groundwater withdrawals in Virginia, followed by public water supply at approximately thirty-seven percent of the total, with irrigation, commercial, mining, and other uses at ten percent or less. *See id.* at 28, 30. The localities with the largest total groundwater withdrawals are Accomack, Bath, Giles, Isle of Wight, King William and Rockingham Counties and the City of Norfolk. *See id.* at 26. The General Assembly responded to these and other warnings in 2015 by *forbidding* the DEQ from imposing withdrawal volume reductions in groundwater permits before January 1, 2016, 2015 Va. Acts, ch. 262, 613 (codified in part at VA. CODE ANN. § 62.1-256.1 (2015)); by creating a new Eastern Virginia Groundwater Advisory Committee to “assist” the State Water Commission and the DEQ in “developing, revising, and implementing a management strategy for ground water in the

The regulators obviously will continue their efforts to conserve the limited groundwater resources of designated ground water management areas to provide sustainable yields, and they deserve credit for their good work. Even in those areas, however, evidence that “overlapping cones of depression” are resulting in “interference among wells” suggests that conflicts among groundwater users may spill out of the regulatory system, even in the ground water management areas.⁸ And projections that seventy-five percent of year 2040 ground water demands—or 334 mgd—will occur outside of designated ground water management areas give rise to a suspicion that such conflicts may arise in other parts of the state as well.⁹

Virginia has no statute addressing conflicting rights to ground water use, and therefore the common law applies (at least “insofar as it is not repugnant to the principles of the Bill of Rights and Constitution of this Commonwealth”).¹⁰ This article will analyze the state of the common law of Virginia governing such conflicting uses.¹¹

Virginia’s common law in this area is highly uncertain. As discussed in Part II, the traditional approach applies different rules to “percolating waters” and “underground streams.” Water in underground streams which can be identified purely from surface indications is governed by the same riparian rights rules that apply to surface streams; but it is doubtful that any such underground streams exist in Virginia, at least according to common law rules of proof.¹² Part III explains that early cases in Virginia held that percolating waters belong absolutely to the owner of the soil and therefore that they may be extracted or diverted at will, with no liability to other landowners, except perhaps in cases of malicious or negligent conduct. That is the so-called “English” or “absolute ownership” rule. In its most recent pronouncement on the subject—in 1927—however, the Supreme Court of Virginia held that in

Eastern Virginia Groundwater Management Area,” with reports due in August and November 2017, *id.*; and by directing the General directed the Joint Legislative Audit and Review Commission to review and report to the General Assembly on Virginia’s water management programs, with an emphasis on groundwater management, H.R.J. Res. 623 (Va. 2015).

⁸ OFFICE OF WATER SUPPLY, VA. DEPT. OF ENVTL. QUALITY, *supra* note 3, at 14.

⁹ *Id.* at 59.

¹⁰ VA. CODE ANN. § 1-200 (2015); *see, e.g.*, *Weishaupt v. Commonwealth*, 315 S.E.2d 847, 852, 855 (Va. 1984).

¹¹ This article deals only with conflicting *uses* of groundwater, not with related issues such as groundwater contamination or regulatory takings of property rights in groundwater. *See, e.g.*, *Wood v. Picillo*, 443 A.2d 1244 (R.I. 1982); *EPA Superfund Program: Avtex Fibers, Inc., Front Royal, VA*, EPA, <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0302606&msspp=med> (last visited Mar. 29, 2016) (discussion of groundwater contamination at the Avtex Fibers Superfund site in Front Royal, Virginia); *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814 (Tex. 2012); Dave Owen, *Taking Groundwater*, 91 WASH. U. L. REV. 253 (2013).

¹² *See infra* text at notes 15–20.

a future case it would “feel free to consider . . . *de novo*” whether to apply a different standard.¹³ That standard, the “American” or “reasonable use” rule, allows the use of percolating water for all purposes properly connected with the use, enjoyment and development of the source land but bars off-site uses if harm to other landowners results. And Part IV examines the reasons articulated by courts that have adopted or followed the English common law rule, in an effort to develop some basis for predicting whether the court would adhere to that rule or adopt a different one if the question were presented today.¹⁴

II. WATER IN KNOWN OR DISCERNIBLE SUBTERRANEAN CHANNELS

Existing case law begins by drawing a distinction between underground waters that are “classified as (1) streams or bodies of water existing in known and well defined channels, and (2) percolating waters.”¹⁵ Percolating waters are discussed in Part II.

The cases state that water in subterranean channels is subject to “the same rules . . . as if the stream were upon the surface.”¹⁶ There are no reported decisions in Virginia applying the riparian rights doctrine to

¹³ *Clinchfield Coal Corp. v. Compton*, 139 S.E. 308, 313 (Va. 1927); *see also infra* text at notes 21–64.

¹⁴ *See infra* text at notes 65–92.

¹⁵ *Compton*, 139 S.E. at 311; *see also, e.g.*, *Heninger v. McGinnis*, 108 S.E. 671, 673 (Va. 1921); *Miller v. Black Rock Springs Imp. Co.*, 40 S.E. 27, 28, 30–32 (Va. 1901). “These legal classifications have been roundly criticized by hydrologists and legal commentators as without scientific basis both as to the distinction attempted between percolating waters and underground streams and also because they ignore the essential interrelationship between surface and ground waters.” *Higday v. Nickolaus*, 469 S.W.2d 859, 865 n.2 (Mo. Ct. App. 1971) (citations omitted); *see also infra* note 44.

¹⁶ *Compton*, 139 S.E. at 311. *But cf.* *Stonegap Colliery Co. v. Hamilton*, 89 S.E. 305, 312 (Va. 1916) (suggesting that in some contexts, the distinction between underground streams and percolating waters is essentially irrelevant: “mining must interfere more or less with those subterranean streams and percolations of water which appear upon the surface as springs, and . . . to hold the owner of the substrata accountable for damages for their disturbance would be in effect to say that he could have no use of his minerals, for without interfering to some extent with such waters, mining would be impossible”); *Oakwood Smokeless Coal Corp. v. Meadows*, 34 S.E.2d 392, 394 (Va. 1945) (“[i]f, in mining in the usual and ordinary way, subterranean streams or percolations of water which feed a spring on the surface are intercepted, thereby causing the spring to sink or become dry, there is no liability therefor upon the owner and operator of the mine” (quoting a headnote to the *Stonegap Colliery* decision)). As to surface waters, Virginia follows the “reasonable use” version of the common law riparian rights doctrine. *See* *Town of Purcellville v. Potts*, 19 S.E.2d 700, 702–03 (Va. 1942); *Virginia Hot Springs Co. v. Hoover*, 130 S.E. 408, 410 (Va. 1925); *Town of Gordonsville v. Zinn*, 106 S.E. 508, 514, 515 (Va. 1921); *see also* *Thurston v. City of Portsmouth*, 140 S.E.2d 678, 680 (Va. 1965) (quoting *Taylor v. Commonwealth*, 47 S.E. 875 (Va. 1904)) (enumerating “the rights of a riparian owner”). This is not to suggest that Virginia’s surface water case law is consistent in all respects. A comparison of the cited cases will demonstrate that it is not. But those inconsistencies, and the law of riparian rights in surface waters generally, is beyond the scope of this article.

underground channels, however, probably because no litigant has been able to prove the existence of such a channel. The existing cases impose an onerous standard of proof:

[I]n order to be subject to the law of surface water, the existence, location and flow of the water must be known to the owner of the land through which it flows, or it must be discoverable from the surface of the earth. Otherwise, no one could with safety make excavations on his own land. Furthermore, “the knowledge required cannot be reasonably held to be that derived from a discovery in part by excavation exposing the channel, but must be knowledge by reasonable inference, from existing and observed facts in the natural or rather preexisting condition of the surface of the ground. The onus of proof lies, of course, on the plaintiff claiming the right, and it lies upon him to show that, without opening the ground by excavation, or having recourse to abstruse speculation of scientific persons, men of ordinary powers and attainments would know, or could with reasonable diligence ascertain, that the stream, when it emerges into light, comes from, and has flowed through, a defined subterranean channel.”¹⁷

“‘Defined’ means a contracted and bounded channel, although the course of the stream may be undefined by human knowledge. ‘Known’ means the knowledge, by reasonable inference, from existing and observed facts in the natural or pre-existing condition of the surface of the ground.”¹⁸

Further to the same point,

It is well settled that, unless it is shown that the underground water flows in a defined and known channel, it will be presumed to be percolating water This presumption it is [sic] difficult to overcome, as in a great majority of cases the exact condition or course of the underground water is not known, nor readily ascertainable, but the burden of proof is on him who alleges that the water flows in a known and defined channel, and he must lose unless he can overcome the presumption by affirmative proof to the contrary

. . . . In order to charge the owner of the surface with liability for disturbing the flow of an underground stream, its existence, location and flow must in some way be made to appear from the surface of the earth; and the appearance must be such only as

¹⁷ *Compton*, 139 S.E. at 311 (citations omitted).

