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THE CONCEPT OF REASONABLE BENEFICIAL USE IN THE LAW OF SURFACE STREAMS

FRANK J. TRELEASE*

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I. *Introduction*

In the western law of water use and allocation much emphasis has been placed on concepts of "reasonable use" or "beneficial use." Economists interested in the best utilization of our water resources necessarily must have an interest in the meaning of these concepts, for a legal concept may conflict with an economic concept. In such a case, what might appear to an economist as an ideal allocation of water to certain uses might conceivably be foreclosed if the proposed allocation conflicts with the law under which it might be made. If it can be assumed that the economist has arrived at an allocation pattern that is better than permitted by existing law, he may play an important part in the growth of the law, keeping it a living thing in tune with the time. His work may persuade the people to change the law by legislative processes, or convince a judge that he should accept the new pattern, modifying or overruling former precedent.

The purpose of this paper is therefore to give the economist some idea of the law in this subject. From the economist's point of view the law may be relevant in several ways. It may be a datum to be considered in forming economic premises, a tool to be used in accomplishing a desirable result, or an obstacle to progress that must somehow be removed.

It is doubtful that much of the law that follows will come as a surprise to those economists interested in water development, but perhaps some of the details offered may be of assistance to him. The paper will first cover the various uses which the law has approved both under the doctrine of riparian rights and the law of prior appropriation, and attempt to define the limits of those uses. It will then proceed to consider the situations in which the law has ascribed relative values to competing uses or classes of uses.

II. *Reasonable Use in Riparian Law*

The riparian law evolved for England and the eastern United States still has some validity in the west coast states, and in that tier of great plains states stretching from North Dakota to Texas on the border between the semiarid and the subhumid parts of the country.¹ Under riparian

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1. Trelease, *Coordination of Riparian Appropriative Rights to the Use of Water*, 33 *Tex. L. Rev.* 24 (1954); Hutchins, *History of the Conflict between Riparian and Appropriative Rights in the Western States Proceedings*, Water Law Conference, University of Texas, 1954, p. 106.

law, it has always been said that the owners of lands bordering upon or crossed by a stream have correlative rights to use the water, but the exact nature of those rights has undergone a change. According to some early authorities, the fundamental right of a riparian proprietor was to have the stream flow as it was accustomed to flow in nature, unimpaired in quality and undiminished in quantity.² Of course, the enforcement of such a theory to the ultimate extreme would have prevented almost all uses of the waters, so that even in its strictest form it has been modified to permit some use by riparian proprietors although nonriparian uses of any nature were forbidden under this theory.

But these are words from a dead age. Today, everywhere in the west, such riparian rights as are recognized at all are based upon the theory that the fundamental right of the riparian proprietor is to the reasonable use of the water of the stream and to be free from unreasonable interference with this use. Under this "reasonable use" theory, the interest of the riparian that receives protection is not in the natural state of the stream but in the use of water that is actually enjoyed. As between riparians the western courts have always applied the rule of reasonable use, recognizing that each riparian owner has a right to diminish the stream for his own purposes and that the lower proprietor must show actual damage to his present existing uses in order to get an injunction against an upper riparian diverter.³ Even in controversies between appropriators and riparians, a riparian today can complain only of nonriparian appropriations that cause an actual loss or injury to his use of water under reasonable methods of use and diversion.⁴ With the ghost of the natural flow theory thus laid, let us look at the uses of water which the courts have held might receive protection when made by a riparian owner.

Natural and Artificial Uses. In a famous early Illinois case, *Evans v. Merriweather*,⁵ the court divided the wants of man in regard to water into two classifications; "natural" and "artificial." Natural wants were said to be those that it was absolutely necessary to supply for man's survival; artificial wants are such as increase his comfort and prosperity. The importance of this classification was that the upper riparian on a small stream might consume all of the water for his natural wants, and a lower proprietor who so needed the water might insist that upper proprietors curtail their artificial uses so as to let water down to him. Each proprietor in turn

2. *Webb v. Portland Manufacturing Co.*, 3 Sumn. 189, 29 F.Cas. 506 (1938).

3. *Lux v. Haggin*, 69 Cal. 255, 4 Pac. 919 (1886); *San Joaquin & Kings River Canal & Irrigation Co. v. Fresno Flume & Irrigation Co.*, 158 Cal. 626, 112 Pac. 182 (1910).

4. *Chow v. Santa Barbara*, 217 Cal. 673, 22 P.2d 5 (1933); *Peabody v. Vallejo*, 2 Cal.2d 351, 40 P.2d 486 (1935); *Clark v. Allaman*, 71 Kans. 206, 80 Pac. 571 (1905); *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903); *McDonough v. Russell-Miller Milling Co.*, 38 N.D. 465, 165 N.W. 504 (1917); *Smith v. Stanolind Oil & Gas Co.*, 197 Okla. 499, 172 P.2d 1002 (1946); *Jones v. Conn*, 39 Ore. 30, 65 Pac. 1068 (1901); *Redwater Land & Canal Co. v. Jones*, 27 S.D. 194, 130 N.W. 85 (1911); *Watkins Land Co. v. Clements*, 98 Tex. 578, 86 S.W. 733, 70 L.R.A. 964, 107 A.S.R. 653 (1905); *Brown v. Chase*, 125 Wash. 542, 217 Pac. 23 (1923).

5. 3 Scam. 492, 18 A.D. 106 (Ill. 1842).

might if necessary consume all the water for his natural uses.⁶ As for artificial wants, each owner had a right to participate in the common benefit. The basis of this rule is apparently the theory that it is better for a few to have water sufficient for their health and well-being, even at the expense of driving others to making their homes elsewhere, than that many should suffer from only a partial supply of water.⁷

Natural uses were stated to be those for domestic and stockwatering purposes, and irrigation and manufacutring uses were classified as artificial. The Illinois court also suggested that irrigation might be a natural want in drier climes. If this theory has been adopted in states where water is scarce, it would have given a material advantage to the upper riparian owners, but such is not the rule in any western state.⁸

Several western states have adopted this classification of uses, sometimes using "ordinary" and "extraordinary" as synonymous with "natural" and "artificial."⁹ Others have doubted its validity, as involving somewhat fanciful distinctions,¹⁰ or have expressly repudiated it.¹¹ The principles of reasonable use would seem adequate to decide most conflicts between domestic users and irrigators or manufacturers in favor of the householder. However, some vitality seems to remain in the rule, for while the nomenclature of the old classification may not be used, a number of jurisdictions give a preference to the domestic and stockwater demands of riparians over the use of the water for other purposes.¹²

Domestic Use. Although it is quite generally held that a riparian proprietor may if necessary exhaust the stream for his domestic purposes, there are few cases that clearly define the exact limits of domestic use. Obviously, it includes water for drinking,¹³ cooking,¹⁴ laundry and sanitation,¹⁵ and the courts frequently add a catch-all classification such as "other household purposes,"¹⁶ "for the maintenance and sustenance of the proprietor and his family."¹⁷ In Oregon it has been held that domestic use includes the watering of such garden and other produce as is reasonably

