Protection Unlimited: A Preferred User's Right to Means of Groundwater Diversion in Nebraska

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Comment

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I. INTRODUCTION

With the expanding agricultural use of groundwater resources\(^1\) in irrigation has come an increasing prevalence of the phenomenon known commonly as well interference.\(^2\) In today's society an individual's access to sufficient quantities of high quality water is imperative not only in the life sustaining biological sense, but in the continuity of income producing activities as well.

Since groundwater is a finite resource, many factions of society have found themselves in competition for its use. Primary conflicts with respect to groundwater in Nebraska normally arise between any combination of users for domestic, agricultural, industrial, or municipal purposes. When such a conflict arises the competing users look (or should be able to look) to the law, that "institution through which human conduct is regulated, and under which collective decisions are carried out,"\(^3\) for resolution of their dispute.

It is in the legal resolution of these groundwater disputes that lawyers, judges, and legislators alike face the most perplexing and complicated task of arriving at an equitable and just solution in each case.

[I]t is the very essence of a law that it should apply to every case . . . . If there is a different law for every case that arises, then what is being administered is simply not law at all but the arbitrary (though not necessarily unjust) decisions of those who govern us. But that is exactly what the word law means—something which is not such a series of arbitrary events or decisions, something which will be the same for the next case as it was for the last. This is where the difficulty arises; for it is the nature of life itself (certainly of human life) never to repeat itself exactly . . . . Life varies, law is of its nature unvarying. Yet at the same time it is the function of law to serve, to express and indeed partly to make the social life of

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1. Groundwater is defined as that water beneath the Earth's surface between saturated soil and rock which supplies wells and springs. American Heritage Dictionary of the English Language 582 (1969).
2. For a discussion of the physical and hydrogeological occurrences which ultimately cause well interference, see infra text, at section II.
3. C. Corker, Groundwater Law, Management and Administration ii (Nat'l Water Comm'n Legal Study No. 6, 1971) [hereinafter cited as Corker].
In view of the foregoing, it should be the objective of all those who promulgate, disseminate, and interpret the laws to formulate rules with which well owners can live comfortably in the knowledge that any well interference dispute will be settled fairly and equitably. Implicit in this objective is the concept that well owners must be able to ascertain not only what the law is, but how it will be applied to them by the courts.

This Comment will attempt to describe the current state of the law in Nebraska as it relates to rights and liabilities in well interference disputes. Certain suggestions are also set forth whereby the current law may become more effective.

II. BASIC GROUNDWATER HYDROLOGY

In order to facilitate an understanding of the legal implications surrounding well interference cases, it is necessary to first formulate a basic working knowledge of the science of groundwater hydrology. Such an understanding provides assistance in determining the actual physical occurrences that take place beneath the Earth's surface and ultimately cause the withdrawal of water from one well to interfere with the productivity of a neighboring well.

When a well is drilled it extends below the surface of the Earth into an underground water supply known as an aquifer. Upon tapping the aquifer it "will yield water to wells . . . at a sufficient rate so that the wells . . . can serve as practical sources of water supply." An aquifer may be either confined or unconfined. The confined aquifer houses water between impermeable layers, not open to atmospheric pressure. Thus, if the high point of the confined aquifer is at a point above the well site, pressure within the aquifer will

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5. The hydrologic cycle is a simple model of a complex sequence of events. During the course of this sequence water is evaporated from the ocean, transported over the land by moving air masses, falls to the land surface as precipitation, and moves back to the ocean by one or more of several routes. [T]his cycle concerns the entire phenomenon of the movement of water above, across, and beneath the land surface . . . . R. HEATH & F. TRAINER, INTRODUCTION TO GROUND-WATER HYDROLOGY 183 (1968). "Ground-water hydrology refers to the study of the ground-water phase of the hydrologic cycle . . . ." Id. at 185 (emphasis omitted).
6. Basically defined, an aquifer is a water-saturated geologic formation with an impermeable layer as its base.
force water up, creating an artesian well. Confined aquifers are sometimes referred to as artesian aquifers. The unconfined aquifer has no impervious material above it. The upper limit of the unconfined aquifer is defined by the water table, said to be “the top of the saturated portion of the geologic formation.” In order to extract water from a well drilled into an unconfined aquifer one must employ some type of pump.

Obviously, pumping water from a well produces an effect on the water level in the aquifer. Several terms are applied to describe this effect at various stages in the pumping process. Static water level refers to the level at which water stands in a well when no water is being withdrawn from the aquifer. The dynamic water level, or pumping level, indicates the level at which water stands while pumping is in progress. Drawdown indicates the extent to which the water level is lowered while pumping is in progress. Residual drawdown is the distance the water level is found to be below the initial static water level after pumping has ceased.

As water is withdrawn from the well, the water level in the well itself and in the nearby formation of the aquifer is lowered below the static water level. As this occurs a gradient begins to form between the water level in the immediate vicinity of the well and that in the more distant formation of the aquifer. As a result of this gradient, the formation causes it to flow downhill toward the well under the influence of gravity. As the gradient begins to appear the water level at the site of the well, being substantially lower than that in more distant areas of the aquifer, takes the shape of a hole or depression in the water surface, appearing as an inverted cone surrounding the well. This depression in the surface of the groundwater is known as the cone of depression. The distance from the well to the outer edge of the cone of depression is denominated as the radius of influence.

The water pumped from a well is extracted from the area immediately surrounding the well. As water continues to be pumped, more and more water must be derived from storage within the aquifer. Consequently, the cone of depression must expand in order to produce the necessary quantity of water at the base of the well.

8. Id. at 22-23.
9. Id. at 21.
10. Id. at 81-82.
11. Id. at 82.
12. Id.
13. Id.
14. Id.
15. Corker, supra note 3, at 46-47.
The radius of influence grows as the cone expands and drawdown increases as the cone deepens. The rate of horizontal and vertical expansion of the cone decreases over time, however, due to the fact that with each foot of horizontal expansion a greater volume of water becomes available to flow down the gradient and supply the well.\textsuperscript{17} During continuous pumping the expansion of the cone will continue until the rate of recharge to the aquifer equals the volume of water being withdrawn by the pump.\textsuperscript{18}

Once pumping has ceased the process will be reversed and the cone of depression will begin to contract, recharging the quantity of water in the area of the pump. Note, however, that the aquifer itself must be recharged by natural sources. Thus it may take an appreciable length of time for the water table to be restored to near its pre-pumping level.

Furthermore, if the water-bearing formation of the aquifer is of high permeability, only a small gradient is required to produce a relatively large quantity of water at the well head. If the formation is of low permeability, however, the gradient required to produce a sufficient quantity of water may exceed the depth at which the pump intake is placed. If this is the case, the capacity of the well will be exceeded and the pump will begin to suck air rather than water.\textsuperscript{19} "Strangely enough, a well a relatively short distance away and constructed in an identical manner may penetrate more permeable materials. If so, this second well may produce more water with possibly a smaller drawdown of the water level."\textsuperscript{20}

Well interference takes place when the cones of depression of two or more wells overlap. As the cones begin to overlap, the gradient to each of the wells is reduced, causing a marked decrease in the flow of water to each well. In the situation where the pump head of one well is lower than that of the other, it is not uncommon for the outside edge of the cone of depression caused by the deeper well to fall below the pump head of the shallower well, thus completely eliminating the shallower well's source of water.

The logistical complexity of the well interference dilemma is to be found in the attempt to determine if, and to what extent, one well is interfering with another. In order to determine the cause and extent of well interference, it is necessary to undertake a hydrologic survey in which numerous test wells are drilled in an effort to facilitate measurement of groundwater levels at various points in the problem area. Through the use of such measurements hydrologists are able to determine whether one well has in-

\begin{itemize}
\item[17.] Id. at 103.
\item[18.] Id.
\item[19.] CORKER, supra note 3, at 47.
\item[20.] Id. at 47-48.
\end{itemize}
interfered with another. As noted above, the permeability factor may serve only to further complicate matters in the effort to ascertain the actual cause of the interference.

III. APPLICABLE LEGAL DOCTRINES

Well interference conflicts have existed virtually since the time at which withdrawal of water from beneath the surface of the Earth became technically and economically feasible. The legal system, consistent with its societal role as regulator of human conduct and collective decisionmaker,21 has had many of these disputes placed at its feet by parties seeking equitable resolutions of their grievances. This section will discuss the basic theories under which the courts in western states22 have attempted to resolve various groundwater disputes.

A. The English Rule of Absolute Ownership

The ancient rule of absolute ownership is based on the concept that a landowner owns not only the surface of the land itself, but everything from the center of the Earth to the heavens within the boundaries of his land.23 A second major premise for the rule has been said to be a policy consideration that courts should not apportion groundwater among owners of overlying land,24 for the ways of groundwater were once thought to be unknown and unknowable.25

A strict interpretation of the rule of absolute ownership would permit the overlying landowner to extract water from beneath his land for any purpose he deems necessary. The rule does not bind overlying landowners to any requirement of productivity or reasonableness. If in the process of withdrawing water the overlying owner's use depletes the supply under adjacent land to his neighbor's detriment, the damaged user has no right of action against the interfering user notwithstanding his status in terms of time or use.

21. Id. at ii.
22. References in this Comment to western states include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, North Dakota, New Mexico, Nevada, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming. See generally W. Hutchins, SELECTED PROBLEMS IN THE LAW OF WATER RIGHTS IN THE WEST 80-109 (1942) [hereinafter cited as Hutchins].
23. The concept is based on "the old maxim that he who owns the surface also owns 'ad coelum ad inferno' . . . ." R. Boyer, SURVEY OF THE LAW OF PROPERTY 263 (3d ed. 1981).
25. Corker, supra note 3, at 103.
The doctrine of absolute ownership was first applied in the English case of *Acton v. Blundell*. The initial application of the rule in the United States came in *Wheatley v. Baugh* and was employed to resolve a dispute between a water user and a miner. The defendant miner wished only to rid himself of water which was detrimental to his mining operation while the plaintiff sought to preserve the water for beneficial use. The Pennsylvania Supreme Court held that the rules governing the use of surface water should not be applied to the use of groundwater. The court reasoned that a surface stream could be protected without forcing the miner to relinquish the total use and enjoyment of his land, but "percolations spread in every direction through the earth." The court did limit the implications of its decision somewhat by stating that the rule of percolating water would not apply in the situation where the plaintiff's injury resulted from the defendant's malicious intent to deprive the plaintiff of water without beneficial use to himself.

Such logic seems to condone the use of groundwater as a marketable commodity which could be used on the overlying land by the owner or sold and transported to other locations for use by other persons. Even blatant waste is not discouraged by the rule so long as any injury to the plaintiff is not the result of malice on the part of the defendant.

In actual application, the rule of absolute ownership in western states has been held to mean that

the person who owns the surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure; and that if, in the exercise of such rights, he intercepts or drains off the water collected from underground springs in his neighbor's well, this inconvenience to his neighbor falls within the description of *damnun absque injuria*, which cannot become the ground of an action.