¹⁸ *Black Rock Springs*, 40 S.E. at 30.

would be reasonably discoverable by men of ordinary powers and attainments. No resort to scientific opinion is necessary.¹⁹

The *Compton* court went on to describe some possible methods of proving, “from surface indications . . . the existence of an underground stream,” based on cases from California, Florida, and Georgia:

Surface depressions or sinks extending in a line on either side of a spring of considerable volume may give notice of the existence of an underground stream Also the existence on the surface of a line of vegetation usually found nowhere except over watercourses So, also, a stream which sinks into the ground and continues under ground for a considerable distance and then reappears, but whose course and direction distinctly appears on the surface, is an underground stream between the points where it appears on the surface.²⁰

III. PERCOLATING GROUNDWATER

As previously stated, there are no Virginia cases finding or holding that a litigant has carried his burden of proving the existence of an “underground stream.” All of the important cases therefore deal with common law rights in “percolating” groundwater.

Percolating waters are those which ooze, seep, or filter, through the soil beneath the surface, without a defined channel, or in a course that is unknown and not discoverable from surface indications without excavation for that purpose. The fact that they may, in their underground course, at places come together so as to form veins or rivulets does not destroy their character as percolating waters Water which has fallen upon a mountain side and sunk into the earth, and which has followed the seams and cracks in the strata of sandstone of which the mountain is composed is percolating water, and its character as such is not altered by the fact that at one place it breaks through the sandstone, forming small springs, which, without a defined channel or current, find their way into the stream.²¹

The court has candidly acknowledged, however, that “[i]t is not so important . . . to accurately define percolating waters.”²² That is due to the presumption noted above, that underground water is percolating unless it is shown, “from existing and observed facts in the natural or

¹⁹ *Compton*, 139 S.E. at 312 (citations omitted).

²⁰ *Id.* (citations omitted).

²¹ *Id.* at 311 (citations omitted).

²² *Id.*

rather preexisting condition of the surface,” to be running in an underground channel.²³ Thus,

[i]t is a mistake . . . to suppose that only those waters which ooze or percolate through the soil are subject to the law of percolating waters. They may flow in a well-defined channel and be such as if on the surface would answer the description of a water course, but in order to be subject to the law of surface water, the existence, location and flow of the water must be known to the owner of the land through which it flows, or it must be discoverable from the surface of the earth²⁴

The nature and scope of the common law right to the use of percolating groundwater in Virginia is explicitly unsettled. The early cases which addressed such issues all held “that a landowner, under whose land there is oil, gas, or water, cannot complain of a neighbor who in pumping on his own property drains the oil, gas, or water from his lands”²⁵ or other words to like effect²⁶; but in its most recent pronouncement on the subject—in 1927—the court held that in a future case it would “feel free to consider . . . *de novo*” whether to apply the so-called “English” or “American” (“reasonable use”) rule.²⁷

The *Compton* court described the competing rules as follows. First, the English rule²⁸:

The common law regarded the fee simple owner of the land as the owner of everything above and below the surface from the sky to the center of the earth . . . and this doctrine is adhered to in England Under this doctrine, the owner of the land may make *any use he pleases* of underlying percolating waters, and may even cut them off *maliciously* without liability to his neighbor.²⁹

²³ *Id.* (citations omitted).

²⁴ *Id.*

²⁵ *Couch v. Clinchfield Coal Corp.*, 139 S.E. 314, 315 (Va. 1927).

²⁶ *See Heninger v. McGinnis*, 108 S.E. 671, 673 (Va. 1921); *Miller v. Black Rock Springs Imp. Co.*, 40 S.E. 27, 30–32 (Va. 1901).

²⁷ *Compton*, 139 S.E. at 313.

²⁸ The English rule also is known as the “absolute ownership” rule, the “absolute dominion” rule, and the rule of “capture.” *See, e.g., Higday v. Nickolaus*, 469 S.W.2d 859, 865 n.2, (Mo. Ct. App. 1971); *Maddocks v. Giles*, 728 A.2d 150 *passim* (Me. 1999); *Martin v. City of Linden*, 667 So. 2d 732, 738 (Ala. 1995).

²⁹ *Compton*, 139 S.E. at 313 (emphases added) (citations omitted). The English or common law rule traditionally is traced to *Acton v. Blundell*, (1843) 152 Eng. Rep. 1223 (Exch.); 12 M. & W. 324, although some cases have noted that essentially the same rule was applied in an earlier American case, *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117 (1836). *See, e.g., Higday*, 469 S.W.2d at 865 n.3.

The Virginia Code, like statutes in a number of other States, adopts “[t]he common law of England, insofar as it is not repugnant to the principles of the Bill of Rights and Constitution of

The court then described the American rule, at significantly greater length:

It is said that the earlier American cases followed this doctrine and some of them still do, but that the trend of modern opinion is in favor of the “reasonable use” rule which has come to be called the American rule The “reasonable use” rule does not forbid the use of the percolating water for all purposes properly connected with the use, enjoyment and development of the land itself, but it does forbid maliciously cutting it off, its unnecessary waste, or withdrawal for sale or distribution for uses not connected with the beneficial enjoyment or ownership of the land from which it is taken³⁰

The court went on to describe “[t]he basis of the ‘American rule,’” as “expressed by Chancellor Pitney in *Meeker v. City of East Orange*,”³¹ as follows:

This does not prevent the proper user by any landowner of the percolating waters subjacent to his soil in agriculture, manufacturing, irrigation, or otherwise; nor does it prevent any reasonable development of his land by mining or the like, although the underground water of neighboring proprietors may thus be interfered with or diverted; but it does prevent the withdrawal of underground waters for distribution or sale for uses not connected with any beneficial ownership or enjoyment of the land whence they are taken, if it thereby result that the owner of adjacent or neighboring land is interfered with in his right to the reasonable user of subsurface water upon his land, or if his wells, springs, or streams are thereby materially

this Commonwealth” as “the rule of decision, except as altered by the General Assembly.” VA. CODE ANN. § 1-200 (2015). Such statutes typically are construed as incorporating English common law in effect either on the date of enactment of the statute, *e.g.*, *State v. Dietz*, 343 P.2d 539, 548 (Mont. 1959) (statute enacted in 1865), or “as it existed when independence was declared in 1776,” *Sides v. Duke University*, 328 S.E.2d 818, 824 (N.C. Ct. App. 1985). See *Higday*, 469 S.W.2d at 867 (*Acton* decided after statutory adoption of English common law); *Adkins v. St. Francis Hospital*, 143 S.E.2d 154, 163 (W. Va. 1965) (“The Commonwealth of Virginia adopted as its law the laws of England until its separation from the mother country and the adoption of its own Constitution. This separation took place long before 1846.”); *accord*, *In re Sampath*, 314 B.R. 73, 77 (Bankr. E.D. Va. 2004).

A Virginia Circuit Court adopted a different approach in *Costello v. Frederick Cnty. Sanitation Auth.*, 49 Va. Cir. Ct. 41, 48–52 (Frederick Co. 1999), but nevertheless concluded that *Acton* was not binding authority in Virginia under section 1-10 (since recodified at VA. CODE ANN. § 1-200).

³⁰ *Compton*, 139 S.E. at 313 (citations omitted).

³¹ 77 N.J.L. 623, 74 A. 379 (1909). *Meeker* is cited in numerous decisions adopting or discussing the American rule. “Chancellor Pitney” was Mahlon Pitney, Chancellor of New Jersey and later a Justice of the U.S. Supreme Court.

diminished in flow, or his land is rendered so arid as to be less valuable for agriculture, pasturage, or other legitimate uses.³²

In *Compton*, the court found that the defendant coal company “was making a legitimate use of its land for mining purposes, even under the ‘reasonable use’ rule.”³³ The court therefore was “not called upon to decide between the different theories,” but it stated that “if the question shall again come before this court we shall feel free to consider it *de novo*.”³⁴

³² *Compton*, 139 S.E. at 313 (citations omitted).

³³ *Id.*

³⁴ *Id.* The Supreme Judicial Court of Massachusetts declared similarly in *Prince v. Stockdell*, 494 N.E.2d 1021, 1023 (Mass. 1986), that it did not need to decide whether to “announce the passing of the doctrine of absolute ownership of subsurface water as taught by [an 1892 case], in favor of a reasonable use test,” but that “[i]n another case” it “might be inclined to reexamine the doctrine which gives the owner of the overlying land absolute control over subsurface water on such land.” The *Compton* court also acknowledged that it had approved “the English theory of the absolute ownership of percolating water” in *Miller v. Black Rock Springs Imp. Co.*, 40 S.E. 27 (Va. 1901), but “[t]he facts of that case did not necessitate a choice between the English and the American rule, as the interception of the water was warranted by either.” 139 S.E. at 313. The *Compton* court acknowledged a similar holding, where no choice had to be made between the English and the American rule, in *Heninger v. McGinnis*, 108 S.E. 671 (Va. 1921). *Id.* at 313. Curiously enough, however, the *Compton* court did not make the same observation with regard to the companion case of *Couch v. Clinchfield Coal Corp.*, 139 S.E. 314 (Va. 1927), decided the same day.

