Nebraska Well-Interference Problems—A Proposal

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Comment

Nebraska Well-Interference Problems — A Proposal

I. INTRODUCTION

Use of Nebraska's ground water resources is multiplying at an ever-increasing pace. Not only is the total withdrawal rate increasing, but the number and types of uses for ground water is on the rise. Ground water has, of course, long been a prime source of domestic water for the state's rural populace. The past few decades have seen tremendous growth in the use of ground water for irrigation purposes. More recently, as urban areas have experienced large growth rates and an increasing demand for water, ground water has been recognized as an economical source of clean water for municipal and industrial use.

One of the most immediate results of the increase in the number of wells and the amount of withdrawals has been interference between the wells of adjoining users. This interference is a function of both hydrological factors and the varying capacity requirements of different types of uses and users.

Recent litigation in Nebraska courts highlights a problem for which neither the common law as pronounced by the Nebraska Supreme Court nor the ground water statutes enacted by the legislature provide a satisfactory answer. The problem involves well-interference between adjoining, overlying landowners where both landowners are putting the water to a "reasonable" use on the overlying land. This is demonstrated by situation where a domestic user finds his heretofore adequate well system rendered non-functional by the effects of a neighbor's high capacity deep-well irrigation system. Not surprisingly, recent litigation has been set

4. See §§ II(A), II(B) in text infra.
5. See § III in text infra.
6. For a definition of these "terms of art," see § III in text infra.
in this type of situation, with the domestic user seeking relief through the judicial system.\textsuperscript{7}

This article will delineate the scope of the problem, explain why current Nebraska law is ineffectual to resolve it, attempt to make some judgments as to whether and under what circumstances a remedy should be available, and propose a method by which to implement whatever remedies are deemed advisable. A disclaimer as to what this article will not attempt to do is appropriate. The article makes no attempt to comment on the advisibility or need for comprehensive ground water management. The desirability of such management has been articulately and persuasively set forth elsewhere.\textsuperscript{8} Similarly, the reader should take note that neither the remedies nor the methods proposed herein will in any way resolve the pressing problems of ground water mining or conjunctive use.\textsuperscript{9} No matter what the resolution of those issues of broader scale, a uniform system of rules for resolving conflicts of well-interference is necessary and advisable.

\section*{II. THE SCOPE OF THE PROBLEM}

\subsection*{A. Hydrological Facts}

A complete understanding of the nature of the problem and hence a well-reasoned analysis of the best method of its resolution requires at least a basic knowledge of the fundamentals of ground water hydrology. The discussion herein is a great oversimplification of the science, but it will serve to acquaint the reader with the basic facts and terminology of the typical well-interference problem.\textsuperscript{10}

Various definitions of the term “ground water” have been proposed and in some instances codified. “Ground water is that water which occurs or moves, seeps, filters, or percolates through the ground under the surface of the land.”\textsuperscript{11} The extent of this

\begin{itemize}
\item \textsuperscript{7} Burchfield v. Adams, Ci. 74-36 & 74-37 (Scotts Bluff County Ct., decided Dec. 1974); Prather v. Eisenmann, No. 17094 (Madison County Dist. Ct., decided Aug. 1976).
\item \textsuperscript{8} See, e.g., Harnsberger, Oeltjen, & Fischer, Groundwater: From Windmills to Comprehensive Public Management, 52 Neb. L. Rev. 179 (1973) [hereinafter cited as Harnsberger].
\item \textsuperscript{9} Id. at 243, 246.
\item \textsuperscript{10} For a more comprehensive discussion of hydrology, see Crosby, A Layman’s Guide to Groundwater Hydrology in C. Corker, Groundwater Law, Management and Administration (Legal Study No. 6, Nat’l Water Comm’n, Oct. 1981).
\end{itemize}
movement, and thus the existence of ground water in any particular area, is dependent to a great extent not only on a source of water, but also on the geologic formation of the earth. Both porosity, the capacity of the geologic strata to store water, and permeability, the capacity to transmit water, can play important roles in the existence and resolution of a well-interference situation.\textsuperscript{12}

The earth materials with sufficient porosity to contain significant amounts of ground water and sufficient permeability to allow its withdrawal in significant quantities are called aquifers. The upper surface of the water saturated material is called the water table.

Aquifers are almost always underlain by an impervious layer which prevents the water from percolating and seeping downward to such a level that it would be beyond economical reach. Occasionally, ground water is not only underlain by impervious material, but is confined between or underneath impervious layers as well. This confinement results in what is known as artesian pressure. A natural opening in the earth's surface which is connected to such a confined aquifer, or a well penetrating through one of the surrounding impervious layers, provides an "escape valve" through which water will flow without external force so long as sufficient artesian pressure exists.

A special type of geologic condition can result in what is known as a perched water table. Perched water tables occur when an impervious layer of limited size exists over what is an otherwise unconfined aquifer. Although most of the ground water in the area can percolate and seep downward until it reaches the water table caused by the aquifer's underlying impervious layer, the flow of part of the ground water will be arrested by the more limited impervious layer, resulting in a localized build-up in water accumulation at an elevation higher than that of the water table of the aquifer.\textsuperscript{13}

A crucial fact of ground water hydrology which must be considered in devising solutions to well-interference problems is that the movement or seepage of ground water occurs at a snail-like pace. Except in earth materials of extraordinarily high permeabil-

\textsuperscript{12} A particular soil's porosity need not be determinative of its permeability. For example, a clay usually has high porosity but low permeability, while a gravel may have both high porosity and high permeability.

\textsuperscript{13} This situation is analogous to the condition that would result if a saucer were buried in a barrel of sand. Water trickling into the saucer would be suspended there, while the remainder would trickle down to the bottom of the barrel.
normal flow velocity is very small. "In Nebraska, ground water percolates slowly, generally not more than several feet each day and in most instances only about 300 feet annually. At a velocity of 300 feet per year, water moves only one mile in seventeen years."\textsuperscript{14} The significance of this factor is that once well-interference occurs, any remedy which relies solely on natural hydrological factors to return the situation to the \textit{status quo} of any particular date will take effect at a similarly abbreviated pace.

The final concept which must be noted in this "short course" in ground water hydrology is that of ground water \textit{mining}. Mining is the term used to describe the gradual lowering of the water table of an aquifer when the total withdrawals from the aquifer exceed the total recharge. Mining not only has broad economic and environmental ramifications which must ultimately be considered on the basis of social values,\textsuperscript{15} but it also is an immediate factor in many instances of well-interference due to the widely varying depths of wells.

B. Well Hydraulics

A similarly elementary discussion of well hydraulics will be attempted in order to give the reader some indication of the types of factual situations in which well-interference problems occur and why they occur. Essentially all ground water withdrawal is accomplished, of course, through the use of wells. Wells may be dug, bored or drilled to any depth and diameter which makes them economical and adequate for the use for which the water is intended. When a well is pumped and water withdrawn, the water level in the well itself and in the immediately surrounding earth materials falls below the water level in the remainder of the aquifer. The water in the area surrounding the well thus begins to seep under the influence of gravity toward the well. As a result, the water table of the aquifer around the well takes the form of a hole or depression in the surface of the ground water table, similar to that of an upside-down bell. This "bell" formed around the pumping well is called the \textit{cone of depression}.

If the aquifer has a high permeability, and thus the water can flow toward the well at a relatively rapid rate, the cone of depression is flat and wide-spread. Low permeability results in a cone of depression which is steep. In both instances, the cone becomes deeper, flatter, and of ever-increasing circumference as the well

\textsuperscript{14} Harnsberger, \textit{supra} note \textsuperscript{8}, at 183.

\textsuperscript{15} See § 1 in text \textit{supra}.
continues to pump. When wells are close, or when withdrawal rates are high, the cones of depression may overlap. It is at this point that well-interference occurs, and decline of the water table is accelerated. When all these factors combine to produce a situation where the force of gravity is not sufficient to supply the necessary quantity of water at the depth at which the well intake is set, the well starts sucking air.