The same language was utilized in paraphrase form in *Altus v. Carr*, indicating that in 1966 the doctrine of absolute ownership

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27. 25 Pa. 528 (1855).
28. *Id.* at 532.
29. *Id.* See CORKER, supra note 3, at 281.
30. See supra note 22.
31. The doctrine of *damnun absque injuria* is defined as a loss, hurt, or harm absent injury from a legal perspective, or a loss which does not give rise to a legal action against the person causing it. See BLACK'S LAW DICTIONARY 354 (5th ed. 1979).
remained alive and well in Texas.\textsuperscript{34}

Early proponents of the English rule believed that the source of groundwater was such a scientific mystery that no legal rule could be formulated to adequately govern the rights to such water.\textsuperscript{35} The application of the rule is, therefore, quite simple, for "it terminates at the outset a difficult factual inquiry about what has happened or is about to happen within the Earth, and the even more difficult problem of what the court should do about it. The doctrine of 'absolute ownership' answers, 'do nothing.'"\textsuperscript{36}

It has been argued, even recently, that the English rule provides a necessary degree of flexibility, dependent only upon the landowner's willingness and ability to invest in withdrawal of groundwater.\textsuperscript{37} This argument is couched in the concept that withdrawal of groundwater should not be governed by an "arbitrary rule that water can be extracted only for certain uses or only for

\textsuperscript{34}The harshness of the rule may be softening somewhat in Texas, however, as evidenced by the decision of the Texas Supreme Court in Friendswood Dev. Co. v. Smith-Southwest Indus., 576 S.W.2d 21 (Tex. 1978). This case involved a plaintiff whose land was sinking substantially as a result of removal of supporting groundwater by the defendant. At trial the plaintiff contended that the defendant's extraction of groundwater had proximately caused the plaintiff's land to sink to a point below mean sea level resulting in the destruction of the land by flooding. Consistent with the English rule as precedent in Texas the trial court determined that the plaintiff had failed to state a cause of action and granted the defendant's motion for summary judgment.

The Texas Court of Civil Appeals reversed the trial court's ruling, stating that the plaintiff had a cause of action based on either negligence or nuisance. Smith-Southwest Indus. v. Friendswood Dev. Co., 546 S.W.2d 890, 898 (Tex. Civ. App. 1977). The court held that where a landowner's negligent withdrawal of groundwater is the proximate cause of injury to the land of another, the extracting party is liable to the owner of the damaged property. \textit{Id.} at 897.

The Texas Supreme Court affirmed the decision of the intermediate appellate court, but added negligence as a ground for future recovery. 576 S.W.2d at 30. "[I]f the landowner's manner of withdrawing ground water from his land is negligent, willfully wasteful, or for the purpose of malicious injury, and such conduct is a proximate cause of the subsidence of the land of others, he will be liable for the consequences of his conduct." \textit{Id.}

This decision is relatively narrow, applying only to cases involving land subsidence, but it does seem to indicate a mellowing of the traditional Texas approach. Although the Texas high court did not indicate a willingness to stray from the application of the English rule in cases involving groundwater use conflicts, its attitude expressed in \textit{Friendswood} may well be the first link in a chain leading to the abrogation of the absolute ownership doctrine in Texas.


\textsuperscript{36}CORKER, \textit{supra} note 3, at 103.

use in certain areas."\textsuperscript{38}

Modern legal scholars, however, believe the English rule of absolute ownership to be anarchical in nature "because the allocation of water is determined by location and the pumping capacity of wells. Law has no role in the system."\textsuperscript{39} In keeping with this philosophy the English rule might more appropriately be renamed as the "powerful pump doctrine."

B. The American Rule of Reasonable Use

The doctrine of reasonable use, first announced in New Hampshire over one hundred years ago,\textsuperscript{40} modifies the English rule of absolute ownership in two significant respects. First, the landowner may use only as much water as his needs reasonably dictate, and must not be wasteful.\textsuperscript{41} Second, the groundwater withdrawn must be used only on the overlying land and may not be sold or transported.\textsuperscript{42} The American rule of reasonable use allows courts substantially more flexibility to arrive at decisions based on the merits of case-by-case analysis than can be derived from the preconceived notions embodied in the English rule.

Like the English rule, the American rule is predicated upon the concept of land ownership. Unlike the absolute ownership doctrine, however, the American rule limits the overlying landowner to a reasonable use of the water.\textsuperscript{43} Rather than merely addressing the issue of ownership as under the English rule, the American rule forces courts to determine the reasonableness of the use.

Under the reasonable use doctrine two neighboring landowners, each of whom is using the water on his own property overlying the common supply, can withdraw all of the supply he can put to beneficial use. What is reasonable is judged solely in relationship to the purpose of such use on overlying land; it is not judged in relationship to the needs of others.\textsuperscript{44}

Therefore, while the rule places limitations on the wasting of groundwater, it is otherwise a rule of absolute ownership.\textsuperscript{45} The use of groundwater is limited to such use as is reasonable and is forbidden on non-overlying land\textsuperscript{46} under a strict interpretation of

\textsuperscript{38} Id.
\textsuperscript{40} Basset v. Salisbury Mfg. Co., 43 N.H. 569 (1862).
\textsuperscript{41} Harnsberger, \textit{supra} note 39, at 205.
\textsuperscript{42} Aiken, \textit{supra} note 24, at 925.
\textsuperscript{43} See Hutchins, \textit{supra} note 35, at 9.
\textsuperscript{44} Harnsberger, \textit{supra} note 39, at 205.
\textsuperscript{46} See \textit{supra} text accompanying notes 41-42.
the American rule. It is worthy of note, however, that unreasonable or wasteful use and indeed even use on non-overlying land may go unscathed unless a neighboring well owner is injured in the process. Without such injury the neighboring user has no standing to challenge the wasteful or non-overlying use.47

The doctrine of reasonable use makes no provision for allocation of water in times of shortage. Thus, where the supply of groundwater is inadequate for all, each user is entitled to all the water he can withdraw and put to reasonable and beneficial use. In this context the "powerful pump doctrine" remains in effect under the rule of reasonable use, and each user must bear his own increased pumping costs.

The rule applied to well interference cases in Nebraska has been stated as the pure American rule of reasonable use.48 This enunciation of a pure application of the doctrine of reasonable use, however, was in apparent conflict with earlier Nebraska case law49 wherein the American rule had been modified by the doctrine of correlative rights50 for application in situations where shortages of groundwater existed. The Nebraska Supreme Court later explained that the announcement of the pure reasonable use rule in Metropolitan Utilities District v. Merritt Beach Co.51 was not intended to change the Nebraska rule in view of the fact that propor-

47. Aiken, supra note 24, at 925 (citing Canada v. City of Shawnee, 179 Okla. 53, 64 P.2d 694 (1937)).
48. See Metropolitan Util. Dist. v. Merritt Beach Co., 179 Neb. 783, 140 N.W.2d 626 (1966), wherein the Nebraska Supreme Court stated that the rule in Nebraska was:

[W]hile the owner of land is entitled to appropriate subterranean or other waters accumulating on his land, which thereby become a part of the realty, he cannot extract and appropriate them in excess of a reasonable and beneficial use upon the land that he owns, especially if the reasonable and beneficial use is injurious to others who have substantial rights to the water.

Id. at 800-01, 140 N.W.2d at 637.
49. In Olson v. City of Wahoo, 124 Neb. 802, 248 N.W. 304 (1933) the court proclaimed the Nebraska rule as follows:

The American rule is that the owner of land is entitled to appropriate subterranean waters found under his land, but he cannot extract and appropriate them in excess of a reasonable and beneficial use upon the land which he owns, especially if such use is injurious to others who have substantial rights to the waters, and if the natural underground supply is insufficient for all owners, each is entitled to a reasonable proportion of the whole, and while a lesser number of states have adopted this rule, it is, in our opinion, supported by better reasoning.

Id. at 811, 248 N.W. at 308 (emphasis added).
50. For a discussion of the doctrine of correlative rights, see infra text, at section III.C.
51. 179 Neb. 783, 140 N.W.2d 626 (1966).
tional use was not at issue in that case. Thus the rule stated in *Olson v. City of Wahoo* remains controlling in Nebraska.

**C. The California Rule of Correlative Rights**

The California rule, or doctrine of correlative rights, was first announced in *Katz v. Walkinshaw* by the California Supreme Court. The basic purpose of the rule is to apportion groundwater among competing users during times of shortage or in areas in which groundwater mining is taking place.

Three significant differences exist between the doctrine of correlative rights and the rule of reasonable use. First, under the rule of correlative rights an overlying landowner is not prohibited from transporting his water for use on non-overlying land so long as no harm comes to others using water from the same groundwater source. Second, those entities entitled to store water underground have exclusive right to the recapture of that water. Finally, when groundwater mining takes place the court will allocate to each competing user a share of the safe yield determined to be appropriate to check the mining.

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52. See Prather v. Eisenmann, 200 Neb. 1, 7, 261 N.W.2d 766, 769-70 (1978). For a full discussion of this case, see infra text, at section IV.
53. 124 Neb. 802, 248 N.W. 304 (1933).
54. "Our law remained as it was enunciated in Olson v. City of Wahoo." 200 Neb. at 7, 261 N.W.2d at 770. See supra note 52.
55. 141 Cal. 116, 74 P. 766 (1903). In *Katz*, the court enjoined the defendant from exporting and selling groundwater for use on non-overlying land to the detriment of the plaintiff, who had long been using water from the same aquifer for irrigation purposes.
57. Aiken, supra note 24, at 926.
61. See Aiken, supra note 24, at 926. Professor Aiken illustrates the safe yield concept as follows:

[I]f total withdrawals of ground water must be reduced by thirty percent to prevent ground water mining, each ground water user within the basin could be required by court order to reduce his ground water withdrawals by thirty percent without regard to priority. *See Pasadena v. Alhambra*, 33 Cal. 2d 906, 207 P.2d 17 (1949). The mutual prescription safe yield doctrine established in *Pasadena* was subse-
In its pure form, as implemented in California, the doctrine of correlative rights
gives each overlying landowner a right to share in the water under his
land, regardless of whether he has previously used it or whether others
are now using it. The law also allows persons who are not overlying land-
owners to appropriate any surplus, which means that cities, districts, and
outsiders can drill and pump the water and pipe it away without any form
of prior approval. The only restraints come after the situation has deterio-
rated to the point that a very long and complicated adjudication is under-
taken and a court imposes restrictions, or until the water users take alarm
and voluntarily form a district as a vehicle for self-imposed controls.62

As under the rules of reasonable use, the correlative rights doc-
trine implies that any increased pumping costs brought about by a
groundwater shortage will be borne by the individual users.63 Unlike the doctrine of reasonable use, however, the rule of correlative
rights does not allow each user to take whatever water he can
pump and put to beneficial use. In times of shortage the available
supply is allocated among competing users, thus eliminating applica-
tion of the “powerful pump doctrine.”

As previously noted,64 the doctrine of correlative rights plays a
role in the common law of Nebraska. The doctrine, however, ap-
plies only insofar as it is necessary to modify the rule of reason-
able use in conflicts which involve aquifer insufficiency. Apparently in disputes arising between competing groundwater
users where the supply of water is sufficient, the common law por-
tion of the court’s ruling will be based on the traditional rule of
reasonable use.65

D. The Restatement Position

Section 858 of the Restatement (Second) of Torts66 announces a
rule which attempts to combine features of each of the three com-
mon law doctrines previously discussed with new features of its

id. 62. Address by Frank Trelease, Twelfth Biennial Conference on Groundwater,
Sacramento, Cal. (Sept. 20, 1979), reprinted in Trelease, Legal Solutions to
63. See Aiken, supra note 24, at 928.
64. See supra note 49 and accompanying text.
65. See supra note 52 and accompanying text. But see also infra note 251 and
accompanying text.
own. From a policy perspective section 858 purports to promote the development and use of groundwater resources by those individuals best able to put them to beneficial use, a goal not unlike those embodied in the reasonable use and correlative rights doctrines. The Restatement rule is therefore phrased from a standpoint of non-liability in an effort to promote that goal.

