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WHAT YOU HAVE ALWAYS WANTED TO KNOW ABOUT RIPARIAN RIGHTS, BUT WERE AFRAID TO ASK†

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Stripped to its essentials the riparian rights doctrine means that the only ones who hold the right to use water are those who have access to it through ownership of land. This is such a simple and seemingly practical rule that, quite possibly, riparianism was widely characteristic of an early stage in the development of water law. But local rules and influences apart, 19th-century Europe (especially France and England) became the main source of the riparian rights doctrine in its present form in other areas of the world. Since Roman law, the oldest legal system to which the roots of European water law can be traced with any certainty, was also a product of Europe, the riparian rights doctrine prevalent in the world today is fully a European doctrine.

No doubt Roman water law was influenced by the still older and more highly developed systems of water law of the ancient fluvial civilizations. However, it is highly problematical that these systems were riparian, at least at the peak of the development.¹ Water from the rivers was conducted by elaborate canals over great distances and even if it could be proved that canal water was for the benefit solely of land abutting the canals, it would still have to be shown that the right to use the canal water was conveyed by ownership of these lands. Furthermore, to be truly riparian the system would have had to base rights to water on ownership of lands abutting the natural stream; but the canals were built by the government and water was conducted to non-riparian lands.² The strongest argument against the theory of a riparian character of the water systems of the great fluvial civilizations seems to be that water use in those lands was closely regimented and supervised and served as a basis for the most stringent autocracy.³

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1. Such a claim was made in a panel discussion by Mann, *Riparian Irrigation Rights as Declared and Enforced by the Courts and Protected by the Statutes of Texas*, June 10-11, 1954, in U. of Texas School of Law, Water Law Conferences, Proceedings 169-70 (1952, 1954).

2. See L. Teclaff, *The River Basin in History and Law* 15-25 (1967); Wittfogel, *Oriental Despotism* 109 (1957).

3. Wittfogel, *supra* note 2, at 47-48.

Roman law made a distinction between perennial streams and those which flowed only seasonally (torrential): the perennial streams were considered to be common or public.⁴ The right to use water of public streams, at least during the classical period of Roman law, was open to all unless it was inconsistent with navigation or some other public use.⁵ Since Roman law did not provide for involuntary servitudes of access, the system can to that extent be considered as riparian.⁶ In addition Roman law preferred to leave the condition of the water undisturbed. The *Digest* reproducing Ulpian's opinion clearly stated:

He shall be held by this interdict who causes the water to flow otherwise than as during the summer before, and it is said the Praetor specified the summer before, because the natural flow of a river is more certain in the summer than in the winter. . . .⁷

and, quoting Pomponius:

A water right whose origin is time out of mind has a duly constituted existence.⁸

RIPARIANISM IN SPAIN AND SPANISH AMERICA

Roman water law influenced the early Germanic codes in Spain, such as the *Lex Visigothorum*,⁹ and even more so the code of Alfonso X, compiled between 1256 and 1265, the so-called *Siete Partidas*.¹⁰ This code, following Justinian, considered water to be *res communis*, not susceptible of ownership.¹¹ It declared that rivers were public property regardless of their navigability¹² and as in Roman law, though this was not explicitly stated, a public character appeared to attach to perennial streams of a certain size.¹³ If a stream flowed through private land, riparians needed no permission to use the water or to carry out works.¹⁴

4. *Digest* 43.12.1.2.; 43.12.1.3 (translated in Ware, *Roman Water Law* 33 (1905) [hereinafter cited as Ware]).

5. *Digest* 43.12.2, Ware, *supra* note 4, at 37. In the Justinian period it became necessary to have authorization for any use of public waters. See 1 Spota, *Tratado de Derecho de Aguas* 186 (1941) [hereinafter cited as Spota].

6. *Digest* 8.3.1., 8.3.3.3, 8.3.33.1, Ware, *supra* note 4, at 103-04, 111-12. See also Spota, *supra* note 5, at 178, 248.

7. *Digest* 43.13.1.8., Ware, *supra* note 4, at 40.

8. *Digest* 43.20.3.4., Ware, *supra* note 4, at 109.

9. *Lex Visigothorum* o *Liber Iudicum*, summarized in Spota, *supra* note 5, at 232.

10. Translation of the rules of the *Siete Partidas* pertaining to water can be found in Ware, *supra* note 4, at 141-55.

11. *Partida* 3, tit. 28, l.3, Ware, *supra* note 4, at 141-42.

12. *Partida* 3, tit. 28, l.6, Ware, *supra* note 4, at 142.

13. Spota, *supra* note 5, at 245.

14. *Partida* 3, tit. 28, l.8, and *Partida* 3, tit. 32, l.18, Ware, *supra* note 4, at 143, 154. See also Spota, *supra* note 5, at 247.

In the subsequent development of feudalism, however, the right to use any water came to be derived more and more from royal or seigneurial authorization. In redistributing territories conquered from the Moors the Spanish kings retained the privilege to grant the use of water flowing through these lands (*aprovechamiento*). They then conceded this privilege to municipalities (*pueblos*) and to the territorial seigneurs, who in turn passed it on to the actual cultivators of the soil.¹⁵ In feudal Spain the occupier of riparian land, the ultimate user of water, generally required a royal or seigneurial authorization.¹⁶ This may account for a development of water law different from that in France, where riparians seem to have always been entitled to use the water of non-navigable streams.¹⁷ Abolition early in the 19th century of these seigneurial privileges did not re-establish the rights of riparians to freely use the waters flowing through their land; to the contrary, it strengthened administrative control over the disposition of water.¹⁸

Present-day Spanish water law requires an authorization for any use of public waters not accorded generally to the public, that is, all flowing surface waters except those which arise on private land as long as they remain on that land.

Once the surface flowing water that arises on private land leaves that land, it acquires a public character, but if such water subsequently flows through other private lands, whether in channels or not, the owners of those lands can make use of it.¹⁹ This may be considered a concession toward riparianism. Another riparian characteristic of Spanish water law is that riparian owners on a navigable stream may use water for irrigation, provided navigation is not impaired. But in contrast to French law, any use of non-navigable streams requires an authorization.²⁰

The Spaniards took their laws and institutions to the New World, but the water law that developed there showed even fewer characteristics of riparianism than in Spain itself. In their South American

15. See e.g., Gay de Montella, *Derecho Hidraulico Español*, no. 15 at 19, cited in Spota, *supra* note 5, at 255, n. 404:

En la parte del territorio que, en virtud de la distribución de la conquista, correspondió a los reyes, y que luego fueron otorgando a los pobladores por medio de la Carta Pueblas, allí se reservaban generalmente mucha parte de las aguas corrientes . . .

16. Spota, *supra* note 5, at 258.

17. 8 Pothier, *Traité de Droit du Domaine de Propriété* 41 (nouv. ed. 1807).

18. Spota, *supra* note 5, at 262.

19. Water Law of June 13, 1879, arts. 4, 5, 126 & ch. XI, (Ley de 13 de Junio, Sobre Propiedad, Uso y Aprovechamiento de Aguas), 59 *Boletín de la Revista General de Legislación y Jurisprudencia* 21 (1879).

20. *Id.* art. 184.

dominions the Spanish kings fell heir to Indian rulers such as the Incas in Peru, thus acquiring a dominion over waters more complete and undisputed than that which they had enjoyed in metropolitan Spain. All water, except that granted to towns or to individuals, was public or crown water at the disposition of the King for the benefit of all,²¹ and its actual distribution among users was in the hands of the viceroys and their councils (the *audiencias*).²²

The Spanish system in South America, then, was a permit system, and the crown was at liberty to make grants of water in any way it wanted both to riparians and non-riparians. This was recognized in a recent opinion of the Texas Court of Civil Appeals, disagreeing with an earlier dictum of the Texas Supreme Court which had held that Spanish and Mexican grants of riparian lands in Texas implied also the grant of riparian rights to use water.²³ South American countries like Mexico and Argentina, which remained faithful to the Spanish tradition in water law, never acquired riparianism. The riparian rights doctrine was introduced to South America chiefly through the influence of the Code Napoléon of France.