Although the well is sucked dry in such a situation, the aquifer has in no way been exhausted. The pump can be turned off, and after a period of recovery which varies according to permeability, the cone of depression will eventually disappear and the water table will return to almost its original level. Alternatively, the well intake can be lowered to a point where gravity can overcome the other factors and supply the necessary quantity of water.

C. Usage Needs

Ground water wells are used in Nebraska by many different persons and entities which need the water for widely varying purposes and projects. In terms of numbers of installations, rural inhabitants making withdrawals for domestic and stock-watering purposes may account for the majority of wells. In terms of total amounts of withdrawals however, those types of users account for only a relatively insignificant amount when compared to annual withdrawals for irrigation, urban domestic, and industrial purposes. Because of the varying volume requirements for the different types of uses, the methods of diversion—the wells—are similarly diverse in nature.

Wells used to provide rural residents with domestic water are, generally, the least sophisticated ground water withdrawal methods. Because the required volume for this type of use is small, the wells are typically more shallow and have less capacity than irrigation or industrial wells. This depends upon the precise volume requirement and the geologic formation of the aquifer. Irrigation wells with volume requirements which may vary from several hundred to two or three thousand gallons per minute are correspondingly deeper with more sophisticated pumping systems.

Municipalities which rely on ground water for both domestic and industrial customers may require several thousand gallons per minute, necessitating a series of deep, high capacity wells usually within a limited geographical area. Municipal well fields also require a fairly constant withdrawal the year round, as compared to the seasonal usage of irrigation wells where there is at least an occasional recovery period.
Well-interference problems can occur in a wide variety of contexts—domestic v. irrigation, irrigation v. irrigation, irrigation v. municipal—or any and all combinations thereof. The interference can be seasonal, as when a domestic well is rendered inoperable during the irrigation season. It can be temporary, as when a drought period cuts off normal recharge. It can be permanent, as when overuse or mining depletes an aquifer's water supply. Well-interference can occur not only in areas where there is a critical ground water shortage, but also in situations where there is no shortage at all where increased withdrawal has merely lowered an aquifer's water table to the point where previously adequate depths no longer reach the lowered table.

III. CURRENT NEBRASKA LAW

Recent years have seen the enactment of a number of statutes in Nebraska pertaining to ground water. Most notable was the enactment in 1975 of L.B. 577—the Nebraska Ground Water Management Act.\(^6\) This bill introduced the concept of "ground water control area" into Nebraska law.

An area may be designated a control area if it shall be determined, following evaluation of relevant hydrologic data, history of developments, and projection of effects of current and new development, that there is an inadequate ground water supply to meet present or reasonably foreseeable needs for beneficial use of such water supply.\(^7\)

The statute gives some guidance as to the relevant factors in determining "adequacy" of the ground water supply. They include, but are not limited to:

(a) Conflicts between users are occurring or may be reasonably anticipated;

(b) Substantial economic hardships exist or are foreseeable as a direct result of current or anticipated ground water decline; or

(c) Other conditions exist that indicate the inadequacy of the ground water supply or that require the area to be designated as a control area for the protection of the public welfare.\(^8\)

If the Director of Water Resources concludes after a public hearing and consideration of the testimony of various official experts\(^9\) that the area should be designated a control area, various statutory and regulatory controls come into effect. Construction of


\(^7\) Id. § 46-658(1).

\(^8\) Id.

\(^9\) Id. § 46-658(3).
new wells within the area is allowed by permit only and may be temporarily halted. Irrigators within the area can be forced to comply with the regulations prohibiting surface run-off. Finally, the Natural Resources District within which the control area is located can regulate usage through designation and allocation of a total withdrawal amount, rotating withdrawals, restricting well spacing, and by imposing other reasonable and necessary regulations.

In addition to the Ground Water Management Act, other statutory controls of ground water usage include the well-spacing requirements applicable to irrigation, industrial, and municipal wells, the well-registration requirements, the driller’s log requirements, the sections relating to the establishment and powers of Ground Water Conservation Districts, the City, Village and Municipal Corporation Ground Water Permit Act, and the ground water preference statute.

Of the current Nebraska statutes pertaining to ground water, only the Ground Water Management Act, the City, Village and Municipal Corporation Ground Water Permit Act, and the ground water preference statute provide even partial means of resolving conflicts between competing, overlying users caught up in a well-interference problem.

The Ground Water Management Act gives primary responsibility for implementation and administration of the goals and policies of the Act to the Natural Resources Districts. Although the districts have broad power to adopt administrative regulations, the real power of the districts, the control provisions of section 46-666, is confined to those areas which have been desig-

20. Id. §§ 46-659 to 662.
21. Id. § 46-666 (2).
22. Id. § 46-664.
23. Id. § 46-666 (1).
28. Id. §§ 46-638 to 650.
29. Id. § 46-613.
30. Although the well-spacing requirements may appear to have some bearing on the problem, three factors minimize the impact: (1) The spacing requirements apply only to wells constructed after the operative date of the act in 1965; (2) The statute makes no provision for spacing requirements with respect to domestic wells; and (3) Depending upon hydrological and geological factors, well-interference may occur even when the wells are the required 1000 feet apart.
nated "control areas" pursuant to section 46-658. Such designation is proper only when there is an inadequate ground water supply to meet present or reasonably foreseeable needs for beneficial use of such water supply.

A number of factors combine to make the Management Act of only limited application and effectiveness to the resolution of well-interference conflicts. First, well-interference can occur when there is no problem at all with the ground water supply being "inadequate." Hydrological conditions, varying well depths, and seasonal pumping can result in well-interference even though the over-all supply would be more than adequate were compatible means and modes of withdrawals implemented.

Second, even assuming that "adequate" within the meaning of section 46-658 could be construed to require some consideration of the exigencies of existing wells, the "control area" concept would seem to be intended to be implemented on an aquifer-wide basis, and not to envision several localized control areas within the confines of any one aquifer.

Finally, even if the legislative intent were to allow establishment of localized control areas in every instance of well-interference, the procedure for doing so is too bulky to provide an expedient means of resolving the conflict. The 30-day notice requirement, the consultation requirement, and the delay inherent in the decision-making process result in a remedy which is too time-consuming when, conceivably, a user may be without a readily-available domestic water supply.

The City, Village and Municipal Corporation Ground Water Permit Act provides, in section 46-647, for the recovery of damages when a user's supply is damaged by a municipal well. The remedy is again limited, both in scope, because the interference must have been caused by a municipal well, and ineffectiveness, because delay in resort to the courts may be small comfort to a user without a water supply.

The ground water preference statute, section 46-613, is subject to much the same criticism. First, there is the question of whether the preference applies to situations where there is no actual shortage, but merely a currently ineffectual means of diversion. Second, it provides no instruction or help when the competing users have the same status as to preference. Finally, it again requires resort to the courts for enforcement, with its attendant delay.

32. NEB. REV. STAT. § 46-647 (Reissue 1974).
33. These preferences must be distinguished from priorities which
Current Nebraska statutes are thus of only limited application to problems of well-interference and even where applicable are ineffective as a means of providing expedient resolution to the conflicts. Similarly, the common law rules pertaining to ground water as pronounced by the Nebraska Supreme Court provide no solution to problems of well-interference. There are basically three different common law rules pertaining to the use of ground water.\textsuperscript{34} The common law of England provided that a landowner had absolute ownership of the waters under his land, and could thus withdraw all the water he could capture without liability to adjoining landowners.\textsuperscript{35} It has been accurately said of the English rule: "In actuality, the English doctrine represents anarchy, because the allocation of water is determined by location and the pumping capacity of wells. Law has no role in the system."\textsuperscript{36}

The second rule, and the one which has been adopted in the majority of American jurisdictions—hence the American rule—imposes the requirement that the overlying landowner's use of the water be reasonable.

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 a beneficial and reasonable 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{37}

The third rule, the correlative rights doctrine, was first stated in

\begin{quote}
establish the order of use among those in the same class. The purpose of a preference statute is to permit water to move from one use to another. The holder of the higher preference ordinarily exercises his right at a time when there is insufficient water to meet all needs. The owner having the superior rank on the preference scale condemns one or more uses which are lower on the list and pays just compensation. The effect is to permanently transfer ownership of the water right from the possessor of the lower or inferior use to the new owner.

