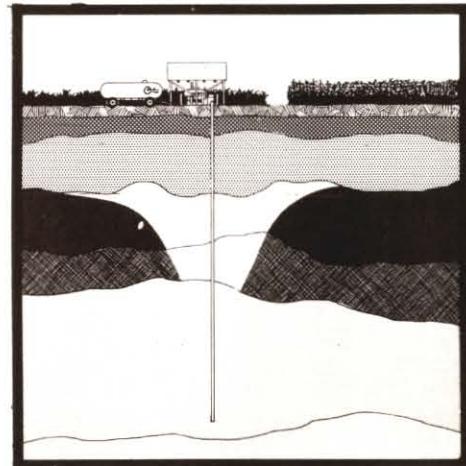


Report # Four  
POLICY ISSUE STUDY  
ON SELECTED  
WATER RIGHTS ISSUES

# PROPERTY RIGHTS IN GROUNDWATER

State Water Planning and Review Process  
Nebraska Natural Resources Commission

JANUARY 1983



# Public Advisory Board

## State Water Planning and Review Process

NEBRASKA NATURAL RESOURCES COMMISSION · 301 CENTENNIAL MALL SOUTH · P.O. BOX 94878 · LINCOLN, NEBRASKA 68509

The Honorable Charles Thone, Governor  
State of Nebraska  
State Capitol  
Lincoln, Nebraska 68509

Members of the Eighty-Seventh Nebraska Legislature  
Second Session  
State Capitol  
Lincoln, Nebraska 68509

Dear Governor Thone and Members of the Legislature:

In accordance with its statutory responsibility under Section 2-3287 R.S. Supp., 1982 the Public Advisory Board has reviewed the report of the Natural Resources Commission entitled "Property Rights in Groundwater" and the Commission's recommendations on the alternatives contained in that report. The following comments and recommendations are offered for your consideration.

The Public Advisory Board agrees with the Commission that a radical change in the groundwater property rights rules for the state is not desirable. We therefore reject, as did the Commission, those alternatives (#2 through #12) which would significantly alter those rules. However, we do not agree with the Commission on its choice between the two remaining alternatives: Alternative #1 (Make no change in present policy) and Alternative #13 (Codify the rules derived from Nebraska cases, as near as they can be determined, as the definition of groundwater property rights in Nebraska). As the Commission's report points out, both those alternatives are designed to generally maintain the present course of direction. The differences between them are in degrees of detail and specificity. The Public Advisory Board does not share the Commission's concerns that Alternative #13 would create an undesirable degree of rigidity in groundwater property rights law. While some flexibility for future actions may be lost by enacting Alternative #13, we believe that loss would be more than offset by the greater certainty of right granted groundwater users. This greater certainty would reduce the present confusion and misunderstanding about groundwater property rights. We therefore favor the enactment of Alternative #13 and urge rejection of Alternative #1.

**MUNICIPAL**  
Richard Hawes  
Omaha

**DOMESTIC**  
Alfred Gigstad  
Nebraska City

**GROUND WATER IRRIGATION**  
Robert Lowry  
Cairo

**SURFACE WATER IRRIGATION**  
Don Steen, Chairman  
Morrill

**LIVESTOCK PRODUCTION**  
Jack Maddux  
Wauneta

**ENVIRONMENTAL**  
Clayton Lukow  
Holstein

**INDUSTRIAL & COMMERCIAL**  
Vance Anderson  
Hastings

**WILDLIFE, FISH & RECREATION**  
Richard Nisley  
Roca

**1st CONGRESSIONAL DISTRICT**  
Elmer Schlaphoff  
Waverly

**2nd CONGRESSIONAL DISTRICT**  
William Emrich  
Bellevue

**3rd CONGRESSIONAL DISTRICT**  
Roy Stewart  
Newport

The Public Advisory Board's recommendation in favor of Alternative #13 is accompanied by two qualifications which we consider to be of utmost importance. First, we want it clearly understood that present and future laws relating to preferences and to public groundwater management strategies should not be superseded or precluded by the enactment of Alternative #13. Secondly, we would strongly recommend a partial modification of Alternative #13. As it is described in Chapter 3 of the report, Alternative #13 consists of what are essentially thirteen doctrinal statements about groundwater and individual rights to use that resource. The ninth and tenth such statements relate to apportionment of groundwater in times of shortage. As currently written, they would allow for consideration of land capability and number of acres owned in the apportionment process. In the opinion of the Public Advisory Board, water allocation mechanisms should not encourage large land holdings or be used as a means for achieving particular land use objectives. We reject, therefore, "owned acres" or "irrigable acres" as appropriate bases for allocation and recommend instead that "irrigated acres" be the standard on which apportionments are made. Our recommendation in this regard was originally made in our comments pertaining to the earlier Commission report entitled "Policy Issue Study on Groundwater Reservoir Management" and we continue to hold firm to that position.

We hope our recommendations will be helpful to you in your deliberations on this important water policy issue.

Sincerely,



Don Steen  
Chairman

DS:JC:cl

cc: Members, Natural Resources Commission  
Members, Public Advisory Board

**POLICY ISSUE STUDY  
ON  
SELECTED WATER RIGHTS ISSUES**

**STATE WATER PLANNING AND REVIEW PROCESS**

**REPORT #4, PROPERTY RIGHTS IN GROUNDWATER**

**REPORT  
OF THE  
NATURAL RESOURCES COMMISSION  
TO  
GOVERNOR ROBERT KERREY  
AND  
THE MEMBERS OF THE NEBRASKA LEGISLATURE**

**JANUARY 1983**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**PROGRAMS:**

SOIL & WATER CONSERVATION  
WATERSHED PROTECTION  
COMPREHENSIVE PLANNING  
FLOOD PLAIN MANAGEMENT  
DATA BANK  
WATER CONSERVATION FUND  
DEVELOPMENT FUND



**STATE OF NEBRASKA**

**NATURAL RESOURCES COMMISSION**

301 Centennial Mall So. - 4th Floor

P.O. Box 94876

Lincoln, Nebraska 68509

Phone: (402) 471-2081

The Honorable Robert Kerrey  
State Capitol, 2nd Floor  
Lincoln, Nebraska 68509

Members of the Nebraska Legislature  
Eighty-Eighth Nebraska Legislature  
First Session  
State Capitol  
Lincoln, Nebraska 68509

Governor Kerrey and Members of the Legislature:

This report, entitled "Property Rights in Groundwater" has been reviewed and approved by the Natural Resources Commission. It is the fourth report of the Selected Water Rights Issues policy study.

Thirteen alternative courses of action relating to the nature and extent of individual and public rights in groundwater are analyzed in the report. The Commission's recommendations on those alternatives are also provided and can be found on the blue pages immediately following the Table of Contents.

It is the hope of the Natural Resources Commission that this report will be helpful in making policy decisions and, if necessary, statutory changes. The Natural Resources Commission is prepared to answer any further questions you may have.

Sincerely,

A handwritten signature in cursive script that reads "Alvin M. Arjiv".

Chairman  
Natural Resources Commission

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Foreword

This is report number 4 of the Selected Water Rights Issues Policy Study. A number of water policy issue studies are being conducted by the Natural Resources Commission under the Nebraska State Water Planning and Review Process. This report addresses the issue of property rights in ground water, both from the perspective of the individual landowner and from that of the public.

The base document for this report was prepared by Norman Thorson, Professor of Law, University of Nebraska College of Law, with the assistance of an interagency task force. Members of the task force and the agencies represented are as follows:

James R. Cook . . . . . Natural Resources Commission (*Leader*)  
Judy Lange . . . . . Department of Environmental Control  
J. Michael Jess . . . . . Department of Water Resources  
William Lee . . . . . Department of Health  
Darryll Pederson . . . . . Conservation & Survey Division, UNL  
J. David Aiken . . . . . Water Resources Center, UNL  
Karen E. Langland . . . . . Policy Research Office  
Gerald Chaffin . . . . . Game & Parks Commission  
John Alloway . . . . . Department of Agriculture

The Commission released this report for public review on February 17, 1982. A public hearing was held in Lincoln, Nebraska, on March 24, 1982 and a summary of that hearing is found in the back of this report. The Public Advisory Board provided the Natural Resources Commission with its recommendations on the alternatives contained within the task force report.

Three Commission members were assigned the responsibility for considering the comments received and for preparing suggested changes in and recommendations on the report. The committee members were:

Henry P. Reifschneider, Chairman  
Robert W. Bell  
Rudolf C. Kokes

Their work was utilized by the Commission to refine and supplement the task force report to its present form.

Other reports complete or being completed as part of the Selected Water Rights Issues Policy Study include:

Preferences in the Use of Water (completed)  
Drainage of Diffused Surface Water (completed)  
Water Rights Adjudication (completed)  
Riparian Rights  
Interstate Water Uses and Conflicts  
Transferability of Surface Water Rights  
Beneficial Uses (decision on whether to complete is pending)

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Table of Contents

	Page
<b>COMMENTS AND RECOMMENDATIONS OF THE NATURAL RESOURCES COMMISSION</b> .....	I
<b>INTRODUCTION</b> .....	III
<b>SUMMARY</b> .....	V
<b>CHAPTER ONE - GROUNDWATER PROPERTY RIGHTS IN NEBRASKA</b> .....	1-1
Introduction .....	1-1
Analysis of Nebraska Decisions .....	1-1
1. <i>Olson v. City of Wahoo</i> .....	1-1
2. <i>Luchsinger v. Loup River Public Power District</i> .....	1-2
3. <i>Metropolitan Utilities District v. Merritt Beach Co.</i> .....	1-3
4. <i>Burger v. City of Beatrice</i> .....	1-3
5. <i>Prather v. Eisenmann</i> .....	1-4
6. <i>State ex rel. Douglas v. Sporhase</i> .....	1-5
Relevant Nebraska Statutes .....	1-5
Synthesis and Conclusion .....	1-6
Footnotes .....	1-8
<b>CHAPTER TWO - CRITICAL ANALYSIS OF EXISTING LAW</b> .....	2-1
Introduction .....	2-1
Protection of Private Rights .....	2-1
Protection of Public Rights .....	2-2
Summary .....	2-3
Footnotes .....	2-4
<b>CHAPTER THREE - ALTERNATIVE LEGISLATIVE POLICY ACTIONS</b> .....	3-1
Introduction .....	3-1
Scope of Chapter .....	3-1
Identification of Alternatives .....	3-1
Information Presented for Each Alternative .....	3-2
Discussion of Alternatives .....	3-3
<i>Alternative #1: Make no change in present policy</i> .....	3-3
<i>Alternative #2: Adopt the English Rule of Absolute Ownership</i> as the definition of groundwater property rights in Nebraska .....	3-3
<i>Alternative #3: Adopt the American Rule of Reasonable Use</i> as the definition of groundwater property rights in Nebraska .....	3-4
<i>Alternative #4: Adopt the California Rule of Correlative</i> Rights as the definition of groundwater property rights in Nebraska .....	3-6
<i>Alternative #5: Adopt a Rule of Reasonable Use as</i> developed in certain eastern states as the definition of groundwater property rights in Nebraska .....	3-9
<i>Alternative #6: Adopt the reasonable use rules found in the</i> RESTATEMENT (SECOND) OF TORTS §858 as the definition of groundwater property rights in Nebraska .....	3-9
<i>Alternative #7: Adopt a First User Rule as the definition of</i> groundwater property rights in Nebraska .....	3-11
<i>Alternative #8: Adopt a Preference in Use Rule as the</i> definition of groundwater property rights in Nebraska .....	3-11

*Alternative #9: Adopt a Comparative Cause Rule as the definition of groundwater property rights in Nebraska* ..... 3-12

*Alternative #10: Adopt a groundwater property rights system where rights are created and evidenced by securing a permit from an appropriate state agency* ..... 3-13

*Alternative #11: Qualify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the total number of acres of overlying land owned by the land owner*..... 3-14

*Alternative #12: Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the number of acres of productive irrigable land owned by the overlying owner* ..... 3-16

*Alternative #13: Codify the rules derived from Nebraska cases, as near as they can be determined, as the definition of groundwater property rights in Nebraska* ..... 3-17

Conclusion ..... 3-19

Footnotes ..... 3-19

**CHAPTER FOUR - RELATIONSHIP OF THIS STUDY TO OTHER** ..... 4-1

Study #1: Instream Flows ..... 4-1

Study #2: Water Quality ..... 4-2

Study #3: Groundwater Reservoir Management ..... 4-2

Study #4: Water Use Efficiency ..... 4-2

Study #5: Selected Water Rights Issues ..... 4-2

Study #6: Municipal Water Needs ..... 4-3

Study #7: Supplemental Water Supplies ..... 4-3

Study #8: Interbasin Transfers ..... 4-3

Study #9: Weather Modification ..... 4-3

Study #10: Water-Energy ..... 4-3

Study #11: Surface-Groundwater Integration ..... 4-3

**SUMMARY OF HEARINGS** ..... S-1

# Comments and Recommendations of the Natural Resources Commission

## INTRODUCTION AND PURPOSE

In preparing policy issue study reports such as this one, the Natural Resources Commission has two major responsibilities. The first responsibility of the Commission is to present in an objective manner a representative range of policy alternatives for the particular water policy issue being considered. The purpose of all portions of this report following this section on comments and recommendations is to fulfill that responsibility.

Once all of the alternatives have been presented, the second responsibility of the Commission is to provide the Legislature, the Governor, and the public with opinions on the various alternatives. This section of the report is to fulfill that responsibility. The Commission's recommendations which follow were made after a review of the report and consideration of comments offered by the public. Reasons for selecting the favored alternative and for rejecting the others are given.

## RECOMMENDED ALTERNATIVE

It is the opinion of the Commission that to present the most appropriate alternative in this report is *Alternative #1: Make no change in present policy*. The Commission believes that LB 375 (1982 session of the Legislature), combined with existing case law, establishes the nature and extent of the groundwater property right at the point where they ought to be established. Individual landowners are provided with reasonable assurance that unless their actions violate or are inconsistent with other specific laws or properly adopted rules and regulations, they have the right to use the water that can be captured beneath their land. They are also properly alerted to the fact that all owners have an equal share in the water supply and that the amount used by each owner can be limited if the supply is insufficient to meet the needs of all.

Another advantage of current policy is that it

retains maximum flexibility for future legislative actions on groundwater. As the development of Nebraska's groundwater supplies continues, presently unanticipated circumstances will almost certainly arise and will require legislative action. The State of Nebraska needs to avoid actions now which could preclude what may be an appropriate response to such circumstances at a later date. In our opinion, *Alternative #1* best accommodates that need.

*Alternative #13* is not recommended but was given serious consideration by the Commission and would be the Commission's favored alternative if the Legislature chose not to accept *Alternative #1*. As this report points out, *Alternatives #1* and *#13* are similar. The differences between the two alternatives are largely in degrees of detail, with *Alternative #13* being the more specific. It is that specificity and the inflexibility which accompanies it that cause the Commission to reject *Alternative #13* in favor of *Alternative #1*. However, if the need arises in the future to inject a greater degree of detail into groundwater property rights, we strongly recommend that the details found in *Alternative #13* be given first consideration.

## ALTERNATIVES NOT FAVORED

### Overall Comments

As the alternatives are presented in this report, they are mutually exclusive. The recommendation of *Alternative #1* automatically requires that each of the others be rejected at least as a complete and separate property rights rule for the state. Beyond that practical requirement, the Commission also rejects many of the alternatives as inappropriate for even a more limited application in Nebraska. These include *Alternatives #2, #5, #6, #7, #9, #11, and #12*. Commission reasons for rejecting these alternatives in total

are given in the discussion below under **Specific Comments**. While also rejected as inappropriate as separate and complete property rights rules for Nebraska, *Alternatives* #3, #4, #8, #10, and #13 each have their place as a part of the overall policy structure for groundwater. As noted in the material which follows, rejection of those alternatives here is not meant to be and should not be interpreted as a total rejection of the concept of those alternatives to the extent they are now or can later be incorporated into a more comprehensive ground water management system.

## Specific Comments

*Alternative* #2, which would adopt the English Rule of Absolute Ownership as a definition of groundwater property rights in Nebraska is rejected in total. It fails to recognize either the rights of surrounding landowners or the rights of the public in the use of groundwater in the state. It is considered outdated and counterproductive to sound management of the groundwater resource.

*Alternatives* #3 and #4 are among those alternatives for which an unfavorable recommendation should not be considered as a total rejection. Both the American Rule of Reasonable Use and the California Rule of Correlative Rights are reflected in current Nebraska policy. However, in that policy they are properly balanced against each other. The Commission does not believe the enactment of either as the sole governing standard would serve the interests of the state.

*Alternatives* #5 and #6 are similar, with both establishing reasonableness as the basic standard for groundwater use. They prescribe that what is reasonable will be determined in relation to the needs of other landowners. While either alternative could be implemented in a way similar to the correlative rights portion of existing Nebraska law, such a result is not assured. The uncertainty that these alternatives would thus introduce is not desirable. Because of this uncertainty, these alternatives might discourage investments and prevent additional groundwater development where it could properly occur.

*Alternative* #7 is an attempt to introduce, at least in part, the concept of a surface water appropriation system into the administration of groundwater in the state. The Commission believes that first in time, first in right rules have no application to the management of groundwater in the manner proposed by *Alternative* #7. At any given point in time, at least all then present users of water for the same purposes should share equally in the available water supply. Current users should be favored over possible future users only in extreme circumstances, such

as those recognized for imposition of a moratorium by the Nebraska Groundwater Management and Protection Act.

*Alternative* #8 is another alternative which would be inappropriate as a sole governing factor for groundwater use, but clearly does have a role in an overall management scheme. *Alternative* #8 is very similar to current Nebraska preferences law, including the results of the only Nebraska case, *Prather v. Eisenmann*, which thus far has interpreted statutory groundwater preferences. The Commission's rejection of *Alternative* #8 should by no means be considered a rejection of the need for groundwater preferences. It is also not a rejection of any of the alternatives recommended in the report completed in October of 1981 and entitled "*Preferences in the Use of Water*".

Having considerable appeal from an equity standpoint, *Alternative* #9 is rejected because of the impracticability of assessing liability between groundwater users on a comparative cause basis. Proving that one groundwater use interfered with another is extremely difficult and any attempts to quantify the degree of interference would be virtually impossible in most situations.

*Alternative* #10 is rejected because it is not felt that permits to use ground water are necessary statewide at present. Large areas of the state continue to have adequate water supplies and are experiencing no decline in water levels and no deterioration in water quality. To require permits before initiation of use in such areas would seem to require needless paperwork and bureaucracy. However, permits should continue to be required in groundwater management areas and groundwater control areas, and before municipal or industrial water is transferred from a well field to the ultimate place of use.

*Alternatives* #11 and #12 are very similar, differing only in the manner in which water would be allocated to individual overlying landowners. They both require quantification of the amount of water hydrologically available and an allocation of a portion of that amount to each landowner whether they're interested in utilizing it or not. To make either alternative work efficiently, it would need to be accompanied by legislation authorizing each landowner to sell his or her rights to his or her share of that available water supply. The Commission does not believe that granting the authority to market rights to use groundwater would be a sound policy decision for the state.

The final alternative, *Alternative* #13, has been discussed earlier under "**Recommended Alternative**". Reference should be made to the discussion there for details of the Commission recommendation regarding that alternative.

# Introduction

This report was prepared to provide policy decision-makers with information relevant to the law of groundwater property rights and how existing rights might be modified or clarified by legislation.

Groundwater use in Nebraska has exploded over the last two decades causing serious water table declines in some areas. It has become clear that groundwater supplies in Nebraska are not inexhaustible. In consequence, numerous strategies for regulating groundwater use and managing groundwater supplies have been suggested. The feasibility, and ultimate success, of any groundwater management scheme, however, depends in large measure on the underlying set of groundwater property rights. The groundwater property rights system determines the constitutional parameters of permissible groundwater use regulation. The groundwater property rights system also determines how the benefits of groundwater supplies are to be shared in those areas where no regulations are in effect. The nature of the groundwater property rights system is, thus, a very important element of the state's groundwater policy.

