The Allocation of Percolating Water under the Oklahoma Ground Water Law of 1972

Eric B. Jensen
THE ALLOCATION OF PERCOLATING WATER UNDER THE OKLAHOMA GROUND WATER LAW OF 1972*

Eric B. Jensen**

On December 12, 1978, the Oklahoma Water Resources Board issued its "Final Order for Determination of the Maximum Annual Yield of Fresh Ground Water from the Tillman County, Oklahoma Alluvium and Terrace Basin." Although the law which authorized the issuance of the order was approved by the legislature in 1972 and became effective on July 1, 1973, the order was not issued until five years later. This order signaled the completion of work required under the new law before regular administration could proceed for the first ground water basin in the state. Thus, administration of ground water under the Oklahoma Ground Water Law of 1972 is in a transitional

* This article is a substantially revised and expanded version of a paper presented to the Arizona Groundwater Management Study Commission in Tucson, Arizona, February 25, 1978. The author expresses special appreciation to the staff of the Oklahoma Water Resources Board for their cooperation in providing information and answering questions in connection with this article. The conclusions expressed herein are those of the author, who assumes responsibility for their accuracy.

** Assistant Professor of Law and Assistant Dean of the College of Law, The University of Tulsa. A.B., University of California, Berkeley; J.D., Harvard University. Member of the Oklahoma and California Bars.


Copyright 1979 by Eric B. Jensen

437
phase. Several questions of interpretation remain unanswered and several problems of administration remain unsolved.

In order to understand the Ground Water Law of 1972, the common law treatment of property interests in ground water and an earlier regulatory scheme adopted in Oklahoma must both be considered. Although the historical development of Oklahoma ground water law has been treated elsewhere, this article will re-examine that history to describe how it has influenced some of the problems of the present. Before considering Oklahoma ground water law from a historical perspective, however, it is first necessary to understand the basic structure of Oklahoma water law in general.

I. INTRODUCTION: SOME IMPORTANT DISTINCTIONS IN OKLAHOMA WATER LAW

Two important distinctions should be observed while analyzing Oklahoma water law. The first distinction is between property interests in water and regulation of water use. The second distinction is between stream water and other kinds of water, including percolating ground water.

5. However, the Oklahoma Water Resources Board is working rapidly to establish regular administration of the new ground water law in western Oklahoma. The following final orders have been issued by the Oklahoma Water Resources Board: Final Order Establishing Prior Ground Water Rights in Tillman Terrace and Alluvial Basin, Tillman County, Oklahoma (Feb. 14, 1978); Final Order for Determination of the Maximum Annual Yields of Fresh Ground Water from the Tillman County, Oklahoma, Alluvium and Terrace Basin (Dec. 12, 1978); Final Order Establishing Prior Ground Water Rights in Texas County, Oklahoma (Dec. 12, 1978); Final Order Establishing Prior Ground Water Rights in Cimarron County, Oklahoma (Jan. 9, 1979); Final Order Establishing Prior Ground Water Rights in Beckham County, Oklahoma (March 13, 1979); Final Order Establishing Prior Ground Water Rights in Kiowa County, Oklahoma (March 13, 1979). In addition, the final order determining prior rights for Beaver County, Oklahoma, is to be presented to the Oklahoma Water Resources Board on April 10, 1979. Letter from J.A. Wood, responding to letter from this author dated March 13, 1979. Preliminary work is being done in twelve other counties in western and central Oklahoma, including Oklahoma and Cleveland counties, and in a portion of Tillman county not covered by the existing final orders. Oklahoma Water Resources Board, Monthly Progress Report for Determination of Prior Rights, Maximum Annual Yield, Equal Proportionate Shares, and Allocation of Ground Water under New Law (1979).

The distinction between property interests in water and regulation of water use may be regarded as artificial. Indeed, in the case of ground water, where the water has no value apart from the use which might be made of it and where it is physically impractical to exclude others from access to the water in place which one might theoretically own, the only meaningful limitations on a property interest are those which limit the right to use water or to interfere with another person's use. Thus, the function of the property concept and the function of regulating use are identical in a practical sense. Nevertheless, the distinction provides a useful analytical tool for determining the limits on the objectives of the regulatory statutes and the means employed to attain those objectives.

The distinction between stream water and other kinds of water may likewise be regarded as artificial. Modern hydrogeology considers ground water and surface water to be interrelated so that the use made of one resource necessarily affects the other. Further, it is advantageous from a management perspective to treat ground water and surface water as fungible. Nevertheless, Oklahoma law continues to treat ground water and surface water separately.

A. Property Interests and Regulation of Use

The conceptual distinction between property interests in water and the regulation of water use is suggested by the organization of the Oklahoma Statutes. The Oklahoma Legislature chose to include the statute which defines property interests in water in title 60 of the Oklahoma Statutes along with statutes defining other kinds of property interests, whereas the statutes regulating the use of water are all found in title 82. The distinction has also been implicitly recognized in case law.

7. It is more difficult to conclude that the water from surface streams has no value apart from use, at least insofar as use means extraction, since flowing surface water has environmental and aesthetic value in place. In fact, the statement in the text may be an oversimplification as applied to groundwater in place may have value as subjacent support for the surface.


9. Further, the distinction is suggested by the constitutional analysis of oil and gas regulations, which present problems similar to those encountered in ground water law See, e.g., Champlin Refining Co. v. Corporation Comm'n, 286 U.S. 210 (1932); Ohio Oil Co. v. Indiana (No. 1), 177 U.S. 190 (1900).


11. Id. at xxiv - xxvi.

12. Rarick II, supra note 6, at 22-23.


15. See notes 102-03 infra and accompanying text.
The distinction has not always been observed, however. For example, in a recent case whose resolution depended upon whether the statutes regulating stream water use or the statutes regulating ground water use applied to the water source in question, the Oklahoma Supreme Court answered the question by focusing almost exclusively on the statute governing property interests, referring only incidentally to the regulatory statutes themselves. Similarly, administrative confusion of the two concepts is indicated by the use of the term “vested rights” in the ground water regulations as originally adopted under the 1972 law. The Oklahoma Water Resources Board has since recognized the distinction by changing the term “vested rights” to “prior rights,” thus removing the property interest connotation from the regulations.

B. Stream Water and Other Kinds of Water

It is somewhat of an oversimplification to say that Oklahoma law differentiates stream water from other kinds of water. The precise contours of the distinction may differ according to the purpose for which such a distinction becomes necessary. If property interests are being defined, one distinction applies. If the use of water is being regulated, another similar, but perhaps slightly different distinction applies. In a small number of cases, the failure of the distinctions to correspond exactly raises some potential difficulties.

1. Property Interests

In defining property interests, the relevant distinction is between “water standing [on land], or flowing over or under its surface but not forming a definite stream” and “[w]ater running in a definite stream” and...

16. Oklahoma Water Resources Bd. v. City of Lawton, 580 P.2d 510 (Okla. 1978). A partial justification for the court’s using the property statute rather than the regulatory statutes for resolving the issue is that the statutes regulating stream water use contain no clear internal reference to their own scope, while the property statute states, “Water running in a definite stream . . . becomes public water and is subject to appropriation . . . as provided by law.” Okla. Stat. tit. 60, § 60 (1971). See notes 56-64 infra and accompanying text. Thus, the property statute might properly be regarded as the statute defining the scope of the statutes regulating stream water use. See also, Rarick II, supra note 6. However, the ground water law does contain a clear internal reference to its scope, which the court fails to cite. Okla. Stat. tit. 82, §§ 1020.1(A), 1020.2, 1020.7 (Supp. 1978).
19. See note 65 infra and accompanying text.
formed by nature over or under the surface . . . .” Water in the former category belongs to the owner of the land upon or beneath which it is found. Water in the latter category may be used by a landowner for domestic purposes, but it is public water subject to appropriation under the law.

To define the distinction as being one between water found on the surface and water found beneath the surface is imprecise. Some water found on the surface—standing water and flowing (diffused) water—belongs to the owner of the surface, and some underground water—that running in a natural stream—is public water, which a landowner may take for domestic use, but which is otherwise subject to the law governing the appropriation of water. In Canada v. City of Shawnee, the Oklahoma Supreme Court translated the statutory categories as they apply to subsurface water into a distinction between percolating water and underground streams. The court stated:

In legal consideration, subterranean waters are divided into two classes: (1) percolating waters, and (2) underground streams. Percolating waters are those which seep, ooze, filter, and otherwise circulate through the subsurface strata without definite channels. Underground streams are simply what their name implies; water passing through the ground beneath the surface in defined channels.

As thus defined, the category “underground streams” may be either a very small category or a very large one, depending upon whether one considers that definition to require that there be a turbulent flow such as characterizes surface streams or only a requirement that there be confining strata. The Canada court, however, envisioned a narrower category than that which would be created if the only requirement was confining strata. The court adopts the generally accepted presumption that subterranean waters are percolating waters, which indicates that

21. Id.
24. 179 Okla. 53, 64 P.2d 694 (1937).
25. Id. at 54, 64 P.2d at 696. In the portion of the opinion from which the quotation is taken, the court does not specifically refer to the statutory categories. Later in the opinion, however, the court discusses the relationship between the statutory concept of ownership and the American rule of reasonable use which it adopts for percolating water. See notes 74-76 infra and accompanying text.
27. 179 Okla. at 54, 64 P.2d at 696. See 1 Waters and Water Rights 322-23 (R. Clark ed.
the court must have believed that more underground water fit its definition of "percolating water" than fit its definition of "underground streams." 28

The Canada court's discussion of the classification of subsurface water must be regarded as dictum since the issue of classification was not raised by the parties. 29 No Oklahoma appellate cases involving subsurface water have been reported where the contention is made that the water source is an underground stream. The category of underground streams (i.e., subsurface waters which are nevertheless public), however, may include more than gushing underground streams.

In Oklahoma Water Resources Board v. City of Lawton, 30 the Board had granted a permit under the ground water law to withdraw ground water which supplied a spring. The city claimed that the Board should have proceeded under the stream water law, which would have required the Board to consider the city's asserted prior right to the water. In holding that the spring supplied a definite stream and that the water should have been classified as stream water, rather than as ground water, the court found that the legislature had intended to forbid landowners from preventing the flow of natural springs which supply a definite stream. 31 The court did not consider that the water was captured before it emerged on the surface, but rather it assumed that, since the resource tapped was the source of a spring, it was subject to stream water rules regardless of whether or not the water was captured on the surface.