Harnsberger, supra note 8, at 231-32.
\end{quote}

\textsuperscript{34} See Annot., 55 A.L.R. 1385 (1928).
\textsuperscript{35} 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 . . . if in the exercise of such right, 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 damnum absque injuria, which cannot become the ground of an action.


\textsuperscript{36} Harnsberger, supra note 8, at 194.
\textsuperscript{37} Id. at 205.
Katz v. Walkinshaw, and has remained almost exclusively a strictly California rule. The correlative rights doctrine recognizes no proprietary rights in ground water. Overlying owners have equal and correlative rights to make a beneficial use of the water on the overlying land, and in times of shortage, the water is apportioned on the basis of the reasonable needs of the users.

Due to some confusing dicta in the decisions of the Nebraska Supreme Court, the precise state of the common law in Nebraska as it pertains to ground water is somewhat unclear. The Nebraska rule can perhaps best be described as a "modified American rule." The confusion centers around the fact that in Olson v. City of Wahoo the court adopted the following definition of the American rule:

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. . . .

The problem is, of course, that the statement in Olson is incorrect as a statement of the American rule. It is incorrect because the American rule, in its pure form, does not provide for apportionment of the supply in any event. There are more limitations on use under the American rule than under the English rule of absolute ownership, but the limitations are all determined on the basis of the individual's use on his own land, and not on any consideration or balancing of the uses of neighboring landowners, as would be the case under the correlative rights doctrine.

38. 141 Cal. 116, 70 P. 663 (1902), rev'd, 141 Cal. 137, 74 P. 766 (1903).
40. Id. at 811, 248 N.W. at 308.
41. "As between persons using the water on overlying lands, there is no apportionment and no protection for the wells and springs of neighbors." RESTATEMENT (SECOND) OF TORTS § 858A, Comment, at 154, (Tent. Draft No. 17, 1971). "Reasonable use of groundwaters does not require the overlying owners to share the supply in place. The requirement is simply that the supply be put to a reasonable or beneficial purpose in relation to the land." Clark, Groundwater Management: Law & Local Response, 6 ARIZ. L. REV. 178, 184 n.36 (1965). See generally Harnsberger, supra note 8, at 204-06; Hanks & Hanks, The Law of Water in New Jersey: Groundwater, 24 RUT. L. REV. 621, 639-42 (1970).
42. "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. This is different than the riparian rule of reasonable use which requires sharing surface watercourses on a proportionate basis." Harnsberger, supra note 8, at 205.
The statement in Olson must clearly be classified as dicta, but the Olson definition and statement has been referred to and adopted in a number of subsequent decisions. Perhaps its most pointed adoption was in Luchsinger v. Loup River Public Power District\(^4\) where the plaintiff sought damages for loss of subirrigation benefits resulting from defendant’s construction of a canal. The court held defendant liable on the basis of Olson, refuting the claim of “mere dicta” in the following manner:

It is argued, however, that this is dicta in the [Olson] opinion in which it appears and not binding on defendant in the present controversy. Whatever may be thought of its applicability to the case in which the rule was adopted, it answers for itself as a sound proposition of law essential to the protection of property rights of private individuals and is consistent with the Constitution and with morality and justice. . . .

The American rule is not only law in Nebraska, but it applies to property damaged for public use as well as to property taken for public use.\(^4\)

The rule as stated in Olson and adopted in Luchsinger is thus a hybrid of the reasonable use rule and the correlative rights doctrine, and is not the American rule at all. This fact may have been recognized by the court itself in Metropolitan Utilities District v. Merritt Beach Co.,\(^4\) as further confusion was added when the court, in dicta, restated the rule as defined in Olson minus the apportionment language.\(^4\)

Whatever the status of the apportionment doctrine in Nebraska, it is clear that the common law in this state is the American rule of reasonable use in some form or another. As applied to problems of well-interference the rule provides no remedies. An overlying owner’s use will not be enjoined or curtailed unless the use is unreasonable. Because almost all overlying uses, such as domestic use, irrigation, and manufacturing have high economic or social value, the uses are usually held to be reasonable.\(^4\) This results in no judicial remedy unless there is waste or malice which may justify a finding of unreasonableness. For all intents and purposes then, the Nebraska common law leaves interfering well owners where it finds them.

IV. A WORKING HYPOTHESIS

The scope of the problem having been clarified, the shortcomings of existing Nebraska law having been pointed out, and an

\(^{43}\) 140 Neb. 179, 299 N.W. 549 (1941).
\(^{44}\) Id. at 182, 299 N.W. at 551.
\(^{45}\) 179 Neb. 783, 140 N.W.2d 626 (1966).
\(^{46}\) Id. at 800–01, 140 N.W.2d at 637.
\(^{47}\) Harnsberger, supra note 8, at 205 n.91.
explanation of the hydrology and reality of typical well-interference problems having been attempted, what remains is to propose a remedy. As a means toward that end, a rule will be suggested to provide a solution to well-interference problems.

The working hypothesis which will be utilized is the rule contained in the Second Restatement Torts, section 858A. This rule has been recommended by Professor Harnsberger as a solution to well-interference problems in the absence of comprehensive ground water management:

If, however, the legislature decides that a system of comprehensive public administrative management is unacceptable, we recommend that it codify a modified version of the reasonable use rule along the lines suggested by Professor Frank Trelease in the 1971 tentative draft of the Restatement of the Law of Torts. The proposed rule is that a landowner who withdraws water from his land and uses it for a beneficial purpose is not liable for interfering with utilization of the water by others unless the withdrawal causes unreasonable harm by lowering the water table or reducing artesian pressure. At the present time small well owners in Nebraska are protected against the large scale diversions to distant lands by municipalities and others, but they have no safeguards from large irrigation facilities or industries utilizing the water on overlying land. The proposed rule extends protection, whenever equitable, against large scale uses on overlying lands. The owner of a shallow domestic well who contributes only infinitesmally to the lowering of the water table in a heavily irrigated area would not be, as he is now, without a remedy.48

V. THE PROPOSED RESTATEMENT RULE

A. The Rule

The tentative draft reads:

NON-LIABILITY FOR USE OF GROUND WATER—
EXCEPTIONS.

A POSSESSOR OF LAND OR HIS GRANTEE WHO WITH-
DRAWS GROUND WATER FROM THE LAND AND USES IT
FOR A BENEFICIAL PURPOSE IS NOT SUBJECT TO LIA-
BILITY FOR INTERFERENCE WITH THE USE OF WATER BY
ANOTHER, UNLESS

(A). THE WITHDRAWAL OF WATER CAUSES UNREASON-
ABLE HARM THROUGH LOWERING THE WATER TABLE
OR REDUCING ARTESIAN PRESSURE . . . 49

48. Id. at 209–10 (footnotes omitted).
49. RESTATEMENT (SECOND) OF TORTS § 858A, at 156 (Tent. Draft No. 17, 1971). The rule contains two additional subparagraphs:

(B) THE GROUND WATER FORMS AN UNDERGROUND
STREAM, IN WHICH CASE THE RULES STATED IN
§§ 850A TO 857 ARE APPLICABLE OR
As noted by the author of the tentative draft, the rule is stated in terms of nonliability with specified exceptions because the American rule is basically a rule of nonliability. By drafting the rule in such terms, with exceptions for those competing uses and users which it is deemed advisable to protect, the conceptual departure from the current law in most jurisdictions can be limited to only those situations desired.

The drafter's own interpretation and categorization of the rule is as follows:

The rule adopted in this Topic can be described as the American rule with its protection broadened. It gives more or less unrestricted freedom to the possessor of overlying land to develop and use ground water and it permits the grant and sale of ground water to persons who need water but do not possess land overlying it. . . . It gives the protection of the American rule to owners of small wells harmed by large withdrawals for use elsewhere, but extends that protection in proper cases to harm done by large withdrawals for operations on overlying lands.