A good deal of misunderstanding currently surrounds groundwater property rights law. In part, this is because the limited number of Nebraska Supreme Court pronouncements on the subject have not always been consistent. In large part, however, the misunderstanding of Nebraska law can be attributed indirectly to the abundance of the state's groundwater supplies. Only recently have conflicts occurred which make it clear that a landowner's right to capture groundwater is not unlimited.

**Chapter One** of this report summarizes current Nebraska law by tracing the development of the so-called "Nebraska Rule of Reasonable Use" and by discussing relevant Nebraska statutes. **Chapter Two** analyzes the practical effects of existing law, with special emphasis on the limits of current law as a means of protecting public or private rights to groundwater use.

**Chapter Three** responds to the analysis set forth in the first two chapters by developing thirteen alternatives for legislative consideration. Each alternative is described in detail and indications of how it could be enacted are provided. Where appropriate, reference is made to the law of other states. In particular, short case studies have been included for some alternatives to alert the reader to states that have extensive experience legislating under particular groundwater property rights systems. Generally, the case studies also demonstrate the limitations of the several alternatives.

The external impacts of adopting each alternative also are addressed in **Chapter Three**. Included are the physical-hydrologic and environmental impacts and the socio-economic impacts of adopting each alternative. The degree of detail possible in these impacts analyses varies greatly from alternative to alternative, with some having fairly apparent impacts and others having impacts that are almost impossible to assess.

The final chapter, **Chapter Four**, is devoted to explaining the relationship between this report and all other policy issue reports produced or to be produced as part of the State Water Planning and Review Process. Relationships are developed for many of the studies being conducted, particularly the March, 1982 Ground Water Reservoir Management Study approved by the Commission. The value of **Chapter Four** to the decision-maker is to alert him or her to how other issues can be affected by decisions regarding property rights in groundwater.

---

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Summary

## CURRENT SITUATION

### Source of Conflict

The purpose of this study is to address a narrow, but important, issue in groundwater law, namely the specification of the property rights to the ground water resource.

Except for the soil itself, water is the most valuable natural resource in the State of Nebraska. As is becoming all too apparent, however, the supply of this resource is not inexhaustible. But scarcity is directly related to value and as water becomes more scarce it becomes more valuable. The result is increased attention paid to the nature and extent of groundwater property rights, as it is these rights that determine which of the state's citizens will directly benefit from groundwater supplies. Current users are concerned that their access to water not be unduly restricted. Nonusers are concerned that supplies of water be available should they wish to initiate use at a future date. The general public is concerned that supplies of groundwater remain available to meet the needs of future generations and to continue to support an economy that has become very dependent on groundwater. Rural and urban residents alike depend on groundwater for a source of drinking water. Finally, groundwater feeds many of the state's streams, provides subirrigated crops in the state's river valleys, and is the source of lakes and wet meadows in the Sandhills. With so many of the state's citizens dependent in one way or another on groundwater supplies, the need to clearly understand groundwater property rights is essential. The nature and extent of those property rights are significant not only to the constitutional bounds of permissible regulation, but also to the relationships between individual groundwater users in areas where no regulations are in effect.

## Nebraska Law

According to the most recent Nebraska Supreme Court decision addressing the subject, *State v. Sporhase*, groundwater in Nebraska is public property. Moreover, the Nebraska court seems to have concluded that groundwater remains public property even after it has been captured by private landowners.

The *Sporhase* case involved the constitutionality of a Nebraska statute governing interstate exportation of groundwater withdrawn in Nebraska. The Nebraska Supreme Court decision upholding the constitutionality of that statute was appealed to the United States Supreme Court where it was reversed. In arriving at its decision, the U.S. Supreme Court addressed the state supreme court's claims that groundwater in Nebraska was publicly owned. The U.S. Court dismissed such a claim as a means to avoid scrutiny under the Commerce clause of the United States Constitution and found that a reciprocity clause in the antiexportation statute did unduly burden interstate commerce. However, the Court did not strike down the declaration of public ownership and in fact gave considerable support throughout its opinion to the real purpose of such a declaration - to demonstrate the state's power to preserve and regulate the use of important resources. For the purposes of this report, the Nebraska Supreme Court declaration that groundwater is publicly owned appears to remain valid even though the state court decision was reversed on another point.

Notwithstanding the public ownership conclusion of the Nebraska Supreme Court in the *Sporhase* opinion, an unbroken series of cases beginning in the 1930's have stated that private landowners also have an interest in water found beneath their lands, a property interest defined by a unique Nebraska Rule of Reasonable Use. This rule has recently been confirmed in a general way through the enactment of Legis-

lative Bill 375 by the Nebraska Legislature. That bill provides in part as follows:

"Every landowner shall be entitled to a reasonable and beneficial use of the groundwater underlying his or her land, subject to the provisions of Chapter 46, article 6, and the correlative rights of other landowners when the groundwater supply is insufficient for all water uses."

Although it may be impossible to completely reconcile public and private property rights discussed in the court cases and the recently enacted statute, the following points seem well established, at least for those areas where no public management has been implemented.

1. Groundwater in Nebraska is public property.
2. Absent public authorization, a landowner can withdraw only that amount of water which he can put to reasonable and beneficial use on the overlying land that he owns.
3. If aquifer supplies are insufficient to meet the reasonable and beneficial needs of all overlying owners, groundwater supplies will be apportioned among the overlying owners.
4. Supplies of groundwater in excess of those necessary to satisfy the reasonable and beneficial uses of overlying owners may, with (and only with) public consent, be transferred away from the overlying lands without any overlying landowners suffering a compensable injury.
5. Among members of the same preference class, overlying owners have no right to maintenance of a particular water table or artesian head.
6. Among members of different preference classes, preferred users are protected from unreasonable reductions in the water table or unreasonable reductions in artesian head caused by the actions of less-preferred users.
7. Use of groundwater actually in place for subirrigation of crops is a reasonable and beneficial use of groundwater.

One conclusion to be drawn from current law is that private groundwater property rights are not secure. In fact, a landowner's groundwater right may be no more than a license, revocable at the will of the state. At best, landowners can argue that they have a right to the same treatment as other landowners and a right to be free of arbitrary exercise of the state's power to restrict groundwater use. Any greater private rights arguably would be inconsistent with the conclusion that groundwater is publicly owned.

A second conclusion that might be inferred is

that groundwater in Nebraska may be subject to a trust that runs to the benefit of the public. Although by no means clearly established, it can be argued persuasively that the Nebraska Rule of Reasonable Use establishes the parameters of this trust and that the legislature is constrained by this trust obligation in managing and disposing of the publicly owned stock of groundwater.

## **NEED TO EXAMINE POLICY ALTERNATIVES**

The unique interaction of private and public groundwater property rights in Nebraska is the source of much uncertainty. Private landowners, in particular, have only limited legal assurance that present pumping rights are secure or that future rights might not be severely limited. With uncertain property rights, the reasonable expectations of landowners may be defeated making wise investment decisions extremely difficult. Moreover, the limits, if any, on the power of the legislature to allocate groundwater supplies and control groundwater use have not been established conclusively. As a consequence of this uncertainty, neither the general public nor private landowners can plan for the future without fear that subsequent litigation, or legislation as the case may be, might destroy the basis of their planning.

On the other hand, the uncertainty that makes planning and management difficult is also a source of strength and opportunity. At present, it is unlikely that any state in the union is in a better position to implement flexible policies for wise groundwater use. Constitutional difficulties that would deter certain management strategies in many states probably are not present in Nebraska where groundwater is public property. To the extent that the state acts to define or clarify groundwater property rights, much of this flexibility could be sacrificed.

The main body of this report develops and analyzes the impacts of thirteen policy alternatives concerned with the specification of groundwater property rights. No property rights system is ideal in all circumstances and, where possible, an attempt has been made to illustrate the limitations of particular systems with concrete examples. Each of these alternatives embodies policy assumptions as to how rapidly the groundwater resource should be used, who should reap the direct economic benefits of groundwater use, and what are the limits of state power to regulate groundwater use and/or the duty of the state to manage groundwater supplies. Most, although not all, of the policy alternatives would permit a

variety of specific management options to be used to implement the policy goals suggested by the property rights themselves. This study, however, is limited to the narrow issue of property rights, not the broader issues of management or regulation. These broader management issues were addressed in the Ground Water Reservoir Management Report approved by the Commission in January, 1982. Nevertheless, specifications of the groundwater property rights system is one possible starting point for any system of groundwater management. In areas where public management systems are not needed or at least not implemented, groundwater property rights may be the only guide to resolution of disputes between individual users.

## **ALTERNATIVE LEGISLATIVE POLICY ACTIONS**

### **Alternative #1: Make no changes in present policy.**

**Alternative One** anticipates no additional legislative action **specifically designed** to define the nature or extent of individual property rights in groundwater. Present policies as described in this report would remain intact, but would be subject to later interpretations and refinements by the courts.

It is not the intent of **Alternative One** to prevent any additional legislation regarding the use of groundwater. New policies relating to public management of groundwater supplies or to relationships between individual users of groundwater could be enacted. Only alternatives designed to directly define a groundwater property right would be precluded by this alternative. It should be recognized, however, that action on other groundwater policies could indirectly have as much impact on the nature and extent of the groundwater property right as enactment of any one of the other twelve alternatives in this report.

**Alternative #2: Adopt the English Rule of Absolute Ownership as the definition of groundwater property rights in Nebraska.**

**Alternative #3: Adopt the American Rule of Reasonable Use as the definition of groundwater property rights in Nebraska.**

**Alternative #4: Adopt the California Rule of Correlative Rights as the definition of groundwater property rights in Nebraska.**

**Alternatives Two through Four** represent the three classical expressions of groundwater property rights, the English Rule, the American

Rule, and the California Rule. **Alternative Two** is a pure rule of capture. Landowners are free to capture as much water as they can and are free to use it however they wish, wherever they wish. It encourages a maximum rate of aquifer depletion as landowners attempt to outcapture their neighbors. As a pure rule of capture, it is incompatible with any degree of regulation. To the extent groundwater is subject to a public trust, the English Rule also would be incompatible with the state's fiduciary obligations under the trust. **Alternative Three** also is a rule of capture but landowners are limited to the amount of water that they can put to reasonable and beneficial use on overlying land that they own. As a practical matter, the American Rule protects agricultural users from the demands of municipal or other off-land users. Absent additional regulation, however, the American Rule does little to slow the rate of aquifer depletion. **Alternative Four** is a modification of the American Rule. The American Rule generally governs unless an overdraft occurs, in which case landowners must share available supplies by making proportional reductions in use. Excess waters over and above the amount needed by overlying landowners are available for appropriation for use on distant lands. In theory, the California Rule encourages maximum use of average annual recharge while limiting total withdrawals to the safe yield of the aquifer. Groundwater is allocated among overlying landowners and distant users according to complex rules. In practice, however, the major impact of the California Rule has been to determine who is required to pay for more expensive imported water.

**Alternative #5: Adopt a Rule of Reasonable Use as developed in certain eastern states as the definition of groundwater property rights in Nebraska.**

**Alternative #6: Adopt the reasonable use rules found in the RESTATEMENT (SECOND) OF TORTS § 858 as the definition of groundwater property rights in Nebraska.**

**Alternatives Five and Six** give landowners a right to use as much groundwater as they can, provided that their use is "reasonable" in relation to the needs of other landowners. Under **Alternative Five**, reasonableness is the subject of a case-by-case judicial determination. Under **Alternative Six**, reasonableness is determined by reference to a list of enumerated criteria. Both alternatives permit great flexibility in reaching equitable solutions to groundwater use conflicts but neither alternative gives the landowner any certainty of right.

**Alternative #7: Adopt a First User Rule as the definition of groundwater property rights in Nebraska.**

**Alternative #8: Adopt a Preference in Use Rule as the definition of groundwater property rights in Nebraska.**

**Alternative #9: Adopt a Comparative Cause Rule as the definition of groundwater property rights in Nebraska.**

**Alternatives Seven through Nine** contemplate essentially unlimited access to supplies of groundwater with the crucial issue being who ought to bear the costs of aquifer depletion that reduces water tables and artesian head. Under **Alternative Seven** early users are protected from later users. Under **Alternative Eight** preferred users are protected from less preferred users. Under **Alternative Nine** costs of aquifer depletion are shared among all users in proportion to their use. The economic burden imposed on later or less preferred users by **Alternatives Seven and Eight** may act to slow aquifer depletion as might the cost of ascertaining comparative cause in **Alternative Nine**.

**Alternative #10: Adopt a groundwater property rights system where rights are created and evidenced by securing a permit from an appropriate state agency.**

This alternative can be incorporated into most substantive rules of law. Permits could thus be granted on the basis of first in time - first in right, on the basis of the number of acres owned, on the basis of intended use, or on any other basis. Thus, permits by themselves have no impact on the rate of aquifer depletion. Permits do, however, give landowners some security of right and serve as a means by which water uses can be inventoried and water management decisions improved. Permits are particularly useful where a decision is made to mine an aquifer.

**Alternative #11: Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the total number of acres of overlying land owned by the landowner.**

**Alternative #12: Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the number of acres of productive irrigable land owned by the overlying owner.**

**Alternatives Eleven and Twelve** would quantify a landowner's property interest in groundwater found beneath his or her land. Each landowner would be assigned a particular quantity of water as his or her share of the aquifer stock. **Alternative Eleven** would allocate water in proportion to the total quantity of land owned

while **Alternative Twelve** would allocate groundwater in proportion to the total number of irrigable acres owned. The size of the allocation could be based on total water in storage or on the basis of natural recharge or on some combination thereof. The rate of aquifer depletion, if any, would depend on the choice of the basis for allocation. The direct economic benefit of groundwater would be shared among overlying landowners based on the number of acres owned, not the amount of water used, much as rights to other mineral deposits are based on land ownership. A significant advantage of quantification is the susceptibility of quantified rights to market transfers. The cost of gathering the hydrologic data necessary for quantification, however, would be very high.

**Alternative #13: Codify the rules derived from Nebraska cases, as near as they can be determined, as the definition of groundwater property rights in Nebraska.**

**Alternative Thirteen** would adopt by legislation the consequences of the Nebraska Rule of Reasonable Use as it has developed or is expected to develop in case law. The effect of this alternative would be to take what now may be a mere license to use ground water and transform it into a vested property right. Landowners under this alternative would be entitled to a reasonable share of the groundwater supply based on land ownership if groundwater supplies were insufficient to meet the needs of all owners. As long as supplies were adequate, landowners would be entitled to withdraw as much water as they could put to reasonable and beneficial use on overlying land that they owned. Any transfers off the overlying land would be subject to state approval and the vested rights of other overlying landowners. Rights acquired pursuant to this alternative would be appurtenant to the land and could not be sold or in any way transferred without the express consent of the public.

*Alternatives #13 and #1* are similar, but not identical. Whereas *Alternative #1* would leave in effect the provisions of LB 375 (which enact in a general way the reasonable use and correlative rights aspects of the Nebraska Rule), *Alternative #13* goes one step beyond that general language by enacting more specific rules, some of which are noted above. Those more specific rules are derived from either a previously confirmed or anticipated interpretation of how the general rule would be applied in particular situations. In a sense, *Alternative #13* is like a definition of the Nebraska Rule of Reasonable Use, while *Alternative #1*, including LB 375, is more in the nature of a statement of that rule. As between the two rules, *Alternative #13* provides

a greater degree of certainty, while *Alternative #1* provides a greater degree of flexibility to recognize changes in circumstances for presently unanticipated problems.

Like *Alternative #1*, *Alternative #13* does not preclude other legislative action on groundwater use. The rules set forth pursuant to that alternative would, therefore, be subject to such other actions and would have application primarily in those areas where public management was not in effect.

## **RELATIONSHIP TO OTHER STUDIES**

Water policy issues cannot be evaluated in a vacuum. One water policy issue can affect or be affected by other water policy issues. A particularly significant relationship exists between this study and the *Ground Water Reservoir Management Study*. Significant relationships also were identified between this study and the *Instream Flow Study*, the *Water Quality Study*, the *Water Use Efficiency Study*, the *Municipal Water Needs Study*, the *Supplemental Water Supplies Study*, and with several of the issues listed as part of the *Selected Water Rights Issues Study* including *Drainage of Diffused Surface Water*, *Preference in the Use of Water*, *Beneficial Use*, and *Interstate Water Uses and Conflicts*. The interrelationships identified clearly illustrate the unity of the hydrologic cycle and the limitations encountered in focusing on only one part of that cycle.

---

**THIS PAGE INTENTIONALLY LEFT BLANK**

# CHAPTER 1

## GROUNDWATER PROPERTY RIGHTS IN NEBRASKA

### INTRODUCTION

This policy issue study is concerned with a very narrow, but important issue in groundwater law, namely the specification of property rights to the groundwater resource.<sup>1</sup> The nature of a landowner's property interest in the water found beneath his land has two major impacts. First, it determines, in large measure, the power of the state to regulate or restrict groundwater usage without constitutional impediments. Under some formulations of groundwater property rights virtually any form of regulation would be constitutionally suspect. Under alternative formulations of groundwater property rights, constitutional barriers to (and protection from) regulation would be virtually nonexistent. Secondly, in those areas where no regulations exist (most of the state at the time of this writing), the landowner's property right in the groundwater will be the primary factor governing his relationship with other users of groundwater. For both reasons a clear understanding of the nature and extent of private property rights in groundwater is the essential first step toward sound management of the resource.

Nebraska indeed is fortunate to be in a position to consider policy alternatives for the specification of groundwater property rights. In most, if not all, other states the nature of private property rights to water is well settled and some states are seriously constrained by the existence of vested rights. As will become apparent during the course of this chapter, private groundwater property rights in Nebraska remain very flexible giving the state an unprecedented opportunity to use, manage, and conserve the resource wisely.

Groundwater property rights in Nebraska have slowly evolved beginning with *Olson v. City of Wahoo*<sup>2</sup> and culminating with *State v. Sporhase*<sup>3</sup> and the enactment of LB 375 by the 1982 Nebraska Legislature. Throughout this period, groundwater property rights remained highly conjectural. The most recent case, *Sporhase*,

resolved many previously unanswered questions while raising many others. The slow development of Nebraska groundwater law largely is explained by the relative abundance of groundwater in the state. Abundant water supplies postpone user conflicts that lead to the formation of judicial precedents. Each of the limited judicial precedents defining groundwater property rights in Nebraska is discussed below as are LB 375 and other relevant Nebraska statutes. An attempt then is made to pull them together in a way that defines the Nebraska groundwater property right.

### ANALYSIS OF NEBRASKA DECISIONS

#### 1. *Olson v. City of Wahoo*<sup>4</sup> (1933)

*Olson*, decided in 1933, contains the first pronouncement of the Nebraska Supreme Court directly addressing groundwater property rights. Plaintiff Olson sued the City of Wahoo alleging that a new city well had lowered the water level in his gravel pit to the point where commercial pumping of sand and gravel had become impractical. Wahoo argued that any reduction in the water level was the result of extremely dry weather conditions rather than a consequence of the new well. The trial court held that, while plaintiff proved that the water level in his pit had been lowered, he failed to prove that the city's pumping caused the decline. The supreme court eventually affirmed the lower court decision, but not until they had discussed two competing theories of groundwater property rights.

Wahoo argued that the court should adopt the English Rule of Absolute Ownership articulated in *Acton v. Blundell*.<sup>5</sup> Under the English Rule no proprietary interest in groundwater exists until it is reduced to capture. The rule thus is more properly thought of as a rule of non-ownership rather than a rule of absolute ownership. In any

event, the city could not be held liable for interfering with plaintiff's water table under the English Rule.

Olson, in contrast, argued that the American Rule of Reasonable Use defined groundwater property rights in Nebraska. The Reasonable Use Rule, first suggested in *Bassett v. Salisbury Manufacturing Co.*,<sup>6</sup> is similar to the English Rule in that rights are generally acquired by capture. The American Rule differs from the English Rule, however, in that use must be reasonable in relation to the overlying land, but not necessarily in relation to the needs of others.<sup>7</sup>

The reasonable use limitation can be thought of as having two components: 1) groundwater captured must be applied to overlying land and 2) groundwater cannot be used for malicious purposes or in a wasteful manner given the purpose of use on the overlying land. Some confusion exists in the first component as to whether "overlying land" refers to all land over the aquifer, only to contiguous tracts over the aquifer owned by one person, or to some other standard. Clearly, however, the second component of the test imposes very little restriction on a landowner's right to use groundwater and does not prevent the total economic depletion of the aquifer by a single overlying landowner.