Basically the Restatement rule declares that, so long as use is beneficial, a groundwater user is not liable for interference caused to the use of others. The breadth of this rule is modified by three exceptions.

First, such beneficial use must not unreasonably harm neighboring users through lowering of the water table or a reduction in artesian pressure. The rationale underlying this exception to the broad general rule is based on the fact that the majority of well interference controversies involve "the complaint not that the defendant has taken all the supply of water, but that a collateral effect of the withdrawal has been an interference with the plaintiff's access to the remaining water and his opportunity to capture a share of it." The view adopted in the Restatement rule "bases the protection against loss of access to water... on a consideration of whether, under all the circumstances, the harm done by lowering the water table or pressure is unreasonable." The drafters of the rule apparently anticipate that the determination in a well interference dispute of who must bear the cost of reinstating access to water for the injured party must hinge on the use to which the interfering party puts the water. The proposed test would place the financial burden not only on those who would withdraw water to be transported to non-overlying lands, but on those who withdraw water in "unprecedented quantities for purposes not common to

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67. Section 858 provides:

(1) A proprietor of land or his grantee who withdraws water from the land and uses it for a beneficial purpose is not subject to liability for interference with the use of water by another, unless

(a) the withdrawal of ground water unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,

(b) the withdrawal of ground water exceeds the proprietor's reasonable share of the annual supply or total store of ground water, or

(c) the withdrawal of ground water has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water.

Restatement (Second) of Torts § 858(1) (1979).

68. Restatement (Second) of Torts § 858 comment b (1979).

69. Id.

70. See Restatement (Second) of Torts § 858(1)(a)-(c) (1979); supra note 67.

71. Restatement (Second) of Torts § 858(1)(a) (1979).

72. Restatement (Second) of Torts § 858 comment e (1979).

73. Id.
the locality.

In determining liability under the Restatement rule one must look not only to the nature and reasonableness of the use, but to the amount by which the plaintiff has depleted the supply as well. Therefore equal treatment and subjection to similar burdens is advocated for persons similarly situated.

The second exception to the general rule creates liability where a user's withdrawal of groundwater exceeds his proportionate share of the supply. This concept, similar to the doctrine of correlative rights, applies to situations in which the groundwater supply will not support unlimited withdrawals, e.g., groundwater mining.

It is generally acknowledged that the existence of an inade-
quate groundwater supply often goes undiscovered until substantial development has occurred. In such a case an equality of right may exist in the initial opportunity to enjoy the resource, but, when the holder of such rights delays its exercise it may not be extended to permit impairment of existing rights, values, and investments.

In many cases, controversies have not arisen until after the groundwater resource has been overdeveloped. Later withdrawals in such instances have often been made with no knowledge that they were causing groundwater mining. "In these cases considerations of priority are inappropriate and a reduction of withdrawal to reasonable shares fixed in proportion to past use, overlying acreage or need may be more equitable."78

The final exception deals with groundwater withdrawals that have adverse effects on watercourses or lakes. Such situations are not within the parameters of this discussion and their treatment is better left for another writing.

The basic requirement for imposition of liability under the Restatement view is a finding of unreasonable use.79 In determining whether a given use is reasonable or unreasonable the finder of fact must consider the purpose of the use,80 the economic value of the use,81 the social value of the use,82 the extent and amount of harm caused,83 the practicality of avoiding the harm by adjusting the use by one proprietor or the other,84 the practicality of adjusting the quantity of water used by each proprietor,85 the protection of existing values of water uses, land, investments, and enterprises,86 and the justice of requiring the user causing harm to bear the loss.87 In the event that the use causing the harm is deemed to be unreasonable and liability is imposed, the remedy granted may be either damages or injunctive relief.88

77. RESTATEMENT (SECOND) OF TORTS § 858 comment g (1979).
78. Id.
79. See RESTATEMENT (SECOND) OF TORTS § 858(2) (1979), which states that a determination of liability under § 858(1) is to be governed by the principles stated in §§ 850-57. The primary duty of the finder of fact is the determination of reasonableness of use. Factors to be considered in arriving at such a determination are set out in § 850A. See infra text accompanying notes 80-87.
80. RESTATEMENT (SECOND) OF TORTS § 850A(a) (1979).
81. Id. at § 850A(c).
82. Id. at § 850A(d).
83. Id. at § 850A(e).
84. Id. at § 850A(f).
85. Id. at § 850A(g).
86. Id. at § 850A(h).
87. Id. at § 850A(i).
88. See generally RESTATEMENT (SECOND) OF TORTS § 850A comment m (1979).
Prior to the adoption of section 858 in 1979, the proposed draft was recommended by legal scholars as a replacement for the existing rule of law governing well interference controversies in Nebraska. It was reasoned in the recommendation that, although small well owners enjoyed statutory protection against large scale diversions to non-overlying lands, there was no protection against unreasonable use by large irrigation facilities or industries utilizing the water on overlying lands. The Restatement position, Professor Harnsberger and his colleagues believed, would provide an equitable remedy for a problem without a suitable solution at common law.

The trial court in Prather v. Eisenmann applied the proposed Restatement rule as a basis for granting both injunctive relief and money damages to plaintiffs whose domestic wells were interfered with as a result of groundwater withdrawals made by the defendant for the purpose of irrigating his overlying land. The Nebraska Supreme Court, however, rejected the Restatement proposal, opting instead to affirm the district court's result through an application of what appears to be the Restatement rule (albeit couched in terms of existing common law doctrines) read in light of the groundwater preference statute in effect in Nebraska. The holding in Prather seems to indicate that the Restatement position has not been adopted as the Nebraska rule, despite recommendations to the contrary by legal scholars.

E. The Doctrine of Prior Appropriation

The concept of prior appropriation has grown out of the notion

89. See Restatement (Second) of Torts § 858A (Tent. Draft No. 17, 1971).
90. Harnsberger, supra note 39, at 209-10.
91. See supra notes 48-54 and accompanying text.
93. Id. at 210.
94. At the time these recommendations were made § 858 of the Restatement, as previously noted, was in proposed draft form. See supra note 89.
95. No. 17094 (Madison County Dist. Ct., decided Aug. 1976). For a more detailed discussion of the case, see infra text, at section IV.
97. See supra text accompanying notes 89-94.
98. See supra notes 48-54 and accompanying text.
100. 200 Neb. at 8-10, 261 N.W.2d at 770-71.
101. See supra notes 89-94 and accompanying text.
that he who is first in time is also first in right. The doctrine originated with regard to all natural resources during the days of the gold rush in California, \(^{102}\) when all that was required for the protection of one's right to mine gold was the staking and recording of the claim. With a replenishable resource such as water, where multiple withdrawals can be taken from a common source, a user's priority is established in accordance with the time of his first use. \(^{103}\) A person whose priority in time places his rights above those of another is referred to as the senior appropriator. The party whose rights are subordinate to those of the senior appropriator is aptly known as the junior appropriator.

Under a pure system of prior appropriation, ownership of the overlying land is essentially irrelevant to the acquisition of rights to the use of water. All that is required to obtain a right is that water be taken and applied to a beneficial use. \(^{104}\) What constitutes a beneficial use is defined statutorily in some jurisdictions, \(^{105}\) while in others specific uses have required litigation in order to determine whether they were beneficial. \(^{106}\)

Most western states governed by prior appropriation operate on a well permit system whereby the date of the permit acts to place the appropriator in the line of priority. The priority system is then utilized to resolve disputes between competing users in the same category. \(^{107}\) Conflicts between users in different categories are normally resolved on the basis of preferences. \(^{108}\)

Nebraska has no priority system pertaining to groundwater. It does, however, employ a constitutional provision for prior appro-

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103. The first party to draw water from the common source establishes first priority, the second party to draw has second priority, and so forth. See generally Katz v. Walkinshaw, 141 Cal. 116, 74 P. 766 (1903).
106. Examples of uses which have been judicially declared as beneficial include the operation of fish hatcheries, Faden v. Hubbell, 93 Colo. 358, 28 P.2d 247 (1933), and the provision of necessities for a railroad, Drake v. Earhart, 2 Idaho 715, 23 P. 541 (1890).
107. For example, such cases would involve irrigator versus irrigator, or domestic user versus domestic user.
108. For a discussion of the preference system, see infra text, at section III.F.
Under the Nebraska surface water priority system a user must obtain a permit to appropriate such water to his own use. The permit operates, as in other states, to place the user chronologically within the priority system by requiring that his beneficial use of the water begin at a designated time. “Failure to maintain beneficial use or to avoid waste are conditions which usually suspend effectiveness of the priority, or extinguish it completely.”

Perhaps the reason that the Nebraska Unicameral has not initiated a system of prior appropriation relating to groundwater is to be found in the fact that many unanswered questions remain with respect to subterranean water and prior appropriation. Unlike surface water, it is difficult and expensive to determine when the groundwater supply is inadequate or when groundwater mining is taking place. Even when complete and accurate hydrologic data indicate that mining is occurring, is it equitable to deny access to appropriators in anticipation of significant recharge? Such recharge may conceivably require a substantial period of time, and, if the water in the aquifer is to be utilized at all, mining must be allowed to continue. A decision not to utilize the groundwater source at all would be rare, yet how is the prior use to be protected?

If two appropriators are in competition for water that is physically available to both at an added cost, at what point should the junior user be required to stop his withdrawals? Is the senior appropriator protected in his right of access, or only to the availability of water in the aquifer without regard to the increased cost of retrieval? These and other questions cause extreme difficulty in the equitable resolution of well interference disputes under a strict system of prior appropriation. The choice of the legislature in Nebraska could be significant:

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109. 109. 109. The right to divert unappropriated waters of every natural stream for beneficial use shall never be denied except when such denial is demanded by the public interest. Priority of appropriation shall give the better right as between those using the water for the same purpose, but when the waters of any natural stream are not sufficient for the use of all those desiring to use the same, those using the water for domestic purposes shall have preference over those claiming it for any other purpose, and those using the water for agricultural purposes shall have the preference over those using the same for manufacturing purposes. Provided no inferior right to use the waters of the state shall be acquired by a superior right without just compensation therefor to the inferior user.

NEB. CONST. art. XV, § 6. For the codification of the provision see NEB. REV. STAT. § 46-204 (Supp. 1982).


111. NEB. REV. STAT. § 46-238 (Supp. 1982).

112. Comment, supra note 45, at 84 (footnote omitted).

113. See CORKER, supra note 3, at 110-11.
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braska not to initiate a system of prior appropriation applicable to groundwater is perhaps a sign favorable to the wise development of Nebraska groundwater law.

F. Preferences

A preference created for a particular use of groundwater may vary in its effect depending on its type. Basically, two separate categories of preferences exist. The absolute or true preference exists when "the preferred use may be initiated without regard to the fact that the supply is already fully appropriated for other purposes, and the preferred user may take water without paying compensation to persons whose uses are thereby impaired."\(^{114}\) The compensatory, or power to condemn, preference gives the preferred user the right to exercise the preference only where compensation is paid to the prior appropriator for his loss of water.\(^{115}\)

As the definition of a compensatory preference suggests, preferences are commonly used to augment a system of prior appropriation.\(^{116}\) Surface water use in Nebraska is governed by a constitutional mandate which embodies both prior appropriation and compensatory preferences.\(^{117}\) Nebraska groundwater law,\(^{118}\) however, provides statutorily for preferences only, with no mention of prior appropriation.