The court focused on the fact that the water from the spring flowed for a short distance as diffused water after it reached the surface before it entered a definite stream and held this to be immaterial. Thus, it would appear that the waters of a definite stream are not limited to the waters within its banks. This fact, combined with the above-noted fact that the water in Lawton had been captured beneath the surface, suggests that subsurface water may be part of a definite surface stream.

Some earlier Oklahoma cases provide analogies leading to the

1967). In terms of the statute, the distinction should be restated as a presumption that subterraneean water is not part of a definite stream.

28. Further, the court's physical description of percolating water includes a reference to impermeable strata which cause accumulations of percolating water in great abundance. 179 Okla. at 53, 64 P.2d at 696.
29. Id. at 54, 64 P.2d at 696.
same conclusion. In two such cases, the issue was whether there was a privilege to erect barriers against flood waters and cause the water to flood other land. If the water was part of a definite stream, there was no such privilege. If it was merely surface water, however, there was such a privilege under the common enemy doctrine. In both cases, the court found that the waters were part of a definite stream, even though they were found outside the banks of the stream:

Overflow waters that continue in a general course, although without defined banks, back into the water course from which they started, or into another water course, do not become “surface waters,” but remain a part of the water course.

The only limitation on this principle is that the overflow waters must be the result of reasonably foreseeable stream conditions, or, to use the words of the cases, “ordinary floods.”

Although Lawton is limited to holding that ground water supplying a spring should be considered stream water rather than ground water, the earlier cases suggest that any ground water whose occurrence is closely connected with the ordinary flow of a surface stream should be treated as stream water. The distinction between diffused surface water and surface water in a stream is analogous to the distinction between underground water not part of a stream and underground water part of a stream, and aptly so since the property statute draws no distinction between surface water and subsurface water, but only a distinction between stream water and water not part of a stream. The conclusion suggested by the cases is further borne out by a provision of the Oklahoma stream water law that authorizes a riparian owner to take stream water for domestic use from wells on his premises. This statutory provision would make little sense if underground water closely associated with a stream was not considered to be stream water.

36. Professor Rarick has apparently drawn the same conclusion, although his terminology is that of percolating water versus underground streams. He concludes that water moving in the alluvium along surface streams is properly classified as water of an underground stream. Rarick IV, supra note 6, at 424.
37. See notes 23-29 supra and accompanying text.
38. OKLA. STAT. tit. 82, § 105.2(A) (Supp. 1978).
This conclusion must be qualified by posing a question implicitly raised, but not explicitly addressed, in *Lawton*. As noted earlier, the *Lawton* court used the property statute to answer a question concerning the scope of the regulatory statutes. Apparently, the *Lawton* court considered the property statute to have an important bearing upon the scope of the stream water regulation but did not consider the statutes which precisely define the scope of the ground water regulations. As will be discussed below, the scope of the ground water regulations is broader in some ways than the classification of ground water not in a definite stream that was suggested by the foregoing case analysis. Thus, the question raised is whether the statute defining the scope of the ground water regulations has the unstated effect of narrowing the definition of stream water for the purposes of defining property interests.

2. Regulation of the Use of Water

Oklahoma has two different administrative schemes for regulating the use of water. The regulation of stream water is based on prior appropriation. For ground water, as will be discussed below, regulation follows the concept of correlative rights by apportioning water to landowners in proportion to their ownership of the surface of the land. To make the distinction in terms of ground water versus stream water, however, is an oversimplification.

The Oklahoma Ground Water Law of 1972 defines ground water as “water under the surface of the earth regardless of the geologic structure in which it is standing or moving outside the cut bank of any definite stream.” Other provisions of the ground water law employ the term “ground water” so that the scope of each provision is limited in its effect to water fitting the description contained in the definition. Two

39. *See* note 16 *supra* and accompanying text.
40. *See* notes 31-55 *infra* and accompanying text.
41. *See* note 64 *infra* and accompanying text. Professor Rarick assumes that changes in the scope of the groundwater regulations have the effect of broadening or narrowing the definition of water not in a definite stream. *See* Rarick IV, *supra* note 6, at 424. If, indeed, the ground water law regulates some ground water which is part of a definite stream, then the ground water law has effectively converted to private use some property which the statute declares to be public property. *See* Okla. Stat. tit. 60, § 60 (1971). One may well wonder whether committing public property to private use in this way is a proper exercise of governmental power.
43. *See* notes 131 & 164 *infra* and accompanying text.
46. *See*, e.g., Okla. Stat. tit. 82, § 1020.7 (Supp. 1978).
other limitations on the scope of the ground water law appear in the law itself. The first is a provision which excludes from coverage "the taking, using or disposal of salt water [defined as water containing 5,000 parts per million or more total dissolved solids47] associated with the exploration, production or recovery of oil and gas or to the taking, using or disposal of water trapped in producing mines."48 The second include several provisions which expressly apply to "fresh ground water" or "fresh ground water basins,"49 fresh water being defined as water containing less than 5,000 parts per million of dissolved solids.50

The definition of ground water used in ground water regulation differs from the concept of subsurface water not part of a definite stream used for defining property interests. The statutory declaration that the geologic structure in which the water stands or moves is irrelevant,51 combined with the statute's exclusion of water found within the cut bank or any stream,52 both excludes some subsurface water not part of a definite stream and includes some subsurface water which is part of a definite stream.53 For example, fresh water found in deep strata separated by impermeable material from a surface stream—so that it is not part of the surface stream—is nevertheless beyond the scope of the ground water law if it is found within the cut bank of the overlying surface stream.54 On the other hand, water flowing in the alluvium

47. OKLA. STAT. tit. 82, § 1020.1(G) (Supp. 1978).
48. OKLA. STAT. tit. 82, § 1020.2 (Supp. 1978).
49. See, e.g., OKLA. STAT. tit. 82, §§ 1020.4, 1020.15 (Supp. 1978).
50. OKLA. STAT. tit. 82, § 1020.1(G) (Supp. 1978).
51. Geologic structure is irrelevant only for the purpose of defining ground water. The definition of ground water basin includes consideration of the geologic structure as perhaps its controlling feature. See OKLA. STAT. tit. 82, §§ 1020.1(C)-1(D) (Supp. 1978).
52. The absence of commas in the statute makes it ambiguous. The reading in the text assumes that it would be correct to punctuate the statute as “water under the surface of the earth[,] regardless of the geologic structure in which it is standing or moving[,] outside the cut bank of any definite stream.” OKLA. STAT. tit. 82, § 1020.1(A) (Supp. 1978). The alternative reading would be to include all subsurface water, considering irrelevant the geologic structure outside the cut bank in which the water stands or moves. The punctuated reading is considered appropriate on the basis of a discussion with Mr. J.A. Wood, Chief of Groundwater Division, Oklahoma Water Resources Board, which occurred February 16, 1978. This discussion suggested that the “cut bank” limitation is for administrative convenience in establishing the applicability of the law, as it is considerably easier to observe from where the surface groundwater is taken than to determine whether the subsurface source is closely connected with the surface stream.
53. Unless the statutes defining the scope of the ground water law have the effect of narrowing the definition of “definite stream.” See note 41 supra and accompanying text and notes 64-65 infra and accompanying text.
54. See note 52 supra. The alternative reading of the statute would eliminate this difference since, although the geologic structure outside the cut bank would be irrelevant under the statute, the geologic structure within the cut bank would be relevant to determine whether the subsurface water was part of the stream or not.
along a surface stream but outside the cut bank of the stream—water which is arguably part of the stream—\textsuperscript{55}—is within the coverage of the ground water law.

The scope of the Oklahoma stream water law\textsuperscript{56} seems to be controlled by the statutory definition of “definite stream.” The stream water law does not, however, employ its critical term of art as consistently as does the ground water law.\textsuperscript{57} In fact, the only use of the term “definite stream” is to exclude from the coverage of the act farm ponds and gully plugs not located on definite streams.\textsuperscript{58} Repeated references to “streams” and “stream systems” can be found throughout the act,\textsuperscript{59} however, including a provision which awkwardly states the principle that the right to use the water of a stream may be claimed only as established under the stream water law or under the property provision.\textsuperscript{60}

To say that the statutory definition of “definite stream” controls the scope of the stream water law does not describe the water which is subject to the law very precisely. The statute uses such terms as “water from a stream,”\textsuperscript{61} “water of a stream”\textsuperscript{62} and “stream system”\textsuperscript{63} without stating whether or not these terms refer only to the water found within the bed and banks which define a definite stream and without otherwise carefully defining a category of water. Thus, the statutory concept of stream water is subject to the same broad interpretation as is the corresponding concept used to define property interests.\textsuperscript{64}

The \textit{Lawton} case, of course, may stand for the proposition that the property concept is identical to the regulatory concept, since the court employed the property interest statute to determine the scope of the stream water regulatory statute. But the two concepts cannot be identical unless the property interest concept of “stream water” is narrowly defined to exclude any subsurface water found outside the cut bank of a stream or unless the statutory definition of ground water is judicially narrowed to exclude water which is part of a definite stream. Otherwise, the inconsistent systems of regulation embodied in the stream...

\textsuperscript{55} See note 53 supra.
\textsuperscript{57} See notes 45-46 supra and accompanying text.
\textsuperscript{58} Okla. Stat. tit. 82, § 105.2(A) (Supp. 1978).
\textsuperscript{60} Okla. Stat. tit. 82, § 105.5 (Supp. 1978).
\textsuperscript{61} E.g., Okla. Stat. tit. 82, §§ 105.5, 105.7 (Supp. 1978).
\textsuperscript{62} E.g., id.
\textsuperscript{63} E.g., Okla. Stat. tit. 82, § 105.29 (Supp. 1978).
\textsuperscript{64} See notes 20-41 supra and accompanying text.
water law and the ground water law would both have to apply to some of the same water sources—an absurd result. Thus, either the statutory definition of ground water must limit what is stream water for purposes of regulation, or the statutory definition of ground water must be limited by the term "stream water" as that term is used to define property interests.

The holding in Lawton necessarily means that the statutory definition of ground water is to be limited by the property concept of stream water at least to the extent that stream water includes source water for a spring. The approach of the court suggests that the property concept of stream water might limit the statutory definition of ground water in its full sweep. To press the logic of the Lawton case to its ultimate conclusion, however, would have the effect of writing the "cut bank" limitation out of the statutory definition of ground water, thus removing from the statute a definitional device designed to lend simplicity to the administration of water resources within the state. Thus, the common boundaries of the two systems for regulating water must presently be viewed as being somewhat uncertain.