Although clearly dicta<sup>8</sup> given the disposition of the case on causation grounds, the Nebraska Supreme Court announced that it favored the American Rule for percolating waters. In defining the American Rule, however, the court stated:

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, . . .<sup>9</sup>

With the "sharing in time of shortage" language the court included an essential component of the California Rule of Correlative Rights in its definition of groundwater property rights.

The apparent rejection of the English Rule in *Olson* was a significant step in the development of groundwater property rights in Nebraska. The *Olson* case, however, left many questions unanswered including what constituted an "insufficient supply" or whether, perhaps, the correlative rights language was merely inadvertent on the part of the court. Furthermore, the court's definition seems to suggest that disputes among landowners with substantial rights in the same source of water should be decided using a

nuisance style accommodation.<sup>10</sup> In any event, *Olson* created the potential for development of a unique rule of groundwater property rights in Nebraska.

## 2. *Luchsinger v. Loup River Public Power District*<sup>11</sup> (1941)

In *Luchsinger*, defendant power district constructed a canal extending from its power plant near Columbus to the Loup River. The canal was excavated adjacent to plaintiff's land. Plaintiff alleged that the canal drained his subirrigated cropland seriously decreasing his dryland corn production. Defendant power district unsuccessfully argued that, since the canal was constructed solely on lands it owned in fee, it was free to intercept groundwater which found its way into the canal. Such a result would have been consistent with the English Rule. The Nebraska Supreme Court again reiterated its version of the American Rule as articulated in *Olson*, however, and rejected the reasoning of the defendant. Under the American Rule defendant's use of water was unreasonable or wasteful in relation to the overlying land since the captured groundwater merely flowed into the Loup River. The plaintiff was awarded damages by the court for the depreciation in value to his land caused by the construction of the canal.

The emphatic language of the court in *Luchsinger* should have ended all speculation that the English Rule of Absolute Ownership was ever the law in Nebraska. In discussing the American Rule quoted from the *Olson* decision, the Court stated:

It is argued, however, that this is dictum in the 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. It expresses the wisdom of the Roman Senate to the effect that private property cannot be taken for public purposes except on an estimate of its value; of the Magna Charta which declares that no one shall be deprived of his property except by the law of the land and by the judgment of his peers; of the Code of Napoleon which provides that no one can be compelled to give up his property except for the public good and for a just and previous indemnity; of the people of the United States who inserted in their Constitution the fundamental principle that

private property shall not be taken for public use without just compensation; of the Nebraska Bill of Rights declaring that "The property of no person shall be taken or damaged for public use without just compensation therefore."<sup>12</sup>

A significant implication of the *Luchsinger* decision is that landowners have some proprietary interest in the water **in place** beneath their lands.<sup>13</sup> The property right is apparently limited, however, to a right that runs against those who are not making a reasonable use of the water within the American Rule meaning. A secondary right, of course, will run against all users of water from a common source to the extent the correlative rights language in *Olson* is applied during a water shortage.

### 3. *Metropolitan Utilities District v. Merritt Beach Co.*<sup>14</sup> (1966)

The next significant groundwater rights case occurred twenty-five years after *Luchsinger*. In the interim period the Nebraska Legislature enacted the City, Village and Municipal Ground Water Permit Act.<sup>15</sup> The constitutionality of this Act was challenged in *Metropolitan Utilities*. In upholding the constitutionality of the Act, the Nebraska Supreme Court discussed groundwater rights. Defendant M.U.D. had received a permit under the Act to withdraw 60 million gallons of water a day from wells located on the north bank of the Platte River and on an adjacent island. Water was to be transferred to Omaha, located in a different river basin. Ninety-three percent of the "groundwater" pumped was the result of induced aquifer recharge from the Platte River.

The opinion contains several significant statements. First, the court literally applied the statutory definition of groundwater as "water which occurs or moves, seeps, filters, or percolates through the ground under the surface of the land",<sup>16</sup> and ignored physical realities that a diversion of surface water was, in fact, taking place.

Second, the opinion holds that authority can be granted to transfer groundwater off the overlying land without offending constitutionally vested rights, at least where the reasonable uses of overlying landowners are not impaired and a public purpose is served. In other words "excess groundwaters" are available for use off the overlying land, a holding consistent with the Correlative Rights Rule of groundwater property rights, but contrary to traditional interpretations of the American Rule. Interestingly, however, the supreme court used a definition of the American Rule that dropped the "sharing in times of

shortage," language announced in *Olson* and repeated in *Luchsinger*. The *Metropolitan Utilities* definition reads as follows:

The American, as distinguished from the English Rule, is that, while the owner of the land is entitled to appropriate subterranean or other waters accumulating on his land, which thereby becomes a part of the realty, he cannot extract and appropriate them in excess of a reasonable and beneficial use upon the land he owns, unconnected with the beneficial use of the land, especially if the exercise of such use in excess of the reasonable and beneficial use is injurious to others, who have substantial rights to the water.<sup>17</sup>

It is thus possible to read *Metropolitan Utilities* as establishing a limit to a landowner's proprietary interest in underlying groundwater, the limit defined by the amount of water that can be put to reasonable and beneficial use on the overlying land.

### 4. *Burger v. City of Beatrice*<sup>18</sup> (1967)

Although groundwater property rights were not directly the subject of *Burger*, the case has significant implications. In *Burger*, defendant city attempted to use its power of eminent domain to condemn an easement on plaintiff farmer's lands so that water could be withdrawn from an underlying aquifer. The water was to be used by two large fertilizer plants located outside the Beatrice city limits. The Nebraska Supreme Court held that the city's power of eminent domain did not extend to condemnation of agricultural water rights for use by industries located outside the city limits.

Since the case turned on the limits of a city's eminent domain power, the nature of the right that was to be condemned was not discussed. In light of *Metropolitan Utilities*, the value of the pumping easement was conjectural. If the water in question was excess, that is, water not needed to satisfy reasonable beneficial uses on the overlying land, then *Metropolitan Utilities* would suggest that the farmers would suffer no compensable injury as long as their surface rights were not invaded. Even if the sought waters were excess, however, *Burger* held that the power of eminent domain could not be used to secure access to the water under the restricted circumstances of the case.

Assuming, as is more likely, that the groundwater sought to be condemned in *Burger* was not all excess, what interests of the farmers would have been taken by the city had the supreme court approved the condemnation? *M.U.D.*

suggests that a landowner's proprietary interest in groundwater is limited to the amount which can be put to reasonable and beneficial use on the overlying land. The language of *Olson* and *Luchsinger* suggests that groundwater supplies can be apportioned when supplies are insufficient to meet all needs. The issue is complicated by the existence of Nebraska's groundwater preference statute which places agricultural uses above industrial uses.<sup>19</sup> What constitutes a reasonable and beneficial use on the overlying land? Presumably the definition and limitation of such terms would be within the power of the legislature as the following language from the dissent suggests: "The water rights here attempted to be condemned will be owned, maintained, and operated by the municipality. The state has declared water to be a public use **and its control is entirely in the hands of the legislature**"<sup>20</sup> (emphasis added). This language suggests a very flexible approach to groundwater property rights, at least by a portion of the court in 1967.

### 5. *Prather v. Eisemann*<sup>21</sup> (1978)

*Prather* was an action brought by plaintiff domestic well owners to enjoin pumping by defendant irrigators. Plaintiff alleged that defendant's pumping caused a loss of artesian pressure in their wells, thereby interfering with their domestic consumption. The court held the irrigator liable for the costs of replacing the domestic users' wells. Although the case was decided on an interpretation of Nebraska's groundwater preference statute (arguably an incorrect interpretation since the court failed to distinguish between rights to the groundwater itself and rights to the means of diversion), the court took the opportunity to extensively review the Nebraska law of groundwater rights.

The court began by reiterating the Nebraska Rule of Reasonable Use first announced in *Olson* and approved in *Luchsinger*. The court stressed that omission of the "sharing" language in *Metropolitan Utilities* was not significant since proportional use was not at issue in that case. Consequently, "Nebraska, in *Olson*, adopted the rule of reasonable use with the addition of the California doctrine of apportionment in time of shortage."<sup>22</sup>

Plaintiffs argued that runoff from defendant's lands indicated that water in excess of a reasonable and beneficial use was being applied. The court did not reach the issue of how a reasonable and beneficial use on overlying land was to be determined although it did discuss the meaning of reasonable use under three competing doctrines, the American, California, and Restate-

ment Rules. According to the court, reasonable use is defined in relation to the appropriator's land in American Rule jurisdictions, is defined as a reasonable share of the whole in correlative rights jurisdictions, and is defined by balancing the equities among competing users in Restatement jurisdictions. By implication, reasonable use under the Nebraska Rule would seem to be a reasonable share of the whole not to exceed what can be reasonably and beneficially applied to the appropriator's lands. The court speaks of this as an "equal right to a fair share" of the underground water.<sup>23</sup>

The "equal right to a fair share" applies only among users of the same preference class, however. When competing uses in different preference classes are involved, the court favors the preferred use although its reasoning is far from clear. On the one hand, the court may be saying that the preference statute entitles preferred users to a property right in water tables and artesian head **undiminished** by the pumping operations of less preferred users. Although such a conclusion would be consistent with the court's holding in *Prather*, it is possible that the court intended to create a property right in the "reasonable maintenance of water levels and artesian head" with reasonable derived from the rule of nonliability for use of groundwater enunciated in RESTATEMENT (SECOND) OF TORTS.<sup>24</sup>

The court quotes from an earlier draft of what is now RESTATEMENT (SECOND) OF TORTS §856(1)(a). This section provides for liability if a withdrawal of groundwater "unreasonably" causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure. RESTATEMENT (SECOND) OF TORTS §850A provides that determining "reasonableness" involves a consideration of many factors including:

- a) the purpose of use
- b) the suitability of use
- c) the economic value of use
- d) the social value of use
- e) the extent and amount of harm caused
- f) the practicality of avoiding the harm by adjusting the use or method of use of one proprietor or the other
- g) the practicality of adjusting the quantity of water used by each proprietor
- h) the protection of existing values of water uses, land, investments and enterprises, and
- i) the justice of requiring the user causing harm to bear the loss.

Perhaps the court in *Prather* was merely adding statutory preferences to the list of factors that should be considered in determining when one user causes unreasonable harm to another user. A contrary construction of the court's actions would give preferred groundwater users a property right that, depending upon the economic value of alternative uses, could effectively preclude any groundwater use by less preferred users irrespective of the amount of water in storage.

#### 6. *State ex rel. Douglas v. Sporhase*<sup>25</sup> (1981)

*Sporhase* is the most recent pronouncement of the Nebraska Supreme Court concerning groundwater property rights. In that case the court upheld a Nebraska statute that forbids transporting groundwater across state lines without a permit.<sup>26</sup> While the state supreme court opinion was later reversed by the United States Supreme Court because a portion of the Nebraska statute was found to create an undue burden on interstate commerce, the state court opinion continues to have extremely significant implications for the definition of groundwater property rights and on the power of the legislature to regulate exercise of those rights.

The Nebraska Supreme Court began its opinion with a review of the *Olson* rule focusing on the language authorizing sharing in times of shortage. "The *Olson* court's inclusion of that concept demonstrates its view that water is a unique commodity subject to state regulation to assure that it is available to everyone in the state in relation to their need, rather than their ability to pay for it."<sup>27</sup> In discussing the subsequent *Metropolitan Utilities* case, the court stated, "The opinion clearly held that the legislature has the power to determine public policy with regard to groundwater and that it may be transferred from the overlying land only with the consent of and to the extent prescribed by the public through its elected representatives."<sup>28</sup>

Finally, in sweeping language, the Nebraska Supreme Court declared that **groundwater is publicly owned**, and went on to state:

The public, through legislative action, may grant to private persons the right to the use of publicly owned waters for private purpose; but as the *Olson* opinion demonstrates, with its emphasis on sharing in times of shortage, the public may limit or deny the right of private parties to freely use the water when it determines that the welfare of the state and its citizens is at stake.<sup>29</sup>

The court went on to stress that ground water use is not an unlimited private property right in

Nebraska but rather a narrowly circumscribed right of reasonable use only on overlying land. Furthermore, the public apparently retains ownership of the water even after private capture since the court notes "that conditioning a landowner's right to transfer groundwater either within or without Nebraska does not deprive him of a property right, since, under Nebraska common law, groundwater may not be transferred off the overlying Nebraska land at all unless the public, owners of the water, grant that right."<sup>30</sup>

As noted earlier, the Nebraska Supreme Court decision upholding the constitutionality of the statute governing exportation of groundwater was appealed to the United States Supreme Court where it was reversed. In arriving at its decision, the U.S. Supreme Court addressed the state supreme court's claim that groundwater in Nebraska was publicly owned. The U.S. Court dismissed such a claim as a means to avoid scrutiny under the Commerce clause of the United States Constitution and found that a reciprocity clause in the anti-exportation statute did unduly burden interstate commerce. However, the Court did not strike down the declaration of public ownership and in fact gave considerable support throughout its opinion to the real purpose of such a declaration - to demonstrate the state's power to preserve and regulate the use of important resources. For the purposes of this report, the Nebraska Supreme Court declaration that groundwater is publicly owned appears to remain valid even though the state court decision was reversed on another point.

## RELEVANT NEBRASKA STATUTES

The nature and extent of the individual landowner's rights in the groundwater supply are not determined solely by case law. One recent Nebraska statute (LB 375) directly addresses groundwater property rights, and numerous other enactments have a more indirect, but nevertheless significant, effect on those rights. The court cases previously discussed have clearly established the right of the legislature to adopt such laws. In the *Metropolitan Utilities* case discussed earlier, the Nebraska Supreme Court explained the effects of its decision as "... thus preserving the right of the Legislature, unimpaired, to determine the policy of the state as to underground waters and the rights of persons in their use."<sup>31</sup> In the *Sporhase* case, the court held that "... the public may limit or deny the right of private parties to freely use the water when it determines that the welfare of the state and its citizens is at stake."<sup>32</sup> These cases provide a strong basis for virtually any reasonable

measures enacted by the Legislature.

In the last several years, the Legislature has exercised its authorities in this regard on several occasions. The action most directly related to this study was taken in the enactment of LB 375 during the 1982 session of the Nebraska Legislature. That bill establishes a comprehensive system for management of groundwater outside of groundwater control areas. It includes in its initial section the following statement about property rights in groundwater.

“Every landowner shall be entitled to a reasonable and beneficial use of the groundwater underlying his or her land, subject to the provisions of Chapter 46, article 6, and the correlative rights of other landowners when the groundwater supply is insufficient for all users.”<sup>33</sup>

This legislative statement about property rights generally restates case law, but does not do so precisely. The significance of any differences between what the court has said and what the Legislature has now enacted will not be known until the courts have been asked to interpret this legislative expression. Also unknown is whether this legislative action has had the effect of vesting a property right in groundwater where none previously existed. If so, the bill could make future attempts to manage the groundwater supply more difficult or in some cases perhaps impossible. Since LB 375 makes these property rights subject to Chapter 46, article 6 (Nebraska groundwater statutes), any such effects should, however, be minimized.

As indicated earlier, a large number of other legislative actions also affect, though not as directly, the nature and extent of the groundwater property right. Well spacing statutes,<sup>34</sup> the first of which was passed in 1957, limit, and in some cases may prevent, installation of wells by groundwater users. Under the Ground Water Management and Protection Act<sup>35</sup> passed in 1975, and amended in 1982 by LB 375,<sup>36</sup> control areas and management areas can be established and regulations can be adopted by natural resources districts for the purpose of addressing several different types of groundwater problems. Once those control areas or management areas are established, permits must be obtained before large capacity wells can be drilled.<sup>37</sup> All wells, including those existing prior to the designation of the control area or the management area, are subject to possible regulations that restrict the amount of water that can be pumped.<sup>38</sup> Where wells can be located is also subject to regulation.<sup>39</sup> In extreme situations, and in control areas only, the Groundwater Management and Protection Act authorizes the establishment of moratoria on additional well

drilling.<sup>40</sup>

Industries which plan to use more than 3,000 acre-feet per year and municipalities are also subject to special permitting requirements and are able to transport water for their intended purposes only if certain criteria can be satisfied.<sup>41</sup>

The constitutionality of most of these regulatory measures has not been tested in the Nebraska Supreme Court. Discussion of some of the issues that would be involved in addressing such constitutionality is contained in Chapter 2. However, if these regulatory measures are constitutionally sustained, their implementation certainly has an effect on the nature and extent of the ground water property right. These effects could not be ignored in any consideration of that right or of any changes in it.

## SYNTHESIS AND CONCLUSION

Recent cases decided by the Nebraska Supreme Court and recent legislative actions have clarified many of the issues relative to groundwater property rights that have been unclear in the past. Significant questions remain to be answered, however. Nevertheless, it is possible to articulate presently existing property rights to groundwater with some degree of confidence. The following principles seem more or less well established in current law.

### **1. Groundwater in Nebraska is public property.**

Any doubt that this is the case was clearly dispelled by the Nebraska Supreme Court's *Sporhase* decision. Consequently, private use of public water is always subject to regulation and control by the legislature. Furthermore, the cases strongly suggest that groundwater remains public property even after permissive capture by private landowners. If so, the legislature could freely regulate use in addition to its power to regulate withdrawals. In fact, it may be impossible to conceive of a regulation governing groundwater use that, if properly drafted, would fail to survive a constitutional challenge.

### **2. Absent public authorization, a landowner can withdraw only that amount of water which he can put to reasonable and beneficial use on overlying land that he owns.**

The traditional American Rule limitations on place of use and prohibition of waste establish an

upper limit to the right of private landowners to withdraw groundwater. Given public ownership of the groundwater, the legislature retains the power to define what shall constitute reasonable and beneficial use. Absent legislative directive, it seems likely that any use of water on the overlying land **suited to the character of the land** would be deemed reasonable and beneficial as long as the water was not wasted<sup>42</sup> or used for malicious purposes.

**3. If aquifer supplies are insufficient to meet the reasonable and beneficial needs of all overlying owners, groundwater supplies are subject to apportionment among the overlying owners.**

Although apportionment has never been accomplished judicially in Nebraska, repeated case references to “sharing in time of shortage” leave little doubt that this element of the California Rule has been incorporated into Nebraska case law. Precisely how such water would be apportioned or when a shortage is “triggered” have never been established by decision. Presumably a “shortage” may exist to activate the correlative rights apportionment whenever an aquifer is depleted below its long run sustainable yield level, in other words, whenever an aquifer is mined. As to the apportionment itself, a variety of possibilities exist. An attempt could be made to hydrologically estimate the relative proportion of the aquifer that underlies a particular tract of overlying land and to apportion accordingly. Another alternative would be to establish a uniform allocation per acre of surface area or overlying lands. A third possibility would be to apportion water based on the character of the overlying land, for instance, apportioning the bulk of the allocated water to overlying irrigable land in rural areas. It is unclear, however, whether apportionment would limit **use** of water to the apportioned quantity or whether apportionment would merely entitle injured parties to compensation from others for excessive use.

**4. Supplies of groundwater in excess of those necessary to satisfy the reasonable and beneficial uses of overlying owners may, with public consent, be transferred away from the overlying lands without any overlying landowners suffering a compensable injury.**

Although this rule has never been explicitly stated by the Nebraska Supreme Court it does seem to be the clear implication of the *Metro-*

*politan Utilities* case and it is consistent with public ownership of groundwater and with the California Rule of correlative rights.

**5. Among members of the same preference class, overlying owners have no right to maintenance of a particular water table or artesian head.**

This rule was announced in *Prather*. An exception to the rule might occur in the event of an apportionment if the apportionment contemplated maintenance of a long run static water table.

