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Deep mining of uranium is currently taking place on a large scale in the western United States. One of the problems facing uranium mining companies is the removal of groundwater from mines. As the authors of this article indicate, dewatering is currently treated in a variety of ways by western states. The authors examine some of the problems that have arisen under these various state laws, then analyze new dewatering legislation which has been enacted in New Mexico.

THE CHALLENGE OF MINE DEWATERING TO WESTERN WATER LAW AND THE NEW MEXICO RESPONSE

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I. INTRODUCTION

A long-standing controversy in the State of New Mexico derives from the uranium industry's need to dewater mines. Dewatering is the process whereby water from surrounding aquifers must be removed by pumping before the uranium can be mined. The Department of the Interior has estimated that uranium dewatering will range from 64,627 acre feet per year to 84,015 acre feet per year by the year 2000.[1]

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1. Lyford, San Juan Basin Regional Study Working Paper No. 37, Modelled Effects of Uranium-Mine Dewatering on Water Resources in North Western New Mexico 6; prepared by the United States Dept. of Interior. *See also*, fig. 8 (1979).

What has made this activity so controversial is that the uranium companies have not needed to obtain a state water right or permit from the state engineer to accomplish this discharge of groundwaters. Because the uranium mines have not technically had a water right, statutory provisions prohibiting impairment of existing rights have not applied.

With this dewatering dilemma in mind, this article first will consider New Mexico statutes relating to groundwater and how they have in the past been interpreted so as not to regulate dewatering. As a means of comparison, the groundwater statutes of several other western states and how they are interpreted, will follow. Finally there will be consideration of recent actions by the state engineer and responses by the uranium industry which have resulted in legislation establishing a system for regulating dewatering.

II. NEW MEXICO GROUNDWATER LAW

A. *History*

The first declaration that the groundwater of New Mexico should be public occurred in 1927. In that year a statute was passed which made it apparent that the state intended to place groundwater within the state administrative procedures for acquiring and administering appropriative rights. The statute, aimed at controlling artesian wells in the vicinity of Roswell, New Mexico, was contested and held to be unconstitutional in *Yeo v. Tweedy*.[2] This holding, however, was based on a technical error within the statute itself; the intent and aim of the statute clearly were upheld.

The contested law had read:

> All waters in this state found in underground streams, channels, artesian basins, reservoirs, or lakes, the boundaries of which may be reasonably ascertained by scientific investigations or surface indications, are hereby declared to be public waters

2. 34 N.M. 611, 286 P. 970 (1930).

> and to belong to the public, and subject to appropriation for beneficial uses under the existing laws of this state. . . .[3]

The law further provided that the state engineer should be given the supervision and control of all such underground waters and of the method and manner of appropriation and use. The *Yeo* court made it clear that vested property rights were not being disturbed because the law merely made new application of existing principles and was in harmony with prior appropriation principles that were consistently applied for surface waters.

The constitutionality of a similar statute was contested in *State ex. rel Bliss v. Dority.*[4] Among the disputed provisions of this statute was one which read: "The waters of underground streams, channels, artesian basins, reservoirs, or lakes having reasonably ascertainable boundaries, are hereby declared to be public waters and to belong to the public and to be subject to appropriation for beneficial use."[5] Beneficial use, then as now, was the basis, the measure, and the limit to the right to use the water.

Defendants in *Dority* denied that their use without a permit of sub-surface water for irrigation violated the law, contending instead that the statute violated vested property rights. The court, however, followed the direction of *Yeo* and affirmed the state's system of controlling groundwater.

Yeo and *Dority*, therefore, seem clearly to stand for the proposition that "with respect to the property aspects of groundwater, the same law has at all times been in effect as was established by the Constitution and statutes for surface water, although the underground waters were not specifically mentioned in the Constitution."[6] In other words, when speaking of water being "subject to appropriation," the New Mexico Constitution is referring to underground

3. N.M. LAWS 1927, Ch. 182.
4. 55 N.M. 12, 225 P.2d 1007 (1950).
5. N.M. STAT. § 77-1101 (1941).
6. Flint, *Groundwater Law and Administration: A New Mexico Viewpoint*, 14 ROCKY MT. MIN. L. INST. 545, 548 (1968).

streams, channels and reservoirs as well as to surface water.[7]

B. Declared Underground Water Basins

In New Mexico today, statutes comparable to those contested in *Yeo* and *Dority* are in effect. Section 72-12-1 of the New Mexico statutes declares underground water having reasonably ascertainable boundaries to be public water subject to appropriation for beneficial use. Any person or corporation wishing to appropriate such water must make an application to the state engineer which must include:

> . . . (1) the particular underground stream, channel, artesian basin, reservoir or lake from which water is proposed to be appropriated, (2) the beneficial use to which it is proposed to apply such water, (3) the location of the proposed well, (4) the name of the owner of the land on which such well will be located, (5) the amount of water applied for, (6) the use for which it is desired. . . .[8]

The state engineer may grant the application and issue a permit only if he finds that there are unappropriated waters or that the proposed application would not impair existing water rights;[9] the burden is upon the applicant to show that there will be no impairment.[10] The above provisions of the groundwater code give the state engineer jurisdiction over appropriation only of those sources which he has found to have reasonably ascertainable boundaries. "The State Engineer defines and proclaims or declares underground water basins when it becomes apparent that regulation is necessary to protect prior appropriation to insure beneficial use of water, and to insure the orderly development of the water resource."[11] Once an underground water basin has been declared, a permit *must* be obtained

7. N.M. CONST. art. 16, §§ 1-3 refer to acquiring water rights. Section 2 states only that the "unappropriated water of every natural stream, perennial or torrential, within the state . . . is hereby declared to belong to the public and to be subject to appropriation for beneficial use. . . ."
8. N.M. STAT. ANN. § 72-12-3(A) (1978).
9. N.M. STAT. ANN. § 72-12-3(E) (1978).
10. Mathers v. Texaco, Inc., 77 N.M. 239, 421 P.2d 771 (1966).
11. *Supra* note 6, at 546.

before water can be appropriated from the basin. This method of appropriation for such water is the exclusive method.[12]

That the state engineer has jurisdiction over underground water basins, that appropriation is the method of acquiring rights to water contained therein, and that that water is to be treated the same as surface water, all were affirmed in *City of Albuquerque v. Reynolds*:[13]

> The jurisdiction and duties of the state engineer with reference to streams and underground waters are the same. They each relate to public waters subject to use by prior appropriators. There does not exist one body of substantive law relating to appropriation of stream water and another body of law relating to appropriation of underground water. The legislature has provided somewhat different administrative procedures whereby appropriators' rights may be secured from the two sources but the substantive rights, when obtained, are identical.[14]