RIPIARIANISM IN FRANCE AND THE COUNTRIES INFLUENCED BY FRANCE

Feudalism in water law asserted itself earlier in France than in

21. The law of Charles V, promulgated in 1541, stated:

Mandamos que el uso de todos los pastos, montes, y aguas de las Provincias de las Indias, sea común a todos los vecinos de ellas, que ahora son, y después fueren para que los puedan gozar libremente y hacer junto a cualquier huiho sus cabañas. . . .

Las Leyes de Indias, 1889 (Don Miguel de la Guardia, comp.), Book 4, tit. 17, law 5.

Spota also states that in South America under Spanish dominion:

[L]as aguas sin distinción entre navegables o innavegables, es decir, *todas las aguas*, pertenecían a la Corona española . . . ellas, por su condición de elementos necesarios para la vida de los pueblos, estaban destinadas al común uso. . . .

Spota, *supra* note 5, at 275.

Water, whether navigable or not, could be owned by individuals only upon receiving it as a grant from the crown. A law of Charles IV in 1532 stated:

Habiéndose de repartir las tierras, aguas, abrevaderos y pastos entre los que fueren a poblar, los Virreyes o Gobernadores, que de Nos tuvieren facultad, hagan el repartimiento, con parecer de los Cabildos de las Ciudades, o Villas, temendo consideración o que los Regadores sean preferidos, si no tuvieren tierras y solares equivalentes. . . .

Las Leyes de Indias, 1889 (Don Miguel de la Guardia, comp.), Book 4, tit. 12, law 5.

22. See Spota, *supra* note 5, at 281, quoting an order of Philip II of 1563; also Dobkins, *The Spanish Element in Texas Water Law* 96 (1959).

23. The recent decision was *Texas v. Valmont Plantations*, 346 S.W.2d 853, 878 (Tex. Civ. App. 1961), in which the Court of Civil Appeals of Texas held, after reviewing the history of Spanish water law in South America, that Spanish grants of riparian lands did not carry with them riparian rights. The earlier decision was *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926).

Spain. By the beginning of the 6th century the Frankish kings in the areas which later became France exercised not only control but also ownership of all flowing waters.²⁴ Much of this power and title was passed down to the feudal lords. By the end of the 17th century, however, the crown had regained much of this control of the waterways from the feudal lords, at least as far as navigable rivers were concerned, for the Ordinance of 1669 reaffirmed the public character of, and royal control over, such rivers.²⁵ Consequently, riparian owners did not acquire any rights to the use of navigable waters through ownership of the abutting land. Where non-navigable streams were concerned, it was a different story. The kings did not acquire title to and control of such streams and they remained in the control, if not ownership, of riparian titleholders, or if there were no individual proprietors, in that of the territorial lords (*seigneurs justiciers*) through whose lands they flowed.²⁶ Although ownership of the waters and beds of these non-navigable and non-floatable streams remained unsettled after the Revolution,²⁷ the Code Napoléon explicitly confirmed to riparians the right to use the waters for irrigation.²⁸ However, other laws added the requirement that any use of the water by mechanical means, as well as any construction in the stream, needed an administrative authorization,²⁹ leaving to the riparian free use of water through simple cuttings in banks only.³⁰

These rights of riparians to free use of water in non-navigable streams have continued up until the present time, but were weakened in 1964. At this time the administration was given power to create a

24. Spota, *supra* note 5, at 192.

25. 3 Proudhon, *Traité du Domaine Public* 53 (2d ed. 1843).

26. *Id.* at 286; *see also* 8 Pothier, *Traité de Droit du Domaine de Propriété* 41 (nouv. ed. 1807), who writes:

À l'égard des rivières non navigables, elles appartiennent aux différents particuliers qui sont fondés en titre ou en possession pour s'en dire propriétaires dans l'étendue portée par leurs titres ou leur possession. Celles qui n'appartiennent point à des particuliers propriétaires, appartiennent aux seigneurs haut-justiciers dans le territoire duquel elles coulent.

27. 3 Proudhon, *supra* note 25, at 286. The ownership of non-navigable and non-floatable beds was given to riparians finally by the Law Concerning the Regime of Waters of Apr. 8, 1898, art. 3, [1898] *Bulletin des Lois*, pt. principale, t. 2 (12e sér.) 394 (Fr.).

28. Art. 644 of the Code Napoléon reads:

Celui dont la propriété borde une eau courante, autre que celle qui est déclarée dépendance du domaine public par l'article 538 au titre de la Distinction des Biens, peut s'en servir à son passage pour l'irrigation de ses propriétés. . . . Celui dont cette eau traverse l'héritage peut même en user dans l'intervalle qu'elle y parcourt, mais à la charge de la rendre, à la sortie de ses fonds, à son cours ordinaire.

29. Law Concerning the Decentralization of the Administration, Mar. 25, 1852, art. 4, table D, [1852] *Bull. des Lois* (10e sér.) 822, 828 (Fr.), and Law Concerning the Regime of Waters, Apr. 8, 1898, art. 40, [1898] *Bull. des Lois*, pt. principale, t. 2 (12e sér.) 400.

30. *See* 1 Colin et Capitant, *Cours Élémentaire de Droit Civil Français* 761 (1931). *See also* Code Rural, art. 106 (Daloz 1965).

category of so-called mixed streams in which the bed still belongs to the riparian owners, but the right to use and dispose of water belongs to the state if such a stream were previously non-navigable; however, if such streams were previously non-navigable, riparian rights exercised at the time when the stream was reclassified are preserved.³¹ Additional power was given to control waters in special zones in which the public interest requires such measures.³²

French law had a far-reaching influence on other systems of water use both in Europe and elsewhere. Italy not only relied heavily on the Code Napoléon, but indirectly helped to spread the Code's influence overseas, notably to Venezuela.

As in other parts of western Europe, the feudalism of the Middle Ages replaced Roman law in Italy and most waters passed into the dominion and ownership of feudal lords. However, in the cities, which played a more important political role there than elsewhere in Europe, the concept of public waters was preserved and even strengthened, since major streams were considered public regardless of their navigability.³³ Venice, impelled also by scarcity, went even further and had already in the 16th century made all its waters public, requiring an authorization for their use.³⁴ The Venetian example was followed in some 19th-century codes such as that of Sardinia of 1838, which declared public both navigable and non-navigable streams. On the other hand the Code of Naples of 1816 adopted the French notion of navigability as the basis for distinction between public and non-public streams.³⁵

The 1865 Civil Code of the newly united Kingdom of Italy struck a compromise. In Article 543 it allowed a riparian owner to use a non-public stream for irrigation and industry as long as he restored the stream, if diverted, to its old course upon leaving his land. Like the Code Napoléon, it gave the courts power in Article 544 to decide water controversies on the basis of balancing the interests of agriculture and industry against the interests of private property. But in Article 427 it departed from the French model in that it included in public waters both navigable and non-navigable streams (*flumini e torrenti*), and this caused a controversy in the Italian legal literature as to whether torrents meant, as in Roman law, non-perennial streams or only the smaller perennial ones.³⁶

The Law of March 20, 1865 concerning public works charac-

31. Law No. 64-1245, Dec. 16, 1964, art. 35-39, Code Rural, Code Forestier, Addendum 12 (Dalloz 1965).

32. *Id.* art. 46-47.

33. Spota, *supra* note 5, at 217.

34. Caponera, *Water Law in Italy* 1 (1953).

35. Spota, *supra* note 5, at 225-26.

36. *Id.* at 463-64.

terized as public not only rivers and torrents, but also ditches, creeks, and public drains, and required a permit for the use of all public waters.³⁷ This only added to the difficulty of determining the extent of a riparian owner's rights. By Article 543 of the Civil Code of 1865, he was allowed to use waters other than those characterized as public in Article 427, that is, *flumini* and *torrenti*. But by the law of March 20, 1865, he was supposed to obtain a permit for waters which the Civil Code permitted him to use without authorization. The uncertainty was not removed until the publication in 1942 of the new Civil Code, which in Article 910 simply excepts public waters from riparian use.³⁸ These are spelled out in Article 822 as rivers, torrents, and other waters that have been defined as public by special laws.³⁹ Since the Testo Unico of 1933 consolidated all public waters in one category as waters of public use,⁴⁰ in Italian law, the riparian can use without concession waters flowing in natural channels that cannot be used to satisfy public or general interests. The use of this water on non-riparian land has been the subject of controversy in Italian (as it is in United States) legal literature, and views have been expressed both for and against according the right to use waters on lands that once were riparian but that eventually, through alienation, have become separated from the stream.⁴¹

On the South American continent several Spanish-speaking republics borrowed their riparianism from the Code Napoléon. Chile is an important example of this influence because it served as a model for the water laws of Columbia and Uruguay in turn.⁴² In Chile, moreover, the scope of riparianism was expanded; until 1951 riparian owners could use all flowing waters for domestic, agricultural, and even industrial purposes.⁴³ Even though flowing water in natural

37. La Ley de Obras Publicas de 1865, arts. 102, 132, Raccolta Ufficiale delle Leggi e dei Decreti del Regno d'Italia 519, at 544 and 553 (1865).