Courts applying a reasonable use test to mining or quarrying operations which disrupt groundwater flows (either by subsurface excavations or by dewatering open pits), as in *Compton*, appear uniformly to hold that such defendants have acted reasonably and have no liability for harm to neighboring springs or wells. *See, e.g.*, *Finley v. Teeter Stone, Inc.*, 248 A.2d 106 (Md. 1968); *Bayer v. Nello L. Teer Co.*, 124 S.E.2d 552 (N.C. 1962); *Sycamore Coal Co. v. Stanley*, 166 S.W.2d 293 (Ky. Ct. App. 1942); *Stonegap Colliery Co. v. Hamilton*, 89 S.E. 305, 312 (Va. 1916) (“mining must interfere more or less with those subterranean streams and percolations of water which appear upon the surface as springs, and . . . to hold the owner of the substrata accountable for damages for their disturbance would be in effect to say that he could have no use of his minerals, for without interfering to some extent with such waters, mining would be impossible”). *Cf.* *Hart v. D’Agostini*, 151 N.W.2d 826 (Mich. Ct. App. 1967) (temporary dewatering of plaintiff’s well caused by sewer line construction). The Supreme Court of Virginia has, however, approved jury instructions that a plaintiff may recover damages if his spring was “drained and destroyed” because a mining company “failed to leave sufficient pillars, props or other means of support to prevent said strata overlying the coal from breaking and falling.” *Stonegap Colliery*, 89 S.E. at 312–13. In that context, liability for loss of the spring is simply an item of damages for breach of the duty to provide subjacent support. In *Couch v. Clinchfield Coal Corp.*, on the other hand, the Court held that the doctrine of lateral support did not apply because the plaintiff’s land had not been “in any way disturbed, except that the percolating subterranean waters on [plaintiff’s land] have been intercepted and diverted by the mining operations of the defendant company on its own lands.” 139 S.E. at 315, 316 (distinguishing *Stonegap Colliery*). In *Wiggins v. Brazil Coal & Clay Corp.*, 440 N.E.2d 495, 498–99 (Ind. Ct. App. 1982), an Indiana Court of Appeals held, *inter alia*, that section 1307(b) of the federal Surface Mining Control and Reclamation Act of 1977 (“SMCRA”) mandated a change from the English common law rule in that case. Section 1307(b) requires surface coal mine operators to “replace” the water supplies of domestic, agricultural, industrial, and other legitimate users of underground or surface sources disrupted by mining operations. 33 U.S.C. § 1307(b) (2012) (“Water rights and replacement”).

That is the Supreme Court of Virginia's last word on the subject. The circuit courts in recent cases appear to be tilting toward the reasonable-use rule, as seen in *Costello v. Frederick County Sanitation Authority*:³⁵

The English Rule is clearly the "English common law" rule, but it was developed in the 19th century in a land which, if anything, has too much water as opposed to too little. The fact that the English Rule has been rejected by most American states and by the drafters of the Restatement of Torts, Second, is circumstantial evidence that the absolutist English rule in all of its Draconian splendor may not be a suitable rule for application in Virginia This Court is persuaded that the fact that the English Common Law was evolving over time to meet the industrial, political, and climatic conditions of the United Kingdom and that the current English Common Law Rule was not enunciated until 1848 indicate that this may well not be a rule of common law that is suitable for application in Virginia in the twenty-first century I do not decide this matter at this time, but I will require a substantial showing that the English Rule is consistent with the peculiar needs and requirements of Virginia as it approaches the twenty-first century.³⁶

As the Supreme Court of Wisconsin noted in *State v. Michels Pipeline Construction, Inc.*, the reasonable use rule

is not a very radical departure from the common-law rule. It still contains quite a broad privilege to use ground water . . .

. . . . [T]he term "reasonable" has a very special restricted meaning. A waste of water or a wasteful use of water is not [*sic*] unreasonable only if it causes harm, and a use of water that causes harm is nevertheless reasonable if it is made in connection with the overlying land. The withdrawal of water for use elsewhere for beneficial purposes such as municipal supply

The Supreme Court of Indiana vacated that decision and dismissed the SMCRA argument as merely "presented as persuasive matter." *Wiggins v. Brazil Coal & Clay Corp.*, 452 N.E.2d 958, 962 (Ind. 1983). A dissenting Justice noted that the Court of Appeals "overlooked the fact that the federal law was not in effect at the time the plaintiffs' cause of action arose" but argued that the majority's adherence to the English rule conflicted with congressional intent. *Id.* at 965 (Hunter, J., dissenting).

³⁵ 49 Va. Cir. Ct. 41 (Frederick Co. 1999).

³⁶ *Id.* at 48, 51, 52. The *Costello* court also cited an unpublished decision that "adopt[ed] the American Rule and reject[ed] the English Rule." *Id.* at 52 (citing *Andrews v. Bd. of Supervisors of New Kent Cnty.* (New Kent Co. Cir. Ct. 1994)). The author is not aware of any cases following *Costello* making a similar determination on whether to adopt the American rule or adhere to the English rule.

or domestic supply is not “reasonable” in this special sense, but such removal may be made without liability if no harm results.³⁷

There also are two additional alternative rules available for consideration in an appropriate case: the “correlative rights” doctrine and the Restatement (Second) of Torts rule.³⁸ The correlative rights doctrine resembles the reasonable use rule as applied to surface waters under the riparian rights doctrine.³⁹ Under that approach,

Each should so exercise his right as not to deprive others of their rights in whole or in part. In times of plenty greater freedom of use probably can be permitted and ordinarily would be permitted without question. In times of greater scarcity or of threatened scarcity or deterioration in quality of the waters, all would be required under this view to so conduct themselves in their use of the water as not to take more than their reasonable share.⁴⁰

³⁷ State v. Michels Pipeline Constr., Inc., 217 N.W.2d 339, 349–50 (Wis. 1974); see also Maerz v. U.S. Steel Corp., 323 N.W.2d 524, 527 n.2 (Mich. Ct. App. 1982) (“[The term reasonable use is] unfortunate and in no small measure responsible for the confusion concerning the rule. If applied to this rule, the words reasonable use cannot be given their inherent broad meaning of a use reasonable under all the circumstances. Instead, the words must be given the contrived meaning of a use reasonably related to enjoyment of the land from which the waters are taken.”).

³⁸ In addition to the rules described in the text, a few courts have applied the law of nuisance or negligence instead of the American or reasonable use rule, where removal of groundwater caused subsidence of neighboring lands. See Henderson v. Wade Sand & Gravel Co., Inc., 388 So. 2d 900, 902 (Ala. 1980) (emphasizing that “we are concerned with the proprietary use of land . . . the water is only incidentally affected”); Friendswood Dev. Co. v. Smith-Southwest Indus., Inc., 576 S.W.2d 21 (Tex. 1978) (adhering to the English rule in conflicting groundwater use cases but announcing prospective application of a negligence rule to land subsidence cases). This article does not undertake to provide a comprehensive survey of the numerous variations in details of the various common law rules as they have developed in the several States.

³⁹ See, e.g., Town of Purcellville v. Potts, 19 S.E.2d 700, 702–03 (Va. 1942). Under the reasonable use version of the riparian rights doctrine

each riparian proprietor has *ex jure naturae* an equal right to the reasonable use of the water running in a natural course through or by his land for every useful purpose to which it can be applied, whether domestic, agricultural or manufacturing, provided it continues to run, after such use, as it is wont to do, *without material diminution* or alteration and *without pollution*; but he cannot diminish its quantity materially or exhaust it (except perhaps for *domestic* purposes and in the *watering of cattle*) to the prejudice of the lower proprietors

Id. at 702 (quoting RALEIGH C. MINOR, THE LAW OF REAL PROPERTY: (BASED ON MINOR’S INSTITUTES) (2d ed. 1928) § 55, p. 76 (emphases in original)).

⁴⁰ City Mill Co. v. Honolulu Sewer & Water Comm’n, 30 Haw. 912, 925 (1929). Only a handful of States have explicitly adopted a correlative rights rule, including California and Florida. See Katz v. Walkinshaw, 74 P. 766 (Cal. 1903); Cason v. Florida Power Co., 76 So. 535 (Fla. 1917). Katz is widely recognized as the leading correlative rights case, but commenters often have failed to notice that the decision in that case mixed correlative rights with the doctrine of prior appropriation. See 74 P. at 772. Some courts, however, have simply overlooked the distinctions between the reasonable use and correlative rights rules. E.g., Jones v. Oz-Ark-Val

“Reasonable use” differs from “correlative rights” in that the former rule treats all uses on source lands as reasonable, and therefore not actionable, regardless of the nature of the use or the nature or extent of any harms inflicted on others using water from a common aquifer; while the latter holds “that one land owner can not extract more than his share of the water even for use on his own lands, where the rights of others are injured thereby.”⁴¹

Section 858 of the Restatement (Second) of Torts (Liability for Use of Ground Water) states this rule:

- (1) A proprietor of land or his grantee who withdraws ground water from the land and uses it for a beneficial purpose is not subject to liability for interference with the use of water by another, unless
- (a) the withdrawal of ground water unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,
 - (b) the withdrawal of ground water exceeds the proprietor’s reasonable share of the annual supply or total store of ground water, or
 - (c) the withdrawal of the ground water has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water.