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6. *Evans v. Merriweather*, 3 Scam. 492, 18 A.D. 106 (Ill. 1842); *Lone Tree Ditch Co. v. Cyclone Ditch Co.*, 15 S.D. 519, 91 N.W. 352 (1902), 26 S.D. 307, 128 N.W. 596 (1910).
 7. *Lone Tree Ditch Co. v. Cyclone Ditch Co.*, 15 S.D. 519, 91 N.W. 352 (1902), 26 S.D. 317, 128 N.W. 596 (1910).
 8. *Watkins Land Co. v. Clements*, 98 Tex. 578, 86 S.W. 733, 70 L.R.S. 964, 107 A.S.R. 653 (1905); *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903).
 9. *Watkins Land Co. v. Clements*, 98 Tex. 578, 86 S.W. 733, 70 L.R.S. 964, 107 A.S.R. 653 (1905); *Lone Tree Ditch Co. v. Cyclone Ditch Co.*, 15 S.D. 519, 91 N.W. 352 (1902), 26 S.D. 307, 128 N.W. 596 (1910).
 10. *Lux v. Haggin*, 69 Cal. 255, 4 Pac. 1919 (1886).
 11. *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903).
 12. *Emporia v. Soden*, 25 Kans. 588, 37 A.R. 265 (1881); *Frizell v. Bindley*, 144 Kans. 84, 58 P.2d 95 (1936); *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903); *Prather v. Hoberg*, 24 Cal.2d 549, 150 P.2d 405 (1944); *Hough v. Porter*, 51 Ore. 318, 98 Pac. 1083 (1909).
 13. *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903).
 14. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).
 15. *Salem Flouring Mills v. Lord*, 42 Ore. 82, 69 Pac. 1033, 70 Pac. 832 (1902).
 16. *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903).
 17. *Hough v. Porter*, 51 Ore. 318, 98 Pac. 1083 (1909).

necessary for the riparian's domestic consumption,¹⁸ and it is frequently stated that it also includes water for stock and other domestic animals.¹⁹ But the use of water for swimming, boating, and for ornamental pools is not classed as domestic.²⁰

The use for domestic purposes is often thought to involve small quantities requiring no considerable diversion of water,²¹ but there are situations in which a large number of people are entitled to such use and the quantity needed may be substantial. The fact that human beings are the occupants of hotels, apartment houses, auto camps, or resorts does not exclude them from the preferential class of domestic users.²² State institutions such as penitentiaries and insane asylums have been the subject of conflicting holdings, some courts saying that they may²³ and others that they may not²⁴ take water for the use of large numbers of inmates. Although generally municipalities are not entitled to riparian rights for the domestic purposes of their inhabitants,²⁵ it has been held in Texas that a city has such a right and that it is superior to the rights of riparian owners for irrigation.²⁶ The United States, as the proprietor of a military establishment housing up to 50,000 men, has been likened to a hotel or resort owner, and has been decreed water for the domestic needs of the men stationed at the camp.²⁷

Stock Water. That the use of a stream for the watering of all types of livestock is a reasonable riparian use does not admit of doubt, but there is some question as to the extent to which a preference exists for this purpose over other uses of the water. Stock watering is frequently listed as a "natural" use or a preferential use for which the stream may be exhausted without reference to the needs of others, or else it is included in the definition of domestic uses. Usually no limitation is put upon the number of cattle or other animals that may be watered, and fifteen head of cattle and 200 chickens have been held to be included in domestic use,²⁸ but in Oregon the court has restricted the definition of domestic animals to those necessary for the proper sustenance and maintenance of the proprietor and his family,²⁹ and in California the court has questioned whether the exhaustion of a stream by large herds of cattle ought to be permitted.³⁰ Since the consumption of water by cattle may be very substantial in relation to the

18. *Ibid.*

19. *Martin v. Burr*, 111 Tex. 57, 228 S.W. 543 (1921); *Hough v. Porter*, 51 Ore. 318, 98 Pac. 1083 (1909); *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

20. *Prather v. Hoberg*, 24 Cal.2d 549, 150 P.2d 405 (1944).

21. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903); *Emporia v. Soden*, 25 Kans. 588, 37 A.R. 265 (1881).

22. *Prather v. Hoberg*, 24 Cal.2d 549, 150 P.2d 405 (1944).

23. *Filbert v. Dechert*, 22 Pa.Super. 362 (1903).

24. *Salem Flouring Mills v. Lord*, 42 Ore. 82, 69 Pac. 1033, 70 Pac. 832 (1902).

25. *Emporia v. Soden*, 25 Kans. 588, 37 A.R. 265 (1881).

26. *Grogan v. Brownwood*, 214 S.W. 532 (Tex. 1919).

27. *United States v. Fallbrook Public Utility District*, 101 F.Supp. 298, 108 F.Supp. 722, 109 F.Supp. 28 (S.D.Cal. 1951).

28. *Church v. Barnes*, 175 Wash. 327, 27 P.2d 690 (1933).

29. *Hough v. Porter*, 51 Ore. 318, 98 Pac. 1083 (1909).

30. *Lux v. Haggin*, 69 Cal. 255, 4 Pac. 919, 10 Pac. 674 (1886).

supply of a small intermittent stream,³¹ restricting the preferential right to the quantity of water needed for an average number of barnyard animals kept for family use would seem wise, for otherwise the upstream riparian stockgrower or dairyman would be in a favored position over those downstream who desired water for the same purposes. In such circumstances the application of the rule of reasonable use and an apportionment of the stream between them would seem more fair.

Irrigation. As has been said, in the arid and semi-arid west where irrigation is necessary to the successful cultivation of the soil, the doctrine of riparian rights was necessarily modified or enlarged so as to permit the reasonable use of water for irrigation although such use may appreciably diminish the flow of the stream. It is now well settled that as between riparian irrigators all are entitled, without precedence, to a fair and reasonable share of the stream³² and that no proprietor may take all of the stream so as to exclude other riparian owners from the use of the water for irrigating purposes.³³ It has been held in Nebraska that irrigation is not necessarily a reasonable use under all circumstances, and that a riparian seeking such use of the stream must plead and prove that his land is arid and that irrigation is essential.³⁴

Power. One of the earliest uses of streams was for the generation of water power for the operation of mills and factories. Today the most important application of water power is its conversion into electricity by means of turbines and dynamos, and the reasonable use of waters of the streams and rivers for this purpose is recognized as an exercise of riparian rights.³⁵ However, certain limitations placed by the courts upon riparian power operations make sole reliance upon riparian rights as a source of water undesirable. It has been held that a definite quantity of water for power purposes cannot be decreed in advance,³⁶ and some states prohibit the storage of water for this purpose³⁷ thus making a firm supply uncertain. There are holdings that it is an unreasonable use to discharge water from a dam in unusual quantities, preventing its use by lower riparian irrigators,³⁸ or even to restrain the flow during the day and release it at night to the inconvenience of riparian irrigators,³⁹ rulings which make it difficult to time releases of water to meet demands for power.