C. *Underground Water Not Having Reasonably Ascertainable Boundaries*

In addition to section 72-12-3, New Mexico groundwater legislation provides that "all underground waters of the state . . . are hereby declared to be public waters and to belong to the public . . . and [are] subject to appropriation for beneficial use within the state. . . ."[15] As with waters in declared basins, beneficial use is the basis, the measure, and the limit of the right to use the public waters. No permit or license is required to appropriate groundwater, however, if the water is not within basins declared by the state engineer to have reasonably ascertainable boundaries.[16]

A further important exception to the permit requirement is provided in that water in an aquifer, the top of which is twenty-five hundred feet or more below the ground

12. State ex rel Bliss v. Dority, *supra* note 4, at 20, 1011.
13. 71 N.M. 428, 379 P.2d 73 (1962), *reh. den.* March 15, 1963.
14. *Id.* at 437, 79.
15. N.M. STAT. ANN. § 72-12-18 (1978).
16. N.M. STAT. ANN. § 72-12-20 (1978).

surface and which contains nonpotable water may *not* be declared an underground water basin.[17] "Nonpotable water" is that containing not less than one thousandth part per million of dissolved solids.[18] Any person wishing to appropriate nonpotable water still must file a notice of intention to drill with the office of the state engineer and must give published notice in the county in which any proposed wells will be located, stating the location and proposed depth of the wells, the purpose for which the water shall be used, and an estimate of the volume of water to be used.[19] In addition, the state engineer may require pertinent data to be filed for each well and may require water produced to be metered and the volume reported.[20] Finally, any person may bring an action in the district court of the county in which any well is situated for damages or injunctive relief for any claimed impairment of existing water rights due to an appropriation of nonpotable water.[21]

D. Artesian Wells

In addition to the statutory controls over groundwater in general, there is specific statutory regulation of artesian waters in New Mexico. An artesian well is defined as that which "derives its water supply from any artesian stratum or basin."[22] All artesian waters are public waters under the supervision and control of the state engineer. But, where an artesian conservancy district has been formed,[23] the district has power and authority concurrent with the state engineer to enforce regulatory provisions.

Among these regulatory provisions is the requirement that any owner of land upon which any artesian well is situated or is to be drilled must have a permit from the state engineer to drill, repair, plug, or abandon the well.[24] Before proceeding with any such work, a bond must be

17. N.M. STAT. ANN. § 72-12-25 (1978).
18. N.M. STAT. ANN. § 72-12-25 (1978).
19. N.M. STAT. ANN. § 72-12-26 (1978).
20. N.M. STAT. ANN. § 72-12-27 (1978).
21. N.M. STAT. ANN. § 72-12-28 (1978).
22. N.M. STAT. ANN. § 72-13-1 (1978).
23. The Artesian Conservancy District Act, N.M. STAT. ANN. §§ 72-13-1 to 72-13-12 (1978) provides for the formation of such districts.
24. N.M. STAT. ANN. § 72-13-4 (1978).

filed,[25] and any contractor drilling a well within an artesian basin or through any artesian stratum must keep a complete record of the well to be filed with the state engineer upon completion of the well.[26]

Waste of artesian water is statutorily restricted, waste being defined as:

> . . . causing, suffering or permitting any artesian water to reach any previous stratum above the artesian strata before coming to the surface of the earth, or causing, suffering or permitting any artesian well to discharge unnecessarily upon the surface of the ground, unless said waters are to be placed to a beneficial use under the constant supervision of the person using such water. . . .[27]

Committing such waste is a misdeameanor and a public nuisance[28] and the state engineer or artesian conservancy district may abate the nuisance, with the resulting costs becoming a lien upon the land, if the well owner fails or refuses to do so within 10 days of receiving notice.[29] It also is unlawful for any person or corporation to conduct artesian well waters through any ditch or conduit which loses more than twenty percent of the water between the point of appropriation and the point of beneficial use.[30]

III. NEW MEXICO GROUNDWATER LAW AS IT RELATES TO DEWATERING

Since the 1950 *Dority* decision, statutory amendments and groundwater decisions have resulted in groundwater being more strictly controlled for the benefit of the public. The regulatory schemes described above, though not exhaustive of New Mexico legislation relating to groundwater, illustrate this trend. It now is necessary to consider how these regulatory schemes should have been interpreted in the past when applied to dewatering.

25. N.M. STAT. ANN. § 72-13-4 (1978).
26. N.M. STAT. ANN. § 72-13-5 (1978).
27. N.M. STAT. ANN. § 72-13-6 (1978).
28. N.M. STAT. ANN. § 72-13-8 (1978).
29. N.M. STAT. ANN. § 72-13-8 (1978).
30. N.M. STAT. ANN. § 72-13-9 (1978).

A literal interpretation of New Mexico groundwater statutes might lead one to believe that the uranium industry, from the first, should have been subject to varying degrees of control by the state engineer, depending upon the source of the dewatered water. If the water came from a declared groundwater basin, an application first should have been made to the state engineer who could grant a permit only upon a finding of the existence of unappropriated water and a lack of impairment of existing rights. This procedure would have been the only means of obtaining a right to use the water, and the uranium company would have had the burden of showing lack of impairment.

In the rare case that the water was not from a declared groundwater basin, a permit would not have been required and the state engineer would have had no jurisdiction over the water's source. The state engineer, pursuant to his statutory authority, has extended his administrative jurisdiction by declaring new basins or enlarging the boundaries of existing basins.[31] As of 1976, there were 26 underground water basins, covering a total of more than 70,000 square miles.[32] These basins underlay more than half of the state's total area of 121,666 square miles.[33]

If the water resulting from dewatering were nonpotable and from an aquifer 2,500 feet or more below the surface, again, no permit would have been required. If this water was to be appropriated, however, notice of intention to drill would have been filed with the state engineer and he could have required information about the amount of water to be used. Most importantly, any person claiming impairment of an existing right could have sought injunctive relief.

Finally, if water came from artesian basins, procedures clearly stated would be applied. Because exploratory drilling for uranium may intercept artesian basins, it is thought that some dewatered water has included artesian

31. Clark, *New Mexico Water Law Since 1955*, 2 NAT. RES. J. 484, 496 (1962).
32. Burger, *The Impact of Underground Uranium Mine Dewatering on Water Supply and Water Quality in New Mexico*, (unpublished manuscript prepared for the Univ. of New Mexico Dept. of Economics, 11-12, fig. 3 1978).
33. THE WORLD ALMANAC & BOOK OF FACTS 458 (1979).

water.[34] This would have invoked the full statutory framework which protects artesian basins.

Presumably, then, most of the water which a uranium company removed from its mines would have been subject to some control or permit requirement. Similiarly, regardless of the source of the water, other statutory controls prohibiting the waste or pollution of any state water would have applied. This has not been the case, however, and until very recently much dewatering has been carried on with no permit being required.