38. Codice Civile, 1942, art. 910, reads:

Il proprietario di un fondo limitato o attraversato da un'acqua *non pubblica* che corre naturalmente e sulla quale altri no ha diritto pruo, mentre essa trascorre, farne uso per l'irrigazione dei suoi terreni e per l'esercizio delle sue industrie, ma deve restituire le colature e gli avanzi al corso ordinario.

39. *Id.* art. 822, reads:

Appartengono allo stato e fanno parte del demanio pubblico il lido del mare, la spiaggia, le rade e i porti; i fiumi, i torrenti, i laghi e le altre acque definite pubbliche dalle leggi in materia; le opere destinate alla difesa nazionale.

40. Testo Unico, Regio Decreto No. 1775, Dec. 11, 1933, art. 1, 5 Raccolta Ufficiale Delle Leggi e Dei Decreti del Regno d'Italia (complimentare) 30 (1933).

41. Spota, *supra* note 5, at 581.

42. U.N., Los Recursos Hidráulicos de América Latina, 1 Chile (E/CN.12/501) 9 (1960); Cano, Las Leyes de Aguas en Sudamérica 40, 57 (1956).

43. Código Civil, 1855, art. 834 (Edición Imprenta y Litografía Universo S.A.-Valparaiso, 1940).

channels was considered public,⁴⁴ for all practical purposes streams belonged to the riparians, who could sell the water they did not need to whomever they wished.⁴⁵ The Water Code of 1951 changed this situation to the extent that it requires a concession for all new uses, whether riparian or not.⁴⁶ Without concession riparians can exercise only rights acquired under previous legislation, which the Code recognizes.⁴⁷ Very likely, this will mean the gradual elimination of riparianism.

Colombia, which based its Civil Code on Chile's, has retained far more of the riparian system. Here, as in Chile prior to 1951, riparians can use all public waters without concession and can sell what they do not need.⁴⁸ Their position was weakened, however, when the government acquired the right to grant public waters to non-riparians.⁴⁹

Uruguay also retains a great deal of riparianism and follows closely the French example in that it puts only navigable and floatable waters in the public domain.⁵⁰ Non-navigable and non-floatable streams are left to the use of riparian owners in accordance with laws and regulations.⁵¹

In Venezuela, whose Civil Code in its provisions concerning water was originally influenced by the Italian Civil Code of 1865,⁵² both navigable and non-navigable streams are in the public domain and a permit is generally required for their use.⁵³ The riparian owners are explicitly entitled to use the water of non-public streams, that is, *arroyos* which are normally dry but become transformed into temporary watercourses after heavy rains.⁵⁴ Though the waters to which riparian rights pertain are as narrowly defined as in Italy, since the upper parts of most river basins are formed by innumerable small *arroyos*, most of the non-navigable streams, as in France, came under

44. *Id.* art. 595.

45. Cano, *supra* note 42, at 43.

46. Código de Aguas, 1951, arts. 23, 33, Ley No. 9.909, 38 Recopilación de Leyes por Orden Numérico 234 (Chile 1951).

47. *Id.* art. 18 (1).

48. Código Civil, 1887, art. 892 (Librería Colombiana 1948); Cano, *supra* note 42, at 40.

49. Decree Law No. 1381, July 1940, art. 12. Text given in Holguín, B.U., Las Aguas Ante el Decreto Positivo Colombiana 19 (1942); also cited and discussed in Cano, *supra* note 42, at 42.

50. Código Civil, 1868, as amended in 1893 and 1914, art. 478 (Ed. Pomoli, 4th ed., Montevideo, Uruguay, 1958).

51. *Id.* arts. 564-65.

52. Spota, *supra* note 5, at 1050.

53. Código Civil, 1942, art. 539 (Editorial Almeda, Cedillo, Caracas, Venezuela, 1956). See also U.N., Los Recursos Hidráulicos de América Latina, II, Venezuela (E/CN.12/593/Rev.1) 46 (1962).

54. Código Civil, 1942, arts. 652, 682 (Venez.).

the riparian system. Moreover, the rights of the riparians are enlarged implicitly by the provisions of the Civil Code that permit any landowner, whether riparian or not, to make cuts in the banks of public streams and to conduct water for his agricultural and industrial uses, as long as this does not cause injury to those who hold preferred rights.⁵⁵ Riparians, naturally, are in a better position to profit by this provision than other landowners.

The rights of Venezuelan riparians were somewhat curtailed, however, by the Agrarian Reform Act of 1960. That act limited the amount of water that can be taken to the amount needed for rational use on the lands through which streams flow or to which they belong.⁵⁶

In Asia, French influence is seen in countries such as Cambodia, Laos, and South Vietnam, which were part of French Indochina. In those countries navigable and floatable streams are in the public domain, their use requiring authorization, whereas the non-navigable and non-floatable streams can be used by the riparians without authorization as in France.⁵⁷

On the North American continent in Quebec, which once belonged to France, the Civil Code follows the French Civil Code and allows riparians to use non-navigable and non-floatable streams without authorization.⁵⁸ The riparian rights doctrine in the United States may also owe its crystallization to French influence.⁵⁹ It is interesting to note by way of contrast, however, that in those parts of North Africa and the Middle East that came under French rule, French riparianism never took root. In these areas authorization systems for any use of any streams were rapidly introduced in the 19th and 20th centuries, thus supporting the argument that riparianism is suitable only for countries with an abundant water supply.⁶⁰

55. *Id.* art. 653.

56. Act of 1960, art. 42; text and English translation in 9 F.A.O., Food and Agricultural Legislation, No. 2 (1960).

57. U.N. Economic Comm'n for Asia and the Far East, Water Legislation in Asia and the Far East, pt. 2 (ST/ECAFE/SER.F/35) 46, 100-01, 129 (1968).

58. Civil Code of the Province of Quebec, amended up to and including 13-14 Elizabeth II, arts. 400 and 503 (Wilson & Lefleur 1966). In other parts of Canada the riparian doctrine imported by the British was curtailed. In Saskatchewan and Alberta it was reduced by the Irrigation Act of 1906, Can. Rev. Stat. ch. 61, § 11 (1906), to use for domestic purposes, and similarly in British Columbia, by the Water Act of 1909, Stat. of the Province of British Columbia, ch. 48, § 4 (1909).

59. See Wiel, *Origin and Comparative Development of the Law of Watercourses in Common Law and in the Civil Law*, 6 Cal. L. Rev. 245 (1918); cf. Maass & Zobel, *Anglo-American Water Law, Who Appropriated the Riparian Doctrine?* 10 Public Policy 109 (1960).