31. Handbook for Better Feeding of Livestock, U.S. Dept. of Ag. Misc. Circular No. 12, Oct. 1947, states that up to 10 gallons per day should be allowed for beef cattle and up to 25 for dairy cows. With some allowance for evaporation and seepage, this could amount to as much as one acre-foot of water every three weeks for 500 cows.
32. *Frizell v. Bindley*, 144 Kans. 84, 58 P.2d 95 (1936).
33. *Harris v. Harrison*, 93 Cal. 676, 29 Pac. 325 (1892).
34. *Slatery v. Harley*, 58 Neb. 575, 79 N.W. 151 (1899).
35. *Mentone Irrigation Co. v. Redlands Electric Light & Power Co.*, 155 Cal. 323, 100 Pac. 1082, 22 L.R.A. (N.S.) 382, 17 Ann.Cas. 1222 (1909); *Southern Nebraska Power Co. v. Taylor*, 109 Neb. 683, 192 N.W. 317 (1923); *In re Hood River*, 114 Ore. 112, 227 Pac. 1065 (1924); *Lone Tree Ditch Co. v. Rapid City Electric Co.*, 16 S.D. 451, 93 N.W. 650 (1903).
36. *In re Hood River*, 114 Ore. 112, 227 Pac. 1065 (1924).
37. *Herminghaus v. Southern California Edison Co.*, 200 Cal. 81, 252 Pac. 607 (1926).
38. *Moore v. California Oregon Power Co.*, 22 Cal.2d 725, 140 P.2d 798 (1943).
39. *Lone Tree Ditch Co. v. Rapid City Electric Co.*, 16 S.D. 451, 93 N.W. 650 (1903).

Soil. Conservation. In recent years many small detention dams, gully plugs, dikes, levees, and stock water reservoirs have been constructed in order to check runoff, create natural subirrigation, aid in flood protection, and conserve the soil. Where these are built upon watercourses, they raise problems of riparian rights. An important recent Kansas case has recognized the value of these soil and water conservation measures, and ruled it a reasonable use to erect small dams, averaging less than one acre-foot in capacity, to hold the water of a small intermittent stream for the use of cattle and the spreading of water through subirrigation to alfalfa fields, where the flow of the stream was not materially reduced.⁴⁰

Other Uses. There is no fixed category of riparian uses, and almost any application of water that fulfills a need or desire of man can be considered a proper use, so long as it is reasonably exercised with due regard to the equal rights of other riparian proprietors. The courts have upheld many uses of water that serve some commercial or industrial need; the harvesting of ice is a use that has been recognized since early time,⁴¹ and a railway company owning riparian lands may make reasonable use of the stream for the purpose of supplying its engines and running its railroad, so long as the rule of fairness and equality is observed and the quantity taken causes no injury.⁴² A municipal light and power plant may use substantial quantities of water for cooling its engines,⁴³ and water may be abstracted from a stream for use in oil drilling operations.⁴⁴

This does not mean that a commercial or industrial application is a necessary attribute to a proper riparian use; the water may be used merely to satisfy a desire for pleasure or esthetic enjoyment. It may be used for a swimming pool,⁴⁵ or maintenance of a park and fishing resort,⁴⁶ and broad rights of boating, bathing, and fishing have been upheld.⁴⁷ In regard to lakes, where the chief value of the surrounding lands is for resort purposes and summer homes, the lake level may not be lowered to the point where the lake is turned into a mud flat.⁴⁸

III. *Beneficial Use in Appropriation Law*

The concept of beneficial use, that water appropriated must be put to useful and beneficial purposes, is fundamental in western water law. A nonuseful appropriation is of no effect⁴⁹ and the application of water to useful and beneficial purposes is the *sine qua non* of a water right under the doctrine of prior appropriation. This concept is frequently expressed in the maxim that beneficial use is the basis, the measure, and the limit

40. *Heise v. Schultz*, 167 Kans. 34, 204 P.2d 706 (1949).

41. *McDonough v. Russell-Miller Milling Co.*, 38 N.D. 465, 165 N.W. 504 (1917).

42. *Atchison, Topeka & Santa Fe Ry. Co. v. Shriver*, 101 Kans. 257, 166 Pac. 519 (1917).

43. *Fairbury v. Fairbury Mill & Elevator Co.*, 123 Neb. 558, 243 N.W. 774 (1932).

44. *Smith v. Stanolind Oil & Gas Co.*, 197 Okla. 499, 172 P.2d 1002 (1946).

45. *Sayles v. Mitchell*, 60 S.D. 592, 245 N.W. 390 (1932).

46. *Broadly v. Furray*, 163 Okla. 204, 21 P.2d 770 (1933).

47. *In re Clinton Water District*, 136 Wash. 284, 218 P.2d 209 (1950).

48. *Martha Lake Water Co. v. Nelson*, 152 Wash. 53, 277 Pac. 382 (1929); *Los Angeles v. Aitken*, 10 Cal.App. 460, 52 P.2d (1935).

49. *Ide v. United States*, 263 U.S. 497, 44 S.Ct. 182, 68 L.Ed. 407 (1924).

of the right to use water, which has been enacted into the statutory law of many of the western states⁵⁰ and incorporated into the federal reclamation law.⁵¹

Although it is sometimes said that what is a beneficial use is a question of fact to be decided upon considering the facts of each case,⁵² a number of uses have received general approval as useful and beneficial, and these will be first discussed.

Statutory Definitions. No state statute defines beneficial use in general terms, but in three states the legislatures have listed the purposes for which water can be appropriated. For instance, in Arizona, these uses are domestic, municipal, irrigation, stockwatering, water power, wildlife (including fish), and mining purposes, for direct use by the appropriator, or for delivery to consumers.⁵³ South Dakota and Texas have similar provisions.⁵⁴ On the face of these statutes, the lists or definitions of beneficial use seem to be conclusive, and to exclude other uses that do not come within the classifications set forth. If this construction should be adopted by the courts, new uses which an advancing civilization demands, such as air conditioning and the dilution of wastes to prevent stream pollution, might be prohibited unless the listed purposes can be stretched to include them. It is arguable that the statutes only insure that the listed uses are beneficial, and that other uses are permissible if they fall within the common law concept of beneficial use. No cases have been found which discuss this problem.

Many other state and federal statutes merely identify certain uses of water as beneficial, and clearly do not exclude all other uses as nonbeneficial. So also the lists of preferences among uses may be said to be legislative declarations that the purposes listed are each beneficial. A few states have laws defining particular beneficial uses. These statutes will be discussed in connection with those uses.

Domestic Purposes. All statutory definitions of beneficial use include domestic uses,⁵⁵ and practically every statute giving preference to certain uses of water places this use at the top of the preferred list.⁵⁶ In California, domestic use is described as the highest use of water.⁵⁷ These laws are simply recognitions of the elemental fact that water is necessary to sustain the life and health of man, and that no other demand for water can transcend its use to that end.

Most of the cases and statutes dealing with the scope of domestic use

50. E.g., Nev. Comp. Law § 7892 (1929); Wyo. Comp. Stat. § 71-401 (1945); N.M. Stat. § 77-102 (1953).

51. Reclamation Act of 1903, § 8.

52. *Denver v. Sheriff*, 105 Colo. 193, 96 P.2d 836 (1939).

53. Ariz. Code § 75-102 (1939).

54. S. Dak. Code § 61-0102 (Supp. 1952); Tex. Civ. Stat. § 7470 as amended Tex. Law c. 354 (1953).

55. *Supra* notes 51 and 52.