IV. THE ROLE OF THE STATE ENGINEER AND HIS INTERPRETATION OF NEW MEXICO LAW

A. Beneficial Use

In New Mexico, the state engineer is given the power to "adopt regulations and codes to implement and enforce any provision of any law administered by him. . . ."[35] This broad authority, when combined with the statutory absence of a definition for the term "beneficial use," led to the void in the control of dewatering. The basis, the measure, and the limit to the right to use any state water whether surface or groundwater is beneficial use. It is a traditional element of the prior appropriation—absent a beneficial use a right to water may not be obtained. And, traditionally, satisfying this element has not been a problem. "There has never been any serious question but that the use of water for irrigation, manufacturing, power production and domestic or municipal use is beneficial."[36] Dewatering, however, in New Mexico has not yet been classified as a beneficial use and, therefore, none of the previously discussed statutes apply.

This position has ironic aspects when one considers that if a mine wastes water by running it down an arroyo, no accounting need be made; yet, if a mine puts the water to

34. *Supra* note 32, at 12.
35. N.M. STAT. ANN. § 72-2-8 (1978).
36. SAX, WATER LAW, PLANNING & POLICY 220 (1968).

some "real" beneficial use, the strict statutory controls apply. The position appears even more anomolous when one considers what the absence of statutory controls really means. As discussed, an application to appropriate groundwater, as with an application for surface water, must be denied if, in the opinion of the state engineer, there is no unappropriated water available. If, then, a uranium company filed for a permit to appropriate and the particular basin was found to have insufficient water, the permit would have to be denied. But, if no permit is required and there is insufficient water, then dewatering could make a bad situation worse and do so lawfully.

Further, New Mexico statutes state that if the beneficial use considered is that of agriculture, the state engineer shall permit the amount allowed to be diverted at a rate consistent with good agricultural practices and which will result in the most effective use of available water in order to prevent waste.[37] Yet, when dewatering is being done and the water is not being "used," the rate and amount of flow and prevention of waste are not subject to control.

Aside from these contradictions, there are other reasons why the New Mexico law of dewatering is surprising. Without defining "mining," Hutchins has included it in his list of traditional beneficial uses.[38] There are several types of mining activities which have been held to be beneficial uses. Indeed, the use of water which first created the prior appropriation system was by gold miners in California in the 1860's. Yet, their only use of the water was to wash gold from gravel.

In a Utah case,[39] it was held that the taking of water from the Great Salt Lake for the purpose of evaporating it to obtain salt was a beneficial use. This is somewhat analogous to dewatering, in that the "use" is the removal of the water so that the remaining mineral may be obtained.

37. N.M. STAT. ANN. § 72-5-8 (1978).
38. HUTCHINS, SELECTED PROBLEMS IN THE LAW OF WATER RIGHTS IN THE WEST 314 (1942).
39. Desert Livestock Co. v. State Land Board, 110 Utah 239, 171 P.2d 401 (1946).

And, in a New Mexico case, *Mathers v. Texaco*,[40] where in a secondary oil recovery operation the use of water was for the extraction of minerals from the soil, the court simply said that there was no dispute on the point that the use of water for the proposed flooding of the oil field was a reasonable and beneficial use. Although secondary recovery is the opposite of dewatering, in the broad sense each is done so that a valuable mineral resource may be recovered, and the activity affecting the water is a prerequisite for such recovery.

A final irony of the classification dispute is that usually, under a prior appropriation system, a user of water never would want to have his use found to be non-beneficial. This would result in a reduction or loss of his water right. However, for entities such as uranium companies, it is most desirable that their "use" be considered non-beneficial. To find otherwise would require them to acquire water rights which they do not now have.

However, mining companies often need to use water for milling, sanitation, and operational purposes. These uses all are beneficial and, therefore, fall in the state engineer's jurisdiction and under the need to apply for a permit. Also, ironically, dewatered waters often have to be treated to meet federal water quality standards. An ion-exchange process is used which removes radioactive materials which are of commercial value. Even though the value may be only marginal, this constitutes a beneficial use which triggers the state engineer's jurisdiction. The mining company then must apply for a permit and assume the burden of proving non-impairment.

B. Impairment

New Mexico statutes require that, just as for an application for a surface water right, an application for a groundwater right must be denied if granting such a right would impair existing water rights.[41] Because uranium companies

40. 77 N.M. 239, 421 P.2d 771 (1966).
41. N.M. STAT. ANN. § 72-12-1 (1978).

need not apply for a permit if there is no beneficial use, impairment is not considered.

Lack of consideration of this element is anomolous also because New Mexico has explicitly sanctioned groundwater "mining," that is, appropriation of groundwater where natural discharge is small in relation to stored supplies and recharge is negligible. In such areas, the traditional policy has been to avoid overdraft or to control the rate of "mining."[42] Such a closed or limited basin was involved in *Mathers v. Texaco*,[43] where impairment of other rights did not limit Texaco's right to take since, in the limited basin, all suffered at some time a decline in the amount of water available. But at least Texaco had to have a permit so that its use of the water was not unlimited.

Where the element of impairment in a limited or non-tributary basin is never even considered, the policy of avoiding overdraft or of controlled mining is defeated. If uncontrolled dewatering is allowed in such areas, it could lead not only to impairment of the water rights of users in the area, but it also could lead to the mining of the water without adequate consideration of the proper management of the resource.

> In some areas recharge is negligible and the water is mined from the earth as are other minerals. Once extracted, it is gone forever. In many other areas recharge may be present but the low permeability of the structure slows down the transmission of water to a particular area to such an extent that the groundwater must be treated as a nonreplenishable resource, since replenishment will take many years.[44]

C. *Waste and Pollution*

New Mexico statutes provide that, in addition to the waste of artesian water being unlawful, "the unauthorized

42. Bagley, *Water Rights Law and Public Policies Relating to Groundwater Mining in the Southwestern States*, 4 J. LAW & ECON. 144, 165 (1961).
43. *Supra* note 40.
44. Trelease, *The Use of Fresh Water for Secondary Recovery of Oil in the Rocky Mountain States*, 16 ROCKY MT. MIN. L. INST. 605, 619 (1971).

use of water to which another person is entitled, or the willful waste of surface or underground water to the detriment of another or the public shall be a misdemeanor."[45] *State ex rel. Erikson v. McLean*[46] made it clear that whatever right one has in water is subject to the established principle that his use shall not be injurious to the rights of others, or of the general public. This was an action by the state engineer to enjoin the uncontrolled flow from a well. The Supreme Court of New Mexico held that allowing water to run twenty-four hours a day over grazing land without the use of a constricted irrigation system was a non-beneficial use, and therefore, waste. Most authorities "have concluded that wasting water is the converse of using it beneficially—that non-beneficial use constitutes waste."[47] If this theory prevailed, the mining companies would be caught in a "Catch 22" situation. If their use of the water were beneficial, they would need a permit and would have the burden of proving nonimpairment. On the other hand, if the dewatering were considered to be non-beneficial, it would seem that it also should be considered waste and capable of enjoinment.