B. Recognition of the Rule

To date, only one reported decision expressly recognized and adopted the rule. In State of Wisconsin v. Michels Pipeline Construction Co., the Wisconsin Supreme Court overruled prior cases which had applied the English rule of absolute ownership to groundwater disputes in that state. The defendant had contracted to construct a sewer for the city of Milwaukee. To enable it to do so, the pipeline company was granted a construction easement over land owned by Milwaukee County. Construction of the sewer required "dewatering" of the soil, and the pipeline company began pumping some 5500 gallons per minute from wells in the area to accomplish this dewatering. Neighboring residents began experiencing the drying of some wells, decreased capacity and quality in others, and diverse problems caused by the subsidence of the soil.

(C) THE WITHDRAWAL OF WATER HAS A DIRECT AND SUBSTANTIAL EFFECT UPON THE WATER OF A WATERCOURSE OR LAKE, IN WHICH CASE THE RULES STATED IN §§ 850A TO 857 ARE APPLICABLE.

Id. For purposes of this article, these exceptions to the general rule will be disregarded. In the author's opinion, factual proof of the existence of an "underground stream" is almost always nonexistent, always confusing, and the distinction should not be perpetuated. In addition, problems of conjunctive use are beyond the scope of this article.

50. Id. Comment (b), at 156.
51. Id. at 155.
52. 63 Wis. 2d 278, 217 N.W.2d 339 (1974).
The state sued on a public nuisance theory. On the strength of earlier decisions adopting the English rule, the trial court held that there could be no cause of action for interfering with the water table.

The supreme court determined that the English rule was no longer a just rule for the resolution of ground water conflicts, and set out to "adopt a rule of law more in harmony with present scientific and legal principles."

The court considered and rejected both the American rule and the correlative rights rule. The former because it was felt not to represent a very significant departure from the English rule, and the latter because the court was unconvinced of the necessity for apportionment. Instead, the court opted for section 858A. In explaining its decision, the court characterized the rule as follows:

Thus the rule preserves the basic expression of a rule of nonliability— a privilege if you will— to use ground water beneath the land. The formulation of the exception to this basic rule recognizes that there is usually enough water for all users so that apportionment is not necessary but that the problem is who shall bear the costs of deepening prior wells, installing pumps, paying increased pumping costs, etc., necessitated by a lowering of the water table by a large user. The common law placed the burden of making improvements on each user. The "reasonable use" rule gives protection to existing wells if the water withdrawal is taken off the land for use elsewhere but not if the water is used for beneficial purposes on the overlying land. The proposed rule of the Restatement Second would place the matter of cost on the same rational basis as the rule applicable to surface streams, the reasonableness of placing the burden upon one party or the other.

In addition, two of the recent Nebraska cases have been decided at the trial level on the basis of the rule contained in section 858A. In Burchfield and Roberts v. Adams, the plaintiffs were domestic users who sued a neighboring irrigator for the expenses incurred in having their pumps lowered. Judge Camerer found for the plaintiffs on the basis of section 858A, having determined that the supreme court had not squarely ruled on the issue of a reduction of artesian pressure being the sole basis for an action for damages.

Similarly, the court's findings and order in Prather v. Eisenmann, seem clearly to be based on section 858A, although no

53. Id. at 298, 217 N.W.2d at 348.
54. Id. at 298-300, 217 N.W.2d at 348-49.
55. Id.
56. Id. at 303, 217 N.W.2d at 351.
57. Cl. 74-36 & 74-37 (Scotts Bluff County Ct., decided Dec. 1974).
58. Letter from the judge to the attorneys of record (Dec. 3, 1974).
specific reference was made to it. Again the situation was plaintiff—domestic user suing defendant—irrigator, this time for an injunction against continued pumping. The court permanently enjoined the defendant from lowering his pump, and in addition temporarily enjoined him from pumping to the point of interference until such time as plaintiffs could establish an alternative water supply. Judge Warren's orders were premised on the following findings:

(11) That preference in the use of underground water shall be given to those using the water for domestic purposes over those claiming it for any other purpose including use for agricultural purposes as declared by the legislature in Section 46-613 RRS 1943 and Section 46-671 RRS 1943;

(12) That the defendant's appropriation of underground percolating waters, that is ground water, by pumping of their irrigation wells on and after July 9, 1976 (a) was in excess of a reasonable and beneficial use on their own land; (b) caused unreasonable harm to plaintiffs and their assignors by lowering the water table and reducing artesian pressure; and (c) was injurious to plaintiffs and their assignors, who have substantial rights in those waters for domestic purposes; . . . 60

Because Judge Warren had found earlier that only a "relatively small portion" of the water had been wasted, 61 he determined that 12(a) must be interpreted as providing the basis only for an injunction against waste. Because the parameters of the injunctions were defined not by prohibiting runoff, but rather by prohibiting interference, the real basis for the judge's decision was either the interference or the preference statute. Reliance on the preference statute would have led the judge to a different conclusion—a permanent injunction against interference, with no requirement on plaintiffs to seek an alternative source. Because Judge Warren, in effect, imposed a requirement of reasonableness on plaintiffs, a requirement not contemplated by the preference statute, the orders were based on the concept behind section 858A (as indicated by the tracking of that section's language in finding 12(b) ), if not on section 858A itself.

C. Analysis

Section 858A appears particularly appropriate to well-interference situations because the concept is firmly tied to withdrawal and the manner in which such withdrawal is made, rather than solely to the beneficilality or reasonableness of the use of the withdrawn

60. Findings of the court announced August 24, 1976 in open court. On November 17, 1976, the plaintiffs were awarded damages for the cost of obtaining an alternative supply of water.

61. Id. Finding No. 7.
water. With reference to well-interference, this interjects into the determination the consideration of the methods of withdrawal in conjunction with the reasonableness of the actual ultimate use.

The distinction between “reasonable” as conceived by section 858A and “reasonable” under the American rule was noted by the *Michels Pipeline* court. In referring to the meaning of “reasonable” under the American rule, the court stated:

>[T]he term ‘reasonable’ has a very special restricted meaning. A waste of water or a wasteful use of water is unreasonable only if it causes harm, and a use of water is nevertheless reasonable if it is made in connection with the overlying land. The withdrawal for use elsewhere for beneficial purposes such as municipal supply or domestic supply is not ‘reasonable’ in this special sense, but such removal may be made without liability if no harm results.\(^6\)

In effect, under the American rule there is an irrebuttable presumption that a withdrawal for a nonwasteful overlying use can be made without liability, no matter what the effect on adjoining landowners’ methods of withdrawal. There is no chance for equitable considerations to even enter the picture in such a situation, for the two factors which are the keys to non-liability are of very mechanical application.

Under section 858A, no such presumption arises, for the equities of the particular situation are automatically considered because a judgment must be made as to whether there has been “unreasonable harm” caused to another’s use. As a guiding principle the drafter’s comment suggests:

>It is usually reasonable to give equal treatment to persons similarly situated and to subject each to similar burdens. If the first farmer to sink an irrigation well finds his facility is inadequate when other farmers irrigate their lands, he has not been unreasonably harmed by them if he is forced to deepen his well to the same level as theirs and pay the same pumping costs when the water level drops. Furthermore, his own withdrawals have contributed to the lowering of the water table. On the other hand, uses of water for domestic and stock watering will not ordinarily justify the cost of deep wells and expensive pumps, and unreasonable harm is usually caused to the person making such uses when the water table is materially lowered or artesian pressure destroyed.\(^6\)

Thus, under the concept of section 858A, a landowner making an overlying use would be subject to much greater exposure to liability for well-interference. No longer would a beneficial, non-

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\(^6\) 63 Wis. 2d at 300-01, 217 N.W.2d at 349-50.

\(^6\) *Restatement (Second) of Torts* § 858A, Comment (d), at 158 (Tent. Draft No. 17, 1971).
malicious, nonwasteful use necessarily provide a “safe harbor” from liability for well-interference.