**6. Among members of different preference classes, preferred users are protected from unreasonable reductions in the water table or unreasonable reductions in artesian head caused by the actions of less-preferred users.**

This rule also follows from *Prather*. It is not clear whether all subsequent interferences with prior preferred uses are unreasonable or whether a more sophisticated balancing of the equities of competing users will be used. Furthermore, it is not clear whether or not a subsequent preferred user can enforce a right to a water level or artesian head against a prior less preferred user. It seems likely, however, that a preferred user must have a current use interfered with by a subsequent non-preferred use to recover damages.

**7. Subirrigation of crops is a reasonable and beneficial use of groundwater.**

This is one implication of *Luchsinger*. It may, nevertheless, generally prove impossible to maintain water levels required for subirrigation since presumably subirrigation and surface irrigation would fall with the same preference class.

Consequently, under *Prather*, a landowner would have no right to maintenance of water levels for subirrigation purposes against a pump irrigator responsible for a decline in the water table.

Additional uncertainties exist under the series of cases set forth above. These uncertainties and questions are discussed in the next chapter, which briefly discusses the limitations inherent in the presently existing set of property rights, at least as articulated above.

---

## FOOTNOTES

---

1. The issue of groundwater property rights must be distinguished from the issue of how exercise of those rights might be limited by regulation. Property rights, the subject of this study, determine the subject of regulation as well as the constitutional limits of permissible regulation. Other aspects of Nebraska groundwater law have been extensively treated in a series of articles printed in the Nebraska Law Review. **See generally** Aiken, **Nebraska Groundwater Law and Administration**, 59 Neb. L. Rev. 917 (1980); Harnsberger, Oeltjen, and Fischer, **Groundwater: From Windmills to Comprehensive Public Management**, 52 Neb. L. Rev. 179 (1979); Harnsberger, **Nebraska Groundwater Problems**, 42 Neb. L. Rev. 721 (1963).
2. 124 Neb. 802, 248 N.W. 304 (1933).
3. 208 Neb. 703, 305 N.W.2d 614, **rev'd**, 50 U.S.L.W. 5115 (U.S. July 2, 1982).
4. 124 Neb. 804, 248 N.W. 304 (1933).
5. 153 Eng. Rep. 1223 (Ex. 1843).
6. 43 N.H. 569 (1862).
7. **See, e.g.**, *Forbell v. City of New York*, 164 N.Y. 522, 58 N.E. 644 (1900).
8. Dicta is language in a court's opinion that is not necessary to reach a decision in the case. A central principle of American jurisprudence is that courts refrain from deciding legal issues until faced with a case or controversy that fairly raises the issue. Consequently, dicta, not being required to resolve a case or controversy, carries no precedential value. In other words, future courts are not bound by language that can be fairly characterized as dicta.
9. 124 Neb. at 811, 248 N.W. at 308.
10. Nuisance suits are generally decided by weighing the gravity of the harm against the utility of an actor's conduct. **See generally** RESTATEMENT (SECOND) OF TORTS §831 (1979).
11. 140 Neb. 179, 299 N.W. 549 (1941).
12. **Id.** at 182-83, 299 N.W. at 551.
13. In other words, a landowner has some property rights in underlying supplies of groundwater that exist apart from actual capture of the water.
14. 179 Neb. 783, 140 N.W.2d 626 (1966).
15. **NEB. REV. STAT.** §§ 46-638 to 46-650 (Reissue 1978 & Cum. Supp. 1980) (currently cited as the Municipal and Rural Domestic Groundwater Transfers Permit Act - **see id.** § 46-650 (Cum. Supp. 1980)).
16. **See** NEB. REV. STAT. § 46-635 (Reissue 1978).
17. 179 Neb. at 800-01, 140 N.W.2d at 637 (1966).
18. 181 Neb. 213, 147 N.W.2d 784 (1967).
19. **See** NEB. REV. STAT. § 46-613 (Reissue 1978).
20. 181 Neb. at 229, 147 N.W.2d at 795 (McCown and Boslaugh, **dissenting**).
21. 200 Neb. 1, 261 N.W.2d 766 (1978).
22. **Id.** at 6, 261 N.W.2d at 769.
23. **Id.** at 10, 261 N.W.2d at 771.
24. **See** RESTATEMENT (SECOND) OF TORTS § 858 (1979).
25. 208 Neb. 703, 305 N.W.2d 614, **rev'd** 50 U.S.L.W. 5115 (U.S. July 2, 1982).
26. **See** NEB. REV. STAT. § 46-613.01 (Reissue 1978).
27. 208 Neb. at 706, 305 N.W.2d at 617.
28. **Id.** at 707, 305 N.W.2d at 617.
29. **Id.** at 708, 305 N.W.2d at 618.
30. **Id.** at 710, 305 N.W.2d at 619.
31. 179 Neb. at 801, 140 N.W.2d at 637.
32. 208 Neb. at 707, 708, 305 N.W.2d at 618.
33. Legislative Bill 375, 87th Nebraska Legislature, 2nd Session (1982), § 1.
34. NEB. REV. STAT., § 46-609 and § 46-651 (Supp. 1981).
35. NEB. REV. STAT., §§ 46-656 to 46-674, (Reissue 1978, Cum. Supp., 1980, Supp., 1981).
36. Legislative Bill 375, 87th Nebraska Legislature, 2nd Session (1982).
37. NEB. REV. STAT., § 46-659 as amended by LB 375, **supra**, note 36.
38. NEB. REV. STAT., § 46-661 (Reissue 1978).
39. NEB. REV. STAT. § 46-666(1)(c) as amended by § 19, LB 375, **supra**, note 36 and § 11, LB 375, **supra**, note 36.
40. NEB. REV. STAT., § 46-666(6), as amended by LB 375, **supra**, note 36.
41. NEB. REV. STAT., §§ 46-675 to 46-690 (Supp., 1981).
42. The Legislature has imposed limits on runoff. **See** NEB. REV. STAT. § 46-664(1) (Reissue 1978).

# CHAPTER 2

## CRITICAL ANALYSIS OF EXISTING LAW

### INTRODUCTION

Uncertainty has not been eliminated in the existing law of groundwater property rights in Nebraska. This uncertainty is particularly pronounced with respect to the right of an individual landowner to use water found beneath the surface of his land. Recent Nebraska Supreme Court opinions concerning groundwater, particularly *State ex. rel. Douglas v. Sporhase*,<sup>1</sup> confirm that the groundwater itself is public property. From a landowner's point of view, however, many questions remain unanswered about his or her rights to use that water. Such questions include:

1. Are private rights to use groundwater anything more than mere permissive licenses that can be altered or revoked at will by the state?
2. Must landowners actually use groundwater to acquire groundwater property rights? As a corollary question, would moratoria on new drilling survive constitutional scrutiny absent payment of compensation to those prohibited from drilling new wells?
3. Do groundwater users have a vested right to continue groundwater use or can the state order existing wells to stop pumping temporarily or permanently without payment of compensation?
4. Can current statutory use preferences be altered without payment of compensation if existing uses are adversely affected?
5. Can the state regulate the quantity of water subject to capture and can the state apply such regulations to existing users without payment of compensation?
6. What means, if any do landowners have to protect their source of groundwater supply from encroachment by others?
7. Do landowners have any means for forcing a quantification of their private rights of use?

In addition, the current law of groundwater rights is somewhat uncertain as to public rights

to use the resource. This uncertainty exists despite the clarifying language of *Sporhase*. Specifically:

1. Does the state have unlimited power to appropriate and use groundwater for public purposes?
2. Are there any limits on the power of the state to authorize private use of groundwater? As a corollary question, is groundwater in Nebraska impressed with a public trust?

Much of the uncertainty typified by questions raised above probably cannot be eliminated without litigation since constitutional issues are involved. Legislative judgments that fall within the outside parameters of constitutionality, however, will be sustained. Consequently, the strengths and limits of the existing set of groundwater property rights can be found by analyzing current rights in an attempt to delimit the power of the legislature to regulate groundwater capture and use.

In contrast to the uncertainties noted above, Nebraska groundwater property rights are characterized by extreme rigidity in some other respects. For example, neither groundwater nor the right to capture and use groundwater can be transferred apart from the land without express authorization of the state.

Strengths and weaknesses of existing law can best be identified by focusing on two broad issues:

- 1) What protection does current law give private landowners who want to productively use or conserve groundwater found beneath their land, that is, how are private rights protected?
- 2) How, if at all, does current law limit the power of the legislature to vest public groundwater in private hands, that is, how are public rights protected?

### PROTECTION OF PRIVATE RIGHTS

Despite the assertion of *Sporhase* that groundwater is public property in Nebraska, earlier cases seemingly established some private right of use. In those areas where the legislature has

not provided otherwise, it seems clear that an owner of land is entitled to appropriate subterranean waters found beneath his lands. Thus in those areas overlying landowners have a property right in "access" to an underlying aquifer.<sup>2</sup> The right of access is arguably a constitutionally vested right that cannot be taken away without payment of compensation. If it is so vested, the access right is thus something more than a mere license revocable at will. Even so, it seems equally clear that landowners have no property right in the water itself. Water is public property, apparently even after capture, in light of *Sporhase*.

Given private (possibly vested) rights of aquifer access and public rights to aquifer water, landowners have little assurance of a continued right to use a source of groundwater. *Sporhase* clearly states that the public may limit or deny private use of groundwater when the public welfare is at stake. Private use is permitted only at the sufferance of the general public. But the rule of law announced in *Olson v. Wahoo*<sup>3</sup> and uniformly adhered to until the *Sporhase* decision,<sup>4</sup> stated that "the **owner of land is entitled** to appropriate subterranean waters found under his land, . . . and if the natural underground supply is insufficient for all **owners, each** is entitled to a reasonable proportion of the whole, . . ." <sup>5</sup> (emphasis added) This language strongly suggests that landowners overlying a common aquifer have proportional rights in the store of water found therein, rights based on ownership of land not on history of use.<sup>6</sup> Under this interpretation of the Nebraska Rule, landowners overlying a common aquifer could be restricted in the amount of water that they could withdraw, but moratoria on new drilling would be constitutionally suspect.<sup>7</sup> On the other hand, moratoria might be characterized as reasonable police power regulation of property rights to land rather than a taking of the property right to groundwater, thereby avoiding constitutional difficulties.<sup>8</sup> In any event, landowners **at most** have an assurance that they will not be disadvantaged vis a vis other overlying landowners; they have no assurance that they can continue to pump indefinitely into the future.

In addition to arguable proportional treatment, landowners are protected in other ways from arbitrary exercise of the power to restrict groundwater use. Under the rule announced in *Olson* it is possible that only restrictions on use that are related to the overlying land could be sustained.<sup>9</sup> Thus, a prorata reduction of pumping could be implemented as could use restrictions that varied with the crop irrigated or the capability class of the land. Similarly, the state may be able to suspend pumping over an entire aquifer without payment of compensation.

But for the limited protections developed above, a landowner's right to use groundwater may be no more than a license revocable by the state at will. Further, because prescriptive rights (rights obtained only because of long-continued use) do not run against the state, no right to continue using water arises from use, no matter how long a history of use can be demonstrated. Thus, the state can probably limit groundwater withdrawals, prohibit groundwater withdrawals, restrict groundwater uses, alter statutory preferences, or otherwise affect the use of groundwater without payment of compensation as long as the restrictions are not arbitrary or discriminatory.

The Nebraska Rule of Reasonable Use also establishes an upper limit on the amount of groundwater that can be withdrawn and used by overlying owners. This upper limit is defined as the amount that can be reasonably and beneficially applied to overlying land owned by the withdrawing party. Private landowners should be able to pursue a private cause of action against any other landowner who exceeds this upper limit. The difficulty is in determining when the upper limit is reached. Absent statutory direction,<sup>10</sup> the Nebraska Supreme Court would probably adopt a definition based on the concept of "waste" and most non-malicious uses of water would be permitted. Thus, in normal course, a landowner has very little ability to protect a supply of groundwater from encroachment by others.

A landowner's ability to protect a supply of groundwater improves, however, if it can be demonstrated that supplies are insufficient to meet the needs of all overlying owners bringing the "sharing in time of shortage" language of *Olson* into play. Unfortunately, no definition of shortage can be found in case law or in statutes. Nor is there any real indication of who is entitled to share in time of shortage. Individual rights would probably be correlated using tort principles designed to balance the equities among competing users bearing in mind that, at least in the absence of statutory direction to the contrary, all overlying users are entitled to a reasonable share of the whole. However, there is no method by which a landowner can quantify his rights to water in place.<sup>11</sup>

## PROTECTION OF PUBLIC RIGHTS

The public power to regulate and control groundwater use appears to be exceedingly broad in light of recent Nebraska Supreme Court decisions. There may, however, be some limits on the power of the state to vest groundwater rights in private hands given the strong statements of public ownership found in the *Sporhase* decision.

Possible limits on state power to divest itself of groundwater rights are suggested by the public trust doctrine, which holds that certain types of natural resources are held in trust by government for the benefit of the general public. Natural resources impressed with a public trust are protected from dissipation and unfair dealing.<sup>12</sup> Consequently, if applied to groundwater in Nebraska, the public trust doctrine might bar state sanctioned modifications of groundwater property rights that would give landowners expanded private rights to water found beneath their lands.

The history of public rights in water dates to the days of the Roman Empire.<sup>13</sup> At the same time, the history of the development of the common law is the history of the development of private property rights. The tension between public and private rights to water has led to the development of accommodation doctrines. One such accommodation is the public trust doctrine.

Historically, the public trust doctrine was used to preserve public ownership of the beds and shores of navigable waters to protect public rights of fishing, navigation, and commerce.<sup>14</sup> More recently, the doctrine has been used to protect public interests in such in-place uses of water as bathing, swimming, boating, open space, climate, aesthetics, environmental quality, and ecological diversity. Viewed functionally, the public trust can be seen to operate in riparian rights cases that protect lake and stream levels, in federal navigation servitude cases that protect the right of navigation, and in cases which protect public recreation rights in streams which run across privately owned beds.<sup>15</sup> Moreover, a variation of the public trust doctrine seems to have found widespread application to the federal public lands.<sup>16</sup>

The public trust doctrine apparently has never been explicitly applied to groundwater.<sup>17</sup> On the other hand, a California court has found a public servitude for groundwater and groundwater conservation purposes inherent in California's correlative rights doctrine.<sup>18</sup> Furthermore, many of the reasons that have led to imposing a public trust on surface waters, such as the uniqueness and importance of the resource and the need to preserve it for use by all for all time, apply with equal force to groundwater.

Although the existence of a public trust does not preclude change or forbid use of natural resources, the doctrine does impose a fiduciary duty on the state. Thus, the state must assure that trust resources are used for the benefit of all and not the few, and that trust resources are preserved from seriously disrupting depletions. Traditionally, the public trust doctrine has been invoked in a variety of ways to enforce this

fiduciary duty.<sup>19</sup> Thus, the doctrine has been used as follows:

- 1) to require express legislative action before trust property can be committed to private uses;
- 2) to invalidate legislation that would transfer public property into private hands in violation of the trust;
- 3) to uphold the power of the legislature to rescind a purported transfer of public trust property;
- 4) to limit excessive delegation of power over trust property to private parties;
- 5) to require broad based decision-making where trust properties are at issue;
- 6) to limit the rights of landowners who own stream beds from interfering with public use of the stream;
- 7) to require comprehensive water planning before significant appropriations of water for energy production could be approved; and
- 8) to require reasonable efforts to mitigate harm to a public trust resource.<sup>20</sup>

If applied to Nebraska groundwater, the public trust doctrine would limit significantly the number of property rights systems that could pass constitutional muster. By restricting the power of the legislature to vest groundwater property rights in private hands, imposition of a trust would protect public rights to groundwater. In addition, the public trust doctrine might limit significantly the power of the legislature to delegate authority over groundwater property rights to administrative agencies. Although the issue is by no means clear, *Sporhase* provides a strong basis for arguing that such a public trust is impressed on the state's groundwater resources.

## SUMMARY

The nature and full extent of groundwater property rights in Nebraska remains somewhat uncertain. However, with the benefit of current cases, statutes, and some speculation, the nature and extent of those rights may be summarized by the following points:

- 1) Private landowners may have no more than a political assurance of continued rights to use groundwater, thus giving the legislature great latitude in designing and implementing legislation to manage groundwater resources.
- 2) It may be possible to alter groundwater preferences without compensating those disadvantaged by the change.
- 3) Groundwater users may gain no rights from a long history of uninterrupted use of the groundwater resource.
- 4) No clearly defined upper limits to the

amount of water that can be withdrawn by an overlying owner exist, but there is at least a theoretical limit.

- 5) Water in place beneath the soil is not protected from exploitation by others and hence, little incentive to conserve groundwater exists.
- 6) There is no clear indication of when a "shortage" exists that would bring the "sharing" language common to many groundwater cases into play.
- 7) Neither those entitled to share in times of shortage nor the method of sharing are delineated.
- 8) A landowner has no means by which he can quantify the rights he has in groundwater found beneath his lands.
- 9) Limits that might be imposed on private exploitation of groundwater in order to protect public rights to the resource are not articulated.
- 10) Rights to use groundwater are not freely transferable to higher and better uses.
- 11) The property rights system does not provide for correlating groundwater and surface water rights.

Whether these points constitute strengths or weaknesses is, of course, largely a matter of individual value judgment.

#### FOOTNOTES

1. 208 Neb. 703, 305 N.W.2d 614, **rev'd**, 50 U.S.L.W. 5115 (U.S. July 2, 1982).
2. The Nebraska Supreme Court has repeatedly held that overlying landowners are "**entitled** to appropriate subterranean waters" found under their land. **See, e.g.,** *Olson v. Wahoo*, 124 Neb. 802, 811, 248 N.W. 304, 308 (1933) (emphasis added).
3. 124 Neb. 802, 248 N.W. 304 (1933).
4. **See generally** Chapter One, **supra**.
5. 124 Neb. at 811, 248 N.W. at 308.
6. The groundwater right would thus be analogous to common law riparian surface water rights. Such rights are not acquired by use, nor are they lost by nonuse. They are defined in relation to the reasonable and correlative needs of all other landowners abutting a stream.
7. The constitutional difficulty arises from the existence of a property right in groundwater that is separate and distinct from an interest in land, although intimately tied to an interest in land. Landowners, under the theory, acquire a proportional interest in the waters of an underlying aquifer by virtue of their land ownership. This interest, however, is subject to the paramount right of the state to direct that water be used elsewhere, or not at all. To the extent that some ground-

water use is permitted, however, landowners each may have an equal right to a fair share of the aquifer's production. Well drilling moratoria would deny some landowners access to the aquifer thereby destroying their proportional interest in the aquifer production. The destruction of the groundwater right could thus be an unconstitutional taking unless compensation was paid.

8. To the extent that new well moratoria could be characterized as merely regulation of land use, a taking might not arise since the right in question would be the right to land, and not the right to water. Since the value of the property right in land would be diminished, but not extinguished, by the regulation, the regulation might not be characterized as a taking.
9. *Olson* provides that a landowner cannot extract water "in excess of a reasonable and beneficial use upon the land which he owns, ..." **See** *Olson v. Wahoo*, 124 Neb. 802, 811, 248 N.W. 304, 308 (1933).
10. Current statutory direction is limited to runoff controls. **See** NEB. REV. STAT. § 46-664(1) (Reissue 1978).
11. A common law action could presumably correlate the rights of all users to maintain an existing supply of groundwater, but the users would not gain a quantified right to continue a specified level of withdrawals indefinitely. Given public ownership of the water, correlation would only establish an upper limit on groundwater withdrawals; the state would remain free to set more stringent requirements.
12. **See generally** W. Rodgers, *Environmental Law* § 2.16 (1977).
13. **See** The Institutes of Justinian 2.1.1 (T. Cooper trans, & ed. 1841).
14. **See generally** Johnson, *Public Trust Protection for Stream Flows and Lake Levels*, 14 U.C. Davis L. Rev. 233 (1980).
15. **See id.**
16. **See generally** Wilkinson, *The Public Trust Doctrine in Public Lands Law*, 14 U.C. Davis L. Rev. 269 (1980).
17. **But cf.** *City of Eau Claire v. Dep't of Natural Resources*, 2 E.L.R. 20,512 (1972) (holding the public trust doctrine applies only to navigable waters, and hence not to groundwater).
18. **See** *Niles Sand & Gravel v. Alameda County Water District*, 37 Cal. App. 3d 924, 112 Cal. Rptr. 846 (1974), **hearing denied** (Cal. Sup. Ct., May 8, 1974), **cert. denied**, 419 U.S. 869 (1975).
19. **See** Johnson, **supra** note 12, at 242-44.
20. **See generally** Johnson, **supra** note 12.