56. See *infra* notes 152 to 158.

57. Cal. § 105.

relate to the extent of the preference granted by such statutes. It is said that an appropriation for domestic purposes is limited to such uses as the riparian owner has at common law to take water for himself, his family, his stock, and the like.⁵⁸ Drinking and cooking are of course covered,⁵⁹ as are general household purposes⁶⁰ and home and farm use.⁶¹

There are three other problems as to the limits of domestic use. One is the question of whether it includes any right to irrigate plants. The Kansas statutes define the term as including "the irrigation of lawns and gardens";⁶² Washington permits domestic water to be used for the irrigation of a "family garden";⁶³ and in Arizona the irrigation of gardens not exceeding one-half acre to each family is allowed.⁶⁴ On the other hand, an Idaho statute construes domestic use as not including any manner of land irrigation,⁶⁵ and in Colorado it is a criminal offense to employ water appropriated for domestic purposes for irrigation or for application to land or plants in any manner or to any extent.⁶⁶

Another problem is whether domestic water may be used to water stock. The preferential right given to the riparian is limited to the watering of domestic and barnyard animals kept with and for the use of the household, and in view of the separate recognition of stock watering as a beneficial use, a similar construction would probably be applied to the domestic preferences given by appropriation statutes. An Idaho law so limits the use of domestic water by animals,⁶⁷ but in Kansas the preference perhaps may be extended to all uses for stock, even for large herds, for in that state the statutes include as domestic the use of water for the watering of livestock and poultry, in addition to specifying farm and domestic animals.⁶⁸

The final area of dispute has been on the question of whether the domestic needs of the inhabitants of a community can be lumped together into a municipal appropriation for "domestic use." It has been uniformly held that such municipal demands cannot have the preference granted to the individual domestic user.⁶⁹ But in several instances, it can be determined from the context that statutory references to "domestic use" probably include the use of water for what is more commonly called municipal use.⁷⁰

Stock Water. The watering of herds of stock and of all types of

58. *Montrose Canal Co. v. Loutsenhizer Ditch Co.*, 23 Colo. 233, 48 Pac. 532 (1896); *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

59. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

60. Idaho Code § 42-111 (1948).

61. Okla. Stat. § 82-577 (1953).

62. Kans. Gen. Stat. § 82a-701 (c) (1949).

63. Wash. Rev. Stat. § 7399 (Rev. 1929).

64. Ariz. Code § 75-106 (1939).

65. Idaho Code § 42-914 (1948).

66. Col. Rev. Stat. § 147-2-6 (1953).

67. Idaho Code § 42-111 (1948).

68. Kans. Gen. Stat. § 82a-701 (c) (1949).

69. *Montrose Canal Co. v. Loutsenhizer Ditch Co.*, 23 Colo. 233, 48 Pac. 532 (1896).

70. E.g., S. Dak. Code § 61-0102 (Supp. 1952); Cal. Water Code § 1460 (1954).

domestic animals is a beneficial use. Stockwatering is included in the statutes of all of the states that list the specific purposes for which water may be appropriated,⁷¹ and is recognized as a useful and beneficial purpose by the statutes and decisions of all other states.

Municipal Purposes. Appropriations to supply cities and towns are authorized in all of the western states, whether made directly by the community or by a private water company given a franchise to supply the municipality and its inhabitants.

Municipal uses actually encompass a large number of different applications of water to different beneficial purposes. Some of these are direct uses by the town or city itself as a consumer, such as water for fire fighting,⁷² for use in public buildings, for flushing sewers,⁷³ for watering parks,⁷⁴ and supplying fountains⁷⁵ and lakes.⁷⁶ But most of the so-called municipal purposes are in fact uses by the inhabitants of the community and the industrial enterprises there located. Domestic uses,⁷⁷ irrigation of lawns and gardens,⁷⁸ sanitary purposes,⁷⁹ the use in shops and business establishments and for the manufacture of goods,⁸⁰ the production of steam,⁸¹ cooling and condensing,⁸² refrigeration,⁸³ air conditioning, and for laundries⁸⁴ and railroads⁸⁵ make up the bulk of the water use in cities, and the municipality or company appropriating the water is in reality appropriating for purposes of sale to the ultimate consumer.

Although illustrations of these uses may be found in the statutes and reports, there are few cases directly dealing with the problem of how far a municipality may go in using or distributing water for specific purposes. Technological advances have outmoded some older cases approving the use of water for horse troughs⁸⁶ and street sprinkling.⁸⁷ Most of the more recent decisions have considered the power of a city to supply water to areas outside the city limits. The validity of such acts will more often turn on the existence and construction of statutes concerning municipal powers than on the proper interpretation to be given to the phrase "municipal purposes."

Irrigation. The use of water for the irrigation of land in order to

71. Supra notes 51 and 52.

72. *Holt v. Cheyenne*, 22 Wyo. 212, 137 Pac. 876 (1913).

73. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

74. *Denver v. Brown*, 56 Colo. 216, 136 Pac. 44 (1913).

75. *Water Supply Co. v. Albuquerque*, 7 N.M. 326, 128 Pac. 77, 43 L.R.A. (N.S.) 439 (1912).

76. *Denver v. Brown*, 56 Colo. 216, 138 Pac. 44 (1913).

77. Cal. Water Code § 1460 (1954).

78. *Denver v. Sheriff*, 105 Colo. 193, 96 P.2d 836 (1939).

79. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

80. Wyo. Comp. Stat. § 71-402 (1945); Okla. Stat. § 82-577 (1953).

81. *Ibid.*

82. Okla. Stat. § 82-577 (1953).

83. Wyo. Comp. Stat. § 71-402 (1945).

84. *Ibid.*

85. *Ibid.*

86. *Water Supply Co. v. Albuquerque*, 7 N.M. 326, 128 Pac. 77, 42 L.R.A. (N.S.) 439 (1912).

87. *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903).

supply the deficiencies of natural rainfall is so widespread in the western United States that "water law" and "irrigation law" have come to be substantially synonymous terms, and it has never been questioned that irrigation, in general, is a beneficial use.

Irrigation has been defined as a sprinkling or watering, the causing of water to flow over lands for nourishing plants, and in its special sense as used in statutes relating to irrigation, as the application of water to lands for the raising of crops and other products of the soil.⁸⁸ But it has also been held to include the use of water for the purpose of growing trees and grass in cities and cemeteries⁸⁹ so that it is not strictly limited to agricultural purposes. While ordinarily the word implies the use of artificial means, as distinguished from subirrigation, the method of application, by flooding, channeling, or sprinkling, is immaterial.⁹⁰

Generally, the law makes no distinction between the various crops that may be grown by irrigation. The use of water to grow native hay and other forage for livestock is on an equal footing with its use for crops of greater immediate value,⁹¹ and where the irrigation of pasture land causes a great increase in the amount of grass produced, the use has been held as a useful and beneficial one, and compared with the irrigation of hayland, the difference being only in the manner in which the grass is fed to stock.⁹² If the irrigation produced only slight plant growth of very little value, it is possible that consideration of reasonableness of the particular use as compared with other uses to which the water might be put might lead a court to hold that such a use was not reasonably beneficial.

Mining. The doctrine of prior appropriation originated when the miners of the California gold rush days took the waters of the streams on the public domain to wash the gold from the gravel in which it was found. The use of water in placer mining to wash the gold from the gravel and its use in milling gold ore to run the crushing machinery and separate the gold from the tailings were thus the earliest beneficial uses that justified the appropriation of water.