D. Critique

Several legitimate criticisms of a rule which would require balancing of the equities of the competing uses in order to determine imposition of liability for interference can be leveled and must be considered. It is assumed that the criticisms of the present rule, where a user can have his well destroyed with no legal remedy available to him, are likewise legitimate, and that comparison of the criticisms will lead to a reasonable result from which an equitable resolution can be proposed.

One such criticism is that such a rule would discourage development of ground water resources by interjecting such a great degree of uncertainty as to force prospective developers to make expensive decisions without full knowledge of the potential cost. A derivative of the same criticism is that the rule would discourage improvement of the withdrawal efficiency of existing installations, because of fears that the additional withdrawal might be the “straw that breaks the camel’s back.”

The easiest, but unfortunately also the least satisfactory, answer is to say that perhaps the state doesn’t need any further development or increased withdrawal of ground water, and that such development should be discouraged rather than encouraged. Many areas in the state are already experiencing severe mining problems, and it can be persuasively argued that any rule which might discourage further development should be adopted post haste.

A more satisfactory answer is that potential developers are subject to at least as much uncertainty under the present rule, and perhaps more. Under the present rule of “take all you can use, and don’t worry about anyone else,” users may have little or no liability, but they have correspondingly little protection. Although advocates of the present rule can respond that their interests will always justify the most sophisticated equipment, and, therefore, that they can protect themselves, the ultimate result of such uncontrolled war would be the “tragedy of the commons.”

64. As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, “What is the utility to me of adding one more animal to my herd?” This utility has one negative and one positive component.

(1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive
A second criticism is that such a rule would allow "free-loading" in the sense of rewarding a user who hangs on to an inefficient or obsolete well, by requiring his technologically modern neighbor to improve the free-loader's system as an added cost of modernizing his own. As to same-type users, the suggestion in the comment would seem to take care of the criticism. There is no unreasonable harm, and thus no liability, within the terms of the rule if, for example, an irrigator is forced to utilize the same depth well, the same type of pump, and pay the same pumping costs as his neighbor uses and pays. As to different-type users, the answer to the criticism is more difficult. One possibility would be to require at least a certain degree of modernity and efficiency of the complainant's system as a condition precedent to relief. Although a workable standard of what is a "reasonably efficient" well for the particular use concededly would be difficult to define, it would not be impossible. At a minimum, such a standard should factor out liability for interference with, for example, hand-dug domestic wells, unless such a well is in fact reasonable under

utility is nearly +1.

(2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decisionmaking herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another . . . . But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.


65. See, e.g., Bishop v. City of Casper, 420 P.2d 446 (Wyo. 1966) (court held that only "adequate" wells were entitled to protection); Baker v. Ore-Ida Foods, Inc., 95 Idaho 575, 513 P.2d 627 (1973) (court refused to protect a prior appropriator's historic means of appropriation where such means demanded an unreasonable pumping level).

66. For example, COLO. REV. STAT. § 37-92-102 (1973), dealing with prior appropriation rights in surface water, requires that "each diverter must establish some reasonable means of effectuating his diversion." But see Wayman v. Murray City Corp., 23 Utah 2d 97, 458 P.2d 861 (1969) (rule of reasonableness). "[T]he means of diversion must be reasonable and consistent with the state of development of water in the area . . . ." Id. at 105, 458 P.2d 866. This type of standard could be easily adapted to impose a "rule of reasonableness" on the complaining well owner.
the circumstances. In any event, some standard can be conceived which would protect those whose well systems are reasonably well suited to their particular use, while ferreting out the "mugwumps."

Despite the criticisms of the concept which can be made, the author would submit that, given appropriate implementation, the principle of section 858A has a good chance of achieving a reasonable compromise between the competing interests in a well-interference situation, and that any codification of the concept could be drafted in such a manner as to minimize the criticisms while mitigating the inequities which are prevalent under the present rule.

VI. IMPLEMENTATION

A. Remedies

Using the principle of Section 858A as the legal rule upon which to base the proposed modification of Nebraska law relating to well-interference, serious consideration must be given to the remedies that such a modification would entail. This consideration must be composed of two interrelated questions, (1) What remedies do well-interference problems warrant and (2) What remedies can be provided by the principle adopted? Formulation of the appropriate remedies for any given situation can rest on the presumption that liability has already been found under the applicable principle. Thus, we need not be concerned with hypothesizing remedies for well-interference problems where the principle imposes no liability.

As to what type of remedy is warranted or justified by well-interference problems, the determination is basically a matter of making value judgments based on the competing equities. The extreme positions of both sides are easily definable. The owner of the ruined well desires full restoration to his former status, that is, to be able to withdraw the same amount of water for the same cost. The interfering well-owner desires to escape with as little cost to himself as possible, preferably nothing. As always, a more appropriate answer likely lies somewhere in the middle.

So far as the "interferee" goes, the result most strongly mandated by equitable considerations is to provide access to water. Items such as increased pumping cost and maintenance expense don't offend the conscience as much as the thought of a user being

67. For a general discussion of water rights' remedies, see ELLIS, BEUSCHER, HOWARD, & DEBRAAL, WATER-USE LAW AND ADMINISTRATION IN WISCONSIN ch. 8 (1970) and MALONEY, PLAGER, & BALDWIN, WATER LAW & ADMINISTRATION; THE FLORIDA EXPERIENCE § 54.3 (1968).
deprived altogether of a reasonably accessible source of water. As for the "interferor," the most burdensome, inequitable form of liability would be foreclosing him from the use of the means of diversion which he has chosen as being most suited to the use to which he intends to put the water.

From these two concededly conscience-oriented truisms, some principles will be proposed for determining appropriate remedial measures that should be authorized by the new rule. First, codified remedies should be focused primarily on providing an alternative source of the needed quantity of water of a similar quality. Alternative source is used rather than similar source because it is important to provide water, from whatever source. Needed quantity is proposed because although providing the requisite amount seems imperative, providing whatever "cushion" the user may have previously enjoyed, does not seem to be imperative. Similar quality is included in order to provide for the limited situations where the use dictates that the water must be of certain minimum standards. Such goals can often be accomplished through means of lowering pumps, deepening wells, hooking up to an existing system, or hooking up to the "interferor's" well.

Second, there seems to be no particular reason why the law should provide remedies which insure that a ground water user's means of diversion will be perpetually effective. Thus, the interferor should not be presumed automatically to be liable for the full cost of providing the alternative source, either in terms of initial investment or increased operational cost. Under the principle of section 858A, liability is defined in terms of "unreasonable harm." Once liability is found, the extent of the liability should be governed by a similar concept, that is, that the interferor should be liable only for the expenses deemed "unreasonable" under the circumstances. Neighboring users should not be required to insulate the interferee from the ravages of time, obsolescence, advancing technology, or the effects of the well-owner's own contribution

68. For example, the user's well may have had more capacity than he actually made use of or needs.
69. For example, the domestic water must have a certain level of purity.
70. For example, Idaho Code § 42-226 (Cum. Supp. 1976), in attempting to correlate a prior appropriation ground water doctrine with new registration/permit rights, states that early appropriators "shall be protected in the maintenance of reasonable ground water pumping levels." Id. (emphasis added).

Alaska also deals with the prior appropriation ground water doctrine:

Priority of appropriation gives prior right. Priority of appro-
to a general decline in the water table. Application of such a principle would necessarily vary with the facts of the situation, including the age of the interference's installation, its prior effectiveness, and comparison to similar installations for the same use in the surrounding area.

Finally, any form of injunctive relief would only rarely, if ever, be justified by a well-interference conflict. First, the concept of the proposal is not to penalize anyone for the withdrawal or use of ground water, but rather to require reasonable consideration and protection of others' rights to do the same. Under such a principle, only if no adequate alternative source can be supplied would requiring cessation or limitation of the right to withdraw and use be justified. Again, the goal is not to restore the interferee to his exact preinterference position, but rather to provide him with water. Second, depending upon the proximity of the wells and the hydrological conditions, the effect of a cessation of or limitation on the withdrawal would, in most instances, be felt so slowly if at all that the interferee could take the necessary steps to procure an alternative source more immediately than to wait for his own well to become functional again. Thus, the interferor would be penalized without corresponding benefit to the interferee. Furthermore,
the remedy even once felt, is temporary at best, for unless the interferor is perpetually enjoined from withdrawal, a totally incongruous result, the alternative source will have to be availed of at some later date anyway. Thus, except for situations where there is no alternative source, or where the interference has occurred with atypical immediacy, injunctive relief even on a temporary basis is not justified.