Poultry Co., 306 S.W.2d 111 (Ark. 1957); *Evans v. City of Seattle*, 47 P.2d 984 (Wash. 1935). *Cf.* Joseph W. Dellapenna, *Correlative Rights Today* § 21.04, in 2 WATERS AND WATER RIGHTS (Amy K. Kelley ed., 3d ed. 2009) (“Courts in at least 13 other states . . . have described themselves, at one time or another, as following a rule of correlative rights, . . . [but m]ost of these states never actually applied correlative rights in the strict sense of a rigid proportional sharing of groundwater if there is not enough to satisfy all demands.”).

⁴¹ *City Mill*, 30 Haw. at 928 (quoting 2 Kinney, IRRIGATION AND WATER RIGHTS § 1192 (2d ed.)). *See, e.g.*, *Baker v. Ore-Ida Foods, Inc.*, 513 P.2d 627, 632 (Idaho 1973) (“[The correlative rights doctrine] requires that a common but insufficient water supply be divided among competing overlying landowners so that each receives an amount of the available water proportionate to his ownership of the overlying land. When there is more than enough water to meet the needs of the overlying owners surplus water may be used on non-overlying lands. However, such transportation is forbidden when there is not enough water to fill the pro rata shares of overlying owners.” (citing, *inter alia*, *Katz*)); *Michels Pipeline*, 217 N.W.2d at 349 (correlative rights doctrine “applies the basic rules of the reasonable use doctrine, but calls for apportionment of underground water where there is not a sufficient supply for all reasonable uses”). Selection and application of a correlative rights rule might lead to a different outcome from application of a reasonable use rule in the mining and quarrying cases cited *supra* note 34. *See Bayer v. Nello L. Teer Co.*, 124 S.E.2d 552, 558 (N.C. 1962) (quoting 36 AM. JUR., MINES & MINERALS § 193). *But cf. Evans*, 47 P.2d at 988 (holding that the City had a legal right to drain a gravel pit to make it available for mining, “under the reasonable use and correlative rights doctrine,” despite total loss of water from neighbors’ springs). The *Evans* court stated that it had previously adopted “the modern American rule of correlative rights.” *Id.* at 987 (citing *Patrick v. Smith*, 134 P. 1076 (Wash. 1913)).

The Restatement (Second) rule is “phrased in terms of nonliability in order to carry forward the policy of encouraging ground water use by permitting more or less unrestricted development of the resource by those who have access to it”; and “[t]he policy and the rule are justified by the fact that since most ground water basins are very large and contain vast quantities of water, it is usually impossible for a single water user to capture the entire supply and leave no water for others.”⁴² The exceptions to the rule of non-liability serve three purposes: (1) to continue protecting “small wells for domestic and agricultural uses from the harmful effects of large wells for municipal and industrial supply” while following “a modern tendency to extend similar protection to cases of harm done by unreasonably large withdrawals for operations conducted on overlying lands”;⁴³ (2) to “impos[e] liability upon a landowner who withdraws more than his reasonable share of the common supply”;⁴⁴ and (3) to “restat[e] the conditions for recognizing that ground water and surface water are often closely interrelated and should be treated as a single source.”⁴⁵

Application of the reasonable use, correlative rights, or Restatement (Second) rule could impact industrial users and municipal or community water systems, by “prevent[ing] the withdrawal of underground waters for distribution or sale for uses not connected with any beneficial ownership or enjoyment of the land whence they are taken.”⁴⁶ Indeed, the early development of the reasonable-use rule occurred primarily, if not exclusively, in cases of municipal, commercial, or industrial uses remote from the source lands.⁴⁷ As the Supreme Court of Virginia stated

⁴² RESTATEMENT (SECOND) OF TORTS § 858, cmt. b (1979).

⁴³ *Id.*, cmt. c.

⁴⁴ *Id.* The Restatement notes that “[t]he concept of underground streams was unscientific and its application could be quite arbitrary” and that this exception merges the common law rule applicable to underground streams and the rule of correlative rights, which “makes it possible to apportion shares of the water in the source to the owners of overlying land whenever total withdrawals reach such magnitude that it is necessary to protect the share of an individual landowner from appropriation by others.” *Id.*

⁴⁵ *Id.*; see also *infra* note 75.

⁴⁶ *Clinchfield Coal Corp. v. Compton*, 139 S.E. at 313 (quoting *Meeker v. City of East Orange*, 74 A. 379, 385 (N.J. 1909)); see, e.g., *Michels Pipeline*, 217 N.W.2d at 350 (“[t]he ‘reasonable use’ rule basically only affords protection from cities withdrawing large quantities of water for municipal utilities”); William E. Cox & Leonard A. Shabman, *Virginia’s Water Law: Resolving the Interjurisdictional Transfer Issue*, 3 VA. J. NAT. RES. L. 181, 191 (1984) (“The absolute ownership doctrine does not restrict the location of water use, while the reasonable use doctrine prohibits water exports that cause injury to adjacent landowners. This distinction is significant because municipalities often attempt to increase their water supplies by pumping groundwater from parcels of outlying land . . .” (footnote omitted)).

⁴⁷ See, e.g., *Rouse v. City of Kinston*, 123 S.E. 482 (N.C. 1924) (industrial); *Schenk v. City of Ann Arbor*, 163 N.W. 109 (Mich. 1917) (municipal); *Meeker*, 74 A. at 379 (municipal); *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391 (Minn. 1907) (commercial); *Pence*

in *Compton*, however, restraints on offsite uses would be imposed only in a suit brought by the owner of adjacent or neighboring lands who is able to prove that the competing wells caused some interference with “his right to the reasonable user of subsurface water upon his land, or if his wells, springs, or streams are thereby materially diminished in flow, or his land is rendered so arid as to be less valuable for agriculture, pasturage, or other legitimate uses.”⁴⁸ (While not mentioned by the *Compton* court, it seems likely that a proven case of land subsidence caused by “unreasonable” groundwater withdrawals from nearby lands also would give rise to a right to relief.)⁴⁹

In that event, a municipal government presumably could acquire the neighboring landowner’s property rights in his underground water by eminent domain.⁵⁰ The impact could be much greater to a non-governmental community water supply system, an industrial user such

v. Carney, 52 S.E. 702 (W. Va. 1905) (commercial); *Forbell v. City of New York*, 58 N.E. 644, 645–46 (N.Y. 1900) (municipal).

⁴⁸ *Compton*, 139 S.E. at 313 (quoting *Meeker*, 77 N.J.L. at 639, 74 A. at 385).

⁴⁹ See, e.g., *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978) (adhering to the English rule in conflicting groundwater use cases but announcing prospective application of a negligence rule, applicable “only to future subsidence proximately caused by future withdrawals of ground water from wells which are either produced or drilled in a negligent manner after the date this opinion becomes final” to land subsidence cases); *Henderson v. Wade Sand & Gravel Co.*, 388 So. 2d 900 (Ala. 1980) (nuisance). Cf. *Finley v. Teeter Stone, Inc.*, 248 A.2d 106 (Md. 1967) (affirming a judgment entered on a directed verdict for a defendant whose reasonable dewatering of its quarry caused subsidence of plaintiffs’ adjacent land). See generally U.S. GEOLOGICAL SURVEY, FACT SHEET 165-00, LAND SUBSIDENCE IN THE UNITED STATES (2000) (noting that “[m]ore than 80 percent of the identified subsidence in the United States is a consequence of human impact on subsurface water,” and “more than 17,000 square miles in 45 states . . . have been directly affected by subsidence”). That report identifies the Franklin-Suffolk and Williamsburg-West Point areas of eastern Virginia as areas where subsidence has been attributed to the compaction of aquifer systems caused by groundwater pumping. See also *Groundwater Depletion*, U.S. GEOLOGICAL SURVEY, <http://water.usgs.gov/edu/gwdepletion.html> (last visited April 4, 2016). That report also lists “[s]ome of the negative effects of groundwater depletion,” including land subsidence, drying up of wells, increased pumping costs, reduction of water in streams and lakes, and deterioration of water quality (including saltwater intrusion, particularly in coastal areas). *Id.*; see *infra* note 75; see also, e.g., *Bayer v. Nello L. Teer Co.*, 124 S.E.2d 552 (N.C. 1978); Stephen E. Snyder, *Ground Water Management: A Proposal for Texas*, 51 TEX. L. REV. 289 (1973).