As a general proposition, preferences to the use of groundwater act as illustrations of a legislative determination of the relative social utility of various water uses. A preference system normally operates to allow a preferred user to condemn\(^{119}\) the use of a lower

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115. Id. at 137.
116. See also supra text accompanying notes 107-08.
117. See supra note 109.
118. Preference in the use of underground water shall be given to those using the water for domestic purposes. They shall have preference over those claiming it for any other purpose. Those using the water for agricultural purposes shall have preference over those using the same for manufacturing or industrial purposes.
As used in this section, domestic use of ground water shall mean all uses of ground water required for human needs as it relates to health, fire control and sanitation and shall include the use of ground water for domestic livestock as related to normal farm and ranch operations.

NEB. REV. STAT. § 46-613 (1978). The statute provides for preferences in the use of groundwater without provision for prior appropriation. Note, however, that § 46-613 spells out a definition of domestic use. This definition is not included in the constitutional provision dealing with surface water preferences. See supra note 109.
119. A power to condemn preference requires the preferred user to pay just compensation to the condemned user when the preference is exercised.
preferred user or non-preferred user during a time of insufficient water supply. In effect the exercise of a preference serves to transfer ownership of the water right from the condemned user to the preferred user. In view of the reference to condemnation, the exercise of a preference as described here would apply in Nebraska only to surface water rights.

Groundwater preferences may arguably be exercised in either a water sufficient or a water insufficient aquifer, and, since the Nebraska groundwater preference statute apparently creates a system of absolute preferences, the exercise may take place without payment of compensation. The exercise of a preference in a water insufficient aquifer may be plagued with many problems, not the least important of which would be the arrival at a conclusive determination that the aquifer is in fact water insufficient. Neither is the exercise of a preference in a water sufficient aquifer in Nebraska without its problems. Rather than acting as a transfer of water rights from one user to another, such an exercise apparently serves to protect the preferred user's means of diversion of groundwater.

IV. PRATHER v. EISENMANN

Prather v. Eisenmann represents the first and only case in which the Nebraska Supreme Court has had the opportunity to construe the Nebraska groundwater preference statute in the context of a well interference dispute between a domestic user and an irrigator.

A. The Facts

The complainants in Prather were three landowning families,

120. See Harnsberger, supra note 39, at 232.
121. Payment of just compensation for the exercise of a preference is mentioned only in the constitutional provision relating to surface water. See supra note 109. No such provision is made with reference to groundwater. See supra note 118.
124. See supra note 121.
125. For a discussion of the many existing problems relating to prior appropriation of groundwater which may also present difficulties with regard to the exercise of a preference in a water insufficient aquifer, see, e.g., Corker, supra note 3, at 110-11.
126. See supra text accompanying note 120.
127. See generally Prather v. Eisenmann, 200 Neb. 1, 261 N.W.2d 766 (1978), and the discussion of the case in section IV of this Comment.
the Furleys, the Prathers, and the Zessins, each of whose residential property was served by a domestic well drilled into a common artesian aquifer.\textsuperscript{130} The Prathers, who, for purposes of litigation, were assigned the claims of the remaining two domestic well owners,\textsuperscript{131} resided on a nine-acre property near the city of Madison, Nebraska. On this property the Prathers maintained an artesian well, approximately 122 feet deep with a two-inch casing, that contained pressure sufficient to raise water five to six feet above the ground without the aid of a pump.\textsuperscript{132}

The Furleys maintained their residence on a two-acre tract adjacent to that of the Prathers. Furleys' residence was also supplied with water by an artesian well which was approximately 111 feet deep andcased with two-inch pipe. As with the Prathers' well, the artesian pressure in Furleys' well was adequate to raise the water level to a point above the ground.\textsuperscript{133}

The third complaining family, the Zessins, owned a residential tract near the Prathers and the Furleys. The Zessins' property, upon which their daughter lived, was supplied with water by a 160-foot-deep well powered by a submersible pump and cased with four-inch pipe.\textsuperscript{134}

In July of 1976, the defendant Eisemann completed an irrigation well on a ninety-acre parcel of farm property which was located in the immediate vicinity of the plaintiffs' residences. The irrigation well was 179 feet deep and tested at a capacity of 1,250 gallons per minute.\textsuperscript{135}

Pumping from the defendant's irrigation well began on July 9, 1976, with water being withdrawn at a rate of approximately 650 gallons per minute. The artesian wells belonging to Prathers and Furleys ceased to function the next day and the Zessins lost the use of their well two days later. The Zessins' submersible pump overheated and welded itself to the casing as a result of the loss of water, forcing them to drill a new well to a depth of 164 feet.\textsuperscript{136}

A temporary injunction was issued by the Madison County District Court on July 20, 1976, halting the defendant's irrigation activity in order to enable a hydrologic study to be undertaken by the

\textsuperscript{130} For a discussion of artesian or confined aquifers, see \textit{supra} text, at section II.
\textsuperscript{131} 200 Neb. at 2, 261 N.W.2d at 768.
\textsuperscript{132} \textit{Id.}, 261 N.W.2d at 767-68.
\textsuperscript{133} \textit{Id.} at 2-3, 261 N.W.2d at 768.
\textsuperscript{134} \textit{Id.} at 3, 261 N.W.2d at 768.
\textsuperscript{135} \textit{Id.}
\textsuperscript{136} \textit{Id.} at 3, 261 N.W.2d at 768. Water acts as a lubricant for a submersible pump. A lack of water over any substantial length of time will cause the pump to reach extreme temperatures due to the friction brought about by a lack of lubrication.
University of Nebraska Conservation and Survey Division. The study involved pumping the defendant's well at a withdrawal rate of 375 gallons per minute for a period of three days. Following the test pumping, the drawdown was measured on the four wells at issue as well as several other test wells. Drawdown on the irrigation well was measured at 97.92 feet, on Prathers' well at 61.91 feet, on Furleys' well at 65.45 feet, and on Zessins' well at 65.6 feet. Once pumping from the irrigation well was stopped the water levels in each of the four wells in question returned to prepumping levels within eleven days.

The conclusions reached by the hydrologists as a result of the study were: (1) the irrigation well and the domestic wells were drawing from the same aquifer; (2) the aquifer could be defined with reasonable scientific certainty; (3) the pumping by Eisenmann depressed the artesian head of the domestic wells; (4) the cone of influence caused by Eisenmann's pumping intercepted or affected the plaintiff's wells; (5) the common aquifer from which the domestic and irrigation wells draw water is sufficient to supply both domestic and irrigation needs; and (6) for the plaintiffs to obtain water from their wells during periods when Eisenmann was pumping, they would have to pump water from the top of the shale. Notwithstanding the determination that the common aquifer contained quantities of water adequate to meet the reasonably foreseeable needs of the parties, the Conservation and Survey Division recommended that the domestic wells be redrilled to a depth below that of the irrigation well. This was necessary to cause the irrigation well to run dry before the domestic wells in the event that the aquifer did not prove sufficient.

The Madison County District Court found that withdrawal of

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137. The injunction was ordered and testing was begun pursuant to a stipulation by the parties. Id. at 3, 261 N.W.2d at 768.
138. See supra text accompanying note 13.
139. 200 Neb. at 3, 261 N.W.2d at 768. Prior to the test pumping the level of water in the artesian aquifer stood at some point above the level of the ground surrounding the artesian wells owned by the Prathers and the Furleys. When the water level was drawn below the level of the ground surrounding the artesian wells they ceased to flow. See generally the discussion of confined aquifers, supra text, at section II.
140. Id. at 3-4, 261 N.W.2d at 768.
141. The cone of influence is also known as the cone of depression. See supra text accompanying note 15.
142. 200 Neb. at 4, 261 N.W.2d at 768. The shale represents the impervious layer serving as the base of the aquifer. See generally the discussion of groundwater aquifers, supra text, at section II.
143. Note, supra note 122, at 833 n.17 (citing an interview with Marilyn Ginsberg, Research Hydrologist for the University of Nebraska Conservation and Survey Division, in Lincoln, Nebraska (Feb. 21, 1980)).
water by the defendant caused the loss of artesian pressure in the plaintiffs' wells, thus causing interference with the plaintiffs' domestic appropriation. The trial court further determined that the aquifer contained sufficient water to suit the needs of all the parties if the plaintiffs would lower their wells to the bottom of the aquifer and the defendant would leave his well at its original depth. The trial court then issued a permanent injunction, enjoining the defendant from lowering his well and from pumping at all during the period necessary for the plaintiffs to deepen their wells. The court also awarded the plaintiffs damages in the amount of $5,346.58, the cost of providing an assured alternative method of water supply as determined by the court. The defendant subsequently appealed to the Nebraska Supreme Court.

B. The Nebraska Supreme Court Ruling

The domestic wells owned by the plaintiffs did not contribute in any significant respect to the diminution of the available artesian pressure or to the reduction of the water level in the aquifer. In view of the fact that the plaintiffs did not lose the use of their wells until after the defendant began pumping from his irrigation well, the issue of liability created a question of first impression for the court.

It was opined by the supreme court that the trial court had applied the Restatement rule in its determination that the "defendants' appropriation of water caused unreasonable harm to plaintiffs by lowering the water table and reducing artesian pressure." Although the supreme court affirmed the lower court's decision, it refused to apply the Restatement rule because it lacked the breadth of the Nebraska rule. The Nebraska rule, as stated by the court, "is a combination of the American and the correlative rights doctrine [sic]." This modified rule of reasonable use, first announced in Olson v. City of Wahoo, was not applied alone in Prather. The existing rule was further modified by the Ne-

144. 200 Neb. at 2, 261 N.W.2d at 767.
145. Id. at 7, 261 N.W.2d at 770.
146. Id.
147. RESTATEMENT (SECOND) OF TORTS § 858A (Tent. Draft No. 17, 1971) (adopted as RESTATEMENT (SECOND) OF TORTS § 858(1) (1979)). For the text of this section, see supra note 67.
148. 200 Neb. at 8, 261 N.W.2d at 770.
149. Id.
150. Id. at 9, 261 N.W.2d at 771. For a discussion of the American rule, see supra text, at section III.B. The doctrine of correlative rights is discussed in the text, at section III.C.
152. Id.
The *Prather* court pointed out that the preference statute serves to give the plaintiffs, as domestic users, preferred status over the defendant, whose use is agricultural. In language unnecessary to the resolution of the dispute, but important in the analysis of the decision, the court noted that as between two domestic users there is neither preference nor priority. Every overlying owner has an equal right to a fair share of the underground water for domestic purposes. If the artesian head in the present situation had been lowered by other domestic users, plaintiffs would be entitled to no relief so long as they still could obtain water by deepening their wells. If the water became insufficient for the use of all domestic users, each domestic user would be entitled to a proportionate share of the water. All domestic users, regardless of priority in time, are entitled to a fair share of the water in the aquifer.

In sustaining the award of damages the court applied a "but for" type of tort analysis, stating that the plaintiffs could still obtain sufficient water by deepening their wells to the shale. Except for the defendants' actions, however, such compensatory measures would not have become necessary.

Perhaps the most significant language contained in the opinion deals with the plaintiffs' rights to their means of access to the groundwater. "Plaintiffs had a valuable *property right in the extraction of water* for domestic purposes. . . . Plaintiffs' right to the extraction of water from their existing wells was appropriated or destroyed by the actions of defendants." The whole of the historic significance attributed to the *Prather* decision is embodied in the language granting a property right in means of diversion where a property right to only the water itself had been previously thought to exist.