# CHAPTER 3

## ALTERNATIVE LEGISLATIVE POLICY ACTIONS

### INTRODUCTION

#### Scope of Chapter

Previous chapters have analyzed Nebraska groundwater property rights in some depth and have discussed the strengths and limitations of existing law. The Nebraska system of groundwater property rights is unique in American jurisprudence, though it borrows heavily from more traditional property rights systems adopted in other states. The salient feature of Nebraska law is public ownership of groundwater. While Chapter Two discussed possible limits on the power of the state to vest public property in private hands, the state apparently has great power to specify a new system of private groundwater rights. This chapter lists alternative systems of property rights and assumes that the state has the power to implement them. In fact, however, state power may be limited under the public trust notions discussed earlier. Such limitations might act as a bar to adopting property rights systems that vest too much control of the groundwater resource in private hands.

No alternative was included because it was thought to be politically acceptable. Similarly, no alternative was excluded because of political unacceptability. An attempt was made to fairly and objectively present the full range of alternatives available.

For the most part, the policy alternatives listed in this chapter are mutually exclusive. Adoption of one alternative necessarily precludes adoption of another alternative as the overall and sole policy for the state. A few of the alternatives, such as *Alternatives #8 and #10*, could be combined with others if care is taken on the methods of combination.

Finally, it should be noted that the list of policy alternatives presented in this chapter is not necessarily exhaustive. Possible alternatives are limited only by the imagination. The range of alternatives listed, however, does fairly cover the

subject. Additional alternatives likely would be variations of those set forth in this chapter.

#### Identification of Alternatives

*Alternative #1:* Make no change in present policy.

*Alternative #2:* Adopt the English Rule of Absolute Ownership as the definition of groundwater property rights in Nebraska.

*Alternative #3:* Adopt the American Rule of Reasonable Use as the definition of groundwater property rights in Nebraska.

*Alternative #4:* Adopt the California Rule of Correlative Rights as the definition of groundwater property rights in Nebraska.

*Alternative #5:* Adopt a Rule of Reasonable Use as developed in certain eastern states as the definition of groundwater property rights in Nebraska.

*Alternative #6:* Adopt the reasonable use rules found in the RESTATEMENT (SECOND) OF TORTS § 858 as the definition of groundwater property rights in Nebraska.

*Alternative #7:* Adopt a First User Rule as the definition of groundwater property rights in Nebraska.

*Alternative #8:* Adopt a Preference in Use Rule as the definition of groundwater property rights in Nebraska.

*Alternative #9:* Adopt a Comparative Cause Rule as the definition of groundwater property rights in Nebraska.

*Alternative #10:* Adopt a groundwater property rights system where rights are created and evidenced by securing a permit from a state agency.

*Alternative #11:* Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the total number of acres of overlying land owned by the landowner.

*Alternative #12:* Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the number of acres of productive irrigable land owned by the overlying landowner.

*Alternative #13:* Codify the rules derived from Nebraska cases, as near as they can be determined, as the definition of groundwater property rights in Nebraska.

## Information Presented for Each Alternative

For each alternative discussed below, information is presented under three headings: **Description and Methods of Implementation**; **Socio-Economic Impacts**; and **Physical-Hydrological and Environmental Impacts**. Information under the first heading, **Description and Methods of Implementation**, describes the alternative and how it could be implemented. For each alternative strengths and weaknesses are discussed. No water rights system has been entirely satisfactory. The weaknesses of many of the common law systems have become apparent over time. The ultimate importance of the property rights system adopted concerns who will make ultimate decisions on groundwater use, how those decisions will be made, and who will be the primary beneficiaries of the benefits that flow from the use of groundwater. Vested private property rights act as effective barriers to many management alternatives. Consequently, great care should be taken in making fundamental alterations in the existing system of rights. On the other hand, water users need some certainty that their source of water will not be severely limited once the users have made substantial investments relying on the availability of water. Finally, the limitations of the alternatives often can be understood best by examining problems encountered in states where the rules have been adopted. Consequently, where appropriate, a subsection detailing a **Case Study** is included under this heading.

Information under the second heading, **Socio-Economic Impacts**, describes how implementing the alternative would impact on economic efficiency<sup>1</sup> and equity.<sup>2</sup> The discussion is necessarily theoretical, and consequently, no attempt is made to quantify the magnitude of the expected impacts. A change that increases economic efficiency is generally desirable, however, since an efficient change translates into a greater output of societal goods and services from a particular combination of resource inputs.

In a perfect economic world, the market would always allocate resources, goods, and services efficiently. For a variety of reasons, however, a market may not operate efficiently. The cost of completing a particular transaction that would increase satisfaction might well exceed the benefit to be gained from the transaction.<sup>3</sup> In that case, a potential gain in economic efficiency will be prevented by **transaction costs**.<sup>4</sup> Alternatives that reduce transaction costs, therefore, generally increase economic efficiency. Similarly, an efficient transaction may not take place because the information necessary to evaluate the transaction is not available at low cost.<sup>5</sup> Reducing **information costs**, therefore, also enhances economic efficiency.

Equity refers roughly to the "fairness" of a particular system of production and consumption which may, or may not, be efficient. While economics cannot answer the question of what is fair or equitable, it can indicate what the equity impacts of a particular alternative are likely to be. An alternative has an equity impact if it results in benefits being conferred on some at the expense of uncompensated losses which must be borne by others. In theory, an efficient alternative should produce the necessary revenues to compensate anyone who suffers an adverse equity impact from adoption of the alternative.<sup>6</sup> Whether or not such effects should be compensated for, however, is a political and social question caught up in personal notions of fairness and justice. Consequently, the equity effects of particular alternatives are noted with no attempt made to evaluate whether those effects are fair or not fair.

Information under the final heading, **Physical-Hydrologic and Environmental Impacts**, describes the probable effect that changes in water use patterns, which would accompany the adoption of a given alternative, would have on hydrologic relationships and on the physical environment.<sup>7</sup> Most of the alternatives identified in this chapter, however, do not lend themselves to detailed description of their probable physical/hydrologic or environmental impacts. Since these alternatives are concerned only with property rights, and not with how exercise of those rights might be restricted or regulated, many variables potentially intervene between the policy alternatives and the impacts. Such variables include geographic factors, management systems, government regulation, technological changes, and the effect of changing economic incentives and restraints on water use. Where, however, implementation of a particular alternative requires access to sophisticated hydrologic data, a discussion of the hydrologic problems involved is included under this heading.

## DISCUSSION OF THE ALTERNATIVES

---

### Alternative #1: Make no change in present policy

---

#### Description and Methods of Implementation

Alternative #1 provides for no additional legislative action specifically designed to define the nature or extent of individual property rights in groundwater. Existing case law would be allowed to stand as would the provisions of LB 375.<sup>8</sup> Occasional interpretations and refinements of current policy could be expected through supreme court decisions. Probably the best expressions of current policy are found in two supreme court cases and one Nebraska statute which respectively provide as follows:

“...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, ...” *Olson v. City of Wahoo*<sup>9</sup>

The public, through legislative action, may grant to private persons the right to the use of publicly owned [ground] waters for private purposes; but ... the public may limit or deny the right of private parties to freely use the water when it determines that the welfare of the state and its citizens is at stake.” *State Ex. rel. Douglas v. Sporhase*<sup>10</sup>

“Every landowner shall be entitled to a reasonable and beneficial use of the groundwater underlying his or her land, subject to the provisions of Chapter 46, article 6, and the correlative rights of other landowners when the groundwater supply is insufficient for all users.” LB 375, 1982 Nebraska Legislature.<sup>11</sup>

Additional discussions of current policy and its effects can be found in Chapters One and Two.

#### Socio-Economic Impacts

Current policy provides landowners with a considerable degree of certainty while also retaining a level of flexibility for future public actions if deemed necessary. Basically, the land-

owner's rights to use the water supply publicly owned is subject only to the correlative rights of others and to public decisions made by or through the authority of the legislature. Certainty in use diminishes where groundwater is being mined or where conflicts are occurring. Decisions to limit or deny use of the water in such situations can result in an economic loss to the landowner either in a previously made investment in equipment or perhaps even in the value of the land itself.

#### Physical-Hydrologic and Environmental Impacts

Under current policy, development of groundwater can be expected to continue in those areas where supplies are adequate. Development will depend more on economics, water supply, and availability of energy than it will on the nature or extent of the individual's property right in the groundwater.

---

### Alternative #2: Adopt the English Rule of Absolute Ownership as the definition of groundwater property rights in Nebraska.

---

#### Description and Methods of Implementation

The English Rule provides that landowners have an absolute right to capture and use water found beneath their lands. It is popularly viewed as giving overlying landowners complete ownership of the water found beneath their lands. If that were literally true, no landowner would have the right to pump water that reached his well by percolation from beneath a parcel of land owned by another since to do so would be to take another's property. In fact, the English Rule is a pure rule of capture more properly viewed as a rule of non-ownership, a withdrawal of law rather than a rule of law. Landowners can hardly be said to “own” water found beneath their land if courts give such landowners no remedies against the acts of adjoining landowners. Given the total withdrawal of law under the English Rule, considerable doubt exists whether Nebraska could, at least by statute, adopt the English Rule.

The English Rule was developed before men had a clear understanding of groundwater principles. Indeed, the fact that groundwaters moved beneath the soil out of sight of men was cited by the court in the leading case of *Acton v. Blundell*<sup>12</sup> as justification for adopting a pure rule of capture as the definition of a groundwater property right. Not surprisingly, a majority of

American jurisdictions initially adopted the English Rule. According to Professor Powell, before 1922, twenty-eight states accepted the English Rule announced in *Acton* by holding or dictum.<sup>13</sup> While initially nearly all of the contiguous western states accepted the English Rule, today only Texas continues to adhere to it.<sup>14</sup>

The only apparent advantage to the English Rule is its ease of application. Landowners have completely unfettered access to as much water as they can pump from beneath their land. Under such a system, overlying landowners must use groundwater as fast as they can to protect their supply from being used by another landowner overlying a common aquifer.

### Case Study

The Texas experience indicates the adverse consequences of such a rule of property. Under Texas law landowners have no remedy against extremely high volume users,<sup>15</sup> even where the water is for use off the overlying land.<sup>16</sup> Recently, Texas, despite a long history of cases adhering to the English Rule, began to back away from the rule in land subsidence cases.<sup>17</sup> The English Rule could not accommodate the needs of landowners in a modern setting. Since the English Rule increases private incentives to deplete aquifers at a rapid rate, the rule has been widely criticized as incompatible with sound management practices in water short areas.

### Socio-Economic Impacts

The English Rule does not protect a landowner's right to use of water from the actions of other landowners. Thus, under the English Rule, a landowner's water right is not secure. Consequently, the English Rule leads to very inefficient patterns of water use. Since the law offers landowners no water right protection, landowners must either rely on their ability to capture water faster than their neighbors or on their ability to negotiate contractual water use limits with their neighbors. The consequence of the first course of action is overuse and excessive aquifer depletion. The attainment of the second course of action is normally blocked by excessive transaction costs. Thus, from an economic perspective, the English Rule is appropriate only where groundwater supplies are far in excess of groundwater demands, such that overuse and aquifer depletion are not perceived to be potential problems.

A second economic difficulty with the English Rule is its extreme inflexibility. If an unfettered right to capture groundwater is a constitutionally

protected property right, any regulations designed to minimize the adverse impacts of the rule would be subject to attack on taking grounds, leaving little or no flexibility to respond to developing problems.

From an equity perspective, the English Rule favors high volume, short term users over water users who would prefer to stretch supplies over longer periods of time. It also favors current users over future users and private landowners over members of the general public.

### Physical-Hydrologic and Environmental Impacts

Adoption of this alternative would encourage a maximum rate of aquifer withdrawal and depletion. Eventually, certain aquifers would likely become economically exhausted necessitating a return to dryland farming and ranching. In areas where dryland farming is not feasible, difficulty in reestablishing native vegetation could result in serious soil erosion problems.

---

### **Alternative #3: Adopt the American Rule of Reasonable Use as the definition of groundwater property rights in Nebraska.**

---

### Description and Methods of Implementation

The classic statement of the American Rule is found in *Forbell v. City of New York*.<sup>18</sup> In *Forbell*, wells operated by the city of Brooklyn lowered the water table and made lands farmed by the plaintiff unfit for the cultivation of celery or water cress. In affirming a judgment in favor of the plaintiff, the court stated:

In the absence of contract or enactment, whatever it is reasonable for the owner to do with his sub-surface water, regard being held for the definite rights of others, he may do. He may make the most of it that he reasonably can. It is not unreasonable... that he should dig wells and take therefrom all the water that he needs in order to the fullest enjoyment and usefulness of his land as land, either for purposes of pleasure, abode, productiveness of soil, trade, manufacture, or for whatever else the land as land may serve. He may consume it but must not discharge it to the injury of others. But to fit it up with wells and pumps of such pervasive and potential reach that from their base the defendant can tap the water stored in the plaintiff's land, and in all the region thereabout, and lead it to his own land, and by

merchandising it prevent its return, is, however, reasonable it may appear to defendant and its customers, unreasonable as to the plaintiff and others whose lands are thus clandestinely sapped, . . .<sup>19</sup>

Thus, in substance, the American Rule was very similar to the English Rule. Under both rules rights are acquired by capture. The only significant limit on the right to capture under the American Rule is the requirement that extracted water be used in conjunction with the overlying land. Under the American Rule, then, groundwater cannot be captured and transported away from the overlying land, at least to the extent that other overlying landowners are injured. Generally, any consumptive use on the overlying land by an overlying owner will be permitted although discharge off the overlying land may be limited or prohibited. Thus, the essence of the American Rule is that overlying landowners are free to use as much groundwater as they can capture and use it as fast as they can capture it, as long as the groundwater use is intimately connected with the overlying land.

At the time the American Rule was developed, the rule gave all landowners an equal right of access to the aquifer and, by limiting transfer off the land, gave significant protection to the store of water in the aquifer. In the early part of the twentieth century the most significant demands on groundwater were for off-land consumption, chiefly municipal use. By restricting such transfers, aquifers were protected. The widespread development of groundwater irrigation in the West, however, eventually led to groundwater mining in many American Rule jurisdictions. Significantly, however, the American Rule did not give landowners a right to an apportionment of the water in the underlying aquifer. As under the English Rule, landowners were given only a right of access to the aquifer. The science of hydrology had not yet progressed to the point where apportionment of groundwaters was viewed as a practical alternative.

### Case Study

The limitations of the American Rule are clearly demonstrated by experience in Arizona which recently abandoned the American Rule and adopted a comprehensive, statutory system of groundwater management. Much of Arizona's historic groundwater law evolved through litigation involving the City of Tucson. In *Jarvis v. State Land Department, (Jarvis I)*<sup>20</sup> irrigators sought to enjoin the City of Tucson from extracting water located beneath lands in a critical groundwater area. The water was to be transferred to the city

some 15 miles away. Critical area designation was applied by the state when groundwater basins were found to have an insufficient supply of groundwater from continued irrigation at the then current levels of withdrawal. Developing new irrigation in critical areas was effectively prohibited. In *Jarvis I*, the court granted the requested injunction since the American Rule precludes transfers off the overlying land if others are injured by the transfer. The existence of a critical area designation was held to be sufficient evidence of injury to other landowners.



In subsequent litigation, the Arizona Supreme Court was called upon to clarify the doctrine. In *Jarvis v. State Land Department, (Jarvis II)*<sup>21</sup> irrigators again sought to limit the groundwater operations of Tucson. The court generally reiterated its rule in *Jarvis I* that water could not be transported off the overlying land but created a limited exception to permit transfer to an airfield located in the critical area. The court reasoned that Tucson should not be prohibited from supplying the airfield since the airfield itself could legally withdraw water from the same basin for domestic purposes by sinking its own wells. In an attempt to ease the burden on Tucson to supply its residents with water, the court created a further equitable exception to the American Rule by authorizing Tucson to acquire cultivated lands, retire them from cultivation, and withdraw an amount of water equal to the historic maximum use upon the lands so acquired. The withdrawn water could then be transferred off the overlying land. In *Jarvis v. State Land Department (Jarvis III)*<sup>22</sup> the court held that the historic maximum usage referred to in *Jarvis II* was

“consumptive use” and not the amount actually pumped. *Jarvis III* also emphasized that the *Jarvis II* decision, which authorized Tucson to retire lands from cultivation to develop a water source, was based purely on equitable principles and had no counterpart in the American Rule of Reasonable Use.

Finally, in a decision that provided the major impetus to development of new groundwater legislation in Arizona, the court reiterated that the doctrine of reasonable use does not permit transfers off the overlying lands if others are injured.<sup>23</sup> In granting an injunction against pumping by mining companies that damaged the farming operations of irrigators, the court stressed that no authority supported a proposition that off land transfers were not off lands overlying a common source of supply. The court determined that, except in certain highly unusual circumstances, many overlying owners would be disadvantaged by such a rule since water would not move up gradient from the point of return.

The limits which the reasonable use rule placed on certain high value users of water, typically mines and cities, resulted in a search for political solutions. The result was the 1980 Arizona Groundwater Management Act which created Active Management Areas (AMA's) covering some 80% of the state's population. Within an AMA, new irrigation is prohibited, other new uses require a permit, existing irrigators are subjected to withdrawal limits based on crops historically grown, transfer provisions are institutionalized both within and away from basins, pump taxes are authorized, and a schedule for reducing the amount of water available to current irrigators and other users is implemented. Outside of AMAs, the American Rule applies except that the remedy of injunction is no longer available to overlying landowners injured by another's transfer of groundwater off the overlying land. The Arizona statute illustrates the type of regulation that might be sustained in an American Rule jurisdiction. Thus, although it is often said that landowners “own” the water beneath their lands in American Rule jurisdictions, clearly rights can only be established by use and even long periods of uninterrupted use establish no right to a continued **level** of use. Many criticisms that apply to the English Rule of Absolute Ownership, however, apply with equal force to the American Rule of Reasonable Use.

### **Socio-Economic Impacts**

Many of the economic criticisms of the English Rule also apply to the American Rule of Reasonable Use. As is the case under the English Rule, property rights under the American Rule are not

secure. Landowners normally are free to capture as much water as they can as fast as they can as long as the water is applied to a use intimately connected with the overlying land. Any adverse effects on other landowners are ignored. The only increase in security brought about by the American Rule is the restriction on use of water off the overlying lands. Landowners need not fear that water will be captured by high volume, off-land users such as municipalities, without compensation being paid. Thus, the American Rule seems to be appropriate only where off-land uses constitute the major threat of aquifer depletion.

The American Rule is, however, a bit more flexible than the English Rule. Since water must be reasonably used in conjunction with the overlying land, properly drafted regulations could probably survive constitutional challenge on taking grounds. The types of regulation that would be permissible may, however, be limited. Water use efficiency standards, for instance, might be upheld while water quantity limitations might be struck down. Thus, the American Rule is somewhat inflexible, though not to the degree of the English Rule.

From an equity perspective, the American Rule also favors high volume, short term users over users who would prefer to use lesser amounts of water over a longer period of time, as long as the high volume users do not transfer the water off the overlying land. The American Rule also favors current users over future users, users of water on overlying lands over public and private off-land users, and private landowners over the general public.

### **Physical-Hydrologic and Environmental Impacts**

Adoption of this rule would tend to encourage rapid aquifer depletion by overlying owners. To the extent that irrigation is the dominant use of water, environmental and physical-hydrologic impacts would be similar to those described under the English Rule. Adverse impacts, however, could be reduced by adopting management strategies that would be permitted under this rule. Without knowledge of the regulations adopted, however, impacts cannot be determined further.