There are several arguments which may be used to refute claims of waste. The uranium companies may argue that their dewatering does not constitute waste because the water is allowed to run where it will, ending up in streams or underground basins where it may be appropriated. They also may argue with considerable merit that their activity is so economically important to the State as to override any charges of waste. In *Yeo v. Tweedy*,[48] which stressed the importance of the use instead of the waste of water, the court also stated that because bodies of subterranean water are the principal resource of the localities where they occur, "their employment to the best economic advantage is important to the state."[49]

45. N.M. STAT. ANN. § 72-8-4 (1978).
46. 62 N.M. 264, 308 P.2d 983 (1957).
47. Note, *Water Waste-Ascertainment and Abatement*, 1973 UTAH L. REV. 449, 451 (1973).
48. 34 N.M. 611, 286 P. 970 (1930).
49. *Id.* at 974.

A possible third argument which denies the occurrence of waste might be that the water resulting from dewatering is nonpotable, or unfit for other uses anyway, so it cannot really be "wasted." This argument, however, seems almost to be an admission of yet another problem of dewatering, namely, water pollution; this paper does not attempt to cover federal water pollution laws, or mining regulations.[50]

D. The Use of Waiver Agreements by Mining Companies

Mining companies frequently have used waiver agreements as a pragmatic device to overcome the legal uncertainties of dewatering. In return for valuable considerations, abutting water rights owners have signed waivers of claims of impairment.

The effect of these waivers has been to release mining companies from liability resulting from past, present, or future pumping in exchange for a stated consideration. Waivers also may include provisions that in the event the original well is so impaired that no water can be pumped from it, the company will provide a specified amount of water per year to the well's owner. This separate obligation may be stated in terms of becoming a covenant running with the land, the benefit of which shall accrue for the heirs, successors, assigns, and purchasers of the original water rights owner.

V. THE TREATMENT OF DEWATERING ACTIVITIES IN OTHER WESTERN STATES

Western states other than New Mexico are currently undergoing intensive mineral development in which dewatering may be required. The interpretation of the groundwater laws of these states, as they relate to dewatering, vary greatly and result in differing degrees of control of the activity.

A. Wyoming

Like New Mexico, Wyoming is a prior appropriation state with beneficial use being the basis, the measure, and

50. *See generally,* Greer, *Water Problems Encountered in Surface Coal Mining in the Western United States,* 22 ROCKY MT. MIN. L. INST. 277 (1976).

the limit of the right to use water at all times.[51] Wyoming also distinguishes between surface and groundwater. Underground water is defined as "any water, including hot water and geothermal steam, under the surface of the land or the bed of any stream, lake, reservoir, or other body of surface water, including water that has been exposed to the surface by an excavation such as a pit."[52]

The prior appropriation system has been applied to all groundwater, including percolating water, and anyone wishing to acquire rights to groundwater must file an application for a permit with the state engineer before commencing construction of any well.[53] In areas not designated as critical groundwater areas,[54] the permit is granted as a matter of course if the proposed use is beneficial and the proposed means of diversion and construction are adequate. If, however, the state engineer finds that granting the permit would not be in the public interest, he may deny the application, subject to review at the next meeting of the state board of control.[55]

For purposes of the above provisions, "wells" means "any artificial opening or excavation in the ground, however made, by which underground water is sought or through which it flows under natural pressure or is artificially withdrawn. . . ."[56] Construction of a well includes "boring, drilling, jetting, digging or excavating, and installing casing, pump and other devices for . . . the withdrawal of underground water. . . ."[57]

These definitions become applicable to mining because of the broad interpretation given to what is a beneficial use. While it is not clear from the statute what "beneficial use" includes, the state engineer's office considers all activities such as dewatering, dust abatement, or washing of ore to be

51. WYO. STAT. § 43-3-101 (1977).
52. WYO. STAT. § 41-3-901(a)(ii) (1977).
53. WYO. STAT. § 41-3-930 (1977).
54. WYO. STAT. § 41-3-912 (1977) gives the state engineer the power to designate critical areas in which groundwater levels are declining.
55. WYO. STAT. § 41-3-931 (1977).
56. WYO. STAT. § 41-3-901(a)(iv) (1977).
57. WYO. STAT. § 41-3-901(a)(v) (1977).

beneficial uses.[58] This is consistent with the exercise of the broad powers given to the state engineer in order to effect the state's policy of conservation of underground water resources.[59] Therefore, if the use made of the water is to be dewatering, the application for a permit must meet all of the statutory requirements:

> Such application shall contain the name and post office address of applicant or applicants, the nature of the proposed use, the location of the proposed well or other means of obtaining underground water, the depth of the water table, if known, the size, type, description, and estimated depth of the proposed well, a description of the proposed pumping equipment, if any, and of the source of power, the estimated capacity in gallons per minute, the amount of water applied for, and . . . such other information as the state engineer may require.[60]

If granted a permit for dewatering, a mine may not dewater more than the amount on the permit, and may not put the water to any other use.[61] The state engineer also may order a mine to cease or reduce withdrawals of underground water if unreasonable interference with another appropriator is found.[62] And, it is a misdeameanor to fail to stop or reduce the flow of underground water in violation of any order of the state engineer.[63] However, the complaining appropriator must prove that his right is being interfered with.

A mining company may acquire the temporary right to the use of water, for a period not to exceed two years, for drilling and producing operations.[64] Again, however, this right is limited by the requirements that the state engineer

58. Telephone conversation with Mike Penz, Groundwater Section, State Engineer's Office, Cheyenne, Wyoming, February 1980.
59. WYO. STAT. § 41-3-909 (1977).
60. WYO. STAT. § 41-3-930 (1977).
61. *Supra* note 58.
62. WYO. STAT. § 41-3-911 (1977).
63. WYO. STAT. § 41-3-919 (1977).
64. WYO. STAT. § 41-3-110 (1977).
65. WYO. STAT. § 41-3-110(b) (1977).

must approve an application for such a temporary right,[65] and it must not injure any other appropriator.[66]

B. Colorado

In Colorado, all water within the state, whether on the surface or underground, is public property subject to appropriation and use.[67] It is clear that for an appropriation to be valid, it must be manifested by the successful application of the water to the beneficial use designated.[68] The traditional policy of beneficial use in reasonable amounts through appropriation has been affirmed with respect to designated groundwaters of the state.[69]

Underground water or groundwater means "any water not visible on the surface of the ground under natural conditions."[70] A groundwater commission of twelve members, including the state engineer,[71] is given the power to determine designated groundwater basins,[72] and any application to appropriate water from a designated groundwater basin must be made to the commission:

> The applicant shall specify the particular designated ground water basin or subdivision thereof from which water is proposed to be appropriated, the beneficial use to which it is proposed to apply such water, the location of the proposed well, the name of the owner of the land on which such well will be located, the estimated average annual amount of water applied for in acre-feet, the estimated maximum pumping rate in gallons per minute. . . . The amount of water applied for shall only be utilized on the land designated on the application. The place of use shall not be changed without first obtaining authorization from the ground water commission.[73]

66. WYO. STAT. § 41-3-110(a) (1977).
67. COLO. REV. STAT. § 37-82-101 (1973).
68. Platte Water Co. v. Northern Colo. Irrigation Co., 12 Colo. 525, 21 P. 711 (1889).
69. COLO. REV. STAT. § 37-90-102 (1973).
70. COLO. REV. STAT. § 37-90-103(19) (1973).
71. COLO. REV. STAT. § 37-90-104 (1973).
72. COLO. REV. STAT. § 37-90-106 (1973).
73. COLO. REV. STAT. § 37-90-107 (1973).