II. THE PROPERTY INTEREST IN OKLAHOMA GROUND WATER

Under the Oklahoma statutes, "The owner of land owns water . . . flowing . . . under its surface, but not forming a definite stream." This sentence, first enacted into statute by the first Territorial Legislature of Oklahoma in 1890, remains the statutory foundation of property rights in percolating ground water in Oklahoma. The only change which has been made in the statute which affects percolating ground water is the addition of a sentence which provides, "The use of ground water shall be governed by the Oklahoma Ground Water Law." It has been suggested that the only purpose of this addition was to prevent legislation reforming the stream water law from being construed to alter the ground water law as it had evolved at the time of

---

65. See note 52 supra. The Lawton case is thus subject to criticism for its failure to consider the ground water definition. This is not to say that the Lawton decision is necessarily unsound as a matter of policy but only that the statutory analysis employed by the court is defective.
66. OKLA. STAT. tit. 60, § 60 (1971).
the amendment. Thus, the statutory basis for property interests in percolating ground water is substantively identical to the provision originally enacted.

The statute ties ownership of subsurface water to the ownership of land. It has been held, however, that the land owner has no claim to any particular molecules of water. Further, the ownership of ground water in place is of little practical significance. Thus, if the statutory declaration that the owner of land owns ground water has any practical meaning, it must include the right to withdraw the water from the land and apply it to use. Judicial treatment of the statute has confirmed the existence of this landowner's right.

The leading Oklahoma case discussing property rights in percolating ground water is *Canada v. City of Shawnee*. In that case, the city had drilled twelve wells on a seventy acre tract of land in order to obtain a supplementary municipal water supply. The land on which the wells were drilled was seven or eight miles from the city. The plaintiffs were farmers who owned adjoining or nearby land and who claimed that the city's activities had dried up wells, springs, and even the land itself. The plaintiffs sought to enjoin the city from pumping its wells. The district court rendered judgment for the defendant; the Oklahoma Supreme Court reversed.

The opinion of the court discusses the evolution of ground water law from its earliest beginnings in England under the rule of absolute ownership through the emergence of the American rule of reasonable use. The city contended that the 1890 statute had adopted the absolute ownership rule for Oklahoma. The court rejected that contention and held that, although the city owned the water beneath the surface of its land, the rights of an owner of water are, as is the case with all other classes and forms of property, subject to "qualifications and conditions respecting the rights of others in the ownership and enjoyment of their

---

70. Rarick II, supra note 6, at 25-26.
72. The law of oil and gas reaches a similar conclusion with respect to the rights of a landowner to withdraw oil and gas from beneath his land, although the law of oil and gas begins with the premise that the landowner does not own the oil and gas under his land until he captures it. See Frost v. Ponca City, 541 P.2d 1321 (Okla. 1975). The analogy between water law and oil and gas law is significant in the constitutional analysis of the Oklahoma ground water law. See notes 125-26, 161 infra and accompanying text.
73. 179 Okla. 53, 64 P.2d 694 (1937).
own property and lives." The court thus concluded that the statute did not preclude application of the American rule of reasonable use in Oklahoma. Applying the American rule, the court held that the city's use of water was unreasonable and should be enjoined, subject to the city's exercise of the power of eminent domain and payment of just compensation.

The court engaged in an extensive discussion of the characteristics of the American rule. That discussion is epitomized in the following language quoted from the New Jersey opinion in Meeker v. East Orange:

The court [in Meeker] said that the rule of reasonable use as applied to percolating waters "does not prevent the proper user by any landowner of the percolating waters subjacent to his soil in agriculture, manufacturing, irrigation, or otherwise; nor does it prevent any reasonable development of his land by mining or the like, although the underground water of neighboring proprietors may thus be interfered with or diverted; but it does prevent the withdrawal of underground waters for distribution or sale for uses not connected with any beneficial ownership or enjoyment of the land whence they are taken, if it thereby result that the owner of adjacent or neighboring land is interfered with in his right to the reasonable user [sic] of subsurface water upon his land, or if his wells, springs, or streams are thereby materially diminished in flow or his land is rendered so arid as to be less valuable for agriculture, pasture, or other legitimate uses.

The rule which thus emerges is one which permits substantial latitude for uses of ground water made on the land from which it is taken, but which allows water to be transported off of the land only where there is no material interference with the rights of adjoining or nearby landowners. The rule emerging from Canada permits substantial latitude

75. 179 Okla. at 56, 64 P.2d at 698-99.
76. Id. at 58, 64 P.2d at 701 (on rehearing).
77. 77 N.J.L. 623, 74 A. 379 (1909).
78. 179 Okla. at 55, 64 P.2d at 697.
79. Professor Rarick suggests that malicious or wasteful uses would be forbidden but that the case leaves some doubt about whether any other use on the land from which the water was taken would be forbidden. Rarick IV, supra note 6, at 410-11.
80. Rarick IV, supra note 6, at 410-11. It is important to stress that even where the use challenged is one made at a distance from the water source, the rule adopted in Canada does not flatly enjoin such a use, but enjoins it only where it causes material interference with the rights of those who own land over the source. A question arises whether the protection thus afforded is of a particular means of diversion or only of the reasonable availability of the water from the land.
for uses made on the land. The facts in Canada, however, did not require the court to address the extent to which uses on overlying land

strict reading of the excerpt from Meeker suggests that if there are wells, springs or streams on his land the landowner is entitled to protection of them. The Canada court did not address this issue.

The Canada court seems to have had nothing more than an unrefined concept of harm in mind. The court states as its conclusion to an analysis of the cases in other jurisdictions, “But the majority of recent decisions stop short at and forbid the harmful extraction of percolating water for sale at a distance.” 179 Okla. at 55, 64 P.2d at 697 (emphasis supplied). But nowhere does the court specifically address the question of the precise nature of the interference forbidden.

In City of Stillwater v. Caniff, 184 Okla. 375, 87 P.2d 947 (1939), a case almost identical to Canada on its facts, the Oklahoma Supreme Court had an opportunity to address the issue of precisely what is protected by the American rule. There the city had pleaded specially that if the plaintiff landowner had deepened his well he would have had an adequate water supply despite the city’s pumping activities. If the court had addressed the merits of the plea and found it legally sustainable, then it would have been possible to conclude that the only protection afforded a landowner was protection of reasonable access to his ground water, not protection of any particular means of diversion. However, the court avoided the merits by finding there was competent evidence of a permanent injury to the plaintiff, with the court’s description of the evidence including a reference to testimony which had been given at trial that the deepening of the wells was impractical. Id. at 376, 87 P.2d at 948.

In City of Enid v. Crow, 316 P.2d 834 (Okla. 1957), the issue was resolved. Once again the factual setting was similar to that of Canada, with some important added facts. In Crow, when the plaintiffs had noticed that their water supply was being depleted, they had complained to the city. The city had responded to the complaint by drilling a deeper well for the plaintiffs, and the plaintiffs had equipped the new well with a new pump and a new pump house. The new well had, however, failed to enable the plaintiffs to obtain sufficient water to run more than one faucet at a time, whereas the old well had produced enough water to run three faucets at a time before the city began to pump its municipal supply. The court affirmed an award of damages consisting of two elements: first, the difference between the value of the land supplied with enough water to run three faucets and the value of the land supplied with enough water to run only one faucet; and second, the expenses that the plaintiff had incurred in equipping the new well. The recognition of the expenses of equipping the new well indicates that protection is to be given a particular means of diversion, not simply the availability of water in the land.

Crow leaves some questions unanswered. First, if no action is taken to deepen a well which suffers interference from a neighbor’s pumping, are damages limited to the cost of deepening the well or are they measured by the diminution in the value of the property occasioned by the decline in the production of water from the old well? In short, does a duty exist which is analogous to the duty to mitigate damages found in the law of contracts? This question is not easily answered as a matter of policy. On one hand, where the expedient of deepening and re-equipped a well will avoid large losses, to award an injured party the diminution of land value where he has not taken the expedient steps would seem to confer upon him a windfall. On the other hand, as the facts in Crow itself show, the benefit to be derived from deepening a well may be speculative, and it is questionable whether the law should make an investment of resources in speculation a condition to full protection of one’s rights.

The second unanswered question is more basic than the first, although related. It is whether the law should protect a landowner who has not expended resources on developing a means of diversion against a lowering of the water table or whether his protection should be limited to depletions which make it unreasonably expensive to obtain his groundwater. Where the interference affects natural surface flow such as stream water or spring water, then perhaps he should, as suggested by Meeker, be given protection, since the lack of any need to seek water below the surface may be an element in the value of his land. (But, such ground water may be part of a stream and thus not his to own in any event. See notes 30-38 supra and accompanying text.) The withdrawal of ground water which does not manifest itself in an impact on surface supplies is less clearly an element influencing value, simply because information about a purely subsurface source is less easily available.
would be permitted to interfere with uses on other overlying land. In fact, no Oklahoma case has dealt with this dimension of the property interest in ground water. Canada, however, contains extensive dicta on the question. The court observed:

[F]lew if any cases can be found where American courts have denied a landowner the right to draw as much percolating water from under his land as he needs, even though it hurts his neighbor, so long as the use to which he puts it bears some reasonable relationship to the natural use of his land, and even though such use of the land be industrial and not agricultural.

The court's use of the general principle of property law that rights of ownership are qualified by the rights of others suggests that some accommodation between competing uses made on land overlying the source should be made. In fact, the court describes the American rule

81. The cases discuss the impact of statutory regulation of ground water use on the relationship between parties, all of whom are using water on the land from which it is taken. See, e.g., Hodges v. Oklahoma Water Resources Bd., 580 P.2d 980 (Okla. 1978); Texas County Irrigation and Water Resources Ass'n v. Cities Serv. Oil Co., 570 P.2d 49 (Okla. 1977); Lowrey v. Hodges, 555 P.2d 1016 (Okla. 1976).
82. 179 Okla. at 55, 64 P.2d at 696.
83. See note 75 supra and accompanying text.
84. That some such accommodation should follow from the adoption of the American rule of reasonable use is suggested by the more or less contemporaneous development in Oklahoma of the reasonable use theory of riparian rights in surface waters. In Broady v. Furray, 163 Okla. 204, 21 P.2d 770 (1933), and in Martin v. British Am. Oil Producing Co., 187 Okla. 193, 102 P.2d 124 (1940), the Oklahoma Supreme Court referred to the rule limiting riparian rights as dictated by "due regard to the right and necessities of others interested." 179 Okla. at 195, 102 P.2d at 126. Cf. 163 Okla. at 204, 21 P.2d at 771 (syllabus by the court). Neither Broady nor Martin involved the allocation of water between riparians, both of whom were withdrawing it for use, so neither opinion had to deal with the question of whether the quantity withdrawn by each would have to be adjusted to meet the needs of the other. However, in Smith v. Stanolind Oil & Gas Co., 197 Okla. 499, 172 P.2d 1002 (1946), the court, referring to both Broady and Martin, affirmed a lower court decree which enjoined the defendant from taking as much water as it needed, while preserving to the plaintiff no more than he needed, despite a contention with support in the language of the statute that plaintiff was entitled to the entire natural flow of the stream. See generally Rarick I, supra note 6, at 11-19.