The extent of the permissible use in connection with mining operations has never been judicially defined. Early cases recognized that an appropriation for mining gave the miner the privilege of encumbering the stream with debris from placer operations, but it has been held that the Idaho preference for mining and milling does not permit the obstruction of the stream with debris and its pollution with poisonous wastes from mills.⁹³ The use of water in drilling for oil and gas has been permitted in Texas

88. *Platte Water Co. v. Northern Colorado Irrigation Co.*, 12 Colo. 525, 21 Pac. 711 (1889).

89. *Denver v. Brown*, 56 Colo. 216, 138 Pac. 44 (1913).

90. *Morrow v. Farmers' Irrigation District*, 177 Neb. 424, 220 N.W. 680 (1928).

91. *Wyoming v. Colorado*, 259 U.S. 419, 42 S.Ct. 552, 66 L.Ed 999 (1922).

92. *Sayre v. Johnson*, 33 Mont. 15, 81 Pac. 389 (1905).

93. *Hill v. Standard Milling Co.*, 12 Idaho 223, 85 Pac. 907 (1906).

and Oklahoma as a proper riparian use,⁹⁴ and by analogy may be considered a beneficial appropriative use. The Texas statutes allow appropriations for mining and the recovery of minerals, and provide for temporary permits of three months duration,⁹⁵ which would seem adequately to provide for such drilling uses.

Manufacturing. The use of water to furnish power to run sawmills was the second beneficial use to receive judicial recognition as a basis for the appropriation of water.⁹⁶ Statutory authority to appropriate for manufacturing purposes has been expressly granted by the federal and some state governments,⁹⁷ and is to be implied from statutes of other states permitting the use of water for power or milling purposes.⁹⁸

Of course, water may be used in connection with the manufacture of goods in many ways other than for the production of power to run machinery. An Oklahoma statute gives preferential status to uses of water in the processes of manufacture, for the production of steam, for refrigeration, cooling, and condensing,⁹⁹ and the Texas legislature has given a like preference to the use of water in processes designed to convert materials of a lower order of value into form having greater usability and commercial value, including the production of steam power.¹⁰⁰ These uses are undoubtedly beneficial under the laws of any state, and the dearth of cases on the exact boundaries of "manufacturing purposes" is probably due to the commonly accepted practice of manufacturers in obtaining their water from municipal supplies, so that not many direct appropriations are made for manufacturing uses other than power.

Power. The direct use of the power of falling water to run sawmills, flour mills, and machinery was one of the earliest uses for which appropriations were made.¹⁰¹ Of course, today the principal use of water power is for the production of electricity to furnish light, heat, and power to the public, and such use is everywhere recognized as useful and beneficial.¹⁰²

Recreation. The use of water for beautifying parks and resorts where people may rest and enjoy themselves, and for forming pools and lakes for swimming, boating, fishing, and hunting is an undoubtedly beneficial use, but the limits of appropriations for these purposes have not been fully explored or stated by the courts.

The statutes of Kansas and Oklahoma name recreation as a beneficial

94. *Texas Co. v. Burkett*, 117 Tex. 16, 296 S.W. 273 (1927); *Smith v. Stanolind Oil & Gas Co.*, 197 Okla. 499, 172 P.2d 1002 (1946).

95. Tex. Civ. Stat. § 7471 (1948); Tex. Laws c. 355 (1953).

96. *Tarter v. Spring Creek Water and Mining Co.*, 5 Cal. 395 (1885).

97. 14 Stat 2.53, § 9 (1866); see also notes 51 and 52 supra.

98. *Lamborn v. Bell*, 18 Colo. 346, 32 Pac. 989, 20 L.R.A. 241 (1893).

99. Okla. Stat. § 82-577 (1953).

100. Tex. Civ. Stat. § 7471 (1948).

101. *Tartar v. Spring Creek Water & Mining Co.*, 5 Cal. 395 (1885).

102. E.g., *Lodi v. East Bay Municipal Utility District*, 7 Cal.2d 316, 60 P.2d 439 (1936); *Salt Lake City v. Salt Lake City Water & Electrical Power Co.*, 24 Utah 249, 67 Pac. 672 (1903); *In re Deschutes River*, 134 Ore. 623, 286 Pac. 563, 294 Pac. 1049 (1930).

use without further description, South Dakota lists "public recreation," and the Arizona law mentions the use of water for wildlife, including fish.¹⁰³ Texas legislation is the most explicit, listing "public parks, games preserves, recreation and pleasure resorts."¹⁰⁴ The Montana court has indicated that the use of water for a swimming pool and fish pond is beneficial,¹⁰⁵ in New Mexico it has been said that recreation and fishing are included in the beneficial uses to which public waters may be put,¹⁰⁶ and in Colorado the irrigation of parks and the filling of lakes and reservoirs within a city have been held to be beneficial.¹⁰⁷

The leading court case involved the owner of a mountain resort who sought to enjoin a power company from diverting a stream that flowed through the resort and formed a beautiful waterfall. The court held that public health, rest, and recreation constitute a beneficial use and said:

"Places such as that described here, favored by climatic conditions, improved by the work of man, and designed to promote health by affording rest and relaxation are assuredly beneficial. They are relatively as important as sanitariums and hospitals, and should not be dismissed by calling them mere resorts for idleness. They are a recognized feature of the times, are important in their influence upon health, and multitudes of people avail themselves of them from necessity."¹⁰⁸

The resort owner lost the case, however, for he sought to preserve the cascade in its natural state, and the court held that no appropriation had been made by means that were not unnecessarily wasteful or excessive, although it regretted that natural objects of great beauty such as these falls had not been preserved by the legislature.

In Oregon this suggestion of the court has been acted upon, and many streams that form beautiful falls or that are famous fishing waters have been reserved from appropriation.¹⁰⁹ In Idaho the governor is authorized to appropriate the water of certain lakes in trust for the people, and the preservation of the lakes for scenic beauty, health, and recreation purposes is declared to be a beneficial use of the water,¹¹⁰ although in reality this is not an appropriation, but like the Oregon laws a reservation of the water to prevent its being appropriated for more mundane purposes. In the absence of such a special statute, a private person cannot make an appropriation of a lake or stream in its natural state for such purposes.

Appropriations for fish and wildlife purposes ordinarily take the form of reservoirs that provide a habitat for game fish and waterfowl. It is common practice today to include these purposes in the list of beneficial

103. *Supra* notes 51 and 52.

104. *Tex. Civ. Stat. § 7470 (1948) as amended.*

105. *Osnes Livestock Co. v. Warren*, 103 Mont. 284, 62 P.2d 206 (1935).

106. *State v. Red River Valley Co.*, 51 N.M. 207, 182 P.2d 421 (1945).

107. *Denver v. Brown*, 56 Colo. 216, 138 Pac. 44 (1913).

108. *Cascade Town Co. v. Empire Water & Power Co.*, 181 Fed. 1011 (Colo. 1910) *rev'd on other grounds*, 205 Fed. 123.