60. Decret No. 18779 Règlementant le Régime des Eaux en Afrique Occidentale Française, Mar. 5, 1921, 13 Bull. des Lois, n. s., pt. principale, le section 883 (1921); Dahir

RIPARIANISM IN ENGLAND AND THE UNITED STATES,
AND ITS SPREAD TO AUSTRALIA AND AFRICA

Generally, throughout continental Europe, the development of centralized political regimes contributed to the exclusion of navigable streams from the riparian rights system. On the other hand, in England and in the United States, riparian rights attached to navigable and non-navigable streams without distinction subject to the protection of navigation. The reasons for this probably lay in: 1) the comparative weakness of the central government in the 19th century, when the riparian rights doctrine finally crystallized in both countries; 2) the insignificant threat to navigation posed by that doctrine in countries with abundant water, and with, at that time, few large developed, consumptive uses of water; and 3) the influence of early 19th-century jurists, especially Kent and Story, who contributed significantly to the shaping of this doctrine and who made no distinction between navigable and non-navigable streams.⁶¹ The fact that they did not make this distinction weakens the widely accepted thesis that the riparian rights theory was borrowed from France by these American jurists and then traveled from the United States to England, where it displaced the short-lived prior appropriation doctrine that had been installed under the influence of Blackstone's *Commentaries*.⁶²

It has been argued since Wiel's article in 1918 in which he propagated the thesis of a French origin of the doctrine, that the elements of riparianism were inherent in medieval English common law.⁶³ Most likely, the riparian doctrine or its ingredients came to the United States as part and parcel of the common law, and the French influence was merely incidental, helping to give it a more precise legal expression.⁶⁴

Thanks to these favorable circumstances, the riparian rights doctrine became most fully developed in both these countries, lasting in full bloom in England until the 1960's, when it was modified and curtailed by a permit system,⁶⁵ but still displaying in the United

Sur le Régime des Eaux, Aug. 1, 1925, art. 12, *Juris-Classeur Marocain*, 1920-34 (Aug. 1, 1925).

61. See 3 Kent, *Commentaries on American Law* *440; and Story's Opinion in *Tyler v. Wilkinson*, 24 F. Cas. 472, 474 (C.C.D.R.I. 1827).

62. See Wiel, *supra* note 59, at 342.

63. For the common law origins of the riparian doctrine, see Maass & Zobel, *supra* note 59, and Lauer, *The Common Law Background of the Riparian Doctrine*, 28 Mo. L. Rev. 60 (1963).

64. As pointed out by Busby, *American Water Rights Law*, 5 So. C.L.Q. 106 (1952), the influence of French law on Kent can be readily ascertained (see 3 Kent, *Commentaries*, *supra* note 61, at *439 *et seq.*), but it is more difficult to trace the sources of Story's formulation of the riparian rights doctrine.

65. Water Supply Act, 1963, c. 38.

States a great deal of vigor.⁶⁶ In the United States it was succinctly described by Kent in his *Commentaries* as follows:

All that the law requires of the party, by or over whose land a stream passes, is, that he should use the water in a reasonable manner, and so as not to destroy, or render useless, or materially diminish, or affect the application of the water by the proprietors above or below on the stream.⁶⁷

Similarly, when the riparian doctrine crystallized in mid-19th-century England, Lord Parke thus defined the rights of the riparian proprietor in *Embrey v. Owen*.⁶⁸

The right to have the stream to flow in its natural state without diminution or alteration is an incident to the property in the land through which it passes; but flowing water is publici juris, not in the sense that it is a bonum vacans, to which the first occupant may acquire an exclusive right, but that it is public and common in this sense only, that all may reasonably use it who have a right of access to it, that none can have any property in the water itself, except in the particular portion which he may choose to abstract from the stream and take into his possession. . . .⁶⁹

In both countries it was recognized that riparian owners have a right to the reasonable use of the water flowing past their lands. However, both in England and in the United States, the courts developed *a priori* criteria to test the reasonableness of water use. The body of these criteria came to be known as the natural flow version of the riparian rights doctrine.

First of all, the use of water had to be on or in connection with riparian land. In *Attwood v. Llay Main Collieries, Ltd.*,⁷⁰ the English

66. It has been replaced, however, in the eastern United States by a permit system in Maryland (Md. Code Ann. art. 96A, § 11 (Supp. 1969)); in Minnesota (Minn. Stat. Ann. § 105.41 (Supp. 1969)); in Florida (Fla. Stat. Ann. § 373.100 (1960)); and in Iowa (Iowa Code Ann. § 455A.26 (Supp. 1969)). Vestiges of riparianism are left in those states in that they exempt domestic uses from licensing. Mississippi, on the other hand, switched to a prior appropriation system (Miss. Code Ann. § 5956-04 (Supp. 1968)), and gave the riparians priority only to perfect their right through new procedures.

West of the Mississippi in several states, the riparian doctrine has either never been introduced or has been repudiated as not suitable for climatic conditions in the American West; thus, in *Reno Smelting, Milling and Reduction Works v. Stevenson*, 20 Nev. 269, 276, 282, 21 P. 317, 321 (1889), the Nevada Supreme Court thought that the state had adopted only so much of the English common law as was suitable for conditions in Nevada.

67. 3 Kent Commentaries, *supra* note 61, at *440.

68. 155 Eng. Rep. 579 (Ex. 1851).

69. *Id.* at 585.

70. Ch. 444, 458 [1926]:

The law on the subject of the right of a riparian owner to take and use the water to which his tenement gives him access is exhaustively dealt with and clearly stated by the House of Lords in *Swindon Waterworks Co. v. Wilts and Berks Canal Navigation Co.* [L.R. 7 H.L. 697] and in *McCartney v.*

Court of Chancery stated unequivocally that non-riparian use was wrong under any circumstances. The Georgia Supreme Court in *Robertson v. Arnold*⁷¹ enjoined the diversion of waters of a non-navigable stream outside riparian land even though the riparian owner did not make use of that water, and the New York Court of Appeals in *Neal v. City of Rochester*⁷² prohibited such diversion even though the city compensated for the diversion by replacing from another source the amount it was diverting.

When water is used in connection with riparian land, then a distinction is made between natural or domestic uses (that is, uses of water for drinking, washing, cleaning and the watering of livestock of the riparian owner and his family) and other uses, such as in industry and irrigation. Domestic uses are declared in advance to be reasonable, and riparians, when supplying needs of the family dwelling, may consume as much water as is necessary without regard to the needs of lower neighbors.⁷³ Other uses are unreasonable if they interfere with the existing uses of other riparians. In some jurisdictions they may not interfere even with future or potential uses, for riparians are entitled to receive the flow of a stream undiminished and unaltered, and if they were not permitted to enjoin the use of water which they do not need, but to which they are entitled, such use might be considered adverse and ripen into a right.⁷⁴

It would seem that in *Tyler v. Wilkinson*,⁷⁵ Justice Story con-

Londonderry and Lough Swilly Ry. Co. [(1904) A.C. 301]. For the purpose of this judgment, it is sufficient to state that a riparian owner may take and use the water for ordinary purposes connected with the riparian tenement (such as domestic purposes or the wants of his cattle), and that in the exercise of his right, he may exhaust the water altogether; that he may also take and use the water for extraordinary purposes, if such user be reasonable and be connected with the riparian tenement, provided that he restores the water so taken and used substantially undiminished in volume and unaltered in character; and lastly, that he has no right whatever to take the water and use it for purposes unconnected with the riparian tenement.

71. 182 Ga. 664, 671, 186 S.E. 806, 809 (1936).

72. 156 N.Y. 213, 50 N.E. 803 (1898).

73. For the United States, see, e.g., *Evans v. Merriweather*, 4 Ill. (Scam.) 491, 495 (1842); *Harvey Realty Co. v. Borough of Wallingford*, 111 Conn. 352, 359, 150 A. 60, 63 (1930); *Palmer v. Leighton*, 280 Pa. 492, 499, 124 A. 747, 749 (1924). For England, see *McCartney v. Londonderry and Lough Swilly Rly. Co., Ltd.*, [1904] A.C. 301, 306-07.

74. Farnham argues, however, that if the riparian has no cause of action, then the prescription will not run against him. Farnham, *The Improvement and Modernization of the New York Laws Within the Framework of the Riparian System*, 3 Land & Water L. Rev. 377, 383 n. 24 (1968).