⁵⁰ Cf. *Town of Purcellville v. Potts*, 19 S.E.2d 700, 703 (Va. 1942). In *Purcellville*, the Supreme Court affirmed an injunction against the Town’s surface water withdrawals, upstream of the plaintiff’s lands, but postponed its effectiveness (as the trial court had done) to give the Town an opportunity to institute condemnation proceedings. See also, e.g., *Forbell*, 58 N.E. at 646 (“[T]he water supply of a great city is of vastly more importance than the celery and water cresses of which the plaintiff’s land was so productive before the defendant encroached upon his water supply. But the defendant can employ the right of eminent domain, and thus provide its people with water without injustice to the plaintiff.”); *Rouse*, 123 S.E. at 493; *Higday v. Nickolaus*, 469 S.W.2d 859, 871–72 (Mo. Ct. App. 1971) (noting that although trial court would have discretion to condition imposition of injunctive relief on city’s exercise of eminent domain, plaintiffs would alternatively have available “a remedy in the nature of an inverse condemnation”).

as a brewer or a paper mill, a commercial user such as a spring water bottler, or a recreational user such as a golf course or a water park. The Supreme Court of Virginia has not had occasion to decide expressly whether an injunction should be issued to prevent groundwater withdrawals that harm neighboring landowners, but it has reached that conclusion in several cases involving surface water withdrawals that violated downstream owners' riparian rights.⁵¹ It may seem likely, therefore, that the court would reach the same conclusion in a case of harmful groundwater withdrawals. The court's more recent decision in *Levisa Coal Co. v. Consolidated Coal Co.* may, however, provide a more reliable basis for prediction.⁵²

In *Levisa*, a coal company pumped excess water from a coal mine into the "voids, tunnels and shafts" of a second, inactive coal mine, claiming a leasehold right to use the second mine for that purpose.⁵³ The owner of the second mine sued to enjoin that use.⁵⁴ The trial court sustained the first company's leasehold claim, but the Supreme Court of Virginia reversed on that issue.⁵⁵ It then turned to the question of injunctive relief, finding that the record was insufficient to allow resolution of that issue on appeal and remanding the case for further proceedings, after an extensive discussion of the governing principles.⁵⁶

First, the court held that "the granting of an injunction is an extraordinary remedy and rests on sound judicial discretion to be exercised upon consideration of the nature and circumstances of a particular case."⁵⁷ The court's reference to judicial discretion is, of course, a strong indication that a trial court's decision is likely to be affirmed on appeal, because a necessary corollary is that appellate review will be conducted under a lenient "abuse of discretion"

⁵¹ *Purcellville*, 19 S.E.2d at 703; *Town of Gordonsville v. Zinn*, 106 S.E. 508, 515-16 (Va. 1921); *Carpenter v. Gold*, 14 S.E. 329, 329-30 (Va. 1892) (interlocutory mandatory injunction).

⁵² *Levisa Coal Co. v. Consolidation Coal Co.*, 662 S.E.2d 44 (Va. 2008). While *Levisa* is a more recent decision, it is not current. The rate of Justice turnover in recent years is probably unprecedented in the history of the court. Only two of the seven active Justices of the Court when *Levisa* was decided, in June 2008, are active Justices today (Chief Justice Lemons and Justice Goodwyn). Justice Koontz, the author of the *Levisa* decision, is now a Senior Justice but does sit frequently on writ panels and argued cases. The Supreme Court of Virginia traditionally adheres closely to the doctrine of stare decisis, but confidence in the prediction that it will do so diminishes with remoteness in time and changes of personnel.

⁵³ *Id.* at 49.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at 52.

⁵⁷ *Id.* at 53 (citations omitted); *accord, e.g., Higday v. Nickolaus*, 469 S.W.2d 859, 871 (Mo. Ct. App. 1971) ("Injunctive relief is a matter of grace, not of right. 'The writ of injunction is an extraordinary remedy. It does not issue as a matter of course, but somewhat at the discretion of the chancellor . . .'" (citations omitted)).

standard—although inclusion of the adjective “sound” may signal a somewhat more stringent standard of appellate review than is typical for abuse of discretion. The reference to “extraordinary remed[ies]” likewise must be understood as a signal that an applicant for injunctive relief has a high burden of proof, which the court may be willing to enforce on appeal. That reading is reinforced by the court’s repetition of the same language, as indicated just below.

Second, “a chancellor may enjoin a continuing trespass,” but “the guiding principle . . . is that the granting of an injunction is an extraordinary remedy and rests on sound judicial discretion to be exercised upon consideration of the nature and circumstances of a particular case.”⁵⁸

Third, “in a case of a continuing trespass . . . if ‘the loss entailed upon [the trespasser] would be excessively out of proportion to the injury suffered by [the owner], or a serious detriment to the public, a court of equity might very properly . . . deny the injunction and leave the parties to settle their differences in a court of law.’”⁵⁹

Fourth, “unless a party is entitled to an injunction pursuant to a statute, a party must establish the ‘traditional prerequisites, i.e., irreparable harm and lack of an adequate remedy at law’ before a request for injunctive relief will be sustained.”⁶⁰ On the other hand, “[c]learly, if the plaintiff has no adequate remedy at law, equity will not countenance a continuing trespass merely because the trespasser, or even the public at large, will be benefited by allowing the trespass to continue.”⁶¹

Fifth—and seemingly in tension with some of the principles stated above—

when the injunction is sought to enforce a real property right a continuing trespass may be enjoined “even though each individual act of trespass is in itself trivial, or the damage is trifling, nominal or insubstantial, and despite the fact that no single trespass causes irreparable injury. The injury is deemed irreparable and the owner protected in the enjoyment of his property whether such be sentimental or pecuniary.”⁶²

⁵⁸ *Levisa*, 662 S.E.2d at 53 (citations omitted).

⁵⁹ *Id.* (alterations in original) (citation omitted).

⁶⁰ *Id.* (citations omitted).

⁶¹ *Id.* (citation omitted). *Contra, Higday*, 469 S.W.2d at 871 (an injunction may be denied where it “‘would result in cutting off the water supply’ to the public harm . . . even though the available remedy at law is not adequate”).

⁶² *Levisa*, 662 S.E.2d at 54 (citation omitted). The quoted passage was stated in “contrast” to the rule applicable “[w]hen an injunction is sought to enforce a contract right concerning personal property.” In that circumstance, “the plaintiff has a high burden of showing that the failure to

In support of that rule, the court described two cases⁶³ in which injunctions were required to protect real property rights despite the availability of adequate legal remedies (i.e., damages).⁶⁴

IV. WOULD THE SUPREME COURT OF VIRGINIA ADHERE TO THE
“ENGLISH” OR “ABSOLUTE OWNERSHIP” RULE AS TO PERCOLATING
GROUNDWATER IF THE ISSUE WERE PRESENTED TODAY?

Predictions as to how a court would decide an uncertain question of law are notoriously hazardous. Perhaps some basis for prediction can be found, however, in the reasons that courts have stated for adopting the English rule.

In *Frazier v. Brown*,⁶⁵ a leading American case for the English common law rule, the Supreme Court of Ohio stated that “the law recognizes no correlative rights in respect to underground waters percolating, oozing or filtrating through the earth . . . mainly from considerations of public policy.”⁶⁶ The court identified two such public policy considerations. First, “the existence, origin, movement and course of such waters, and the causes which govern and direct their movements, are so secret, occult and concealed, that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would be, therefore, practically impossible.”⁶⁷ Second, “any such recognition of correlative rights, would interfere, to the material detriment of the common wealth, with drainage and agriculture, mining, the construction of highways and railroads, with

enjoin the alleged improper action will result in irreparable harm for which the law will afford him no adequate remedy.” *Id.* at 53 (citations omitted).

⁶³ *Blue Ridge Poultry & Egg Co. v. Clark*, 176 S.E.2d 323 (Va. 1970); *Clayborn v. Camilla Red Ash Coal Co.*, 105 S.E. 117 (Va. 1920).

⁶⁴ *Levisa*, 662 S.E.2d at 54.

⁶⁵ *Frazier v. Brown*, 12 Ohio St. 294 (1861). The Supreme Court of Virginia cited *Frazier* with approval in *Couch v. Clinchfield Coal Corp.*, 139 S.E. 314, 316 (Va. 1927), and in *Miller v. Black Rock Springs Imp. Co.*, 40 S.E. 27, 28 (Va. 1901); but it did not repeat the reasoning quoted in the text.

⁶⁶ 12 Ohio St. at 311.

⁶⁷ *Id. Accord, e.g., Chatfield v. Wilson*, 28 Vt. 49, 54 (1855) (“The secret, changeable, and uncontrollable character of underground water in its operations, is so diverse and uncertain that we cannot well subject it to the regulations of law, nor build upon it a system of rules, as is done in the case of surface streams.”); *Roath v. Driscoll*, 20 Conn. 533, 541 (1850) (“The laws of [the] existence and progress [of percolating water] while there, are not uniform, and cannot be known or regulated. It rises to great heights, and moves collaterally, by influences beyond our apprehension. These influences are so secret, changeable and uncontrollable [sic], we cannot subject them to the regulations of law, nor build upon them a system of rules, as has been done with streams upon the surface.”); *Black Rock Springs*, 40 S.E. at 31 (quoting *Roath*, 20 Conn. at 541).

sanitary regulations, building and the general progress of improvement in works of embellishment and utility.”⁶⁸

Some courts, beginning with the Pennsylvania Supreme Court’s decision in *Wheatley v. Baugh*,⁶⁹ have reasoned that

percolations spread in every direction through the earth, and it is impossible to avoid disturbing them without relinquishing the necessary enjoyment of the land. Accordingly the law has never gone so far as to recognise [sic] in one man a right to convert another’s farm to his own use, for the purposes of a filter.