109. *Ore. Rev. Stat. §§ 538-110 - 300 (1953).*

110. *Idaho Code §§ 67-4301, 4304 (1948).*

uses to be served by reservoir projects, and to the extent that these recreational features are incidental concomitants of the storage of water for irrigation, power, and other well-accepted uses, questions as to the validity of the storage of water for these purposes do not arise. When it is sought to take water solely for these purposes, however, several problems may crop up. In general, it has been said that public waters may be impounded for recreation, fishing, and hunting purposes.¹¹¹ Whether this may be done for private or only public recreation has never been squarely decided. Water for a fish pond, apparently private, was approved without discussion in Montana.¹¹² A Texas court has said in dicta that water appropriated for game preserves and pleasure resorts may be diverted to private lands and there used to the exclusion of the public.¹¹³ But a private club in Utah, seeking an appropriation for filling duck ponds and for growing vegetation attractive to wildfowl, ran afoul of the rule in that state that an appropriator must have the exclusive benefit and control over the appropriation, and the application was denied, since the land to be flooded was public domain open to all for hunting.¹¹⁴ In California two cases have denied gun clubs the right to use well water to flood lands in order to create duck marshes. Regulations forbidding the use of underground water except for certain named purposes were upheld on the basis that California underground water law requires the water to be reasonably used in connection with the land from which it is taken,¹¹⁵ and it was said that while the maintenance of such duck ponds would contribute greatly to the enjoyment of those owning the hunting privileges, it was not a use which was beneficial to the land.

Hunting, fishing, and other recreational activities connected with streams and lakes constitute major attractions of many parts of the western states, and millions of dollars are spent by tourists from less attractive areas who come to enjoy them. Public recreational facilities, when sponsored by public agencies, are beneficial in a broad sense to a large segment of the population, and when operated for profit are an important source of wealth. Appropriations of water for such facilities would in most cases be non-consumptive, except for evaporation, once reservoirs are filled, and should receive the recognition and protection of law. Private facilities, for the benefit of individuals or of clubs with restricted membership, may constitute property of great value to their owners. No dogmatic rule should be adopted allowing or forbidding the taking of water for such private recreation, but each such attempted appropriation should be scrutinized and the effect of its allowance upon foreseeable demands for water for other purposes should be considered.

111. *State v. Red River Valley Co.*, 51 N.M. 207, 182 P.2d 421 (1945).

112. *Osnes Livestock Co. v. Warren*, 103 Mont. 284, 62 P.2d 206 (1935).

113. *Diversion Lake Club v. Heath*, 126 Tex. 129, 86 S.W.2d 441 (1935).

114. *Lake Shore Duck Club v. Lake View Duck Club*, 50 Utah 76, 166 Pac. 309, L.R.A. (1918B) 620 (1917).

115. *Ex parte Elam*, 6 Cal.App. 233, 91 Pac. 811 (1907); *Ex parte Mass*, 219 Cal. 422, 27 P.2d 373 (1933).

Miscellaneous Uses. Water has been put to many other uses that have received legislative or judicial sanction as beneficial or useful. An early Idaho case held that the use of water for railway necessities was unquestionably for a beneficial purpose,¹¹⁶ and the statutes of Oregon and Wyoming so declare.¹¹⁷ Other statutes permit water to be taken for the production of steam,¹¹⁸ for refrigeration, cooling, and the manufacture of ice,¹¹⁹ and for maintaining sanitary conditions of stream flow by the dilution of sewage and wastes.¹²⁰ In California the storage of water underground is a beneficial use if the recharged ground water is later put to use.¹²¹

The use of water is indispensable to the operation of fish hatcheries, of course, and it is self-evident that the water so diverted is devoted to beneficial use.¹²² Such a use has been likened to irrigation, in that its result is to increase the food supply of the population.¹²³

Not all uses to which man can apply water for some immediate benefit are classified as beneficial in the legal sense. The drowning of gophers will not justify an appropriation.¹²⁴ Although the use of water to carry debris from a reservoir to keep it out of turbines would be useful and beneficial to the owner, it will not be allowed when it would interfere with those of the water for irrigation, where other means to control the debris could be devised.¹²⁵

IV. *Comparative Reasonableness of Use*

Up to this point this paper has dealt with whether a particular type of use, *as such*, has received court or legislative approval as a "reasonable use" or "beneficial use," and has attempted to point out the limits of the legal definition of such use. This may seem a sterile approach to an economist, to consider each use in the abstract and to tag it as reasonable or unreasonable, beneficial or not beneficial, yet by and large that has been the method of the courts and legislatures until quite recently. This seemingly one-sided approach has resulted in this list of uses characterized as reasonable or beneficial in general, and seemingly the courts have merely approved of a particular use that has come in question if it falls within one of these categories. But actually there are few absolutes on this list. In fact this one-sidedness is more apparent than real, at least in the litigated cases. Each case was in fact a dispute between two people fighting for water that was insufficient to take care of the needs of both. When one urged that the other's use was not beneficial, he was usually relying upon the often

116. *Drake v. Earhart*, 2 Idaho 750, 23 Pac. 541 (1890).

117. Ore. Rev. Stat. § 537-310 (1953); Wyo. Comp. Stat. § 71-402 (1945).

118. Okla. Stat. § 82-531 (1953); Wyo. Comp. Stat. § 71-402 (1945).

119. *Ibid.*

120. Okla. Stat. § 82-531 (1953).

121. Cal. Water Code § 1242 (1954).

122. *Faden v. Hubbell*, 93 Colo. 358, 28 P.2d 247 (1933).

123. *Ex parte Elam*, 6 Cal.App. 233, 91 Pac. 811 (1907).

124. *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District*, 3 Cal.2d 489, 45 P.2d 972 (1935).

125. *In re Deschutes River*, 134 Ore. 623, 286 Pac. 563, 294 Pac. 1049 (1930).

inarticulate premise that it was not beneficial because his use was *more* beneficial. Therefore, most of the cases did actually amount to a choice by the courts between one use over another, but analysis of the cases in these terms is generally impossible because that is not the way the courts talked about them. But as competition for the supply grew fiercer, and as the realization grew upon the courts and legislatures that the allocation of water involved a problem in the conservation of natural resources, new concepts evolved, that each use must not only be beneficial in the abstract sense, but must also be a reasonable and economic use in the light of other demands for the little water remaining to be allocated.

Reasonableness of Riparian Use. It has always been the law that a riparian's use of the water must be reasonable in the light of the equal rights of all other riparians on the stream. What is reasonable will vary with the circumstances of each case,¹²⁶ and in each case the quantity which a particular riparian may take will vary from year to year and from season to season,¹²⁷ not only from the varying volume of water flowing down the streams at different times of the year or at different times of the year of different years, but also from the amount of land that may have been settled upon and the extent of the use of the waters by others for irrigation and for the so-called natural purposes.¹²⁸ A riparian owner who has been accustomed to use a certain amount of water on his land may increase the quantity if it is reasonably required for extended irrigation,¹²⁹ and, on the other hand, what might be a reasonable use of water giving no grounds for complaint in good years may become highly unreasonable in time of drouth.¹³⁰ This flexibility of the riparian right is regarded by some economists as undesirable since it produces an instability in the water right, but on the other hand it has been praised as providing a flexibility guaranteeing that a particular use pattern will not become frozen and prevent changes that progress demands.

The use of water by one riparian proprietor that causes substantial harm to another has been said to be unreasonable unless the utility of the use outweighs the gravity of the harm.¹³¹ Reasonableness is not to be determined solely by reference to the needs of the user, nor solely from the standpoint of the person harmed. If there is no injury to the rights of the lower proprietor, of course there is no liability under the rule of reasonable use,¹³² but the mere fact of damage and substantial inconvenience to other riparians does not itself make the use unreasonable.¹³³ For example, it has

126. *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903); *Jones v. Conn*, 39 Ore. 30, 64 Pac. 855, 65 Pac. 1068 (1901).