75. 24 F. Cas. (C.C.D.R.I. 1827) 472, 474:

When I speak of this common right, I do not mean to be understood as holding the doctrine that there can be no diminution whatsoever, and no obstruction or impediment whatsoever, by a riparian proprietor, in the use of the water as it flows; for that would be to deny any valuable use of it. There may be, and there must be allowed of that, which is common to all, a reason-

sidered only such uses as caused harm, but, for example, in *Hendrick v. Cook*,⁷⁶ the Georgia Supreme Court in 1848 argued that any invasion of riparian rights was itself injury, even if it did not cause damage. In this case which concerned the flooding of unused mill-shoals whose future usefulness might have been impaired, only damages were sought. In *Clinton v. Myers*,⁷⁷ however, the New York Court of Appeals held that a lower riparian who did not sustain any injury could enjoin a mill owner from damming the surplus water of the stream in the wet season for future power use and releasing it when not needed in summer. The court said:

But it is insisted that this detention does no material injury to the defendant, but that, on the contrary, his power is made more valuable by this use of water. The answer to this is, that he must be the judge whether he will accept of any such benefit. He is entitled to the water and to its use for sawing in the Spring, according to the natural flow, and is not obliged to accept and use it for that or any other purpose during the drought of Summer.⁷⁸

Because riparian land plays such a vital role in the riparian rights doctrine, it is of great importance, both theoretical and practical, to define it with precision. Generally, in English common law, it must abut on the stream, but it does not have to include ownership of part of the streambed.⁷⁹ On tidal streams, the contact between land and water must be at ordinary high tide. It seems also that, to be riparian, the land must be of reasonable size and have a reasonably large water frontage. In *Attwood v. Llay Main Collieries Ltd.*,⁸⁰ the court held that:

The proposition that every piece of land in the same occupation which includes a portion of river bank and therefore affords access to the river is a riparian tenement is, in my opinion, far too wide. In order to test it, let me take an extreme case: nobody in their senses would seriously suggest that the site of Paddington Station and Hotel is a riparian tenement, although it is connected with the river Thames by a strip of land many miles long, nor could it reasonably be suggested that the whole of a large estate of, say, 2000 acres was a riparian tenement, because a small portion of it was bounded by a stream.⁸¹

able use. The true test of the principle and extent of the use is whether it is to the injury of the other proprietors or not.

76. 4 Ga. 241, 251-52 (1848).

77. 46 N.Y. 511 (1871).

78. *Id.* at 520.

79. *Lyon v. Fishmonger's Co.*, [1875] 1 A.C. 662; see generally, Wisdom, *The Law of Rivers and Watercourses* 71-72 (1962).

80. [1926] Ch. 444.

81. *Id.* at 459.

In the United States, rules defining riparian lands are not uniform.⁸² Justice Story, who contributed so much to the crystallization of riparian doctrine, held in *Webb v. Portland Mfg. Co.*,⁸³ that the ownership of the bank of a stream entitled the owner to exercise riparian rights. This corresponded to the rules which developed or took final shape later in England.⁸⁴ A similar definition of riparian land as land abutting a stream was adopted by the New York Court of Appeals,⁸⁵ and the Connecticut Supreme Court in *Harvey v. Borough of Wallingford*⁸⁶ declared that a riparian proprietor is the owner of land which is bounded by a watercourse. In the same vein the Georgia Supreme Court made the exercise of riparian rights dependent on ownership of the bank (*ripa*), explicitly divorcing it from ownership of the streambed,⁸⁷ and the Supreme Court of Alabama distinguished and completely separated riparian rights from ownership of the streambed.⁸⁸

On the other hand, in New Jersey, lands bordering on tidal streams whose beds belong to the state are not riparian.⁸⁹ Similarly, in the State of Washington the owner of abutting land on a navigable stream has no riparian rights.⁹⁰

In Wisconsin, the Supreme Court in *Allen v. Webber*⁹¹ held that when ownership was limited to the bank of a non-navigable stream, the owner had no right to gather ice, and the Supreme Court of Arkansas, in a much more recent case, likewise denied riparian rights when the ownership of the upland did not embrace a portion of the bed of a non-navigable stream.⁹² When this streambed test is applied to navigable streams, it denies the upland a riparian character altogether because beds of navigable streams, as a general rule, belong to the states and not to upland owners.⁹³ When applied to non-

82. See generally, Ziegler, *Water Use Under Common Law Doctrine*, in *Water Resources and the Law* 49 (1958); and 1 Farnham, *The Law of Waters and Water Rights* 306-17 (1904).

83. 29 F. Cas. 506, 510 (C.C.D.M. 1838).

84. See note 79 *supra*.

85. *In re. West 205th St.* in *City of New York*, 240 N.Y. 68, 72, 147 N.E. 361, 362 (1925).

86. 111 Conn. 352, 358, 150 A. 60, 63 (1930).

87. *Rome Ry & Light Co. v. Loeb*, 141 Ga. 202, 207, 80 S.E. 785, 787 (1914).

88. *Mobile Dry-Docks Co. v. City of Mobile*, 146 Ala. 198, 203-09, 40 So. 205, 207-09 (1906). The meaning of riparian land as bordering on a stream is discussed at length in this case, with citations to earlier cases.

89. *Bailey v. Driscoll*, 34 N.J. Supp. 228, 246, 112 A.2d 3, 12 (1955).

90. *State ex rel. Ham, Yearsley & Ryrice v. Superior Court*, 70 Wash. 442, 451-52, 126 P. 945, 947-48 (1912).

91. 80 Wis. 531, 50 N.W. 514 (1891).

92. *Kilgo v. Cook*, 174 Ark. 432, 435, 295 S.W. 355 (1927). More cases are given in 5 Powell, *Law of Real Property* 372 (1968).

93. See, e.g., *Barney v. City of Keokuk*, 94 U.S. 324, 338 (1876), and see generally, 1 Clark, *Waters and Water Rights* 256 (1967).

navigable streams it has less far-reaching consequences because land under such streams belongs to the riparian owners, not to the state,⁹⁴ thus making the upland riparian as long as it is legally connected with the streambed. Recognizing the harshness of the test, the *Restatement of Torts* would generally limit its application to non-navigable streams and to those situations where state laws permit of private property under navigable waters, whereas on all other navigable streams the fact of bordering on the water would itself convey a riparian character.⁹⁵

In addition to the requirement that riparian land must abut the stream or comprise the bed of the stream, it is generally accepted that the riparian character is confined to land owned in one piece and contained within the watershed of the stream.⁹⁶ Strips of land detached from the abutting land or separated from it by someone else's property lose their riparian character unless they also border on the stream, and strips added to it do not, as a rule, acquire such character.⁹⁷ The rule, however, is not quite uniform, and in California, when riparian rights are explicitly reserved for a strip detached from the riparian land, though not abutting on the stream, the strip retains its riparian character.⁹⁸ In Oregon, contrariwise, riparian rights extend to the added parcels.⁹⁹

Obviously the riparian rights doctrine in its natural flow version fully protected rural domestic uses. But it was not satisfactory in protecting consumptive uses such as irrigation, probably because it crystallized in a humid country where such irrigation as then existed

94. See, e.g., *Tyler v. Wilkinson*, 24 F. Cas. 472 (C.C.D.R.I. 1827). See also 1 Clark, *supra* note 93, at 261, n. 87, and cases cited therein.

95. *Restatement of Torts* § 843 states:

The term "riparian land," as used in the *Restatement* of this subject, is a parcel of land which includes a part of the bed of the watercourse or lake or which borders upon a public watercourse or lake, the bed of which is in public ownership.

96. See *Ziegler*, *supra* note 82, at 56-61, and 2 *Farnham*, *supra* note 82, at 1571-73.

97. *Id.*

98. *Rancho Santa Marguerita v. Vail*, 11 Cal. 2d 501, 538-39, 81 P.2d 533, 552 (1938). But in Michigan the decision of the Court of Appeals that upheld this doctrine (*Thompson v. Enz*, 2 Mich. App. 404, 406-07, 140 N.W.2d 563, 564 (1966)), was reversed by the Supreme Court, which stated bluntly:

We hold that riparian rights are not alienable, severable, divisible or assignable apart from the land which includes therein or is bounded by a natural water course.

Thompson v. Enz, 379 Mich. 667, 686, 154 N.W.2d 473, 483 (1967).

This opinion is also interesting because it reviews authorities for, and clearly supports, the proposition that riparian rights do not apply to artificial watercourses. *Id.* at 677-82, 154 N.W.2d at 480-81.