The principle of section 858A seems to be reasonably compatible with these conceptualizations of what types of remedies "should" be provided. By strictly limiting the use of injunctive power and by holding the interfereree as well as the interferor to a certain standard of reasonableness, self-help, in the context of placing on the interfereree the initial mechanical burden of finding an alternative source, is encouraged. Thus, the principle need only support the allocation of the costs of procuring the alternative source, as compared to, for example, the correlative rights rule where the principle must be the supporting basis for allocation of the resource itself.

B. The Means of Implementation

Taking the conclusions of the previous section as to the types of remedies which can and should be provided, the remaining problem, and probably the crux of the whole well-interference issue, is how to implement the goals of the concept of section 858A, that is, how to administer and effectuate the resolution of the problem.\footnote{See 5 R. CLARK, WATERS & WATER RIGHTS § 445 (1972) (general discussion of the means of administration).} Two methods are readily apparent: (1) resolution through private litigation, and (2) resolution through administrative determination.

The pros and cons of the two methods have been debated with undying fervor, and each method has its strong points. Several factors should be considered in choosing the most appropriate method for resolution of well-interference conflicts.

First, whatever method is used, it must provide a means by which an alternative source of water can be supplied to the interfereree with immediacy. If self-help can be encouraged, that is, if the system can successfully and definitively impose upon the interfereree the initial onus of establishing an alternative supply, this factor will have been provided for. Although the question of allocation of the cost of establishing such alternative source also deserves an expeditious answer, such a resolution is not as imperative as making sure
that no one is without water for more than a brief period. It should be noted that at this stage, under the principle of this proposal the determination of liability is not imperative. The important thing is to get the user water, and concern over who is ultimately going to bear the burden of paying for the alternative source should take a back seat to the establishment of the alternative source.

Assuming that this type of self-help in fact can be encouraged, neither system seems to be more suited to the goal than the other. It is suggested, however, that the above-described self-help should be a "guided self-help." That is, that both the immediate parties and the public in general have an interest in seeing that the alternative source chosen is the one most suited to the particular situation.

In the typical situation, more than one alternative means of providing a supply of water will be available. Perhaps merely lowering or replacing the pump will suffice. Perhaps the well can be deepened or relocated; perhaps a municipal or rural system is reasonably accessible. Perhaps the interferor's well would be a mechanically feasible source. Although the interferee should have the burden of initiating action, he should not be expected to or allowed to make a choice without the benefit of expert advice and some form of review of his decision. Because the interferor ordinarily is going to be liable for at least a portion of the expense of establishing the alternative source, he has an interest in seeing that the alternative chosen is the most reasonable under the circumstances. The public interest in ground water management and development is sufficient to warrant some input in order to insure that the alternative chosen will not result in adverse effects generally, and particularly that the solution is more or less permanent and will not result in reinterference in the foreseeable future.

These considerations require some decision-making process at the preliminary stage of choosing an alternative source, and for

72. The Legislative Assembly recognizes, declares and finds that the right to reasonable control of all water within this state from all sources of water supply belongs to the public, and that in order to insure the preservation of the public welfare, safety and health it is necessary that: . . .

(9) Whenever wasteful use of ground water, impairment of or interference with existing rights to appropriate surface water, declining ground water levels, interference among wells, overdrawing of ground water supplies or pollution of ground water exists or impends, controlled use of the ground water concerned be authorized and imposed under voluntary joint action by the Water Resources Director and the ground water users concerned whenever possible, but by the director under the police power of the state when such voluntary joint action is not taken or is ineffective.

ORE. REV. STAT. § 537.525(a) (1975).
such a function an administrative determination does seem to be particularly more suitable than a judge's decision. Not only would the decision be subject to less delay, but the agency can also be expected to have more expertise, more staff, and more factual information on the ground water situation in the particular area, so that an agency can more reasonably be expected to adequately protect all the competing interests.

After the initial stage of resolving the conflict has been passed, that is, after the choice of an alternative source has been made and a water supply restored, different considerations come into play. The problem at this point is to fix liability and to fairly and equitably distribute the cost of obtaining, operating, and maintaining the alternative supply. Under the principles proposed above, this imposition of liability and any resultant cost distribution will be the product of many factors. Most, if not all of these factors are concerned with hydrology and the practicalities of well mechanics. Thus, the actual fact finding function of the decision-maker will be limited to a very special field of expertise. These determinations may include such issues as whether the failure of the well is in fact traceable to any particular well, or whether all or many of the wells in the aquifer contributed; whether the failed well was reasonably comparable in capacity, efficiency, and modernity to other wells used for the same purposes in the same general area; whether the cause of the failure was in fact interference or merely a general decline in the water table; whether the failed well contributed to such decline; and a multitude of other similarly difficult determination.

Such determinations are ill-suited to resolution by means of private lawsuits. The main reason is that the factual determinations require extensive and expensive evidence, the gathering of which would be beyond the means of the ordinary litigant. A more fully informed decision would be forthcoming from a fact-finder which has the staff, resources and expertise to gather all the relevant hydrological information available, rather than relying on private litigants whose resources are limited and who seek to present only a slanted view of the facts.

Second, situations where several wells could conceivably be contributors to the interference could be more efficiently handled by an agency than by a court. By delegating the determination to an agency which has existing data compilations and which has the means and resources to gather whatever additional information

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73. See Ground Water Management: A Proposal for Texas, 51 Tex. L. Rev. 289, 300-01 (1973); Harnsberger, supra note 8, at 239.
may be required, duplicative effort and expenses can be minimized, the interferer's burden of proof can be eased, and all who have in fact contributed to the unreasonable interference can be ascertained and be assessed their reasonable proportion of the cost of the alternative supply.

Thus, a qualified agency with some expertise in the area can be expected to arrive at a more hydrologically accurate determination of the actual cause of the interference than a court with no especial expertise.

As to the reasonable allocation of the cost of the alternative supply, once liability has been established, there seems to be no particular reason why an agency could not make as equitable a distribution as a court. Therefore, in the interests of simplicity and expediency, the agency which is given responsibility for determining liability should also determine the extent and form that the liability should take.

The author would submit that the Natural Resources Districts\textsuperscript{74} established pursuant to L.B. 1367 of the 1969 legislature\textsuperscript{75} are the natural choice for implementation of this proposal. Giving to the NRDs primary responsibility for resolution of well-interference conflicts within their boundaries will assure local input and local expertise while at the same time providing for access to wide-ranging resources and information.\textsuperscript{76} This proposal is in agreement with a previous proposal which was made in the course of a study of the need for comprehensive ground water management.

NRDs should have power to require reasonable, practical adjustments between water users.

Comment. These may include requirements that an aquifer be recharged, that another user's means of withdrawal be deepened, reset, expanded or reconstructed, partially or entirely, at the expense of a prospective user, or that an alternative water supply be provided, partially or entirely, at the expense of the prospective user.\textsuperscript{77}

VII. A PROPOSED CODIFICATION

The following codification is suggested as a means of implementing the principles discussed herein. Just as the concepts proposed are subject to criticism, so is the codification admittedly

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\textsuperscript{74} Hereinafter referred to as NRDs.
\textsuperscript{75} Neb. Rev. Stat. §§ 2-3201 to 3272 (Reissue 1974).
\textsuperscript{76} For a discussion of the powers and resources of the NRDs, see Harnsberger, \textit{supra} note 8, at 262-64.
\textsuperscript{77} Id. at 272 (footnotes omitted).
imperfect. No pretense is made as to the completeness with which
the form of the statute foresees all possible difficulties which could
arise in the course of implementing the principle adopted. With
this proposal as a vehicle toward examination of the concepts
embodied therein, consideration and criticism will hopefully result
in a solution to problems of well-interference which is workable
both in principle and implementation.