Affected water users are provided with notice and opportunity for hearing and review of any commission decision. If the proposed appropriation will not unreasonably impair existing water rights from the same source, and will not create unreasonable waste, the commission shall grant the application, and the state engineer shall issue a conditional permit to the applicant to appropriate all or a part of the waters applied for, subject to any conditions and limitations the commission may specify.[74] The commission is given much guidance as to what constitutes waste or impairment:

> In ascertaining whether a proposed use will create unreasonable waste or unreasonably affect the rights of other appropriators, the commission shall take into consideration the area and geologic conditions, the average annual yield and recharge rate of the appropriate water supply, the priority and quantity of existing claims of all persons to use the water, the proposed method of use, and all other matters appropriate to such questions. With regard to whether a proposed use will impair uses under existing water rights, impairment shall include the unreasonable lowering of the water level, or the unreasonable deterioration of water quality, beyond reasonable economic limits of withdrawal or use.[75]

A conditional permit allows an applicant to construct a well or other works necessary to apply the water to a beneficial use.[76] If, after completion of the well or other works, the commission finds that the water has been put to beneficial use, it shall order the state engineer to issue a final permit.[77] Priority of claims for the appropriation of designated groundwater shall be determined by the doctrine of prior appropriation.[78]

Groundwater not within a designated groundwater basin also is controlled. Any well to be constructed outside

74. COLO. REV. STAT. § 37-90-107(3) (1973).
75. COLO. REV. STAT. § 37-90-107(5) (1973).
76. COLO. REV. STAT. § 37-90-108(1) (1973).
77. COLO. REV. STAT. § 37-90-108(2) (1973).
78. COLO. REV. STAT. § 37-90-109(1) (1973).

a designated groundwater basin may not be started before a permit has been filed with the state engineer's office:

> The applicant shall specify the particular . . . aquifer from which the water is to be diverted, the beneficial use to which it is proposed to apply such water, the location of the proposed well, the name of the owner of the land on which such well will be located, the average annual amount of water applied for in acre-feet per year, the proposed maximum pumping rate in gallons per minute. . . .[79]

The permit may be granted only if the state engineer finds that there is unappropriated water available for withdrawal by the proposed well and that the vested water rights of others will not be injured materially.[80]

In carrying out these groundwater management provisions, both the state engineer and the groundwater commission are given broad powers. The state engineer's powers relate largely to the regulation of construction or maintenance of wells.[81] Especially important among these is the power to commence actions to enjoin the illegal opening or excavation of wells or withdrawal or use of water from them.[82]

The powers of the groundwater commission are somewhat broader, and include many of the duties of groundwater control given solely to the state engineer in other states. These include the power to limit or prohibit withdrawal of water from any well during any period that it determines unreasonable injury to prior appropriators would result,[83] and the power to establish a reasonable groundwater pumping level in an area having a common designated groundwater supply.[84] In addition, in areas where a groundwater management district has not been formed, the com-

79. COLO. REV. STAT. § 37-90-137 (1973).
80. COLO. REV. STAT. § 37-90-137(2) (1973).
81. COLO. REV. STAT. § 37-90-110 (1973).
82. COLO. REV. STAT. § 37-90-110(1)(e) (1973).
83. COLO. REV. STAT. § 37-90-111(a) (1973).
84. COLO. REV. STAT. § 37-90-111(b) (1973).

mission may prescribe measuring methods and the amount of water withdrawn from wells.[85]

Generally, the state engineer in cooperation with the commission has power to regulate the drilling and construction of all wells in the state to the extent necessary to prevent the waste of water and the injury to or destruction of other water resources.[86]

In pursuit of these powers, any dewatering activities by mines are considered to be a beneficial use and therefore all of the above provisions regarding an application to appropriate or an application for a permit apply. A mine may not dewater if unappropriated water is not available or if other users' rights will be impaired. Further, a permit gives only a right to drill and not a right to the water itself.[87]

If the water resulting from dewatering is found to be unappropriated, a mine may obtain a water right and sell the water. It would seem, therefore, that mines are not only controlled as to the amount of their dewatering, but are given an incentive not to waste the resulting water. In addition, if the water is not sold but is allowed to return to an aquifer, a mine first must obtain a permit from the Water Pollution Control Commission of the State Department of Health.

C. Montana

Montana distinguishes between ground and surface water, although similar administrative procedures are used for acquiring rights to either. The system is administered by the Department of Natural Resources and Conservation which is empowered to prescribe procedures, forms, and requirements for applications or permits.[88]

85. COLO. REV. STAT. § 37-90-111(f) (1973).
86. COLO. REV. STAT. § 37-90-138 (1973).
87. Telephone conversation with Bruce DeBrine, Deputy State Engineer of Groundwater Operations, State Engineers Office, Denver, Colorado, March 1980.
88. MONT. CODE ANN. § 85-2-113 (1979).

Any right, whether for ground or surface water, may be appropriated only for a beneficial use, and this system of appropriation is the exclusive means for acquiring any water right.[89] The beneficial use of any water means "a use of water for the benefit of the appropriator, other persons, or the public including but not limited to, agricultural (including stock water), domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses."[90]

The Board of Natural Resources and Conservation has control over groundwater and their power was greatly increased by the revision of the Montana Code in 1979.[91] The Board may pass specific rules relating to particular groundwater problems. No such rules have been passed which deal with dewatering; however, "beneficial use" is interpreted broadly to include this activity.[92] This interpretation flows from the notion that, because mines benefit by their removal of the water, this clearly is a use for the benefit of the appropriator.