Consistent with its apparent desire to protect the plaintiffs' means of diversion the supreme court affirmed the trial court's ruling, holding that the proper measure of damages was that amount required to return the plaintiffs to the positions they had enjoyed prior to the interference caused by the defendant's well. "The measure of recovery in all civil cases is compensation for the in-
Thus the judgment of $5,346.58 awarded by the trial court was upheld as well.

V. AN ANALYSIS OF THE LAW

A. Property Rights in Means of Diversion

Inasmuch as the Prather decision appears to grant unlimited protection to a preferred user's means of groundwater diversion, it is appropriate to examine the case law in other western jurisdictions as it relates to well interference disputes. In several states a user's means of diversion has been granted much the same protection as were the plaintiffs' in Prather, although most of these jurisdictions have since moved away from strict application of the rule.

In Noh v. Stoner the Idaho Supreme Court ruled that a prior appropriator has an absolute right to his historical means and level of diversion without regard to its reasonableness or its impact on future use. To the extent that the prior appropriator's historical pumping level and means of diversion were extended absolute protection, however, Noh has been overruled.

Where the defendant diverted the flow of river water resulting in decreased aquifer recharge and subsequent interference with a complainant's means of diversion, the California Supreme Court held that a prior appropriator could not be forced to incur any material expense in order to accommodate a junior appropriator. The court did, however, temper its decision somewhat by imposing a reasonableness standard whereby the senior appropriator may be required to make some minor changes in his means of diversion in order to make water available for subsequent appropriators.

In Hanson v. Salt Lake City, the plaintiff lost his artesian pressure and was forced to install a pump to withdraw water as a result of the defendant's drilling of a new well nearby. In the re-

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161. Id. at 11, 261 N.W.2d at 772 (citing Abel v. Conover, 170 Neb. 926, 104 N.W.2d 684 (1960)).
162. See supra note 22 for a listing of the "western states."
163. See, e.g., Pima Farms v. Procter, 30 Ariz. 96, 245 P. 369 (1926), in which the Arizona Supreme Court held that a senior appropriator has a right of action against a junior appropriator for maintenance of the water table. Note, however, that since the decision in Pima Farms, Arizona has abandoned the doctrine of prior appropriation in favor of the rule of reasonable use. See Bristor v. Cheatham, 75 Ariz. 227, 255 P.2d 173 (1953).
164. 53 Idaho 651, 26 P.2d 1112 (1933).
167. Id. See also Hutchins, supra note 22, at 176-79.
168. 115 Utah 404, 205 P.2d 255 (1949).
sulting litigation the defendant advanced the argument that the plaintiff had a right only to the water and not to his historic means of access. The Utah Supreme Court dismissed the argument in holding that defendant must bear the expense of raising to the surface for the prior appropriator that which had otherwise flowed naturally under artesian pressure. The court did, however, spell out the fact that the right to a means of diversion was not an absolute right: "[S]uch means [must be] reasonably efficient and [must not] unreasonably waste water."\footnote{169} 

The same court later ignored the reasonable diversion requirement of Hanson in Current Greek Irrigation Co. v. Andrews.\footnote{170} In Current Creek it was held that prior appropriators who rely on artesian pressure as their means of diversion are "entitled to have the subsequent appropriators restrained from . . . lowering the static head pressure . . . unless they replace the quantity . . . of . . . water by pumping or other means to the prior appropriators at the sole cost of the subsequent appropriators."\footnote{171} Note, however, that the Current Creek decision was based on a 1953 Utah statute\footnote{172} requiring that any subsequent appropriator whose use proved injurious to the quantity or quality of water available to any prior appropriator must replace the same at the sole cost of the subsequent appropriator. A dissenting judge in Current Creek argued vehemently that the reasoning of the majority assumed an absolute property right in the means of diversion as well as in the groundwater itself.\footnote{173} The dissent contended that this logic was contrary to the policy encouraging maximum use and development of groundwater resources.

B. The Doctrine of Reasonable Diversion

The policy analysis of Justice Crockett's dissent in Current Creek was ultimately utilized by the Utah Supreme Court in adopting the doctrine of reasonable diversion in Wayman v. Murray City Corp.\footnote{174} In Wayman the plaintiffs complained that the defendant, in relocating its municipal wells, had interfered with the plaintiff's existing wells by diminishing the quantity of water available.\footnote{175} The court determined that there was not a shortage of water, but only a decrease in pressure at the plaintiffs' well

\footnotesize{\begin{itemize}
\item \footnote{169} Id. at 422, 205 P.2d at 263.
\item \footnote{170} 9 Utah 2d 324, 344 P.2d 528 (1959).
\item \footnote{171} Id. at 328, 344 P.2d at 531.
\item \footnote{172} UTAH CODE ANN. § 73-3-23 (1953).
\item \footnote{173} 9 Utah 2d at 332, 344 P.2d at 535 (Crockett, J., dissenting).
\item \footnote{174} 23 Utah 2d 97, 458 P.2d at 861 (1969).
\item \footnote{175} Id. at 100, 458 P.2d at 862.
\end{itemize}}
heads. The court noted that, although a conflict apparently existed between the policy to maximize water usage and the Utah statute, the competing interest must be balanced in a manner best suited to serving the development of the state's water law. In enunciating the doctrine of reasonable diversion the court explained that an application of the rule involves an analysis of the total situation: the quantity of water available, the average annual recharge of the basin, the existing rights and their priorities. All users are required where necessary to employ reasonable and efficient means in taking their own waters in relation to others to the end that wastage of water is avoided and the greatest amount of available water is put to beneficial use.

The court did not define what is meant by "reasonable and efficient means" of diversion, but it has elsewhere been indicated that any attempted definition of the concept creates a great obstacle for efficient groundwater management. Thus, the concept of reasonable diversion or reasonable pump lift must apparently be applied in a case-by-case analysis.

The Idaho Supreme Court has likewise strayed from the abso-

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176. Id. at 101, 458 P.2d at 863.
177. The statute provides in pertinent part that "replacement shall be at the sole cost of the applicant . . . whose appropriation may diminish the [quantity] or injuriously affect the quality of appropriated underground water." Utah Code Ann. § 73-3-23 (1980). See, Comment, Protection of Means of Groundwater Division, 20 Nat. Resources J. 635, 639 (1980).
178. 23 Utah 2d at 104, 458 P.2d at 865.
179. Id., 458 P.2d at 865.
180. What may be reasonable pump lift to an appropriator using water for irrigation purposes may be unacceptable to his neighbor who is concerned only with domestic use. These two users must, nonetheless, share water from a common supply.

Generally, the water table (or the confining surface of an artesian aquifer) has a slightly curved surface. Unless extraordinary structural or hydraulic conditions are present, this surface is not subject to abrupt changes in elevation. The surface of a water table normally follows a somewhat flattened likeness of the overlying terrain, while the pressure surface of an artesian aquifer often bears no resemblance to the topography above. Even though there exists a tendency toward uniform water levels in neighboring wells, there is not always an adequate supply of water available to two wells at a common depth. In certain cases the geologic material at the level of the water table lacks the requisite permeability. Thus deeper drilling into rocks of appropriate permeability is necessary in order to realize the desired output. Once the drill enters these rocks, however, the water level in the well tends to rise to a level similar to that of other wells of like depth in the area.

The amount of pump lift required is also affected by the distance from the land surface to the groundwater level. This phenomenon gives a distinct advantage to the well owner in a valley over his neighbor on a hill. When these factors are combined with the substantial local differences in transmissivity which cause great variation in the drawdown resulting from the extraction of a given quantity of water, the complexity of determining reasonable pump lift becomes obvious. See generally Corker, supra note 3, at 78-80.
lute right to means of diversion granted in *Noh v. Stoner*\(^{181}\) with its decision in *Baker v. Ore-Ida Foods, Inc.*\(^{182}\) The *Baker* court held that a prior appropriator's means of diversion will be protected only to the extent that he has maintained reasonable pumping levels.\(^{183}\) The chief concern of the *Baker* majority was that holders of senior appropriative rights may occasionally be forced to "accept some modifications in their rights in order to achieve the goal of full economic development."\(^{184}\)

Notwithstanding any difficulty of definition, the *Prather* court made no attempt whatsoever to address the reasonableness of the plaintiffs' means of diversion. Instead, it merely created a mechanical extension of property rights to include means of access. Using a broadened version of section 858 of the *Restatement* (or the Nebraska common law rule)\(^{185}\) in conjunction with the preference statute,\(^{186}\) as the court apparently did, provides no latitude for a denial of liability even where a preferred user is injured as an ultimate result of his own inadequate means of diversion.

C. The Economic Reach Analysis

Courts in other jurisdictions have adopted the doctrine of reasonable diversion in varying forms. In the sense that protection of means of diversion has historically included protection of both quantity and quality of water,\(^{187}\) the Colorado Supreme Court has held that a prior appropriator does not have an absolute right to the historical quality of his water.\(^{188}\) Prior to the announcement of this rule, Colorado courts had determined the nature of reasonable diversion from the standpoint of economic impact. In *Colorado Springs v. Bender*,\(^{189}\) for example, it was held that a senior appropriator's means of diversion must be both reasonable and efficient. Without such a rule, the court reasoned, the owner of a shallow well could prevent the use of water by subsequent appropriators notwithstanding the existence of adequate quantities of water available at greater depths.\(^{190}\)

In keeping with the absolute property right concept, however, the court applied the principle "that a junior appropriator may not divert the water to which he is entitled by any . . . means the re-

\(^{181}\) 53 Idaho 651, 26 P.2d 1112 (1933).

\(^{182}\) 95 Idaho 575, 513 P.2d 627 (1973).

\(^{183}\) Id. at 585, 513 P.2d at 637. *But see supra* note 180.

\(^{184}\) 95 Idaho at 584, 513 P.2d at 636.

\(^{185}\) See supra text accompanying notes 147-54.

\(^{186}\) NEB. REV. STAT. § 46-613 (1978).

\(^{187}\) See generally Comment, *supra* note 177.

\(^{188}\) A-B Cattle Co. v. United States, 196 Colo. 539, 589 P.2d 57 (1979).


\(^{190}\) Id. at 462, 366 P.2d at 555.
result of which will be to diminish or interfere with the right of a senior appropriator to full use of his appropriation." 191 But the court thought it necessary to modify this rule slightly by discussing the elevation at which the subsequent appropriator should be required to stop pumping. The opinion suggests that the arrival at such a determination requires the court to consider whether the prior appropriator is utilizing a means of diversion that is "reasonably adequate for the use to which he had historically put the water." 192 In the event that the senior appropriator's means of diversion meets this reasonableness standard the court noted that the subsequent appropriator should be required to bear the expense of restoring access to the water for the senior user. 193

The policy considerations surrounding the requirement that the prior appropriator use a reasonable means of diversion gave rise to the economic reach analysis. Prior to requiring the junior user to pay the costs involved in restoring the prior appropriator's historical means of diversion the court felt compelled to examine the possibility of requiring the prior appropriator himself to increase the efficiency of his means of diversion. In so doing the court indicated that consideration should be given to the prior appropriator's purposes for the water and his "economic reach." 194 In expressing the concept behind the economic reach analysis the court stated that

[1]he plaintiffs cannot reasonably command the whole source of supply merely to facilitate the taking by them of a fraction of the entire flow to which their senior appropriation entitles them. On the other hand, plaintiffs cannot be required to improve their extraction facilities beyond their economic reach, upon a consideration of all the factors involved. 195

Simply stated the concept of economic reach merely focuses on economic efficiency as a primary means of determining the extent to which diversion is reasonable.