The rule of reasonable use as applied to groundwater is stated by the Canada court: "[E]ach landowner is restricted to a reasonable exercise of his own rights and a reasonable use of his own property, in view of the similar rights of others." 179 Okla. at 54, 64 P.2d at 696. The parallel between this statement and the principle stated in Broady and Martin and relied upon to allocate water in Stanolind is evident, and a similar parallel exists between the riparian rights principle and the general principle of property law referred to in Canada. See note 75 supra and accompanying text. This parallelism leads one to believe that had a problem of allocation between landowners using water on land overlying the source ever been presented to the Oklahoma Supreme Court in a common law setting, see note 81 supra and accompanying text, the court might have undertaken to find an accommodation as it did in Stanolind. The question may now be mooted, however, by the adoption of statutory allocation schemes.
as simply an application of that general principle.\textsuperscript{85}

The court's summary of the reasonable use principle as gleaned from the cases suggests one basis for accommodation. The court states that a landowner is entitled to use whatever quantity of water he needs without regard to the effect of his use on others "so long as the use to which he puts it bears some reasonable relationship to the natural use of his land . . . ."\textsuperscript{86} Thus, other landowners will have a claim against a landowner who uses water in a way which bears no reasonable relationship to the natural use of his land. In addition, a landowner making such a use would not be entitled to protection against others. Since the natural use of land may vary from region to region, a use of water related to the natural use of land in a relatively well-watered area may not be considered such a use in an arid region. Thus, the protection to which one is entitled and the type of interference against which one is protected may well depend upon a concept not unlike that of "beneficial use" which characterizes prior appropriation law.\textsuperscript{87}

The court rejects the notion that the American rule commands an apportionment of water between adjacent landowners.\textsuperscript{88} The reason for the rejection of an apportionment notion is significant as one observes that the \textit{Canada} court thought the American rule to be merely a gloss on the English rule of absolute ownership.\textsuperscript{89} The court justifies its rejection of apportionment by observing that

\textit{\ldots . If the rule of reasonable use should attempt in actual practice an apportionment of percolating water between adjacent landowners, it would serve to illustrate the necessity of the English rule.}\textsuperscript{90}

If the impossibility of apportionment justifies rejecting the principle of apportionment, then the reasons the court thought apportion-

\textsuperscript{85} 179 Okla. at 54-55, 64 P.2d at 696.
\textsuperscript{86} 179 Okla. at 55, 64 P.2d at 697 (emphasis added).
\textsuperscript{87} \textit{See} Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 3 Cal. 2d 489, 45 P.2d 972 (1935); \textit{1 WATERS AND WATER RIGHTS} 85-93 (R. Clark ed. 1967). \textit{See also} \textit{RESTATEMENT (SECOND) OF TORTS} \S 850B (a) (Tent. Draft No. 17, 1971). Pushed to an extreme, this approach might deny certain landowners any right to use ground water at all. This would seem to contravene the statutory rights of ownership in the water.

With respect to the concept of "beneficial use," the Oklahoma Supreme Court has recently suggested that the concept is less flexible than suggested in the text. Hodges v. Oklahoma Water Resources Bd., 580 P.2d 980 (Okla. 1978). \textit{See} note 208 \textit{infra} and accompanying text.
\textsuperscript{88} 179 Okla. at 55, 64 P.2d at 696.
\textsuperscript{89} \textit{Id.} at 55, 64 P.2d at 697.
\textsuperscript{90} \textit{Id.} at 54-55, 64 P.2d at 696.
ment to be impossible must be examined. If the impossibility can be overcome, then perhaps apportionment is not inappropriate in Oklahoma. Unfortunately, the court does not discuss why it thought apportionment was impossible other than to suggest that the reasons are the same reasons which justify the English rule. Analysis of the opinion itself must end at this point as the court is equally silent on the reasons justifying the English rule.

A clue to the court's thoughts may be found in the brief of the defendant in error:

The English or common law rule seems to be rested at bottom upon the maxim, "Cujus est solum, ejus est usque ad coelum et ad interos, [sic]," and has also been upheld by numerous courts from considerations of public policy; (1) because the existence, origin, movement, and course of such waters, and the causes which govern and direct their movements, are so secret, occult, and concealed that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would be therefore practically impossible; (2) because any such recognition of correlative right would interfere, to the material detriment of the commonwealth, with drainage and agriculture, mining, the construction of highways and railroads, with sanitary regulations, building and the general progress of improvement in works of embellishment and utility. 91

Thus, the court was informed of two reasons for the soundness of the English rule: first, lack of a factual foundation for administering any other rule; second, diminution of public welfare through the interference with valuable activities which the correlative rights principle—a rule of apportionment—would entail. 92

As to the second reason, to the extent that the beneficial activities which cannot be carried on involve the use of water, the English rule carries as much potential for interference as any other rule since valuable activities requiring water are entirely at the mercy of anyone making a subsequent demand on the common supply. The court

91. To whomsoever the soil belongs, he owns also to the sky and to the depths.
92. Brief of Defendant in Error at 30, Canada v. City of Shawnee 179 Okla. 53, 64 P.2d 694 (1937). These reasons are almost identical to the reasons given in Acton v. Blundell, 12 M.&.W. 324, 152 Eng. Rep. 1223 (Ex. 1843), cited by the court as the first announcement of the English rule. See 179 Okla. at 54, 64 P.2d at 696.
seems to have recognized this in its statement that "it was those who sought an unfair and unconscionable advantage from the English rule who necessitated a limitation on that rule . . . ."

The stress of the second reason, however, seems to be on the protection of beneficial activities which require the drainage of ground water, such as construction, swamp drainage, and mining, rather than on the use of ground water. It is unlikely, however, that drainage problems influenced the decision in Canada, since both parties were seeking to use the water, not to dispose of it as a nuisance. It is further unlikely that drainage problems would rise to such significant proportions in Oklahoma that needed drainage would materially deplete ground water supplies, except in connection with petroleum, gas, and mining operations, which entail penetrations deep into the earth.

It is likely that the Oklahoma Supreme Court was more concerned with the lack of a factual foundation for administering any rule other than the English rule than it was with any interference with valuable activities which might follow from the adoption of the correlative rights theory. If this surmise is correct, then supplying the factual foundation would remove the most significant obstacle to a system of apportionment. Whether or not the surmise is correct, supplying the factual foundation would remove the most persuasive objection to an apportionment system. This observation is particularly interesting since both the Oklahoma Ground Water Law of 1949 and the Oklahoma Ground Water Law of 1972 mandate the gathering of hydrological data as the basis for the administrative allocation systems that they adopt.

If the foregoing analysis is sound, then the contours of the American rule of reasonable use as adopted in Oklahoma may be considerably different from those contemplated by Canada. Indeed, obviating the reasons for rejecting apportionment may have the effect of expanding the scope of permissible use at a distance from the land. It certainly has the effect of permitting greater restrictions on uses made on the land than those envisioned by the Canada court under the con-

94. 179 Okla. at 55, 64 P.2d at 697.
95. Acton involved drainage of a mine. See notes 92-93 supra.
96. But see OKLA. STAT. tit. 82, § 1020.2 (Supp. 1978).
98. The opinion in Canada seems to set up apportionment and "application [of the American rule] to concrete cases" (which yields the rule substantially restricting uses off of the land) as alternative approaches to the allocation problem. If the objection to apportionment can be obviated, then the choice of the alternative rule seems to be less compelled.
ditions of "impossibility" that the court felt obtained. The only situations which might require relatively unrestrained rights to remove water would be those circumstances where the extraction of the water was to eliminate a nuisance, and the practical impact of these exceptional situations is likely to be insignificant.

The American rule of reasonable use is the basic property rule of percolating water in Oklahoma, and it has survived the enactment of statutes regulating the use of percolating water. Both the Ground Water Law of 1949 and the Ground Water Law of 1972 pay express homage to the concept that the owner of land owns the water beneath it. In addition, two opinions of the Oklahoma Supreme Court decided after the enactment of the 1949 law indicate that the American rule of reasonable use survived that statute. In City of Enid v. Crow, the court, without reference to the ground water law, affirmed an award of damages based upon interference with interests protected under the rule announced in Canada. More striking is Bowles v. City of Enid because the court had to determine whether the ground water law provided the exclusive means by which the city could acquire rights in ground water or whether the city would acquire those rights by exercise of the power of eminent domain; thus, the court could not overlook the ground water law. The court noted:

The conclusion here reached, [that the ground water law does not foreclose recourse to the power of eminent domain] in no manner forecloses any right or privilege in the reasonable use of underground waters of owners of adjacent lands. Their rights are recognized in our Shawnee and Stillwater decisions. . .

The implication of this language is that the property rights protected against uncompensated takings are defined by the American rule of reasonable use. Thus, the regulation of the use of ground water must observe the limits set by these property rights.

99. See note 91 supra and accompanying text.
101. Okla. Stat. tit. 82, § 1013 (1971) (repealed 1972); Okla. Stat. tit. 82, § 1020.9 (Supp. 1978). This is a particularly significant feature of the 1949 law since it is basically a prior appropriation statute. See note 118 infra and accompanying text.
102. 316 P.2d 834 (Okla. 1957).
104. Id. at 616, 245 P.2d at 734 (emphasis supplied). For a discussion of the Stillwater case, see note 80 supra.
III. THE REGULATION OF THE USE OF OKLAHOMA GROUND WATER

A. The Oklahoma Ground Water Law of 1949

The first effort in Oklahoma to impose systematic control of ground water use occurred in 1949 with the enactment of a comprehensive ground water law. The 1949 law expressly recognized that subsurface water is owned by the owner of the land beneath which it is found by making ownership of the land a condition precedent to the withdrawal of water found beneath its surface. Four important limitations, however, were placed on the right of a landowner to use the water located beneath his land.

The first limitation is perhaps not properly described as a limitation but rather as a legislative elaboration of a concept which may be implicit in the American rule of reasonable use. As discussed above, the rights of a landowner may be limited under the reasonable use doctrine by a concept akin to beneficial use. The Ground Water Law of 1949 made beneficial use an express condition of the right to use ground water. In addition, the complementary concept, “waste,” was defined. Under the statute, waste included: taking or using ground water so that it was lost for beneficial use; excessive transportation loss; permitting loss into previous materials encountered in a well; and permitting pollution of a fresh water basin.