Such a claim, if sustained, would amount to a total abrogation of the right of property. No man could dig a cellar, or a well, or build a house on his own land, because these operations necessarily interrupt the filtrations through the earth. Nor could he cut down the forest and clear his land for the purposes of husbandry, because the evaporation which would be caused by exposing the soil to the sun and air would inevitably diminish, to some extent, the supply of water which would otherwise filter through it. He could not even turn a furrow for agricultural purposes, because this would, partially, produce the same result.⁷⁰

Numerous courts following the English rule have added a further consideration: that groundwater is “as much a part of the freehold through which it courses as the clays, sand, gravel, and rocks found therein.”⁷¹ It might be suggested, however, that this is not as much a factor supporting the selection of a rule as an inference or conclusion drawn from the rule that the court has selected.

⁶⁸ *Frazier*, 12 Ohio St. at 311; *see also, e.g., Wheatley v. Baugh*, 25 Pa. 528, 535 (1855) (“In conducting extensive mining operations, it is in general impossible to preserve the flow of the subterranean waters through the interstices in which they have usually passed, and many springs must be necessarily destroyed in order that the proprietors of valuable minerals may enjoy their own. The public interest is greatly promoted by protecting this right, and it is just that the imperfect rights and lesser advantage should give place to that which is perfect, and infinitely the most beneficial to individuals and to the community in general.”).

⁶⁹ 25 Pa. 528 (1855).

⁷⁰ *Id.* at 532 (quoted in *Black Rock Springs*, 40 S.E. at 32).

⁷¹ *Rouse v. City of Kinston*, 123 S.E. 482, 489 (N.C. 1924) (quoting 27 RULING CASE LAW § 91 (1914)); *see also, e.g., Maddocks v. Giles*, 728 A.2d 150, 152 (Me. 1999) (“The absolute dominion rule is based on the premise that groundwater is the absolute property of the owner of the land, just like the rocks and soil that compose it.”) (adhering to that rule); *Roath*, 20 Conn. at 541 (“Water combined with the earth, or passing through it, by percolation, or by filtration, or chemical attraction, has no distinctive character of ownership from the earth itself; not more than the metallic oxids of which the earth is composed Water, whether moving or motionless *in the earth*, is not, in the eye of the law, distinct from the earth.”); *Black Rock Springs*, 40 S.E. at 31 (quoting *Roath*). This rule appears to be based on the common law maxim *cujus est solum, ejus est usque ad coelum et ad inferos*, “[t]o whomsoever the soil belongs, he owns also to the sky and to the depths.” *Rouse*, 123 S.E. at 492; *see also, e.g., Clinchfield Coal Corp. v. Compton*, 139 S.E. 308, 313 (Va. 1927).

Finally, the few courts that have adhered to the English rule in recent decades have held that they were constrained to do so by the rule of stare decisis, combined with a concern that changing the common law rule would disrupt vested property rights. These courts have reasoned that authority for making such a change belongs to the legislature and not to the courts.⁷²

There are at least colorable arguments that none of the stated reasons for adopting or adhering to the English rule is valid in Virginia today. First, numerous courts and secondary authorities have held or argued that modern geology has completely undercut the notion that ground waters are so “secret, occult and concealed that an attempt to administer any set of legal rules in respect to them . . . would be, therefore, practically impossible.”⁷³ As stated by the Supreme Court of Wisconsin, “scientific knowledge in the field of hydrology has certainly advanced to the point where a cause and effect relationship can be established between a tapping of underground water and the level of the water table in the area so that liability can be fairly adjudicated consonant with due process.”⁷⁴ That is particularly true in the area of groundwater-surface water interaction.⁷⁵

⁷² See, e.g., *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75 (Tex. 1999) (citing constitutional assignment of groundwater protection and regulation to the legislative branch and holding judicial repudiation of the English rule inappropriate “at this time”); *Maddocks*, 728 A.2d at 154; *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 28–29 (Tex. 1978) (“We agree that some aspects of the English or common law rule . . . are harsh and outmoded, and the rule has been severely criticized Most of the critics, however, recognize that it has become an established rule of property law in this State, under which many citizens own land and water rights. The rule has been relied upon by thousands of farmers, industries, and municipalities in purchasing and developing vast tracts of land overlying aquifers of underground water.”). The *Maddocks* court also stated that it was “not convinced that the absolute dominion rule is the wrong rule for Maine” and that the plaintiffs “did not present evidence or point to any studies showing that the absolute dominion rule has not functioned well in Maine.” 728 A.2d at 153, 154.

⁷³ *Frazier*, 12 Ohio St. at 311.

⁷⁴ *State v. Michels Pipeline Constr., Inc.*, 217 N.W.2d 339, 345. (Wis. 1974); accord, e.g., *McNamara v. City of Rittman*, 838 N.E.2d 640, 646 (Ohio 2005) (“The dark arts theory of *Frazier*—that the movements of groundwater are so mysterious that we should not even try to determine who has rights to the water—has been abandoned.”); *Higday v. Nickolaus*, 469 S.W.2d 859, 869 (Mo. Ct. App. 1971); see also, e.g., Joseph W. Dellapenna, *The Rise and the Demise of the Absolute Dominion Doctrine for Groundwater*, 35 U. ARK. LITTLE ROCK L. REV. 291, 311 (2013) (“Today, when hydrologists, water users, and courts can determine a great deal about groundwater, a refusal to decide a case on the grounds [*sic*] that the court cannot access sufficient information to resolve the issues is simply irresponsible.”); *How Do Hydrologists Locate Groundwater?*, U.S. GEOLOGICAL SURVEY, <http://water.usgs.gov/edu/gwhowtofind.html> (last visited July 24, 2015). See generally OFFICE OF WATER SUPPLY, VA. DEPT. OF ENVTL. QUALITY, *supra* note 3. As far back as 1896, the Supreme Court of Florida relied on the results of dye tests in holding that a party’s evidence had overcome the presumption that underground waters were percolating and proved the existence of an underground stream. *Tampa Waterworks Co. v. Cline*, 20 So. 780, 785 (Fla. 1896). Indeed, even those courts that have held themselves compelled to

There is, however, an important qualification to that argument. While modern groundwater geology has advanced far beyond the state of the art when *Frazier v. Brown* was decided in 1861, the economic costs of proving a case by those methods are likely to be prohibitive for individual litigants.

adhere to the English rule have sometimes acknowledged “that what was ‘secret [and] occult’ to us in 1904 – the movement of groundwater – [is] no longer so.” *Sipriano*, 1 S.W.3d at 77 (first alteration in original). *Contra*, *Huelsmann v. State*, 381 N.E.2d 950, 953–54 (Ohio Ct. App. 1977) (“Insofar as knowledge of the behavior and capabilities of our ground water bearing formations is concerned, we are still in such a state of ignorance that we would be unable to manage them effectively even with the best of administrative controls. We no longer say that the behavior of water is “secret and occult.” We say that a great deal of exploration and research needs to be done.”) (quoting an administrative agency presentation)).

⁷⁵ *E.g.*, *Michels Pipeline*, 217 N.W.2d at 345; R. Timothy Weston, *Harmonizing Management of Ground and Surface Water Use Under Eastern Water Law Regimes*, 11 U. DEN. WATER L. REV. 239, 242–43 (2008) (quoting THOMAS C. WINTER ET AL., U.S. GEOLOGICAL SURVEY, CIRCULAR NO. 1139, GROUND WATER AND SURFACE WATER: A SINGLE RESOURCE iii (1998)) (noting that the base flow in many eastern streams is directly derived from groundwater and, conversely, that surface waters may infiltrate to recharge the groundwater system); James N. Castleberry, Jr., *A Proposal for Adoption of a Legal Doctrine of Ground-Stream Water Interrelationship in Texas*, 7 ST. MARY’S L.J. 503, 510 (1975) (modern technology enables distinction between percolating waters which never become part of a flowing stream and those which contribute to the flow of streams); Joseph A. Miri, *Some Problems of Water Resource Management in Virginia. A Preliminary Examination*, 13 WM. & MARY L. REV. 388, 390 (1971) (surface and groundwater sources are to a large degree interdependent); Owen, *supra* note 11, at 256 (“[s]ometimes groundwater pumping can literally make rivers disappear” (footnote omitted)); NATIONAL GROUND WATER ASS’N, GROUNDWATER SUSTAINABILITY: A WHITE PAPER 3 (2004, technical update 2009) (“Ground water’s contribution to stream flow varies. For small and medium sized streams, estimates are that between 40% and 50% is from ground water seepage Surface water also provides a source of ground water recharge.” (citation omitted)).

Plaintiffs have claimed harm to surface water resources resulting from groundwater extraction in several cases. They include *Collens v. New Canaan Water Co.*, 234 A.2d 825 (Conn. 1967) (affirming award of compensatory and punitive damages as well as injunctive relief); *Michigan Citizens for Water Conservation v. Nestlé Waters N. Am., Inc.*, 269 Mich. App. 25, 709 N.W.2d 174 (Mich. Ct. App. 2005), *rev’d in part on other grounds*, 737 N.W.2d 447 (Mich. Ct. App. 2007); *Spear T Ranch, Inc. v. Knaub*, 691 N.W.2d 116 (Neb. 2005) (claiming interference with prior appropriation rights in surface waters); and *Smith v. City of Brooklyn*, 54 N.E. 787 (N.Y. 1899). The rule followed in most such cases is that the fact

[t]hat the diversion and diminution of the stream were caused by arresting and collecting the underground waters, which, percolating through the earth, fed the stream, does not affect the question. When the fact was established upon the proofs that the defendant’s works and wells had caused, by this subsidence of water, a diversion of the stream’s natural flow in its channel, the injury was proved, and the plaintiff’s cause of action established.