---

**Alternative #4: Adopt the California Rule of Correlative Rights as the definition of groundwater property rights in Nebraska.**

---

## Description and Methods of Implementation

The California Rule of Correlative Rights was announced in *Katz v. Walkinshaw*.<sup>24</sup> The court first rejected the absolute ownership doctrine, stating:

We cannot perceive how a doctrine offering so little protection to the investments in and product of such enterprises, and offering much temptation to others to capture the water on which they depend, can tend to promote developments in the future or preserve those already made, and, therefore, we do not believe that public policy or a regard for the general welfare demands the doctrine.<sup>25</sup>

The court then went on to fashion a unique California Rule based on the American Rule of Reasonable Use. The right of a landowner to use underlying groundwater was limited to the quantity that could be used in connection with the overlying land. In an important departure from the American Rule, however, the court in *Katz* held that excess or surplus water could be appropriated by public or private parties for use on distant lands. Among such appropriators, the rules that governed priority disputes on surface waters were to be applied to groundwater disputes. In conflicts between appropriators and overlying landowners, the court held that rights of landowners would be paramount to rights of appropriators if the landowners had used groundwater prior to the attempted appropriation. The court reserved the question of how disputes would be resolved between distant appropriators and overlying landowners whose use did not begin until after the appropriation. Finally, the California court announced that between overlying landowners, in the event of an insufficient supply, each landowner was entitled to a "fair and just proportion" of the water. The court did not discuss precisely how this apportionment of rights would be accomplished.

### Case Study

California law continued to evolve through subsequent litigation. In *Burr v. Maclay Rancho Water Co.*,<sup>26</sup> the California Supreme Court answered the question it had reserved in *Katz*. In *Burr*, the court held that a subsequent overlying user has priority over a prior appropriator for use on distant lands, and consequently, an appropriation is subject to the reasonable use of water on lands overlying the supply. The court was concerned with the possibility that an appropriator might otherwise acquire the landowner's right by adverse use.

The issue of prescriptive rights took on new importance in *City of Pasadena v. City of Alhambra*.<sup>27</sup> In *Pasadena*, the court held that an appropriative taking of non-surplus water is wrongful, and hence, may ripen into a prescriptive right if continued for the statutory period in continuous, adverse, notorious, open, and hostile fashion. The court went on to hold that the prescriptive statute begins to run once an overdraft commences, and that all rights, whether overlying, appropriative, or prescriptive, are subject to loss through prescription. Since however, original pumpers continued to withdraw water contributing to the overdraft, they too acquired rights by prescription. This doctrine, known as mutual prescription, essentially places all users of water on an equal footing who have used water for at least five years beyond the date that an overdraft has commenced. In a bitter dissent to *Pasadena*, Judge Carter of the California Supreme Court argued that the decision was contrary to "every statute, principle, and rule of law" previously enacted or promulgated. As a result of *Pasadena*, the burden of an overdraft was shared by all users in proportion to their use of water with proportional reductions required.



In *Tehachapi-Cummings Water District v. Armstrong*,<sup>28</sup> the court clarified the doctrine of mutual prescription as applied to disputes among overlying owners. The court held that, while appropriators can gain prescriptive rights against other appropriators or against overlying landowners, one overlying owner cannot establish a prescriptive right against another

overlying owner. Overlying rights are correlative like those of surface riparians. Each owner's fair share of water is based on current and beneficial needs, not on the history of past use. The dominant concern of the court is maximizing beneficial and productive use of water.

The California Rule has also come under stress as water supplies have become more critical. In *Los Angeles v. San Fernando*,<sup>29</sup> the California Supreme Court reexamined the doctrine of mutual prescription and severely limited its scope by holding that California law prohibits cities from losing title to water rights by prescription. Absent the holding in *San Fernando*, Los Angeles would have lost priority that it claimed based on the existence of historic pueblo rights and on the importation of water from the Owens valley. The court also limited the doctrine of mutual prescription as applied to private parties by requiring a specific finding of actual or constructive notice of the existence of an overdraft before the statutory period begins to run. In addition, the court held that years of surplus break the continuity necessary for the running of a prescriptive period. In the wake of *San Fernando*, the following propositions regarding the California Rule hold:

- 1) Cities acquire rights to the return flows from imported waters which are superior to any overlying or appropriative rights in native water.
- 2) Overlying landowners are entitled to use the amount of native water they can put to reasonable and beneficial use on the overlying land **less** any right lost by prescription.
- 3) Holders of appropriative rights to groundwater are entitled to have such supplies allocated under the principle that first in time is first in right unless their appropriative right has been obliterated by mutual prescription. Prescriptive rights cannot be acquired against a city.

The real impact of the California Rule has not been in allocating water supplies, but rather in determining who must pay for more expensive imported water. The history of the California Rule has been an evolving attempt to devise a property rule which permits maximum efficient use of water. As economic and physical conditions changed, the rule evolved often in a tortured manner as courts struggled to maintain some consistency with what had gone before. The dominant concern has been to preserve investments in water. Thus, the English Rule was rejected and landowners were assured some rights to groundwater, rights that encouraged

investment. Appropriation of surplus waters was permitted to encourage use. Eventually, mutual prescription was developed to insure that large investments in groundwater development would not be totally lost. As imported water became more important, the doctrine of mutual prescription was restricted to facilitate a more "equitable" sharing of the costs of the importation.

An unfortunate side effect of the development of the California Rule has been the development of legal fictions to justify imposition of a legal doctrine (such as implying constructive notice of the beginning of an overdraft in *Pasadena*, when the existence of such an overdraft could only be determined by massive expenditures on hydrologic investigations years later). These legal fictions have kept groundwater users from achieving any degree of certainty as to the nature of their rights, at least until recently. Ironically, it was a felt need for certainty which led the California courts to develop the rule of correlative rights in the first instance.

### **Socio-Economic Impacts**

The economic impacts of the California Rule are exceedingly difficult to articulate. Rights in theory are more secure than under either the English Rule or the American Rule due to the "sharing" notion when an overdraft occurs. This increased security of right, however, is significantly lessened by the possibility that rights can be lost through prescription. Since the statute of limitations on prescription begins to run when an overdraft commences, the security of an overlying landowner's right can only be preserved by extreme vigilance in the form of expensive and sophisticated hydrologic monitoring. Since "excess" groundwater supplies in a basin are subject to prior appropriation, off-land appropriators have secure rights only insofar as they hold early appropriations and surplus waters continue to exist.

A major economic advantage of the California Rule is its flexibility. Its emphasis on "sharing" in a variety of circumstances insures that major water investments will not be lost totally. Under the California Rule, a state also has great latitude in adopting regulations without encountering constitutional difficulties. The California Rule thus tends to facilitate efficient use of groundwater but in no way mandates efficient use.

The equity impacts of the California Rule also are extremely difficult to isolate. Overlying owners ostensibly are favored over off-land users, but the possibility of the prescriptive loss of rights severely limits this advantage. Moreover, the ability to appropriate "excess" water

puts such "off-land" users as municipalities in a better position than they would occupy under the American Rule. Early appropriators for off-land users are favored over later appropriators. Overlying landowners, however, are treated somewhat equally in that they can be ratably restricted in times of shortage. Large volume users, however, are favored over low-volume users since user rights are correlated on the basis of current and beneficial needs. Early users are favored somewhat over later users or deferred users since the California Rule does not permit water to be saved for future use.

### **Physical-Hydrologic and Environmental Impacts**

The operation of the California Rule is much too complex to facilitate an accurate description of physical-hydrologic and environmental impacts. The most that can be said is that the rule offers a potential to prevent total exhaustion of an aquifer because of provisions that mandate sharing and pro rata reductions in time of shortage.

---

### **Alternative #5: Adopt a Rule of Reasonable Use as developed in certain eastern states as the definition of groundwater property rights in Nebraska.**

---

#### **Description and Methods of Implementation**

Certain eastern states have resolved groundwater disputes on the basis of riparian principles, namely on a substantive determination of what use is reasonable in a given circumstance.<sup>30</sup> Where riparian principles are applied, the rights of individual landowners overlying an aquifer are correlated. Landowners have a right to use groundwater but only to the extent that others are not injured thereby. The American Rule, in contrast, sanctions uses which injure other overlying landowners by depleting the aquifer as long as the depleting landowner is not transporting the water off the overlying land.

An extreme interpretation of this rule would limit extractions to no more than the sustainable yield of the aquifer. A more relaxed version of the rule would permit aquifer dewatering, but only as long as court-defined superior uses were not interfered with. Such *ad hoc* determinations create great uncertainty of right, so much uncertainty in fact, that the rule probably cannot function as a rule of property but only as a rule of tort. A more complete development of the tort law

approach to groundwater property rights is discussed in *Alternative #6*.

### **Socio-Economic Impacts**

While a reasonable use rule would be extremely flexible, it would offer landowners almost no security of right. The investment deterrent of potential future *ad hoc* determinations of use rights would act as a significant barrier to attaining economic efficiency in water use. In some respects, this rule is even less secure than the English Rule since a landowner cannot rely on an ability to out-capture his neighbor. On the other hand, the flexibility of the rule would permit judges to reallocate water in a more efficient manner if the circumstances demanded reallocation. Judges would not necessarily strive for economic efficiency, however, nor would they necessarily be capable of evaluating economic efficiency in use even if that were perceived as a goal.

The *ad hoc* nature of use determinations under this rule makes it impossible to evaluate equity impacts. All that can be said is that no particular groups are inherently favored over other particular groups of users.

### **Physical-Hydrologic and Environmental Impacts**

Since property rights would be subject to *ad hoc* judicial interpretation under this alternative, no basis exists to predict physical-hydrologic or environmental impacts. While judicial power could be used to minimize adverse impacts, the rule offers no assurance that judicial power would, in fact, be used to minimize adverse impacts.

---

### **Alternative #6: Adopt the reasonable use rules found in the RESTATEMENT (SECOND) OF TORTS § 858 as the definition of groundwater property rights in Nebraska.**

---

#### **Description and Methods of Implementation**

RESTATEMENT (SECOND) OF TORTS § 858 (1979) provides as follows:

##### **Liability for Use of Groundwater**

(1) A proprietor of land or his grantee who withdraws groundwater 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 groundwater unreason-

ably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,

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

(c) the withdrawal of the groundwater 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.

(2) The determination of liability under clauses (a), (b), and (c) of Subsection (1) is governed by the principles stated in § 850 to 857.

Sections 850 to 857 of the Restatement set forth principles to be applied in resolving surface water disputes among riparian proprietors. The Restatement position is thus a somewhat more sophisticated version of the eastern approach to the American Rule discussed in *Alternative #5*.

### Case Study

The RESTATEMENT (SECOND) OF TORTS Rule, as explicated in a preliminary draft, has been adopted in Wisconsin and its operation is illustrated by the case of *State v. Michels Pipeline Construction, Inc.*<sup>31</sup> In *Michels Pipeline*, defendant dewatered an aquifer to permit tunneling for a sewer some forty feet beneath the surface. Plaintiffs sued alleging that defendant's activities caused great hardship by drying up some wells, decreasing capacity and quality in other wells, and by causing foundations, basement walls, and driveways to crack due to soil subsidence. The trial court granted defendant's motion to dismiss the complaint for failing to state a cause of action. The dismissal was proper under the then prevailing English Rule.

On appeal, the Wisconsin Supreme Court examined the basis of the English Rule, determined that modern hydrologic sophistication obviated the need for the English Rule, and adopted the Restatement Rule. The court stated that the rule preserves a "privilege" to use groundwater beneath the land while expanding the protection of the American Rule to owners of small wells harmed by large withdrawals for use on overlying lands. As pointed out by the court, a central assumption of the Restatement Rule is that enough groundwater usually exists to satisfy the needs of all users with the crucial issue a determination of how costs associated with a general lowering of the water table are to be shared. In *Michels Pipeline*, the case was remanded to the trial court to determine whether defendant's use of water caused "unreasonable harm" to the plaintiffs. Essentially, the effect of the Restatement Rule is to bring groundwater

rights law "in line with the general limitation of the use of property embodied in the law of nuisance."



The Restatement Rule demonstrates the often obscured relationship between rules of liability and rules of property. Under the RESTATEMENT (SECOND) OF TORTS, a landowner's property right in groundwater is defined by reference to the liability of others for interfering with his groundwater source. A landowner under the Restatement Rule has an absolute right to capture water found beneath his land as long as the amount of water captured is not great enough to cause unreasonable harm to other landowners. In addition, clause (1)(b) of the Rule permits apportionment of groundwater stocks in a situation where the aquifer is being mined. The Restatement Rule also assumes that groundwater rights are marketable.<sup>32</sup>

The chief benefit of the Restatement Rule is its flexibility to meet changing circumstances. This flexibility is its chief shortcoming as well, however, since landowners have no certainty of right to use water. Water use investment decisions are always subject to the possibility that a court might find the particular use to be unreasonable in relation to the needs of others at some future date. Furthermore, as an attempt to incorporate the best features of the three traditional common law rules, it lacks internal consistency. Finally, the rule is designed to place most groundwater use and allocation decisions within the equitable jurisdiction of courts rather than within the policy making purview of legislatures, gaining a degree of flexibility in the law at the expense of the

greater uniformity of application that should flow from more detailed legislative pronouncements.

### **Socio-Economic Impacts**

As a more sophisticated version of the Eastern Reasonable Use Rule, the Restatement Rule diminishes some of the disadvantages discussed under the Eastern Rule. Particularly, the Restatement Rule offers a landowner much more security than the Eastern Reasonable Use Rule while preserving a great measure of flexibility. A landowner is secure in a right to capture water found beneath his land as long as the capture does not result in unreasonable harm to another. While “unreasonable harm” is subject to judicial interpretation, the Restatement contains criteria constraining the choice. The flexibility of the rule probably allows a state to adopt most forms of regulation without fear of constitutional challenge.

The equity impacts of the Restatement Rule cannot be determined accurately since much turns on specific holdings of reasonableness. As a rule of non-liability however, it tends to favor current users over future users.

### **Physical-Hydrologic and Environmental Impacts**

Physical-hydrologic and environmental impacts of *Alternative #6* cannot be determined with any degree of precision. Too much depends upon the manner in which “unreasonable” is interpreted in judicial decisions. A potential for minimizing adverse consequences is present, however, given the flexibility of the alternative.

---

## **Alternative #7: Adopt a First User Rule as the definition of groundwater property rights in Nebraska.**

---

### **Description and Methods of Implementation**

A recent law review article suggested three alternatives to the nonliability rule set forth in RESTATEMENT (SECOND) OF TORTS § 858 and discussed in *Alternative #6*.<sup>33</sup> The first suggestion is discussed here and the other two in the next two alternatives.

The authors’ first proposal would incorporate principles of western prior appropriation law into groundwater property rights. The suggested rule would read as follows:

A possessor of land or his grantee who uses groundwater from an aquifer is subject to liability for interference with the use of water,

or for damage to the land surface or structures upon the overlying land, caused to another whose use of specific nature and amount predates his use, unless such prior use constitutes waste.<sup>34</sup>

The First User Rule is more certain than the Restatement of common law rules and hence, should encourage early investment and discourage litigation. The rule may not be perceived fair, however, since it prefers early, less valuable uses, over later, more valuable uses. Furthermore, the rule may be difficult to administer because, at least in theory, each subsequent use would cause some injury to all prior uses located over a common aquifer. Some of the above difficulties could be lessened, however, by adopting a full-fledged prior appropriation system as discussed in *Alternative #10*. Finally, a First User Rule does not prevent or control aquifer depletion.

### **Socio-Economic Impacts**

A First User Rule gives a landowner greater security of right than some other rules provided the holder of the right is an early user. Favoring early users is not necessarily economically efficient, however, since early uses may be less valuable than later uses. It is thus necessary that rights and priorities be transferable if First User Rules are to lead to efficient results. A First User Rule also is somewhat inflexible since, once the rule is established, regulating the activity of early users would be constitutionally suspect.

The equity impacts of this alternative favor early users over later users and users of water over conservers of water. Since aquifer depletion is not controlled by a First User Rule, current users are favored over the public generally. This rule contains no preference between overlying owner and off-land users.

### **Physical-Hydrologic and Environmental Impacts**

A first user rule, absent additional regulation, would likely lead to rapid aquifer depletions since some users would have an absolute right to continue pumping. The rule is more concerned with who gets prime access to groundwater than with permissible levels of extraction.

---

## **Alternative #8: Adopt a Preference in Use Rule as the definition of groundwater property rights in Nebraska.**

---

## Description and Methods of Implementation

The second alternative suggested in the *Lowe* article<sup>35</sup> would limit liability for groundwater interference to situations in which higher preference uses were injured by lower preference uses. Preferences would be set by the legislature or by an administrative agency. Such a rule, which would be an extension of Nebraska's current system of **statutory** preferences,<sup>36</sup> might read as follows:

A possessor of land or his grantee who uses groundwater from an aquifer is subject to liability for interference with the use of water, or for damage caused to the land surface or structures upon the overlying land, owned by a preferred user. The following uses are listed in order of preference:

- 1) ...
- 2) ...
- .
- .
- .
- n) ...

The Preference in Use Rule essentially is grafted onto the English or American Rules and is predicated on an equitable principle which holds that similar users should share the burden of aquifer depletion or well interference caused by their use but should not be required to share the burdens imposed by dissimilar, less preferred users. Preferences could be based on the perceived relative social value of the uses or on the magnitude of average withdrawals with varying economic consequences. As with the previous alternative, this rule, by itself, does not prevent aquifer exhaustion.

## Socio-Economic Impacts

A Preference in Use Rule promotes economic efficiency only if the priorities or preferences established reflect relative economic values of water use. Rights of preferred users are secure while rights of less preferred users are not secure. A major economic criticism of the rule is its inherent inflexibility once preferences are established. Unless they are modified over time to reflect changing economic relationships, inefficient water use will be encouraged. The possibility that preferences could change, however, tends to reduce security of right.

Equity impacts would depend on the precise list of preferences adopted. Preferred users, however, would be free to injure less preferred users under this alternative and the less preferred users would not need to be compensated

for their loss. In addition, current users would be favored over future users and the public generally.

## Physical-Hydrologic and Environmental Impacts

The physical-hydrologic and environmental impacts of this rule cannot be determined absent knowledge of the specific preferences established. In addition, the rule offers no assurance that the rate of aquifer depletion would be regulated. The most that can be said is that widely varying impacts would accompany alternative schemes.

---

## Alternative #9: Adopt a Comparative Cause Rule as the definition of groundwater property rights in Nebraska.

---

## Description and Methods of Implementation

The final alternative suggested in the *Lowe* article<sup>37</sup> was stated by the authors as follows:

A possessor of land or his grantee who uses groundwater from an aquifer is subject to liability for resulting interference with the use of water, or for damage to the land surface or structures upon the overlying land, in the proportion to which his use during which the impairment or damage was caused bears to all uses of groundwater from the aquifer during that period.<sup>38</sup>

The Comparative Cause Rule recognizes that all users of groundwater are responsible for water table declines and other types of groundwater interference. Consequently, the rule requires that costs be shared in proportion to the quantity of water extracted from the aquifer. Thus, if B's new use caused A to incur a \$1000 expense to deepen his well and B used three times as much water as A, B would be required to pay \$750 and A would be required to pay \$250 to deepen A's well. As promulgated by the authors, however, the Comparative Cause Rule also incorporates first user principles since, in the above example, if B's use was prior, A would have to bear the entire cost of constructing a well deep enough to reach the aquifer.

A major problem with the Comparative Cause Rule is in apportioning liability as the number of parties extracting water from an aquifer increases. Furthermore, any new use overlying the aquifer is potentially a new source of litigation, at least once the point is reached where average annual withdrawals exceed the average annual

amount of natural recharge. Finally, as with the previous two alternatives, no provision in the rule prevents or retards the economic exhaustion of the aquifer. Consequently, this alternative, and the two preceding ones, have serious deficiencies when applied to jurisdictions where groundwater mining and water shortages are common occurrences.

### **Socio-Economic Impacts**

The notion of sharing responsibility for costs of groundwater depletion among new and old users tends to promote economic efficiency for forcing all users to consider part of the costs of aquifer depletion. A truly efficient Comparative Cause Rule, however, would be applied independent of a priority use rule. Economically, potential gains in efficiency from adopting a rule of comparative cause likely would be offset by the cost of ascertaining the relative contributions to cause, a problem greatly increased in heavy use areas. Consequently, the rule probably is not feasible in water short jurisdictions.