99. *Jones v. Conn*, 39 Ore. 30, 39, 64 P. 855, 858 (1901). *Ziegler*, *supra* note 82 at 61, asserts that this is an exception and that, as a rule, riparian rights do not attach to added tracts of land.

was unlikely to cause substantial diminution of flow.¹⁰⁰ Therefore, the natural flow doctrine was applied consistently in England, but less so in the United States, where the courts tested reasonableness by weighing what they considered to be the relevant factors in each case, such as size and capacity of the stream, type of activity and its suitability for the stream, and benefit to the user.

In 1883 the Minnesota Supreme Court in *Red River Roller Mills v. Wright*¹⁰¹ attempted a general definition or formula of relevant factors. The court said:

In determining what is a reasonable use, regard must be had to the subject-matter of the use; the occasion and manner of its application; the object, extent, necessity, and duration of the use; the nature and size of the stream; the kind of business to which it is subservient; the importance and necessity of the use claimed by one party, and the extent of the injury to the other party; the state of improvement of the country in regard to mills and machinery, and the use of water as a propelling power; the general and established usages of the country in similar cases; and all the other and ever-varying circumstances of each particular case bearing upon the question of the fitness and propriety of the use of the water under consideration.¹⁰²

However, in this version of the riparian rights doctrine, which became known as the "reasonable use doctrine," *a priori* criteria were not altogether abandoned, and the presumption that use outside riparian land is unreasonable was largely retained, with the difference that now such use had to cause actual injury to the riparian owner in order to be declared unreasonable and prohibited.

The Texas Supreme Court's decision in *Texas Co. v. Burkett*¹⁰³ well illustrates this rule. In this case, which concerned the lawfulness of diversion and sale of water of the Leon River, the court stated:

It is, however, the rule, which we think applicable in this state, that the riparian owner has the right to divert riparian water to non-

100. See, e.g., the opinion of Lord Cairns in *Swindon Waterworks Co. v. Wilts and Berks Canal N. Co.*, L.R. 7 H.L. 697, 704:

Under certain circumstances, and provided no material injury is done, the water may be used and may be diverted for a time by the upper owner for the purpose of irrigation. That may well be done; the exhaustion of the water which may thereby take place may be so inconsiderable as not to form a subject of complaint by the lower owner, and the water may be restored after the object of irrigation is answered, in a volume substantially equal to that in which it passed before.

101. 30 Minn. 249, 15 N.W. 167 (1883).

102. *Id.* at 253, 15 N.W. at 169. See also Hanks, *Law of Water in New Jersey*, 22 Rutgers L. Rev. 621, 630 (1968).

103. 117 Tex. 16, 296 S.W. 273 (1927).

riparian lands, where water is abundant and no possible injury could result to lower riparian owners.¹⁰⁴

In *Stratton v. Mt. Hermon Boys' School*,¹⁰⁵ in which the issue was the school's diversion of water for domestic use outside riparian land, the Massachusetts Supreme Court emphasized that in the case of riparian use lawfulness of interference with other riparian use would be determined by reasonableness of the conduct in the light of all circumstances. In the case of diversion outside riparian land, injury alone determines lawfulness. The court held:

The use of the water flowing in a stream is common to all riparian owners. . . . Such use may result in some diminution, obstruction or change in the natural flow of the stream, but the interference cannot exceed that which arises from reasonable conduct in the light of all circumstances, having due regard to the exercise of the common right by other riparian owners. . . .

. . . There are numerous expressions to the effect that the rights of riparian ownership . . . cannot be stretched to include uses reasonable in themselves, but upon and in connection with nonriparian estates. . . . These principles, however, are subject to the modification that the diversion, if for a use reasonable in itself, must cause actual perceptible damage to the present or potential enjoyment of the property of the lower riparian proprietor before a cause of action arises in his favor.¹⁰⁶

In some instances, however, courts went still further and indicated that injury to riparian use alone may not be sufficient to make non-riparian use unlawful. Thus, in *Gillis v. Chase*¹⁰⁷ a New Hampshire case decided in 1892, even though the diversion of water to non-riparian land did no injure the actual riparian use, the court made a broad statement expressing the view that non-riparian uses are entitled to the same consideration in every respect as is given to riparians. The court said:

The English rule is understood to be that "a riparian owner cannot, except as against himself, confer on one who is not a riparian owner any right to use the water of the stream; and any used [*sic*] by a nonriparian proprietor, even under a grant from a riparian owner, is unlawful." . . . But this rule is otherwise in this jurisdiction, for it is held here to be a question of fact whether the use of the water made by a riparian owner for his own purposes or for sale to others, is, under all the circumstances, a reasonable use.¹⁰⁸

104. *Id.* at 25, 296 S.W. at 276.

105. 216 Mass. 83, 103 N.E. 87 (1913).

106. *Id.* at 85-87, 103 N.E. at 88.

107. 67 N.H. 161, 31 A. 18 (1892).

108. *Id.* at 162, 31 A. at 19.

Similarly, in *Lawrie v. Silsby*¹⁰⁹ in which the injury was to non-riparian use by pollution, the Vermont Supreme Court in 1904 considered non-riparian use on a par with riparian use, stating:

This is the rule in New Hampshire, where they repudiate the English doctrine, and hold it to be a question of fact whether the use of the water made by a riparian owner for his own purposes, or for sale to others for non-riparian purposes, is, in all the circumstances, a reasonable use. . . . Here the taking of the water by the orators is lawful and beneficial, and does not alter the rights of the defendants, nor do they any actual and perceptible damage. Therefore their use must be deemed reasonable as to the defendants. But the use the defendants are making of the water is bound to damage the orators to some extent, and therefore it cannot be said, as matter of law, in the circumstances, to be a reasonable use. Hence it is a question of fact for the master. . . .¹¹⁰

In English law changes designed to afford better administrative control over the disposition of water have been introduced by statutes. Initially, licensing was introduced for the abstraction of groundwater in areas that were considered in need of protection,¹¹¹ and then the Water Supply Act of 1963 brought about a comprehensive scheme of licensing for most waters.¹¹² But the new English system has retained a great deal of common law riparianism. Provided they pertain to riparian land, it exempts from licensing the domestic uses of riparians and agricultural uses, with the exception of spray irrigation.¹¹³ The determination of what constitutes riparian land has been shifted, however, from the courts to adminis-

109. 76 Vt. 240, 56 A. 1106 (1904).

110. *Id.* at 252-53, 56 A. at 1108-09. *Gillis v. Chase*, 67 N.H. 161, 31 A. 18, and the *Lawrie* case are the two cases usually cited as evidence of full application of the reasonableness test to non-riparian uses. However, they stand as an exception rather than as a general rule. See *Ziegler, supra* note 82 at 69, and 5 Powell, *Law of Real Property* 376 (1970).

111. Water Act of 1945, 8 & 9 Geo. 6, c. 42, § 14.

112. Water Resources Act 1963, c. 38, § 23(1):

[N]o person shall abstract water from any source of supply in a river authority area, or cause or permit any other person so to abstract any water, except in pursuance of a license under this Act granted by the river authority and in accordance with the provisions of that license.

According to § 2, source of supply is defined in the Act as inland water and any underground strata, and according to § 135, inland water embraces all natural or artificial streams, all lakes and ponds that discharge into streams or other lakes or ponds (individual lakes or groups of lakes that do not discharge into streams or other groups of lakes are excluded and can be private waters. § 2), as well as channels, creeks, bays, estuaries, and arms of the sea which do not qualify as streams, lakes or reservoirs. According to the same section underground strata mean strata subjacent to the surface of any land, and water there contained, with the exception mainly of water in sewer and drainage works.

113. *Id.* § 24(2).

trative agencies (the River Boards). And the land on which a riparian can use water may differ from the common-law definition of riparian land.¹¹⁴

Riparians need licenses for spray irrigation and industrial purposes, but they are in a privileged position to obtain them, since with the exception of persons who were given power to acquire land compulsorily,¹¹⁵ licenses can be accorded only to occupiers of land contiguous to the body of water in question, *i.e.*, riparian owners.¹¹⁶ Further protection to riparians is afforded by the recognition of acquired rights (use of water for at least five years before 1965), which entitle the user to obtain a license as of right.¹¹⁷

The present system in England may best be termed riparianism under license. It endeavors to correct the wastefulness of riparianism through licensing to ensure that water is used for beneficial purposes.