The second limitation prevented the issuance of a permit for the use of ground water in excess of the average annual recharge of the ground water basin. The pre-1949 common law rules placed no restrictions on the amount of water a landowner could apply to the land from which the water was taken except those restrictions implicit in the requirement that the use of water have a reasonable relationship to the natural use of the land. The Ground Water Law of 1949, on the

107. See note 86 supra and accompanying text.
108. But cf. note 208 infra and accompanying text.
111. Id. The statute also defined waste as extraction of water in excess of the average annual recharge of the area owned by the landowner and reduction of the yield of existing wells drilled by prior appropriators. See notes 112-20 infra and accompanying text.
113. See note 86 supra and accompanying text.
other hand, introduced the concept of limiting the rate at which water was used in accordance with the conditions of supply.

Under the 1972 law, the limitation of quantity to the average annual recharge has important consequences for the recognition which must be accorded rights perfected under the 1949 law. In this regard, however, it may be significant that, prior to 1965, the express prescription was against the issuance of permits for use in excess of the average annual recharge, and the statute did not expressly state that rights acquired other than under a permit were subject to this limitation. Since the statute at that time provided for permits only after adjudication of rights in a ground water basin, it is possible to read the statute as permitting the establishment of rights through adjudication without regard to the average annual recharge limitation while imposing the limitation on rights in the same basin that arise after adjudication. Such an anomalous interpretation of the statute is probably contrary to the statutory intent. In any event, it has no applicability to rights based on uses initiated after July 14, 1965, because legislation which went into effect on that date extended the permit procedure to preadjudication uses and expanded the definition of "waste" to include use in excess of the average annual rate of recharge.

The third limitation is found in the method adopted by the statute to resolve disputes over water. The principle upon which these disputes were resolved was priority in time. However, would not be an apt description of the system which evolved, because the Oklahoma water administrator tied the amount of water an applicant was permitted to withdraw to the amount of land he owned or leased overlying the basin rather than to the use to which the applicant proposed to put the water. On the other hand, "correlative rights" would not be an apt description either because disputes were to be settled on a time priority principle and because the amount of water allocated administratively, although tied to the amount of land owned or leased, was not a simple proportion of the annual yield of the basin, but

114. See notes 147-48 infra and accompanying text.
115. See notes 127-30 infra and accompanying text.
118. OKLA. STAT. tit. 82, §§ 1005, 1015 (1971) (repealed 1972). The statute even applied the priority principle retroactively to prestatute uses.
119. Ranick IV, supra note 6, at 421.
was rather a fixed amount per acre.\textsuperscript{120} Thus, no attempt was made to guarantee every overlying owner a share of the water in the basin.

The method of resolving disputes over ground water adopted by the 1949 law was arguably a method of apportioning water, thus running afoul of the Oklahoma Supreme Court's rejection of apportionment between landowners.\textsuperscript{121} To the extent that the judicial disdain for a rule of apportionment was based upon lack of information about ground water resources, the statute met this objection by mandating hydrological surveys.\textsuperscript{122} The response of the statute, however, was incomplete in that the statute did not make the completion of the hydrological studies a condition precedent to the establishment of the priority of a claim to appropriate ground water.\textsuperscript{123} Moreover, after 1965, the completion of a hydrological study was not a condition precedent to the exercise by the Water Resources Board of its licensing powers.\textsuperscript{124}

A more serious objection to the statute was that the method of apportionment adopted by the 1949 law had the potential effect of denying all use of water to those landowners who sought to use their water at a point relatively late in time. In effect, the statute could have been construed as transferring the water rights of those who made no use of their water until a point relatively late in time to those who had started to use water from the same source at an early time.\textsuperscript{125} In the oil and gas area the right to withdraw the resource is tied, as it is in the

\textsuperscript{120} Id. The fixed amount was two acre-feet per year. Rarick indicates that claims to greater amounts would be recognized if the applicant could show both a beneficial use and an average annual yield of a greater amount. There were also apparently some exceptions for municipalities. For example, in the order establishing prior rights in Tillman County, the City of Tipton was accorded a recognized priority for 347 acre-feet of water per year, to be extracted from wells located on a 25,000 square foot parcel of land. Oklahoma Water Resources Board, Final Order Establishing Prior Ground Water Rights in Tillman Terrace and Alluvial Basin, Tillman County, Oklahoma (Feb. 14, 1978). Applying the two acre-foot formula, the city would have been entitled to only slightly more than one acre-foot per year. See also, Oklahoma Water Resources Board, Allocations to the City of Guymon, Final Order Establishing Prior Ground Water Rights in Texas County, Oklahoma (Dec. 12, 1978); Allocations to the Boise City Utilities Authority, Final Order Establishing Prior Ground Water Rights in Cimarron County, Oklahoma (Jan. 9, 1979); Allocation to the Oklahoma State Reformatory, Final Order Establishing Prior Ground Water Rights in Kiowa County, Oklahoma (March 13, 1979). A municipality is, of course, required to make compensation if its withdrawal of water interferes with the right of adjoining and nearby landowners to make reasonable use of ground water. Canada v. City of Shawnee, 179 Okla. 53, 64 P.2d 694 (1937); Bowles v. City of Enid, 206 Okla. 611, 245 P.2d 730 (1952).

\textsuperscript{121} See notes 87-96 supra and accompanying text.


\textsuperscript{125} The Ninth Circuit Court of Appeals considered an Oregon statute which admittedly may have had the same effect upon riparian rights in Oregon; nevertheless, the statute was upheld
case of ground water, to the ownership of the surface overlying the source. The Oklahoma Supreme Court has held in such cases that where certain owners are prohibited from exercising their rights of withdrawal, another owner who is permitted to exercise his right of withdrawal must account to the other owners for the profits made from the sale of the oil and gas. Thus, it would seem that a statute which prohibited a landowner from withdrawing ground water to protect the ability of another landowner to continue to withdraw a given amount would have the effect of depriving the landowner whose use was prohibited of a valuable property right without adequate compensation.

The fourth limitation was a licensing requirement imposed by the statute. Prior to 1965, the applicability of the licensing provision depended upon whether the existing ground water rights in the area had been adjudicated or not. In unadjudicated areas, the priority of a claim could be established by an application procedure amounting to little more than a notice, although apparently some control was exercised over the amount of water for which an application would be accepted. Further, since the application procedure established the priority of a mere claim, rather than a right, to appropriate ground water, the claim could presumably be rejected upon adjudication of the ground water rights in the area.

In adjudicated areas, the Board was given authority to control the use of ground water through a full licensing procedure. In 1965, the distinction between adjudicated areas and unadjudicated areas for purposes of the licensing procedure was abandoned, and authority to control all water uses by licensing was conferred upon the administrator.

B. The Oklahoma Ground Water Law of 1972

1. Basic Scheme

The 1972 Act completely rewrote the prior Oklahoma ground water regulatory statute. The basic schemes of the 1972 Act were that...
ground water basins be identified, that the maximum annual yield from each water basin be determined by hydrological studies, that the amount and location of land overlying such ground water basin be determined, and that the maximum annual yield from the basin be divided among the owners of land above the basin in proportion to the surface area owned.

Special provision is made for municipal water supplies. A municipality may use the water allocated to platted land within its corporate limits without regard to whether it owns the land. Before the municipality may use the water, however, it must be able to supply water to the platted land to which the water is allocated, and it must obtain a permit. The requirement that the municipality be able to supply water to the land to which the water it claims is allocated presumably answers the constitutional objections which might be raised concerning this provision of the statute. Further, any wells must be drilled on the platted land and not less than 600 feet within the municipal boundaries.

2. Domestic Exemption

Both the 1949 Act and the 1972 Act exempt domestic uses from their coverage. The 1972 exemption, however, is slightly narrower than the 1949 exemption. The 1949 Act exempts “using ground water for domestic uses, for household purposes, or for the purpose of watering of stock, and for the irrigation of land not exceeding a total of three acres in area for the growing of gardens, orchards, and lawns.” The 1972 law exempts “the use of water by a natural individual or by a family or household for household purposes, for farm and domestic animals up to the normal grazing capacity of the land and for the irrigation of land

132. A municipality that uses water which would otherwise be allocated to the owner of platted land within the corporate limits must make water available to the platted land on the same basis as it is available to other residents of the municipality. 77 OKLA. OP. ATTY GEN. 277 (1977).

133. See Frost v. Ponca City, 541 P.2d 1321 (Okla. 1975). Water must be supplied to the platted land to which the ground water is allocated on the same basis as it is available to other residents of the municipality. 77 OKLA. OP. ATTY GEN. 277 (1977). Thus, a municipality can presumably make its normal charge for water service to such land. This is consistent with the approach of Frost in which the city was allowed credit for the expenses associated with the recovery of the hydrocarbons located beneath plaintiffs’ land in accounting for profits to those landowners.

134. OKLA. STAT. tit. 82, § 1020.21 (Supp. 1978). Apart from its right to take the water allocated to platted land within its corporate limits, a municipality seeking to develop a municipal water supply from a ground water source must apparently either buy or lease enough land to entitle it to withdraw what it seeks to withdraw in accordance with the normal proportioning scheme of the Act. OKLA. STAT. tit. 82, §§ 1020.9, 1020.11D (Supp. 1978).

not exceeding a total of three acres in area for the growing of gardens, orchards, and lawns." The primary effect of the change is to extend the coverage of the ground water law to withdrawals for use in livestock feeding operations and to uses which might arguably be domestic but which are not uses by private households, such as uses by resorts.

The apparent purpose of the domestic exemption is to save both the state and the typically small domestic user the expense associated with an administrative proceeding in connection with the use of water having only a de minimis affect on the ground water supply. The contention that the domestic exemption creates a domestic priority has been rejected by the Oklahoma Supreme Court. In this connection, a change in the basic approach of the exemption statute from that used in the 1949 law is significant. The 1949 law provided that the statute did not interfere with domestic use, rather clearly suggesting a domestic priority. The 1972 law states simply that a permit is not required for domestic use, an approach which is easily susceptible to the interpretation given it by the Oklahoma Supreme Court.