Under the economic reach analysis it is evident that, while the prior appropriator's right to his means of access is not absolute, as in the Prather decision, it apparently remains a material right. The ultimate determination of who will restore the prior appropriator's means of diversion under the economic reach analysis apparently hinges on nothing more than his financial ability to reach the water to which he is entitled as a result of his appropriative right.

The doctrine of reasonable diversion is apparently beginning to overshadow the economic reach analysis in Colorado. A-B Cattle

191. Id. at 463-64, 366 P.2d at 556.
192. Id. at 464, 366 P.2d at 558.
193. Id.
194. Id. at 464, 366 P.2d at 556.
195. Id.
Co. v. United States^{196} has raised a question as to the extent of a senior appropriator's right to means of diversion. The A-B Cattle Co. case flatly held that a prior appropriator does not have a right to the historical quality of his water, at least insofar as silt content is concerned.\footnote{196. 196 Colo. 539, 589 P.2d 57 (1979).} The court totally ignored any economic reach analysis,\footnote{197. Id. at 543, 589 P.2d at 61.} and gave no indication of what future protection will be extended to a prior appropriator's means of access in Colorado.

Perhaps the better interpretation of A-B Cattle Co. would indicate that water quality has little, if any, bearing on the reasonableness of a particular means of diversion. Over extended periods of time such phenomena as pressure, quality, and quantity of water are subject to natural change. The case may perhaps be read as simply holding that a Colorado user is not exclusively entitled to historic physical occurrences.

D. Combining Preferences and Priorities

The concept of preferences is generally associated with a system of prior appropriation.\footnote{198. Id. at 550, 589 P.2d at 67.} The Nebraska statute governing appropriation of surface water\footnote{199. See Harnsberger, supra note 39, at 231.} grants priority to the user who is first in time and also establishes preferences in accordance with the state's constitution.\footnote{200. NEB. REV. STAT. § 46-204 (Supp. 1982).} The constitutional requirement that a condemning user pay just compensation to the appropriator whose use is condemned gives some indication of the importance of preferences in relation to priorities.

It provides that an exception to that first in time, first in right doctrine will be made to a user whose water is more highly valued by society when that more highly valued use \textit{can afford to and does} compensate a less valued but senior use for all damages sustained. The result is to reduce materially the value of having a preferred use.\footnote{201. NEB. CONST. art. XV, § 6. For the text of this section, see supra note 109.}

Nebraska surface water priorities are, in another sense, subordinate to the preferences. Practically this means that a junior preferred user may, in times of water shortage, obtain water from a senior nonpreferred user simply by compensating the senior user for the damages sustained as a result of exercising the preference. Under the Nebraska surface water law, however, it is not clear whether the power to exercise a preference via condemnation extends to individuals or is limited to institutions which

have traditionally enjoyed the power of eminent domain. "Some commentators have indicated that only entities having the power of eminent domain have the right to exercise the preference against an involuntary senior user," while others believe that a domestic user may exercise his preference without paying compensation to the damaged nonpreferred user.

Unlike its surface water counterpart, Nebraska groundwater law does not provide for prior appropriation. By virtue of the fact that "[p]references generally are associated with a system of prior appropriation . . . it was surprising when the Nebraska Legislature enacted the . . . ground water preference law" without provision for prior appropriation. As a result, well interference disputes must be settled under Nebraska common law (modified by the preference statute as was done by the Prather court).

Commentators have speculated in the past as to whether the preference statute grants to a preferred user some proprietary interest. "If this preference scheme is viewed as vesting groundwater rights in users preferred under the statute, this fosters the idea that some property right, which is capable of enforcement by judicial or administrative means, does exist in groundwater." The need for such speculation, however, was apparently laid to rest by the Nebraska Supreme Court in Prather. Not only did the decision appear to remove all doubt as to whether a preferred user enjoys a proprietary interest in groundwater, the opinion stated that the preferred user "has a valuable property right in the extraction of water for domestic purposes." The court had therefore extended the proprietary interest even beyond that anticipated by pre-Prather commentators by recognizing a property right in the preferred user's means of diversion.

But alas, the apparent clarity of the rule regarding a proprietary interest in groundwater was only fleeting, and we were not allowed to bask in the enlightened glow of understanding for more than a short time. In State ex rel. Douglas v. Sporhase an irrigator

203. Id. at 1-5 (citing Fischer, supra note 104, at 357; Doyle, Water Rights in Nebraska, 29 Neb. L. Rev. 385, 409 (1950); Yeutter, A Legal-Economic Critique of Nebraska Watercourse Law, 44 Neb. L. Rev. 11, 44-49 (1965)).

204. Comment, supra note 45, at 84 (citing generally 78 Am. Jur. 2d Waters §§ 317-25 (1975)).


207. See supra notes 49-54 and accompanying text.

208. Comment, supra note 45, at 84.

209. 200 Neb. at 11, 261 N.W.2d at 771 (emphasis added).

owned adjacent tracts of land in Nebraska and Colorado with his well situs on the Nebraska tract. The State of Nebraska sought an injunction in the District Court of Chase County to enjoin the defendant from transporting groundwater drawn from the Nebraska well to his adjacent property in Colorado. The action was governed by a statute which provides that any person desirous of transporting water from Nebraska to an adjoining state must first apply to the Nebraska Department of Water Resources for a permit to do so.\footnote{211} Such a permit may under no circumstances be granted, however, if the state to which the water is to be transported does not grant "reciprocal rights to withdraw and transport groundwater from that state for use in . . . Nebraska."\footnote{212} The Chase County District Court issued the injunction.\footnote{213}

The defendant appealed the decision, claiming that the statute was not only a violation of the commerce clause, but a deprivation of liberty and property without due process of law as well. The Nebraska Supreme Court held that the appellant was deprived of neither liberty nor property since there is no "private property right in the water itself . . . ."\footnote{214} The language of the Nebraska Supreme Court in \textit{Sporhase},\footnote{215} however, need not be construed as being inconsistent with the court's opinion in \textit{Prather}.\footnote{216} While the \textit{Sporhase} decision apparently limits the notion of a proprietary interest in the water itself, the \textit{Prather} opinion clearly indicates the existence of such an interest in the domestic user's means of access to groundwater.\footnote{217}

\footnote{212} Id.
\footnote{213} 208 Neb. at 705, 305 N.W. 2d at 616. In granting the injunction the district court held that "§ 46-613.01 does not violate the commerce clause of U.S. Const. art. I, § 8, since under Nebraska law water is not an article of commerce." \textit{Id.}
\footnote{214} Id. at 710, 305 N.W.2d at 619. The United States Supreme Court reversed the decision of the Nebraska Supreme Court, holding that groundwater is an article of commerce. 102 S. Ct. at 3463. The Court further held that a state's imposition of "severe withdrawal and use restrictions on its own citizens is not discrimination against interstate commerce when it seeks to prevent the uncontrolled transfer of water out of the State." 102 S. Ct. at 3464. The reciprocity requirement of § 46-613.01, however, does nothing to "significantly advance the State's legitimate conservation and preservation interest . . . . and thus does not survive the 'strictest scrutiny' test reserved for facially discriminatory legislation." 102 S. Ct. at 3465.

Since the United States Supreme Court did not address the issue of whether a proprietary interest exists in groundwater, the language of the Nebraska Supreme Court quoted in the text apparently remains unaffected.

\footnote{215} 208 Neb. at 710, 305 N.W.2d at 619.
\footnote{216} 200 Neb. at 11, 261 N.W.2d at 771. \textit{See supra} text accompanying note 209.
\footnote{217} Note also the obvious factual distinctions between \textit{Prather} and \textit{Sporhase}. The \textit{Sporhase} case involved an irrigator, not a domestic appropriator, and the groundwater preference statute, Neb. Rev. Stat. § 46-613 (1978), \textit{supra} note 118, was inapplicable since a well interference dispute was not involved.
Thus the Nebraska rule governing well interference controversies remains functionally unchanged.

E. Other Possibilities for the Resolution or Avoidance of Conflicts

In many of the other eighteen western states\textsuperscript{218} statutory attempts have been made to resolve well interference disputes. In Idaho\textsuperscript{219} and Wyoming\textsuperscript{220} for example, a senior appropriator may, pursuant to state law, request an administrative determination of whether well interference is taking place. These statutes free the potential plaintiff of the substantial economic strain involved in meeting his burden of proof that may serve to effectively deny him access to the courts in Nebraska.\textsuperscript{221} In several other states a junior appropriator may be administratively regulated for the benefit of a senior user when well interference occurs.\textsuperscript{222} Well interference conflicts in Oregon\textsuperscript{223} and Wyoming\textsuperscript{224} are resolved on the basis of preferences.

Some western states utilize legislation as an attempt to avoid well interference conflicts altogether. In a number of states well applications are considered on the basis of what effect the proposed appropriation would have on existing wells.\textsuperscript{225} Proposed ap-

\textsuperscript{218} See supra note 22.
\textsuperscript{220} Wyo. Stat. § 41-3-911(b) (1977).
\textsuperscript{221} See, e.g., Olson v. City of Wahoo, 124 Neb. 802, 248 N.W. 304 (1933). Plaintiff, who owned a gravel pit on the outskirts of the City of Wahoo, brought suit against the city alleging that wells drilled by the defendant were causing interference with his own water supply. The Nebraska Supreme Court determined that the plaintiff had failed to prove the requisite cause and effect relationship between the defendant's wells and his own diminished water supply. The court concluded, therefore, that the plaintiff was not entitled to recover damages. For recommendations concerning the burden of proof, see infra text, at section VI.A.4.
\textsuperscript{224} Wyo. Stat. § 41-3-911(a) (1977) (creating an absolute preference for domestic users if the domestic well is adequate). See, e.g., Bishop v. City of Casper, 420 P.2d 446 (Wyo. 1966), wherein the plaintiff sued for damages caused to his domestic well by the defendant's wells. The Wyoming Supreme Court upheld the trial court's grant of summary judgment for the defendant based on the fact that the plaintiff had failed to allege in his pleadings that his well was adequate.
propiations in these states which would interfere with existing wells are either denied or granted conditionally. Certain other states impose restrictions on groundwater use and development, requiring the maintenance of reasonable pumping depths. Thus, senior appropriators are granted only a limited degree of protection. In these states a preferred user may not enjoin an inferior user unless his own well is adequate to withdraw the available groundwater supply.

Realizing that the Nebraska preference system may be in need of modification, the Nebraska Natural Resources Commission has compiled a list of fifteen alternative solutions for legislative modification of the preference statutes. Although all of the proposed alternatives will not be discussed, certain of them do merit consideration.

One alternative involves a total abolition of the preferences system. As it applies to groundwater, the implementation of this rule would serve to make all users subject to the Nebraska common law rule. Each user would be entitled to make reasonable use of the water underlying his land, and, if shortages occurred, each user would be entitled to his reasonable proportion of the existing supply. In view of the fact that no system of prior appropriation exists in Nebraska, the resolution of conflicts under this proposal would require a case-by-case determination of the merits involved. Conflicts between users in the same category would be handled in the same manner as conflicts between users in different categories.