Smith, 54 N.E. at 788. The *Michigan Citizens* case, however, adopted a case-by-case, all-factors-considered “balancing” test (which might as accurately be described as a “share the pain” approach), “attempt[ing] to ensure that [all] parties would have reasonable access to the common water supply,” and concluding that the riparian owners “might properly be required to suffer some harm to their use” of the stream but that it would be unjust to permit the defendant bottler to impose the entire burden of those harms on the plaintiffs while retaining all of the benefits. 709 N.W.2d at 199, 207.

[G]roundwater use can be difficult to track. Unless one watches the sprinklers very closely, or unless users are subject to mandatory reporting requirements, it is hard to tell how much water your neighbor is using. Subsurface groundwater flow also can be hard to measure, and determining the extent of interference among competing users can be difficult.

....
... [I]n reality, potential plaintiffs face daunting evidentiary challenges that can effectively preclude litigation. To prevail, they must demonstrate not only that they have been injured, but also by whom, and then must show that the competing users' groundwater withdrawals exceeded their reasonable shares. Between the complexities of aquifer hydrogeology, the typical absence of information on groundwater withdrawals, and the inherent vagueness of common law standards, those showings can be difficult to make, and plaintiffs may not even try.⁷⁶

The second public policy consideration stated in *Frazier* is that "recognition of correlative rights" would interfere with industrial and economic development and "sanitary regulations." Others have argued, however, that because

the absolute-use doctrine is not responsive to changing needs for water and does not provide for security for water rights, it could have the effect of discouraging investment... Although a reasonable-use or negligence doctrine may not provide absolute security, these alternatives at least assure that losses due to the withdrawal of water are compensable.⁷⁷

Or as far back as 1909, the New Jersey Supreme Court stated in *Meeker* that:

It is sometimes said that unless the English rule be adopted, landowners will be hampered in the development of their property because of the uncertainty that would thus be thrown

⁷⁶ Owen, *supra* note 11, at 264, 270 (footnotes omitted); *see also, e.g.*, Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century*, 25 U. ARK. LITTLE ROCK L. REV. 9, 43 (2002) ("Today, a great deal is known about how groundwater behaves, and information can be obtained about how it is used. To do so, however, is time-consuming and expensive." (footnotes omitted)); *How Do Hydrologists Locate Groundwater?*, *supra* note 74 ("To locate groundwater accurately and to determine the depth, quantity, and quality of the water, several techniques must be used, and a target area must be thoroughly tested and studied to identify hydrologic and geologic features important to the planning and management of the resource.").

⁷⁷ David A. Wright, Note, *Establishing Liability for Damage Resulting from the Use of Underground Percolating Water: Smith-Southwest Industries v. Friendswood Development Company*, 15 HOUSTON L. REV. 454, 465 (1978); *see also, e.g.*, *Chasemore v. Richards*, (1857) 2 H. & N. 168, 195 (Exch. Ch. Eng.) (dissenting opinion of Coleridge, J.), *aff'd*, (1859) 7 H.L. Cas. 349 (Eng.).

about their rights. It seems to us that this reasoning is wholly faulty. If the English rule is to obtain, a man may discover upon his own land springs of great value for medicinal purposes or for use in special forms of manufacture, and may invest large sums of money upon their development; yet he is subject at any time to have the normal supply of such springs wholly cut off by a neighboring landowner, who may, with impunity, sink deeper wells and employ more powerful machinery, and thus wholly drain the sub-surface water from the land of the first discoverer.⁷⁸

A third argument for the English rule, articulated in *Wheatley v. Baugh*, is that abolition of that rule “would amount to a total abrogation of the right of property,” barring such ordinary incidents of property ownership as digging a cellar or a well, building a house, cutting timber and clearing land, or “turn[ing] a furrow for agricultural purposes.”⁷⁹ The Supreme Court of Wisconsin has responded that “[t]here is a basic inconsistency in saying that a person has a property right in underground water that cannot be taken without compensation, for when he exercises that right to the detriment of his neighbor, he is actually taking his neighbor’s property without compensation.”⁸⁰ The *Meeker* court added “that there is a middle ground between the existence of an absolute and indefeasible right and the absence of any right that the law will recognize and protect. There is room for the existence of qualified and correlative rights in both landowners.”⁸¹ It also seems fair to say that to the extent that the argument is based on activities with likely minimal impacts, such as timbering, land clearing, and plowing, it represents the *reductio ad absurdum*.

⁷⁸ *Meeker v. City of East Orange*, 74 A. 379, 384–85 (N.J. 1909). Under the English rule, investors and entrepreneurs would

be constantly threatened with danger of utter destruction of the valuable enterprises and systems of water-works which they control, and . . . all new enterprises of the same sort [would] be subject to the same peril. They [would] have absolutely no protection in law against others having stronger pumps, deeper wells, or a more favorable situation, who [could] thereby take from them unlimited quantities of the water, reaching to the entire supply, and without regard to the place of use.

Katz v. Walkinshaw, 74 P. 766, 771 (Cal. 1903).

⁷⁹ *Wheatley v. Baugh*, 25 Pa. 528, 532 (1855). *Cf.* *Clinchfield Coal Corp. v. Compton*, 139 S.E. 308, 311 (Va. 1927) (“[T]o be subject to the law of surface water, the existence, location and flow of the water must be known to the owner of the land through which it flows, or it must be discoverable from the surface of the earth. Otherwise, no one could with safety make excavations on his own land.”).

⁸⁰ *State v. Michels Pipeline Constr. Inc.*, 217 N.W.2d 339, 347 (Wis. 1974). *Accord, Chasemore*, 2 H. & N. at 193 (dissenting opinion of Coleridge, J.) (“it is certainly a novel principle that by an operation on my own land, I may both excusably abstract, and lawfully convert to my own use, the underground property of my neighbor”).

⁸¹ 74 A. at 384.

Numerous courts and other authorities have rejected the argument that groundwater is “as much a part of the freehold through which it courses as the clays, sand, gravel, and rocks found therein.”⁸² The *Meeker* court, for example, cited “the impracticability of applying the rule of absolute ownership to the fluid, water, which by reason of its nature is incapable of being subjected to such ownership.”⁸³ The Supreme Court of Minnesota held similarly, also in an early case, that “[w]hile water is to be defined as a mineral, the rules of law as to its use must logically vary from those applicable to coal, ore, and the like. Water is a fluid, and mobile, ‘a fugitive.’ Coal and ores have a fixed and permanent place.”⁸⁴

Stare decisis concerns (which have been significant in Texas and Maine decisions)⁸⁵ should carry no weight in Virginia, given the Supreme Court of Virginia’s warning in *Compton*, in 1927, that in a future case it would “feel free to consider . . . *de novo*” whether to apply the English common law or American reasonable use rule.⁸⁶

Some courts and other authorities have noted that the English common law rule may have been better suited to an era when groundwater extraction technology was not so far developed and that “[p]erhaps . . . the old rule has been modified because in the

⁸² *Rouse v. City of Kinston*, 123 S.E. 482, 489 (N.C. 1924) (quoting 27 RULING CASE LAW § 91(1914)).

⁸³ 74 A. at 384 (“Where percolating water exists in a state of nature generally throughout a tract of land, whose parcels are held in several ownership by different proprietors, it is, in the nature of things, impossible to accord to each of these proprietors the absolute right to withdraw *ad libitum* all percolating water which may be reached by a well or pump upon any one of the several lots, for such withdrawal by one owner necessarily interferes to some extent with the enjoyment of the like privilege and opportunity by the other owners.”).

⁸⁴ *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391, 393 (Minn. 1907); see also, e.g., *City Mill Co. v. Honolulu*, 30 Haw. 912, 925–26 (1929). The *Erickson* court added:

The analogy to natural gas and oil is more apt. Their natural use, however, is as merchandise Water, although in large measure a commodity of commerce, is essential to the natural use of land for agriculture and other purposes, and to the support of human life itself. A rigid rule, applying to underground waters the law applicable to surface waters in various jurisdictions, might work insufferable hardship, and put the control of an element as necessary to life as air itself into the hands of a monopoly.

111 N.W. at 393.

⁸⁵ See *supra* note 72.

⁸⁶ *Clinchfield Coal Corp. v. Compton*, 139 S.E. 308, 313 (Va. 1927). In *C&W Coal Corp. v. Salyer*, 104 S.E.2d 50 (Va. 1958), the Court affirmed a judgment for the defendant which apparently was based on the English rule. It does not appear from the opinion in that case, however, that the plaintiff presented any argument for adoption of the American rule. Her sole theory on appeal was that the evidence established as a matter of law that her spring “was fed by an underground stream of water flowing in a defined channel, which was known or should have been known” to the defendant corporation. *Id.* at 51. Thus, that decision should not be regarded as reaffirming the English rule.

development of machinery, electricity has replaced manual power, and the amount of water that may be drawn has increased astronomically.”⁸⁷ That too argues for adoption of a more protective rule.