1. In order to provide for resolution of conflicts involving interfer-
ence between and among the wells of ground water users, a system
for the equitable resolution of such conflicts is hereby established
which is intended to:

(a) Be premised upon the realities of ground water hydrology and
scientific information relating thereto;

(b) Provide relatively assured supplies of ground water so as to
protect and encourage reasonable development and use while at
the same time providing sufficient flexibility for adjustment to
meet public and private needs; and

(c) Encourage reasonable and practical adjustments between in-
terfering users as the desired solution to well-interference conflicts
and discourage solutions which abridge or limit the right to a rea-
sonable and beneficial use of ground water.

Private rights and privileges based on the American rule of reason-
able use are limited and regulated to the extent, and only to the
extent, necessary to effectuate the purposes and policies of this
act.78

Comment

The proposed act would probably be codified as a part of the Ne-
braska Ground Water Management Act, and hence no broad state-
ment of public policy was deemed necessary, the author choosing
instead to rely on the statement of section 46-656 as the source of
the power to resolve interference conflicts. The statement of intent
which has been made is intended to emphasize the goal of protec-
tion of users with as little infringement as possible on the right
to use ground water and the current rules of law pertaining there-
to.

2. A possessor of land or his grantee who withdraws ground water
in a reasonable manner and uses it for a reasonable and beneficial
purpose upon the land from which it was withdrawn is not subject
to liability for interference with the use of water by another, or for
interference with another's well unless such withdrawal or manner
of withdrawal results in an unreasonable lowering of the water

78. See Wisconsin Bill No. 616, § 33.01 (1957).
table or unreasonable reduction in the artesian pressure of the other's well.\textsuperscript{79}

\textit{Comment}

There are a number of distinctions between the proposed Restatement rule and the rule as codified above. Most significant, the rule as proposed herein does not allow for grant and sale of the water. That provision was deleted because, arguably, it would allow trans-basin diversion,\textsuperscript{80} a concept which has received considerable discussion in Nebraska in recent years. The author chose to delete such provision because of a belief that such a concept, if adopted at all, should come in the form of a positive enactment, and not in the "back-door" manner of including such a concept in this proposed statute. Trans-basin diversion is not a critical concept to the resolution of well-interference conflicts, and its political volatility would likely result in more conflict over the enactment of this proposal than it would otherwise entail. It has therefore been deleted in the interests of expediency.

Second, the provisions in the tentative draft relating to "underground streams" and conjunctive use have been deleted.\textsuperscript{81} Finally, the codification has been changed to adapt the rule more expressly to well-interference. The author has attempted this adaptation through the means of adding the concepts of "reasonable manner" of withdrawal and "interference with another's well." This is basically a clarification that not only the uses made of the water, but also the wells themselves and their relative reasonableness as means of diversion, are relevant to the determination of and existence of liability for interference.

3. When any ground water user believes that his use of water is being unreasonably interfered with, the water table of his well unreasonably lowered, or the artesian pressure of his well unreasonably reduced, or that such interference, lowering, or reduction is imminent in the near future, as the result of another's withdrawal or manner of withdrawal of ground water, such user, as claimant, may make a written statement under oath of such belief to the director of the Natural Resources District within which his well is located.

Such statement shall include:
(a) The name and address of the claimant;
(b) The names and addresses of the owners of all wells that claimant believes are contributing to or will contribute to the interference;

\textsuperscript{79} See \textit{Restatement (Second) of Torts} § 858A (Tent. Draft No. 17, 1971).

\textsuperscript{80} "Trans-basin diversion" means that the water is transported to and used at a location which is not in the same river basin from which the water was withdrawn. The term is used more often in the context of \textit{surface} water than ground water, but is a concept which is applicable to both.

\textsuperscript{81} See note 49 \textit{supra}.
(c) A description of the nature of the use which is or was being made of the water from the subject well and the amount and quantity of water required for such use, and a description of such well, including its depth, its age, the type of pump being used, the well's pre-interference withdrawal capacity, and its current withdrawal capacity;

(d) A similar description of the respondents' wells and the nature of their use, so far as is known to the claimant;

(e) A detailed statement of the facts upon which the claimant founds his belief of unreasonable interference or imminent unreasonable interference.

Upon receipt of such statement, if the director deems the statement sufficient as meeting the above requirements, said director shall issue a notice setting the matter for hearing before the board of the Natural Resources District. The notice shall be returned to the claimant who shall cause the same to be served upon the respondents together with a copy of the statement. Such service shall be made at least five days before the time fixed for hearing and in the same manner that service is made in a civil action. Proof of service shall be made to the director by claimant at least two days before the hearing. 82

Comment

Initially, note that this codification would allow for a hearing and adjudication of rights prior to actual interference or loss of use upon a belief of imminent interference. The author believes that such pre-problem resolution should be encouraged, and that the types of remedies proposed herein, i.e. practical adjustments, lend themselves particularly to pre-problem implementation.

Arguably, the director could have the power not only to determine the statement's compliance with the descriptive requirements, but also to make some type of judgement as to the reasonableness of the belief of interference.83 Such a power may be especially appropriate where there is no existing loss of use but merely a belief of impending interference. If the proposed system becomes subject to abuse by bad faith claimants, such a provision may be necessary. However, the author believes that such bad faith claimants can be weeded out with a minimum of effort and expense by the board's initial review of the evidence and hydrologic data, and therefore that such a power is unnecessary until repeated abuse is evidenced.

4. The director, upon his own motion or upon the motion of any of the named respondents, shall cause to be joined as respondents at

83. See, e.g., Wyo. Stat. § 41-128(b) (Cum. Supp. 1973) (requiring an investigation and report by the state engineer, and a refusal by the parties to voluntarily implement his proposals, before any conflict between appropriators can go to hearing).
such hearing all owners of such other wells as may be reasonably believed to be contributing to the asserted interference with claimant's well. Notice and service shall be given to such other respondents in the same manner as required for the respondents named in claimant's statement.

Comment

The provision requires that all interfering users be joined in a single proceeding. The provision is mandatory, in the belief that equitable allocation of the costs of whatever remedy is deemed appropriate can be achieved only if all contributors are present.

5. The hearing shall be conducted before the board under reasonable rules and regulations of procedure prescribed by the Director of the Department of Water Resources. All parties to the hearing as well as the board itself shall have the right to subpoena witnesses who shall be sworn and testify under oath. The Department of Water Resources shall send a representative to the hearing, knowledgeable as to the local hydrological conditions, who shall testify to such conditions under oath and answer the questions of all parties and the board. All parties to the hearing shall be entitled to be heard in person or by attorney, and all parties, and the board itself, shall have the right to call and cross-examine any witness.

Comment

The provision is essentially procedural; however, note that it does place an affirmative duty upon the Department of Water Resources to send a representative and impart all relevant data and information which the Department has concerning local conditions. Regulation of procedure is given to the Department of Water Resources in the belief that the procedures should be uniform statewide.

6. At such hearing the board shall determine whether there has been an unreasonable lowering of the water table or an unreasonable reduction in the artesian pressure of claimant's well which is attributable to the wells of any or all of the respondents. In making this determination, the board shall consider any and all relevant evidence, including but not limited to:

(a) Whether claimant's well was a reasonable means of diversion for the type of use being made of the water, and if not, to what extent the asserted lowering or reduction would have affected said well if it had been a reasonable means of diversion. For purposes of this section, a well which is reasonably comparable in all material respects with other wells in the same general area which are used for the same type of use will be presumed to be a reasonable means of diversion;
(b) Whether the lowering or reduction is attributable to interference by another well or wells, or is instead the result of a general decline in the water table of the aquifer, and if so, to what extent claimant's withdrawals have contributed to such general decline;

(c) The extent to which any of the parties is making a use of the ground water which is not reasonable and beneficial; and

(d) The nature of the uses which the parties are making of the ground water. The wells under consideration at the hearing shall be classified according to the nature of the use being made of the water withdrawn therefrom on the basis of the following categorizations: domestic (including stockwatering in average quantities); irrigation; industrial; and municipal (including cities and villages). For purposes of this section, the effects of a well on another well of the same category shall be presumed to be not unreasonable. Such presumption shall be rebutted by proof that the effects are in fact unreasonable under all the circumstances.