3. Ground Water Mining

Unlike the 1949 law, which contemplates use of only the average annual recharge of the basin, the 1972 law expressly contemplates ground water mining. The statute specifies that the depletion schedule used be such as not to exhaust the basin before July 1, 1993. If exhaustion of the basin over such a short depletion schedule would permit production of water in excess of the amount required for beneficial use, however, then the depletion schedule may extend beyond July 1, 1993, since the statute specifies only a minimum basin life, not a maximum. In the eastern part of Oklahoma, this may well be the mode of

136. OKLA. STAT. tit. 82, § 1020.1(B) (Supp. 1978) (emphasis supplied).
137. See Rarick IV, supra note 6, at 423.
139. OKLA. STAT. tit. 82, § 1004 (1971) (repealed 1972).
140. OKLA. STAT. tit. 82, § 1020.3 (Supp. 1978).
141. See notes 112-13 supra and accompanying text.
142. OKLA. STAT. tit. 82, § 1020.5 (Supp. 1978).
143. Id.
administration.\textsuperscript{144} It is even conceivable that an infinite life may be used in some basins so that the administration of water use is based on average annual recharge, as it was under the 1949 law.

4. Establishing the Parameters of Regular Administration

\textit{a. Protection of Prior Rights}

The 1972 law sets forth a two-step process for establishing the basis upon which the water within a particular ground water basin will be allocated to individual owners. The first step is the ascertainment of prior rights. This is an administrative procedure in Oklahoma, based upon the records of the Water Resources Board and upon the evidence adduced at a hearing on the matter.\textsuperscript{145} So far,\textsuperscript{146} final orders determining prior rights have been issued for five counties in Oklahoma.\textsuperscript{147}

The change from the average annual recharge policy under the 1949 law to the ground water mining policy under the 1972 law creates a problem with respect to the coordination of rights under the old law and rights under the new law. Specifically, the problem is whether the holder of a water right acquired under the old law could successfully challenge a use made under the new law which had the effect of long term depletion of the common water supply. In other words, where prior rights have been established based upon the policy against mining expressed in the old law, can the Water Resources Board switch to a policy permitting mining in the administration of such a basin?

The statute protecting prior rights arguably permits the recognition of rights under prior law on the basis of a controlled ground water mining policy rather than on the basis of a policy permitting the use of only the average annual recharge. Although the 1972 law protects the right to use ground water established under prior law, it defines that right in terms of only one dimension—quantity.\textsuperscript{148} It does not define the right in terms of duration nor in terms of the maintenance of particular ground water conditions. Thus, the protection afforded prior rights is arguably only protection of the right to use the quantity of water used before the enactment of the 1972 law for whatever period of

\begin{footnotes}
\footnotetext[144]{Conversation with James Barnett and J.A. Wood, \textit{supra} note 4.}
\footnotetext[146]{As of March 31, 1979.}
\footnotetext[147]{Letter from J.A. Wood, responding to letter from author dated March 13, 1979. \textit{See} note 5 \textit{supra}.}
\footnotetext[148]{\textit{OKLA. STAT. tit. 82, § 1020.14} (Supp. 1978).}
\end{footnotes}
time and under whatever conditions of supply obtain while the water supply lasts under the mining policy.

Another question related to the change from an average annual recharge policy to a mining policy is the recognition which must be accorded uses commenced under prior law (whether under permit or otherwise) which hydrological studies now show to require water in excess of the limit set by the average annual recharge. Arguably prior law allowed no such uses to ripen into a right to use water—at least to the extent such uses commenced after 1965\(^{149}\)—so no recognition is accorded such uses under the 1972 law\(^{150}\).

If quantity is the only dimension of prior rights which must be recognized under the 1972 law\(^{151}\), then there is no statutory requirement that any priority system be recognized among the prior users. The administrative practice, however, is contrary to this conclusion\(^{152}\).

As to the priority of rights under prior law and of rights acquired under the 1972 law, the statutory language\(^{153}\) suggests that rights under the prior law are superior to rights acquired under the 1972 law\(^{154}\).

The narrowing of the exemption for domestic uses may create a problem in administration with respect to the recognition which must be extended uses commenced under the broader 1949 exemption and which are no longer exempt under the 1972 Act. The problem is a minor one since it is likely to arise infrequently. It will be difficult to resolve when it does arise because no clear guidelines exist for its resolution\(^{155}\). Domestic uses under the 1949 law are excluded from the

\(^{149}\) See notes 115-16 supra and accompanying text.

\(^{150}\) The grounds for denying recognition would be that any permit for such a use granted under the 1949 law was improperly granted and any application filed prior to 1965 for such use of water in a basin which was unadjudicated as of July 14, 1965, could never ripen into a water right. However, to the extent such uses were accompanied by applications under the old law, the applications could be recognized as applications under the new law. See Okla. Stat. tit. 82, § 1020.7 (Supp. 1978).

\(^{151}\) See note 148 supra and accompanying text.

\(^{152}\) Okla. Water Resources Board Reg. § 670.2 (1973) (amended Dec. 14, 1976). See also OKLAHOMA WATER RESOURCES BOARD, FINAL ORDER ESTABLISHING PRIOR GROUND WATER RIGHTS IN TILLMAN TERRACE AND ALLUVIAL BASIN, TILLMAN COUNTY, OKLAHOMA (Feb. 14, 1978); FINAL ORDER ESTABLISHING PRIOR GROUND WATER RIGHTS IN TEXAS COUNTY, OKLAHOMA (Dec. 12, 1978); FINAL ORDER ESTABLISHING PRIOR GROUND WATER RIGHTS IN CIMARRON COUNTY, OKLAHOMA (Jan. 9, 1979); FINAL ORDER ESTABLISHING PRIOR GROUND WATER RIGHTS IN BECKHAM COUNTY, OKLAHOMA (March 13, 1979); FINAL ORDER ESTABLISHING PRIOR GROUND WATER RIGHTS IN KIOWA COUNTY, OKLAHOMA (March 13, 1979).

\(^{153}\) See, e.g., Okla. Stat. tit. 82, § 1020.14 (Supp. 1978). Section 1020.14 prohibits the deprivation of the quantity of water to which users who obtained rights under prior law would otherwise be entitled.


\(^{155}\) Okla. Stat. tit. 82, § 1004 (1971) (repealed 1972). This statute provided that the only
schedules of priorities applying to other types of uses, and the 1949 law gave express permission for domestic uses without regard to other competing uses. Therefore, the only way to recognize those uses which were exempt from the 1949 law but which are not exempt from the 1972 law—as well as to recognize the reliance interests formed with respect to the former law—is to grant the formerly exempt uses first priority in the prior rights determination required under the 1972 law. It can be argued, however, that persons making such newly nonexempt uses have no property interests which would entitle them to an absolute priority over other nonexempt users. If this argument is adopted, the Board would be free to accommodate these rights in the system in some other way, such as by assigning them a priority according to the date that their newly nonexempt use began.

Two constitutional issues arise with respect to the protection which the 1972 law affords prior rights. The first is whether the protection afforded is constitutionally sufficient. Arguably, it is. The principal inroad the 1972 law makes into the rights obtained under the 1949 law is in its permissive depletion of the ground water reservoir. If the American rule of reasonable use is the underlying property system in Oklahoma ground water, then the holder of a prior right has no protected property interest preventing depletion of the reservoir, since the American rule of reasonable use is not inconsistent with ground water mining. In fact, the freedom accorded a landowner to use water on land overlying the source with little regard for the effect such use has on other landowners is more suggestive of mining than of average annual recharge administration of ground water resources.

Further, redefinition of prior rights in terms of the mining policy can be justified as a limitation on the rights of prior users necessary to protect the property interests of other landowners in the basin. As

provisions of the law which applied to domestic use were certain of the proscriptions against waste, significantly not including the proscription against uses interferring with prior appropriators.

156. See note 155 supra.
159. This is true only to the extent that the American rule of reasonable use survived the 1949 law as the basis of ground water law, see notes 99-104 supra and accompanying text, and to the extent that this rule permits beneficial uses on the land from which the water was taken, see notes 75-85 supra and accompanying text.
160. See notes 66-104 supra and accompanying text.
such, it is a justifiable exercise of the police power. To the extent that changing from average annual recharge administration to a mining policy makes water available in useable quantities to landowners who, under the safe-yield prior appropriation policy, would have had no right to withdraw water, the change in policy protects their right to use what the law declares to be theirs.

The second constitutional problem relates to whether the recognition accorded prior rights is constitutionally permissible. The determination of this question hinges on the same factors discussed above in relation to the constitutionality of the prior appropriation means of allocation in Oklahoma. The problem may be somewhat less intense under the 1972 law, since in most places the recognition of prior rights will leave at least some water available for allocation under the correlative rights principle adopted by the 1972 law. All this really means, however, is that prior rights are not protected under the 1972 law as thoroughly as they were under former law. It does not mean that the property rights of the other landowners have not been substantially interfered with. Thus, it may be that recognition of prior rights under the 1972 law is unconstitutional.

b. Determination of Maximum Annual Yield

The second step in establishing the basis upon which the water within a ground water basin will be allocated is to combine the determination of prior rights and hydrological studies of the basin to determine how much water is available for new uses within the basin. A final determination of the maximum annual yield within the basin is made only after a hearing. Once the maximum annual yield has been determined, the Board begins to issue regular permits authorizing landowners to withdraw water in proportion to their shares of the maximum annual yield, determined on the basis of the surface area each owns overlying the basin.

The determination of maximum annual yield is made separately for each ground water basin. “Ground water basin” is defined by the statute as “a distinct underground body of water overlain by contiguous land and having substantially the same geological and hydrological

---

161. See, e.g., Ohio Oil Co. v. Indiana, 177 U.S. 190 (1900); Champlin Refining Co. v. Corporation Comm'n, 286 U.S. 210 (1932).
162. See notes 125-26 supra and accompanying text.
163. OKLA. STAT. tit. 82, § 1020.6 (Supp. 1978).
164. OKLA. STAT. tit. 82, § 1020.9 (Supp. 1978).
characteristics and yield capabilities." Thus, each distinct geological formation is a distinct ground water basin. An owner whose wells penetrate two or more such formations should have a separate allocation from each formation. The water taken by prior users should affect the maximum annual yield calculation for a given formation only to the extent that their water is drawn from that formation. Accumulating and analyzing all of the information necessary to import such precision into the calculation, however, presents serious practical problems.

Some other physical problems complicate the determination of maximum annual yield. First, the statute is unclear on whether maximum annual yield is to be calculated in terms of the total amount of water stored in the basin or whether it is to be calculated in terms of the proportion of the water which is economically recoverable. If calculated according to the total amount of water in storage, the amount allocated to each user will increase. Moreover, the consequent increase in the rate at which a permit holder may withdraw water from the basin will result in an earlier end to the useable life of the basin than that contemplated by the depletion schedule used in the calculation. If so calculated, persons commencing to use their allocation at a late point in time may find difficulty in ever recovering water at the rate of their full allocation. This result appears to be unlikely, however, since the Board has determined to calculate the amount of water stored in terms of the amount economically recoverable.