Finally, the early Virginia decisions in this area relied in part on what then appeared to be “settled law that, if the well dug by one man ruins the well or spring of his neighbor by drawing off its water, it is *damnum absque injuria*.”⁸⁸ The nationwide trend toward adoption of the reasonable use rule (or one of the other relatively more protective rules discussed above), noted in *Compton*, has continued in the decades since that decision.⁸⁹ Indeed, it appears that decisions in only three States—

⁸⁷ *Koch v. Wick*, 87 So. 2d 47, 48 (Fla. 1956); *see also, e.g., Henderson v. Wade Sand & Gravel Co.*, 388 So. 2d 900, 902 (Ala. 1980) (“The American rule came into being with the invention of the high capacity pump, when cities bought land or easements for well fields in the country and lowered the water table beyond the reach of the domestic wells of neighboring farmers.”) (quoting RESTATEMENT (SECOND) OF TORTS ch. 41, topic 3, Intro. Note (1979)); *Pence v. Carney*, 52 S.E. 702, 704 (W. Va. 1905) (“Can it then be said in these days of powerful machinery and modern appliances, when it is possible for one land owner to drain the lands of a neighborhood, or section of country, of their underground water and thus render them practically valueless, . . . that underground, percolating waters are wholly without the protection of the law, that they, like the wild animal, belong alone to him who first obtains possession of them?”); *Forbell v. New York*, 58 N.E. 644, 646 (N.Y. 1900) (referring to “wells and pumps of such pervasive and potential reach that from their base the defendant can tap the water stored in the plaintiff’s land, and in all the region thereabout, and lead it to his own land, and by merchandising it prevent its return”).

⁸⁸ *Miller v. Black Rock Springs Imp. Co.*, 40 S.E. 27, 29 (Va. 1901) (quoting THOMAS M. COOLEY, A TREATISE ON THE LAW OF TORTS: OR THE WRONGS WHICH ARISE INDEPENDENTLY OUT OF CONTRACT 689 (2d ed. 1888)).

⁸⁹ *See, e.g., Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324 (Ohio 1984) (overruling *Frazier v. Brown*, 12 Ohio St. 294 (1861), and adopting the Restatement (Second) rule); *Maerz v. U.S. Steel Corp.*, 323 N.W.2d 524, 530 (Mich. Ct. App. 1982) (holding that the “principles expressed” in the Restatement (Second) “are consistent with the Michigan adjudications on the subject and the general trend of decisions in other states, are less harsh and arbitrary and more fair and just than the English rule or lesser modifications of the English rule, and should be followed in Michigan”); *Henderson*, 388 So. 2d at 903 (overruling prior decisions and “hold[ing] that where a plaintiff’s use of groundwater, whether it be for consumption or, as here, for support, is interfered with by defendant’s diversion of that water, incidental to some use of his own land, the rules of liability developed by the law of nuisance will apply”) (*but see Adams v. Lang*, 553 So. 2d 89, 90 (Ala. 1989) (holding that the reasonable use rule, and not the nuisance rule of *Henderson*, applies to “a competitive use of ground water or percolating water”)); *Prather v. Eisenmann*, 261 N.W.2d 766, 771 (Neb. 1978) (explaining that Nebraska follows “a combination of the American and the correlative rights doctrine,” construed in the light of a state “preference statute”); *State v. Michels Pipeline Constr., Inc.*, 217 N.W.2d 339 (Wis. 1974) (overruling *Huber v. Merkel*, 94 N.W. 354 (Wis. 1903), and adopting the rule stated in the RESTATEMENT (SECOND) OF TORTS, Tentative Draft No. 17, Section 858A). *See also State v. Michels Pipeline Constr., Inc.*, 219 N.W.2d 308 (Wis. 1974) (announcing that application of the new rule announced in *Michels Pipeline* would be prospective only except as to parties to that case); *Higday v. Nickolaus*, 469 S.W.2d 859 (Mo. Ct. App. 1971); *Bristol v. Cheatham*, 255 P.2d 173 (Ariz. 1953); *Rothrauff v. Sinking Spring Water Co.*, 14 A.2d 87 (Pa. 1940); *Bridgman v. Sanitary Dist. of Decatur*, 517 N.E.2d 309, 312–13 (Ill. App. Ct. 1987) (discussing Illinois’ Water Use Act of 1983, which “has brought Illinois under a unique, unified doctrine of common law which covers the development and use of both surface and groundwater resources, and . . . is based upon the riparian doctrine of reasonable use”).

Maine, Indiana, and Texas⁹⁰—and a longstanding Georgia statute⁹¹ now adhere to the English rule. The English rule, in short, is no longer “settled law” in this country, and the Supreme Court of Virginia may be more inclined to follow the national trend than to adhere to an English common law rule.

The bottom line must be that, while the question is open, it cannot be predicted with any confidence that the Supreme Court of Virginia would *not* adopt the “American” reasonable use rule—or possibly some version of the correlative rights or Restatement (Second) rule—in a case involving groundwater withdrawals that harmed nearby landowners. A third possibility is that the court might choose a middle ground—adhering generally to the absolute ownership doctrine by creating a rule that forbade “maliciously” interfering with a neighbor’s groundwater supply but allowed withdrawals for uses remote from the overlying lands.⁹²

⁹⁰ See *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75 (Tex. 1999); *Maddocks v. Giles*, 728 A.2d 150, 154 (Me. 1999); *Wiggins v. Brazil Coal & Clay Corp.*, 452 N.E.2d 958 (Ind. 1983). The *Maddocks* court noted, however, that a state statute, inapplicable to that case, “creat[es] liability when a person withdraws ground water in excess of household purposes for a single-family home and the withdrawal interferes with the pre-existing household use of groundwater.” 728 A.2d at 154 n.6 (citations omitted). Professor Dellapenna notes that legislation in Indiana as well as Maine has modified but not abolished the absolute ownership rule. Joseph W. Dellapenna, *Absolute Dominion Rule* § 20.07(b), in 2 *WATERS & WATER RIGHTS* (Amy K. Kelley ed., 3d ed. 2009). See also *id.* § 20.07(a)(1) (discussing Texas legislation).

Massachusetts’ position (like Virginia’s) is uncertain, in light of *Prince v. Stockdell*, 494 N.E.2d 1021, 1023 (Mass. 1986), which declined to “announce the passing of the doctrine of absolute ownership” but indicated a willingness to re-examine that doctrine “[i]n another case.” The Supreme Court of Vermont rejected arguments for abrogation of the English rule in *Drinkwine v. State*, 300 A.2d 616 (Vt. 1973), but the Vermont General Assembly has since taken that step. See VT. STAT. ANN. tit. 10, § 1410(a) (2015) (“(4) all persons have a right to the beneficial use and enjoyment of groundwater free from unreasonable interference by other persons; and (5) it is the policy of the state that the common-law doctrine of absolute ownership of groundwater is hereby abolished”). Subsections (c) and (d) of that statute provide a cause of action for equitable relief or damages, or both, for “unreasonable harm caused by another person withdrawing, diverting or altering the character or quality of groundwater,” except that “a person who alters groundwater quality or character as a result of agricultural or silvicultural activities, or other activities regulated by the secretary of agriculture, food and markets, shall be liable only if that alteration was either negligent, reckless or intentional.” *Id.* § 1410(c)–(d). And subsection (e) contains a non-exclusive list of nine “[f]actors to be considered in determining the unreasonableness of any harm.” *Id.* § 1410(d).

⁹¹ See GA. CODE ANN. § 51-9-8 (2015) (Interference with Underground Streams) (“[t]he course of a stream of water underground and its exact condition before its first use are so difficult of ascertainment that trespass may not be brought for any supposed interference with the rights of a proprietor”); *Stoner v. Patten*, 63 S.E. 897, 897–98 (Ga. 1909) (construing a nearly identical predecessor statute consistently with the English rule).

⁹² At least one published article has postulated that a dictum in *Oakwood Smokeless Coal Corp. v. Meadows*, 34 S.E.2d 392, 396 (Va. 1945) (“Mining operations, being a reasonable use of land, do not, in general, make one carrying on such operations liable because percolating waters are intercepted or drawn away so as to destroy or injure springs or wells belonging to the owner

of the surface or of adjoining lands.”), “impl[ies] that Virginia has adopted the ‘American rule’ of groundwater allocation.” Mary Kathleen Martin & Laurie L. Riddles, Note, *Coal Slurry Pipeline*, 17 U. RICH. L. REV. 789, 809 n.164 (1983). Another has commented that statements in *Couch v. Clinchfield Coal Corp.*, 139 S.E. 314, 315 (Va. 1927), and *Black Rock Springs*, 40 S.E. at 30, to the effect “that negligent or malicious interference with percolating waters will result in liability,” are in conflict with the “‘absolute ownership’ theory” and thus suggest that the “Court is moving toward acceptance” of the reasonable use rule. Leslie J. Roos, Note, *Private Remedies to Abate Water Pollution in Virginia and New Theories in Environmental Law*, 13 WM. & MARY L. REV. 477, 485 (1971).