Therefore, any mine planning dewatering must apply for a permit. All applications are considered individually and a permit shall be issued if:

(1) there are unappropriated waters in the source of supply;
(2) the rights of a prior appropriator will not be affected adversely;
(3) the proposed means of diversion or construction are adequate;
(4) the proposed use of water is a beneficial use;
(5) the proposed use will not interfere unreasonably with other planned uses or developments for which a permit has been issued or for which water has been reserved;

89. MONT. CODE ANN. § 85-2-301 (1979).
90. MONT. CODE ANN. § 85-2-102(2) (1979).
91. *See generally*, MONT. CODE ANN. §§ 85-2-505 to 85-2-507 (1979).
92. Telephone conversation with Ron Guse, Assistant Chief of Water Rights Bureau, Department of Natural Resources and Conservation, Helena, Montana, February 1980.

> (6) an applicant for an appropriation of fifteen cubic feet per second or more proves by clear and convincing evidence that the rights of a prior appropriator will not be adversely affected.[93]

In addition, any permit issued may be subject to terms, conditions, restrictions, and limitations the Department considers necessary to protect the rights of other appropriators, and it may issue temporary or seasonal permits.[94]

There is one exception to this permit requirement:

> Outside the boundaries of a controlled groundwater area, a permit is not required before appropriating groundwater by means of a well with a maximum yield of less than one hundred (100) gallons a minute. Within 60 days of completion of the well, the appropriator shall file notice of completion. . . . Upon receipt of the notice, the Department shall automatically issue a certificate of water right. . . . The date of filing if the notice of completion is the date of priority of the right.[95]

In rare cases, this exception might be used by mines although it was intended for use by ranches and farms. Usually dewatering activities will yield more than one hundred gallons a minute.

Additional controls exist for withdrawals from controlled groundwater subareas. A person may appropriate groundwater from such an area only by applying for and receiving a permit from the Department, and the Department may not grant a permit if the withdrawal would be beyond the capacity of the aquifer in the groundwater area;[96] such groundwater shall not be wasted.[97] Among excepted activities which are not considered waste, and therefore a beneficial use, is the "disposal of groundwater without further beneficial use that must be withdrawn for

93. MONT. CODE ANN. § 85-2-311 (1979).
94. MONT. CODE ANN. § 85-2-312(1) (1979).
95. MONT. CODE ANN. § 85-2-306(1) (1979).
96. MONT. CODE ANN. § 85-2-508 (1979).
97. MONT. CODE ANN. § 85-2-505(1) (1979).

the sole purpose of improving or preserving the utility of land by draining the same, or that removed from a mine to permit mining operations or to preserve the mine in good condition."[98] Should the interpretation of dewatering as a beneficial use ever be seriously contested, this statute, along with the statutory definition of beneficial use, should dispose of the question.

D. Utah

Utah statutes relating to appropriation and use of waters closely resemble those of Wyoming. However, the manner in which they have been interpreted for purposes of dewatering is sharply different.

The Legislature of the State of Utah has declared "all waters in the state whether above or under the ground to be public property, subject to all existing rights."[99] The prior appropriation doctrine therefore is applicable to all groundwater and the same procedure must be followed in acquiring a water right regardless of the source of the water. This process must be started by filing with the state engineer's office an application to appropriate.[100] The appropriation must be for some useful and beneficial purpose, beneficial use being the basis, the measure, and the limit of all water rights.[101]

Every application for the right to use unappropriated public water must be detailed:

> Such application . . . shall set forth the name and . . . address of the person, corporation or association making the application; the nature of the proposed use for which the appropriation is intended; the quantity of water in acre-feet . . . to be appropriated . . . and the time during which it is to be used each year; the name of the stream or other source from which the water is to be diverted; the place on such stream or source where the water is

98. MONT. CODE ANN. § 85-2-505(1)(c) (1979).
99. UTAH CODE ANN. § 73-1-1 (1968).
100. UTAH CODE ANN. § 73-3-1 (1968).
101. UTAH CODE ANN. § 73-1-3 (1968).

> to be diverted and the nature of the diverting works; the dimensions, grade, shape and nature of the proposed diverting channel; and such other facts as will clearly define the full purpose of the proposed application. . . . If the proposed use is for milling or mining, the application shall show the name of the mill and its location or the name of the mine and the mining district in which it is situated, its nature, and the place where the water is to be returned to the natural stream or source.[102]

The state engineer's duty toward every application for an appropriation is statutorily outlined.[103] If certain conditions are found by the state engineer's office, including the presence of unappropriated water and a lack of impairment to existing rights, the application must be approved.[104]

The state engineer may deny an application if he finds that the appropriation of the water will interfere with its more beneficial use for irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing.[105] This list has been interpreted such that the uses mentioned first are not necessarily more beneficial than the uses mentioned later.[106] Apparently, then, the state engineer may, under certain circumstances, find the use of water for mining to be more beneficial than its use for irrigation. He may also approve a limited water for industrial, power and mining development for a specific period of time.[107]

Additional requirements are imposed if water is to be acquired from a well. Following the completion of a well, a report must be filed with the state engineer.

> The report shall . . . contain . . . the name and . . . address of the driller and the owner of well or tunnel; the number of the approved application to

102. UTAH CODE ANN. § 73-3-2 (Supp. 1979).
103. UTAH CODE ANN. §§ 73-3-5 to 75-3-7 (1968).
104. UTAH CODE ANN. § 73-3-8 (Supp. 1979).
105. UTAH CODE ANN. § 73-3-8 (Supp. 1979).
106. Tanner v. Bacon, 103 U. 494, 136 P.2d 57 (1943).
107. UTAH CODE ANN. § 73-3-8 (Supp. 1970).

> appropriate water under which work was prosecuted; the location of well or tunnel and the size and kind of casing used therein; the depth and log of well or tunnel; the date on which well or tunnel came into production; temperature and quantity of water issuing, drawn or pumped therefrom; and the location of water-bearing strata.[108]

"Well" means an excavation or opening into the ground made by digging, boring, drilling, jetting or driving, or any other artificial method for obtaining underground water.[109] In addition, any person or firm drilling wells in the state of Utah must receive annual permits from the state engineer and must file with him a $500 bond.[110]

In spite of this apparently extensive statutory framework relating to mining and groundwater, the Utah (State) (E)ngineer's office does not regulate dewatering.[111] If in the course of operation a mine needs to dewater, it may be done without an accounting to the state engineer's office, even if the amount or source of the water or the effects of its removal are not known.[112] However, if after the water is pumped up it is used for any purpose such as dust abatement or ore washing, a permit must be applied for, activating the statutory procedure described. Otherwise, the water is allowed to return to its status as public water.

Many mines in Utah do put water resulting from dewatering to a beneficial use, and presumably if no impairment is found, a mine can use all that they pump out of the ground.[113] This results in an indirect, but presumably ineffective control of dewatering. Further deference is given to mines in that, in spite of the broad definition of "well," dewatering, drilling or exploratory drilling are considered

108. UTAH CODE ANN. § 73-3-22 (1968).
109. UTAH CODE ANN. § 73-3-24 (1968).
110. UTAH CODE ANN. § 73-3-25 (1968).
111. UTAH CODE ANN. § 73-2-1 gives the state engineer the power to make publish such rules and regulations as may be necessary from time to time fully to carry out the duties of his office.
112. Telephone conversation with Stanley Green, Appropriations Engineer, State Engineer's Office, Salt Lake City, Utah, March 1980.
113. *Id.*

to be incidents of mining rather than such an activity as to invoke the well restrictions.