A second physical problem is that the configuration of the strata confining a basin may mean that water is practically recoverable at certain points above the basin for a longer period of time than it is at other points. Should the maximum annual yield calculation include all of

165. OKLA. STAT. tit. 82, § 1020.1(C) (Supp. 1978).
166. Conversation with J.A. Wood, Chief, Groundwater Division, Oklahoma Water Resources Board, Feb. 16, 1978, at the offices of the Board, located in Oklahoma City. Another practical problem is that inadequate information about some of the formations makes an accurate determination of the natural characteristics and capacities of those formations quite difficult.
167. OKLA. STAT. tit. 82, § 1020.5 (Supp. 1978); conversation with J.A. Wood, supra note 166.
168. Telephone conversation with J.A. Wood, March 28, 1979. The maximum annual yield order for Tillman County includes the following item as one of the bases upon which the maximum annual yield was calculated, "allowing a minimum 20 year life of the basin under the condition that at least 50% of the basin will still have a saturation of at least five (5) feet of fresh ground water on July 1, 1993." OKLAHOMA WATER RESOURCES BOARD, FINAL ORDER FOR DETERMINATION OF THE MAXIMUM ANNUAL YIELD OF FRESH GROUND WATER FROM THE TILLMAN COUNTY, OKLAHOMA, ALLUVIUM AND TERRACE BASIN (Dec. 12, 1978). Mr. Wood explains this stipulation by advising that an irrigation well of minimum economical size (capacity of 250 gallons per minute) requires that much saturated thickness in that particular basin. He further indicated that the saturated thickness requirement would vary from basin to basin, depending upon each basin's peculiar geological characteristics. Telephone conversation with J.A. Wood, supra.
the water in the basin (or at least that portion thereof economically recoverable) or should it include only that portion down to the maximum depth at which to the water can be had from substantially all points on the surface overlying the basin? The statute avoids the question by permitting the division of a basin into subbasins with a separate calculation of maximum annual yield for each subbasin.\textsuperscript{169} The geological configurations are such that a division of a basin into merely two or three subbasins, however, would not solve the problem, and the administration of the law would be greatly complicated.\textsuperscript{170} In addition, the hydrological connection between the subbasins could conceivably make any separate allocation to a particular subbasin meaningless in physical terms, since the water to supply the allocation might be drawn off into another subbasin by withdrawals from such other subbasin.

The Board has solved this problem in another way in the case of the Tillman County Order. The Board's solution is more or less a compromise. They approached the problem by first excluding from the basin all land which as of July 1, 1973, did not overlie a saturated thickness great enough to supply an irrigation well of minimum economical capacity. The maximum annual yield is calculated allowing for depletion of the saturated thickness below such minimum levels before July 1, 1993, under 50\% of the remaining acreage.\textsuperscript{171}

c. Changes in Allocation Based on Revised Data

The Board is required to update its hydrological surveys at least every ten years.\textsuperscript{172} As a result of such updating, the Board may revise its maximum annual yield determination, but it may not decrease the amount of water allocated per acre.\textsuperscript{173} If the later hydrological studies indicate that the maximum annual yield as originally determined was too high, the statute would seem to say that the allocation under a permit granted after the revised study would nevertheless be determined on the original basis. This would mean that the basin would be depleted faster than had originally been contemplated.\textsuperscript{174}

\textsuperscript{169} OKLA. STAT. tit. 82, § 1020.5 (Supp. 1978).
\textsuperscript{170} Conversation with J.A. Wood, \textit{supra} note 160.
\textsuperscript{172} OKLA. STAT. tit. 82, § 1020.4 (Supp. 1978).
\textsuperscript{173} OKLA. STAT. tit. 82, § 1020.6 (Supp. 1978).
\textsuperscript{174} If later permits from a ground water basin were for less water than earlier permits, the
The problem could be alleviated by using time-limited permits which expire at the date of the anticipated redetermination. The statute forbids permits limited to any shorter time than the anticipated basin life, however, so time-limited permits are of limited utility.

d. Well Spacing

The statute authorizes spacing orders. Although authority for spacing orders existed under the 1949 Act, this authority was exercised sparingly. Under the new act, spacing orders will probably be issued for each basin at the time the maximum annual yield is determined. The Attorney General of Oklahoma has expressed the opinion that the Water Resources Board does not have the authority to order well spacing prior to the completion of hydrological studies and the determination of the maximum annual yield.

5. Transitional Rules

Pending completion of the initial hydrological studies, the Board is authorized to issue temporary permits. The statute provides that the minimum allocation under a temporary permit is two acre-feet per year per acre of overlying land, although more may be allocated if the applicant can show that a greater allocation is consistent with a twenty year basin life. The Board requires a hydrological study in support of an application for more than two acre-feet, and it is unlikely that an applicant would go to the expense of providing such a study, especially in view of the requirement that a temporary permit must be revalidated annually.

\footnotesize{same kind of constitutional objections as are addressed to the prior appropriation system might be made. See note 125 supra and accompanying text.}

175. OKLA. STAT. tit. 82, § 1020.9 (Supp. 1978).
176. OKLA. STAT. tit. 82, § 1020.17 (Supp. 1978).
177. Rarick IV, supra note 6, at 423.
178. Conversation with J.A. Wood, supra note 166.
179. 77 OKLA. OP. ATT’Y GEN. 305 (1978).
180. OKLA. STAT. tit. 82, § 1020.11(B) (Supp. 1978).
181. Conversation with James Barnett and J.A. Wood, supra note 4. However, since regular administration under the Act is tied closely to specific geological formations, the two acre-foot limitation arguably applies to each basin underlying the land. Hence, one could arguably obtain a temporary permit for two acre-feet for each underlying formation, and, in fact, some temporary permits have been issued on that basis. Id. But the statute speaks of two acre-feet per acre of overlying land, not two acre-feet per basin per acre of overlying land, so the language of the statute can be read as guaranteeing only two acre-feet, regardless of how many basins underlie the land.
182. OKLA. STAT. tit. 82, § 1020.11(B) (Supp. 1978).}
The Oklahoma Supreme Court has rejected the contention that, in view of the expense involved in developing a water supply under a temporary permit, a temporary permit is tantamount to a permanent permit. The economic problem for a water developer is a real one, however, and perhaps the legislature would be well advised to permit the Board to set the amount of water allowable under a temporary permit according to a reasonable estimate of the likely results of the hydrological studies. The Board does have limited discretion to grant a temporary permit for an amount less than that mandated by the statute, but that discretion is controlled by the use the applicant proposes to make of the water rather than by an estimate of his ultimate allocation.

The position taken by the Attorney General that mandatory well spacing is not permitted prior to the completion of hydrological surveys exacerbates the economic problem for the water developer. The water developer runs the risk that a well which he has drilled under a temporary permit may not comply with the well spacing rules adopted for the basin when regular administration of the basin begins and well spacing orders are adopted. Thus, either the water developer must cease using the well and suffer the loss when mandatory well spacing orders are adopted by the Board, or an exception for the developer's well must be made in the well spacing orders, perhaps compromising the effectiveness of the order. A better solution would be to permit the adoption of a tentative mandatory well spacing order before hydrological surveys are complete.

The position taken by the Oklahoma Attorney General seems to be an unduly narrow interpretation of the well spacing statute. The Attorney General's opinion is based upon the statutory requirements that well spacing be "in relation to the allocation to the land overlying the basin or sub-basin." This language would seem broad enough, however, to include both temporary allocations of water under temporary permits as well as final allocations of water under regular permits.
Further, the statute expressly provides that the board may make well spacing orders before issuing any permits, without specifying that the reference is only to regular permits, such as are issued after the maximum annual yield has been determined.

5. Regular Permits: Final Allocation to Landowners

After the maximum annual yield of a ground water basin has been determined, the Board begins to issue regular permits. To issue a regular permit the Board must find that the lands owned or leased by the applicant overlie the basin, that the use the applicant intends to make of the water is a beneficial use, and that waste will not occur.\(^{188}\) The statute provides that the Board “shall allocate to the applicant his proportionate part of the maximum annual yield of the basin or subbasin.”\(^ {189}\) However, the requirement that the applicant demonstrate that he intends to make a beneficial use of the water may mean that the Board may issue a permit for less than the applicant’s proportionate share.\(^ {190}\)

The only enforcement device provided by the 1972 Act is a provision requiring annual reports of water use. Failure to file such reports empowers the Board to cancel the permit.\(^ {191}\) Well metering is authorized only upon request of a majority of landowners within the basin or the subbasin.\(^ {192}\) Violation of the Act is a misdemeanor, and each day during which a violation continues after notice from the Board constitutes a separate offense.\(^ {193}\)

Although the 1949 law required that water be applied to beneficial use within five years of the issuance of a permit,\(^ {194}\) the 1972 Act places no time limit on application of water to beneficial use after the permit is issued. Thus, it is consistent with the language of the statute for the Board to grant a permit for a future beneficial use. The common law concept of abandonment might be applied to terminate a permit under which water had not been applied to beneficial use. However, since the statute does not create rights, but rather manages preexisting rights based on land ownership, the concept of abandonment would seem to

\(^{188}\) Okla. Stat. tit. 82, § 1020.9 (Supp. 1978).

\(^{189}\) Id.

\(^{190}\) See notes 204-10 infra and accompanying text.


have no applicability. Further, since no user is entitled to more than
his proportionate share of the maximum annual yield, the existence
of paper rights which are not put to use would seem to have little effect
on others entitled to use the water—other than to extend the basin life
beyond the date used to determine the annual yield. If time-limited
permits are used, then any unused allocations, whether the subject of
a permit or not, could be reallocated when new applications are consid-
ered at the end of the basin life. This is true unless the limitation on
changes in the allocation based on revised hydrological information
is interpreted, as it well might be, to prevent downward revisions even
where no permits are outstanding.

Several factors influence the precise amount of water which is
available under a permit. The natural condition of the ground water
basin being considered influences the amount of water available. In
addition, as has been observed, the Board may influence the maxi-
mum annual yield by making its calculations on the basis of a maxi-
mum basin life extending beyond July 1, 1993.