The equity impacts of this alternative favor current users over the public generally since the alternative contains no provision to prevent or retard the premature economic exhaustion of the aquifer. Early users are favored over later users, but not to as great an extent as would occur under a pure first user rule.

### **Physical-Hydrologic and Environmental Impacts**

This alternative, as have several previous alternatives, concerns allocation of the economic costs associated with aquifer declines rather than with the permitted rate of decline or with maintenance of an aquifer. Absent additional regulation, economic exhaustion of the aquifer remains a possibility. Without knowing the nature of any regulation, however, physical-hydrologic and environmental impacts cannot be ascertained.

---

**Alternative #10: Adopt a groundwater property rights system where rights are created and evidenced by securing a permit from a state agency.**

---

### **Description and Methods of Implementation**

A wide variety of statutory permit systems have replaced common law groundwater property rights in many eastern and western states. The

essence of a permit system is a requirement that property owners receive permission from a state agency before they may drill a well and pump from it. Absent a permit, landowners have no property right in underlying water that is subject to constitutional protection.<sup>39</sup>

In permit states the terms of the permit define the nature of the groundwater property right. In many western states a system of prior appropriation is used. A permittee is limited to the amount of water that can be beneficially used on overlying lands with permits issued on a first-come, first served basis. The number of permits that will be issued in a particular location varies from state to state in correlation with the degree to which a state permits mining of the groundwater aquifer.

Since most substantive rules of law can be incorporated into a permit which then serves as the source of a groundwater property right, the major value of permit systems is the degree of management that they facilitate. Consequently, permits are generally incorporated into "critical area" legislation in states which lack statewide water management programs. Permits may also provide greater certainty to water right holders. While permits do not inherently increase certainty of rights, they may do so if the parameters of the permit are drafted with specificity in mind. Finally, a major value of permit systems is the increased ability to monitor water use changes. Even where active state or local water management is not contemplated, permits provide an important source of data that can be used to identify potential future problems at a time when they can be averted at a relatively low cost.

### **Case Study**

Colorado, a prior appropriation permit state, uses a two part test to determine the amount of nontributary groundwater<sup>40</sup> available for appropriation. Regulation varies depending on whether the groundwater is found in a designated or nondesignated basin. Within a designated basin, new appropriation permits will be issued unless the current rate of pumping in a circular area within a three mile radius of the proposed well equals or exceeds the rate of pumping that would result in a 40% depletion of the available groundwater in that area over a 25 year period.<sup>41</sup> The three mile rule was adopted to implement a statutory provision empowering the Colorado Ground Water Commission to deny an application for a groundwater appropriation if it finds that the proposed appropriation will unreasonably impair existing water rights from the same source, taking into account the area, geologic conditions, annual recharge, the priority and

quantity of existing claims, and other factors.<sup>42</sup> In the case of nondesignated, non-tributary groundwater, Colorado limits annual pumping to no more than 1% of water stored under the applicable area.<sup>43</sup> The Colorado permit system, however, is very expensive to administer.

### **Socio-Economic Impacts**

The major economic advantage of permits is to facilitate regulation and management of an aquifer. Whether or not the permit enhances the prospect of an economically efficient allocation of water depends upon the particular substantive rule of law that is incorporated into the permit. Consequently, one cannot determine the efficiency or equity impacts of this alternative other than to say most rules could be improved by a permit that clearly indicates the nature of the right possessed, whatever that right might be. It is difficult to say, however, whether the gains in certainty from the use of permits would result in economic benefits that exceed the administrative cost of the permit system. That particular cost-benefit relationship also might vary depending on the substantive rule of law incorporated into the permit system.

### **Physical-Hydrologic and Environmental Impacts**

The physical-hydrologic and environmental impacts of permit systems cannot be identified apart from the underlying system of property rights and regulations incorporated into a permit system. Permit systems do, however, offer a convenient management vehicle for minimizing the adverse impacts of groundwater use.

---

**Alternative #11: Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the total number of acres of overlying land owned by the landowner.**

---

#### **Description and Methods of Implementation**

*Alternative #11* would fix each claimant's fair share of a common pool of groundwater. The effect of this rule would be to give overlying landowners some ownership of the water while it is still in place beneath the surface of their land.

Absent formal quantification of rights, state courts uniformly reject "ownership in place" theories as being inconsistent with the fugitive nature of groundwater. Consequently, all of the common law rules require capture of groundwater before significant property interests are created.

Quantification of groundwater property rights requires the existence of sophisticated hydrologic data concerning aquifer boundaries as well as the depth and structure of the aquifer at any particular point in space. Once an apportionment of waters is accomplished, however, landowners become secure in their right to withdraw and use groundwaters up to the maximum limit of their allocation. The state, of course, would not be required to make all water in storage available to overlying owners. It could protect all or a portion of the stock of groundwater found in the aquifer. In any event, an allocation of rights based on the physical characteristics of the underlying aquifer would serve to establish the relative proportion of the available supply that each overlying landowner was entitled to claim as his own.

Schemes that attempt to quantify groundwater rights based on the amount of overlying land may result in situations where the annual amount of water allocated to a particular user is less than the amount of water needed to make extraction economically feasible. Several potential solutions to the problem can be hypothesized, but most have serious limitations. Allowing such landowners to withdraw water only on alternate years is normally not feasible since a fixed investment would be sitting idle a good portion of the time. Granting limited duration permits with a proscribed gap between permits is more feasible, but still suffers from the difficulty of accurately estimating the period of time necessary to fully recover an investment. Furthermore, such a rule might require abandonment of a productive asset that could continue to produce income at low cost even where the recovery period was sufficient to encourage the investment initially. Moreover, if no provision is made for the smaller landowner, such owners could be effectively deprived of their fair share of the aquifer yield. In some cases, no single landowner overlying a marginal aquifer may control enough land to make extraction economically feasible. In such an event, the groundwater supply would be effectively wasted through non-use.

Two potential solutions appear to have fewer limitations, however. On the one hand, quantified water rights could be made marketable and transferable. Competitive bidding would then determine who gets the water use and who would get alternative compensation in the form of rental

or purchase payments for the water right transferred. A second and related alternative is to rely on pooling and unitization agreements as is commonly done for oil and gas extraction.

In oil and gas law, pooling refers to bringing together of small tracts of land sufficient for the granting of a permit under existing well spacing rules. Unitization, on the other hand, refers to the joint operation and management of a producing reservoir. Most states, including Nebraska, permit compulsory pooling and unitization agreements.<sup>44</sup> Pooling prevents economic waste that would accompany the drilling of a large number of small wells while unitization allows an entire reservoir to be managed without regard to surface boundaries. Thus, by analogy, if minimum well spacing requirements had the effect of prohibiting extraction of groundwater, contiguous tracts could be pooled for purposes of marshalling the necessary number of overlying acres with private negotiations used to allocate the benefits of water extracted. Similarly, if agreement could be reached, the groundwater reservoir could be unitized with wells placed on the most productive ground and owners of less productive ground sharing in the benefits of groundwater use. A wide number of variations on the above theme could be developed. The importance of the twin concepts of pooling unitization, however, is that they enable all landowners to share in the benefits of groundwater use while helping to ensure that groundwater is put to the most productive use possible.

### Case Study

Oklahoma adopted a groundwater regulatory statute in 1972 that comes within the scope of this alternative.<sup>45</sup> The 1972 act is described in detail in *Jensen, The Allocation of Percolating Water Under the Oklahoma Groundwater Law of 1972*.<sup>46</sup> The act required that:

groundwater basins be identified, that the maximum annual yield from each water basin be determined by hydrologic studies, that the amount and location of land overlying such groundwater basin be determined, and that the maximum annual yield from the basin be divided among the owners of land above the basin in proportion to the surface area owned.<sup>47</sup>

Special provisions of the act exempt domestic wells from permit requirements (with domestic use encompassing household uses, livestock watering for animals up to the normal grazing capacity of the land, and irrigation of lawns, orchards, and gardens not to exceed three acres) and allow municipalities to claim all the water

allocated to platted land as long as the municipality supplies water to the platted land. The law also establishes a minimum aquifer life by providing that the depletion schedule used cannot exhaust the basin before July 1, 1993. Nothing prevents the state from establishing a longer aquifer life or even from limiting withdrawals to natural recharge. The system is thus quite flexible.

One of the significant problems faced in a general quantification of groundwater rights is the difficulty of determining the maximum annual yield of the aquifer, even after an aquifer life has been selected. Water may be recoverable at some points overlying the basin for a longer period of time than at other points. Thus, a state must decide whether all of the water in storage should be used to calculate maximum annual yield or only that portion down to a depth where substantially all of the overlying points can continue to extract water. Furthermore, the annual yield can be determined either with reference to the total amount of water in storage or with reference to the economically recoverable portion of water in storage. If total water is used, the aquifer will be economically depleted earlier than the date suggested by the selected aquifer life. If economically recoverable water is used, the maximum annual yield will change over time as economic conditions change. Oklahoma has attempted to deal with these problems by calculating maximum annual yield for subbasins within basins and by opting for an economically recoverable test. The difficulties, of course, are complicated considerably if there are presently existing private groundwater rights that must be incorporated into the new system.

Under the Oklahoma law, groundwater property rights are defined by the number of acres of overlying land owned by the groundwater user. To the extent that some landowners do not use their annual allocation, the effective life of the aquifer is increased. Although overlying landowners do not lose their right to pump through lack of use, there is no provision that permits landowners to save their allocation for a future period. This is so because Oklahoma regulations restrict only the annual amount that can be pumped. No provision restricts the total amount of water that can be pumped over time. Thus, early pumpers can use more than their proportional share of water in storage. It would, of course, be possible to set a maximum limit on the total amount of water which could be withdrawn over time from a particular tract of land. Maximum limits would result in a true proportional allocation of groundwater rights but would require additional expenditures for administrative record keeping and reporting.

## Socio-Economic Impacts

Quantifying groundwater property rights would give landowners absolute security of right. The system also would be flexible since virtually all forms of even-handed regulation would be permissible. Quantification, by itself, however, would not lead to economically efficient use of groundwater. Efficient water use would occur only if the rights were freely transferable in a market system that accounted for inherent market defects. The advantage of quantification, however, is that groundwater could then be treated economically much as any other item of property.

From an equity perspective, this alternative would favor landowners over the general public since landowners would capture much of the economic rent inherent in the groundwater resource. All landowners would benefit from groundwater, however, on the basis of hydrologic and geologic characteristics of their land rather than on history of use, priority of use, or time of use.

## Physical-Hydrologic and Environmental Impacts

The flexibility and certainty of right offered by quantification would facilitate sophisticated management of groundwater reservoirs that could minimize the adverse physical-hydrologic and environmental effects of groundwater use. Successful implementation of this alternative, however, would require sophisticated hydrologic data. Several factors must be known to determine the amount of groundwater in storage including the position of the upper surface of saturation, the definition of the base of the aquifer, and the porosity of the earth material. There are difficulties in the determination of each factor.

Determining the position of the upper surface of saturation becomes progressively more difficult as one moves across the state toward eastern Nebraska. For example, two wells side by side near Rising City, Nebraska have a 17 foot difference in water level during the winter months with greater differences during the summer. Essentially there is a water level drop in the lower aquifer unit under confined conditions and a water level rise in the upper aquifer unit under unconfined conditions. Determination of storage coefficients in both settings would be required before water level changes could be translated to changes in water storage. At least several pump tests would be required per section to get ball park figures.

Water-level information currently is most avail-

able in developed areas due to the efforts of NRDs in data collection. Unfortunately, these are the same areas where complexities mentioned in the previous paragraph occur.

Definition of the base of the aquifer has a number of concerns. How deep can irrigators go for water and still be economic? What is the water quality? What is the nature of the underlying bedrock? For example, at York, Nebraska three distinct sand and gravel layers have been tapped in turn as water level declines have occurred and development increased. Because most wells are drilled to a depth where adequate water can be obtained and not drilled to the base of the aquifer(s), a shortage of information exists in many areas.

Porosity, as it represents the potential for storage, has many factors such as sorting, packing, cementation of grains, sphericity, and angularity. A general figure would be 20 to 40 percent. Closer determination would require much more detailed field tests.

In short, much of the detailed information that might be required to implement this alternative does not now exist. A comprehensive program would be required to generate this information.

---

**Alternative #12: Quantify the amount of water hydrologically available beneath particular surface formations and give each landowner a vested right to withdraw a particular quantity of water based on the number of acres of productive irrigable land owned by the overlying landowner.**

---

## Description and Methods of Implementation

*Alternative #12* is based on the same concept as *Alternative #11*, quantifying groundwater property rights and allocating them in relation to the overlying land. This alternative differs from the previous one, however, in that water rights are not assigned on the basis of total overlying acreage owned but on the basis of productive overlying acreage owned. Consequently, this alternative incorporates an element of land use directly into the groundwater allocation process.

Difficulties, of course, would be encountered in an attempt to allocate groundwater rights based on the character of the overlying land. Some beneficial uses of water, such as for mining or manufacturing, may be independent of the character of the overlying land. On the other hand, reasonable agricultural use of ground-

water clearly is related to the character of the overlying land. Since agriculture is by far the most important user of groundwater in Nebraska, looking to the character of the land in allocating irrigation rights arguably is beneficial. The level of water use that would be reasonable in relation to the character of the overlying land is, however, a matter that varies over time as economic conditions and technology change.

Implementing this alternative would require determining the boundaries of underlying aquifers, the quantity of water in storage, and whether the aquifer should be mined or sustained at a particular level. In addition, overlying land would have to be classified by productivity and a determination made as to the relative amount of available water in storage that would be assigned to each productivity class. The major effect of this alternative would be to give property rights in groundwater to owners of overlying "irrigable" land instead of vesting the rights in owners of overlying land.

### **Socio-Economic Impacts**

In general, the efficiency impacts of this alternative would be the same as for the previous alternative with one exception. Allocating water on the basis of productive land rather than on the basis of the overlying land would result in larger allocations to those most likely to use the water. Since water users would then have less need to contract with others for water, transaction costs would be reduced and the prospects for achieving efficiency, enhanced.

The major economic difference between this alternative, and the previous one, however, is equitable. Under this alternative, owners of productive land would gain the benefit of the economic rent of water instead of sharing that resource value more broadly.

### **Physical-Hydrologic and Environmental Impacts**

The physical-hydrologic and environmental impacts for this alternative would be the same as for the previous alternative. Quantification offers a potential to minimize adverse impacts but it would require hydrologic data not currently available.

---

**Alternative #13: Codify the rules derived from Nebraska cases, as near as they can be determined, as the definition of groundwater property rights in Nebraska.**

---

### **Description and Methods of Implementation**

Nebraska groundwater property rights were analyzed extensively in Chapter One and that analysis will not be repeated here.<sup>48</sup> Existing case law rather clearly indicates that groundwater in Nebraska is public property subject to a private right of capture. Consequently, with the possible exception of a "public trust" type limitation, the state has wide latitude in allocating rights. Lacking express direction from the legislature prior to the adoption of LB 375,<sup>49</sup> however, the Nebraska Supreme Court evolved a body of law which permits private capture and use of groundwater without, necessarily, creating a private property right in a particular method of capture or quantity of water captured. This alternative would take what is probably no more than a permissive license to use groundwater, and statutorily transform that license into what could be a vested property right to the benefit of overlying landowners.

It must, of course, be cautioned that vesting property rights in private hands necessarily reduces future flexibility of state action in meeting future water problems since any future action would be limited by the "takings" clauses of state and federal constitutions.

Although existing Nebraska case and statutory law concerning groundwater property rights are not fully consistent, certain principles can be deduced. The enactment of LB 375<sup>50</sup> in the 1982 session of the legislature may, in fact, have already established many of these principles through rather general language. This alternative seeks a greater degree of detail and accomplishes that goal, more or less, by specifying the known or assumed effects of the Nebraska Rule of Reasonable Use, rather than by stating the rule itself. The following statutory formulation is intended to be a permanent codification of those effects, many of which could be changed or defined without significant constitutional constraint. Where Nebraska law does not provide guidance, a rule is included based on the development of similar rules in other states. This hypothetical set of rules, **all of which would be subject to other legislation now or later enacted**, reads as follows:

- 1) Groundwater in place beneath the surface of the earth is hereby declared to be, and to always have been, property of the people of the State of Nebraska, and such water is held in trust for the benefit of the people of the state.
- 2) Except as may otherwise be provided by the Legislature, overlying landowners have an equal right to capture and use a

- fair share of the groundwater found beneath lands that they can own.
- 3) The right of overlying landowners to capture and use groundwater found beneath the surface of their lands is limited to the amount of groundwater that can be put to reasonable and beneficial use on overlying land owned by the landowner.
  - 4) Any use of groundwater on the overlying land is declared to be reasonable and beneficial provided that the use is suitable to the character of the overlying land and provided that the use does not constitute waste.
  - 5) Captured groundwater may not be transferred off the overlying land owned by the withdrawing party without express public approval.
  - 6) The right of each and every landowner overlying a particular aquifer to capture and use groundwater found beneath their lands is correlative with and limited by the rights of all other overlying owners.
  - 7) If groundwater supplies are insufficient to meet the reasonable and beneficial needs of all overlying owners, overlying owners are entitled to have existing supplies apportioned among themselves.
  - 8) Groundwater supplies are insufficient to meet the reasonable and beneficial needs of overlying owners whenever average annual withdrawals are expected to exceed average annual natural recharge.
  - 9) In apportioning groundwater in times of shortage, consideration shall be given to the geologic and hydrologic parameters of an underlying aquifer, the amount of water in storage, the number of acres overlying the aquifer, the character of the land overlying the aquifer, and the size, character, and underlying aquifer characteristics of particular tracts of land among which the water is to be apportioned.
  - 10) Judicial apportionment of groundwater in time of shortage shall be without regard to history of use and without regard to present or future intent to commence or continue use.
  - 11) Supplies of groundwater in excess of the reasonable and beneficial needs of overlying owners, may, with public consent, be transferred away from the overlying lands and overlying landowners will not be deemed to have suffered any compensable injury as a consequence of the transfer.

- 12) Landowners who acquire groundwater property rights pursuant to the above sections may not sell, give, lease, or in any manner convey the rights to water so acquired without the express consent of the public.
- 13) Nothing in the above sections shall be construed to prevent parties possessing the power of eminent domain from acquiring the rights of overlying owners through eminent domain proceedings.

While the above formulation is not necessarily the way in which the Nebraska Supreme Court would resolve all issues of Nebraska law, it is consistent with existing law and could probably be implemented without constitutional objection. A major limitation of the approach, however, is the use of judicial allocation in place of administrative allocation. It would likely be more expensive to allocate through repeated litigation than through administrative actions. Furthermore, judicial allocation over time is less likely to yield consistent results than would an administrative procedure. Additional major weaknesses of the above approach include the absence of any explicit mechanism to consider the mining of groundwater, prohibitions on transfers and perhaps pooling of groundwater rights, the lack of any written documentation of the existence of a groundwater right, and lack of specific directives as to how specific provisions such as the "public trust" and "apportionment" are to be implemented. On the other hand, a formulation similar to that above would clarify many nebulous points in current law and give the courts greater legislative direction than has been present in the past.

### **Socio-Economic Impacts**

Codifying existing law would result in a substantial increase in landowner's security of right to groundwater. All else being equal, an increase in security of right would enhance the prospect of achieving economic efficiency. Codifying existing law, however, would significantly decrease flexibility that might be required to address changed circumstances in the future. Thus, the relative efficiency of the perceived existing set of rules is all important. Although existing law as defined in this alternative is not necessarily efficient, it is, for the most part, consistent with efforts to achieve economic efficiency. A major problem with existing law, however, is its silence on the issue of groundwater mining, an activity that might, at times, be efficient.

From an equity perspective, this alternative would transfer wealth from the general public

and vest it in overlying landowners and other water users. Overlying owners, however, would be treated equally without regard to history of use. Present users might still be favored over future users, however, depending on the judicial construction of the requirement of apportionment in times of shortage.