E. Nevada

Nevada law provides that "the water of all sources of water supply within the boundaries of the state whether above or beneath the surface of the ground belongs to the public."[114] Further, subject to existing rights, all such water may be appropriated for beneficial use,[115] which is the basis, the measure and limit of the right to the use of water.[116]

As with surface waters, all underground waters are subject to appropriation for beneficial use only under the laws relating to the appropriation and use of water.[117] Groundwaters are specifically provided for as far as their importance to the state is concerned:

> It is the intention of the legislature . . . to prevent the waste of underground waters and pollution and contamination thereof and provide for the administration of the provisions thereof by the State Engineer, who is hereby empowered to make such rules and regulations . . . as may be necessary for the proper execution of the provisions of this chapter.[118]

Other provisions relating to groundwater closely resemble those of New Mexico. The state engineer may designate groundwater basins,[119] and any person wishing to drill in such basins must first apply to the state engineer for a permit to appropriate.[120] In basins which have not been designated, no application or permit to appropriate is necessary until after the well is sunk and water developed.[121] (New Mexico does not have this provision.) Special protection is provided for artesian aquifers.[122]

114. NEV. REV. STAT. § 533.025 (1973).
115. NEV. REV. STAT. § 533.030(1) (1973).
116. NEV. REV. STAT. § 533.035 (1973).
117. NEV. REV. STAT. § 534.020(1) (1973).
118. NEV. REV. STAT. § 534.020(2) (1973).
119. NEV. REV. STAT. § 534.030 (1973).
120. NEV. REV. STAT. § 534.050(1) (1973).
121. NEV. REV. STAT. § 534.050(2) (1973).
122. NEV. REV. STAT. § 534.080 (1973).

Generally, the state engineer is given broad powers in order to protect groundwaters. He may require periodic statements of water elevations, water used, and acreage on which water was used,[123] and may conduct pumping tests to determine if overpumping is indicated.[124] As in New Mexico, he may issue a permit to appropriate groundwater only if there is unappropriated water in the area.[125]

However, all of the above seems of little importance since, in Nevada, waters pumped from mines are considered to be developed water and as such are the property of the persons who develop them. In the case which so held,[126] the waters were from three sources: 1) drainage of adjacent land; 2) pumping from mines; and 3) waters discharged after being used in machinery. It was held that the stream resulting from such waters is artificial and temporary, not a natural stream, and that the waters are not subject to appropriation. The court said that such waters "are produced by the capital, labor and enterprise of those developing them, and by such developing they become the property of those engaged in the enterprise."[127]

VI. THE PHILLIPS CASE: A TURNING POINT

An order issued by the New Mexico State Engineer's office in October, 1979, may have been the impetus which resulted in a legislative compromise between mining companies and interests opposed to dewatering. This order was in reply to an application to appropriate waters of the San Juan Underground Water Basin,[128] filed in September, 1976, by Phillips Uranium Company.

By the terms of the application as amended at hearing,[129] Phillips proposed to withdraw "a total of 654,431

123. NEV. REV. STAT. § 534.110(2)(a) (1973).
124. NEV. REV. STAT. § 534.110(2)(b) (1973).
125. NEV. REV. STAT. § 534.110(3) (1973).
126. Cardelli v. Comstock Tunnel Co., 26 Nev. 284, 66 P. 950 (1901).
127. *Id.* at 295, 952; *see also* HUTCHINS, THE NEVADA LAW OF WATER RIGHTS 55 (1955).
128. The San Juan Basin was declared in 1976 and underlays much of the present uranium mining activities. *Supra* note 49, at 11.
129. Application of Phillips Uranium Company to Appropriate the Waters of the San Juan Underground Water Basin, New Mexico State Engineer Application No. SJ-109.

acre-feet of water in a 32.5 year period at a rate averaging 20,106 acre-feet per year and not exceeding 32,250 acre-feet in any year. . . ."[130] The beneficial uses for which the water was intended included use of a small quantity for milling operations and sanitation needs and the diversion of the remaining water through an ion-exchange processes which would extract additional ore.[131]

Following a denial of the permit by the state engineer, based on a finding that impairment of existing rights would result, a full hearing was held.[132]

The resulting order found that the proposed Phillips' dewatering would cause water level draw downs of more than 1,500 feet in the immediate area of one Phillips well, and draw downs of more than 500 feet in 13 other wells of different ownership.[133] It was found further that artesian wells in the vicinity in ownership other than Phillips would be affected to the extent that the owners would have to install more powerful pumps and motors to continue their appropriations. The state engineer noted, however, that declining water levels together with increased pumping costs and lowered well yields do not *per se* constitute impairment as a matter of law.[134] But the state engineer did find that there would be impairment of existing rights if total water level declines resulting from Phillips' withdrawals *and all other withdrawals* exceeded 400 feet.

The application to appropriate was granted, provided that if the water level declines more than 400 feet, all withdrawals must cease within 365 days.[135]

130. Findings and Order, State Engineer Application No. SJ-109 (October 10, 1979).
131. THE LEGAL TASK FORCE OF THE NEW MEXICO MINING ASSOCIATION COMMITTEE ON MINE DEWATERING, *The Conflict Between Water and Mining in New Mexico—A Background Paper*, 16 (Nov. 23, 1979).
132. *Id.* at 16-17.
133. *Supra* note 130.
134. The findings noted that the flows of the Rio Puerco and San Juan Rivers, both of which are fully appropriated, would be affected in maximum amounts of 82 acre-feet per year. These effects, however, would not occur until up to 210 years after pumping began. Finding 17.
135. Among other conditions contained in the order were those requiring that all rules and regulations pertaining to artesian wells be complied with, that each well operated under the permit be equipped with an approved valve and meter, and that the construction of works and application of water to beneficial use be pursued with diligence. Orders 7, 9 and 12.

Projections by Phillips show that as a result of their dewatering only, water levels will decline to 400 feet within seven years.[136] Dewatering in the area by other companies will bring this about even sooner. The Phillips decision, therefore, is being appealed; if it is affirmed it will hang like a sword of Damocles over the mining industry.

An industry report makes the point clearly:

> The Phillips decision . . . has created an atmosphere of uncertainty and hesitation in the mining industry. Companies are reasonably reluctant to commit large sums of money for mineral production in New Mexico while the dewatering controversy remains unresolved.[137]

Thus, the Phillips decision provided a strong catalyst for a legislative solution to stabilize the legal rights and responsibilities of mining users and other competing users of groundwaters.