127. *Prather v. Hoberg*, 24 Cal.2d 549, 150 P.2d 405 (1944).

128. *Lone Tree Ditch Co. v. Cyclone Ditch Co.*, 15 S.D. 519, 91 N.W. 352, 128 N.W. 596 (1910).

129. *Redwater Land & Water Co. v. Reed*, 26 S.D. 466, 128 N.W. 702 (1910).

130. *Meng v. Coffey*, 67 Neb. 500, 93 N.W. 713 (1903).

131. *Restatement of Torts*, §§ 851-854.

132. *Fairbury v. Fairbury Mill & Elevator Co.*, 123 Neb. 558, 243 N.W. 774 (1932).

133. *Turner v. James Canal Co.*, 155 Cal. 82, 99 Pac. 520, 22 L.R.A. 401, 132 A.S.R. 59 (1909).

held that where there is a small quantity of water available, far insufficient to meet the needs of all riparians, a use may be reasonable even though it consumes so much water that lower riparians may be put to some expense in order to utilize the remainder.¹³⁴ On the other hand, the mere fact of benefit to the user does not establish the reasonableness of the use. The full flow of the stream cannot be demanded to the detriment of other irrigators merely because some slight benefits result from the overflow, such as the depositing of beneficial silt upon lands, or the washing of salt from marshes, or the replenishing of ground waters.¹³⁵ And although the use for electric power may be proper,¹³⁶ to alternately restrain and release the flow of water stored for that purpose so as seriously to inconvenience irrigators in their use has been held unreasonable.¹³⁷

Reasonableness of Beneficial Use. The courts early laid down the rule that no appropriation of water was valid where the water simply went to waste, and held that the appropriator who diverted more than was needed for his actual requirements and allowed the excess to go to waste acquired no right to the excess.¹³⁸ Also, they have always exercised the power to declare that some uses were not beneficial or that certain applications of water did not fall within accepted classifications of beneficial uses.¹³⁹

In rather recent times these concepts have been merged into a new rule—that a particular use must not only be embraced within the general class of uses held to be beneficial, or must not only be of benefit to the appropriator but it must also be a reasonable and economic use of the water in view of other present and future demands upon the source of supply. Thus in the Oregon case of *In re Deschutes River*,¹⁴⁰ the use of forty second-feet of water during the irrigation season to clean debris from a reservoir and keep it out of electric turbines was denied, although the benefit of such a use to the appropriator was admitted. The court pointed out that that quantity of water could otherwise be used to irrigate 1600 acres of land, and the appropriation was denied as wasteful. The difference between absolute waste and economical use was said to be one of degree only. Similarly, the validity of local regulations permitting the use of underground water only for irrigation, domestic and fish propagation purposes has been upheld in denying an appropriation of such water for flooding land to make duck marshes for private gun clubs, although the benefit to the members of the clubs was recognized.¹⁴¹

An amendment to the California constitution expresses the concept in this fashion: "It is hereby declared that because of the conditions prevailing

134. *Rancho Santa Margarita v. Vail*, 11 Cal.2d 501, 81 P.2d 533 (1938).

135. *Peabody v. Vallejo*, 2 Cal.2d 351, 42 Pac. 486 (1935).

136. *Lone Tree Ditch Co. v. Rapid City Electric Co.*, 16 S.D. 451, 93 N.W. 650 (1903).

137. *Broady v. Furray*, 163 Okla. 204, 21 P.2d 770 (1933).

138. *Power v. Switzer*, 21 Mont. 523, 55 Pac. 32 (1898).

139. *In re Deschutes River*, 134 Ore. 623, 286 Pac. 563, 294 Pac. 1049 (1930).

140. *Ibid.*

141. *Ex parte Elam*, 6 Cal.App. 233, 91 Pac. 811 (1907); *Ex parte Mass*, 219 Cal. 422, 27 P.2d 373 (1933).

in this state the general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use of unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."¹⁴² Construing this section, the California court has said that what may be a reasonable beneficial use where water is present in excess of all needs would not be a reasonable beneficial use in an area of great scarcity and need, and that what is beneficial use at one time may, because of changed conditions, become a waste of water at a later time.¹⁴³

Preferences. In addition to litigation users in which the relative value of their beneficial purposes are weighed, there are statutes which give preference to certain classes of uses over others. These are legislative determinations that one type of use is of relatively greater value than another.

The subject of preferences is too broad to cover exhaustively in this short space,¹⁴⁴ but we can notice three major types here. The most common of these gives the preferred user the right to condemn a nonpreferred water right upon the payment of compensation.¹⁴⁵ The exercise of such a preference will result in permanently transferring the water right to the new owner, who succeeds to the right of the former owner. The most common example of such a preference is the familiar picture of a city condemning an irrigation water right. The second type of preference is called a "true" preference, which gives the preferred user a superior right over other users and in effect places him at the top of the priority list. Stated another way, a true preference exists when the preferred use may be initiated without regard to the fact that the supply is already fully appropriated for other purposes, and the preferred user may take water without paying compensation to persons whose uses are thereby impaired. There are several examples of this second class of preference on interstate streams. The Colorado River Compact lays down the rule that the impounding and use of waters for power shall be subservient to the use and consumption of water for agricultural and domestic purposes and shall never interfere with or prevent the use of water for these dominant purposes.¹⁴⁶ A desire to safeguard further development caused the Montana legislature to qualify a grant of permission to flood Montana land by a dam to be built in Idaho, by giving a preference to future irrigation and domestic appropriations over the use of generating power at the dam.¹⁴⁷ When plans were

142. Cal. Const., Art. XIV, § 3.

143. Tulare Irrigation District v. Lindsay-Strathmore Irrigation District, 3 Cal.2d 489, 45 P.2d 972 (1935).

144. See, Trelease, Preferences to the Use of Water, 27 Rocky Mtn. L. Rev. 133 (1955).

145. Colo. Const., Art. XVI, § 6; Idaho Const., Art. XV, § 3; Neb. Const., Art. XV, § 6; Wyo. Comp. Stat. § 71-402 (1945).

146. 45 Stat. 1057, Art. IV (b) (1928).

147. Mont. Rev. Stat. § 89-895 (1953).

made for the almost complete development of the Missouri river, the upstream states, fearing that the maintenance of a navigation channel in the downstream reaches of the river might some day curtail consumptive uses, forced the insertion of the O'Mahoney-Millikin amendment into the 1944 Flood Control Act that authorized the project. By that amendment only such use of water can be made for navigation as does not conflict with present or future beneficial uses for domestic, municipal, stock water, irrigation, mining, or industrial purposes.¹⁴⁸ This principle is not now limited to Missouri river, it has been extended to all waters arising in the seventeen western states. There are few true preferences in state law, but in Texas all appropriations made since 1931 are granted subject to future appropriations for municipal purposes.¹⁴⁹

The third type of preference has come with the state statutes regulating appropriations by requiring permits from state water officials. Several states expressly give their water administrators the power to choose among several pending applicants who seek to appropriate the same supply when the available waters are insufficient for all. Statutes listing the order in which application should be considered exist in California, Arizona, and Texas.¹⁵⁰ In many states water officials are given the power to choose among applicants or deny permits on broad grounds involving the exercise of discretion instead of the application of a fixed list of preferences. In Utah the state engineer is to prefer "the more beneficial use,"¹⁵¹ and there the state engineer has subordinated to multipurpose project a power appropriation that would have cut the heart out of the project.¹⁵² In Oregon due regard is to be had for conserving water and for the maximum economic development of the water¹⁵³ while the Texas water engineers are to give preference to those applications which will effectuate maximum utilization and prevent the escape of water without contribution to beneficial public service.¹⁵⁴

There is little agreement as to the order in which these uses are to be preferred. In all of the western states, cities and towns are given the power to condemn water rights for municipal supplies, and hence have a preferred right in this sense, although most of the statutes conferring the power are found in the laws relating generally to municipal government and not in the water codes.¹⁵⁵ In the earlier preference statutes, the typical order set out is domestic over all other uses and irrigation over manufacturing,¹⁵⁶ although in Idaho mining districts mining uses are preferred over irriga-

148. 33 U.S.C. § 701-1b (1944).