The British not only helped to establish the riparian rights doctrine in North America,¹¹⁸ but on other continents as well. In Australia it has been greatly curtailed, but in South Africa and Southern Rhodesia it still flourishes, though in modified form.

Victoria was the first among the Australian states to restrict the riparian system.¹¹⁹ It vests all rights to the use and flow and control of water in any watercourse in the Crown, and the riparians are left only with a right to divert water for domestic and stock-watering purposes. All other diversions have to be licensed by a state agency,

114. *Id.* § 55(2).

If it appears to the river authority that the occupier is entitled, as against other occupiers of land contiguous to the inland water in question, to abstract water therefrom for use on part of the holding [*i.e.*, the holding which includes contiguous land], but is not so entitled to abstract water for use on other parts of the holding, (a) the river authority may serve on him a notice in writing specifying the first-mentioned part of the holding, and (b) subject to the following provisions of this section, the notice shall have effect as a determination under this section, and the part specified in the notice shall be the relevant part of the holding for the purposes of the proviso to section 24(2) of this Act.

115. Qualification added by the Water Resources Act of 1968, c. 35, § 1(2). This does not seem to have changed the riparian character of the English system preserved by the Act of 1963, since the person entitled to compulsory acquisition of land does not derive that power from the fact of being granted a license to abstract water, but that license is given to him because he has or can have this power. The right of eminent domain possessed by certain entities does not derogate from the riparian character of the system. It is only when the granting of the license itself entails the right to eminent domain that the system ceases to be riparian.

116. Water Resources Act 1963, c. 38, § 27(2).

117. *Id.* § 33.

118. The British influenced the development of riparianism in the United States and introduced it to parts of Canada. *See supra*, note 58.

119. *See Davis, Australian and American Water Allocation Systems Compared*, 9 B.C. Ind. & Com. L. Rev. 647, 651 (1968).

which has power to grant non-riparians the right to acquire access to water by condemnation.¹²⁰

New South Wales instituted a licensing system ten years later than Victoria by a series of acts beginning with the Water Rights Act of 1896.¹²¹ These limit the rights of a riparian proprietor to domestic purposes, watering of stock, and cultivation of gardens of not more than five acres.¹²² However, if the government allows its superior right to lie in abeyance and does not use a particular body of water, the restriction to domestic uses does not apply, and riparians may use the water for other purposes, without license.¹²³

In contrast to New South Wales and Victoria, South Australia has retained more of the riparian rights system. The Control of Waters Act, 1919-1925, it is true, did vest property in the waters of any watercourse in the Crown, but the application of the Act has been made dependent upon the Governor's proclamation. To date, the Act has been applied only to a portion of the River Murray (about two-thirds of its course through the state).¹²⁴ Riparian owners need no license under this Act for domestic uses or for the irrigation of a garden not larger than one acre, but for all other purposes they must have a license.¹²⁵

In general, Australia may be said to have a non-priority permit system, but still with the stamp of the riparian rights doctrine which pertains to domestic and limited agricultural uses (small gardens).

The riparian system brought by the British to South Africa and Rhodesia has endured better in arid and semi-arid conditions there than it did in Australia. The South Africans never adopted the division between private and public streams based on navigability. Instead, until it was modified by statute, they retained the Roman law distinction between perennial and non-perennial (torrential) streams. Hall reports that around the middle of the 19th century under the influence of English jurists or jurists educated in England,

120. Water Act of 1958, Act No. 6413, § 4(1), 6, 14, 204, 8 Gen. Pub. Acts 749 (Vic. 1958).

121. Water Rights Act of 1896, 60 Vict. No. 20, 1 N.S.W. Stat., 1894-97; at 267 (1898).

122. Water Act, 1912-55, § 7(1), 12 N.S.W. Stat. 1824-1957, at 187 (1958).

123. In *Thorpes Ltd. v. Grant Pastoral Co. Ltd.*, 92 Commw. L. R. 317, 331 (Austl. 1955), the Court said:

The Act (1896) does not directly affect any private rights, but gives to the Crown new rights—not riparian rights—which are superior to, and may be exercised in derogation of, private riparian rights, but that, until those new and superior rights are exercised, private rights can and do co-exist with them.

124. U.N. Economic Comm'n for Asia and the Far East, *Water Legislation in Asia and the Far East*, pt. 2 (ST/ECAFE/SER.F/35) 4 (1968).

125. Control of Waters Act, 1919-25, § 7 & 8(3), 2 Public Gen. Acts, So. Australia 1837-1936, at 43 (1937).

the riparian system began to replace the Roman Dutch law, whereby the perennial streams were owned by the state.¹²⁶ By 1880 it was fully developed, and its main ingredients had been succinctly stated in *Van Heerden v. Viese*.¹²⁷ In that case, Chief Justice de Villiers said:

Broadly stated, our law recognizes two classes of natural streams or water-courses, viz.: public and private. Under the designation of public streams are included all perennial rivers, whether navigable, or not, and all streams which, although not large enough to be considered as rivers, are yet perennial, and are capable of being applied to the common use of riparian proprietors. . . .

Under the designation of private streams are included rivers and streams which are not perennial, and streamlets which, although perennial, are so weak as to be incapable of being applied to common use. . . .

Now the importance of the distinction between public and private streams consists in this, that, whereas in the case of the former the rights of each riparian proprietor are limited by the rights of the public and of the different riparian proprietors *jure naturae*; in the case of the latter the rights of each riparian proprietor are limited only by such rights as long usage may have conferred upon the remaining proprietors. It is important to bear in mind that by our law (differing in this respect from the law of England as well as of France) even rivers which are not fit to be used for navigation are deemed to be public, provided they are perennial. . . .

When once the public nature of the stream or river is established, the rights of each riparian proprietor, whether at its source or along its course, are limited by the rights of the public so far as those rights are capable of being exercised, and by the common rights of the remaining riparian proprietors. When once the private nature of a stream or river is established, the public has no right in respect of it, and the lower proprietors can claim no other right than such as long usage may have established in their favor against the upper proprietors. . . .¹²⁸

The final form of riparianism, however, has been given in South Africa by statute.¹²⁹ South African statutory law requires permission of the Water Court or an authorization of the administration for any industrial use.¹³⁰ In addition, a system of judicial adjudica-

126. Hall, *The Origin and Development of Water Rights in South Africa* 7-37 (1939).

127. 1 Buch. A.C. 5 (1882).

128. *Id.* at 7-10; also quoted in Hall, *supra* note 118, at 47-48.

129. Water Act No. 54 of 1956, *as amended* to 1969, 12 Statutes of the Republic of So. Africa, Classified and Annotated, at 1201 (1970).

130. Water Act, Act No. 54 of 1956, § 11. Permission to use water in quantities not

tion of shares in public streams similar to that existing in some prior appropriation jurisdictions in the United States has been developed for the sake of agricultural uses.¹³¹

Statutory water law in South Africa has done away with the distinction between perennial and non-perennial streams, defining as public those streams which flow in definite and natural channels and which can be used in common for irrigation.¹³² Streams so weak that they cannot be used by several owners are considered private waters, whether they be perennial or intermittent.¹³³ Riparian rights pertain only to public streams¹³⁴ and differ depending on whether normal flow or surplus water is used. This distinction between normal flow and surplus water is peculiar to South African law and only partially corresponds to the difference between flood water and normal flow in the United States, where riparian rights do not, as a rule, pertain to flood water.¹³⁵ In South Africa the normal flow is defined as visible and flowing water with a permanent source which can be used directly without the aid of storage for irrigation.¹³⁶ Any stream water that requires storage in order to be used for irrigation is surplus water.¹³⁷ It is obvious that surplus flow exists equally whether there is too much or too little water.

As in the United States and England, the riparian owner in South Africa can use as much of the normal flow for domestic purposes as he needs.¹³⁸ For agricultural purposes he can use a reasonable share of the water consistent with the similar rights of other riparians.¹³⁹ This is not unlike the reasonable use theory in the United States, except that in South Africa the riparian owner can have and usually has his reasonable share determined by the Water Court in advance of any dispute. This definitely makes for stability of the system because existing or determined rights are protected when a new determination is made.¹⁴⁰

larger than 50,000 gallons on an average per day during any month is given by the Water Courts (§ 11(1)). If larger quantities are needed, a permit must be obtained from the Minister (§ 11(3)).