Comment

The provision is an attempt at a reasonably precise formulation of the considerations, policies, and judgments suggested previously. Beyond that, the only item which warrants particular note is the creation of a statutory presumption that it is reasonable to expect same-type users to "pay their own way" in order to remain competitive. This is carrying the suggestion of comment (d) of the tentative draft of §858A to the extreme in an attempt to provide as much guidance as possible to the decision-making body.

7. If the board finds that there has been an unreasonable lowering of the water table or an unreasonable reduction in the artesian pressure of the claimant's well, the board shall determine which well or wells contributed to such lowering or reduction and, to the extent possible, the degree of contribution of each. Such determination shall consider the extent to which, if any, the claimant's well was determined unreasonable pursuant to section 6(a). If the board, after consideration of all the evidence, is unable to determine with reasonable certainty the degree of contribution of each respondent's well, it shall be presumed that the well of each respondent contributed equally to the amount of lowering or reduction determined to be unreasonable.

Comment

The provision is self-explanatory, presenting the prerequisite determination for allocation of the cost of securing the alternative source. It requires consideration of the extent to which the ineffectiveness of claimant's own well contributed to his problem. The "if all else fails" provision allowing for equal allocation between all competing wells is in deference to the author's opinion that where interference is clear but proof of the culprit is not, the most wide-spread cost distribution is the most equitable of all the alternatives.
8. (a) Irrespective of whether the board shall find pursuant to section 7 that any or all of the respondents are subject to liability under section 2, the board shall determine the most reasonable alternative source of the quantity of water required by the claimant. In making this determination, the board shall consider the following factors:

1. The initial cost of securing the alternative supply;
2. The speed with which the alternative supply can be secured;
3. The operational costs of using and maintaining the alternative supply;
4. The adequacy and prospective adequacy of the alternative supply, allowing for claimant's foreseeable future needs for the same type of use;
5. The relative ease of accessibility of the alternative supply; as well as all other factors relevant to the particular situation.

(b) The board shall consider all alternatives which are mechanically feasible, including:

1. Any improvements which can be made to claimant's existing well which would make it adequate for claimant's needs;
2. Construction of a new well on claimant's property;
3. Any existing rural or municipal water system which might be reasonably available to claimant;
4. Diversion of the required amount from a neighboring well;
and any other alternatives available under the particular circumstances.

Comment

The provision is intended to give the claimant the benefit of the board's information, data, and expertise as to alternative supplies regardless of the ultimate determination and allocation of liability for the cost of the alternative supply.

9. Within 5 days after the close of the hearing, the board shall issue written findings as to which, if any, of the respondents have been found liable under section 2 and the extent of any such liability. Accompanying such findings shall be the board's written determination of the most reasonable alternative supply available for providing claimant with the required quantity of water. If liability has been determined, the board shall also issue an order adjudging such respondents liable on the proportionate basis determined pursuant to section 7 for the cost of securing, operating, and maintaining the alternative supply.

Comment

Note the admittedly burdensome time constraint under which the board is required to issue its findings. This is necessary in order
to assure the expedient establishment of an alternative supply. That is the claimant should have the benefit of the board's proposed solution before he undertakes to procure what he hopes will be a permanently secure source of water.

If the time constraint proves to be too burdensome, issuance of the board's findings could conceivably be bifurcated, requiring issuance of only the board's chosen alternative within the five-day period, thus providing the guidance desired while allowing a longer period of deliberation for the issues of liability and allocation of cost. Such bifurcation could cause problems, however, where the alternative supply proposed is diversion of the required quantity from an "interferor's" supply. Such a proposal would be equitable only where the "interferor" has previously or at least concurrently been adjudged liable.

10. If an order adjudging liability issues, the claimant shall take all actions necessary to secure the alternative supply found by the board to be the most reasonable. Upon completion of the establishment of the alternative supply, the claimant shall present the board with a statement of the costs incurred. If the board finds such statement to be true and accurate, it shall order all respondents previously adjudged liable to pay to claimant their proportionate share of such costs. *Provided*, that any such respondent may challenge the reasonableness of any item of cost, in which event the board shall review the particular item and determine its reasonableness.

Claimant may elect to procure the required supply from a source other than that proposed by the board, but in such event claimant shall bear all additional costs incurred in procuring such alternative. In no event shall any respondent be required to pay any amount not representing actual expenditure in money or labor by the claimant.

*Comment*

The provision places upon the claimant the burden of the mechanical establishment of the alternative supply. The effect of the board's determination of the most reasonable alternative supply is to give the claimant a guideline which, if followed, raises a presumption of legitimacy of the reasonable costs incurred in procuring such a supply. The option given to the claimant to choose a different alternative is not without cost, as the claimant must then pay all additional costs incurred, and in addition will have forfeited whatever deference compliance with the board's proposal would entitle him to should future problems arise, especially in the instance where a respondent chooses to challenge the reasonableness of an item of cost. The last clause is intended to eliminate any situation where a claimant might opt for a "bargain" alternative in hopes of pocketing the savings. The provision emphasizes that the remedy provided is tied to cost and not to damages.
WELL INTERFERENCE

11. If liability has been found, and if the board has determined that there is no reasonably available alternative supply for satisfying claimant's needs, then and only then may the board consider whether an order limiting the use of any of the parties to the hearing should issue. No such order shall issue unless the evidence before the board clearly establishes that implementation of such an order would re-establish the effectiveness of claimant's well with reasonable immediacy. Any such order shall be in a form calculated to result in as little limitation, both in manner and duration, as is possible while still accomplishing such re-establishment of claimant's well. Provided, that where the evidence discloses that waste is occurring, or that a use is being made which is not reasonable and beneficial, the board may at any time issue an order directing that such waste or such use be halted.

Comment

This section is intended to provide the very limited injunctive power discussed above. Note that a limitation on use, other than a prohibition of waste or non-beneficial use, cannot even be considered or proposed unless liability has been found and the board has been unable to find any reasonable alternative source. With such limitations, use of any power under this section should be very rare and occur only under exceptional circumstances.

12. Any respondent may appeal any order directing the payment of costs or limiting such respondent's use of water to the county court of the county in which claimant's well is located upon posting of bond in an amount equal to such respondent's proportionate share of such costs, provided that such an appeal shall not delay the implementation of any order issued under section 11. Claimant may appeal any determination of the board to the county court of the county in which his well is located upon posting of bond for costs. Findings and orders of the board shall be disturbed only on a showing of a clear abuse of discretion.

Comment

Only an extremely limited judicial review is provided for, in deference to the very expertise-oriented determinations required. An alternative would be to allow no judicial review whatsoever.

13. In order to aid in the implementation of this act, the Director of the Department of Water Resources is hereby authorized to make such investigations as may be necessary to determine the location, extent, depth, volume and flow of all ground waters within the state, and in making such investigation, is hereby authorized and directed to cooperate with the federal government, with any other
state or representative of another state, with any political subdivi-
sion, or any person, firm, association or corporation upon such
terms and under such conditions as the Director may deem appro-
riate.

In connection with such investigation, the Director may require
reports from each ground water user as to the amount of such
user's withdrawal, the manner of such withdrawal, and the nature
of the use being made of the water. Such reports shall be in the
form prescribed by the Director.

Comment

Because the act is predicated upon information and data on
hydrologic conditions in the area of the interference situation,
this provision is intended to provide the bank of information neces-
sary to make the determinations of the board hydrologically ac-
curate. The burden of making the investigations is placed on the
Department of Water Resources in order to allow for an efficient
and integrated state-wide system. The requirement that the De-
partment be represented at any hearing will make the information
readily available to the boards of the various Natural Resources
Districts. Such a system of investigations would of course have a
beneficial effect on all aspects of ground water management and
conservation in Nebraska, the need for such knowledge not being
limited to instances of well-interference.

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