A second alternative advocates the abolition of all preferences except for domestic use. The advantage of this proposal is its reservation of water to meet basic human needs in times of

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226. See supra note 226.
227. What is reasonable for an irrigation well may in fact not be reasonable for a domestic well pumping from the same aquifer. See supra note 180.
228. See supra note 226.
229. Id. at 4-7 to 4-9, alternative no. 2.
230. The probable effects of each of the alternative plans presented will be discussed with respect to its implementation given no other alterations in the existing groundwater law in Nebraska.
231. See supra notes 49-54 and accompanying text.
232. NEB. NATURAL RESOURCES COMM’N REPORT, supra note 202, at 4-1 to 4-33.
233. Id. at 4-7 to 4-9, alternative no. 2.

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shortage, a concept no doubt appealing to students of Maslow.\textsuperscript{234} As it relates to groundwater usage, this alternative would make very little change in existing law since the likelihood of well interference is probably greatest in the domestic use area.

A third alternative calls for a compensation requirement to be placed on the exercise of a groundwater preference.\textsuperscript{235} The implementation of this alternative proposal would naturally require the establishment of a system or prior appropriation as well.\textsuperscript{236} Without the prior appropriation system any exercise of a preference would beg for compensation, whereas with such a system only those damaged users whose appropriation was made first would require compensation. A substitution of this alternative for the law applied in \textit{Prather} would yield an identical result since the irrigator had drilled his well after the plaintiffs' wells were drilled.

Finally, the Commission proposes the imposition of reasonable standards on the use of preferences for protecting the means of access to a groundwater supply.\textsuperscript{237} This proposal would theoretically yield a result similar to that brought about by an application of the doctrine of reasonable diversion.\textsuperscript{238} The imposition of a standard of reasonable diversion would prevent the owner of a marginally adequate domestic well from profiting at the expense of an inferior user.

\textbf{VI. RECOMMENDATIONS}

The number of new wells drilled in Nebraska in 1982 was down considerably as compared with the irrigation boom of the past approximately ten years.\textsuperscript{239} It is anticipated that this trend will con-

\begin{verbatim}
\footnotesize
\begin{tabular}{ll}
1972 & 2,286 \\
1973 & 2,174 \\
1974 & 2,820 \\
1975 & 5,113 \\
1976 & 5,639 \\
1977 & 5,110 \\
1978 & 1,815 \\
1979 & 2,005 \\
1980 & 2,106 \\
1981 & 2,844 \\
1982 & 1,211 \\
\end{tabular}
\end{verbatim}

\textsuperscript{234} See A. MASLOW, MOTIVATION AND PERSONALITY (1954).
\textsuperscript{235} NEB. NATURAL RESOURCES COMM'N REPORT, supra note 202, at 4-30 to 4-31, alternative no. 14.
\textsuperscript{236} \textit{Id.} at 4-30.
\textsuperscript{237} \textit{Id.} at 4-30 to 4-31, alternative no. 15.
\textsuperscript{238} See generally supra text, at section V.B.
\textsuperscript{239} Well registrations with the Nebraska Water Resources Department indicate the following number of new wells drilled and registered in the state in each year since 1972:
Whether this decline is due to the depressed farm economy, the fear of leaner years to come, or a combination of the two is of little consequence. The key factor is that the number of new wells in Nebraska is declining, perhaps signifying a trend toward relative stability in the total number of producing wells in the state. With fewer new wells being drilled, the probability of new well interference disputes will likely decline proportionately.

Notwithstanding the decline in numbers of new wells drilled, well interference conflicts will remain an unavoidable consequence in a primarily agricultural society. It is with this prognosis in mind that the observations and recommendations that follow are made.

A. Considerations in Judicial Reform

The grant of a property right in means of diversion coupled with a system of absolute groundwater preferences does not appear consistent with the concepts of social and economic utility. This is not to suggest that the result peculiar to the parties in *Prather v. Eisenmann* was an inequitable one. Without being presented with further facts it is indeed impossible to predict what effect a consideration by the court of such standards as reasonable pumping depth and foreseeability of future harm may have had on the outcome of *Prather*. The suggestion that the *Prather* result may not be consistent with social and economic utility merely demonstrates a fear that inequities may be imminent in future well interference cases if similar mechanical applications of the law take place. Nevertheless, these and other considerations must be given due deference by the courts of Nebraska.


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240. *Id.*


242. See, e.g., RESTATEMENT (SECOND) OF TORTS § 850A (1979), which suggests that the court should consider the following:

1. the purpose of the use;
2. the economic value of the use;
3. the social value of the use;
4. the extent and amount of harm caused;
5. the practicality of avoiding the harm by adjusting the use by one proprietor or the other;
6. the practicality of adjusting the quantity of water used by each proprietor;
7. the protection of existing values of water uses, land, investments, and enterprises; and
8. the justice of requiring the user causing harm to bear the loss.

*Id.* at § 850A(c)-(i). Cf., Wasserberger v. Coffee, 180 Neb. 149, 141 N.W.2d 738 (1966), modified, 180 Neb. 569, 144 N.W.2d 209 (1966), which suggests that the following be considered: (1) the social utility associated with the respective
1. Foreseeability of Harm

The preference statute must be considered with, rather than in place of, the equities involved. Perhaps some interference with artesian head is to be expected if the full economic benefit of ground-water appropriation is to be realized.

If ... appropriation is to accomplish the desired end of making full use of ground-water resources of the state, it must be recognized that some lowering of the water table or the artesian pressure is a reasonable result of a reasonable method of diversion ... and should not constitute a basis of damages.\(^{243}\)

It is perhaps not totally inequitable to expect a domestic user to install a pump rather than relying solely on artesian pressure as a means of diversion. The mere loss of artesian head can often be remedied with a submersible pump. Where, however, it is determined that the damaged well would require redrilling to a greater depth, the domestic user has obviously been injured to a larger extent. The issue that must be considered is foreseeability of damage by the domestic user.

A person building a house on a residential tract surrounded by agricultural land should be reasonably expected to foresee the probability of irrigation development in the area. Thus, if a domestic user in an agricultural area finds his artesian head diminished as a result of a neighboring irrigator's appropriation, the initial issue to be addressed must be foreseeability of the interference.\(^{244}\)

Formulating an answer to the question of what actually constitutes foreseeable harm indeed presents a difficult factual dilemma. Unfortunately, foreseeable harm is not a concept to which one can easily attach a definition. It must, therefore, be determined by the finder of fact in light of the circumstances peculiar to each case. Of major importance in this vein are considerations of the age of the plaintiff's well and the circumstances in existence at the time it was drilled.

If, for example, the plaintiff's well had been drilled at a time

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244. In a typical negligence analysis the test of foreseeable harm is one generally applied to the actions of a defendant. See generally W. Prosser, HANDBOOK OF THE LAW OF TORTS § 43 (4th ed. 1971) [hereinafter cited as Prosser]. The analysis is being applied here, however, as one of either assumption of risk, see id. at § 68, or contributory negligence, see id. at § 65, on the part of the plaintiff.
prior to the advent of irrigation in his area, he cannot be said to have been unreasonable in his utilization of a relatively shallow well in comparison with today's standards. On the other hand, if the plaintiff's domestic water needs are supplied by an artesian well drilled at a time when irrigation was a standard agricultural practice in his immediate area, it would have been reasonable for him to anticipate that his neighbors may soon drill irrigation wells on adjacent property.

2. Financial Feasibility

The financial ramifications of a complaining party's actions must also be balanced against the subjective concept of foreseeability of harm. It is not economically feasible that the law should require one to drill a well deeper than is necessary to serve its proposed purpose merely as a defensive maneuver, unless the likelihood of interference is relatively high. By the same token, a domestic user should not be allowed to benefit at the expense of others whose actions were reasonable as a result of his own inadequate well.

Consider the situation where an individual builds his home in a rural area already heavily irrigated. If he drills a domestic well during November to a minimum depth necessary to suit his needs, he will very likely discover his means of access to be totally inadequate when, in the following July, the surrounding irrigators begin to draw large quantities of water from the common resource. Yet, under a strict application of the law as stated in Prather, the plaintiff would prevail in his attempt to require the interfering irrigators to subsidize him in redrilling his domestic well to an adequate depth.

3. The Measure of Damages

Justice demands that the preference system be modified to include the doctrine of reasonable diversion. Where a dispute arises between a preferred user and a nonpreferred user, courts must address the question of reasonable diversion from the standpoint of foreseeability of harm. This determination must then form the basis for the court's calculation of the amount of damages, if any, to be awarded.

If the plaintiff's means of access, when analyzed in light of the

245. The analysis of the facts in view of the geographical location is imperative. Irrigation has been the standard practice in the Platte River Valley, for example, for a much longer period than in the sandhills region of Nebraska.

246. For a discussion of the doctrine of reasonable diversion, see supra text, at section V.B.
foregoing tests, is found to be reasonable, the defendant should be required to pay damages in an amount necessary to restore the plaintiff's access to a quantity of groundwater essential to meet his needs. In the event that the plaintiff's means of diversion is found not to have been reasonable in view of the foreseeability of the resulting harm, he should be awarded damages only to the extent of injuries he would have sustained had his means of diversion been reasonable. If the court determines that no injury would have been incurred had the plaintiff's means of diversion been reasonable, no damages should be awarded.

4. The Burden of Proof

Yet another troublesome feature of the current Nebraska law relating to well interference disputes is the burden of proof placed upon the plaintiff by Olson v. City of Wahoo. In the Prather decision there was no need for the court to consider the harshness of the standard since the plaintiff's hydrologic study was undertaken at the state's expense. In the event that an individual plaintiff were forced to privately fund such a hydrologic survey, the costs may well exceed any possible recovery.

If the alleged interference were viewed in light of a res ipsa loquitur analysis, the burden of proof would be shifted back to the defendant to rebut the presumption that his well is the sine qua non of the plaintiff's injury. Such an analysis appears to be logical and equitable in the situation where the domestic well had functioned adequately until the installation of an irrigation well on nearby property. The res ipsa presumption would be strengthened if the domestic well returned to normal production within a reasonable period of time following the cessation of withdrawal from the irrigation well.

5. Reasonableness of the Means of Diversion

Once the cause of the interference has been presumptively established and the defendant has been unable to successfully rebut the presumption, the court should consider more than the common law rule as modified by the preferences. This was in fact the

247. 124 Neb. 802, 248 N.W. 304 (1933). For a brief discussion of the facts involved in this case, see supra note 221.
248. See Note, supra note 122, at 839-40 n.70.
249. For a discussion of the estimated cost of employing a private engineering firm to conduct the hydrologic study undertaken in Prather, see id. at 841 n.75 and accompanying text. Bear in mind that the costs indicated therein represent early 1980 estimates.
250. "The Nebraska rule...is a combination of the American and the correlative rights doctrine [sic]. It must be construed, however, in light of our prefer-
announced rule in Prather, but, as a practical matter, the court rendered the concept of reasonable use totally meaningless in a factual situation to which the preference system applies. Where a nonpreferred user interferes with a preferred use, an application of the rule as announced in Prather would apparently cause liability to attach under the preference statute with no regard whatsoever for the reasonableness of the nonpreferred use or the reasonableness of the preferred user's means of diversion.

The court must further consider the reasonableness of the plaintiff's means of diversion of groundwater. As previously discussed, the plaintiff must not be unjustly enriched as a result of interference which he should reasonably have anticipated. He must be allowed to recover damages for only that injury which he would have sustained had his means of access been reasonable when viewed in light of the probability of impending interference. This factual analysis would of necessity be highly subjective, including such factors as the age of the plaintiff's well, the extent to which groundwater use in his locality had been developed at the time his well was drilled, and the extent to which he could have anticipated such development at the time of the drilling of his well.