149. Tex. Civ. Stat. § 7472 (1948).

150. Cal. Water Code § 1254 (1954); Ariz. Code § 75-106 (1939); Tex. Civ. Stat. § 7471 (1948).

151. Utah Code § 100-3-8 (1943).

152. *Tanner v. Bacon*, 103 Utah 494, 136 P.2d 957 (1943).

153. Ore. Comp. Stat. § 116-601 (1940).

154. Tex. Civ. Stat. § 7472c (1948).

155. Trelease, *Preferences to the Use of Water*, 27 Rocky Mtn. L. Rev. 133 (1955).

156. See note 143 supra; Utah Code § 100-3-21 (1943).

tion.¹⁵⁷ Wyoming's preference statute perhaps shows the importance of railroading in the state's economy for "domestic and transportation" purposes are preferred over all others.¹⁵⁸ More recent statutes have expanded the lists and changed the order somewhat. Preferences in permission to appropriate Texas waters are listed in this order: (1) domestic and municipal uses (2) water used in the process of converting materials into forms having greater usability and commercial value including stream generation of power (3) irrigation (4) mining and recovery of minerals (5) hydroelectric power (6) navigation and (7) recreation and pleasure.¹⁵⁹ Oklahoma conservancy districts in choosing among applications for water are to give preference, first, to domestic and municipal water supply, and, second, to supplying water for processes of manufacture, production of steam, refrigerating, cooling and condensing, and for maintaining sanitary conditions of stream flow, and, third, for irrigation, power development, recreation, fisheries, and other uses.¹⁶⁰ Where appropriations of Kansas water conflict, uses take precedence in the following order: domestic, municipal, irrigation, industrial, recreational, and water power uses.¹⁶¹

V. *Conclusion*

The economist will first note from this mass of law that the legal concepts of reasonable riparian use and beneficial purpose of appropriation act as only a slight check on water users. It should be remembered that most of this law evolved in the last century, in a period of development of water resources in a pioneer economy when laissez-faire principles dominated the thoughts of entrepreneurs, legislators, and judges. In pioneer times any use of a resource could be said to be an economic gain. In riparian law, the emphasis on the right of the individual to do as he pleased so long as he not damage his neighbor too greatly stemmed from the same philosophy.

In the rather new concept of reasonable beneficial use, the courts are just beginning to show an awareness of the economic relativity of specific uses, and the comparative benefits to be realized from different, competing uses. But it should be noted that the courts have hesitated to set themselves up as economic planners and have used this power very sparingly up until now, although it may become very important in future decisions as the amount of available water diminishes. Up to the present laissez-faire economics have determined the relative desirability of projects and decided which should be built. Every project precludes some future project by the very nature of the doctrine of priority. These developments which are feasible and economical enough to justify the immediate expenditure of the capital necessary to put them into effect have always received the better right to the water by being first built. This is still true to a

157. Idaho Const., Art. XV, § 3.

158. Wyo. Comp. Stat. § 71-402 (1945).

159. Tex. Civ. Stat. § 7471 (1948).

160. Okla. Stat. § 82-577 (1953).

161. Kans. Gen. Stat. § 82a-707 (1949).

large extent today, although such decisions are subject to check by administrative officials who may choose between applications of projects either on broad public interest grounds or in accordance with a set list of preferences.

As for the preference statutes, they seem to be in great need of overhauling. There is a wide variation as to what shall be preferred and how the preference is to operate. There is general agreement only in that man's personal needs come first, so that domestic and municipal purposes head every list, and there seems to be a fairly uniform resolve not to let waters run unused into the seas, with the consequence that power and navigation operations are generally found near the bottom. But irrigation, manufacturing, mining, and railroad transportation jockey with each other for preferment in the middle ground. There is no uniform effect given to preferences even for one particular purpose; for instance, domestic users are given an absolute preference in some states, a right to condemn in others, and only a better chance to receive a permit elsewhere. Many states have not consciously chosen any order of preference other than that of giving communities the right to condemn a municipal supply.

A reappraisal of these laws and the policies behind them on both state and national levels would not be out of place. Archaic laws may shape ultimate development in an undesirable fashion or may provide stumbling blocks that retard or discourage progress.

In selecting the values on which a modern system of preferences should be based, obviously the uses that are directly necessary to human life and health come first. Second, uses for irrigation and industrial consumption, where there is no substitute for water, must take precedence over other uses for which substitutes can be found, such as power and water transportation.¹⁶² New uses may demand a place on the preference list. Only recently recognition has been given to the importance of maintaining a stream flow adequate to dilute municipal and industrial wastes and prevent downstream health problems. Anyone who has spent a summer in Oklahoma might urge that the preference there given to "refrigeration, cooling and condensing" includes the use for air conditioning. The industrialization of the west may cause some states to review their present policies of preferring irrigation over manufacturing. Where catering to tourists and sportsmen has become a major industry, the protection of recreational and fish and wildlife value takes on a commercial as well as an esthetic importance. Lastly, care should be taken that the hands of future generations should not be too tightly bound.

In such an appraisal of preferences, the extent of the preferment should be considered and its ultimate effects understood. Whenever water is taken from one beneficial use and put to another, an economic loss occurs, whether it is taken under a true preference or by means of eminent domain.

162. Missouri; Land and Water 64, Missouri Basin Survey Commission (1953).

The type of preference merely determines whether the loss falls on the first user or on the taker. But the total loss may be smaller if a true preference is used instead of condemnation: a city is likely to condemn an early right and put valuable land out of production, but a city whose new uses are put at the top of the priority list will squeeze out the marginal land at the bottom. If policy demands that compensation be paid, the latter solution may present insuperable obstacles in the computation of damages, since different appropriators will be affected as stream flow varies. A factor that weighs against the true preference, however, is that its potential exercise may prevent development because investors may refuse to put their money into enterprises dependent upon legally unstable water rights. Where water uses already approach the maximum level, establishing a system of preferences between future appropriations may accomplish little. The power to choose the more desirable of pending applications may be of little effect unless application for major projects happens to coincide.

Actually the future is more in the hands of economists, engineers, and administrators than in the hands of lawyers and judges. Sometimes the law acts as a brake upon new ideas and new schemes, but usually when the application of the new idea will hurt somebody. In such cases the courts will try to strike a balance between progress and protection of rights. Legislators may be slow to accept new ideas. But by and large western water law has been the handmaiden of progress, and you may rest assured that it will not now become a clog on development.