Prior rights may influence the precise amount of water available
under a permit in two ways. First, prior rights reduce the total amount
of water available for allocation to new uses. Second, for a particu-
lar user who has a prior right, the prior right may be chargeable against
any right he might be entitled to under a permit under the terms of the
new law. The statute does not explicitly treat prior rights in this man-
ner. The section specifying the amount allocated under a regular per-
mit says simply that the permit “shall allocate to the applicant his
proportionate part of the maximum annual yield of the basin or sub-
basin,” and then the defines proportionate part, with no reference to
prior rights. The section protecting prior rights states simply that the
new law is not to “be construed to deprive any person of any right to
the use of ground water in such quantities and amounts as were used or
were entitled to be used prior to the enactment hereof.”

A permit
which charged prior rights against a new proportionate allocation
would arguably not deprive the applicant of his prior right to use ground water as long as the combined recognition of prior rights and new permit provided him his full allocation. The Oklahoma Water Resources Board has requested an opinion from the Attorney General resolving this particular question.\footnote{203}

Finally, the Board appears to have the authority to limit the amount of water allocated to a particular user to the amount he can beneficially use. The Attorney General of Oklahoma has issued an opinion with respect to the Board's authority over temporary permits\footnote{204} which, if followed, confers upon the Board the authority to issue both regular and temporary permits to use less water than the amounts provided for by statute. The rationale for the opinion is that the statute forbids the waste of water and that issuance of a permit to use an amount in excess of that needed for beneficial use would be condoning waste. Although the opinion deals only with temporary permits, the statutes relied upon to support the opinion apply equally to regular and to temporary permits.\footnote{205} Thus, despite statutory language which seems to mandate the amount of water to be allocated under a permit,\footnote{206} the Board may have the authority to issue a permit for a lesser amount.

Decisions in other jurisdictions suggest that even more power may be hidden in the beneficial use concept. In California, for example, the courts have adopted the view that whether a given use is a "beneficial use" depends upon the precise circumstances of the case.\footnote{207} The flexibility of the concept of beneficial use in Oklahoma, however, does not permit a court to declare that a particular use is not a beneficial use because of the circumstances if the use is one specified in the statutory declaration of policy.\footnote{208} Thus, it would be inappropriate for the Oklahoma Water Resources Board to deny a permit for irrigation purposes in an area which is short of water on the grounds that insufficient water made irrigation a nonbeneficial use.\footnote{209} On the other hand, it might not be inappropriate for the Board to deny a permit for irrigation

\footnotesize{\begin{itemize}
\item \footnote{203} Telephone conversation with J.A. Wood, March 28, 1979.
\item \footnote{204} \textit{OKLA. Op. ATT`Y GEN.} 218 (1974).
\item \footnote{205} \textit{See OKLA. STAT. tit. 82, §§ 1020.2, 1020.9, 1020.15} (Supp. 1978).
\item \footnote{206} \textit{See OKLA. STAT. tit. 82, §§ 1020.9, 1020.11(B)} (Supp. 1978).
\item \footnote{207} Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 3 Cal. 2d 489, 45 P.2d 972 (1935).
\item \footnote{209} Hodges v. Oklahoma Water Resources Bd., 580 P.2d 980 (Okla. 1978).
\end{itemize}}
on those grounds if the method of irrigation proposed was wasteful.\textsuperscript{210}

This leaves unresolved one significant problem. Suppose that under the minimum basin life assumption permitted by the statute the maximum annual yield is insufficient to provide an allocation of water in an economically useable quantity for the needs for which it is demanded. The Board has attempted to deal with this problem in Tillman County by estimating the probable number of acres for which demands for new water rights will be made during the basin life and by calculating the per acre share on that basis. In this way, the Board was able to establish a per acre share of one acre-foot per year.\textsuperscript{211}

The problem with the Board's solution is that it is in direct conflict with what the statute provides. The statute provides that the base upon which a given applicant's proportionate share is determined is "the land overlying the fresh ground water basin or sub-basin . . . ."\textsuperscript{212} Thus, if the statute is given a strict construction, a farmer who commences irrigation under the 1972 Act may be able to irrigate only a portion of the land which overlies the ground water basin and which provides the basis for a calculation of his share of the water.\textsuperscript{213} The Board cannot recalculate the maximum annual yield on the basis of a shorter basin life because the calculation is already based on the minimum basin life permitted by statute. Even if such a recalculation could be made, it would undesirable to do so because the costs of developing the water could not reasonably be amortized in a shorter time frame. Moreover, it may be impossible for farmers to obtain long term land financing where irrigation water is likely to become unavailable before

\textsuperscript{210} \textit{See id.} Even the \textit{Tulare} opinion may be construed as giving only a limited degree of flexibility to the beneficial use concept. In \textit{Tulare}, the court stopped far short of holding that an agricultural use of water was not a beneficial use. Rather, the court held that such wasteful practices as using the entire flow of a stream for sub-irrigation and use of water to drown field pests were not beneficial in the circumstances of the case.

Even if beneficial use is not available to limit the kind of use which might be made of water in a water short area, the Board may nevertheless justify denial of permit on the ground that a particular proposed use is not a natural use of the land to which the water is to be applied and thus that the applicant has no water right to make such a use. \textit{See note 86 supra} and accompanying text.

\textsuperscript{211} Telephone conversation with J.A. Wood, March 28, 1979. The Tillman County Order contains a finding that the total land area overlying the basin is 189,760 acres. The order provides a maximum annual yield of 70,000 acre feet and a proportionate share for each landowner of one acre foot per acre. \textit{Oklahoma Water Resources Board, Final Order for Determination of the Maximum Annual Yield of Fresh Ground Water from the Tillman County, Oklahoma, Alluvium and Terrace Basin} (Dec. 12, 1978). If the maximum annual yield were distributed evenly over the entire 189,760 acres, then the proportionate share would be only a little more than 1/3 of an acre-foot per acre.

\textsuperscript{212} \textit{Okla. Stat. tit. 82, § 1020.9} (Supp. 1978).

\textsuperscript{213} \textit{See note 211 supra.}
the expiration of the loan term. The only solutions for a farmer caught in that kind of a dilemma are either to buy more land than he plans to farm so that he can acquire water rights sufficient for the farm he intends to operate or to acquire water rights allocated to other land.

It is not clear that the ground water law permits the outright sale of water rights. The Act contains no express permission for transfer of water rights apart from the land to which the water rights appertain. Further, it can be argued that the statute governing the approval of an application for a permit allows a permit to be granted only for uses which the applicant himself intends to make on his overlying land.

However, the statute does provide for unitization of land. Thus, it may be possible for several landowners to agree to operate their lands as a unit for water purposes and to allocate the water produced from the unit to certain lands, while other lands are allowed to lie fallow. The problem with this solution is that it is quite cumbersome.

IV. Conclusion

Unless the administrative construction of the statute passes judicial scrutiny, the last mentioned problem is the one upon which the Ground Water Law of 1972 is going to founder. Any given water use

215. Okla. Stat. tit. 82, § 1020.9 (Supp. 1978). On the other hand, the statute does not expressly require that the water be used on the land from which it is taken or which provides the basis for the individual allocation. The only express statutory requirement is that the well must be located on land which the applicant owns or leases under a lease permitting the applicant to withdraw water from the ground water basin beneath the land.
217. Another procedure provided for by statute which may have some potential for alleviating the problem is the formation of an irrigation district with enlarged powers or the enlargement of the powers of an existing irrigation district. With the consent of more than 50% of the landowners who own more than 50% of the land area within an irrigation district, an irrigation district may "develop comprehensive plans for efficient use of fresh groundwater and the control and prevention of waste; . . . develop information and limitations on well sizes, withdrawal rates, well spacing and basin and sub-basin determinations; . . . adopt district rules and regulations on the foregoing and enforce the same . . . , providing the same are in conformity with and have been approved by the Water Resources Board . . . " Okla. Stat. tit. 82 § 277.22 (Supp. 1978). The rule making power with respect to the comprehensive plans for efficient use of fresh groundwater may give an irrigation district with these enlarged powers the authority to form what is in effect a compulsory unit, allocating the unit's allocated water to those within the unit who need it.

There are two problems with this. First, use of the enlarged powers in this way would run up against the constitutional objections identified for the prior appropriation system. See notes 125-26 supra and accompanying text. Second, the requirement of majority approval has made it impossible to give enlarged powers to any irrigation district in the state of Oklahoma.

218. Even if the administrative construction passes muster under the statute, it is still subject to the same constitutional infirmities which characterize the recognition of prior rights. See notes 125-26 supra and accompanying text.
requires a certain threshold quantity without which the use is either impossible or uneconomic. If the per acre allocation in a particular area does not meet that threshold requirement, then either the use must be abandoned or one of the cumbersome alternatives outlined above must be pursued to its conclusion. The alternatives to abandoning the use may themselves lead to its abandonment either because the expense of pursuing the alternative is too great (as in the case of a farmer's purchase of more land than he intends to farm) or because the objective pursued becomes unattainable due to the lack of cooperation among the interested parties (as in the case of an attempt to establish a unitization plan).

Instead of a choice between unsatisfactory alternatives, the law should make it possible for one who wishes to use ground water to acquire a protected right to use enough water to meet his threshold requirement without making the effort so expensive as not to be worthwhile. Further, the success of the effort ought not to depend upon the vicissitudes of the unrestrained human will of those who feel their rights, no matter how abstract, have been invaded. The prior appropriation system of the 1949 law was a step in that direction, and the 1972 law seems to be a step backwards. The Board's attempt to save the 1972 law seems destined for failure.219

The constitutional problems with the prior appropriation system are primarily problems of compensation. Thus, it might be possible to structure a prior appropriation ground water allocation system by providing a means whereby those landowners who felt that their rights had been invaded could seek damages against a permit holder measured by the devaluation of their land.220 The amount by which land without water development on it would be devalued due to withdrawal of its water allocation seems to turn on the availability of water in the area. Consider, for example, land which is good farm land except for the shortage of water. If the water conditions on the land are such that production of water at full capacity would quickly exhaust the water supply, then the amount by which the value of the land is increased by the presence of the water cannot be very great. And yet, compensation for that lost value would respond fully to the constitutional objections raised by the transfer of water under one landowner's land to another landowner through the medium of a water permit.

219. See note 212 supra and accompanying text.
220. See, e.g., KAN. STAT. § 82a-716 (1977).
The problem with the Oklahoma ground water law as it is presently structured is that it elevates property interests to such a high level that the practical value of those property interests in the more arid areas of the state is minimal, except for low-value uses such as domestic uses. Ground water is a resource which can provide substantial economic benefits. These benefits cannot be obtained, however, unless the privilege of using the water is concentrated in few enough hands so that the amount which each of the privileged users is entitled to use is adequate to obtain the potential economic benefits available. The Oklahoma Ground Water Law of 1972 does not respond to this very practical need.