The element of foreseeability would compel the court to apply a negligence analysis rather than imposing upon the interfering well owner a standard of strict liability as was done in the Prather decision. If the plaintiff's means of diversion is found to be reasonably adequate to suit his needs when viewed in light of the foreseeability requirement, the defendant may be found to have violated his duty of due care. This result stems not from any willful or malicious intent on the part of the defendant, but merely from the nature of his activity. If the plaintiff's means of diversion is found to be less than reasonable under the foreseeability test, the facts should be analyzed either in terms of contributory negligence or assumed risk. An application of the contributory negligence standard would serve to mitigate damages sustained by the plaintiff, while an assumption of the risk standard may extinguish damages altogether.

The evidence indicates defendants had a runoff of approximately 15 to 25 gallons of water per minute above the water utilized on their land. The trial court found this was in excess of a reasonable and beneficial use on their own land. It is not necessary for us to reach this issue. We do not deem it material in view of the decision we reach herein. This case must be analyzed in reference to the preferential use statute.

200 Neb. at 7, 261 N.W.2d at 770.

251. See supra text, at section VI.A.1.
6. Social Utility

The social utility of the competing uses must also be weighed by the court. This consideration is arguably addressed in the groundwater preference statute, but would necessarily be applied in the resolution of disputes between two or more nonpreferred users.

Such an analysis would require the court to balance the value to society in general of each competing use in order to arrive at a determination of which use contributes the superior benefit. Where the parties to a dispute utilize the groundwater for the same purpose this consideration would not apply.

7. Economic Utility

Keeping in mind the social desirability of encouraging the efficient development of Nebraska's groundwater resources, courts must balance the economic utility of the competing uses. In many instances this consideration may be very closely related to considerations of social utility, for activities that are economically beneficial are often socially beneficial as well.

In its analysis of the relative economic utilities, the court must give careful consideration to the investments involved, the impact of a given decision on the business or other enterprises involved, and the respective needs of each party for the water. In the case of a high capacity industrial or irrigation well, the capital outlay necessary to restore access to a damaged user may be beyond the financial means of the party against whom a judgment is rendered. An application of strict liability standards for interference with a preferred user may also have a negative impact on the value of agricultural or industrial real estate. The developer of such property would have no way of anticipating that his well or wells may one day interfere with a neighboring domestic well that has not yet been drilled. The court must also compare the quantity of water needed by each user and the necessity for the water as it relates to the continued productivity of each enterprise.

8. Extent of the Harm

The extent of harm caused by the defendant is another issue which must be addressed by the court. It is imperative that the factual questions of the existence and the extent of the defen-

253. Neb. Rev. Stat. § 46-613 (1978); supra note 118. Social utility was arguably addressed by the drafters of the statute in view of the very nature of the preference system. The system assigns a greater social value to domestic use than to any other form of use, and a greater social value to agricultural use than to industrial use.
ant's causation of the injury sustained by the plaintiff be examined. In certain circumstances it is entirely possible that wells other than the defendant's have contributed to the plaintiff's loss. In such a case it is logical that the other interfering parties be joined and, where liability is found, forced to contribute in an effort to further the policy in favor of loss spreading.

9. **Capacity to Bear the Loss**

Yet another point to be analyzed by the court is the justice of requiring the party causing the interference to bear the entire loss. Again a standard tort analysis may be applied in an effort to determine the capacity of each party to stand the loss which must necessarily fall on one or the other. Such a balancing test is not based so much on the respective wealth of the parties as it is on each party's ability to absorb the loss or avoid it entirely.

An analysis of this nature would be particularly applicable where the controversy pits an individual user against a large industrial user, a public utility, a large corporate agricultural user, or a municipality. Such a large scale appropriator is normally in a much better position to absorb the loss through the use of taxes, pricing practices, or rates than is the individual user.

In the event of multiple party causation, a system of pro rata contribution may prove to be equitable. Problems may arise, however, in that extensive hydrological testing would be required in order to effectively determine each defendant's proportionate share of liability.

10. **Limits on the Quantity of Water Used**

Finally, the court should consider the practicality of adjusting the quantity of water being used by either party to the action. Such an adjustment of the quantity used will necessarily be applied where waste is taking place by one or more of the competing users or where groundwater mining is in progress causing aquifer insufficiency. A reduction in consumption by one or more parties may indeed prove to be more equitable than redrilling one or more wells.

In the final analysis the court must consider all of the factors previously addressed, balancing each in accordance with the particular facts of the case. Certain of the considerations mentioned will be inapplicable in some controversies, but those that apply must be given careful evaluation by the court. Through a process of utilizing the applicable considerations discussed here, the court will be much better able to arrive at a decision which represents a

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254. See generally Prosser, supra note 244, at § 4.
delicate balance of the facts against standards of equity and fairness rather than a strict application of anachronistic rules.

B. Considerations in Legislative Reform

While fair and equitable resolution of disputes is indeed a worthy goal, those individuals seeking judicial redress for damages sustained as a result of well interference are too late to avoid at least some harm or inconvenience. Regardless of how well the court system balances the equities involved, one of the parties may come away with his desired result and the other with ill will toward the legal system, for unfortunately, only one party may prevail.

Perhaps a goal even more noble than the just resolution of well interference disputes is the complete avoidance of such controversies to as great an extent as is possible. This goal can be approached only through wise and well planned legislation. With this end in mind, the guidelines that follow may act as a step toward avoidance of future well interference conflicts through sound legislative action.

1. The Effects of a Proposed Well

Legislation which provides for an administrative determination of the effect a proposed new well would have on existing area wells prior to the issuance of a well permit would serve to reveal potential conflicts before they develop.\(^\text{255}\) Under such legislation an administrative agency, such as the Nebraska Water Resources Department, would be responsible for reviewing each well application in light of the existing number of wells in the immediate area of the proposed well, the respective capacities of existing wells, the existence of prior well interference conflicts (if any) in the area, the type of usage to which water withdrawn from existing wells is put, and the purpose for which water extracted from the proposed well will be utilized. These suggested administrative considerations are certainly not intended to comprise an exhaustive list of determinative factors; other considerations which the legislature or the agency in charge believes to be pertinent should be included. In the event that a proposed well is determined, through the administrative process, to present a threat to existing area wells, the permit could be refused or granted conditionally with an express limitation as to permissible quantities of water that may be withdrawn.

Another alternative available to those granting a conditional

\(^\text{255}\) For citations to representative statutes drafted on a similar concept and enacted in other jurisdictions, see \textit{supra} note 225.
permit is the approval of an unconditional permit containing an express reservation mandating that the withdrawals from the new well will be decreased in the event of interference. In an effort to defray the necessary administrative costs incurred pursuant to such an investigation, it would become necessary to increase the fee required to accompany the well application.

2. Public Hearings

A second legislative alternative would provide for the establishment of a system under which public hearings would be held in locations easily accessible to the local populace prior to the approval of new well applications. The agency conducting these hearings should be the same agency that reviews the well application and makes the determinations regarding potential interference. The hearings should occur after the responsible agency has reached a decision regarding potential conflicts.

At such hearings citizens who oppose the application would be permitted the opportunity to air their concerns before an official (or a panel of such officials) representing the controlling administrative agency. The hearings would be conducted in a manner similar to that utilized by a zoning board. Following a hearing, the agency would review the testimony heard and weigh opponents' views in the determination of whether, and to what extent, i.e., conditional or unconditional, the requested permit should be granted.

3. Standing to Sue

Finally, in an effort to statutorily recognize the doctrine of reasonable diversion, the Nebraska Unicameral should carefully consider imposing a requirement that no preferred user will have standing to enjoin or seek damages from any other user for well interference unless the complaining party's well is drilled to a reasonable depth and his means of diversion is also reasonable. As previously discussed, this concept would prevent the complaining user from obtaining a windfall at the expense of another user in the event that a conflict were to arise. The appropriate administrative agency would issue a declaratory ruling, creating a rebuttable presumption that pumping depth and means of diversion are or are not reasonable. The presumption would operate in

256. For a discussion of the doctrine of reasonable diversion, see supra text, at section V.B.
257. For citations to representative statutes drafted on concepts similar to the idea set out here and enacted in other jurisdictions, see supra note 226.
258. See supra text, at section VI.A.2.
much the same fashion as the res ipsa loquitur presumption of the cause of the interference.\textsuperscript{260}

In arriving at a determination of whether the means of diversion and the pumping depth in the complainant's well are reasonable, the investigating agency should consider the utility of the proposed water use, the terrain of the surrounding area, and the depth of similar wells in the same vicinity. Again, the list of considerations is not exhaustive and the legislature, by statute, must give to the investigating agency the authority necessary to consider other pertinent factors in arriving at the administrative determination of reasonableness or unreasonableness. Where the parties contest the validity of the declaratory ruling issued by the agency, an opportunity for a hearing on the contested issues is provided.\textsuperscript{261}

If, at the conclusion of these administrative proceedings, the parties involved are dissatisfied with the result, provisions currently exist whereby the decision may be appealed.\textsuperscript{262} Under such a provision a party would be given the opportunity to appeal the administrative determination to the district court.\textsuperscript{263} The district court finding, if unsatisfactory to either litigant, may be subsequently appealed to the Nebraska Supreme Court.\textsuperscript{264}

\textbf{VII. CONCLUSION}

As a result of technological advancements made in our agrarian society and the exigency for full groundwater resource development, well interference controversies are to be expected. So long as wells continue to draw water from common sources interference will exist to some degree. It is the avoidance of these disputes that must be of paramount concern to the Nebraska Unicameral, and the fair and equitable resolution of such conflicts that must be the polar star by which the courts guide their decisions.

When the legislative channels for dispute avoidance do not prove sufficient and well interference cases come before the Nebraska Supreme Court, it must not decide the controversies with its visual acuity hampered by the restrictive blinders of stare decisis. By considering the recommendations previously noted the court can be free to expand the common law rules to include a bal-

\textsuperscript{260} The res ipsa loquitur presumption of the cause of interference is discussed in the text, at section VI.A.4.
\textsuperscript{262} See infra notes 263-64.
ancing of the interests involved in each case, thereby reaching equitable and just conclusions.

The Nebraska groundwater preference statute has remained unaltered since its inception. It simply states that one type of use is superior to another without requiring reasonableness in one's means of access. Should the statute continue to stand with such broad parameters, it is conceivable that the court could judicially modify its construction to include the doctrine of reasonable diversion. To do so would entail nothing more than a modification of the Nebraska common law doctrine of reasonable use which the court purported to apply in conjunction with the preference statute in Prather. By modifying the common law rule to include the doctrine of reasonable diversion, the court could consider the dispute from the standpoint of fairness, a consideration which has been sadly absent in prior adjudications of well interference conflicts in Nebraska.

A number of considerations have been suggested in this Comment that, when applied by Nebraska courts, may serve to remedy the inequities brought about by the Prather decision. Sound legal reasoning compels the conclusion that, in an effort to maximize the probabilities for fair and just resolutions in future well interference controversies, the courts must analyze the facts in light of the considerations set out herein.

Judicial reform, however, will not be sufficient to alleviate this enigma in its entirety. A mitigation of the existing inequities must be coerced through immediate legislative action. If indeed the legislature were to rectify the problem before more well interference controversies are presented to the supreme court, the court would be relieved of any necessity to wrestle with the dilemma involved in overturning precedent.

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266. See supra note 49.