### Physical-Hydrologic and Environmental Impacts

Codifying existing law, by itself, would have no physical-hydrologic or environmental impacts apart from the current situation.

### CONCLUSION

Nebraska is in a unique and enviable position in comparison with most states when it comes to legal and institutional barriers to change in the structure of groundwater property rights. The clear statements in Nebraska law indicating that groundwater is public property give the legislature great latitude in developing a fair and equitable system for allocating groundwater among competing users.

Many of the possible allocation mechanisms which might be adopted, however, would result in the creation of vested private property rights which would limit future flexibility of action. Any regulation of the use of groundwater must observe the limits set by these private property rights. On the other hand, if intelligent decisions are to be made regarding the use of groundwater, it is necessary that the parameters of the property right be defined with some degree of certainty. The tension that must be resolved is between the certainty of a system of private groundwater property rights and the flexibility of a system of public groundwater property rights. This tension is exacerbated by the fact that any redefinition of property rights means that some citizens will gain more than others, although there need not necessarily be any losers. The fact remains, however, that many individuals and groups have equitable claims to the existing stock of groundwater, and a groundwater property rights system necessarily determines which equitable claims will be satisfied and which will not.

---

### FOOTNOTES

---

1. Economics is the science of human choice in a world where resources are limited and wants are insatiable. In addressing the economic impact of various water policy

alternatives it is necessary to focus both on the problem of resource utilization and on the problem of want satisfaction, topics subsumed within the broad label of economic efficiency. Economists commonly distinguish between productive efficiency and allocative efficiency. Productive efficiency is achieved when resources are combined to create the most output for the least cost. Thus, a change is productively efficient if it allows society to produce more goods at the same cost or the same amount of goods at a lower cost. Allocative efficiency, in contrast, relates to the distribution of produced goods among the members of society, whether presently living or yet to be born. A change is allocatively efficient if it will increase the satisfaction of at least one member of society without decreasing the satisfaction of another (Pareto superiority), or if it will increase the satisfaction of some members of society more than it will decrease the satisfaction of other members of society (Kaldor-Hicks efficiency). An economic system is thus said to be efficient if it allocates existing resources so as to maximize the production derived from them, and if it distributes the goods produced in a manner that maximizes consumer welfare.

2. Equity refers to how society's wealth is distributed among the members of society. Changes in equity are reflected in changes in the distribution of wealth. Evaluation of equity impacts is difficult, however, as equity is essentially a philosophical concept, not an economic one.

3. An efficient transaction, for instance could be thwarted if an individual was required to negotiate with several parties, each of whom would be negligibly impacted by the proposed conduct. Efficiency gains often can be offset by such transactions, thereby effectively blocking the efficiency gain.

4. **See generally** Calabresi, **Transaction Costs, Resource Allocation and Liability Rules - A Comment**, 11 J LAW & ECON 67 (1968).

5. This is a particular problem where legal rules are unclear making completely accurate information available only at the cost of **ex post** litigation.

6. The relationship between efficiency and equity must be understood. Efficiency gains are independent of equity impact. Thus, if A can make more efficient use of water owned by B than can B himself, it is efficiency to transfer the water to B. A need not pay for the water for the transfer to be efficient. Whether A is required to pay for the water or

is merely free to take it has an important equity impact, however, since in one case B is compensated for his loss and in the other he is not.

7. Although original plans were to treat environmental impacts separately, strong interrelationships with the physical-hydrologic impacts soon became apparent. The two types of impact analyses, therefore, have been combined in the discussions which follow.
8. Legislative Bill 375, 87th Nebraska Legislature, 2nd Session (1982).
9. 124 Neb. 802, 248 N.W. 304 (1933).
10. 208 Neb. 703, 305 N.W.2d 614, **rev'd**, 50 U.S.L.W. 5115 (U.S. July 2, 1982).
11. **Supra**, note 8, § 1.
12. 152 Eng. Rep. 1223 (Ex. 1843).
13. 5 POWELL, REAL PROPERTY § 725 (1979).
14. **See** Harnsberger, **Nebraska Groundwater Problems**, 42 NEB. L. REV. 721, 745 (1963).
15. **See** *Houston and Texas Central R.R. v. East*, 98 Tex. 146, 81 S.Ct. 279 (1904).
16. **See** *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W.2d 789 (1955).
17. **See** *Friendswood Development Co. v. Smith-Southwest Industries, Inc.*, 576 S.W.2d 21 (Tex. 1978).
18. 164 N.Y. 522, 58 N.E. 644 (1900).
19. **Id.** at 526, 58 N.E. at 645-46.
20. 104 Ariz. 527, 456 P.2d 385 (1969).
21. 106 Ariz. 506, 479 P.2d 169 (1970).
22. 113 Ariz. 230, 550 P.2d 227 (1976).
23. **See** *Farmer Investment Co. v. Bettwy*, 113 Ariz. 520, 558 P.2d 14 (1976).
24. 141 Cal. 116, 74 Pac. 766 (1903).
25. **Id.** at 133, 74 Pac. at 771.
26. 154 Cal. 428, 98 Pac. 260 (1908).
27. 33 Cal.2d 908, 207 P.2d 17 (1949).
28. 49 Cal. App. 3d 922, 122 Cal. Rptr. 918, 537 P.2d 1250 (1975).
29. 14 Cal.3d 199, 537 P.2d 1250, 123 Cal. Rptr. 1 (1975).
30. **See, e.g.**, *Jones v. Oz-Ark-Val Poultry Co.*, 228 Ark. 76, 306 S.W.2d 111 (1957).
31. 63 Wis. 2d 278, 217 N.W.2d 339, 219 N.W.2d 308 (1974).
32. **See** RESTATEMENT (SECOND) OF TORTS § 858, Comment b.

33. **See** Lowe, Ruedisili, & Graham, **Beyond Section 853: A Proposed Groundwater Liability and Management System for the Eastern United States**, 8 Ecology L. Q. 131 (1979).
34. **Id.** at 151.
35. **See** Lowe, Ruedisili, & Graham, **supra** note 32.
36. This alternative clearly would give preferred users a right to have water levels or artesian head maintained against the actions of less preferred users. Current preference statutes, in contrast, do not prescribe how preferences are to be implemented. Limits on their use to impose liability between users is not presently known. **See generally** discussion of *Prather v. Eisenmann*, **supra** Chapter One, at 1-6 to 1-8.
37. **See** Lowe, Ruedisili, & Graham, **supra** note 32.
38. **Id.** at 153.
39. **See, e.g.**, *Village of Jequesta v. Jupiter Inlet Corp.*, 371 So. 2d 663 (Fla. 1979).
40. Nontributary groundwater refers to aquifers that are not hydrologically linked to streams or other surface waters.
41. **See** *Fundingsland v. Colorado Groundwater Commission*, 171 Colo. 487, 468 P.2d 835 (1970).
42. **See** COLO. REV. STAT. § 37-90-107.
43. **See** COLO. REV. STAT. § 37-90-137.
44. **See** NEB. REV. STAT. §§ 57-909 **et seq.** (Reissue 1978).
45. **See** Okla. Stat. tit. 82, §§ 1020.1-22 (Cum. Supp. 1980).
46. 14 Tulsa L. Rev. 437 (1979).
47. **Id.** at 460.
48. It is important to note that this alternative is limited to specification of a groundwater property right. It is not a restatement of Nebraska groundwater law which would include various regulatory measures such as well spacing, preferences, and the groundwater management act. The groundwater property right describes the nature of a landowner's proprietary interest in groundwater, an interest that is subject to varying amounts of state regulation.
49. **Supra**, note 8, § 1.
50. **Id.**

## CHAPTER 4

### RELATIONSHIP OF THIS STUDY TO OTHERS

Policy issue studies like this one vividly demonstrate the interrelationship between water policy issues. Water policy is complex, and no method of distinguishing issues can successfully eliminate overlaps. The purpose of this chapter is to identify the most significant relationships between this study and the other policy issue studies being conducted as part of the state water planning and review process.

As this report is being prepared the policy study activity, as originally designed, is approximately one-half completed. While reports have not been prepared on several of the studies, work is well underway on many, and the scope of those studies is becoming increasingly well-defined. As a result, it becomes easier with each study report to identify the relationships between that study and the others.

Identifying those relationships is important in each case. Such identification promotes awareness of the fact that any particular water policy action will have greater impact upon overall water policy than just the resolution of the immediate issue at hand. The result of this awareness should not be to delay automatically what may otherwise appear to be a favorable action, although that may be appropriate in some cases. However, such awareness should at a minimum discourage actions that will prevent consideration of new information at a later date.

Significant relationships can be identified between the subject of this report, groundwater property rights, and several of the other policy issue studies being conducted. The extent of that relationship, if any, is addressed in the material which follows.

#### **STUDY #1: INSTREAM FLOWS**

The report prepared for the *Instream Flows Study* was approved by the Commission in January and sent forward to the Legislature and

the Governor for their consideration. While that study dealt almost exclusively with surface water and this study deals almost exclusively with groundwater, relationships between the two studies do exist. Streams in the State of



Nebraska which have fairly constant base flow are dependent upon the discharge of groundwater for the maintenance of that flow. That discharge could be reduced or even eliminated in some streams because of the development and use of groundwater supplies. The extent to which the alternatives addressed in this study would encourage or discourage such groundwater use could affect the realization of instream flow objectives in those streams. A more specific discussion of the effects of the alternatives on groundwater use is discussed below under "Study#3: *Groundwater Reservoir Management*."

## **STUDY #2: WATER QUALITY**

The extent of the relationship of this study to the *Water Quality Study* is similar to that identified for the *Instream Flow Study*. That relationship is dependent upon the extent that groundwater property rights alternatives encourage or discourage use of water in areas where contamination by nitrates or other pollutants is a direct result of the application of supplemental water and chemicals.

## **STUDY #3: GROUNDWATER RESERVOIR MANAGEMENT**

This study and the *Groundwater Reservoir Management Study* dated March, 1982 are very closely related in all respects. In fact, the subject matter addressed by this study could have been, and perhaps should have been, dealt with at that time. As a result, policy makers could benefit from information generated in that report when considering alternatives identified in this one.

A particularly close relationship with the *Groundwater Reservoir Management Study* is found in *Alternatives #10, #11, and #12* in this report. Those alternatives present ways of allocating particular quantities of groundwater among prospective users. They are direct alternative ways to achieve whatever groundwater reservoir management objectives are being sought.

The other alternatives in this report are also closely related to the *Groundwater Reservoir Management Study*, but somewhat less directly. The first five alternatives, all of which approach the issue from the standpoint of the landowner's property right in the groundwater supply, would have different impacts on the ability to publicly manage groundwater supplies. If *Alternative #2* were adopted, the options for public management would be severely limited. *Alternatives #3 and #4* more closely approach current Nebraska law and would allow considerable flexibility in that regard. The effect of *Alternative #5* in this respect cannot be determined.

The next four *Alternatives, #6 through #9*, all specify liability rules between competing users. Their effect on groundwater use would depend upon the type and extent of the liabilities created. The greater the potential liability to other users, the more groundwater utilization would be discouraged. *Alternative #6* imposes a very limited liability and as a result would probably not discourage groundwater use to any great extent. On the other hand, *Alternative #7* could prove to be a

significant impediment to additional developments in some areas. The effects of *Alternative #8* would depend upon the specific uses given a preference. The final alternative in this category, *#9*, would not, if implemented, be expected to have a significant effect upon the amount of use because of practical limitations on its application. It might be more costly to attempt to assess comparative cause than to remedy the problem.

## **STUDY #4: WATER USE EFFICIENCY**

Many of the alternatives in this study are also closely related to the *Water Use Efficiency Study* because they would encourage or discourage efficient use of water. *Alternative #2* would provide the least encouragement for eliminating waste, while *Alternatives #3 through #5* would provide some incentive for efficiency, as would *Alternative #6*. Also directly encouraging more efficient use would be *Alternatives #11 and #12*. If each landowner knew exactly how much water could be utilized, it is likely that landowners would choose the most efficient use possible and feasible under the circumstances.

## **STUDY #5: SELECTED WATER RIGHTS ISSUES**

*Drainage of Diffused Surface Water.* The only portion of the drainage report significantly related to this report is the portion dealing with wetlands. In some areas groundwater usage can contribute to or cause the loss of wetlands. Any effect of the alternatives in this report on that usage could, therefore, affect the retention of those wetlands.

*Preferences in the Use of Water.* *Alternative #8* in this report is directly related to the preferences report forwarded by the Commission in October of 1981. In fact, *Alternative #8* would essentially codify the present law of Nebraska by combining (1) the current statutory preferences system and (2) the judicial application of that system as a means for resolving conflicts between different types of groundwater users.

*Beneficial Use.* Of the four major subject areas addressed in a draft report on *Beneficial Use*, only one is significantly related to this study. That subject area is the application of beneficial use as a method of limiting waste. The relationships between that portion of the *Beneficial Use Study* and this study are the same as those noted above for the *Water Use Efficiency Study*.

*Water Right Adjudications.* No significant relationships with this study have been identified.

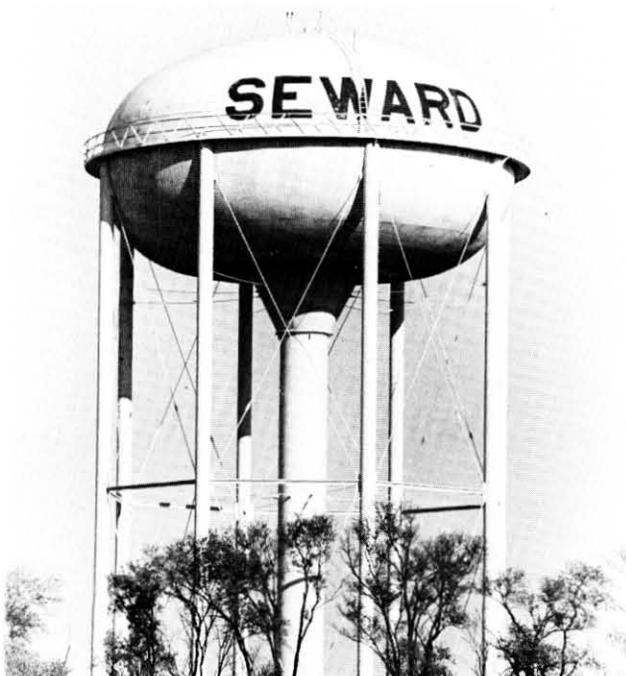
*Riparian/Appropriative Rights.* No significant relationships with this study have been identified.

*Interstate Water Uses and Conflicts.* The alternatives in this study could affect the interstate use of groundwater. For example, if the English Rule of Absolute Ownership (*Alternative #2*) were adopted, Nebraska would probably not be able to prohibit the transportation and use of that water across state lines under any circumstances. Also, the nature of the individual's rights to the use of ground water could affect Nebraska's relationships with other states over the use of the groundwater supply. Nebraska cannot realistically expect neighboring states to be more restrictive than it is on the use of a common source of supply.

*Transferability of Surface Water Rights.* No significant relationships with this study have been identified.

## **STUDY #6: MUNICIPAL WATER NEEDS**

Because of the almost exclusive reliance on groundwater as a source of municipal water, decisions affecting the nature of groundwater property rights will clearly impact upon municipal water uses. The exact impact of any of the alternatives identified in Chapter 3 will normally depend upon the nature of the specific situation. For example, *Alternative #2* could have good or bad consequences for a particular municipal water supply. To the benefit of a municipality, this



alternative would allow the purchase of a parcel of land only large enough for construction of the well with no fear of liability for depletion of the water supplies under adjoining properties. By the same token, however, the alternative would provide a municipality with no protection from withdrawals by others. Such withdrawals, of course, could adversely affect the municipal supply.

Another alternative with consequences which would depend upon the details of implementation is *Alternative #8*. That alternative would benefit municipal uses if such uses were given a preferred use, but would be detrimental if they were given an inferior use.

## **STUDY #7: SUPPLEMENTAL WATER SUPPLIES**

The nature of the *Supplemental Water Supplies* study is not yet well defined, but that study will deal with both groundwater and surface water. It is likely that alternatives to recharge groundwater supplies will be included. The feasibility and practicability of recharge schemes could be impacted by some of the alternatives identified in this report. Because many of the alternatives would also affect the extent of groundwater use in the state, they would also affect the need for supplemental water.

## **STUDY #8: INTERBASIN TRANSFERS**

## **STUDY #9: WEATHER MODIFICATION**

A decision has been made that these studies will not be conducted. Therefore, no attempt has been made to identify possible relationships with this study.

## **STUDY #10: WATER - ENERGY**

## **STUDY #11: SURFACE - GROUNDWATER INTEGRATION**

These two studies are identified in the September 15, 1982, Annual Report and Plan of Work. Only initial work has begun on them, however, and no attempt was made to identify possible relationships with this study.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# SUMMARY OF HEARING

## REPORT #4, PROPERTY RIGHTS IN GROUNDWATER

7:00 p.m.

MARCH 24, 1982

NRC Conference Room  
Nebraska State Office Building  
Lincoln, Nebraska

Persons attending: \_\_\_\_\_

Henry Reifschneider, Lincoln, NRC  
James Cook, Lincoln, NRC  
Alvin Narjes, Sidney, NRC  
Clinton VonSeggern, Scribner, NRC  
Ervin Lechner, Beatrice, NRC  
Howard Hardy, Fairbury, NRC  
Beth Spaugh, Eagle, Sierra Club  
Alan Eastman, Lincoln  
Brenda Gillan, Lincoln  
Doug Taylor, Lincoln, University  
Bradley Campbell, Lincoln, University  
Don McCabe, Lincoln, Nebraska Farmer  
Bill Fairfield, Omaha, Nebr. Assoc. of Center  
Pivot Mfg.  
Hal Schroeder, Lincoln, Lower Platte South NRD  
Robert Mettenbrink, Grand Island  
Larry Behrens, Grand Island  
Fred Thomas, Omaha

Richard Slama, Lincoln  
Kay Williamson, Lincoln  
Elaine Vrana, Seward  
Tony Vrana, Seward, NRC  
Warren Patefield, Lincoln, NRC  
Robert Gifford, Gering, NRC  
Rudolf Kokes, Ord, NRC  
Jim Cook, Mills, NRC  
Don Thompson, McCook, NRC  
Richard Hahn, Grand Island, NRC  
William Holland, Omaha  
Dayle Williamson, Lincoln, NRC  
Don Hood, Tecumseh, Nemaha NRD  
Joe Munn, Lincoln  
Harvey Langrehr, St. Libory, NE  
Renald Barrett, Mead  
Mike Barrett, Mead

---

### PUBLIC NOTICE

Legal notice of this hearing was published in six newspapers across the state. In addition, press releases were sent to every newspaper and AM radio station in the state.

### HEARING PROCEDURE

Henry Reifschneider presided over the hearing. Prior to the receipt of testimony, Jim Cook summarized the contents of the report and identified some staff suggested revisions and additions to the report. All present were given an opportunity to testify. An informal question and answer period was then conducted, and opportunity for additional testimony was granted prior to the conclusion of the hearing.

### TESTIMONY OFFERED

**Larry Behrens, Grand Island**, noted Article 1, Section 1 of the Nebraska Constitution and expressed his view that water under an individual's land belonged to that individual. He felt that the landowner's right to use that water could

not be constitutionally deprived.

**Joe Munn, Lincoln**, testified stating that he was representing a Mr. Lynn Schoffer, also of Lincoln. He expressed a concern that the rights to use water for domestic purposes were not adequately protected in Nebraska and suggested that additional protection be provided.

**Richard Slama, Lincoln**, testified stressing the importance of conservation practices to maintenance of groundwater supplies. He noted that these practices, including no till farming, better retained precipitation on the land, thus reducing the demands for groundwater irrigation and also helping to enhance natural recharge.

**Beth Spaugh, Eagle, NE**, testified on behalf of the Nebraska Chapter of the Sierra Club. In her testimony she suggested that groundwater resources are the property of the people; that there is a need for further management of groundwater supplies; that sustained yield ought to be the objective in such management; that irrigators should improve efficiency and use of water; that the interrelationship between groundwater and surface water ought to be recognized; and that allocation can be an effective tool in managing water use. \_\_\_\_\_