VII. THE LEGISLATIVE RESPONSE TO MINE DEWATERING

A bill controlling dewatering has been proposed repeatedly in recent sessions of the New Mexico Legislature. Senate Bill 110 was introduced by State Senator Tito Chavez in the 1979 legislative session. The bill stated:

> A diversion of underground waters in declared underground basins made for the purpose of dewatering a mine is not waste per se, but is subject to all of the administrative procedures and laws relating to the appropriation of underground waters, except that no water rights may be established by a diversion for the sole purpose of dewatering a mine. The provisions of this section shall not apply to or prevent the immediate dewatering of a mine in emergency flooding situations.

136. *Supra* note 128, at 18.
137. *Id.*

The effect of this bill would have been not only to invoke all permit procedures discussed above, but also to require that the underground waters removed be put to some use. The bill was tabled;[138] however, a Senate memorial calling for an interim committee to study mine dewatering was passed. As a result of the Phillips decision, mining companies were faced with being able to dewater only until a level of "presumed impairment" was reached. Because it is most likely that these levels would have been reached before all of the ore had been removed, the threat of having to cease operations entirely was more than a possibility.

In an attempt to solve this problem, the New Mexico Mining Association proposed legislation in the 1980 session which went far beyond the Senate Bill 110. The proposal, entitled "The Mine Dewatering Act," was passed in the final day of the session. The Act states that its purpose is "to promote maximum economic development of mineral resources while ensuring that such development does not impair existing water rights,"[139] and with this goal in mind, it attempts to create a new category not contained before in New Mexico water law. The Act makes dewatering neither an appropriation of water nor a waste of water but, instead, something in between, requiring new mechanisms of regulation.

The first of these new mechanisms is a mine dewatering permit required whenever anyone wishes to engage in mine dewatering in a declared underground basin.[140] To acquire such a permit, an application must be made to the state engineer who shall issue the permit if he finds that dewatering would not impair existing rights. If he finds that there will be impairment, he shall then notify the applicant who can appeal or file a plan of replacement.[141]

138. *See* Note, Geothermal Energy: Problems and Shortcomings of Classification of a Unique Resource—A Look at Problems With Water Law, With Particular Emphasis on New Mexico, 19 NAT. RES. J. 445, 457, n. 60 (1979).
139. Senate Bill 114, 34th Legislature, State of New Mexico, Second Session, 1980, § 2(B).
140. *Id.* at § 6.
141. *Id.* at § 7(D).

This concept of a "plan of replacement" is a second new mechanism which may help to solve the dewatering problem.[142] The Act defines replacement of water as:

> the furnishing of a substitute water supply, the modification of existing water supply facilities, the drilling of replacement wells, the assumption of additional operating costs, the procurement of documentation establishing a waiver of protection by owners of affected water rights, artificial recharge or any other reasonable means to avoid impairment.[143]

All costs of replacement shall be at the expense of the applicant;[144] the applicant, be it the United States, the State of New Mexico, or any person, or corporation, is however, given the right of eminent domain.[145]

If the state engineer finds that the plan of replacement prevents impairment of affected water rights, the permit shall be issued contingent upon implementation and maintenance of the plan.[146] The Act also provides factors the state engineer should consider when reviewing a plan of replacement,[147] and procedures ensuring the implementation and maintenance of such a plan.[148]

By this Act, tailored to dewatering activities, several problems may have been solved. The activity will no longer go on largely uncontrolled insofar as the state engineer is concerned. More importantly, there is protection for existing rights; when a right is affected there will be several options which a mining company can pursue for replacement of the water. But until there is a plan of replacement or a

142. The concept of "replacement" is already in use in Utah in a somewhat different form. UTAH CODE ANN. § 73-3-23 (1968) grants a junior appropriator for whose appropriation may diminish the quality or injuriously affect the quality of underground water, the *right* to replace so that the junior appropriator may appropriate underground water. With the right of replacement is granted the right of eminent domain.
143. *Id.* at § 2(D).
144. *Id.* at § 4.
145. *Id.* at § 12(A).
146. *Id.* at § 7(F).
147. *Id.* at § 8.
148. *Id.* at § 9.

waiver from the affected owner, dewatering can not be carried on.

It should be noted that, as a practical matter, some dewatering will continue without the filing of a plan of replacement, since the Act provides that dewatering initiated before the effective date of the Act is not subject to the "plan of replacement" requirement.[149] This provision was a major reason why New Mexico environmental groups, long-time advocates of dewatering control, did not support this Act.

The Act also provides that "No water rights may be established solely by mine dewatering."[150] Since dewatering, at least in underground basins, can be done only with a permit, this will mean that the permit grants only the right to dewater, but not the right for a mining company to use or sell the water.

The legislation may raise some constitutional questions. As we have seen, groundwaters are "public waters,"[151] and under the New Mexico Constitution public waters are "subject to appropriation for beneficial use,"[152] and "beneficial use shall be the basis, the measure, and the limit of the right to the use of water."[153]

The Act specifically provides that mine dewatering is not an appropriation[154] and that no water rights are acquired by a dewatering permit.[155] Thus, a new category of water use is created which may not fit in comfortably with the constitutional language and its established judicial interpretation. Mine dewatering is not an appropriation, but water produced may be used as "replacement water" to replace water committed to rights to appropriate which may be impaired by dewatering.[156]

149. *Id.* at § 5(B).
150. *Id.* at § 5(A).
151. *See* text accompanying note 2, *supra.*
152. N.M. CONST. art. 16, § 2.
153. N.M. CONST. art. 16, § 3
154. *Supra* note 136, at § 5(A).
155. *Id.*
156. *Id.* at §§ 4, 3(F).

The Act represents an imaginative and novel approach. Novelty often is a target for constitutional challenge.[157]

IX. CONCLUSION

The dewatering problem in New Mexico has not yet been solved. The Mine Dewatering Act, however, certainly is an innovative step in that direction. With its passage, New Mexico has become the only western state to deal with dewatering by creating devices new to traditional, prior appropriation law. Considering the extensive dewatering yet to be done, it is clear that such devices were needed; existing New Mexico water law just did not cover the problem adequately.

With passage of the Mine Dewatering Act the appropriate state enforcement agencies have a large task before them of seeing that existing rights, including reserved rights, are adequately protected. This will include seeing that plans of replacement are adequate, that such plans are in fact implemented, and that environmental controls and regulations are followed. With effective controls and enforcement procedures, great benefits could be gained by the state, the mining industry, and by private owners of water rights.

157. Standing, in New Mexico, ordinarily requires an injury in fact, economic or otherwise, and under the replacement concept it may be difficult to show "injury in fact" so as to have standing to challenge the legislation. *See* DeVargas Savings & Loan Assn. v. Campbell, 87 N.M. 469, 535 P.2d 1320 (1975), or Utton, *Administrative Law*, 6 N.M. L. REV. 401 (1976).