131. *Id.* § 40(b).

132. *Id.* § 1 (public stream).

133. *Id.* § 1 (private water). The other private waters are source water, rain water (which is private unless it joins a public stream), drainage water, and underground water (which is private unless it flows in channels and can be employed for common use).

134. *Id.* § 9.

135. See *Crawford v. Hathaway*, 67 Neb. 325, 93 N.W. 781, 791-98 (1903); *Motl v. Boyd*, 116 Tex. 82, 111, 286 S.W. 458, 468 (1926).

136. Water Act, No. 54 of 1956, § 1 (normal flow).

137. *Id.* § 1 (surplus water).

138. *Id.* § 9(1e).

139. *Id.* § 9(1).

140. *Id.* § 40(b).

The riparian owner also has the right to store as much of the surplus water as he can beneficially use for domestic, agricultural, and urban purposes. He does not have to give priority to domestic uses of other riparians since that priority pertains only to normal flow, and in time of shortage he does not have to reduce his stored share proportionally with that of other users.¹⁴¹ The amount of surplus water is determined by the water court in fixed quantities and is binding only between parties, whereas the amount of normal flow is determined in terms of reasonable proportion or pro rata share.¹⁴²

The water courts in South Africa have more power than the river boards in England or the ordinary courts in the United States since they can empower the non-riparian to use public water or can permit that water to be used on non-riparian land. The only requirement for non-riparian use is that it be in the public interest or that there be more water than is usable within the catchment area.¹⁴³ This is the furthest departure from pure riparianism. In the United States such departures are made only by legislatures when, for example, they empower municipalities to acquire water by eminent domain.

Rhodesia, more than South Africa, has curtailed the privileges of riparian owners. They can use public waters without authorization only for primary use. Public waters comprise streams of natural origin flowing in channels, even when artificially improved or changed, including flood waters and springs that feed such streams and groundwater that flows under them.¹⁴⁴ Primary use means human use in or about a dwelling to an amount not exceeding 50 gallons per day for each person resident in the dwelling and use of water for the support of animal life.

The riparian owner must have authorization for secondary uses (including irrigation or fish-farming) and tertiary uses (mainly industry and power).¹⁴⁵ The Water Court can give non-riparians the right to use public water for primary, secondary, and tertiary uses

141. *Id.* § 10(1)(2).

142. But the quantity of surplus flow is established only on the application of aggrieved users, whereas the quantity of normal flow for irrigation is determined in special proceeding without dispute. *Id.* § 19. See also Hall & Burger, *Hall on Water Rights in South Africa* 80 & 137 (1957).

143. Water Act, No. 54 of 1956, § 11(2)(2b).

144. Water Act, § 2, Statute Law of Southern Rhodesia, c. 268 (1963). Private water is defined negatively as "all water not being water of a public stream which rises naturally on the land or which falls or naturally drains onto any land so long as it remains visible on such land and does not join a public stream." *Id.* According to this definition, diffused water and spring water are private if they do not join a public stream, and furthermore, a spring to be private must not flow in a channel or otherwise it would become a stream.

145. *Id.* §§ 2 & 8.

only when the water is not used beneficially by a riparian owner or when non-riparian use is considered to be in the public interest. Otherwise, they have to pay compensation to the riparian owner.¹⁴⁶ Primary purposes of the riparian owner are given priority over all other uses, secondary over tertiary uses, but these are relative priorities because if such is in the public interest, a court can give a non-riparian permission for secondary or tertiary use, even if it would interfere with the riparian owner's primary use.¹⁴⁷

While still retaining the privileged position of the riparian owners, the Rhodesian system has incorporated into its diluted riparianism, characteristics of the prior appropriation system by adopting priority in time of application as the main criterion in authorizing use of public water within a particular category of uses and users. When a water shortage occurs users who are later in time can satisfy their needs only after the needs of users with prior rights have been satisfied.¹⁴⁸

CONCLUSIONS

The idea that use of flowing water should belong to those who have access to the water through ownership of abutting land might have appeared spontaneously at one time or another in most systems of law in which private ownership developed. The fact, however, that it occurred in Roman law at its classical period was of particular importance for the development of the modern doctrine of riparian rights. Roman law, grafted onto local customs, became the basis for the formulation of the riparian rights doctrine in France, especially in the Code Napoléon. The influence of the Code Napoléon helped to spread the French version of the riparian doctrine to other European countries as well as to Latin America and Asia. It also helped to crystallize the common law evolution of the riparian doctrine in England and the United States. The British in turn spread their version of the riparian rights doctrine throughout their empire, especially to Canada, Australia, and South Africa.

In the second half of the 19th century, however, the tide turned and the range of uses to which the doctrine applied began to shrink. Permit systems became firmly established in some German states,¹⁴⁹ and in the 1880's the right of riparian owners to use water without authorization was confined in most of Canada and Australia to

146. *Id.* § 9.

147. *Id.* §§ 11 & 41.

148. *Id.* §§ 38-40.

149. See Teclaff, *The River Basin in History and Law* 94-95 (1967).

domestic purposes.¹⁵⁰ In parts of South America this trend did not really take hold until much later, around the middle of the present century, when Chile abrogated its riparian system in 1951 and Venezuela's agrarian reform of 1960 trimmed riparianism considerably in that country.¹⁵¹

These changes in the laws of countries that once adhered to the riparian doctrine plus the fact that there have been no new converts to the system may herald the eventual downfall of that doctrine or at least confine its application to uses which do not consume a great deal of water, such as domestic purposes or the watering of small plots of land. However, riparianism is far from dead yet. It is still successfully applied to agricultural uses in the semi-arid conditions of South Africa, where the powers of the Water Court, which apportion the waters and can grant the water use right to non-riparians when necessary, give the system flexibility and adaptability to the public interest.¹⁵² In the eastern United States movement away from the doctrine has been slow; it has not gained momentum¹⁵³ since the desertion of Iowa in the 1950's. In England even after the reform of 1963 which combined riparianism with a permit system, riparians can still use water for most agricultural and all domestic purposes without license and they have an almost exclusive right to apply for a license for uses which need authorization.¹⁵⁴

Moreover, even while the importance and territorial scope of the doctrine diminish, it begins to exert a lasting, though indirect, influence on future water management.

As the ecology of our planet becomes better understood and as this understanding is applied to determine how natural resources should be used with least destructive effect on the environment, it becomes evident that non-use may be as important or even more important than use of a particular resource. It is now well-known, for example, that river estuaries are important spawning grounds for various forms of marine life and can be many times more productive of wealth than land areas of comparative size.¹⁵⁵ But the delicate ecological balance of estuarine ecosystems is upset by pollution and upstream diversions which interrupt or lessen the flow of fresh water. Thus, on economic grounds alone, sound policy may demand that a

150. See *supra* notes 58 & 120.

151. See *supra* notes 46 & 56.

152. *Supra* note 143.

153. *Supra* note 66.

154. *Supra* notes 113 & 116.

155. Commission on Marine Science, Engineering and Resources, 1 Science and Environment, pt. III, at 37 (Report of the Panel on Management and Development of the Coastal Zone) (1969).

river empty into the sea substantially unimpaired in quality and quantity of flow. To take another example: if wild and scenic rivers are to be preserved, obviously they must be left undisturbed to a considerable extent, thereby involving a policy decision predicated upon newer recreational and esthetic needs.¹⁵⁶

The requirement that water be left as far as possible in its natural state, of course, is the well-known tenet of the natural flow version of the riparian rights doctrine. Its revival under pressure of environmental exigencies may not prolong the life of the riparian doctrine itself, but will assure that the old maxim "*aqua currit et debet currere ut currere solebat*,"¹⁵⁷ becomes part of water management under any doctrine to the extent that it will have to be taken routinely into account as a factor in making appropriate disposition of water.

156. The Wild and Scenic Rivers Act of 1968, 16 U.S.C. § 1271 (1970), designated sections of eight rivers in the West and Midwest of the United States as the nucleus of a National Wild and Scenic Rivers system.

157. Cited, e.g., in *Shury v. Piggot*, 81 Eng. Rep. 280 (K.B. 1625).